Previous

HHRA RISK TABLES

Reasonable Maximum Exposure
Site 09
Alameda Point, Alameda, California

TABLE H-7.1.1.RME
EPA RAGS PART D TABLE 7b
CALCULATION OF RME CHEMICAL NONCANCER HAZARDS
CURRENT INDUSTRIAL WORKER
SITE 09, ALAMEDA POINT, ALAMEDA, CALIFORNIA

Scenario Timeframe:	Future
Receptor Population:	Industrial Worker
Receptor Age:	Adult

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Non-Cancer Hazard Calculations				
					Value	Units	Intake/Exposure Concentration		RfD/RfC		Hazard Quotient
							Value	Units	Value	Units	
Soil (0-2)	Soil	Site Soil	Ingestion	Arsenic	5.90E+00	mg/kg	5.8E-06	mg/kg-day	3.0E-04	mg/kg-day	1.9E-02
			Exp. Route Total								1.9E-02
			Dermal	Arsenic	5.90E+00	mg/kg	1.1E-06	mg/kg-day	3.0E-04	mg/kg-day	3.8E-03
			Exp. Route Total								3.8E-03
		Exposure Point Total									2.3E-02
	Exposure Medium Total										2.3E-02
	Air	Outdoor Air	Inhalation (particulates)	Arsenic	5.90E+00	mg/kg	8.7E-10	mg/kg-day	--	--	--
			Exp. Route Total								0.0E+00
		Exposure Point Total									0.0E+00
	Exposure Medium Total										0.0E+00
Medium Total											2.3E-02
Groundwater	Groundwater	Indoor Air (Vapor Intrusion)	Inhalation	Benzene	7.90E-02	(a) ug/m^3	1.5E-05	mg/kg-day	8.6E-03	mg/kg-day	1.8E-03
				Vinyl Chloride	4.58E+00	(a) ug/m^3	9.0E-04	mg/kg-day	2.9E-02	mg/kg-day	3.1E-02
			Exp. Route Total								3.3E-02
		Exposure Point Total									3.3E-02
	Exposure Medium Total										3.3E-02
Medium Total											3.3E-02
										Total of Receptor Hazards Across All Media	5.6E-02

Notes:

--	Not Applicable or Not Available
EPC	Exposure point concentration
mg/kg	Milligram per kilogram
mg/kg-day	Milligram per kilogram per day
RfD	Reference dose
RfC	Reference concentration
RME	Reasonable maximum exposure

(a) See the Vapor Intrusion to Indoor Air Evaluation for determination of the modeled indoor air concentration.

TABLE H-7.1.2.RME
EPA RAGS PART D TABLE 7b
CALCULATION OF RME CHEMICAL NONCANCER HAZARDS
CURRENT CONSTRUCTION WORKER
SITE 09, ALAMEDA POINT, ALAMEDA, CALIFORNIA

Scenario Timeframe:	Future
Receptor Population:	Construction Worker
Receptor Age:	Adult

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Non-Cancer Hazard Calculations				
					Value	Units	Intake/Exposure Concentration		RfD/RfC		Hazard Quotient
							Value	Units	Value	Units	
Soil (0-2)	Soil	Site Soil	Ingestion	Arsenic	5.90E+00	mg/kg	1.9E-05	mg/kg-day	3.0E-04	mg/kg-day	6.4E-02
			Exp. Route Total								6.4E-02
			Dermal	Arsenic	5.90E+00	mg/kg	1.7E-06	mg/kg-day	3.0E-04	mg/kg-day	5.7E-03
			Exp. Route Total								5.7E-03
		Exposure Point Total									6.9E-02
	Exposure Medium Total										6.9E-02
	Air	Outdoor Air	Inhalation (particulates)	Arsenic	5.90E+00	mg/kg	8.7E-10	mg/kg-day	--	--	--
			Exp. Route Total								0.0E+00
		Exposure Point Total									0.0E+00
	Exposure Medium Total										0.0E+00
Medium Total											6.9E-02
										Total of Receptor Hazards Across All Media	6.9E-02

Notes:

--	Not Applicable or Not Available
EPC	Exposure point concentration
mg/kg	Milligram per kilogram
mg/kg-day	Milligram per kilogram per day
RfD	Reference dose
RfC	Reference concentration
RME	Reasonable maximum exposure

TABLE H-7.1.3.RME
EPA RAGS PART D TABLE 7b
CALCULATION OF RME CHEMICAL NONCANCER HAZARDS
CURRENT ADULT RESIDENT
SITE 09, ALAMEDA POINT, ALAMEDA, CALIFORNIA

Scenario Timeframe:	Future
Receptor Population:	Resident
Receptor Age:	Adult

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Non-Cancer Hazard Calculations				
							Intake/Exposure Concentration		RfD/RfC		Hazard Quotient
					Value	Units	Value	Units	Value	Units	
Soil (0-2)	Soil	Site Soil	Ingestion	Arsenic	5.90E+00	mg/kg	8.1E-06	mg/kg-day	3.0E-04	mg/kg-day	2.7E-02
			Exp. Route Total								2.7E-02
			Dermal	Arsenic	5.90E+00	mg/kg	9.7E-07	mg/kg-day	3.0E-04	mg/kg-day	3.2E-03
			Exp. Route Total								3.2E-03
		Exposure Point Total									3.0E-02
	Exposure Medium Total										3.0E-02
	Homegrown Produce	Homegrown Produce	Ingestion	Arsenic	5.90E+00	mg/kg	3.0E-05	mg/kg-day	3.0E-04	mg/kg-day	1.0E-01
			Exp. Route Total								1.0E-01
		Exposure Point Total									1.0E-01
	Exposure Medium Total										1.0E-01
	Air	Outdoor Air	Inhalation (particulates)	Arsenic	5.90E+00	mg/kg	1.2E-09	mg/kg-day	--	--	--
			Exp. Route Total								0.0E+00
		Exposure Point Total									0.0E+00
	Exposure Medium Total										0.0E+00
Medium Total											1.3E-01
Groundwater	Groundwater	Indoor Air (Vapor Intrusion)	Inhalation	Benzene	7.90E-01	(a) ug/m^3	2.2E-04	mg/kg-day	8.6E-03	mg/kg-day	2.5E-02
				Vinyl Chloride	4.58E+01	(a) ug/m^3	1.2E-02	mg/kg-day	2.9E-02	mg/kg-day	4.4E-01
			Exp. Route Total								4.6E-01
		Exposure Point Total									4.6E-01
		Tap	Ingestion	1,1-Dichloroethane	2.03E-02	mg/L	5.6E-04	mg/kg-day	1.0E-01	mg/kg-day	5.6E-03
				1,2-Dichloroethane	6.00E-04	mg/L	1.6E-05	mg/kg-day	3.0E-02	mg/kg-day	5.5E-04
				1,2-Dichloroethene (Total)	4.34E-01	mg/L	1.2E-02	mg/kg-day	1.0E-02	mg/kg-day	1.2E+00
				1,2-Dichloropropane	2.00E-03	mg/L	5.5E-05	mg/kg-day	1.1E-03	mg/kg-day	5.0E-02
				1,2,3-Trichloropropane	3.00E-04	mg/L	8.2E-06	mg/kg-day	6.0E-03	mg/kg-day	1.4E-03
				1,3-Dichloropropane	9.00E-04	mg/L	2.5E-05	mg/kg-day	1.1E-03	mg/kg-day	2.2E-02
				2,2'-Oxybis(1-chloropropane)	7.00E-04	mg/L	1.9E-05	mg/kg-day	4.0E-02	mg/kg-day	4.8E-04
				2-Methylnaphthalene	9.28E-01	mg/L	2.5E-02	mg/kg-day	9.0E-03	mg/kg-day	2.8E+00
				4-Methylphenol	1.20E+00	mg/L	3.3E-02	mg/kg-day	5.0E-03	mg/kg-day	6.6E+00
				Antimony	1.05E-02	mg/L	2.9E-04	mg/kg-day	4.0E-04	mg/kg-day	7.2E-01
				Arsenic	3.70E-02	mg/L	1.0E-03	mg/kg-day	3.0E-04	mg/kg-day	3.4E+00
				Benzene	2.00E-03	mg/L	5.5E-05	mg/kg-day	4.0E-03	mg/kg-day	1.4E-02
				Benz(a)anthracene	1.00E-03	mg/L	2.7E-05	mg/kg-day	--	--	--

TABLE H-7.1.3.RME
EPA RAGS PART D TABLE 7b
CALCULATION OF RME CHEMICAL NONCANCER HAZARDS
CURRENT ADULT RESIDENT
SITE 09, ALAMEDA POINT, ALAMEDA, CALIFORNIA

Scenario Timeframe:	Future
Receptor Population:	Resident
Receptor Age:	Adult

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Non-Cancer Hazard Calculations				
					Value	Units	Intake/Exposure Concentration		RfD/RfC		Hazard Quotient
							Value	Units	Value	Units	
				Benzo(a)pyrene	2.00E-03	mg/L	5.5E-05	mg/kg-day	--	--	--
				Benzo(b)fluoranthene	2.00E-03	mg/L	5.5E-05	mg/kg-day	--	--	--
				Benzo(k)fluoranthene	8.00E-04	mg/L	2.2E-05	mg/kg-day	--	--	--
				Chloroethane	5.00E-03	mg/L	1.4E-04	mg/kg-day	4.0E-01	mg/kg-day	3.4E-04
				Chrysene	1.00E-03	mg/L	2.7E-05	mg/kg-day	--	--	--
				Ethylbenzene	2.11E-02	mg/L	5.8E-04	mg/kg-day	1.0E-01	mg/kg-day	5.8E-03
				Indeno(1,2,3-cd)pyrene	1.00E-03	mg/L	2.7E-05	mg/kg-day	--	--	--
				Lead	5.80E-03	mg/L	1.6E-04	mg/kg-day	--	--	--
				Manganese	2.25E+00	mg/L	6.2E-02	mg/kg-day	2.4E-02	mg/kg-day	2.6E+00
				Methyl-t-butyl ether	1.13E-02	mg/L	3.1E-04	mg/kg-day	8.6E-01	mg/kg-day	3.6E-04
				Naphthalene	3.32E+00	mg/L	9.1E-02	mg/kg-day	2.0E-02	mg/kg-day	4.5E+00
				Pentachlorophenol	2.00E-03	mg/L	5.5E-05	mg/kg-day	3.0E-02	mg/kg-day	1.8E-03
				Tetrachloroethene	3.00E-03	mg/L	8.2E-05	mg/kg-day	1.0E-02	mg/kg-day	8.2E-03
				Trichloroethene	1.29E-02	mg/L	3.5E-04	mg/kg-day	3.0E-04	mg/kg-day	1.2E+00
				Vinyl chloride	3.04E-02	mg/L	8.3E-04	mg/kg-day	3.0E-03	mg/kg-day	2.8E-01
				Xylene (Total)	2.06E-01	mg/L	5.6E-03	mg/kg-day	2.0E-01	mg/kg-day	2.8E-02
			Exp. Route Total								2.3E+01
			Dermal (bathing/ showering)	1,1-Dichloroethane	2.03E-02	mg/L	1.9E-05	mg/kg-day	1.0E-01	mg/kg-day	1.9E-04
				1,2-Dichloroethane	6.00E-04	mg/L	3.6E-07	mg/kg-day	3.0E-02	mg/kg-day	1.2E-05
				1,2-Dichloroethene (Total)	4.34E-01	mg/L	4.8E-04	mg/kg-day	1.0E-02	mg/kg-day	4.8E-02
				1,2-Dichloropropane	2.00E-03	mg/L	2.2E-06	mg/kg-day	1.1E-03	mg/kg-day	2.0E-03
				1,2,3-Trichloropropane	3.00E-04	mg/L	3.2E-07	mg/kg-day	6.0E-03	mg/kg-day	5.3E-05
				1,3-Dichloropropane	9.00E-04	mg/L	1.0E-06	mg/kg-day	1.1E-03	mg/kg-day	9.1E-04
				2,2'-Oxybis(1-chloropropane)	7.00E-04	mg/L	7.6E-07	mg/kg-day	4.0E-02	mg/kg-day	1.9E-05
				2-Methylnaphthalene	9.28E-01	mg/L	6.2E-03	mg/kg-day	9.0E-03	mg/kg-day	6.9E-01
				4-Methylphenol	1.20E+00	mg/L	1.3E-03	mg/kg-day	5.0E-03	mg/kg-day	2.6E-01
				Antimony	1.05E-02	mg/L	1.5E-06	mg/kg-day	4.0E-04	mg/kg-day	3.8E-03
				Arsenic	3.70E-02	mg/L	5.3E-06	mg/kg-day	3.0E-04	mg/kg-day	1.8E-02
				Benzene	2.00E-03	mg/L	6.0E-06	mg/kg-day	4.0E-03	mg/kg-day	1.5E-03
				Benz(a)anthracene	1.00E-03	mg/L	6.7E-05	mg/kg-day	--	--	--
				Benzo(a)pyrene	2.00E-03	mg/L	2.0E-04	mg/kg-day	--	--	--
				Benzo(b)fluoranthene	2.00E-03	mg/L	2.0E-04	mg/kg-day	--	--	--
				Benzo(k)fluoranthene	8.00E-04	mg/L	2.5E-05	mg/kg-day	--	--	--
				Chloroethane	5.00E-03	mg/L	4.4E-06	mg/kg-day	4.0E-01	mg/kg-day	1.1E-05
				Chrysene	1.00E-03	mg/L	6.7E-05	mg/kg-day	--	--	--

TABLE H-7.1.3.RME
EPA RAGS PART D TABLE 7b
CALCULATION OF RME CHEMICAL NONCANCER HAZARDS
CURRENT ADULT RESIDENT
SITE 09, ALAMEDA POINT, ALAMEDA, CALIFORNIA

Scenario Timeframe:	Future
Receptor Population:	Resident
Receptor Age:	Adult

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Non-Cancer Hazard Calculations				
					Value	Units	Intake/Exposure Concentration		RfD/RfC		Hazard Quotient
							Value	Units	Value	Units	
				Ethylbenzene	2.11E-02	mg/L	1.5E-04	mg/kg-day	1.0E-01	mg/kg-day	1.5E-03
				Indeno(1,2,3-cd)pyrene	1.00E-03	mg/L	1.4E-04	mg/kg-day	--	--	--
				Lead	5.80E-03	mg/L	8.3E-07	mg/kg-day	--	--	--
				Manganese	2.25E+00	mg/L	3.2E-04	mg/kg-day	2.4E-02	mg/kg-day	1.3E-02
				Methyl-t-butyl ether	1.13E-02	mg/L	3.4E-06	mg/kg-day	8.6E-01	mg/kg-day	4.0E-06
				Naphthalene	3.32E+00	mg/L	2.2E-02	mg/kg-day	2.0E-02	mg/kg-day	1.1E+00
				Pentachlorophenol	2.00E-03	mg/L	1.1E-04	mg/kg-day	3.0E-02	mg/kg-day	3.7E-03
				Tetrachloroethene	3.00E-03	mg/L	1.4E-05	mg/kg-day	1.0E-02	mg/kg-day	1.4E-03
				Trichloroethene	1.29E-02	mg/L	2.2E-05	mg/kg-day	3.0E-04	mg/kg-day	7.4E-02
				Vinyl chloride	3.04E-02	mg/L	2.4E-05	mg/kg-day	3.0E-03	mg/kg-day	8.1E-03
				Xylene (Total)	2.06E-01	mg/L	1.6E-03	mg/kg-day	2.0E-01	mg/kg-day	7.8E-03
			Exp. Route Total								2.2E+00
			Inhalation (bathing/ showering)	1,1-Dichloroethane	2.03E-02	mg/L	6.7E-05	mg/kg-day	1.4E-01	mg/kg-day	4.8E-04
				1,2-Dichloroethane	6.00E-04	mg/L	2.0E-06	mg/kg-day	1.4E-03	mg/kg-day	1.4E-03
				1,2-Dichloroethene (Total)	4.34E-01	mg/L	1.4E-03	mg/kg-day	1.0E-02	mg/kg-day	1.4E-01
				1,2-Dichloropropane	2.00E-03	mg/L	6.6E-06	mg/kg-day	1.1E-03	mg/kg-day	6.0E-03
				1,2,3-Trichloropropane	3.00E-04	mg/L	9.9E-07	mg/kg-day	1.4E-03	mg/kg-day	7.1E-04
				1,3-Dichloropropane	9.00E-04	mg/L	3.0E-06	mg/kg-day	1.1E-03	mg/kg-day	2.7E-03
				2,2'-Oxybis(1-chloropropane)	7.00E-04	mg/L	2.3E-06	mg/kg-day	4.0E-02	mg/kg-day	5.8E-05
				2-Methylnaphthalene	9.28E-01	mg/L	3.1E-03	mg/kg-day	8.6E-04	mg/kg-day	3.6E+00
				Benzene	2.00E-03	mg/L	6.6E-06	mg/kg-day	8.6E-03	mg/kg-day	7.7E-04
				Chloroethane	5.00E-03	mg/L	1.6E-05	mg/kg-day	2.9E+00	mg/kg-day	5.7E-06
				Ethylbenzene	2.11E-02	mg/L	7.0E-05	mg/kg-day	2.9E-01	mg/kg-day	2.4E-04
				Methyl-t-butyl ether	1.13E-02	mg/L	3.7E-05	mg/kg-day	8.6E-01	mg/kg-day	4.3E-05
				Naphthalene	3.32E+00	mg/L	1.1E-02	mg/kg-day	8.6E-04	mg/kg-day	1.3E+01
				Tetrachloroethene	3.00E-03	mg/L	9.9E-06	mg/kg-day	1.7E-01	mg/kg-day	5.8E-05
				Trichloroethene	1.29E-02	mg/L	4.3E-05	mg/kg-day	1.0E-02	mg/kg-day	4.3E-03
				Vinyl chloride	3.04E-02	mg/L	1.0E-04	mg/kg-day	2.9E-02	mg/kg-day	3.5E-03
				Xylene (Total)	2.06E-01	mg/L	6.8E-04	mg/kg-day	2.9E-02	mg/kg-day	2.3E-02
			Exp. Route Total								1.6E+01
		Exposure Point Total									4.2E+01
	Exposure Medium Total										4.3E+01
Medium Total											4.3E+01
										Total of Receptor Hazards Across All Media	4.3E+01

TABLE H-7.1.3.RME
EPA RAGS PART D TABLE 7b
CALCULATION OF RME CHEMICAL NONCANCER HAZARDS
CURRENT ADULT RESIDENT
SITE 09, ALAMEDA POINT, ALAMEDA, CALIFORNIA

Scenario Timeframe:	Future
Receptor Population:	Resident
Receptor Age:	Adult

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Non-Cancer Hazard Calculations				
					Value	Units	Intake/Exposure Concentration		RfD/RfC		Hazard Quotient
							Value	Units	Value	Units	

Notes:

--	Not Applicable or Not Available
EPC	Exposure point concentration
mg/kg	Milligram per kilogram
mg/kg-day	Milligram per kilogram per day
RfD	Reference dose
RfC	Reference concentration
RME	Reasonable maximum exposure

(a) See the Vapor Intrusion to Indoor Air Evaluation for determination of the modeled indoor air concentration.

TABLE H-7.1.4.RME
EPA RAGS PART D TABLE 7b
CALCULATION OF RME CHEMICAL NONCANCER HAZARDS
CURRENT CHILD RESIDENT
SITE 09, ALAMEDA POINT, ALAMEDA, CALIFORNIA

Scenario Timeframe:	Future
Receptor Population:	Resident
Receptor Age:	Child

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Non-Cancer Hazard Calculations				
					Value	Units	Intake/Exposure Concentration		RfD/RfC		Hazard Quotient
							Value	Units	Value	Units	
Soil (0-2)	Soil	Site Soil	Ingestion	Arsenic	5.90E+00	mg/kg	7.5E-05	mg/kg-day	3.0E-04	mg/kg-day	2.5E-01
			Exp. Route Total								2.5E-01
			Dermal	Arsenic	5.90E+00	mg/kg	6.3E-06	mg/kg-day	3.0E-04	mg/kg-day	2.1E-02
			Exp. Route Total								2.1E-02
		Exposure Point Total									2.7E-01
	Exposure Medium Total										2.7E-01
	Homegrown Produce	Homegrown Produce	Ingestion	Arsenic	5.90E+00	mg/kg	3.0E-05	mg/kg-day	3.0E-04	mg/kg-day	1.0E-01
			Exp. Route Total								1.0E-01
		Exposure Point Total									1.0E-01
	Exposure Medium Total										1.0E-01
	Air	Outdoor Air	Inhalation (particulates)	Arsenic	5.90E+00	mg/kg	2.9E-09	mg/kg-day	--	--	--
			Exp. Route Total								0.0E+00
		Exposure Point Total									0.0E+00
	Exposure Medium Total										0.0E+00
Medium Total											3.7E-01
Groundwater	Groundwater	Indoor Air (Vapor Intrusion)	Inhalation	Benzene	7.90E-01	(a) ug/m³	5.1E-04	mg/kg-day	8.6E-03	mg/kg-day	5.9E-02
				Vinyl Chloride	4.58E+01		3.0E-02	mg/kg-day	2.9E-02	mg/kg-day	1.0E+00
			Exp. Route Total								1.1E+00
		Exposure Point Total									1.1E+00
		Tap	Ingestion	1,1-Dichloroethane	2.03E-02	mg/L	1.3E-03	mg/kg-day	1.0E-01	mg/kg-day	1.3E-02
				1,2-Dichloroethane	6.00E-04	mg/L	3.8E-05	mg/kg-day	3.0E-02	mg/kg-day	1.3E-03
				1,2-Dichloroethene (Total)	4.34E-01	mg/L	2.8E-02	mg/kg-day	1.0E-02	mg/kg-day	2.8E+00
				1,2-Dichloropropane	2.00E-03	mg/L	1.3E-04	mg/kg-day	1.1E-03	mg/kg-day	1.2E-01
				1,2,3-Trichloropropane	3.00E-04	mg/L	1.9E-05	mg/kg-day	6.0E-03	mg/kg-day	3.2E-03
				1,3-Dichloropropane	9.00E-04	mg/L	5.8E-05	mg/kg-day	1.1E-03	mg/kg-day	5.2E-02
				2,2'-Oxybis(1-chloropropane)	7.00E-04	mg/L	4.5E-05	mg/kg-day	4.0E-02	mg/kg-day	1.1E-03
				2-Methylnaphthalene	9.28E-01	mg/L	5.9E-02	mg/kg-day	9.0E-03	mg/kg-day	6.6E+00
				4-Methylphenol	1.20E+00	mg/L	7.7E-02	mg/kg-day	5.0E-03	mg/kg-day	1.5E+01
				Antimony	1.05E-02	mg/L	6.7E-04	mg/kg-day	4.0E-04	mg/kg-day	1.7E+00
				Arsenic	3.70E-02	mg/L	2.4E-03	mg/kg-day	3.0E-04	mg/kg-day	7.9E+00
				Benzene	2.00E-03	mg/L	1.3E-04	mg/kg-day	4.0E-03	mg/kg-day	3.2E-02
				Benz(a)anthracene	1.00E-03	mg/L	6.4E-05	mg/kg-day	--	--	--
				Benzo(a)pyrene	2.00E-03	mg/L	1.3E-04	mg/kg-day	--	--	--
				Benzo(b)fluoranthene	2.00E-03	mg/L	1.3E-04	mg/kg-day	--	--	--

TABLE H-7.1.4.RME
EPA RAGS PART D TABLE 7b
CALCULATION OF RME CHEMICAL NONCANCER HAZARDS
CURRENT CHILD RESIDENT
SITE 09, ALAMEDA POINT, ALAMEDA, CALIFORNIA

Scenario Timeframe:	Future
Receptor Population:	Resident
Receptor Age:	Child

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Non-Cancer Hazard Calculations				
					Value	Units	Intake/Exposure Concentration		RfD/RfC		Hazard Quotient
							Value	Units	Value	Units	
				Benzo(k)fluoranthene	8.00E-04	mg/L	5.1E-05	mg/kg-day	--	--	--
				Chloroethane	5.00E-03	mg/L	3.2E-04	mg/kg-day	4.0E-01	mg/kg-day	8.0E-04
				Chrysene	1.00E-03	mg/L	6.4E-05	mg/kg-day	--	--	--
				Ethylbenzene	2.11E-02	mg/L	1.3E-03	mg/kg-day	1.0E-01	mg/kg-day	1.3E-02
				Indeno(1,2,3-cd)pyrene	1.00E-03	mg/L	6.4E-05	mg/kg-day	--	--	--
				Lead	5.80E-03	mg/L	3.7E-04	mg/kg-day	--	--	--
				Manganese	2.25E+00	mg/L	1.4E-01	mg/kg-day	2.4E-02	mg/kg-day	6.0E+00
				Methyl-t-butyl ether	1.13E-02	mg/L	7.2E-04	mg/kg-day	8.6E-01	mg/kg-day	8.4E-04
				Naphthalene	3.32E+00	mg/L	2.1E-01	mg/kg-day	2.0E-02	mg/kg-day	1.1E+01
				Pentachlorophenol	2.00E-03	mg/L	1.3E-04	mg/kg-day	3.0E-02	mg/kg-day	4.3E-03
				Tetrachloroethene	3.00E-03	mg/L	1.9E-04	mg/kg-day	1.0E-02	mg/kg-day	1.9E-02
				Trichloroethene	1.29E-02	mg/L	8.2E-04	mg/kg-day	3.0E-04	mg/kg-day	2.7E+00
				Vinyl chloride	3.04E-02	mg/L	1.9E-03	mg/kg-day	3.0E-03	mg/kg-day	6.5E-01
				Xylene (Total)	2.06E-01	mg/L	1.3E-02	mg/kg-day	2.0E-01	mg/kg-day	6.6E-02
			Exp. Route Total								5.5E+01
			Dermal (bathing/ showering)	1,1-Dichloroethane	2.03E-02	mg/L	5.7E-05	mg/kg-day	1.0E-01	mg/kg-day	5.7E-04
				1,2-Dichloroethane	6.00E-04	mg/L	1.1E-06	mg/kg-day	3.0E-02	mg/kg-day	3.5E-05
				1,2-Dichloroethene (Total)	4.34E-01	mg/L	1.4E-03	mg/kg-day	1.0E-02	mg/kg-day	1.4E-01
				1,2-Dichloropropane	2.00E-03	mg/L	6.6E-06	mg/kg-day	1.1E-03	mg/kg-day	6.0E-03
				1,2,3-Trichloropropane	3.00E-04	mg/L	9.4E-07	mg/kg-day	6.0E-03	mg/kg-day	1.6E-04
				1,3-Dichloropropane	9.00E-04	mg/L	3.0E-06	mg/kg-day	1.1E-03	mg/kg-day	2.7E-03
				2,2'-Oxybis(1-chloropropane)	7.00E-04	mg/L	2.2E-06	mg/kg-day	4.0E-02	mg/kg-day	5.6E-05
				2-Methylnaphthalene	9.28E-01	mg/L	1.8E-02	mg/kg-day	9.0E-03	mg/kg-day	2.0E+00
				4-Methylphenol	1.20E+00	mg/L	3.8E-03	mg/kg-day	5.0E-03	mg/kg-day	7.6E-01
				Antimony	1.05E-02	mg/L	4.4E-06	mg/kg-day	4.0E-04	mg/kg-day	1.1E-02
				Arsenic	3.70E-02	mg/L	1.6E-05	mg/kg-day	3.0E-04	mg/kg-day	5.2E-02
				Benzene	2.00E-03	mg/L	1.8E-05	mg/kg-day	4.0E-03	mg/kg-day	4.4E-03
				Benz(a)anthracene	1.00E-03	mg/L	2.0E-04	mg/kg-day	--	--	--
				Benzo(a)pyrene	2.00E-03	mg/L	5.9E-04	mg/kg-day	--	--	--
				Benzo(b)fluoranthene	2.00E-03	mg/L	5.9E-04	mg/kg-day	--	--	--
				Benzo(k)fluoranthene	8.00E-04	mg/L	7.4E-05	mg/kg-day	--	--	--
				Chloroethane	5.00E-03	mg/L	1.3E-05	mg/kg-day	4.0E-01	mg/kg-day	3.2E-05
				Chrysene	1.00E-03	mg/L	2.0E-04	mg/kg-day	--	--	--
				Ethylbenzene	2.11E-02	mg/L	4.4E-04	mg/kg-day	1.0E-01	mg/kg-day	4.4E-03
				Indeno(1,2,3-cd)pyrene	1.00E-03	mg/L	4.2E-04	mg/kg-day	--	--	--
				Lead	5.80E-03	mg/L	2.4E-06	mg/kg-day	--	--	--
				Manganese	2.25E+00	mg/L	9.5E-04	mg/kg-day	2.4E-02	mg/kg-day	4.0E-02

TABLE H-7.1.4.RME
EPA RAGS PART D TABLE 7b
CALCULATION OF RME CHEMICAL NONCANCER HAZARDS
CURRENT CHILD RESIDENT
SITE 09, ALAMEDA POINT, ALAMEDA, CALIFORNIA

Scenario Timeframe:	Future
Receptor Population:	Resident
Receptor Age:	Child

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Non-Cancer Hazard Calculations				
					Value	Units	Intake/Exposure Concentration		RfD/RfC		Hazard Quotient
							Value	Units	Value	Units	
				Methyl-t-butyl ether	1.13E-02	mg/L	1.0E-05	mg/kg-day	8.6E-01	mg/kg-day	1.2E-05
				Naphthalene	3.32E+00	mg/L	6.6E-02	mg/kg-day	2.0E-02	mg/kg-day	3.3E+00
				Pentachlorophenol	2.00E-03	mg/L	3.3E-04	mg/kg-day	3.0E-02	mg/kg-day	1.1E-02
				Tetrachloroethene	3.00E-03	mg/L	4.2E-05	mg/kg-day	1.0E-02	mg/kg-day	4.2E-03
				Trichloroethene	1.29E-02	mg/L	6.5E-05	mg/kg-day	3.0E-04	mg/kg-day	2.2E-01
				Vinyl chloride	3.04E-02	mg/L	7.2E-05	mg/kg-day	3.0E-03	mg/kg-day	2.4E-02
				Xylene (Total)	2.06E-01	mg/L	4.6E-03	mg/kg-day	2.0E-01	mg/kg-day	2.3E-02
			Exp. Route Total								6.6E+00
			Inhalation (bathing/ showering)	1,1-Dichloroethane	2.03E-02	mg/L	2.7E-04	mg/kg-day	1.4E-01	mg/kg-day	1.9E-03
				1,2-Dichloroethane	6.00E-04	mg/L	8.1E-06	mg/kg-day	1.4E-03	mg/kg-day	5.8E-03
				1,2-Dichloroethene (Total)	4.34E-01	mg/L	5.8E-03	mg/kg-day	1.0E-02	mg/kg-day	5.8E-01
				1,2-Dichloropropane	2.00E-03	mg/L	2.7E-05	mg/kg-day	1.1E-03	mg/kg-day	2.4E-02
				1,2,3-Trichloropropane	3.00E-04	mg/L	4.0E-06	mg/kg-day	1.4E-03	mg/kg-day	2.9E-03
				1,3-Dichloropropane	9.00E-04	mg/L	1.2E-05	mg/kg-day	1.1E-03	mg/kg-day	1.1E-02
				2,2'-Oxybis(1-chloropropane)	7.00E-04	mg/L	9.4E-06	mg/kg-day	4.0E-02	mg/kg-day	2.3E-04
				2-Methylnaphthalene	9.28E-01	mg/L	1.2E-02	mg/kg-day	8.6E-04	mg/kg-day	1.4E+01
				Benzene	2.00E-03	mg/L	2.7E-05	mg/kg-day	8.6E-03	mg/kg-day	3.1E-03
				Chloroethane	5.00E-03	mg/L	6.7E-05	mg/kg-day	2.9E+00	mg/kg-day	2.3E-05
				Ethylbenzene	2.11E-02	mg/L	2.8E-04	mg/kg-day	2.9E-01	mg/kg-day	9.8E-04
				Methyl-t-butyl ether	1.13E-02	mg/L	1.5E-04	mg/kg-day	8.6E-01	mg/kg-day	1.8E-04
				Naphthalene	3.32E+00	mg/L	4.5E-02	mg/kg-day	8.6E-04	mg/kg-day	5.2E+01
				Tetrachloroethene	3.00E-03	mg/L	4.0E-05	mg/kg-day	1.7E-01	mg/kg-day	2.4E-04
				Trichloroethene	1.29E-02	mg/L	1.7E-04	mg/kg-day	1.0E-02	mg/kg-day	1.7E-02
				Vinyl chloride	3.04E-02	mg/L	4.1E-04	mg/kg-day	2.9E-02	mg/kg-day	1.4E-02
				Xylene (Total)	2.06E-01	mg/L	2.8E-03	mg/kg-day	2.9E-02	mg/kg-day	9.5E-02
			Exp. Route Total								6.7E+01
		Exposure Point Total									1.3E+02
	Exposure Medium Total										1.3E+02
Medium Total											1.3E+02
										Total of Receptor Hazards Across All Media	1.3E+02

Notes:

--	Not Applicable or Not Available
EPC	Exposure point concentration
mg/kg	Milligram per kilogram
mg/kg-day	Milligram per kilogram per day
RfD	Reference dose
RfC	Reference concentration

TABLE H-7.1.4.RME
EPA RAGS PART D TABLE 7b
CALCULATION OF RME CHEMICAL NONCANCER HAZARDS
CURRENT CHILD RESIDENT
SITE 09, ALAMEDA POINT, ALAMEDA, CALIFORNIA

Scenario Timeframe:	Future
Receptor Population:	Resident
Receptor Age:	Child

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Non-Cancer Hazard Calculations				
					Value	Units	Intake/Exposure Concentration		RfD/RfC		Hazard Quotient
							Value	Units	Value	Units	

RME *Reasonable maximum exposure*

(a) See the Vapor Intrusion to Indoor Air Evaluation for determination of the modeled indoor air concentration.

TABLE H-7.1.5.RME
EPA RAGS PART D TABLE 7b
CALCULATION OF RME CHEMICAL NONCANCER HAZARDS
FUTURE DEVELOPED CONSTRUCTION WORKER
SITE 09, ALAMEDA POINT, ALAMEDA, CALIFORNIA

Scenario Timeframe:	Future-Developed
Receptor Population:	Construction Worker
Receptor Age:	Adult

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Non-Cancer Hazard Calculations				
					Value	Units	Intake/Exposure Concentration		RfD/RfC		Hazard Quotient
							Value	Units	Value	Units	
Soil (0-8)	Soil	Site Soil	Ingestion	Arsenic	4.52E+00	mg/kg	1.5E-05	mg/kg-day	3.0E-04	mg/kg-day	4.9E-02
			Exp. Route Total								4.9E-02
			Dermal	Arsenic	4.52E+00	mg/kg	1.3E-06	mg/kg-day	3.0E-04	mg/kg-day	4.4E-03
			Exp. Route Total								4.4E-03
		Exposure Point Total									5.3E-02
	Exposure Medium Total										5.3E-02
	Air	Outdoor Air	Inhalation (particulates)	Arsenic	4.52E+00	mg/kg	6.7E-10	mg/kg-day	--	--	--
			Exp. Route Total								0.0E+00
		Exposure Point Total									0.0E+00
	Exposure Medium Total										0.0E+00
Medium Total											5.3E-02
										Total of Receptor Hazards Across All Media	5.3E-02

Notes:

--	*Not Applicable or Not Available*
EPC	Exposure point concentration
mg/kg	Milligram per kilogram
mg/kg-day	Milligram per kilogram per day
RfD	Reference dose
RfC	Reference concentration
RME	Reasonable maximum expsoure

TABLE H-7.1.6.RME
EPA RAGS PART D TABLE 7b
CALCULATION OF RME CHEMICAL NONCANCER HAZARDS
FUTURE REDEVELOPED ADULT RESIDENT
SITE 09, ALAMEDA POINT, ALAMEDA, CALIFORNIA

Scenario Timeframe:	Future-Redeveloped
Receptor Population:	Resident
Receptor Age:	Adult

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Non-Cancer Hazard Calculations				
					Value	Units	Intake/Exposure Concentration		RfD/RfC		Hazard Quotient
							Value	Units	Value	Units	
Soil (0-8)	Soil	Site Soil	Ingestion	Arsenic	4.52E+00	mg/kg	6.2E-06	mg/kg-day	3.0E-04	mg/kg-day	2.1E-02
			Exp. Route Total								2.1E-02
			Dermal	Arsenic	4.52E+00	mg/kg	7.4E-07	mg/kg-day	3.0E-04	mg/kg-day	2.5E-03
			Exp. Route Total								2.5E-03
		Exposure Point Total									2.3E-02
	Exposure Medium Total										2.3E-02
	Homegrown Produce	Homegrown Produce	Ingestion	Arsenic	4.52E+00	mg/kg	2.3E-05	mg/kg-day	3.0E-04	mg/kg-day	7.6E-02
			Exp. Route Total								7.6E-02
		Exposure Point Total									7.6E-02
	Exposure Medium Total										7.6E-02
	Air	Outdoor Air	Inhalation (particulates)	Arsenic	4.52E+00	mg/kg	9.3E-10	mg/kg-day	--	--	--
			Exp. Route Total								0.0E+00
		Exposure Point Total									0.0E+00
	Exposure Medium Total										0.0E+00
Medium Total											1.0E-01
Groundwater	Groundwater	Indoor Air (Vapor Intrusion)	Inhalation	Benzene	7.90E-01	(a) ug/m^3	2.2E-04	mg/kg-day	8.6E-03	mg/kg-day	2.5E-02
				Vinyl Chloride	4.58E+01	(a) ug/m^3	1.2E-02	mg/kg-day	2.9E-02	mg/kg-day	4.4E-01
			Exp. Route Total								4.6E-01
		Exposure Point Total									4.6E-01
		Tap	Ingestion	1,1-Dichloroethane	2.03E-02	mg/L	5.6E-04	mg/kg-day	1.0E-01	mg/kg-day	5.6E-03
				1,2-Dichloroethane	6.00E-04	mg/L	1.6E-05	mg/kg-day	3.0E-02	mg/kg-day	5.5E-04
				1,2-Dichloroethene (Total)	4.34E-01	mg/L	1.2E-02	mg/kg-day	1.0E-02	mg/kg-day	1.2E+00
				1,2-Dichloropropane	2.00E-03	mg/L	5.5E-05	mg/kg-day	1.1E-03	mg/kg-day	5.0E-02
				1,2,3-Trichloropropane	3.00E-04	mg/L	8.2E-06	mg/kg-day	6.0E-03	mg/kg-day	1.4E-03
				1,3-Dichloropropane	9.00E-04	mg/L	2.5E-05	mg/kg-day	1.1E-03	mg/kg-day	2.2E-02
				2,2'-Oxybis(1-chloropropane)	7.00E-04	mg/L	1.9E-05	mg/kg-day	4.0E-02	mg/kg-day	4.8E-04
				2-Methylnaphthalene	9.28E-01	mg/L	2.5E-02	mg/kg-day	9.0E-03	mg/kg-day	2.8E+00
				4-Methylphenol	1.20E+00	mg/L	3.3E-02	mg/kg-day	5.0E-03	mg/kg-day	6.6E+00
				Antimony	1.05E-02	mg/L	2.9E-04	mg/kg-day	4.0E-04	mg/kg-day	7.2E-01
				Arsenic	3.70E-02	mg/L	1.0E-03	mg/kg-day	3.0E-04	mg/kg-day	3.4E+00
				Benzene	2.00E-03	mg/L	5.5E-05	mg/kg-day	4.0E-03	mg/kg-day	1.4E-02
				Benz(a)anthracene	1.00E-03	mg/L	2.7E-05	mg/kg-day	--	--	--

TABLE H-7.1.6.RME
EPA RAGS PART D TABLE 7b
CALCULATION OF RME CHEMICAL NONCANCER HAZARDS
FUTURE REDEVELOPED ADULT RESIDENT
SITE 09, ALAMEDA POINT, ALAMEDA, CALIFORNIA

Scenario Timeframe:	Future-Redeveloped
Receptor Population:	Resident
Receptor Age:	Adult

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Non-Cancer Hazard Calculations				
					Value	Units	Intake/Exposure Concentration		RfD/RfC		Hazard Quotient
							Value	Units	Value	Units	
				Benzo(a)pyrene	2.00E-03	mg/L	5.5E-05	mg/kg-day	--	--	--
				Benzo(b)fluoranthene	2.00E-03	mg/L	5.5E-05	mg/kg-day	--	--	--
				Benzo(k)fluoranthene	8.00E-04	mg/L	2.2E-05	mg/kg-day	--	--	--
				Chloroethane	5.00E-03	mg/L	1.4E-04	mg/kg-day	4.0E-01	mg/kg-day	3.4E-04
				Chrysene	1.00E-03	mg/L	2.7E-05	mg/kg-day	--	--	--
				Ethylbenzene	2.11E-02	mg/L	5.8E-04	mg/kg-day	1.0E-01	mg/kg-day	5.8E-03
				Indeno(1,2,3-cd)pyrene	1.00E-03	mg/L	2.7E-05	mg/kg-day	--	--	--
				Lead	5.80E-03	mg/L	1.6E-04	mg/kg-day	--	--	--
				Manganese	2.25E+00	mg/L	6.2E-02	mg/kg-day	2.4E-02	mg/kg-day	2.6E+00
				Methyl-t-butyl ether	1.13E-02	mg/L	3.1E-04	mg/kg-day	8.6E-01	mg/kg-day	3.6E-04
				Naphthalene	3.32E+00	mg/L	9.1E-02	mg/kg-day	2.0E-02	mg/kg-day	4.5E+00
				Pentachlorophenol	2.00E-03	mg/L	5.5E-05	mg/kg-day	3.0E-02	mg/kg-day	1.8E-03
				Tetrachloroethene	3.00E-03	mg/L	8.2E-05	mg/kg-day	1.0E-02	mg/kg-day	8.2E-03
				Trichloroethene	1.29E-02	mg/L	3.5E-04	mg/kg-day	3.0E-04	mg/kg-day	1.2E+00
				Vinyl chloride	3.04E-02	mg/L	8.3E-04	mg/kg-day	3.0E-03	mg/kg-day	2.8E-01
				Xylene (Total)	2.06E-01	mg/L	5.6E-03	mg/kg-day	2.0E-01	mg/kg-day	2.8E-02
			Exp. Route Total								2.3E+01
			Dermal (bathing/ showering)	1,1-Dichloroethane	2.03E-02	mg/L	1.9E-05	mg/kg-day	1.0E-01	mg/kg-day	1.9E-04
				1,2-Dichloroethane	6.00E-04	mg/L	3.6E-07	mg/kg-day	3.0E-02	mg/kg-day	1.2E-05
				1,2-Dichloroethene (Total)	4.34E-01	mg/L	4.8E-04	mg/kg-day	1.0E-02	mg/kg-day	4.8E-02
				1,2-Dichloropropane	2.00E-03	mg/L	2.2E-06	mg/kg-day	1.1E-03	mg/kg-day	2.0E-03
				1,2,3-Trichloropropane	3.00E-04	mg/L	3.2E-07	mg/kg-day	6.0E-03	mg/kg-day	5.3E-05
				1,3-Dichloropropane	9.00E-04	mg/L	1.0E-06	mg/kg-day	1.1E-03	mg/kg-day	9.1E-04
				2,2'-Oxybis(1-chloropropane)	7.00E-04	mg/L	7.6E-07	mg/kg-day	4.0E-02	mg/kg-day	1.9E-05
				2-Methylnaphthalene	9.28E-01	mg/L	6.2E-03	mg/kg-day	9.0E-03	mg/kg-day	6.9E-01
				4-Methylphenol	1.20E+00	mg/L	1.3E-03	mg/kg-day	5.0E-03	mg/kg-day	2.6E-01
				Antimony	1.05E-02	mg/L	1.5E-06	mg/kg-day	4.0E-04	mg/kg-day	3.8E-03
				Arsenic	3.70E-02	mg/L	5.3E-06	mg/kg-day	3.0E-04	mg/kg-day	1.8E-02
				Benzene	2.00E-03	mg/L	6.0E-06	mg/kg-day	4.0E-03	mg/kg-day	1.5E-03
				Benz(a)anthracene	1.00E-03	mg/L	6.7E-05	mg/kg-day	--	--	--
				Benzo(a)pyrene	2.00E-03	mg/L	2.0E-04	mg/kg-day	--	--	--
				Benzo(b)fluoranthene	2.00E-03	mg/L	2.0E-04	mg/kg-day	--	--	--
				Benzo(k)fluoranthene	8.00E-04	mg/L	2.5E-05	mg/kg-day	--	--	--
				Chloroethane	5.00E-03	mg/L	4.4E-06	mg/kg-day	4.0E-01	mg/kg-day	1.1E-05
				Chrysene	1.00E-03	mg/L	6.7E-05	mg/kg-day	--	--	--
				Ethylbenzene	2.11E-02	mg/L	1.5E-04	mg/kg-day	1.0E-01	mg/kg-day	1.5E-03

TABLE H-7.1.6.RME
EPA RAGS PART D TABLE 7b
CALCULATION OF RME CHEMICAL NONCANCER HAZARDS
FUTURE REDEVELOPED ADULT RESIDENT
SITE 09, ALAMEDA POINT, ALAMEDA, CALIFORNIA

Scenario Timeframe:	Future-Redeveloped
Receptor Population:	Resident
Receptor Age:	Adult

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Non-Cancer Hazard Calculations				
					Value	Units	Intake/Exposure Concentration		RfD/RfC		Hazard Quotient
							Value	Units	Value	Units	
				Indeno(1,2,3-cd)pyrene	1.00E-03	mg/L	1.4E-04	mg/kg-day	--	--	--
				Lead	5.80E-03	mg/L	8.3E-07	mg/kg-day	--	--	--
				Manganese	2.25E+00	mg/L	3.2E-04	mg/kg-day	2.4E-02	mg/kg-day	1.3E-02
				Methyl-t-butyl ether	1.13E-02	mg/L	3.4E-06	mg/kg-day	8.6E-01	mg/kg-day	4.0E-06
				Naphthalene	3.32E+00	mg/L	2.2E-02	mg/kg-day	2.0E-02	mg/kg-day	1.1E+00
				Pentachlorophenol	2.00E-03	mg/L	1.1E-04	mg/kg-day	3.0E-02	mg/kg-day	3.7E-03
				Tetrachloroethene	3.00E-03	mg/L	1.4E-05	mg/kg-day	1.0E-02	mg/kg-day	1.4E-03
				Trichloroethene	1.29E-02	mg/L	2.2E-05	mg/kg-day	3.0E-04	mg/kg-day	7.4E-02
				Vinyl chloride	3.04E-02	mg/L	2.4E-05	mg/kg-day	3.0E-03	mg/kg-day	8.1E-03
				Xylene (Total)	2.06E-01	mg/L	1.6E-03	mg/kg-day	2.0E-01	mg/kg-day	7.8E-03
			Exp. Route Total								2.2E+00
			Inhalation (bathing/ showering)	1,1-Dichloroethane	2.03E-02	mg/L	6.7E-05	mg/kg-day	1.4E-01	mg/kg-day	4.8E-04
				1,2-Dichloroethane	6.00E-04	mg/L	2.0E-06	mg/kg-day	1.4E-03	mg/kg-day	1.4E-03
				1,2-Dichloroethene (Total)	4.34E-01	mg/L	1.4E-03	mg/kg-day	1.0E-02	mg/kg-day	1.4E-01
				1,2-Dichloropropane	2.00E-03	mg/L	6.6E-06	mg/kg-day	1.1E-03	mg/kg-day	6.0E-03
				1,2,3-Trichloropropane	3.00E-04	mg/L	9.9E-07	mg/kg-day	1.4E-03	mg/kg-day	7.1E-04
				1,3-Dichloropropane	9.00E-04	mg/L	3.0E-06	mg/kg-day	1.1E-03	mg/kg-day	2.7E-03
				2,2'-Oxybis(1-chloropropane)	7.00E-04	mg/L	2.3E-06	mg/kg-day	4.0E-02	mg/kg-day	5.8E-05
				2-Methylnaphthalene	9.28E-01	mg/L	3.1E-03	mg/kg-day	8.6E-04	mg/kg-day	3.6E+00
				Benzene	2.00E-03	mg/L	6.6E-06	mg/kg-day	8.6E-03	mg/kg-day	7.7E-04
				Chloroethane	5.00E-03	mg/L	1.6E-05	mg/kg-day	2.9E+00	mg/kg-day	5.7E-06
				Ethylbenzene	2.11E-02	mg/L	7.0E-05	mg/kg-day	2.9E-01	mg/kg-day	2.4E-04
				Methyl-t-butyl ether	1.13E-02	mg/L	3.7E-05	mg/kg-day	8.6E-01	mg/kg-day	4.3E-05
				Naphthalene	3.32E+00	mg/L	1.1E-02	mg/kg-day	8.6E-04	mg/kg-day	1.3E+01
				Tetrachloroethene	3.00E-03	mg/L	9.9E-06	mg/kg-day	1.7E-01	mg/kg-day	5.8E-05
				Trichloroethene	1.29E-02	mg/L	4.3E-05	mg/kg-day	1.0E-02	mg/kg-day	4.3E-03
				Vinyl chloride	3.04E-02	mg/L	1.0E-04	mg/kg-day	2.9E-02	mg/kg-day	3.5E-03
				Xylene (Total)	2.06E-01	mg/L	6.8E-04	mg/kg-day	2.9E-02	mg/kg-day	2.3E-02
			Exp. Route Total								1.6E+01
		Exposure Point Total									4.2E+01
	Exposure Medium Total										4.3E+01
Medium Total											4.3E+01
										Total of Receptor Hazards Across All Media	4.3E+01

Notes:

-- Not Applicable or Not Available

TABLE H-7.1.6.RME
EPA RAGS PART D TABLE 7b
CALCULATION OF RME CHEMICAL NONCANCER HAZARDS
FUTURE REDEVELOPED ADULT RESIDENT
SITE 09, ALAMEDA POINT, ALAMEDA, CALIFORNIA

Scenario Timeframe:	Future-Redeveloped
Receptor Population:	Resident
Receptor Age:	Adult

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Non-Cancer Hazard Calculations				
					Value	Units	Intake/Exposure Concentration		RfD/RfC		Hazard Quotient
							Value	Units	Value	Units	

EPC	Exposure point concentration
mg/kg	Milligram per kilogram
mg/kg-day	Milligram per kilogram per day
RfD	Reference dose
RfC	Reference concentration
RME	Reasonable maximum expsoure

(a) See the Vapor Intrusion to Indoor Air Evaluation for determination of the modeled indoor air concentration.

TABLE H-7.1.7.RME
EPA RAGS PART D TABLE 7b
CALCULATION OF RME CHEMICAL NONCANCER HAZARDS
FUTURE REDEVELOPED CHILD RESIDENT
SITE 09, ALAMEDA POINT, ALAMEDA, CALIFORNIA

Scenario Timeframe:	Future-Redeveloped
Receptor Population:	Resident
Receptor Age:	Child

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Non-Cancer Hazard Calculations				
					Value	Units	Intake/Exposure Concentration		RfD/RfC		Hazard Quotient
							Value	Units	Value	Units	
Soil (0-8)	Soil	Site Soil	Ingestion	Arsenic	4.52E+00	mg/kg	5.8E-05	mg/kg-day	3.0E-04	mg/kg-day	1.9E-01
			Exp. Route Total								1.9E-01
			Dermal	Arsenic	4.52E+00	mg/kg	4.9E-06	mg/kg-day	3.0E-04	mg/kg-day	1.6E-02
			Exp. Route Total								1.6E-02
		Exposure Point Total									2.1E-01
	Exposure Medium Total										2.1E-01
	Homegrown Produce	Homegrown Produce	Ingestion	Arsenic	4.52E+00	mg/kg	2.3E-05	mg/kg-day	3.0E-04	mg/kg-day	7.6E-02
			Exp. Route Total								7.6E-02
		Exposure Point Total									7.6E-02
	Exposure Medium Total										7.6E-02
	Air	Outdoor Air	Inhalation (particulates)	Arsenic	4.52E+00	mg/kg	2.2E-09	mg/kg-day	--	--	--
			Exp. Route Total								0.0E+00
		Exposure Point Total									0.0E+00
	Exposure Medium Total										0.0E+00
Medium Total											2.9E-01
Groundwater	Groundwater	Indoor Air (Vapor Intrusion)	Inhalation	Benzene	7.90E-01	(a) ug/m^3	5.1E-04	mg/kg-day	8.6E-03	mg/kg-day	5.9E-02
				Vinyl Chloride	4.58E+01	(a) ug/m^3	3.0E-02	mg/kg-day	2.9E-02	mg/kg-day	1.0E+00
			Exp. Route Total								1.1E+00
		Exposure Point Total									1.1E+00
		Tap	Ingestion	1,1-Dichloroethane	2.03E-02	mg/L	1.3E-03	mg/kg-day	1.0E-01	mg/kg-day	1.3E-02
				1,2-Dichloroethane	6.00E-04	mg/L	3.8E-05	mg/kg-day	3.0E-02	mg/kg-day	1.3E-03
				1,2-Dichloroethene (Total)	4.34E-01	mg/L	2.8E-02	mg/kg-day	1.0E-02	mg/kg-day	2.8E+00
				1,2-Dichloropropane	2.00E-03	mg/L	1.3E-04	mg/kg-day	1.1E-03	mg/kg-day	1.2E-01
				1,2,3-Trichloropropane	3.00E-04	mg/L	1.9E-05	mg/kg-day	6.0E-03	mg/kg-day	3.2E-03
				1,3-Dichloropropane	9.00E-04	mg/L	5.8E-05	mg/kg-day	1.1E-03	mg/kg-day	5.2E-02
				2,2'-Oxybis(1-chloropropane)	7.00E-04	mg/L	4.5E-05	mg/kg-day	4.0E-02	mg/kg-day	1.1E-03
				2-Methylnaphthalene	9.28E-01	mg/L	5.9E-02	mg/kg-day	9.0E-03	mg/kg-day	6.6E+00
				4-Methylphenol	1.20E+00	mg/L	7.7E-02	mg/kg-day	5.0E-03	mg/kg-day	1.5E+01
				Antimony	1.05E-02	mg/L	6.7E-04	mg/kg-day	4.0E-04	mg/kg-day	1.7E+00
				Arsenic	3.70E-02	mg/L	2.4E-03	mg/kg-day	3.0E-04	mg/kg-day	7.9E+00
				Benzene	2.00E-03	mg/L	1.3E-04	mg/kg-day	4.0E-03	mg/kg-day	3.2E-02
				Benz(a)anthracene	1.00E-03	mg/L	6.4E-05	mg/kg-day	--	--	--

TABLE H-7.1.7.RME
EPA RAGS PART D TABLE 7b
CALCULATION OF RME CHEMICAL NONCANCER HAZARDS
FUTURE REDEVELOPED CHILD RESIDENT
SITE 09, ALAMEDA POINT, ALAMEDA, CALIFORNIA

Scenario Timeframe:	Future-Redeveloped
Receptor Population:	Resident
Receptor Age:	Child

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Non-Cancer Hazard Calculations				
					Value	Units	Intake/Exposure Concentration		RfD/RfC		Hazard Quotient
							Value	Units	Value	Units	
				Benzo(a)pyrene	2.00E-03	mg/L	1.3E-04	mg/kg-day	--	--	--
				Benzo(b)fluoranthene	2.00E-03	mg/L	1.3E-04	mg/kg-day	--	--	--
				Benzo(k)fluoranthene	8.00E-04	mg/L	5.1E-05	mg/kg-day	--	--	--
				Chloroethane	5.00E-03	mg/L	3.2E-04	mg/kg-day	4.0E-01	mg/kg-day	8.0E-04
				Chrysene	1.00E-03	mg/L	6.4E-05	mg/kg-day	--	--	--
				Ethylbenzene	2.11E-02	mg/L	1.3E-03	mg/kg-day	1.0E-01	mg/kg-day	1.3E-02
				Indeno(1,2,3-cd)pyrene	1.00E-03	mg/L	6.4E-05	mg/kg-day	--	--	--
				Lead	5.80E-03	mg/L	3.7E-04	mg/kg-day	--	--	--
				Manganese	2.25E+00	mg/L	1.4E-01	mg/kg-day	2.4E-02	mg/kg-day	6.0E+00
				Methyl-t-butyl ether	1.13E-02	mg/L	7.2E-04	mg/kg-day	8.6E-01	mg/kg-day	8.4E-04
				Naphthalene	3.32E+00	mg/L	2.1E-01	mg/kg-day	2.0E-02	mg/kg-day	1.1E+01
				Pentachlorophenol	2.00E-03	mg/L	1.3E-04	mg/kg-day	3.0E-02	mg/kg-day	4.3E-03
				Tetrachloroethene	3.00E-03	mg/L	1.9E-04	mg/kg-day	1.0E-02	mg/kg-day	1.9E-02
				Trichloroethene	1.29E-02	mg/L	8.2E-04	mg/kg-day	3.0E-04	mg/kg-day	2.7E+00
				Vinyl chloride	3.04E-02	mg/L	1.9E-03	mg/kg-day	3.0E-03	mg/kg-day	6.5E-01
				Xylene (Total)	2.06E-01	mg/L	1.3E-02	mg/kg-day	2.0E-01	mg/kg-day	6.6E-02
			Exp. Route Total								5.5E+01
			Dermal (bathing/ showering)	1,1-Dichloroethane	2.03E-02	mg/L	5.7E-05	mg/kg-day	1.0E-01	mg/kg-day	5.7E-04
				1,2-Dichloroethane	6.00E-04	mg/L	1.1E-06	mg/kg-day	3.0E-02	mg/kg-day	3.5E-05
				1,2-Dichloroethene (Total)	4.34E-01	mg/L	1.4E-03	mg/kg-day	1.0E-02	mg/kg-day	1.4E-01
				1,2-Dichloropropane	2.00E-03	mg/L	6.6E-06	mg/kg-day	1.1E-03	mg/kg-day	6.0E-03
				1,2,3-Trichloropropane	3.00E-04	mg/L	9.4E-07	mg/kg-day	6.0E-03	mg/kg-day	1.6E-04
				1,3-Dichloropropane	9.00E-04	mg/L	3.0E-06	mg/kg-day	1.1E-03	mg/kg-day	2.7E-03
				2,2'-Oxybis(1-chloropropane)	7.00E-04	mg/L	2.2E-06	mg/kg-day	4.0E-02	mg/kg-day	5.6E-05
				2-Methylnaphthalene	9.28E-01	mg/L	1.8E-02	mg/kg-day	9.0E-03	mg/kg-day	2.0E+00
				4-Methylphenol	1.20E+00	mg/L	3.8E-03	mg/kg-day	5.0E-03	mg/kg-day	7.6E-01
				Antimony	1.05E-02	mg/L	4.4E-06	mg/kg-day	4.0E-04	mg/kg-day	1.1E-02
				Arsenic	3.70E-02	mg/L	1.6E-05	mg/kg-day	3.0E-04	mg/kg-day	5.2E-02
				Benzene	2.00E-03	mg/L	1.8E-05	mg/kg-day	4.0E-03	mg/kg-day	4.4E-03
				Benz(a)anthracene	1.00E-03	mg/L	2.0E-04	mg/kg-day	--	--	--
				Benzo(a)pyrene	2.00E-03	mg/L	5.9E-04	mg/kg-day	--	--	--
				Benzo(b)fluoranthene	2.00E-03	mg/L	5.9E-04	mg/kg-day	--	--	--
				Benzo(k)fluoranthene	8.00E-04	mg/L	7.4E-05	mg/kg-day	--	--	--
				Chloroethane	5.00E-03	mg/L	1.3E-05	mg/kg-day	4.0E-01	mg/kg-day	3.2E-05
				Chrysene	1.00E-03	mg/L	2.0E-04	mg/kg-day	--	--	--
				Ethylbenzene	2.11E-02	mg/L	4.4E-04	mg/kg-day	1.0E-01	mg/kg-day	4.4E-03

TABLE H-7.1.7.RME
EPA RAGS PART D TABLE 7b
CALCULATION OF RME CHEMICAL NONCANCER HAZARDS
FUTURE REDEVELOPED CHILD RESIDENT
SITE 09, ALAMEDA POINT, ALAMEDA, CALIFORNIA

Scenario Timeframe:	Future-Redeveloped
Receptor Population:	Resident
Receptor Age:	Child

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Non-Cancer Hazard Calculations				
					Value	Units	Intake/Exposure Concentration		RfD/RfC		Hazard Quotient
							Value	Units	Value	Units	
				Indeno(1,2,3-cd)pyrene	1.00E-03	mg/L	4.2E-04	mg/kg-day	--	--	--
				Lead	5.80E-03	mg/L	2.4E-06	mg/kg-day	--	--	--
				Manganese	2.25E+00	mg/L	9.5E-04	mg/kg-day	2.4E-02	mg/kg-day	4.0E-02
				Methyl-t-butyl ether	1.13E-02	mg/L	1.0E-05	mg/kg-day	8.6E-01	mg/kg-day	1.2E-05
				Naphthalene	3.32E+00	mg/L	6.6E-02	mg/kg-day	2.0E-02	mg/kg-day	3.3E+00
				Pentachlorophenol	2.00E-03	mg/L	3.3E-04	mg/kg-day	3.0E-02	mg/kg-day	1.1E-02
				Tetrachloroethene	3.00E-03	mg/L	4.2E-05	mg/kg-day	1.0E-02	mg/kg-day	4.2E-03
				Trichloroethene	1.29E-02	mg/L	6.5E-05	mg/kg-day	3.0E-04	mg/kg-day	2.2E-01
				Vinyl chloride	3.04E-02	mg/L	7.2E-05	mg/kg-day	3.0E-03	mg/kg-day	2.4E-02
				Xylene (Total)	2.06E-01	mg/L	4.6E-03	mg/kg-day	2.0E-01	mg/kg-day	2.3E-02
			Exp. Route Total								6.6E+00
			Inhalation (bathing/ showering)	1,1-Dichloroethane	2.03E-02	mg/L	2.7E-04	mg/kg-day	1.4E-01	mg/kg-day	1.9E-03
				1,2-Dichloroethane	6.00E-04	mg/L	8.1E-06	mg/kg-day	1.4E-03	mg/kg-day	5.8E-03
				1,2-Dichloroethene (Total)	4.34E-01	mg/L	5.8E-03	mg/kg-day	1.0E-02	mg/kg-day	5.8E-01
				1,2-Dichloropropane	2.00E-03	mg/L	2.7E-05	mg/kg-day	1.1E-03	mg/kg-day	2.4E-02
				1,2,3-Trichloropropane	3.00E-04	mg/L	4.0E-06	mg/kg-day	1.4E-03	mg/kg-day	2.9E-03
				1,3-Dichloropropane	9.00E-04	mg/L	1.2E-05	mg/kg-day	1.1E-03	mg/kg-day	1.1E-02
				2,2'-Oxybis(1-chloropropane)	7.00E-04	mg/L	9.4E-06	mg/kg-day	4.0E-02	mg/kg-day	2.3E-04
				2-Methylnaphthalene	9.28E-01	mg/L	1.2E-02	mg/kg-day	8.6E-04	mg/kg-day	1.4E+01
				Benzene	2.00E-03	mg/L	2.7E-05	mg/kg-day	8.6E-03	mg/kg-day	3.1E-03
				Chloroethane	5.00E-03	mg/L	6.7E-05	mg/kg-day	2.9E+00	mg/kg-day	2.3E-05
				Ethylbenzene	2.11E-02	mg/L	2.8E-04	mg/kg-day	2.9E-01	mg/kg-day	9.8E-04
				Methyl-t-butyl ether	1.13E-02	mg/L	1.5E-04	mg/kg-day	8.6E-01	mg/kg-day	1.8E-04
				Naphthalene	3.32E+00	mg/L	4.5E-02	mg/kg-day	8.6E-04	mg/kg-day	5.2E+01
				Tetrachloroethene	3.00E-03	mg/L	4.0E-05	mg/kg-day	1.7E-01	mg/kg-day	2.4E-04
				Trichloroethene	1.29E-02	mg/L	1.7E-04	mg/kg-day	1.0E-02	mg/kg-day	1.7E-02
				Vinyl chloride	3.04E-02	mg/L	4.1E-04	mg/kg-day	2.9E-02	mg/kg-day	1.4E-02
				Xylene (Total)	2.06E-01	mg/L	2.8E-03	mg/kg-day	2.9E-02	mg/kg-day	9.5E-02
			Exp. Route Total								6.7E+01
		Exposure Point Total									1.3E+02
	Exposure Medium Total										1.3E+02
Medium Total											1.3E+02
										Total of Receptor Hazards Across All Media	1.3E+02

Notes:

-- Not Applicable or Not Available

TABLE H-7.1.7.RME
EPA RAGS PART D TABLE 7b
CALCULATION OF RME CHEMICAL NONCANCER HAZARDS
FUTURE REDEVELOPED CHILD RESIDENT
SITE 09, ALAMEDA POINT, ALAMEDA, CALIFORNIA

Scenario Timeframe:	Future-Redeveloped
Receptor Population:	Resident
Receptor Age:	Child

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Non-Cancer Hazard Calculations				
					Value	Units	Intake/Exposure Concentration		RfD/RfC		Hazard Quotient
							Value	Units	Value	Units	

EPC	Exposure point concentration
mg/kg	Milligram per kilogram
mg/kg-day	Milligram per kilogram per day
RfD	Reference dose
RfC	Reference concentration
RME	Reasonable maximum expsoure

(a) See the Vapor Intrusion to Indoor Air Evaluation for determination of the modeled indoor air concentration.

HHRA RISK TABLES

Reasonable Maximum Exposure
Site 13
Alameda Point, Alameda, California

TABLE H-7.2.1.RME
EPA RAGS PART D TABLE 7b
CALCULATION OF RME CHEMICAL NONCANCER HAZARDS
CURRENT INDUSTRIAL WORKER
SITE 13, ALAMEDA POINT, ALAMEDA, CALIFORNIA

Scenario Timeframe:	Future
Receptor Population:	Industrial Worker
Receptor Age:	Adult

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Non-Cancer Hazard Calculations				
					Value	Units	Intake/Exposure Concentration		RfD/RfC		Hazard Quotient
							Value	Units	Value	Units	
Soil (0-2)	Soil	Site Soil	Ingestion	Arsenic	9.62E+00	mg/kg	9.4E-06	mg/kg-day	3.0E-04	mg/kg-day	3.1E-02
				Benz(a)anthracene	1.46E-01	mg/kg	1.4E-07	mg/kg-day	--	--	--
				Benzo(a)pyrene	1.32E-01	mg/kg	1.3E-07	mg/kg-day	--	--	--
				Benzo(b)fluoranthene	1.29E-01	mg/kg	1.3E-07	mg/kg-day	--	--	--
				Benzo(k)fluoranthene	7.96E-02	mg/kg	7.8E-08	mg/kg-day	--	--	--
				Chromium	4.21E+01	mg/kg	4.1E-05	mg/kg-day	1.5E+00	mg/kg-day	2.7E-05
				Dibenz(a,h)anthracene	4.05E-02	mg/kg	4.0E-08	mg/kg-day	--	--	--
				Indeno(1,2,3-cd)pyrene	8.30E-02	mg/kg	8.1E-08	mg/kg-day	--	--	--
				Lead	1.39E+02	mg/kg	1.4E-04	mg/kg-day	--	--	--
			Exp. Route Total								3.1E-02
			Dermal	Arsenic	9.62E+00	mg/kg	1.9E-06	mg/kg-day	3.0E-04	mg/kg-day	6.2E-03
				Benz(a)anthracene	1.46E-01	mg/kg	1.2E-07	mg/kg-day	--	--	--
				Benzo(a)pyrene	1.32E-01	mg/kg	1.1E-07	mg/kg-day	--	--	--
				Benzo(b)fluoranthene	1.29E-01	mg/kg	1.1E-07	mg/kg-day	--	--	--
				Benzo(k)fluoranthene	7.96E-02	mg/kg	6.7E-08	mg/kg-day	--	--	--
				Chromium	4.21E+01	mg/kg	2.7E-06	mg/kg-day	1.5E+00	mg/kg-day	1.8E-06
				Dibenz(a,h)anthracene	4.05E-02	mg/kg	3.4E-08	mg/kg-day	--	--	--
				Indeno(1,2,3-cd)pyrene	8.30E-02	mg/kg	7.0E-08	mg/kg-day	--	--	--
				Lead	1.39E+02	mg/kg	9.0E-06	mg/kg-day	--	--	--
			Exp. Route Total								6.2E-03
		Exposure Point Total									3.8E-02
	Exposure Medium Total										3.8E-02
	Air	Outdoor Air	Inhalation (particulates)	Arsenic	9.62E+00	mg/kg	1.4E-09	mg/kg-day	--	--	--
				Benz(a)anthracene	1.46E-01	mg/kg	2.2E-11	mg/kg-day	--	--	--
				Benzo(a)pyrene	1.32E-01	mg/kg	2.0E-11	mg/kg-day	--	--	--
				Benzo(b)fluoranthene	1.29E-01	mg/kg	1.9E-11	mg/kg-day	--	--	--
				Benzo(k)fluoranthene	7.96E-02	mg/kg	1.2E-11	mg/kg-day	--	--	--
				Chromium	4.21E+01	mg/kg	6.2E-09	mg/kg-day	--	--	--
				Dibenz(a,h)anthracene	4.05E-02	mg/kg	6.0E-12	mg/kg-day	--	--	--
				Indeno(1,2,3-cd)pyrene	8.30E-02	mg/kg	1.2E-11	mg/kg-day	--	--	--
				Lead	1.39E+02	mg/kg	2.1E-08	mg/kg-day	--	--	--
			Exp. Route Total								0.0E+00

TABLE H-7.2.1.RME
EPA RAGS PART D TABLE 7b
CALCULATION OF RME CHEMICAL NONCANCER HAZARDS
CURRENT INDUSTRIAL WORKER
SITE 13, ALAMEDA POINT, ALAMEDA, CALIFORNIA

Scenario Timeframe:	Future
Receptor Population:	Industrial Worker
Receptor Age:	Adult

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Non-Cancer Hazard Calculations				
					Value	Units	Intake/Exposure Concentration		RfD/RfC		Hazard Quotient
							Value	Units	Value	Units	
		Exposure Point Total									0.0E+00
	Exposure Medium Total										0.0E+00
Medium Total											3.8E-02
										Total of Receptor Hazards Across All Media	3.8E-02

Notes:

--	Not Applicable or Not Available
EPC	Exposure point concentration
mg/kg	Milligram per kilogram
mg/kg-day	Milligram per kilogram per day
RfD	Reference dose
RfC	Reference concentration
RME	Reasonable maximum exposure

TABLE H-7.2.2.RME
EPA RAGS PART D TABLE 7b
CALCULATION OF RME CHEMICAL NONCANCER HAZARDS
CURRENT CONSTRUCTION WORKER
SITE 13, ALAMEDA POINT, ALAMEDA, CALIFORNIA

Scenario Timeframe:	Future
Receptor Population:	Construction Worker
Receptor Age:	Adult

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Non-Cancer Hazard Calculations				
					Value	Units	Intake/Exposure Concentration		RfD/RfC		Hazard Quotient
							Value	Units	Value	Units	
Soil (0-2)	Soil	Site Soil	Ingestion	Arsenic	9.62E+00	mg/kg	3.1E-05	mg/kg-day	3.0E-04	mg/kg-day	1.0E-01
				Benz(a)anthracene	1.46E-01	mg/kg	4.7E-07	mg/kg-day	--	--	--
				Benzo(a)pyrene	1.32E-01	mg/kg	4.3E-07	mg/kg-day	--	--	--
				Benzo(b)fluoranthene	1.29E-01	mg/kg	4.2E-07	mg/kg-day	--	--	--
				Benzo(k)fluoranthene	7.96E-02	mg/kg	2.6E-07	mg/kg-day	--	--	--
				Chromium	4.21E+01	mg/kg	1.4E-04	mg/kg-day	1.5E+00	mg/kg-day	9.1E-05
				Dibenz(a,h)anthracene	4.05E-02	mg/kg	1.3E-07	mg/kg-day	--	--	--
				Indeno(1,2,3-cd)pyrene	8.30E-02	mg/kg	2.7E-07	mg/kg-day	--	--	--
				Lead	1.39E+02	mg/kg	4.5E-04	mg/kg-day	--	--	--
			Exp. Route Total								1.0E-01
			Dermal	Arsenic	9.62E+00	mg/kg	2.8E-06	mg/kg-day	3.0E-04	mg/kg-day	9.3E-03
				Benz(a)anthracene	1.46E-01	mg/kg	1.8E-07	mg/kg-day	--	--	--
				Benzo(a)pyrene	1.32E-01	mg/kg	1.7E-07	mg/kg-day	--	--	--
				Benzo(b)fluoranthene	1.29E-01	mg/kg	1.6E-07	mg/kg-day	--	--	--
				Benzo(k)fluoranthene	7.96E-02	mg/kg	1.0E-07	mg/kg-day	--	--	--
				Chromium	4.21E+01	mg/kg	4.1E-06	mg/kg-day	1.5E+00	mg/kg-day	2.7E-06
				Dibenz(a,h)anthracene	4.05E-02	mg/kg	5.1E-08	mg/kg-day	--	--	--
				Indeno(1,2,3-cd)pyrene	8.30E-02	mg/kg	1.0E-07	mg/kg-day	--	--	--
				Lead	1.39E+02	mg/kg	1.3E-05	mg/kg-day	--	--	--
			Exp. Route Total								9.3E-03
		Exposure Point Total									1.1E-01
	Exposure Medium Total										1.1E-01
	Air	Outdoor Air	Inhalation (particulates)	Arsenic	9.62E+00	mg/kg	1.4E-09	mg/kg-day	--	--	--
				Benz(a)anthracene	1.46E-01	mg/kg	2.2E-11	mg/kg-day	--	--	--
				Benzo(a)pyrene	1.32E-01	mg/kg	2.0E-11	mg/kg-day	--	--	--
				Benzo(b)fluoranthene	1.29E-01	mg/kg	1.9E-11	mg/kg-day	--	--	--
				Benzo(k)fluoranthene	7.96E-02	mg/kg	1.2E-11	mg/kg-day	--	--	--
				Chromium	4.21E+01	mg/kg	6.2E-09	mg/kg-day	--	--	--
				Dibenz(a,h)anthracene	4.05E-02	mg/kg	6.0E-12	mg/kg-day	--	--	--
				Indeno(1,2,3-cd)pyrene	8.30E-02	mg/kg	1.2E-11	mg/kg-day	--	--	--
				Lead	1.39E+02	mg/kg	2.1E-08	mg/kg-day	--	--	--
			Exp. Route Total								0.0E+00
		Exposure Point Total									0.0E+00

TABLE H-7.2.2.RME
EPA RAGS PART D TABLE 7b
CALCULATION OF RME CHEMICAL NONCANCER HAZARDS
CURRENT CONSTRUCTION WORKER
SITE 13, ALAMEDA POINT, ALAMEDA, CALIFORNIA

Scenario Timeframe:	Future
Receptor Population:	Construction Worker
Receptor Age:	Adult

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Non-Cancer Hazard Calculations				
					Value	Units	Intake/Exposure Concentration		RfD/RfC		Hazard Quotient
							Value	Units	Value	Units	
	Exposure Medium Total										0.0E+00
Medium Total											1.1E-01
										Total of Receptor Hazards Across All Media	1.1E-01

Notes:

--	Not Applicable or Not Available
EPC	Exposure point concentration
mg/kg	Milligram per kilogram
mg/kg-day	Milligram per kilogram per day
RfD	Reference dose
RfC	Reference concentration
RME	Reasonable maximum exposure

TABLE H-7.2.3.RME
EPA RAGS PART D TABLE 7b
CALCULATION OF RME CHEMICAL NONCANCER HAZARDS
CURRENT ADULT RESIDENT
SITE 13, ALAMEDA POINT, ALAMEDA, CALIFORNIA

Scenario Timeframe:	Future
Receptor Population:	Resident
Receptor Age:	Adult

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Non-Cancer Hazard Calculations				
					Value	Units	Intake/Exposure Concentration		RfD/RfC		Hazard Quotient
							Value	Units	Value	Units	
Soil (0-2)	Soil	Site Soil	Ingestion	Arsenic	9.62E+00	mg/kg	1.3E-05	mg/kg-day	3.0E-04	mg/kg-day	4.4E-02
				Benz(a)anthracene	1.46E-01	mg/kg	2.0E-07	mg/kg-day	--	--	--
				Benzo(a)pyrene	1.32E-01	mg/kg	1.8E-07	mg/kg-day	--	--	--
				Benzo(b)fluoranthene	1.29E-01	mg/kg	1.8E-07	mg/kg-day	--	--	--
				Benzo(k)fluoranthene	7.96E-02	mg/kg	1.1E-07	mg/kg-day	--	--	--
				Chromium	4.21E+01	mg/kg	5.8E-05	mg/kg-day	1.5E+00	mg/kg-day	3.8E-05
				Dibenz(a,h)anthracene	4.05E-02	mg/kg	5.5E-08	mg/kg-day	--	--	--
				Indeno(1,2,3-cd)pyrene	8.30E-02	mg/kg	1.1E-07	mg/kg-day	--	--	--
				Lead	1.39E+02	mg/kg	1.9E-04	mg/kg-day	--	--	--
			Exp. Route Total								4.4E-02
			Dermal	Arsenic	9.62E+00	mg/kg	1.6E-06	mg/kg-day	3.0E-04	mg/kg-day	5.3E-03
				Benz(a)anthracene	1.46E-01	mg/kg	1.0E-07	mg/kg-day	--	--	--
				Benzo(a)pyrene	1.32E-01	mg/kg	9.4E-08	mg/kg-day	--	--	--
				Benzo(b)fluoranthene	1.29E-01	mg/kg	9.2E-08	mg/kg-day	--	--	--
				Benzo(k)fluoranthene	7.96E-02	mg/kg	5.7E-08	mg/kg-day	--	--	--
				Chromium	4.21E+01	mg/kg	2.3E-06	mg/kg-day	1.5E+00	mg/kg-day	1.5E-06
				Dibenz(a,h)anthracene	4.05E-02	mg/kg	2.9E-08	mg/kg-day	--	--	--
				Indeno(1,2,3-cd)pyrene	8.30E-02	mg/kg	5.9E-08	mg/kg-day	--	--	--
				Lead	1.39E+02	mg/kg	7.6E-06	mg/kg-day	--	--	--
			Exp. Route Total								5.3E-03
		Exposure Point Total									4.9E-02
	Exposure Medium Total										4.9E-02
	Homegrown Produce	Homegrown Produce	Ingestion	Arsenic	9.62E+00	mg/kg	4.9E-05	mg/kg-day	3.0E-04	mg/kg-day	1.6E-01
				Benz(a)anthracene	1.46E-01	mg/kg	6.7E-07	mg/kg-day	--	--	--
				Benzo(a)pyrene	1.32E-01	mg/kg	4.6E-07	mg/kg-day	--	--	--
				Benzo(b)fluoranthene	1.29E-01	mg/kg	4.2E-07	mg/kg-day	--	--	--
				Benzo(k)fluoranthene	7.96E-02	mg/kg	2.6E-07	mg/kg-day	--	--	--
				Chromium	4.21E+01	mg/kg	--	mg/kg-day	1.5E+00	mg/kg-day	--
				Dibenz(a,h)anthracene	4.05E-02	mg/kg	2.1E-07	mg/kg-day	--	--	--
				Indeno(1,2,3-cd)pyrene	8.30E-02	mg/kg	2.1E-07	mg/kg-day	--	--	--
				Lead	1.39E+02	mg/kg	--	mg/kg-day	--	--	--
			Exp. Route Total								1.6E-01

TABLE H-7.2.3.RME
EPA RAGS PART D TABLE 7b
CALCULATION OF RME CHEMICAL NONCANCER HAZARDS
CURRENT ADULT RESIDENT
SITE 13, ALAMEDA POINT, ALAMEDA, CALIFORNIA

Scenario Timeframe:	Future
Receptor Population:	Resident
Receptor Age:	Adult

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Non-Cancer Hazard Calculations				
					Value	Units	Intake/Exposure Concentration		RfD/RfC		Hazard Quotient
							Value	Units	Value	Units	
		Exposure Point Total									1.6E-01
	Exposure Medium Total										1.6E-01
	Air	Outdoor Air	Inhalation	Arsenic	9.62E+00	mg/kg	2.0E-09	mg/kg-day	--	--	--
			(particulates)	Benz(a)anthracene	1.46E-01	mg/kg	3.0E-11	mg/kg-day	--	--	--
				Benzo(a)pyrene	1.32E-01	mg/kg	2.7E-11	mg/kg-day	--	--	--
				Benzo(b)fluoranthene	1.29E-01	mg/kg	2.7E-11	mg/kg-day	--	--	--
				Benzo(k)fluoranthene	7.96E-02	mg/kg	1.6E-11	mg/kg-day	--	--	--
				Chromium	4.21E+01	mg/kg	8.7E-09	mg/kg-day	--	--	--
				Dibenz(a,h)anthracene	4.05E-02	mg/kg	8.4E-12	mg/kg-day	--	--	--
				Indeno(1,2,3-cd)pyrene	8.30E-02	mg/kg	1.7E-11	mg/kg-day	--	--	--
				Lead	1.39E+02	mg/kg	2.9E-08	mg/kg-day	--	--	--
			Exp. Route Total								0.0E+00
		Exposure Point Total									0.0E+00
	Exposure Medium Total										0.0E+00
Medium Total											2.1E-01
Groundwater	Groundwater	Tap	Ingestion	1,2-Dichloroethane	4.02E-04	mg/L	1.1E-05	mg/kg-day	3.0E-02	mg/kg-day	3.7E-04
				2-Methylnaphthalene	1.16E-02	mg/L	3.2E-04	mg/kg-day	9.0E-03	mg/kg-day	3.5E-02
				Arsenic	2.86E-02	mg/L	7.8E-04	mg/kg-day	3.0E-04	mg/kg-day	2.6E+00
				Benzene	4.61E-03	mg/L	1.3E-04	mg/kg-day	4.0E-03	mg/kg-day	3.2E-02
				Ethylbenzene	1.02E-03	mg/L	2.8E-05	mg/kg-day	1.0E-01	mg/kg-day	2.8E-04
				Manganese	7.80E+00	mg/L	2.1E-01	mg/kg-day	2.4E-02	mg/kg-day	8.9E+00
				Naphthalene	3.48E-02	mg/L	9.5E-04	mg/kg-day	2.0E-02	mg/kg-day	4.8E-02
				Pentachlorophenol	7.00E-03	mg/L	1.9E-04	mg/kg-day	3.0E-02	mg/kg-day	6.4E-03
				Thallium	2.62E-03	mg/L	7.2E-05	mg/kg-day	6.6E-05	mg/kg-day	1.1E+00
				Trichloroethene	9.06E-04	mg/L	2.5E-05	mg/kg-day	3.0E-04	mg/kg-day	8.3E-02
			Exp. Route Total								1.3E+01
			Dermal	1,2-Dichloroethane	4.02E-04	mg/L	2.4E-07	mg/kg-day	3.0E-02	mg/kg-day	8.0E-06
			(bathing/	2-Methylnaphthalene	1.16E-02	mg/L	7.8E-05	mg/kg-day	9.0E-03	mg/kg-day	8.7E-03
			showering)	Arsenic	2.86E-02	mg/L	4.1E-06	mg/kg-day	3.0E-04	mg/kg-day	1.4E-02
				Benzene	4.61E-03	mg/L	1.4E-05	mg/kg-day	4.0E-03	mg/kg-day	3.5E-03
				Ethylbenzene	1.02E-03	mg/L	7.1E-06	mg/kg-day	1.0E-01	mg/kg-day	7.1E-05
				Manganese	7.80E+00	mg/L	1.1E-03	mg/kg-day	2.4E-02	mg/kg-day	4.6E-02

TABLE H-7.2.3.RME
EPA RAGS PART D TABLE 7b
CALCULATION OF RME CHEMICAL NONCANCER HAZARDS
CURRENT ADULT RESIDENT
SITE 13, ALAMEDA POINT, ALAMEDA, CALIFORNIA

Scenario Timeframe:	Future
Receptor Population:	Resident
Receptor Age:	Adult

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Non-Cancer Hazard Calculations				
					Value	Units	Intake/Exposure Concentration		RfD/RfC		Hazard Quotient
							Value	Units	Value	Units	
				Naphthalene	3.48E-02	mg/L	2.3E-04	mg/kg-day	2.0E-02	mg/kg-day	1.2E-02
				Pentachlorophenol	7.00E-03	mg/L	3.9E-04	mg/kg-day	3.0E-02	mg/kg-day	1.3E-02
				Thallium	2.62E-03	mg/L	3.7E-07	mg/kg-day	6.6E-05	mg/kg-day	5.7E-03
				Trichloroethene	9.06E-04	mg/L	1.6E-06	mg/kg-day	3.0E-04	mg/kg-day	5.2E-03
			Exp. Route Total								1.1E-01
			Inhalation (bathing/ showering)	1,2-Dichloroethane	4.02E-04	mg/L	1.3E-06	mg/kg-day	1.4E-03	mg/kg-day	9.5E-04
				2-Methylnaphthalene	1.16E-02	mg/L	3.8E-05	mg/kg-day	8.6E-04	mg/kg-day	4.4E-02
				Benzene	4.61E-03	mg/L	1.5E-05	mg/kg-day	8.6E-03	mg/kg-day	1.8E-03
				Ethylbenzene	1.02E-03	mg/L	3.4E-06	mg/kg-day	2.9E-01	mg/kg-day	1.2E-05
				Naphthalene	3.48E-02	mg/L	1.1E-04	mg/kg-day	8.6E-04	mg/kg-day	1.3E-01
				Trichloroethene	9.06E-04	mg/L	3.0E-06	mg/kg-day	1.0E-02	mg/kg-day	3.0E-04
			Exp. Route Total								1.8E-01
		Exposure Point Total									1.3E+01
	Exposure Medium Total										1.3E+01
Medium Total											1.3E+01
										Total of Receptor Hazards Across All Media	1.3E+01

Notes:

--	Not Applicable or Not Available
EPC	Exposure point concentration
mg/kg	Milligram per kilogram
mg/kg-day	Milligram per kilogram per day
RfD	Reference dose
RfC	Reference concentration
RME	Reasonable maximum exposure

TABLE H-7.2.4.RME
EPA RAGS PART D TABLE 7b
CALCULATION OF RME CHEMICAL NONCANCER HAZARDS
CURRENT CHILD RESIDENT
SITE 13, ALAMEDA POINT, ALAMEDA, CALIFORNIA

Scenario Timeframe:	Future
Receptor Population:	Resident
Receptor Age:	Child

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Non-Cancer Hazard Calculations				
					Value	Units	Intake/Exposure Concentration		RfD/RfC		Hazard Quotient
							Value	Units	Value	Units	
Soil (0-2)	Soil	Site Soil	Ingestion	Arsenic	9.62E+00	mg/kg	1.2E-04	mg/kg-day	3.0E-04	mg/kg-day	4.1E-01
				Benz(a)anthracene	1.46E-01	mg/kg	1.9E-06	mg/kg-day	--	--	--
				Benzo(a)pyrene	1.32E-01	mg/kg	1.7E-06	mg/kg-day	--	--	--
				Benzo(b)fluoranthene	1.29E-01	mg/kg	1.6E-06	mg/kg-day	--	--	--
				Benzo(k)fluoranthene	7.96E-02	mg/kg	1.0E-06	mg/kg-day	--	--	--
				Chromium	4.21E+01	mg/kg	5.4E-04	mg/kg-day	1.5E+00	mg/kg-day	3.6E-04
				Dibenz(a,h)anthracene	4.05E-02	mg/kg	5.2E-07	mg/kg-day	--	--	--
				Indeno(1,2,3-cd)pyrene	8.30E-02	mg/kg	1.1E-06	mg/kg-day	--	--	--
				Lead	1.39E+02	mg/kg	1.8E-03	mg/kg-day	--	--	--
			Exp. Route Total								4.1E-01
			Dermal	Arsenic	9.62E+00	mg/kg	1.0E-05	mg/kg-day	3.0E-04	mg/kg-day	3.4E-02
				Benz(a)anthracene	1.46E-01	mg/kg	6.8E-07	mg/kg-day	--	--	--
				Benzo(a)pyrene	1.32E-01	mg/kg	6.1E-07	mg/kg-day	--	--	--
				Benzo(b)fluoranthene	1.29E-01	mg/kg	6.0E-07	mg/kg-day	--	--	--
				Benzo(k)fluoranthene	7.96E-02	mg/kg	3.7E-07	mg/kg-day	--	--	--
				Chromium	4.21E+01	mg/kg	1.5E-05	mg/kg-day	1.5E+00	mg/kg-day	1.0E-05
				Dibenz(a,h)anthracene	4.05E-02	mg/kg	1.9E-07	mg/kg-day	--	--	--
				Indeno(1,2,3-cd)pyrene	8.30E-02	mg/kg	3.9E-07	mg/kg-day	--	--	--
				Lead	1.39E+02	mg/kg	5.0E-05	mg/kg-day	--	--	--
			Exp. Route Total								3.4E-02
		Exposure Point Total									4.4E-01
	Exposure Medium Total										4.4E-01
	Homegrown Produce	Homegrown Produce	Ingestion	Arsenic	9.62E+00	mg/kg	4.9E-05	mg/kg-day	3.0E-04	mg/kg-day	1.6E-01
				Benz(a)anthracene	1.46E-01	mg/kg	6.7E-07	mg/kg-day	--	--	--
				Benzo(a)pyrene	1.32E-01	mg/kg	4.6E-07	mg/kg-day	--	--	--
				Benzo(b)fluoranthene	1.29E-01	mg/kg	4.2E-07	mg/kg-day	--	--	--
				Benzo(k)fluoranthene	7.96E-02	mg/kg	2.6E-07	mg/kg-day	--	--	--
				Chromium	4.21E+01	mg/kg	--	mg/kg-day	1.5E+00	mg/kg-day	--
				Dibenz(a,h)anthracene	4.05E-02	mg/kg	2.1E-07	mg/kg-day	--	--	--
				Indeno(1,2,3-cd)pyrene	8.30E-02	mg/kg	2.1E-07	mg/kg-day	--	--	--
				Lead	1.39E+02	mg/kg	--	mg/kg-day	--	--	--
			Exp. Route Total								1.6E-01

TABLE H-7.2.4.RME
EPA RAGS PART D TABLE 7b
CALCULATION OF RME CHEMICAL NONCANCER HAZARDS
CURRENT CHILD RESIDENT
SITE 13, ALAMEDA POINT, ALAMEDA, CALIFORNIA

Scenario Timeframe:	Future
Receptor Population:	Resident
Receptor Age:	Child

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Non-Cancer Hazard Calculations				
					Value	Units	Intake/Exposure Concentration		RfD/RfC		Hazard Quotient
							Value	Units	Value	Units	
		Exposure Point Total									1.6E-01
	Exposure Medium Total										1.6E-01
	Air	Outdoor Air	Inhalation (particulates)	Arsenic	9.62E+00	mg/kg	4.7E-09	mg/kg-day	--	--	--
				Benz(a)anthracene	1.46E-01	mg/kg	7.1E-11	mg/kg-day	--	--	--
				Benzo(a)pyrene	1.32E-01	mg/kg	6.4E-11	mg/kg-day	--	--	--
				Benzo(b)fluoranthene	1.29E-01	mg/kg	6.3E-11	mg/kg-day	--	--	--
				Benzo(k)fluoranthene	7.96E-02	mg/kg	3.9E-11	mg/kg-day	--	--	--
				Chromium	4.21E+01	mg/kg	2.1E-08	mg/kg-day	--	--	--
				Dibenz(a,h)anthracene	4.05E-02	mg/kg	2.0E-11	mg/kg-day	--	--	--
				Indeno(1,2,3-cd)pyrene	8.30E-02	mg/kg	4.1E-11	mg/kg-day	--	--	--
				Lead	1.39E+02	mg/kg	6.8E-08	mg/kg-day	--	--	--
			Exp. Route Total								0.0E+00
		Exposure Point Total									0.0E+00
	Exposure Medium Total										0.0E+00
Medium Total											6.1E-01
Groundwater	Groundwater	Tap	Ingestion	1,2-Dichloroethane	4.02E-04	mg/L	2.6E-05	mg/kg-day	3.0E-02	mg/kg-day	8.6E-04
				2-Methylnaphthalene	1.16E-02	mg/L	7.4E-04	mg/kg-day	9.0E-03	mg/kg-day	8.2E-02
				Arsenic	2.86E-02	mg/L	1.8E-03	mg/kg-day	3.0E-04	mg/kg-day	6.1E+00
				Benzene	4.61E-03	mg/L	2.9E-04	mg/kg-day	4.0E-03	mg/kg-day	7.4E-02
				Ethylbenzene	1.02E-03	mg/L	6.5E-05	mg/kg-day	1.0E-01	mg/kg-day	6.5E-04
				Manganese	7.80E+00	mg/L	5.0E-01	mg/kg-day	2.4E-02	mg/kg-day	2.1E+01
				Naphthalene	3.48E-02	mg/L	2.2E-03	mg/kg-day	2.0E-02	mg/kg-day	1.1E-01
				Pentachlorophenol	7.00E-03	mg/L	4.5E-04	mg/kg-day	3.0E-02	mg/kg-day	1.5E-02
				Thallium	2.62E-03	mg/L	1.7E-04	mg/kg-day	6.6E-05	mg/kg-day	2.5E+00
				Trichloroethene	9.06E-04	mg/L	5.8E-05	mg/kg-day	3.0E-04	mg/kg-day	1.9E-01
			Exp. Route Total								3.0E+01
			Dermal (bathing/ showering)	1,2-Dichloroethane	4.02E-04	mg/L	7.1E-07	mg/kg-day	3.0E-02	mg/kg-day	2.4E-05
				2-Methylnaphthalene	1.16E-02	mg/L	2.3E-04	mg/kg-day	9.0E-03	mg/kg-day	2.6E-02
				Arsenic	2.86E-02	mg/L	1.2E-05	mg/kg-day	3.0E-04	mg/kg-day	4.0E-02
				Benzene	4.61E-03	mg/L	4.1E-05	mg/kg-day	4.0E-03	mg/kg-day	1.0E-02
				Ethylbenzene	1.02E-03	mg/L	2.1E-05	mg/kg-day	1.0E-01	mg/kg-day	2.1E-04
				Manganese	7.80E+00	mg/L	3.3E-03	mg/kg-day	2.4E-02	mg/kg-day	1.4E-01

TABLE H-7.2.4.RME
EPA RAGS PART D TABLE 7b
CALCULATION OF RME CHEMICAL NONCANCER HAZARDS
CURRENT CHILD RESIDENT
SITE 13, ALAMEDA POINT, ALAMEDA, CALIFORNIA

Scenario Timeframe:	Future
Receptor Population:	Resident
Receptor Age:	Child

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Non-Cancer Hazard Calculations				
					Value	Units	Intake/Exposure Concentration		RfD/RfC		Hazard Quotient
							Value	Units	Value	Units	
				Naphthalene	3.48E-02	mg/L	6.9E-04	mg/kg-day	2.0E-02	mg/kg-day	3.5E-02
				Pentachlorophenol	7.00E-03	mg/L	1.2E-03	mg/kg-day	3.0E-02	mg/kg-day	3.8E-02
				Thallium	2.62E-03	mg/L	1.1E-06	mg/kg-day	6.6E-05	mg/kg-day	1.7E-02
				Trichloroethene	9.06E-04	mg/L	4.6E-06	mg/kg-day	3.0E-04	mg/kg-day	1.5E-02
			Exp. Route Total								3.2E-01
			Inhalation (bathing/ showering)	1,2-Dichloroethane	4.02E-04	mg/L	5.4E-06	mg/kg-day	1.4E-03	mg/kg-day	3.9E-03
				2-Methylnaphthalene	1.16E-02	mg/L	1.6E-04	mg/kg-day	8.6E-04	mg/kg-day	1.8E-01
				Benzene	4.61E-03	mg/L	6.2E-05	mg/kg-day	8.6E-03	mg/kg-day	7.2E-03
				Ethylbenzene	1.02E-03	mg/L	1.4E-05	mg/kg-day	2.9E-01	mg/kg-day	4.7E-05
				Naphthalene	3.48E-02	mg/L	4.7E-04	mg/kg-day	8.6E-04	mg/kg-day	5.4E-01
				Trichloroethene	9.06E-04	mg/L	1.2E-05	mg/kg-day	1.0E-02	mg/kg-day	1.2E-03
			Exp. Route Total								7.4E-01
		Exposure Point Total									3.1E+01
	Exposure Medium Total										3.1E+01
Medium Total											3.1E+01
										Total of Receptor Hazards Across All Media	3.2E+01

Notes:

--	Not Applicable or Not Available
EPC	Exposure point concentration
mg/kg	Milligram per kilogram
mg/kg-day	Milligram per kilogram per day
RfD	Reference dose
RfC	Reference concentration
RME	Reasonable maximum exposure

TABLE H-7.2.5.RME
EPA RAGS PART D TABLE 7b
CALCULATION OF RME CHEMICAL NONCANCER HAZARDS
FUTURE DEVELOPED CONSTRUCTION WORKER
SITE 13, ALAMEDA POINT, ALAMEDA, CALIFORNIA

Scenario Timeframe:	Future-Developed
Receptor Population:	Construction Worker
Receptor Age:	Adult

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Non-Cancer Hazard Calculations				
					Value	Units	Intake/Exposure Concentration		RfD/RfC		Hazard Quotient
							Value	Units	Value	Units	
Soil (0-8)	Soil	Site Soil	Ingestion	2-Methylnaphthalene	1.14E+01	mg/kg	3.7E-05	mg/kg-day	9.0E-03	mg/kg-day	4.1E-03
				Arsenic	6.16E+00	mg/kg	2.0E-05	mg/kg-day	3.0E-04	mg/kg-day	6.6E-02
				Benzene	8.97E-02	mg/kg	2.9E-07	mg/kg-day	4.0E-03	mg/kg-day	7.2E-05
				Benz(a)anthracene	1.62E-01	mg/kg	5.2E-07	mg/kg-day	--	--	--
				Benzo(a)pyrene	1.39E-01	mg/kg	4.5E-07	mg/kg-day	--	--	--
				Benzo(b)fluoranthene	1.31E-01	mg/kg	4.2E-07	mg/kg-day	--	--	--
				Benzo(k)fluoranthene	9.57E-02	mg/kg	3.1E-07	mg/kg-day	--	--	--
				Chromium	3.69E+01	mg/kg	1.2E-04	mg/kg-day	1.5E+00	mg/kg-day	7.9E-05
				Chrysene	2.79E-01	mg/kg	9.0E-07	mg/kg-day	--	--	--
				Dibenz(a,h)anthracene	4.83E-02	mg/kg	1.6E-07	mg/kg-day	--	--	--
				Indeno(1,2,3-cd)pyrene	9.28E-02	mg/kg	3.0E-07	mg/kg-day	--	--	--
				Lead	5.47E+01	mg/kg	1.8E-04	mg/kg-day	--	--	--
				Vanadium	2.98E+01	mg/kg	9.6E-05	mg/kg-day	7.0E-03	mg/kg-day	1.4E-02
			Exp. Route Total								8.4E-02
			Dermal	2-Methylnaphthalene	1.14E+01	mg/kg	--	mg/kg-day	9.0E-03	mg/kg-day	--
				Arsenic	6.16E+00	mg/kg	1.8E-06	mg/kg-day	3.0E-04	mg/kg-day	6.0E-03
				Benzene	8.97E-02	mg/kg	--	mg/kg-day	4.0E-03	mg/kg-day	--
				Benz(a)anthracene	1.62E-01	mg/kg	2.0E-07	mg/kg-day	--	--	--
				Benzo(a)pyrene	1.39E-01	mg/kg	1.8E-07	mg/kg-day	--	--	--
				Benzo(b)fluoranthene	1.31E-01	mg/kg	1.6E-07	mg/kg-day	--	--	--
				Benzo(k)fluoranthene	9.57E-02	mg/kg	1.2E-07	mg/kg-day	--	--	--
				Chromium	3.69E+01	mg/kg	3.6E-06	mg/kg-day	1.5E+00	mg/kg-day	2.4E-06
				Chrysene	2.79E-01	mg/kg	3.5E-07	mg/kg-day	--	--	--
				Dibenz(a,h)anthracene	4.83E-02	mg/kg	6.1E-08	mg/kg-day	--	--	--
				Indeno(1,2,3-cd)pyrene	9.28E-02	mg/kg	1.2E-07	mg/kg-day	--	--	--
				Lead	5.47E+01	mg/kg	5.3E-06	mg/kg-day	--	--	--
				Vanadium	2.98E+01	mg/kg	2.9E-06	mg/kg-day	7.0E-03	mg/kg-day	4.1E-04
			Exp. Route Total								6.4E-03
		Exposure Point Total									9.1E-02
	Exposure Medium Total										9.1E-02
	Air	Outdoor Air	Inhalation (particulates)	2-Methylnaphthalene	1.14E+01	mg/kg	1.7E-09	mg/kg-day	8.6E-04	mg/kg-day	2.0E-06
				Arsenic	6.16E+00	mg/kg	9.1E-10	mg/kg-day	--	--	--
				Benzene	8.97E-02	mg/kg	1.3E-11	mg/kg-day	8.6E-03	mg/kg-day	1.5E-09
				Benz(a)anthracene	1.62E-01	mg/kg	2.4E-11	mg/kg-day	--	--	--
				Benzo(a)pyrene	1.39E-01	mg/kg	2.1E-11	mg/kg-day	--	--	--

TABLE H-7.2.5.RME
EPA RAGS PART D TABLE 7b
CALCULATION OF RME CHEMICAL NONCANCER HAZARDS
FUTURE DEVELOPED CONSTRUCTION WORKER
SITE 13, ALAMEDA POINT, ALAMEDA, CALIFORNIA

Scenario Timeframe:	Future-Developed
Receptor Population:	Construction Worker
Receptor Age:	Adult

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Non-Cancer Hazard Calculations				
					Value	Units	Intake/Exposure Concentration		RfD/RfC		Hazard Quotient
							Value	Units	Value	Units	
				Benzo(b)fluoranthene	1.31E-01	mg/kg	1.9E-11	mg/kg-day	--	--	--
				Benzo(k)fluoranthene	9.57E-02	mg/kg	1.4E-11	mg/kg-day	--	--	--
				Chromium	3.69E+01	mg/kg	5.5E-09	mg/kg-day	--	--	--
				Chrysene	2.79E-01	mg/kg	4.1E-11	mg/kg-day	--	--	--
				Dibenz(a,h)anthracene	4.83E-02	mg/kg	7.2E-12	mg/kg-day	--	--	--
				Indeno(1,2,3-cd)pyrene	9.28E-02	mg/kg	1.4E-11	mg/kg-day	--	--	--
				Lead	5.47E+01	mg/kg	8.1E-09	mg/kg-day	--	--	--
				Vanadium	2.98E+01	mg/kg	4.4E-09	mg/kg-day	--	--	--
			Exp. Route Total								2.0E-06
			Inhalation (VOCs)	2-Methylnaphthalene	1.14E+01	mg/kg	5.2E-05	mg/kg-day	8.6E-04	mg/kg-day	6.0E-02
				Benzene	8.97E-02	mg/kg	6.5E-06	mg/kg-day	8.6E-03	mg/kg-day	7.6E-04
			Exp. Route Total								6.1E-02
		Exposure Point Total									6.1E-02
	Exposure Medium Total										6.1E-02
Medium Total											1.5E-01
										Total of Receptor Hazards Across All Media	1.5E-01

Notes:

--	Not Applicable or Not Available
EPC	Exposure point concentration
mg/kg	Milligram per kilogram
mg/kg-day	Milligram per kilogram per day
RfD	Reference dose
RfC	Reference concentration
RME	Reasonable maximum expsoure
VOC	Volatile organic compound

TABLE H-7.2.6.RME
EPA RAGS PART D TABLE 7b
CALCULATION OF RME CHEMICAL NONCANCER HAZARDS
FUTURE REDEVELOPED ADULT RESIDENT
SITE 13, ALAMEDA POINT, ALAMEDA, CALIFORNIA

Scenario Timeframe:	Future-Redeveloped
Receptor Population:	Resident
Receptor Age:	Adult

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Non-Cancer Hazard Calculations				
					Value	Units	Intake/Exposure Concentration		RfD/RfC		Hazard Quotient
							Value	Units	Value	Units	
Soil (0-8)	Soil	Site Soil	Ingestion	2-Methylnaphthalene	1.14E+01	mg/kg	1.6E-05	mg/kg-day	9.0E-03	mg/kg-day	1.7E-03
				Arsenic	6.16E+00	mg/kg	8.4E-06	mg/kg-day	3.0E-04	mg/kg-day	2.8E-02
				Benzene	8.97E-02	mg/kg	1.2E-07	mg/kg-day	4.0E-03	mg/kg-day	3.1E-05
				Benz(a)anthracene	1.62E-01	mg/kg	2.2E-07	mg/kg-day	--	--	--
				Benzo(a)pyrene	1.39E-01	mg/kg	1.9E-07	mg/kg-day	--	--	--
				Benzo(b)fluoranthene	1.31E-01	mg/kg	1.8E-07	mg/kg-day	--	--	--
				Benzo(k)fluoranthene	9.57E-02	mg/kg	1.3E-07	mg/kg-day	--	--	--
				Chromium	3.69E+01	mg/kg	5.1E-05	mg/kg-day	1.5E+00	mg/kg-day	3.4E-05
				Chrysene	2.79E-01	mg/kg	3.8E-07	mg/kg-day	--	--	--
				Dibenz(a,h)anthracene	4.83E-02	mg/kg	6.6E-08	mg/kg-day	--	--	--
				Indeno(1,2,3-cd)pyrene	9.28E-02	mg/kg	1.3E-07	mg/kg-day	--	--	--
				Lead	5.47E+01	mg/kg	7.5E-05	mg/kg-day	--	--	--
				Vanadium	2.98E+01	mg/kg	4.1E-05	mg/kg-day	7.0E-03	mg/kg-day	5.8E-03
			Exp. Route Total								3.0E-02
			Dermal	2-Methylnaphthalene	1.14E+01	mg/kg	--	mg/kg-day	9.0E-03	mg/kg-day	--
				Arsenic	6.16E+00	mg/kg	1.0E-06	mg/kg-day	3.0E-04	mg/kg-day	3.4E-03
				Benzene	8.97E-02	mg/kg	--	mg/kg-day	4.0E-03	mg/kg-day	--
				Benz(a)anthracene	1.62E-01	mg/kg	1.2E-07	mg/kg-day	--	--	--
				Benzo(a)pyrene	1.39E-01	mg/kg	9.9E-08	mg/kg-day	--	--	--
				Benzo(b)fluoranthene	1.31E-01	mg/kg	9.3E-08	mg/kg-day	--	--	--
				Benzo(k)fluoranthene	9.57E-02	mg/kg	6.8E-08	mg/kg-day	--	--	--
				Chromium	3.69E+01	mg/kg	2.0E-06	mg/kg-day	1.5E+00	mg/kg-day	1.3E-06
				Chrysene	2.79E-01	mg/kg	2.0E-07	mg/kg-day	--	--	--
				Dibenz(a,h)anthracene	4.83E-02	mg/kg	3.4E-08	mg/kg-day	--	--	--
				Indeno(1,2,3-cd)pyrene	9.28E-02	mg/kg	6.6E-08	mg/kg-day	--	--	--
				Lead	5.47E+01	mg/kg	3.0E-06	mg/kg-day	--	--	--
				Vanadium	2.98E+01	mg/kg	1.6E-06	mg/kg-day	7.0E-03	mg/kg-day	2.3E-04
			Exp. Route Total								3.4E-03
		Exposure Point Total									3.3E-02
	Exposure Medium Total										3.3E-02
	Homegrown Produce	Homegrown Produce	Ingestion	2-Methylnaphthalene	1.14E+01	mg/kg	--	mg/kg-day	9.0E-03	mg/kg-day	--
				Arsenic	6.16E+00	mg/kg	3.1E-05	mg/kg-day	3.0E-04	mg/kg-day	1.0E-01
				Benzene	8.97E-02	mg/kg	--	mg/kg-day	4.0E-03	mg/kg-day	--
				Benz(a)anthracene	1.62E-01	mg/kg	7.4E-07	mg/kg-day	--	--	--

TABLE H-7.2.6.RME
EPA RAGS PART D TABLE 7b
CALCULATION OF RME CHEMICAL NONCANCER HAZARDS
FUTURE REDEVELOPED ADULT RESIDENT
SITE 13, ALAMEDA POINT, ALAMEDA, CALIFORNIA

Scenario Timeframe:	*Future-Redeveloped*
Receptor Population:	Resident
Receptor Age:	Adult

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Non-Cancer Hazard Calculations				
					Value	Units	Intake/Exposure Concentration		RfD/RfC		Hazard Quotient
							Value	Units	Value	Units	
				Benzo(a)pyrene	1.39E-01	mg/kg	4.9E-07	mg/kg-day	--	--	--
				Benzo(b)fluoranthene	1.31E-01	mg/kg	4.2E-07	mg/kg-day	--	--	--
				Benzo(k)fluoranthene	9.57E-02	mg/kg	3.1E-07	mg/kg-day	--	--	--
				Chromium	3.69E+01	mg/kg	--	mg/kg-day	1.5E+00	mg/kg-day	--
				Chrysene	2.79E-01	mg/kg	1.1E-06	mg/kg-day	--	--	--
				Dibenz(a,h)anthracene	4.83E-02	mg/kg	2.6E-07	mg/kg-day	--	--	--
				Indeno(1,2,3-cd)pyrene	9.28E-02	mg/kg	2.4E-07	mg/kg-day	--	--	--
				Lead	5.47E+01	mg/kg	--	mg/kg-day	--	--	--
				Vanadium	2.98E+01	mg/kg	--	mg/kg-day	7.0E-03	mg/kg-day	--
			Exp. Route Total								1.0E-01
		Exposure Point Total									1.0E-01
	Exposure Medium Total										1.0E-01
	Air	Outdoor Air	Inhalation (particulates)	2-Methylnaphthalene	1.14E+01	mg/kg	2.3E-09	mg/kg-day	8.6E-04	mg/kg-day	2.7E-06
				Arsenic	6.16E+00	mg/kg	1.3E-09	mg/kg-day	--	--	--
				Benzene	8.97E-02	mg/kg	1.9E-11	mg/kg-day	8.6E-03	mg/kg-day	2.2E-09
				Benz(a)anthracene	1.62E-01	mg/kg	3.3E-11	mg/kg-day	--	--	--
				Benzo(a)pyrene	1.39E-01	mg/kg	2.9E-11	mg/kg-day	--	--	--
				Benzo(b)fluoranthene	1.31E-01	mg/kg	2.7E-11	mg/kg-day	--	--	--
				Benzo(k)fluoranthene	9.57E-02	mg/kg	2.0E-11	mg/kg-day	--	--	--
				Chromium	3.69E+01	mg/kg	7.6E-09	mg/kg-day	--	--	--
				Chrysene	2.79E-01	mg/kg	5.8E-11	mg/kg-day	--	--	--
				Dibenz(a,h)anthracene	4.83E-02	mg/kg	1.0E-11	mg/kg-day	--	--	--
				Indeno(1,2,3-cd)pyrene	9.28E-02	mg/kg	1.9E-11	mg/kg-day	--	--	--
				Lead	5.47E+01	mg/kg	1.1E-08	mg/kg-day	--	--	--
				Vanadium	2.98E+01	mg/kg	6.2E-09	mg/kg-day	--	--	--
			Exp. Route Total								2.7E-06
			Inhalation (VOCs)	2-Methylnaphthalene	1.14E+01	mg/kg	7.2E-05	mg/kg-day	8.6E-04	mg/kg-day	8.4E-02
				Benzene	8.97E-02	mg/kg	9.1E-06	mg/kg-day	8.6E-03	mg/kg-day	1.1E-03
			Exp. Route Total								8.5E-02
		Exposure Point Total									8.5E-02
	Exposure Medium Total										8.5E-02
Medium Total											2.2E-01

TABLE H-7.2.6.RME
EPA RAGS PART D TABLE 7b
CALCULATION OF RME CHEMICAL NONCANCER HAZARDS
FUTURE REDEVELOPED ADULT RESIDENT
SITE 13, ALAMEDA POINT, ALAMEDA, CALIFORNIA

Scenario Timeframe:	Future-Redeveloped
Receptor Population:	Resident
Receptor Age:	Adult

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Non-Cancer Hazard Calculations				
					Value	Units	Intake/Exposure Concentration		RfD/RfC		Hazard Quotient
							Value	Units	Value	Units	
Groundwater	Groundwater	Tap	Ingestion	1,2-Dichloroethane	4.02E-04	mg/L	1.1E-05	mg/kg-day	3.0E-02	mg/kg-day	3.7E-04
				2-Methylnaphthalene	1.16E-02	mg/L	3.2E-04	mg/kg-day	9.0E-03	mg/kg-day	3.5E-02
				Arsenic	2.86E-02	mg/L	7.8E-04	mg/kg-day	3.0E-04	mg/kg-day	2.6E+00
				Benzene	4.61E-03	mg/L	1.3E-04	mg/kg-day	4.0E-03	mg/kg-day	3.2E-02
				Ethylbenzene	1.02E-03	mg/L	2.8E-05	mg/kg-day	1.0E-01	mg/kg-day	2.8E-04
				Manganese	7.80E+00	mg/L	2.1E-01	mg/kg-day	2.4E-02	mg/kg-day	8.9E+00
				Naphthalene	3.48E-02	mg/L	9.5E-04	mg/kg-day	2.0E-02	mg/kg-day	4.8E-02
				Pentachlorophenol	7.00E-03	mg/L	1.9E-04	mg/kg-day	3.0E-02	mg/kg-day	6.4E-03
				Thallium	2.62E-03	mg/L	7.2E-05	mg/kg-day	6.6E-05	mg/kg-day	1.1E+00
				Trichloroethene	9.06E-04	mg/L	2.5E-05	mg/kg-day	3.0E-04	mg/kg-day	8.3E-02
			Exp. Route Total								1.3E+01
			Dermal (bathing/ showering)	1,2-Dichloroethane	4.02E-04	mg/L	2.4E-07	mg/kg-day	3.0E-02	mg/kg-day	8.0E-06
				2-Methylnaphthalene	1.16E-02	mg/L	7.8E-05	mg/kg-day	9.0E-03	mg/kg-day	8.7E-03
				Arsenic	2.86E-02	mg/L	4.1E-06	mg/kg-day	3.0E-04	mg/kg-day	1.4E-02
				Benzene	4.61E-03	mg/L	1.4E-05	mg/kg-day	4.0E-03	mg/kg-day	3.5E-03
				Ethylbenzene	1.02E-03	mg/L	7.1E-06	mg/kg-day	1.0E-01	mg/kg-day	7.1E-05
				Manganese	7.80E+00	mg/L	1.1E-03	mg/kg-day	2.4E-02	mg/kg-day	4.6E-02
				Naphthalene	3.48E-02	mg/L	2.3E-04	mg/kg-day	2.0E-02	mg/kg-day	1.2E-02
				Pentachlorophenol	7.00E-03	mg/L	3.9E-04	mg/kg-day	3.0E-02	mg/kg-day	1.3E-02
				Thallium	2.62E-03	mg/L	3.7E-07	mg/kg-day	6.6E-05	mg/kg-day	5.7E-03
				Trichloroethene	9.06E-04	mg/L	1.6E-06	mg/kg-day	3.0E-04	mg/kg-day	5.2E-03
			Exp. Route Total								1.1E-01
			Inhalation (bathing/ showering)	1,2-Dichloroethane	4.02E-04	mg/L	1.3E-06	mg/kg-day	1.4E-03	mg/kg-day	9.5E-04
				2-Methylnaphthalene	1.16E-02	mg/L	3.8E-05	mg/kg-day	8.6E-04	mg/kg-day	4.4E-02
				Benzene	4.61E-03	mg/L	1.5E-05	mg/kg-day	8.6E-03	mg/kg-day	1.8E-03
				Ethylbenzene	1.02E-03	mg/L	3.4E-06	mg/kg-day	2.9E-01	mg/kg-day	1.2E-05
				Naphthalene	3.48E-02	mg/L	1.1E-04	mg/kg-day	8.6E-04	mg/kg-day	1.3E-01
				Trichloroethene	9.06E-04	mg/L	3.0E-06	mg/kg-day	1.0E-02	mg/kg-day	3.0E-04
			Exp. Route Total								1.8E-01
		Exposure Point Total									1.3E+01
	Exposure Medium Total										1.3E+01

TABLE H-7.2.6.RME
EPA RAGS PART D TABLE 7b
CALCULATION OF RME CHEMICAL NONCANCER HAZARDS
FUTURE REDEVELOPED ADULT RESIDENT
SITE 13, ALAMEDA POINT, ALAMEDA, CALIFORNIA

Scenario Timeframe:	Future-Redeveloped
Receptor Population:	Resident
Receptor Age:	Adult

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Non-Cancer Hazard Calculations				
					Value	Units	Intake/Exposure Concentration		RfD/RfC		Hazard Quotient
							Value	Units	Value	Units	
Medium Total											1.3E+01
										Total of Receptor Hazards Across All Media	1.3E+01

Notes:

--	Not Applicable or Not Available
EPC	Exposure point concentration
mg/kg	Milligram per kilogram
mg/kg-day	Milligram per kilogram per day
RfD	Reference dose
RfC	Reference concentration
RME	Reasonable maximum exposure
VOC	Volatile organic compound

TABLE H-7.2.7.RME
EPA RAGS PART D TABLE 7b
CALCULATION OF RME CHEMICAL NONCANCER HAZARDS
FUTURE REDEVELOPED CHILD RESIDENT
SITE 13, ALAMEDA POINT, ALAMEDA, CALIFORNIA

Scenario Timeframe:	Future-Redeveloped
Receptor Population:	Resident
Receptor Age:	Child

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Non-Cancer Hazard Calculations				
					Value	Units	Intake/Exposure Concentration		RfD/RfC		Hazard Quotient
							Value	Units	Value	Units	
Soil (0-8)	Soil	Site Soil	Ingestion	2-Methylnaphthalene	1.14E+01	mg/kg	1.5E-04	mg/kg-day	9.0E-03	mg/kg-day	1.6E-02
				Arsenic	6.16E+00	mg/kg	7.9E-05	mg/kg-day	3.0E-04	mg/kg-day	2.6E-01
				Benzene	8.97E-02	mg/kg	1.1E-06	mg/kg-day	4.0E-03	mg/kg-day	2.9E-04
				Benz(a)anthracene	1.62E-01	mg/kg	2.1E-06	mg/kg-day	--	--	--
				Benzo(a)pyrene	1.39E-01	mg/kg	1.8E-06	mg/kg-day	--	--	--
				Benzo(b)fluoranthene	1.31E-01	mg/kg	1.7E-06	mg/kg-day	--	--	--
				Benzo(k)fluoranthene	9.57E-02	mg/kg	1.2E-06	mg/kg-day	--	--	--
				Chromium	3.69E+01	mg/kg	4.7E-04	mg/kg-day	1.5E+00	mg/kg-day	3.1E-04
				Chrysene	2.79E-01	mg/kg	3.6E-06	mg/kg-day	--	--	--
				Dibenz(a,h)anthracene	4.83E-02	mg/kg	6.2E-07	mg/kg-day	--	--	--
				Indeno(1,2,3-cd)pyrene	9.28E-02	mg/kg	1.2E-06	mg/kg-day	--	--	--
				Lead	5.47E+01	mg/kg	7.0E-04	mg/kg-day	--	--	--
				Vanadium	2.98E+01	mg/kg	3.8E-04	mg/kg-day	7.0E-03	mg/kg-day	5.4E-02
			Exp. Route Total								3.3E-01
			Dermal	2-Methylnaphthalene	1.14E+01	mg/kg	--	mg/kg-day	9.0E-03	mg/kg-day	--
				Arsenic	6.16E+00	mg/kg	6.6E-06	mg/kg-day	3.0E-04	mg/kg-day	2.2E-02
				Benzene	8.97E-02	mg/kg	--	mg/kg-day	4.0E-03	mg/kg-day	--
				Benz(a)anthracene	1.62E-01	mg/kg	7.5E-07	mg/kg-day	--	--	--
				Benzo(a)pyrene	1.39E-01	mg/kg	6.5E-07	mg/kg-day	--	--	--
				Benzo(b)fluoranthene	1.31E-01	mg/kg	6.1E-07	mg/kg-day	--	--	--
				Benzo(k)fluoranthene	9.57E-02	mg/kg	4.5E-07	mg/kg-day	--	--	--
				Chromium	3.69E+01	mg/kg	1.3E-05	mg/kg-day	1.5E+00	mg/kg-day	8.8E-06
				Chrysene	2.79E-01	mg/kg	1.3E-06	mg/kg-day	--	--	--
				Dibenz(a,h)anthracene	4.83E-02	mg/kg	2.2E-07	mg/kg-day	--	--	--
				Indeno(1,2,3-cd)pyrene	9.28E-02	mg/kg	4.3E-07	mg/kg-day	--	--	--
				Lead	5.47E+01	mg/kg	2.0E-05	mg/kg-day	--	--	--
				Vanadium	2.98E+01	mg/kg	1.1E-05	mg/kg-day	7.0E-03	mg/kg-day	1.5E-03
			Exp. Route Total								2.4E-02
		Exposure Point Total									3.6E-01
	Exposure Medium Total										3.6E-01
	Homegrown Produce	Homegrown Produce	Ingestion	2-Methylnaphthalene	1.14E+01	mg/kg	--	mg/kg-day	9.0E-03	mg/kg-day	--
				Arsenic	6.16E+00	mg/kg	3.1E-05	mg/kg-day	3.0E-04	mg/kg-day	1.0E-01
				Benzene	8.97E-02	mg/kg	--	mg/kg-day	4.0E-03	mg/kg-day	--
				Benz(a)anthracene	1.62E-01	mg/kg	7.4E-07	mg/kg-day	--	--	--

TABLE H-7.2.7.RME
EPA RAGS PART D TABLE 7b
CALCULATION OF RME CHEMICAL NONCANCER HAZARDS
FUTURE REDEVELOPED CHILD RESIDENT
SITE 13, ALAMEDA POINT, ALAMEDA, CALIFORNIA

Scenario Timeframe:	Future-Redeveloped
Receptor Population:	Resident
Receptor Age:	Child

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Non-Cancer Hazard Calculations				
					Value	Units	Intake/Exposure Concentration		RfD/RfC		Hazard Quotient
							Value	Units	Value	Units	
				Benzo(a)pyrene	1.39E-01	mg/kg	4.9E-07	mg/kg-day	--	--	--
				Benzo(b)fluoranthene	1.31E-01	mg/kg	4.2E-07	mg/kg-day	--	--	--
				Benzo(k)fluoranthene	9.57E-02	mg/kg	3.1E-07	mg/kg-day	--	--	--
				Chromium	3.69E+01	mg/kg	--	mg/kg-day	1.5E+00	mg/kg-day	--
				Chrysene	2.79E-01	mg/kg	1.1E-06	mg/kg-day	--	--	--
				Dibenz(a,h)anthracene	4.83E-02	mg/kg	2.6E-07	mg/kg-day	--	--	--
				Indeno(1,2,3-cd)pyrene	9.28E-02	mg/kg	2.4E-07	mg/kg-day	--	--	--
				Lead	5.47E+01	mg/kg	--	mg/kg-day	--	--	--
				Vanadium	2.98E+01	mg/kg	--	mg/kg-day	7.0E-03	mg/kg-day	--
			Exp. Route Total								1.0E-01
		Exposure Point Total									1.0E-01
	Exposure Medium Total										1.0E-01
	Air	Outdoor Air	Inhalation (particulates)	2-Methylnaphthalene	1.14E+01	mg/kg	5.5E-09	mg/kg-day	8.6E-04	mg/kg-day	6.4E-06
				Arsenic	6.16E+00	mg/kg	3.0E-09	mg/kg-day	--	--	--
				Benzene	8.97E-02	mg/kg	4.4E-11	mg/kg-day	8.6E-03	mg/kg-day	5.1E-09
				Benz(a)anthracene	1.62E-01	mg/kg	7.9E-11	mg/kg-day	--	--	--
				Benzo(a)pyrene	1.39E-01	mg/kg	6.8E-11	mg/kg-day	--	--	--
				Benzo(b)fluoranthene	1.31E-01	mg/kg	6.4E-11	mg/kg-day	--	--	--
				Benzo(k)fluoranthene	9.57E-02	mg/kg	4.7E-11	mg/kg-day	--	--	--
				Chromium	3.69E+01	mg/kg	1.8E-08	mg/kg-day	--	--	--
				Chrysene	2.79E-01	mg/kg	1.4E-10	mg/kg-day	--	--	--
				Dibenz(a,h)anthracene	4.83E-02	mg/kg	2.4E-11	mg/kg-day	--	--	--
				Indeno(1,2,3-cd)pyrene	9.28E-02	mg/kg	4.5E-11	mg/kg-day	--	--	--
				Lead	5.47E+01	mg/kg	2.7E-08	mg/kg-day	--	--	--
				Vanadium	2.98E+01	mg/kg	1.5E-08	mg/kg-day	--	--	--
			Exp. Route Total								6.4E-06
			Inhalation (VOCs)	2-Methylnaphthalene	1.14E+01	mg/kg	1.7E-04	mg/kg-day	8.6E-04	mg/kg-day	2.0E-01
				Benzene	8.97E-02	mg/kg	2.1E-05	mg/kg-day	8.6E-03	mg/kg-day	2.5E-03
			Exp. Route Total								2.0E-01
		Exposure Point Total									2.0E-01
	Exposure Medium Total										2.0E-01
Medium Total											6.6E-01

TABLE H-7.2.7.RME
EPA RAGS PART D TABLE 7b
CALCULATION OF RME CHEMICAL NONCANCER HAZARDS
FUTURE REDEVELOPED CHILD RESIDENT
SITE 13, ALAMEDA POINT, ALAMEDA, CALIFORNIA

Scenario Timeframe:	Future-Redeveloped
Receptor Population:	Resident
Receptor Age:	Child

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Non-Cancer Hazard Calculations				
					Value	Units	Intake/Exposure Concentration		RfD/RfC		Hazard Quotient
							Value	Units	Value	Units	
Groundwater	Groundwater	Tap	Ingestion	1,2-Dichloroethane	4.02E-04	mg/L	2.6E-05	mg/kg-day	3.0E-02	mg/kg-day	8.6E-04
				2-Methylnaphthalene	1.16E-02	mg/L	7.4E-04	mg/kg-day	9.0E-03	mg/kg-day	8.2E-02
				Arsenic	2.86E-02	mg/L	1.8E-03	mg/kg-day	3.0E-04	mg/kg-day	6.1E+00
				Benzene	4.61E-03	mg/L	2.9E-04	mg/kg-day	4.0E-03	mg/kg-day	7.4E-02
				Ethylbenzene	1.02E-03	mg/L	6.5E-05	mg/kg-day	1.0E-01	mg/kg-day	6.5E-04
				Manganese	7.80E+00	mg/L	5.0E-01	mg/kg-day	2.4E-02	mg/kg-day	2.1E+01
				Naphthalene	3.48E-02	mg/L	2.2E-03	mg/kg-day	2.0E-02	mg/kg-day	1.1E-01
				Pentachlorophenol	7.00E-03	mg/L	4.5E-04	mg/kg-day	3.0E-02	mg/kg-day	1.5E-02
				Thallium	2.62E-03	mg/L	1.7E-04	mg/kg-day	6.6E-05	mg/kg-day	2.5E+00
				Trichloroethene	9.06E-04	mg/L	5.8E-05	mg/kg-day	3.0E-04	mg/kg-day	1.9E-01
			Exp. Route Total								3.0E+01
			Dermal (bathing/ showering)	1,2-Dichloroethane	4.02E-04	mg/L	7.1E-07	mg/kg-day	3.0E-02	mg/kg-day	2.4E-05
				2-Methylnaphthalene	1.16E-02	mg/L	2.3E-04	mg/kg-day	9.0E-03	mg/kg-day	2.6E-02
				Arsenic	2.86E-02	mg/L	1.2E-05	mg/kg-day	3.0E-04	mg/kg-day	4.0E-02
				Benzene	4.61E-03	mg/L	4.1E-05	mg/kg-day	4.0E-03	mg/kg-day	1.0E-02
				Ethylbenzene	1.02E-03	mg/L	2.1E-05	mg/kg-day	1.0E-01	mg/kg-day	2.1E-04
				Manganese	7.80E+00	mg/L	3.3E-03	mg/kg-day	2.4E-02	mg/kg-day	1.4E-01
				Naphthalene	3.48E-02	mg/L	6.9E-04	mg/kg-day	2.0E-02	mg/kg-day	3.5E-02
				Pentachlorophenol	7.00E-03	mg/L	1.2E-03	mg/kg-day	3.0E-02	mg/kg-day	3.8E-02
				Thallium	2.62E-03	mg/L	1.1E-06	mg/kg-day	6.6E-05	mg/kg-day	1.7E-02
				Trichloroethene	9.06E-04	mg/L	4.6E-06	mg/kg-day	3.0E-04	mg/kg-day	1.5E-02
			Exp. Route Total								3.2E-01
			Inhalation (bathing/ showering)	1,2-Dichloroethane	4.02E-04	mg/L	5.4E-06	mg/kg-day	1.4E-03	mg/kg-day	3.9E-03
				2-Methylnaphthalene	1.16E-02	mg/L	1.6E-04	mg/kg-day	8.6E-04	mg/kg-day	1.8E-01
				Benzene	4.61E-03	mg/L	6.2E-05	mg/kg-day	8.6E-03	mg/kg-day	7.2E-03
				Ethylbenzene	1.02E-03	mg/L	1.4E-05	mg/kg-day	2.9E-01	mg/kg-day	4.7E-05
				Naphthalene	3.48E-02	mg/L	4.7E-04	mg/kg-day	8.6E-04	mg/kg-day	5.4E-01
				Trichloroethene	9.06E-04	mg/L	1.2E-05	mg/kg-day	1.0E-02	mg/kg-day	1.2E-03
			Exp. Route Total								7.4E-01
		Exposure Point Total									3.1E+01
	Exposure Medium Total										3.1E+01
Medium Total											3.1E+01
										Total of Receptor Hazards Across All Media	3.2E+01

TABLE H-7.2.7.RME
EPA RAGS PART D TABLE 7b
CALCULATION OF RME CHEMICAL NONCANCER HAZARDS
FUTURE REDEVELOPED CHILD RESIDENT
SITE 13, ALAMEDA POINT, ALAMEDA, CALIFORNIA

Scenario Timeframe:	Future-Redeveloped
Receptor Population:	Resident
Receptor Age:	Child

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Non-Cancer Hazard Calculations				
					Value	Units	Intake/Exposure Concentration		RfD/RfC		Hazard Quotient
							Value	Units	Value	Units	

Notes:

–	Not Applicable or Not Available
EPC	Exposure point concentration
mg/kg	Milligram per kilogram
mg/kg-day	Milligram per kilogram per day
RfD	Reference dose
RfC	Reference concentration
RME	Reasonable maximum expsoure
VOC	Volatile organic compound

HHRA RISK TABLES

Reasonable Maximum Exposure
Site 19
Alameda Point, Alameda, California

TABLE H-7.3.1.RME
EPA RAGS PART D TABLE 7b
CALCULATION OF RME CHEMICAL NONCANCER HAZARDS
CURRENT INDUSTRIAL WORKER
SITE 19, ALAMEDA POINT, ALAMEDA, CALIFORNIA

Scenario Timeframe:	Current/Future
Receptor Population:	Industrial Worker
Receptor Age:	Adult

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Non-Cancer Hazard Calculations				
					Value	Units	Intake/Exposure Concentration		RfD/RfC		Hazard Quotient
							Value	Units	Value	Units	
Soil (0-2)	Soil	Site Soil	Ingestion	Arsenic	8.89E+00	mg/kg	8.7E-06	mg/kg-day	3.0E-04	mg/kg-day	2.9E-02
				Benzo(a)pyrene	8.04E-02	mg/kg	7.9E-08	mg/kg-day	--	--	--
			Exp. Route Total								2.9E-02
			Dermal	Arsenic	8.89E+00	mg/kg	1.7E-06	mg/kg-day	3.0E-04	mg/kg-day	5.7E-03
				Benzo(a)pyrene	8.04E-02	mg/kg	6.7E-08	mg/kg-day	--	--	--
			Exp. Route Total								5.7E-03
		Exposure Point Total									3.5E-02
	Exposure Medium Total										3.5E-02
	Air	Outdoor Air	Inhalation (particulates)	Arsenic	8.89E+00	mg/kg	1.3E-09	mg/kg-day	--	--	--
				Benzo(a)pyrene	8.04E-02	mg/kg	1.2E-11	mg/kg-day	--	--	--
			Exp. Route Total								0.0E+00
		Exposure Point Total									0.0E+00
	Exposure Medium Total										0.0E+00
Medium Total											3.5E-02
										Total of Receptor Hazards Across All Media	3.5E-02

Notes:

EPC	Exposure point concentration
mg/kg	Milligram per kilogram
mg/kg-day	Milligram per kilogram per day
RfD	Reference dose
RfC	Reference concentration
RME	Reasonable maximum exposure
--	Not Applicable or Not Available

TABLE H-7.3.2.RME
EPA RAGS PART D TABLE 7b
CALCULATION OF RME CHEMICAL NONCANCER HAZARDS
CURRENT CONSTRUCTION WORKER
SITE 19, ALAMEDA POINT, ALAMEDA, CALIFORNIA

Scenario Timeframe:	Current/Future
Receptor Population:	Construction Worker
Receptor Age:	Adult

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Non-Cancer Hazard Calculations				
					Value	Units	Intake/Exposure Concentration		RfD/RfC		Hazard Quotient
							Value	Units	Value	Units	
Soil (0-2)	Soil	Site Soil	Ingestion	Arsenic	8.89E+00	mg/kg	2.9E-05	mg/kg-day	3.0E-04	mg/kg-day	9.6E-02
				Benzo(a)pyrene	8.04E-02	mg/kg	2.6E-07	mg/kg-day	--	--	--
			Exp. Route Total								9.6E-02
			Dermal	Arsenic	8.89E+00	mg/kg	2.6E-06	mg/kg-day	3.0E-04	mg/kg-day	8.6E-03
				Benzo(a)pyrene	8.04E-02	mg/kg	1.0E-07	mg/kg-day	--	--	--
			Exp. Route Total								8.6E-03
		Exposure Point Total									1.0E-01
	Exposure Medium Total										1.0E-01
	Air	Outdoor Air	Inhalation (particulates)	Arsenic	8.89E+00	mg/kg	1.3E-09	mg/kg-day	--	--	--
				Benzo(a)pyrene	8.04E-02	mg/kg	1.2E-11	mg/kg-day	--	--	--
			Exp. Route Total								0.0E+00
		Exposure Point Total									0.0E+00
	Exposure Medium Total										0.0E+00
Medium Total											1.0E-01
										Total of Receptor Hazards Across All Media	1.0E-01

Notes:

EPC	Exposure point concentration
mg/kg	Milligram per kilogram
mg/kg-day	Milligram per kilogram per day
RfD	Reference dose
RfC	Reference concentration
RME	Reasonable maximum exposure
--	Not Applicable or Not Available

TABLE H-7.3.3.RME
EPA RAGS PART D TABLE 7b
CALCULATION OF RME CHEMICAL NONCANCER HAZARDS
CURRENT ADULT RESIDENT
SITE 19, ALAMEDA POINT, ALAMEDA, CALIFORNIA

Scenario Timeframe:	Current/Future
Receptor Population:	Resident
Receptor Age:	Adult

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Non-Cancer Hazard Calculations				
					Value	Units	Intake/Exposure Concentration		RfD/RfC		Hazard Quotient
							Value	Units	Value	Units	
Soil (0-2)	Soil	Site Soil	Ingestion	Arsenic	8.89E+00	mg/kg	1.2E-05	mg/kg-day	3.0E-04	mg/kg-day	4.1E-02
				Benzo(a)pyrene	8.04E-02	mg/kg	1.1E-07	mg/kg-day	--	--	--
			Exp. Route Total								4.1E-02
			Dermal	Arsenic	8.89E+00	mg/kg	1.5E-06	mg/kg-day	3.0E-04	mg/kg-day	4.9E-03
				Benzo(a)pyrene	8.04E-02	mg/kg	5.7E-08	mg/kg-day	--	--	--
			Exp. Route Total								4.9E-03
		Exposure Point Total									4.5E-02
	Exposure Medium Total										4.5E-02
	Homegrown Produce	Homegrown Produce	Ingestion	Arsenic	8.89E+00	mg/kg	4.5E-05	mg/kg-day	3.0E-04	mg/kg-day	1.5E-01
				Benzo(a)pyrene	8.04E-02	mg/kg	2.8E-07	mg/kg-day	--	--	--
			Exp. Route Total								1.5E-01
		Exposure Point Total									1.5E-01
	Exposure Medium Total										1.5E-01
	Air	Outdoor Air	Inhalation (particulates)	Arsenic	8.89E+00	mg/kg	1.8E-09	mg/kg-day	--	--	--
				Benzo(a)pyrene	8.04E-02	mg/kg	1.7E-11	mg/kg-day	--	--	--
			Exp. Route Total								0.0E+00
		Exposure Point Total									0.0E+00
	Exposure Medium Total										0.0E+00
Medium Total											2.0E-01
Groundwater	Groundwater	Tap	Ingestion	1,1-Dichloroethane	2.49E-02	mg/L	6.8E-04	mg/kg-day	1.0E-01	mg/kg-day	6.8E-03
				1,2-Dichloroethane	4.45E-04	mg/L	1.2E-05	mg/kg-day	3.0E-02	mg/kg-day	4.1E-04
				1,2-Dichloropropane	1.11E-03	mg/L	3.0E-05	mg/kg-day	1.1E-03	mg/kg-day	2.8E-02
				Arsenic	9.64E-03	mg/L	2.6E-04	mg/kg-day	3.0E-04	mg/kg-day	8.8E-01
				Benzene	6.04E-04	mg/L	1.7E-05	mg/kg-day	4.0E-03	mg/kg-day	4.1E-03
				Manganese	5.17E+00	mg/L	1.4E-01	mg/kg-day	2.4E-02	mg/kg-day	5.9E+00
				Tetrachloroethene	9.35E-03	mg/L	2.6E-04	mg/kg-day	1.0E-02	mg/kg-day	2.6E-02
				Trichloroethene	2.34E-03	mg/L	6.4E-05	mg/kg-day	3.0E-04	mg/kg-day	2.1E-01
			Exp. Route Total								7.1E+00
			Dermal (bathing/ showering)	1,1-Dichloroethane	2.49E-02	mg/L	2.4E-05	mg/kg-day	1.0E-01	mg/kg-day	2.4E-04
				1,2-Dichloroethane	4.45E-04	mg/L	2.7E-07	mg/kg-day	3.0E-02	mg/kg-day	8.9E-06
				1,2-Dichloropropane	1.11E-03	mg/L	1.2E-06	mg/kg-day	1.1E-03	mg/kg-day	1.1E-03

TABLE H-7.3.3.RME
EPA RAGS PART D TABLE 7b
CALCULATION OF RME CHEMICAL NONCANCER HAZARDS
CURRENT ADULT RESIDENT
SITE 19, ALAMEDA POINT, ALAMEDA, CALIFORNIA

Scenario Timeframe:	Current/Future
Receptor Population:	Resident
Receptor Age:	Adult

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Non-Cancer Hazard Calculations				
					Value	Units	Intake/Exposure Concentration		RfD/RfC		Hazard Quotient
							Value	Units	Value	Units	
				Arsenic	9.64E-03	mg/L	1.4E-06	mg/kg-day	3.0E-04	mg/kg-day	4.6E-03
				Benzene	6.04E-04	mg/L	1.8E-06	mg/kg-day	4.0E-03	mg/kg-day	4.5E-04
				Manganese	5.17E+00	mg/L	7.4E-04	mg/kg-day	2.4E-02	mg/kg-day	3.1E-02
				Tetrachloroethene	9.35E-03	mg/L	4.4E-05	mg/kg-day	1.0E-02	mg/kg-day	4.4E-03
				Trichloroethene	2.34E-03	mg/L	4.0E-06	mg/kg-day	3.0E-04	mg/kg-day	1.3E-02
			Exp. Route Total								5.5E-02
			Inhalation (bathing/ showering)	1,1-Dichloroethane	2.49E-02	mg/L	8.2E-05	mg/kg-day	1.4E-01	mg/kg-day	5.9E-04
				1,2-Dichloroethane	4.45E-04	mg/L	1.5E-06	mg/kg-day	1.4E-03	mg/kg-day	1.0E-03
				1,2-Dichloropropane	1.11E-03	mg/L	3.7E-06	mg/kg-day	1.1E-03	mg/kg-day	3.3E-03
				Benzene	6.04E-04	mg/L	2.0E-06	mg/kg-day	8.6E-03	mg/kg-day	2.3E-04
				Tetrachloroethene	9.35E-03	mg/L	3.1E-05	mg/kg-day	1.7E-01	mg/kg-day	1.8E-04
				Trichloroethene	2.34E-03	mg/L	7.7E-06	mg/kg-day	1.0E-02	mg/kg-day	7.7E-04
			Exp. Route Total								6.1E-03
		Exposure Point Total									7.1E+00
	Exposure Medium Total										7.1E+00
Medium Total											7.1E+00
										Total of Receptor Hazards Across All Media	7.3E+00

Notes:

EPC	Exposure point concentration
mg/kg	Milligram per kilogram
mg/kg-day	Milligram per kilogram per day
RfD	Reference dose
RfC	Reference concentration
RME	Reasonable maximum exposure
--	Not Applicable or Not Available

TABLE H-7.3.4.RME
EPA RAGS PART D TABLE 7b
CALCULATION OF RME CHEMICAL NONCANCER HAZARDS
CURRENT CHILD RESIDENT
SITE 19, ALAMEDA POINT, ALAMEDA, CALIFORNIA

Scenario Timeframe:	Current/Future
Receptor Population:	Resident
Receptor Age:	Child

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Non-Cancer Hazard Calculations				
					Value	Units	Intake/Exposure Concentration		RfD/RfC		Hazard Quotient
							Value	Units	Value	Units	
Soil (0-2)	Soil	Site Soil	Ingestion	Arsenic	8.89E+00	mg/kg	1.1E-04	mg/kg-day	3.0E-04	mg/kg-day	3.8E-01
				Benzo(a)pyrene	8.04E-02	mg/kg	1.0E-06	mg/kg-day	–	–	–
			Exp. Route Total								3.8E-01
			Dermal	Arsenic	8.89E+00	mg/kg	9.5E-06	mg/kg-day	3.0E-04	mg/kg-day	3.2E-02
				Benzo(a)pyrene	8.04E-02	mg/kg	3.7E-07	mg/kg-day	–	–	–
			Exp. Route Total								3.2E-02
		Exposure Point Total									4.1E-01
	Exposure Medium Total										4.1E-01
	Homegrown Produce	Homegrown Produce	Ingestion	Arsenic	8.89E+00	mg/kg	4.5E-05	mg/kg-day	3.0E-04	mg/kg-day	1.5E-01
				Benzo(a)pyrene	8.04E-02	mg/kg	2.8E-07	mg/kg-day	–	–	–
			Exp. Route Total								1.5E-01
		Exposure Point Total									1.5E-01
	Exposure Medium Total										1.5E-01
	Air	Outdoor Air	Inhalation (particulates)	Arsenic	8.89E+00	mg/kg	4.3E-09	mg/kg-day	–	–	–
				Benzo(a)pyrene	8.04E-02	mg/kg	3.9E-11	mg/kg-day	–	–	–
			Exp. Route Total								0.0E+00
		Exposure Point Total									0.0E+00
	Exposure Medium Total										0.0E+00
Medium Total											5.6E-01
Groundwater	Groundwater	Tap	Ingestion	1,1-Dichloroethane	2.49E-02	mg/L	1.6E-03	mg/kg-day	1.0E-01	mg/kg-day	1.6E-02
				1,2-Dichloroethane	4.45E-04	mg/L	2.8E-05	mg/kg-day	3.0E-02	mg/kg-day	9.5E-04
				1,2-Dichloropropane	1.11E-03	mg/L	7.1E-05	mg/kg-day	1.1E-03	mg/kg-day	6.5E-02
				Arsenic	9.64E-03	mg/L	6.2E-04	mg/kg-day	3.0E-04	mg/kg-day	2.1E+00
				Benzene	6.04E-04	mg/L	3.9E-05	mg/kg-day	4.0E-03	mg/kg-day	9.7E-03
				Manganese	5.17E+00	mg/L	3.3E-01	mg/kg-day	2.4E-02	mg/kg-day	1.4E+01
				Tetrachloroethene	9.35E-03	mg/L	6.0E-04	mg/kg-day	1.0E-02	mg/kg-day	6.0E-02
				Trichloroethene	2.34E-03	mg/L	1.5E-04	mg/kg-day	3.0E-04	mg/kg-day	5.0E-01
			Exp. Route Total								1.6E+01
			Dermal (bathing/ showering)	1,1-Dichloroethane	2.49E-02	mg/L	7.0E-05	mg/kg-day	1.0E-01	mg/kg-day	7.0E-04
				1,2-Dichloroethane	4.45E-04	mg/L	7.9E-07	mg/kg-day	3.0E-02	mg/kg-day	2.6E-05
				1,2-Dichloropropane	1.11E-03	mg/L	3.7E-06	mg/kg-day	1.1E-03	mg/kg-day	3.3E-03

TABLE H-7.3.4.RME
EPA RAGS PART D TABLE 7b
CALCULATION OF RME CHEMICAL NONCANCER HAZARDS
CURRENT CHILD RESIDENT
SITE 19, ALAMEDA POINT, ALAMEDA, CALIFORNIA

Scenario Timeframe:	Current/Future
Receptor Population:	Resident
Receptor Age:	Child

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Non-Cancer Hazard Calculations				
					Value	Units	Intake/Exposure Concentration		RfD/RfC		Hazard Quotient
							Value	Units	Value	Units	
				Arsenic	9.64E-03	mg/L	4.1E-06	mg/kg-day	3.0E-04	mg/kg-day	1.4E-02
				Benzene	6.04E-04	mg/L	5.4E-06	mg/kg-day	4.0E-03	mg/kg-day	1.3E-03
				Manganese	5.17E+00	mg/L	2.2E-03	mg/kg-day	2.4E-02	mg/kg-day	9.1E-02
				Tetrachloroethene	9.35E-03	mg/L	1.3E-04	mg/kg-day	1.0E-02	mg/kg-day	1.3E-02
				Trichloroethene	2.34E-03	mg/L	1.2E-05	mg/kg-day	3.0E-04	mg/kg-day	3.9E-02
			Exp. Route Total								1.6E-01
			Inhalation (bathing/ showering)	1,1-Dichloroethane	2.49E-02	mg/L	3.3E-04	mg/kg-day	1.4E-01	mg/kg-day	2.4E-03
				1,2-Dichloroethane	4.45E-04	mg/L	6.0E-06	mg/kg-day	1.4E-03	mg/kg-day	4.3E-03
				1,2-Dichloropropane	1.11E-03	mg/L	1.5E-05	mg/kg-day	1.1E-03	mg/kg-day	1.4E-02
				Benzene	6.04E-04	mg/L	8.1E-06	mg/kg-day	8.6E-03	mg/kg-day	9.4E-04
				Tetrachloroethene	9.35E-03	mg/L	1.3E-04	mg/kg-day	1.7E-01	mg/kg-day	7.4E-04
				Trichloroethene	2.34E-03	mg/L	3.1E-05	mg/kg-day	1.0E-02	mg/kg-day	3.1E-03
			Exp. Route Total								2.5E-02
		Exposure Point Total									1.7E+01
	Exposure Medium Total										1.7E+01
Medium Total											1.7E+01
										Total of Receptor Hazards Across All Media	1.7E+01

Notes:

EPC	Exposure point concentration
mg/kg	Milligram per kilogram
mg/kg-day	Milligram per kilogram per day
RfD	Reference dose
RfC	Reference concentration
RME	Reasonable maximum exposure
--	Not Applicable or Not Available

TABLE H-7.3.5.RME
EPA RAGS PART D TABLE 7b
CALCULATION OF RME CHEMICAL NONCANCER HAZARDS
FUTURE DEVELOPED CONSTRUCTION WORKER
SITE 19, ALAMEDA POINT, ALAMEDA, CALIFORNIA

Scenario Timeframe:	*Future-Developed*
Receptor Population:	Construction Worker
Receptor Age:	Adult

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Non-Cancer Hazard Calculations				
					Value	Units	Intake/Exposure Concentration		RfD/RfC		Hazard Quotient
							Value	Units	Value	Units	
Soil (0-8)	Soil	Site Soil	Ingestion	Arsenic	7.75E+00	mg/kg	2.5E-05	mg/kg-day	3.0E-04	mg/kg-day	8.3E-02
				Benzo(a)pyrene	5.51E-02	mg/kg	1.8E-07	mg/kg-day	--	--	--
				Lead	5.50E+01	mg/kg	1.8E-04	mg/kg-day	--	--	--
			Exp. Route Total								8.3E-02
			Dermal	Arsenic	7.75E+00	mg/kg	2.3E-06	mg/kg-day	3.0E-04	mg/kg-day	7.5E-03
				Benzo(a)pyrene	5.51E-02	mg/kg	6.9E-08	mg/kg-day	--	--	--
				Lead	5.50E+01	mg/kg	5.3E-06	mg/kg-day	--	--	--
			Exp. Route Total								7.5E-03
		Exposure Point Total									9.1E-02
	Exposure Medium Total										9.1E-02
	Air	Outdoor Air	Inhalation (particulates)	Arsenic	7.75E+00	mg/kg	1.1E-09	mg/kg-day	--	--	--
				Benzo(a)pyrene	5.51E-02	mg/kg	8.2E-12	mg/kg-day	--	--	--
				Lead	5.50E+01	mg/kg	8.2E-09	mg/kg-day	--	--	--
			Exp. Route Total								0.0E+00
		Exposure Point Total									0.0E+00
	Exposure Medium Total										0.0E+00
Medium Total											9.1E-02
										Total of Receptor Hazards Across All Media	9.1E-02

Notes:

EPC	Exposure point concentration
mg/kg	Milligram per kilogram
mg/kg-day	Milligram per kilogram per day
RfD	Reference dose
RfC	Reference concentration
RME	Reasonable maximum expsoure
--	Not Applicable or Not Available

TABLE H-7.3.6.RME
EPA RAGS PART D TABLE 7b
CALCULATION OF RME CHEMICAL NONCANCER HAZARDS
FUTURE REDEVELOPED ADULT RESIDENT
SITE 19, ALAMEDA POINT, ALAMEDA, CALIFORNIA

Scenario Timeframe:	Future-Redeveloped
Receptor Population:	Resident
Receptor Age:	Adult

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Non-Cancer Hazard Calculations				
					Value	Units	Intake/Exposure Concentration		RfD/RfC		Hazard Quotient
							Value	Units	Value	Units	
Soil (0-8)	Soil	Site Soil	Ingestion	Arsenic	7.75E+00	mg/kg	1.1E-05	mg/kg-day	3.0E-04	mg/kg-day	3.5E-02
				Benzo(a)pyrene	5.51E-02	mg/kg	7.5E-08	mg/kg-day	--	--	--
				Lead	5.50E+01	mg/kg	7.5E-05	mg/kg-day	--	--	--
			Exp. Route Total								3.5E-02
			Dermal	Arsenic	7.75E+00	mg/kg	1.3E-06	mg/kg-day	3.0E-04	mg/kg-day	4.2E-03
				Benzo(a)pyrene	5.51E-02	mg/kg	3.9E-08	mg/kg-day	--	--	--
				Lead	5.50E+01	mg/kg	3.0E-06	mg/kg-day	--	--	--
			Exp. Route Total								4.2E-03
		Exposure Point Total									4.0E-02
	Exposure Medium Total										4.0E-02
	Homegrown Produce	Homegrown Produce	Ingestion	Arsenic	7.75E+00	mg/kg	3.9E-05	mg/kg-day	3.0E-04	mg/kg-day	1.3E-01
				Benzo(a)pyrene	5.51E-02	mg/kg	1.9E-07	mg/kg-day	--	--	--
				Lead	5.50E+01	mg/kg	--	mg/kg-day	--	--	--
			Exp. Route Total								1.3E-01
		Exposure Point Total									1.3E-01
	Exposure Medium Total										1.3E-01
	Air	Outdoor Air	Inhalation (particulates)	Arsenic	7.75E+00	mg/kg	1.6E-09	mg/kg-day	--	--	--
				Benzo(a)pyrene	5.51E-02	mg/kg	1.1E-11	mg/kg-day	--	--	--
				Lead	5.50E+01	mg/kg	1.1E-08	mg/kg-day	--	--	--
			Exp. Route Total								0.0E+00
		Exposure Point Total									0.0E+00
	Exposure Medium Total										0.0E+00
Medium Total											1.7E-01
Groundwater	Groundwater	Tap	Ingestion	1,1-Dichloroethane	2.49E-02	mg/L	6.8E-04	mg/kg-day	1.0E-01	mg/kg-day	6.8E-03
				1,2-Dichloroethane	4.45E-04	mg/L	1.2E-05	mg/kg-day	3.0E-02	mg/kg-day	4.1E-04
				1,2-Dichloropropane	1.11E-03	mg/L	3.0E-05	mg/kg-day	1.1E-03	mg/kg-day	2.8E-02
				Arsenic	9.64E-03	mg/L	2.6E-04	mg/kg-day	3.0E-04	mg/kg-day	8.8E-01
				Benzene	6.04E-04	mg/L	1.7E-05	mg/kg-day	4.0E-03	mg/kg-day	4.1E-03
				Manganese	5.17E+00	mg/L	1.4E-01	mg/kg-day	2.4E-02	mg/kg-day	5.9E+00
				Tetrachloroethene	9.35E-03	mg/L	2.6E-04	mg/kg-day	1.0E-02	mg/kg-day	2.6E-02
				Trichloroethene	2.34E-03	mg/L	6.4E-05	mg/kg-day	3.0E-04	mg/kg-day	2.1E-01
			Exp. Route Total								7.1E+00

TABLE H-7.3.6.RME
EPA RAGS PART D TABLE 7b
CALCULATION OF RME CHEMICAL NONCANCER HAZARDS
FUTURE REDEVELOPED ADULT RESIDENT
SITE 19, ALAMEDA POINT, ALAMEDA, CALIFORNIA

Scenario Timeframe:	Future-Redeveloped
Receptor Population:	Resident
Receptor Age:	Adult

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Non-Cancer Hazard Calculations				
					Value	Units	Intake/Exposure Concentration		RfD/RfC		Hazard Quotient
							Value	Units	Value	Units	
			Dermal (bathing/ showering)	1,1-Dichloroethane	2.49E-02	mg/L	2.4E-05	mg/kg-day	1.0E-01	mg/kg-day	2.4E-04
				1,2-Dichloroethane	4.45E-04	mg/L	2.7E-07	mg/kg-day	3.0E-02	mg/kg-day	8.9E-06
				1,2-Dichloropropane	1.11E-03	mg/L	1.2E-06	mg/kg-day	1.1E-03	mg/kg-day	1.1E-03
				Arsenic	9.64E-03	mg/L	1.4E-06	mg/kg-day	3.0E-04	mg/kg-day	4.6E-03
				Benzene	6.04E-04	mg/L	1.8E-06	mg/kg-day	4.0E-03	mg/kg-day	4.5E-04
				Manganese	5.17E+00	mg/L	7.4E-04	mg/kg-day	2.4E-02	mg/kg-day	3.1E-02
				Tetrachloroethene	9.35E-03	mg/L	4.4E-05	mg/kg-day	1.0E-02	mg/kg-day	4.4E-03
				Trichloroethene	2.34E-03	mg/L	4.0E-06	mg/kg-day	3.0E-04	mg/kg-day	1.3E-02
			Exp. Route Total								5.5E-02
			Inhalation (bathing/ showering)	1,1-Dichloroethane	2.49E-02	mg/L	8.2E-05	mg/kg-day	1.4E-01	mg/kg-day	5.9E-04
				1,2-Dichloroethane	4.45E-04	mg/L	1.5E-06	mg/kg-day	1.4E-03	mg/kg-day	1.0E-03
				1,2-Dichloropropane	1.11E-03	mg/L	3.7E-06	mg/kg-day	1.1E-03	mg/kg-day	3.3E-03
				Benzene	6.04E-04	mg/L	2.0E-06	mg/kg-day	8.6E-03	mg/kg-day	2.3E-04
				Tetrachloroethene	9.35E-03	mg/L	3.1E-05	mg/kg-day	1.7E-01	mg/kg-day	1.8E-04
				Trichloroethene	2.34E-03	mg/L	7.7E-06	mg/kg-day	1.0E-02	mg/kg-day	7.7E-04
			Exp. Route Total								6.1E-03
		Exposure Point Total									7.1E+00
	Exposure Medium Total										7.1E+00
Medium Total											7.1E+00
										Total of Receptor Hazards Across All Media	7.3E+00

Notes:

EPC	Exposure point concentration
mg/kg	Milligram per kilogram
mg/kg-day	Milligram per kilogram per day
RfD	Reference dose
RfC	Reference concentration
RME	Reasonable maximum expsoure
--	Not Applicable or Not Available

TABLE H-7.3.7.RME
EPA RAGS PART D TABLE 7b
CALCULATION OF RME CHEMICAL NONCANCER HAZARDS
FUTURE REDEVELOPED CHILD RESIDENT
SITE 19, ALAMEDA POINT, ALAMEDA, CALIFORNIA

Scenario Timeframe:	Future-Redeveloped
Receptor Population:	Resident
Receptor Age:	Child

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Non-Cancer Hazard Calculations				
					Value	Units	Intake/Exposure Concentration		RfD/RfC		Hazard Quotient
							Value	Units	Value	Units	
Soil (0-8)	Soil	Site Soil	Ingestion	Arsenic	7.75E+00	mg/kg	9.9E-05	mg/kg-day	3.0E-04	mg/kg-day	3.3E-01
				Benzo(a)pyrene	5.51E-02	mg/kg	7.0E-07	mg/kg-day	--	--	--
				Lead	5.50E+01	mg/kg	7.0E-04	mg/kg-day	--	--	--
			Exp. Route Total								3.3E-01
			Dermal	Arsenic	7.75E+00	mg/kg	8.3E-06	mg/kg-day	3.0E-04	mg/kg-day	2.8E-02
				Benzo(a)pyrene	5.51E-02	mg/kg	2.6E-07	mg/kg-day	--	--	--
				Lead	5.50E+01	mg/kg	2.0E-05	mg/kg-day	--	--	--
			Exp. Route Total								2.8E-02
		Exposure Point Total									3.6E-01
	Exposure Medium Total										3.6E-01
	Homegrown Produce	Homegrown Produce	Ingestion	Arsenic	7.75E+00	mg/kg	3.9E-05	mg/kg-day	3.0E-04	mg/kg-day	1.3E-01
				Benzo(a)pyrene	5.51E-02	mg/kg	1.9E-07	mg/kg-day	--	--	--
				Lead	5.50E+01	mg/kg	--	mg/kg-day	--	--	--
			Exp. Route Total								1.3E-01
		Exposure Point Total									1.3E-01
	Exposure Medium Total										1.3E-01
	Air	Outdoor Air	Inhalation (particulates)	Arsenic	7.75E+00	mg/kg	3.8E-09	mg/kg-day	--	--	--
				Benzo(a)pyrene	5.51E-02	mg/kg	2.7E-11	mg/kg-day	--	--	--
				Lead	5.50E+01	mg/kg	2.7E-08	mg/kg-day	--	--	--
			Exp. Route Total								0.0E+00
		Exposure Point Total									0.0E+00
	Exposure Medium Total										0.0E+00
Medium Total											4.9E-01
Groundwater	Groundwater	Tap	Ingestion	1,1-Dichloroethane	2.49E-02	mg/L	1.6E-03	mg/kg-day	1.0E-01	mg/kg-day	1.6E-02
				1,2-Dichloroethane	4.45E-04	mg/L	2.8E-05	mg/kg-day	3.0E-02	mg/kg-day	9.5E-04
				1,2-Dichloropropane	1.11E-03	mg/L	7.1E-05	mg/kg-day	1.1E-03	mg/kg-day	6.5E-02
				Arsenic	9.64E-03	mg/L	6.2E-04	mg/kg-day	3.0E-04	mg/kg-day	2.1E+00
				Benzene	6.04E-04	mg/L	3.9E-05	mg/kg-day	4.0E-03	mg/kg-day	9.7E-03
				Manganese	5.17E+00	mg/L	3.3E-01	mg/kg-day	2.4E-02	mg/kg-day	1.4E+01
				Tetrachloroethene	9.35E-03	mg/L	6.0E-04	mg/kg-day	1.0E-02	mg/kg-day	6.0E-02
				Trichloroethene	2.34E-03	mg/L	1.5E-04	mg/kg-day	3.0E-04	mg/kg-day	5.0E-01
			Exp. Route Total								1.6E+01

TABLE H-7.3.7.RME
EPA RAGS PART D TABLE 7b
CALCULATION OF RME CHEMICAL NONCANCER HAZARDS
FUTURE REDEVELOPED CHILD RESIDENT
SITE 19, ALAMEDA POINT, ALAMEDA, CALIFORNIA

Scenario Timeframe:	Future-Redeveloped
Receptor Population:	Resident
Receptor Age:	Child

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Non-Cancer Hazard Calculations				
					Value	Units	Intake/Exposure Concentration		RfD/RfC		Hazard Quotient
							Value	Units	Value	Units	
			Dermal (bathing/ showering)	1,1-Dichloroethane	2.49E-02	mg/L	7.0E-05	mg/kg-day	1.0E-01	mg/kg-day	7.0E-04
				1,2-Dichloroethane	4.45E-04	mg/L	7.9E-07	mg/kg-day	3.0E-02	mg/kg-day	2.6E-05
				1,2-Dichloropropane	1.11E-03	mg/L	3.7E-06	mg/kg-day	1.1E-03	mg/kg-day	3.3E-03
				Arsenic	9.64E-03	mg/L	4.1E-06	mg/kg-day	3.0E-04	mg/kg-day	1.4E-02
				Benzene	6.04E-04	mg/L	5.4E-06	mg/kg-day	4.0E-03	mg/kg-day	1.3E-03
				Manganese	5.17E+00	mg/L	2.2E-03	mg/kg-day	2.4E-02	mg/kg-day	9.1E-02
				Tetrachloroethene	9.35E-03	mg/L	1.3E-04	mg/kg-day	1.0E-02	mg/kg-day	1.3E-02
				Trichloroethene	2.34E-03	mg/L	1.2E-05	mg/kg-day	3.0E-04	mg/kg-day	3.9E-02
			Exp. Route Total								1.6E-01
			Inhalation (bathing/ showering)	1,1-Dichloroethane	2.49E-02	mg/L	3.3E-04	mg/kg-day	1.4E-01	mg/kg-day	2.4E-03
				1,2-Dichloroethane	4.45E-04	mg/L	6.0E-06	mg/kg-day	1.4E-03	mg/kg-day	4.3E-03
				1,2-Dichloropropane	1.11E-03	mg/L	1.5E-05	mg/kg-day	1.1E-03	mg/kg-day	1.4E-02
				Benzene	6.04E-04	mg/L	8.1E-06	mg/kg-day	8.6E-03	mg/kg-day	9.4E-04
				Tetrachloroethene	9.35E-03	mg/L	1.3E-04	mg/kg-day	1.7E-01	mg/kg-day	7.4E-04
				Trichloroethene	2.34E-03	mg/L	3.1E-05	mg/kg-day	1.0E-02	mg/kg-day	3.1E-03
			Exp. Route Total								2.5E-02
		Exposure Point Total									1.7E+01
	Exposure Medium Total										1.7E+01
Medium Total											1.7E+01
										Total of Receptor Hazards Across All Media	1.7E+01

Notes:

EPC	Exposure point concentration
mg/kg	Milligram per kilogram
mg/kg-day	Milligram per kilogram per day
RfD	Reference dose
RfC	Reference concentration
RME	Reasonable maximum expsoure
--	Not Applicable or Not Available

HHRA RISK TABLES

Reasonable Maximum Exposure
Site 22
Alameda Point, Alameda, California

TABLE H-7.4.1.RME
EPA RAGS PART D TABLE 7b
CALCULATION OF RME CHEMICAL NONCANCER HAZARDS
CURRENT INDUSTRIAL WORKER
SITE 22, ALAMEDA POINT, ALAMEDA, CALIFORNIA

Scenario Timeframe:	Current
Receptor Population:	Industrial Worker
Receptor Age:	Adult

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Non-Cancer Hazard Calculations				
					Value	Units	Intake/Exposure Concentration		RfD/RfC		Hazard Quotient
							Value	Units	Value	Units	
Soil (0-2)	Soil	Site Soil	Ingestion	2-Methylnaphthalene	4.60E-01	mg/kg	4.5E-07	mg/kg-day	9.0E-03	mg/kg-day	5.0E-05
				Arsenic	1.04E+01	mg/kg	1.0E-05	mg/kg-day	3.0E-04	mg/kg-day	3.4E-02
				Benzo(a)pyrene	5.12E-02	mg/kg	5.0E-08	mg/kg-day	--	--	--
				Lead	1.52E+03	mg/kg	1.5E-03	mg/kg-day	--	--	--
			Exp. Route Total								3.4E-02
			Dermal	2-Methylnaphthalene	4.60E-01	mg/kg	--	mg/kg-day	9.0E-03	mg/kg-day	--
				Arsenic	1.04E+01	mg/kg	2.0E-06	mg/kg-day	3.0E-04	mg/kg-day	6.7E-03
				Benzo(a)pyrene	5.12E-02	mg/kg	4.3E-08	mg/kg-day	--	--	--
				Lead	1.52E+03	mg/kg	9.8E-05	mg/kg-day	--	--	--
			Exp. Route Total								6.7E-03
		Exposure Point Total									4.1E-02
	Exposure Medium Total										4.1E-02
	Air	Outdoor Air	Inhalation (particulates)	2-Methylnaphthalene	4.60E-01	mg/kg	6.8E-11	mg/kg-day	8.6E-04	mg/kg-day	7.9E-08
				Arsenic	1.04E+01	mg/kg	1.5E-09	mg/kg-day	--	--	--
				Benzo(a)pyrene	5.12E-02	mg/kg	7.6E-12	mg/kg-day	--	--	--
				Lead	1.52E+03	mg/kg	2.3E-07	mg/kg-day	--	--	--
			Exp. Route Total								7.9E-08
		Exposure Point Total									7.9E-08
	Exposure Medium Total										7.9E-08
Medium Total											4.1E-02
Groundwater	Groundwater	Indoor Air (Vapor Intrusion)	Inhalation	Benzene	1.40E+00	(a) ug/m3	2.7E-04	mg/kg-day	8.6E-03	mg/kg-day	3.2E-02
				Ethylbenzene	1.10E+00	(a) ug/m3	2.2E-04	mg/kg-day	2.9E-01	mg/kg-day	7.4E-04
				o-Xylene	2.60E+00	(a) ug/m3	5.1E-04	mg/kg-day	2.9E-02	mg/kg-day	1.8E-02
				m-Xylene	4.70E-01	(a) ug/m3	9.2E-05	mg/kg-day	2.9E-02	mg/kg-day	3.2E-03
				Toluene	2.90E+00	(a) ug/m3	5.7E-04	mg/kg-day	1.1E-01	mg/kg-day	5.2E-03
			Exp. Route Total								5.8E-02

TABLE H-7.4.1.RME
EPA RAGS PART D TABLE 7b
CALCULATION OF RME CHEMICAL NONCANCER HAZARDS
CURRENT INDUSTRIAL WORKER
SITE 22, ALAMEDA POINT, ALAMEDA, CALIFORNIA

Scenario Timeframe:	Current
Receptor Population:	Industrial Worker
Receptor Age:	Adult

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Non-Cancer Hazard Calculations				
					Value	Units	Intake/Exposure Concentration		RfD/RfC		Hazard Quotient
							Value	Units	Value	Units	
		Exposure Point Total									5.8E-02
	Exposure Medium Total										5.8E-02
Medium Total											5.8E-02
										Total of Receptor Hazards Across All Media	9.9E-02

Notes:

EPC	*Exposure point concentration*
mg/kg	Milligram per kilogram
mg/kg-day	Milligram per kilogram per day
RfD	Reference dose
RfC	Reference concentration
RME	Reasonable maximum exposure
–	Not Applicable or Not Available

(a) See the Vapor Intrusion to Indoor Air Evaluation for determination of the modeled indoor air concentration.

TABLE H-7.4.2.RME
EPA RAGS PART D TABLE 7b
CALCULATION OF RME CHEMICAL NONCANCER HAZARDS
CURRENT CONSTRUCTION WORKER
SITE 22, ALAMEDA POINT, ALAMEDA, CALIFORNIA

Scenario Timeframe:	Current
Receptor Population:	Construction Worker
Receptor Age:	Adult

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Non-Cancer Hazard Calculations				
					Value	Units	Intake/Exposure Concentration		RfD/RfC		Hazard Quotient
							Value	Units	Value	Units	
Soil (0-2)	Soil	Site Soil	Ingestion	2-Methylnaphthalene	4.60E-01	mg/kg	1.5E-06	mg/kg-day	9.0E-03	mg/kg-day	1.7E-04
				Arsenic	1.04E+01	mg/kg	3.4E-05	mg/kg-day	3.0E-04	mg/kg-day	1.1E-01
				Benzo(a)pyrene	5.12E-02	mg/kg	1.7E-07	mg/kg-day	--	--	--
				Lead	1.52E+03	mg/kg	4.9E-03	mg/kg-day	--	--	--
			Exp. Route Total								1.1E-01
			Dermal	2-Methylnaphthalene	4.60E-01	mg/kg	--	mg/kg-day	9.0E-03	mg/kg-day	--
				Arsenic	1.04E+01	mg/kg	3.0E-06	mg/kg-day	3.0E-04	mg/kg-day	1.0E-02
				Benzo(a)pyrene	5.12E-02	mg/kg	6.4E-08	mg/kg-day	--	--	--
				Lead	1.52E+03	mg/kg	1.5E-04	mg/kg-day	--	--	--
			Exp. Route Total								1.0E-02
		Exposure Point Total									1.2E-01
	Exposure Medium Total										1.2E-01
	Air	Outdoor Air	Inhalation (particulates)	2-Methylnaphthalene	4.60E-01	mg/kg	6.8E-11	mg/kg-day	8.6E-04	mg/kg-day	7.9E-08
				Arsenic	1.04E+01	mg/kg	1.5E-09	mg/kg-day	--	--	--
				Benzo(a)pyrene	5.12E-02	mg/kg	7.6E-12	mg/kg-day	--	--	--
				Lead	1.52E+03	mg/kg	2.3E-07	mg/kg-day	--	--	--
			Exp. Route Total								7.9E-08
		Exposure Point Total									7.9E-08
	Exposure Medium Total										7.9E-08
Medium Total											1.2E-01
										Total of Receptor Hazards Across All Media	1.2E-01

Notes:

EPC	Exposure point concentration
mg/kg	Milligram per kilogram
mg/kg-day	Milligram per kilogram per day
RfD	Reference dose
RfC	Reference concentration
RME	Reasonable maximum exposure
--	Not Applicable or Not Available

TABLE H-7.4.3.RME
EPA RAGS PART D TABLE 7b
CALCULATION OF RME CHEMICAL NONCANCER HAZARDS
CURRENT ADULT RESIDENT
SITE 22, ALAMEDA POINT, ALAMEDA, CALIFORNIA

Scenario Timeframe:	Future
Receptor Population:	Resident
Receptor Age:	Adult

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Non-Cancer Hazard Calculations				
					Value	Units	Intake/Exposure Concentration		RfD/RfC		Hazard Quotient
							Value	Units	Value	Units	
Soil (0-2)	Soil	Site Soil	Ingestion	2-Methylnaphthalene	4.60E-01	mg/kg	6.3E-07	mg/kg-day	9.0E-03	mg/kg-day	7.0E-05
				Arsenic	1.04E+01	mg/kg	1.4E-05	mg/kg-day	3.0E-04	mg/kg-day	4.8E-02
				Benzo(a)pyrene	5.12E-02	mg/kg	7.0E-08	mg/kg-day	--	--	--
				Lead	1.52E+03	mg/kg	2.1E-03	mg/kg-day	--	--	--
			Exp. Route Total								4.8E-02
			Dermal	2-Methylnaphthalene	4.60E-01	mg/kg	--	mg/kg-day	9.0E-03	mg/kg-day	--
				Arsenic	1.04E+01	mg/kg	1.7E-06	mg/kg-day	3.0E-04	mg/kg-day	5.7E-03
				Benzo(a)pyrene	5.12E-02	mg/kg	3.6E-08	mg/kg-day	--	--	--
				Lead	1.52E+03	mg/kg	8.3E-05	mg/kg-day	--	--	--
			Exp. Route Total								5.7E-03
		Exposure Point Total									5.3E-02
	Exposure Medium Total										5.3E-02
	Homegrown Produce	Homegrown Produce	Ingestion	2-Methylnaphthalene	4.60E-01	mg/kg	--	mg/kg-day	9.0E-03	mg/kg-day	--
				Arsenic	1.04E+01	mg/kg	5.3E-05	mg/kg-day	3.0E-04	mg/kg-day	1.8E-01
				Benzo(a)pyrene	5.12E-02	mg/kg	1.8E-07	mg/kg-day	--	--	--
				Lead	1.52E+03	mg/kg	--	mg/kg-day	--	--	--
			Exp. Route Total								1.8E-01
		Exposure Point Total									1.8E-01
	Exposure Medium Total										1.8E-01
	Air	Outdoor Air	Inhalation (particulates)	2-Methylnaphthalene	4.60E-01	mg/kg	9.5E-11	mg/kg-day	8.6E-04	mg/kg-day	1.1E-07
				Arsenic	1.04E+01	mg/kg	2.2E-09	mg/kg-day	--	--	--
				Benzo(a)pyrene	5.12E-02	mg/kg	1.1E-11	mg/kg-day	--	--	--
				Lead	1.52E+03	mg/kg	3.1E-07	mg/kg-day	--	--	--
			Exp. Route Total								1.1E-07
		Exposure Point Total									1.1E-07
	Exposure Medium Total										1.1E-07
Medium Total											2.3E-01
Groundwater	Groundwater	Indoor Air (Vapor Intrusion)	Inhalation	Benzene	1.40E+01	(a) ug/m3	3.8E-03	mg/kg-day	8.6E-03	mg/kg-day	4.4E-01
				Ethylbenzene	1.10E+01	(a) ug/m3	3.0E-03	mg/kg-day	2.9E-01	mg/kg-day	1.0E-02
				o-Xylene	2.60E+01	(a) ug/m3	7.1E-03	mg/kg-day	2.9E-02	mg/kg-day	2.4E-01
				m-Xylene	4.70E+00	(a) ug/m3	1.3E-03	mg/kg-day	2.9E-02	mg/kg-day	4.4E-02
				Toluene	2.90E+01	(a) ug/m3	7.9E-03	mg/kg-day	1.1E-01	mg/kg-day	7.2E-02
			Exp. Route Total								8.2E-01
		Exposure Point Total									8.2E-01

TABLE H-7.4.3.RME
EPA RAGS PART D TABLE 7b
CALCULATION OF RME CHEMICAL NONCANCER HAZARDS
CURRENT ADULT RESIDENT
SITE 22, ALAMEDA POINT, ALAMEDA, CALIFORNIA

Scenario Timeframe:	Future
Receptor Population:	Resident
Receptor Age:	Adult

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Non-Cancer Hazard Calculations				
					Value	Units	Intake/Exposure Concentration		RfD/RfC		Hazard Quotient
							Value	Units	Value	Units	
		Tap	Ingestion	1,2-Dichloroethane	6.95E-03	mg/L	1.9E-04	mg/kg-day	3.0E-02	mg/kg-day	6.3E-03
				2-Methylnaphthalene	2.84E-02	mg/L	7.8E-04	mg/kg-day	9.0E-03	mg/kg-day	8.6E-02
				Arsenic	4.10E-02	mg/L	1.1E-03	mg/kg-day	3.0E-04	mg/kg-day	3.7E+00
				Benzene	1.49E+00	mg/L	4.1E-02	mg/kg-day	4.0E-03	mg/kg-day	1.0E+01
				Chloroform	1.20E-02	mg/L	3.3E-04	mg/kg-day	1.0E-02	mg/kg-day	3.3E-02
				Ethylbenzene	4.48E-01	mg/L	1.2E-02	mg/kg-day	1.0E-01	mg/kg-day	1.2E-01
				Manganese	1.10E+01	mg/L	3.0E-01	mg/kg-day	2.4E-02	mg/kg-day	1.3E+01
				Naphthalene	2.14E-01	mg/L	5.9E-03	mg/kg-day	2.0E-02	mg/kg-day	2.9E-01
				n-Propylbenzene	2.30E-01	mg/L	6.3E-03	mg/kg-day	4.0E-02	mg/kg-day	1.6E-01
				Tetrachloroethene	2.60E-03	mg/L	7.1E-05	mg/kg-day	1.0E-02	mg/kg-day	7.1E-03
				Thallium	3.74E-03	mg/L	1.0E-04	mg/kg-day	6.6E-05	mg/kg-day	1.6E+00
				Toluene	1.51E+00	mg/L	4.1E-02	mg/kg-day	2.0E-01	mg/kg-day	2.1E-01
				Trichloroethene	1.20E-02	mg/L	3.3E-04	mg/kg-day	3.0E-04	mg/kg-day	1.1E+00
				Xylene (Total)	1.96E+00	mg/L	5.4E-02	mg/kg-day	2.0E-01	mg/kg-day	2.7E-01
			Exp. Route Total								3.0E+01
			Dermal (bathing/ showering)	1,2-Dichloroethane	6.95E-03	mg/L	4.2E-06	mg/kg-day	3.0E-02	mg/kg-day	1.4E-04
				2-Methylnaphthalene	2.84E-02	mg/L	1.9E-04	mg/kg-day	9.0E-03	mg/kg-day	2.1E-02
				Arsenic	4.10E-02	mg/L	5.9E-06	mg/kg-day	3.0E-04	mg/kg-day	2.0E-02
				Benzene	1.49E+00	mg/L	4.5E-03	mg/kg-day	4.0E-03	mg/kg-day	1.1E+00
				Chloroform	1.20E-02	mg/L	1.2E-05	mg/kg-day	1.0E-02	mg/kg-day	1.2E-03
				Ethylbenzene	4.48E-01	mg/L	3.1E-03	mg/kg-day	1.0E-01	mg/kg-day	3.1E-02
				Manganese	1.10E+01	mg/L	1.6E-03	mg/kg-day	2.4E-02	mg/kg-day	6.6E-02
				Naphthalene	2.14E-01	mg/L	1.4E-03	mg/kg-day	2.0E-02	mg/kg-day	7.2E-02
				n-Propylbenzene	2.30E-01	mg/L	3.0E-03	mg/kg-day	4.0E-02	mg/kg-day	7.5E-02
				Tetrachloroethene	2.60E-03	mg/L	1.2E-05	mg/kg-day	1.0E-02	mg/kg-day	1.2E-03
				Thallium	3.74E-03	mg/L	5.3E-07	mg/kg-day	6.6E-05	mg/kg-day	8.1E-03
				Toluene	1.51E+00	mg/L	6.7E-03	mg/kg-day	2.0E-01	mg/kg-day	3.3E-02
				Trichloroethene	1.20E-02	mg/L	2.1E-05	mg/kg-day	3.0E-04	mg/kg-day	6.9E-02
				Xylene (Total)	1.96E+00	mg/L	1.5E-02	mg/kg-day	2.0E-01	mg/kg-day	7.4E-02
			Exp. Route Total								1.6E+00

TABLE H-7.4.3.RME
EPA RAGS PART D TABLE 7b
CALCULATION OF RME CHEMICAL NONCANCER HAZARDS
CURRENT ADULT RESIDENT
SITE 22, ALAMEDA POINT, ALAMEDA, CALIFORNIA

Scenario Timeframe:	*Future*
Receptor Population:	Resident
Receptor Age:	Adult

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Non-Cancer Hazard Calculations				
					Value	Units	Intake/Exposure Concentration		RfD/RfC		Hazard Quotient
							Value	Units	Value	Units	
			Inhalation (bathing/ showering)	1,2-Dichloroethane	6.95E-03	mg/L	2.3E-05	mg/kg-day	1.4E-03	mg/kg-day	1.6E-02
				2-Methylnaphthalene	2.84E-02	mg/L	9.4E-05	mg/kg-day	8.6E-04	mg/kg-day	1.1E-01
				Benzene	1.49E+00	mg/L	4.9E-03	mg/kg-day	8.6E-03	mg/kg-day	5.7E-01
				Chloroform	1.20E-02	mg/L	4.0E-05	mg/kg-day	8.6E-04	mg/kg-day	4.6E-02
				Ethylbenzene	4.48E-01	mg/L	1.5E-03	mg/kg-day	2.9E-01	mg/kg-day	5.1E-03
				Naphthalene	2.14E-01	mg/L	7.1E-04	mg/kg-day	8.6E-04	mg/kg-day	8.2E-01
				n-Propylbenzene	2.30E-01	mg/L	7.6E-04	mg/kg-day	4.0E-02	mg/kg-day	1.9E-02
				Tetrachloroethene	2.60E-03	mg/L	8.6E-06	mg/kg-day	1.7E-01	mg/kg-day	5.0E-05
				Toluene	1.51E+00	mg/L	5.0E-03	mg/kg-day	1.1E-01	mg/kg-day	4.5E-02
				Trichloroethene	1.20E-02	mg/L	4.0E-05	mg/kg-day	1.0E-02	mg/kg-day	4.0E-03
				Xylene (Total)	1.96E+00	mg/L	6.5E-03	mg/kg-day	2.9E-02	mg/kg-day	2.2E-01
			Exp. Route Total								1.9E+00
		Exposure Point Total									3.4E+01
	Exposure Medium Total										3.5E+01
Medium Total											3.5E+01
										Total of Receptor Hazards Across All Media	3.5E+01

Notes:

EPC	Exposure point concentration
mg/kg	Milligram per kilogram
mg/kg-day	Milligram per kilogram per day
RfD	Reference dose
RfC	Reference concentration
RME	Reasonable maximum exposure
--	Not Applicable or Not Available

(a) See the Vapor Intrusion to Indoor Air Evaluation for determination of the modeled indoor air concentration.

TABLE H-7.4.4.RME
EPA RAGS PART D TABLE 7b
CALCULATION OF RME CHEMICAL NONCANCER HAZARDS
CURRENT CHILD RESIDENT
SITE 22, ALAMEDA POINT, ALAMEDA, CALIFORNIA

Scenario Timeframe:	Future
Receptor Population:	Resident
Receptor Age:	Child

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Non-Cancer Hazard Calculations				
					Value	Units	Intake/Exposure Concentration		RfD/RfC		Hazard Quotient
							Value	Units	Value	Units	
Soil (0-2)	Soil	Site Soil	Ingestion	2-Methylnaphthalene	4.60E-01	mg/kg	5.9E-06	mg/kg-day	9.0E-03	mg/kg-day	6.5E-04
				Arsenic	1.04E+01	mg/kg	1.3E-04	mg/kg-day	3.0E-04	mg/kg-day	4.4E-01
				Benzo(a)pyrene	5.12E-02	mg/kg	6.5E-07	mg/kg-day	--	--	--
				Lead	1.52E+03	mg/kg	1.9E-02	mg/kg-day	--	--	--
			Exp. Route Total								4.4E-01
			Dermal	2-Methylnaphthalene	4.60E-01	mg/kg	--	mg/kg-day	9.0E-03	mg/kg-day	--
				Arsenic	1.04E+01	mg/kg	1.1E-05	mg/kg-day	3.0E-04	mg/kg-day	3.7E-02
				Benzo(a)pyrene	5.12E-02	mg/kg	2.4E-07	mg/kg-day	--	--	--
				Lead	1.52E+03	mg/kg	5.4E-04	mg/kg-day	--	--	--
			Exp. Route Total								3.7E-02
		Exposure Point Total									4.8E-01
	Exposure Medium Total										4.8E-01
	Homegrown Produce	Homegrown Produce	Ingestion	2-Methylnaphthalene	4.60E-01	mg/kg	--	mg/kg-day	9.0E-03	mg/kg-day	--
				Arsenic	1.04E+01	mg/kg	5.3E-05	mg/kg-day	3.0E-04	mg/kg-day	1.8E-01
				Benzo(a)pyrene	5.12E-02	mg/kg	1.8E-07	mg/kg-day	--	--	--
				Lead	1.52E+03	mg/kg	--	mg/kg-day	--	--	--
			Exp. Route Total								1.8E-01
		Exposure Point Total									1.8E-01
	Exposure Medium Total										1.8E-01
	Air	Outdoor Air	Inhalation (particulates)	2-Methylnaphthalene	4.60E-01	mg/kg	2.2E-10	mg/kg-day	8.6E-04	mg/kg-day	2.6E-07
				Arsenic	1.04E+01	mg/kg	5.1E-09	mg/kg-day	--	--	--
				Benzo(a)pyrene	5.12E-02	mg/kg	2.5E-11	mg/kg-day	--	--	--
				Lead	1.52E+03	mg/kg	7.4E-07	mg/kg-day	--	--	--
			Exp. Route Total								2.6E-07
		Exposure Point Total									2.6E-07
	Exposure Medium Total										2.6E-07
Medium Total											6.6E-01
Groundwater	Groundwater	Indoor Air (Vapor Intrusion)	Inhalation	Benzene	1.40E+01	(a) ug/m3	9.0E-03	mg/kg-day	8.6E-03	mg/kg-day	1.0E+00
				Ethylbenzene	1.10E+01	(a) ug/m3	7.1E-03	mg/kg-day	2.9E-01	mg/kg-day	2.4E-02
				o-Xylene	2.60E+01	(a) ug/m3	1.7E-02	mg/kg-day	2.9E-02	mg/kg-day	5.8E-01
				m-Xylene	4.70E+00	(a) ug/m3	3.0E-03	mg/kg-day	2.9E-02	mg/kg-day	1.0E-01
				Toluene	2.90E+01	(a) ug/m3	1.9E-02	mg/kg-day	1.1E-01	mg/kg-day	1.7E-01

TABLE H-7.4.4.RME
EPA RAGS PART D TABLE 7b
CALCULATION OF RME CHEMICAL NONCANCER HAZARDS
CURRENT CHILD RESIDENT
SITE 22, ALAMEDA POINT, ALAMEDA, CALIFORNIA

Scenario Timeframe:	Future
Receptor Population:	Resident
Receptor Age:	Child

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Non-Cancer Hazard Calculations				
					Value	Units	Intake/Exposure Concentration		RfD/RfC		Hazard Quotient
							Value	Units	Value	Units	
			Exp. Route Total								1.9E+00
		Exposure Point Total									1.9E+00
		Tap	Ingestion	1,2-Dichloroethane	6.95E-03	mg/L	4.4E-04	mg/kg-day	3.0E-02	mg/kg-day	1.5E-02
				2-Methylnaphthalene	2.84E-02	mg/L	1.8E-03	mg/kg-day	9.0E-03	mg/kg-day	2.0E-01
				Arsenic	4.10E-02	mg/L	2.6E-03	mg/kg-day	3.0E-04	mg/kg-day	8.7E+00
				Benzene	1.49E+00	mg/L	9.5E-02	mg/kg-day	4.0E-03	mg/kg-day	2.4E+01
				Chloroform	1.20E-02	mg/L	7.7E-04	mg/kg-day	1.0E-02	mg/kg-day	7.7E-02
				Ethylbenzene	4.48E-01	mg/L	2.9E-02	mg/kg-day	1.0E-01	mg/kg-day	2.9E-01
				Manganese	1.10E+01	mg/L	7.0E-01	mg/kg-day	2.4E-02	mg/kg-day	2.9E+01
				Naphthalene	2.14E-01	mg/L	1.4E-02	mg/kg-day	2.0E-02	mg/kg-day	6.8E-01
				n-Propylbenzene	2.30E-01	mg/L	1.5E-02	mg/kg-day	4.0E-02	mg/kg-day	3.7E-01
				Tetrachloroethene	2.60E-03	mg/L	1.7E-04	mg/kg-day	1.0E-02	mg/kg-day	1.7E-02
				Thallium	3.74E-03	mg/L	2.4E-04	mg/kg-day	6.6E-05	mg/kg-day	3.6E+00
				Toluene	1.51E+00	mg/L	9.7E-02	mg/kg-day	2.0E-01	mg/kg-day	4.8E-01
				Trichloroethene	1.20E-02	mg/L	7.7E-04	mg/kg-day	3.0E-04	mg/kg-day	2.6E+00
				Xylene (Total)	1.96E+00	mg/L	1.3E-01	mg/kg-day	2.0E-01	mg/kg-day	6.3E-01
			Exp. Route Total								7.1E+01
			Dermal (bathing/ showering)	1,2-Dichloroethane	6.95E-03	mg/L	1.2E-05	mg/kg-day	3.0E-02	mg/kg-day	4.1E-04
				2-Methylnaphthalene	2.84E-02	mg/L	5.6E-04	mg/kg-day	9.0E-03	mg/kg-day	6.3E-02
				Arsenic	4.10E-02	mg/L	1.7E-05	mg/kg-day	3.0E-04	mg/kg-day	5.8E-02
				Benzene	1.49E+00	mg/L	1.3E-02	mg/kg-day	4.0E-03	mg/kg-day	3.3E+00
				Chloroform	1.20E-02	mg/L	3.4E-05	mg/kg-day	1.0E-02	mg/kg-day	3.4E-03
				Ethylbenzene	4.48E-01	mg/L	9.3E-03	mg/kg-day	1.0E-01	mg/kg-day	9.3E-02
				Manganese	1.10E+01	mg/L	4.6E-03	mg/kg-day	2.4E-02	mg/kg-day	1.9E-01
				Naphthalene	2.14E-01	mg/L	4.2E-03	mg/kg-day	2.0E-02	mg/kg-day	2.1E-01
				n-Propylbenzene	2.30E-01	mg/L	8.9E-03	mg/kg-day	4.0E-02	mg/kg-day	2.2E-01
				Tetrachloroethene	2.60E-03	mg/L	3.6E-05	mg/kg-day	1.0E-02	mg/kg-day	3.6E-03
				Thallium	3.74E-03	mg/L	1.6E-06	mg/kg-day	6.6E-05	mg/kg-day	2.4E-02
				Toluene	1.51E+00	mg/L	2.0E-02	mg/kg-day	2.0E-01	mg/kg-day	9.9E-02
				Trichloroethene	1.20E-02	mg/L	6.1E-05	mg/kg-day	3.0E-04	mg/kg-day	2.0E-01
				Xylene (Total)	1.96E+00	mg/L	4.4E-02	mg/kg-day	2.0E-01	mg/kg-day	2.2E-01
			Exp. Route Total								4.7E+00

TABLE H-7.4.4.RME
EPA RAGS PART D TABLE 7b
CALCULATION OF RME CHEMICAL NONCANCER HAZARDS
CURRENT CHILD RESIDENT
SITE 22, ALAMEDA POINT, ALAMEDA, CALIFORNIA

Scenario Timeframe:	Future
Receptor Population:	Resident
Receptor Age:	Child

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Non-Cancer Hazard Calculations				
					Value	Units	Intake/Exposure Concentration		RfD/RfC		Hazard Quotient
							Value	Units	Value	Units	
			Inhalation (bathing/ showering)	1,2-Dichloroethane	6.95E-03	mg/L	9.3E-05	mg/kg-day	1.4E-03	mg/kg-day	6.7E-02
				2-Methylnaphthalene	2.84E-02	mg/L	3.8E-04	mg/kg-day	8.6E-04	mg/kg-day	4.4E-01
				Benzene	1.49E+00	mg/L	2.0E-02	mg/kg-day	8.6E-03	mg/kg-day	2.3E+00
				Chloroform	1.20E-02	mg/L	1.6E-04	mg/kg-day	8.6E-04	mg/kg-day	1.9E-01
				Ethylbenzene	4.48E-01	mg/L	6.0E-03	mg/kg-day	2.9E-01	mg/kg-day	2.1E-02
				Naphthalene	2.14E-01	mg/L	2.9E-03	mg/kg-day	8.6E-04	mg/kg-day	3.3E+00
				n-Propylbenzene	2.30E-01	mg/L	3.1E-03	mg/kg-day	4.0E-02	mg/kg-day	7.7E-02
				Tetrachloroethene	2.60E-03	mg/L	3.5E-05	mg/kg-day	1.7E-01	mg/kg-day	2.1E-04
				Toluene	1.51E+00	mg/L	2.0E-02	mg/kg-day	1.1E-01	mg/kg-day	1.8E-01
				Trichloroethene	1.20E-02	mg/L	1.6E-04	mg/kg-day	1.0E-02	mg/kg-day	1.6E-02
				Xylene (Total)	1.96E+00	mg/L	2.6E-02	mg/kg-day	2.9E-02	mg/kg-day	9.1E-01
			Exp. Route Total								7.6E+00
		Exposure Point Total									8.3E+01
	Exposure Medium Total										8.5E+01
Medium Total											8.5E+01
										Total of Receptor Hazards Across All Media	8.6E+01

Notes:

EPC	Exposure point concentration
mg/kg	Milligram per kilogram
mg/kg-day	Milligram per kilogram per day
RfD	Reference dose
RfC	Reference concentration
RME	Reasonable maximum exposure
–	Not Applicable or Not Available

(a) See the Vapor Intrusion to Indoor Air Evaluation for determination of the modeled indoor air concentration.

TABLE H-7.4.5.RME
EPA RAGS PART D TABLE 7b
CALCULATION OF RME CHEMICAL NONCANCER HAZARDS
FUTURE DEVELOPED CONSTRUCTION WORKER
SITE 22, ALAMEDA POINT, ALAMEDA, CALIFORNIA

Scenario Timeframe:	Future-Developed
Receptor Population:	Construction Worker
Receptor Age:	Adult

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Non-Cancer Hazard Calculations				
					Value	Units	Intake/Exposure Concentration		RfD/RfC		Hazard Quotient
							Value	Units	Value	Units	
Soil (0-8)	Soil	Site Soil	Ingestion	2-Methylnaphthalene	1.42E+01	mg/kg	4.6E-05	mg/kg-day	9.0E-03	mg/kg-day	5.1E-03
				Arsenic	7.36E+00	mg/kg	2.4E-05	mg/kg-day	3.0E-04	mg/kg-day	7.9E-02
				Benzene	3.30E+00	mg/kg	1.1E-05	mg/kg-day	4.0E-03	mg/kg-day	2.7E-03
				Benzo(a)pyrene	6.71E-02	mg/kg	2.2E-07	mg/kg-day	--	--	--
				Ethylbenzene	1.12E+02	mg/kg	3.6E-04	mg/kg-day	1.0E-01	mg/kg-day	3.6E-03
				Lead	1.14E+03	mg/kg	3.7E-03	mg/kg-day	--	--	--
				Toluene	1.44E+02	mg/kg	4.6E-04	mg/kg-day	2.0E-01	mg/kg-day	2.3E-03
				Xylene (Total)	5.05E+02	mg/kg	1.6E-03	mg/kg-day	2.0E-01	mg/kg-day	8.2E-03
			Exp. Route Total								1.0E-01
			Dermal	2-Methylnaphthalene	1.42E+01	mg/kg	--	mg/kg-day	9.0E-03	mg/kg-day	--
				Arsenic	7.36E+00	mg/kg	2.1E-06	mg/kg-day	3.0E-04	mg/kg-day	7.1E-03
				Benzene	3.30E+00	mg/kg	--	mg/kg-day	4.0E-03	mg/kg-day	--
				Benzo(a)pyrene	6.71E-02	mg/kg	8.4E-08	mg/kg-day	--	--	--
				Ethylbenzene	1.12E+02	mg/kg	--	mg/kg-day	1.0E-01	mg/kg-day	--
				Lead	1.14E+03	mg/kg	1.1E-04	mg/kg-day	--	--	--
				Toluene	1.44E+02	mg/kg	--	mg/kg-day	2.0E-01	mg/kg-day	--
				Xylene (Total)	5.05E+02	mg/kg	--	mg/kg-day	2.0E-01	mg/kg-day	--
			Exp. Route Total								7.1E-03
		Exposure Point Total									1.1E-01
	Exposure Medium Total										1.1E-01
	Air	Outdoor Air	Inhalation (particulates)	2-Methylnaphthalene	1.42E+01	mg/kg	2.1E-09	mg/kg-day	8.6E-04	mg/kg-day	2.4E-06
				Arsenic	7.36E+00	mg/kg	1.1E-09	mg/kg-day	--	--	--
				Benzene	3.30E+00	mg/kg	4.9E-10	mg/kg-day	8.6E-03	mg/kg-day	5.7E-08
				Benzo(a)pyrene	6.71E-02	mg/kg	9.9E-12	mg/kg-day	--	--	--
				Ethylbenzene	1.12E+02	mg/kg	1.7E-08	mg/kg-day	2.9E-01	mg/kg-day	5.7E-08
				Lead	1.14E+03	mg/kg	1.7E-07	mg/kg-day	--	--	--
				Toluene	1.44E+02	mg/kg	2.1E-08	mg/kg-day	1.1E-01	mg/kg-day	1.9E-07
				Xylene (Total)	5.05E+02	mg/kg	7.5E-08	mg/kg-day	2.9E-02	mg/kg-day	2.6E-06
			Exp. Route Total								5.3E-06

TABLE H-7.4.5.RME
EPA RAGS PART D TABLE 7b
CALCULATION OF RME CHEMICAL NONCANCER HAZARDS
FUTURE DEVELOPED CONSTRUCTION WORKER
SITE 22, ALAMEDA POINT, ALAMEDA, CALIFORNIA

Scenario Timeframe:	Future-Developed
Receptor Population:	Construction Worker
Receptor Age:	Adult

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Non-Cancer Hazard Calculations				
					Value	Units	Intake/Exposure Concentration		RfD/RfC		Hazard Quotient
							Value	Units	Value	Units	
			Inhalation (VOCs)	2-Methylnaphthalene	1.42E+01	mg/kg	6.5E-05	mg/kg-day	8.6E-04	mg/kg-day	7.5E-02
				Benzene	3.30E+00	mg/kg	2.4E-04	mg/kg-day	8.6E-03	mg/kg-day	2.8E-02
				Ethylbenzene	1.12E+02	mg/kg	4.1E-03	mg/kg-day	2.9E-01	mg/kg-day	1.4E-02
				Toluene	1.44E+02	mg/kg	7.0E-03	mg/kg-day	1.1E-01	mg/kg-day	6.4E-02
				Xylene (Total)	5.05E+02	mg/kg	1.6E-02	mg/kg-day	2.9E-02	mg/kg-day	5.6E-01
			Exp. Route Total								7.4E-01
		Exposure Point Total									7.4E-01
	Exposure Medium Total										7.4E-01
Medium Total											8.5E-01
										Total of Receptor Hazards Across All Media	8.5E-01

Notes:

EPC	Exposure point concentration
mg/kg	Milligram per kilogram
mg/kg-day	Milligram per kilogram per day
RfD	Reference dose
RfC	Reference concentration
RME	Reasonable maximum expsoure
VOC	Volatile organic compound
--	Not Applicable or Not Available

TABLE H-7.4.6.RME
EPA RAGS PART D TABLE 7b
CALCULATION OF RME CHEMICAL NONCANCER HAZARDS
FUTURE REDEVELOPED ADULT RESIDENT
SITE 22, ALAMEDA POINT, ALAMEDA, CALIFORNIA

Scenario Timeframe:	Future-Redeveloped
Receptor Population:	Resident
Receptor Age:	Adult

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Non-Cancer Hazard Calculations				
					Value	Units	Intake/Exposure Concentration		RfD/RfC		Hazard Quotient
							Value	Units	Value	Units	
Soil (0-8)	Soil	Site Soil	Ingestion	2-Methylnaphthalene	1.42E+01	mg/kg	1.9E-05	mg/kg-day	9.0E-03	mg/kg-day	2.2E-03
				Arsenic	7.36E+00	mg/kg	1.0E-05	mg/kg-day	3.0E-04	mg/kg-day	3.4E-02
				Benzene	3.30E+00	mg/kg	4.5E-06	mg/kg-day	4.0E-03	mg/kg-day	1.1E-03
				Benzo(a)pyrene	6.71E-02	mg/kg	9.2E-08	mg/kg-day	--	--	--
				Ethylbenzene	1.12E+02	mg/kg	1.5E-04	mg/kg-day	1.0E-01	mg/kg-day	1.5E-03
				Lead	1.14E+03	mg/kg	1.6E-03	mg/kg-day	--	--	--
				Toluene	1.44E+02	mg/kg	2.0E-04	mg/kg-day	2.0E-01	mg/kg-day	9.9E-04
				Xylene (Total)	5.05E+02	mg/kg	6.9E-04	mg/kg-day	2.0E-01	mg/kg-day	3.5E-03
			Exp. Route Total								3.9E-02
			Dermal	2-Methylnaphthalene	1.42E+01	mg/kg	--	mg/kg-day	9.0E-03	mg/kg-day	--
				Arsenic	7.36E+00	mg/kg	1.2E-06	mg/kg-day	3.0E-04	mg/kg-day	4.0E-03
				Benzene	3.30E+00	mg/kg	--	mg/kg-day	4.0E-03	mg/kg-day	--
				Benzo(a)pyrene	6.71E-02	mg/kg	4.8E-08	mg/kg-day	--	--	--
				Ethylbenzene	1.12E+02	mg/kg	--	mg/kg-day	1.0E-01	mg/kg-day	--
				Lead	1.14E+03	mg/kg	6.2E-05	mg/kg-day	--	--	--
				Toluene	1.44E+02	mg/kg	--	mg/kg-day	2.0E-01	mg/kg-day	--
				Xylene (Total)	5.05E+02	mg/kg	--	mg/kg-day	2.0E-01	mg/kg-day	--
			Exp. Route Total								4.0E-03
		Exposure Point Total									4.3E-02
	Exposure Medium Total										4.3E-02
	Homegrown Produce	Homegrown Produce	Ingestion	2-Methylnaphthalene	1.42E+01	mg/kg	--	mg/kg-day	9.0E-03	mg/kg-day	--
				Arsenic	7.36E+00	mg/kg	3.7E-05	mg/kg-day	3.0E-04	mg/kg-day	1.2E-01
				Benzene	3.30E+00	mg/kg	--	mg/kg-day	4.0E-03	mg/kg-day	--
				Benzo(a)pyrene	6.71E-02	mg/kg	2.3E-07	mg/kg-day	--	--	--
				Ethylbenzene	1.12E+02	mg/kg	--	mg/kg-day	1.0E-01	mg/kg-day	--
				Lead	1.14E+03	mg/kg	--	mg/kg-day	--	--	--
				Toluene	1.44E+02	mg/kg	--	mg/kg-day	2.0E-01	mg/kg-day	--
				Xylene (Total)	5.05E+02	mg/kg	--	mg/kg-day	2.0E-01	mg/kg-day	--
			Exp. Route Total								1.2E-01
		Exposure Point Total									1.2E-01
	Exposure Medium Total										1.2E-01
	Air	Outdoor Air	Inhalation (particulates)	2-Methylnaphthalene	1.42E+01	mg/kg	2.9E-09	mg/kg-day	8.6E-04	mg/kg-day	3.4E-06
				Arsenic	7.36E+00	mg/kg	1.5E-09	mg/kg-day	--	--	--

TABLE H-7.4.6.RME
EPA RAGS PART D TABLE 7b
CALCULATION OF RME CHEMICAL NONCANCER HAZARDS
FUTURE REDEVELOPED ADULT RESIDENT
SITE 22, ALAMEDA POINT, ALAMEDA, CALIFORNIA

Scenario Timeframe:	Future-Redeveloped
Receptor Population:	Resident
Receptor Age:	Adult

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Non-Cancer Hazard Calculations				
					Value	Units	Intake/Exposure Concentration		RfD/RfC		Hazard Quotient
							Value	Units	Value	Units	
				Benzene	3.30E+00	mg/kg	6.8E-10	mg/kg-day	8.6E-03	mg/kg-day	7.9E-08
				Benzo(a)pyrene	6.71E-02	mg/kg	1.4E-11	mg/kg-day	--	--	--
				Ethylbenzene	1.12E+02	mg/kg	2.3E-08	mg/kg-day	2.9E-01	mg/kg-day	8.0E-08
				Lead	1.14E+03	mg/kg	2.4E-07	mg/kg-day	--	--	--
				Toluene	1.44E+02	mg/kg	3.0E-08	mg/kg-day	1.1E-01	mg/kg-day	2.7E-07
				Xylene (Total)	5.05E+02	mg/kg	1.0E-07	mg/kg-day	2.9E-02	mg/kg-day	3.6E-06
			Exp. Route Total								7.4E-06
			Inhalation (VOCs)	2-Methylnaphthalene	1.42E+01	mg/kg	9.0E-05	mg/kg-day	8.6E-04	mg/kg-day	1.0E-01
				Benzene	3.30E+00	mg/kg	3.3E-04	mg/kg-day	8.6E-03	mg/kg-day	3.9E-02
				Ethylbenzene	1.12E+02	mg/kg	5.7E-03	mg/kg-day	2.9E-01	mg/kg-day	2.0E-02
				Toluene	1.44E+02	mg/kg	9.8E-03	mg/kg-day	1.1E-01	mg/kg-day	8.9E-02
				Xylene (Total)	5.05E+02	mg/kg	2.3E-02	mg/kg-day	2.9E-02	mg/kg-day	7.8E-01
			Exp. Route Total								1.0E+00
		Exposure Point Total									1.0E+00
	Exposure Medium Total										1.0E+00
Medium Total											1.2E+00
Groundwater	Groundwater	Indoor Air (Vapor Intrusion)	Inhalation	Benzene	1.40E+01	(a) ug/m3	3.8E-03	mg/kg-day	8.6E-03	mg/kg-day	4.4E-01
				Ethylbenzene	1.10E+01	(a) ug/m3	3.0E-03	mg/kg-day	2.9E-01	mg/kg-day	1.0E-02
				o-Xylene	2.60E+01	(a) ug/m3	7.1E-03	mg/kg-day	2.9E-02	mg/kg-day	2.4E-01
				m-Xylene	4.70E+00	(a) ug/m3	1.3E-03	mg/kg-day	2.9E-02	mg/kg-day	4.4E-02
				Toluene	2.90E+01	(a) ug/m3	7.9E-03	mg/kg-day	1.1E-01	mg/kg-day	7.2E-02
			Exp. Route Total								8.2E-01
		Exposure Point Total									8.2E-01
		Tap	Ingestion	1,2-Dichloroethane	6.95E-03	mg/L	1.9E-04	mg/kg-day	3.0E-02	mg/kg-day	6.3E-03
				2-Methylnaphthalene	2.84E-02	mg/L	7.8E-04	mg/kg-day	9.0E-03	mg/kg-day	8.6E-02
				Arsenic	4.10E-02	mg/L	1.1E-03	mg/kg-day	3.0E-04	mg/kg-day	3.7E+00
				Benzene	1.49E+00	mg/L	4.1E-02	mg/kg-day	4.0E-03	mg/kg-day	1.0E+01
				Chloroform	1.20E-02	mg/L	3.3E-04	mg/kg-day	1.0E-02	mg/kg-day	3.3E-02
				Ethylbenzene	4.48E-01	mg/L	1.2E-02	mg/kg-day	1.0E-01	mg/kg-day	1.2E-01
				Manganese	1.10E+01	mg/L	3.0E-01	mg/kg-day	2.4E-02	mg/kg-day	1.3E+01
				Naphthalene	2.14E-01	mg/L	5.9E-03	mg/kg-day	2.0E-02	mg/kg-day	2.9E-01
				n-Propylbenzene	2.30E-01	mg/L	6.3E-03	mg/kg-day	4.0E-02	mg/kg-day	1.6E-01

TABLE H-7.4.6.RME
EPA RAGS PART D TABLE 7b
CALCULATION OF RME CHEMICAL NONCANCER HAZARDS
FUTURE REDEVELOPED ADULT RESIDENT
SITE 22, ALAMEDA POINT, ALAMEDA, CALIFORNIA

Scenario Timeframe:	Future-Redeveloped
Receptor Population:	Resident
Receptor Age:	Adult

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Non-Cancer Hazard Calculations				
					Value	Units	Intake/Exposure Concentration		RfD/RfC		Hazard Quotient
							Value	Units	Value	Units	
				Tetrachloroethene	2.60E-03	mg/L	7.1E-05	mg/kg-day	1.0E-02	mg/kg-day	7.1E-03
				Thallium	3.74E-03	mg/L	1.0E-04	mg/kg-day	6.6E-05	mg/kg-day	1.6E+00
				Toluene	1.51E+00	mg/L	4.1E-02	mg/kg-day	2.0E-01	mg/kg-day	2.1E-01
				Trichloroethene	1.20E-02	mg/L	3.3E-04	mg/kg-day	3.0E-04	mg/kg-day	1.1E+00
				Xylene (Total)	1.96E+00	mg/L	5.4E-02	mg/kg-day	2.0E-01	mg/kg-day	2.7E-01
			Exp. Route Total								3.0E+01
			Dermal (bathing/ showering)	1,2-Dichloroethane	6.95E-03	mg/L	4.2E-06	mg/kg-day	3.0E-02	mg/kg-day	1.4E-04
				2-Methylnaphthalene	2.84E-02	mg/L	1.9E-04	mg/kg-day	9.0E-03	mg/kg-day	2.1E-02
				Arsenic	4.10E-02	mg/L	5.9E-06	mg/kg-day	3.0E-04	mg/kg-day	2.0E-02
				Benzene	1.49E+00	mg/L	4.5E-03	mg/kg-day	4.0E-03	mg/kg-day	1.1E+00
				Chloroform	1.20E-02	mg/L	1.2E-05	mg/kg-day	1.0E-02	mg/kg-day	1.2E-03
				Ethylbenzene	4.48E-01	mg/L	3.1E-03	mg/kg-day	1.0E-01	mg/kg-day	3.1E-02
				Manganese	1.10E+01	mg/L	1.6E-03	mg/kg-day	2.4E-02	mg/kg-day	6.6E-02
				Naphthalene	2.14E-01	mg/L	1.4E-03	mg/kg-day	2.0E-02	mg/kg-day	7.2E-02
				n-Propylbenzene	2.30E-01	mg/L	3.0E-03	mg/kg-day	4.0E-02	mg/kg-day	7.5E-02
				Tetrachloroethene	2.60E-03	mg/L	1.2E-05	mg/kg-day	1.0E-02	mg/kg-day	1.2E-03
				Thallium	3.74E-03	mg/L	5.3E-07	mg/kg-day	6.6E-05	mg/kg-day	8.1E-03
				Toluene	1.51E+00	mg/L	6.7E-03	mg/kg-day	2.0E-01	mg/kg-day	3.3E-02
				Trichloroethene	1.20E-02	mg/L	2.1E-05	mg/kg-day	3.0E-04	mg/kg-day	6.9E-02
				Xylene (Total)	1.96E+00	mg/L	1.5E-02	mg/kg-day	2.0E-01	mg/kg-day	7.4E-02
			Exp. Route Total								1.6E+00
			Inhalation (bathing/ showering)	1,2-Dichloroethane	6.95E-03	mg/L	2.3E-05	mg/kg-day	1.4E-03	mg/kg-day	1.6E-02
				2-Methylnaphthalene	2.84E-02	mg/L	9.4E-05	mg/kg-day	8.6E-04	mg/kg-day	1.1E-01
				Benzene	1.49E+00	mg/L	4.9E-03	mg/kg-day	8.6E-03	mg/kg-day	5.7E-01
				Chloroform	1.20E-02	mg/L	4.0E-05	mg/kg-day	8.6E-04	mg/kg-day	4.6E-02
				Ethylbenzene	4.48E-01	mg/L	1.5E-03	mg/kg-day	2.9E-01	mg/kg-day	5.1E-03
				Naphthalene	2.14E-01	mg/L	7.1E-04	mg/kg-day	8.6E-04	mg/kg-day	8.2E-01
				n-Propylbenzene	2.30E-01	mg/L	7.6E-04	mg/kg-day	4.0E-02	mg/kg-day	1.9E-02
				Tetrachloroethene	2.60E-03	mg/L	8.6E-06	mg/kg-day	1.7E-01	mg/kg-day	5.0E-05
				Toluene	1.51E+00	mg/L	5.0E-03	mg/kg-day	1.1E-01	mg/kg-day	4.5E-02
				Trichloroethene	1.20E-02	mg/L	4.0E-05	mg/kg-day	1.0E-02	mg/kg-day	4.0E-03
				Xylene (Total)	1.96E+00	mg/L	6.5E-03	mg/kg-day	2.9E-02	mg/kg-day	2.2E-01

TABLE H-7.4.6.RME
EPA RAGS PART D TABLE 7b
CALCULATION OF RME CHEMICAL NONCANCER HAZARDS
FUTURE REDEVELOPED ADULT RESIDENT
SITE 22, ALAMEDA POINT, ALAMEDA, CALIFORNIA

Scenario Timeframe:	Future-Redeveloped
Receptor Population:	Resident
Receptor Age:	Adult

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Non-Cancer Hazard Calculations				
					Value	Units	Intake/Exposure Concentration		RfD/RfC		Hazard Quotient
							Value	Units	Value	Units	
			Exp. Route Total								1.9E+00
		Exposure Point Total									3.4E+01
	Exposure Medium Total										3.5E+01
Medium Total											3.5E+01
										Total of Receptor Hazards Across All Media	3.6E+01

Notes:

EPC	Exposure point concentration
mg/kg	Milligram per kilogram
mg/kg-day	Milligram per kilogram per day
RfD	Reference dose
RfC	Reference concentration
RME	Reasonable maximum expsoure
VOC	Volatile organic compound
–	Not Applicable or Not Available

(a) See the Vapor Intrusion to Indoor Air Evaluation for determination of the modeled indoor air concentration.

TABLE H-7.4.7.RME
EPA RAGS PART D TABLE 7b
CALCULATION OF RME CHEMICAL NONCANCER HAZARDS
FUTURE REDEVELOPED CHILD RESIDENT
SITE 22, ALAMEDA POINT, ALAMEDA, CALIFORNIA

Scenario Timeframe:	Future-Redeveloped
Receptor Population:	Resident
Receptor Age:	Child

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Non-Cancer Hazard Calculations				
					Value	Units	Intake/Exposure Concentration		RfD/RfC		Hazard Quotient
							Value	Units	Value	Units	
Soil (0-8)	Soil	Site Soil	Ingestion	2-Methylnaphthalene	1.42E+01	mg/kg	1.8E-04	mg/kg-day	9.0E-03	mg/kg-day	2.0E-02
				Arsenic	7.36E+00	mg/kg	9.4E-05	mg/kg-day	3.0E-04	mg/kg-day	3.1E-01
				Benzene	3.30E+00	mg/kg	4.2E-05	mg/kg-day	4.0E-03	mg/kg-day	1.1E-02
				Benzo(a)pyrene	6.71E-02	mg/kg	8.6E-07	mg/kg-day	--	--	--
				Ethylbenzene	1.12E+02	mg/kg	1.4E-03	mg/kg-day	1.0E-01	mg/kg-day	1.4E-02
				Lead	1.14E+03	mg/kg	1.5E-02	mg/kg-day	--	--	--
				Toluene	1.44E+02	mg/kg	1.8E-03	mg/kg-day	2.0E-01	mg/kg-day	9.2E-03
				Xylene (Total)	5.05E+02	mg/kg	6.5E-03	mg/kg-day	2.0E-01	mg/kg-day	3.2E-02
			Exp. Route Total								4.0E-01
			Dermal	2-Methylnaphthalene	1.42E+01	mg/kg	--	mg/kg-day	9.0E-03	mg/kg-day	--
				Arsenic	7.36E+00	mg/kg	7.9E-06	mg/kg-day	3.0E-04	mg/kg-day	2.6E-02
				Benzene	3.30E+00	mg/kg	--	mg/kg-day	4.0E-03	mg/kg-day	--
				Benzo(a)pyrene	6.71E-02	mg/kg	3.1E-07	mg/kg-day	--	--	--
				Ethylbenzene	1.12E+02	mg/kg	--	mg/kg-day	1.0E-01	mg/kg-day	--
				Lead	1.14E+03	mg/kg	4.1E-04	mg/kg-day	--	--	--
				Toluene	1.44E+02	mg/kg	--	mg/kg-day	2.0E-01	mg/kg-day	--
				Xylene (Total)	5.05E+02	mg/kg	--	mg/kg-day	2.0E-01	mg/kg-day	--
			Exp. Route Total								2.6E-02
		Exposure Point Total									4.3E-01
	Exposure Medium Total										4.3E-01
	Homegrown Produce	Homegrown Produce	Ingestion	2-Methylnaphthalene	1.42E+01	mg/kg	--	mg/kg-day	9.0E-03	mg/kg-day	--
				Arsenic	7.36E+00	mg/kg	3.7E-05	mg/kg-day	3.0E-04	mg/kg-day	1.2E-01
				Benzene	3.30E+00	mg/kg	--	mg/kg-day	4.0E-03	mg/kg-day	--
				Benzo(a)pyrene	6.71E-02	mg/kg	2.3E-07	mg/kg-day	--	--	--
				Ethylbenzene	1.12E+02	mg/kg	--	mg/kg-day	1.0E-01	mg/kg-day	--
				Lead	1.14E+03	mg/kg	--	mg/kg-day	--	--	--
				Toluene	1.44E+02	mg/kg	--	mg/kg-day	2.0E-01	mg/kg-day	--
				Xylene (Total)	5.05E+02	mg/kg	--	mg/kg-day	2.0E-01	mg/kg-day	--
			Exp. Route Total								1.2E-01
		Exposure Point Total									1.2E-01
	Exposure Medium Total										1.2E-01
	Air	Outdoor Air	Inhalation (particulates)	2-Methylnaphthalene	1.42E+01	mg/kg	6.9E-09	mg/kg-day	8.8E-04	mg/kg-day	8.1E-06
				Arsenic	7.36E+00	mg/kg	3.6E-09	mg/kg-day	--	--	--

TABLE H-7.4.7.RME
EPA RAGS PART D TABLE 7b
CALCULATION OF RME CHEMICAL NONCANCER HAZARDS
FUTURE REDEVELOPED CHILD RESIDENT
SITE 22, ALAMEDA POINT, ALAMEDA, CALIFORNIA

Scenario Timeframe:	Future-Redeveloped
Receptor Population:	Resident
Receptor Age:	Child

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Non-Cancer Hazard Calculations				
					Value	Units	Intake/Exposure Concentration		RfD/RfC		Hazard Quotient
							Value	Units	Value	Units	
				Benzene	3.30E+00	mg/kg	1.6E-09	mg/kg-day	8.6E-03	mg/kg-day	1.9E-07
				Benzo(a)pyrene	6.71E-02	mg/kg	3.3E-11	mg/kg-day	--	--	--
				Ethylbenzene	1.12E+02	mg/kg	5.5E-08	mg/kg-day	2.9E-01	mg/kg-day	1.9E-07
				Lead	1.14E+03	mg/kg	5.6E-07	mg/kg-day	--	--	--
				Toluene	1.44E+02	mg/kg	7.0E-08	mg/kg-day	1.1E-01	mg/kg-day	6.4E-07
				Xylene (Total)	5.05E+02	mg/kg	2.5E-07	mg/kg-day	2.9E-02	mg/kg-day	8.5E-06
			Exp. Route Total								1.8E-05
			Inhalation (VOCs)	2-Methylnaphthalene	1.42E+01	mg/kg	2.1E-04	mg/kg-day	8.6E-04	mg/kg-day	2.5E-01
				Benzene	3.30E+00	mg/kg	7.9E-04	mg/kg-day	8.6E-03	mg/kg-day	9.2E-02
				Ethylbenzene	1.12E+02	mg/kg	1.3E-02	mg/kg-day	2.9E-01	mg/kg-day	4.6E-02
				Toluene	1.44E+02	mg/kg	2.3E-02	mg/kg-day	1.1E-01	mg/kg-day	2.1E-01
				Xylene (Total)	5.05E+02	mg/kg	5.3E-02	mg/kg-day	2.9E-02	mg/kg-day	1.8E+00
			Exp. Route Total								2.4E+00
		Exposure Point Total									2.4E+00
	Exposure Medium Total										2.4E+00
Medium Total											3.0E+00
Groundwater	Groundwater	Indoor Air (Vapor Intrusion)	Inhalation	Benzene	1.40E+01	(a) ug/m3	9.0E-03	mg/kg-day	8.6E-03	mg/kg-day	1.0E+00
				Ethylbenzene	1.10E+01	(a) ug/m3	7.1E-03	mg/kg-day	2.9E-01	mg/kg-day	2.4E-02
				o-Xylene	2.60E+01	(a) ug/m3	1.7E-02	mg/kg-day	2.9E-02	mg/kg-day	5.8E-01
				m-Xylene	4.70E+00	(a) ug/m3	3.0E-03	mg/kg-day	2.9E-02	mg/kg-day	1.0E-01
				Toluene	2.90E+01	(a) ug/m3	1.9E-02	mg/kg-day	1.1E-01	mg/kg-day	1.7E-01
			Exp. Route Total								1.9E+00
		Exposure Point Total									1.9E+00
		Tap	Ingestion	1,2-Dichloroethane	6.95E-03	mg/L	4.4E-04	mg/kg-day	3.0E-02	mg/kg-day	1.5E-02
				2-Methylnaphthalene	2.84E-02	mg/L	1.8E-03	mg/kg-day	9.0E-03	mg/kg-day	2.0E-01
				Arsenic	4.10E-02	mg/L	2.6E-03	mg/kg-day	3.0E-04	mg/kg-day	8.7E+00
				Benzene	1.49E+00	mg/L	9.5E-02	mg/kg-day	4.0E-03	mg/kg-day	2.4E+01
				Chloroform	1.20E-02	mg/L	7.7E-04	mg/kg-day	1.0E-02	mg/kg-day	7.7E-02
				Ethylbenzene	4.48E-01	mg/L	2.9E-02	mg/kg-day	1.0E-01	mg/kg-day	2.9E-01
				Manganese	1.10E+01	mg/L	7.0E-01	mg/kg-day	2.4E-02	mg/kg-day	2.9E+01
				Naphthalene	2.14E-01	mg/L	1.4E-02	mg/kg-day	2.0E-02	mg/kg-day	6.8E-01
				n-Propylbenzene	2.30E-01	mg/L	1.5E-02	mg/kg-day	4.0E-02	mg/kg-day	3.7E-01

TABLE H-7.4.7.RME
EPA RAGS PART D TABLE 7b
CALCULATION OF RME CHEMICAL NONCANCER HAZARDS
FUTURE REDEVELOPED CHILD RESIDENT
SITE 22, ALAMEDA POINT, ALAMEDA, CALIFORNIA

Scenario Timeframe:	Future-Redeveloped
Receptor Population:	Resident
Receptor Age:	Child

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Non-Cancer Hazard Calculations				
					Value	Units	Intake/Exposure Concentration		RfD/RfC		Hazard Quotient
							Value	Units	Value	Units	
				Tetrachloroethene	2.60E-03	mg/L	1.7E-04	mg/kg-day	1.0E-02	mg/kg-day	1.7E-02
				Thallium	3.74E-03	mg/L	2.4E-04	mg/kg-day	6.6E-05	mg/kg-day	3.6E+00
				Toluene	1.51E+00	mg/L	9.7E-02	mg/kg-day	2.0E-01	mg/kg-day	4.8E-01
				Trichloroethene	1.20E-02	mg/L	7.7E-04	mg/kg-day	3.0E-04	mg/kg-day	2.6E+00
				Xylene (Total)	1.96E+00	mg/L	1.3E-01	mg/kg-day	2.0E-01	mg/kg-day	6.3E-01
			Exp. Route Total								7.1E+01
			Dermal (bathing/ showering)	1,2-Dichloroethane	6.95E-03	mg/L	1.2E-05	mg/kg-day	3.0E-02	mg/kg-day	4.1E-04
				2-Methylnaphthalene	2.84E-02	mg/L	5.6E-04	mg/kg-day	9.0E-03	mg/kg-day	6.3E-02
				Arsenic	4.10E-02	mg/L	1.7E-05	mg/kg-day	3.0E-04	mg/kg-day	5.8E-02
				Benzene	1.49E+00	mg/L	1.3E-02	mg/kg-day	4.0E-03	mg/kg-day	3.3E+00
				Chloroform	1.20E-02	mg/L	3.4E-05	mg/kg-day	1.0E-02	mg/kg-day	3.4E-03
				Ethylbenzene	4.48E-01	mg/L	9.3E-03	mg/kg-day	1.0E-01	mg/kg-day	9.3E-02
				Manganese	1.10E+01	mg/L	4.6E-03	mg/kg-day	2.4E-02	mg/kg-day	1.9E-01
				Naphthalene	2.14E-01	mg/L	4.2E-03	mg/kg-day	2.0E-02	mg/kg-day	2.1E-01
				n-Propylbenzene	2.30E-01	mg/L	8.9E-03	mg/kg-day	4.0E-02	mg/kg-day	2.2E-01
				Tetrachloroethene	2.60E-03	mg/L	3.6E-05	mg/kg-day	1.0E-02	mg/kg-day	3.6E-03
				Thallium	3.74E-03	mg/L	1.6E-06	mg/kg-day	6.6E-05	mg/kg-day	2.4E-02
				Toluene	1.51E+00	mg/L	2.0E-02	mg/kg-day	2.0E-01	mg/kg-day	9.9E-02
				Trichloroethene	1.20E-02	mg/L	6.1E-05	mg/kg-day	3.0E-04	mg/kg-day	2.0E-01
				Xylene (Total)	1.96E+00	mg/L	4.4E-02	mg/kg-day	2.0E-01	mg/kg-day	2.2E-01
			Exp. Route Total								4.7E+00
			Inhalation (bathing/ showering)	1,2-Dichloroethane	6.95E-03	mg/L	9.3E-05	mg/kg-day	1.4E-03	mg/kg-day	6.7E-02
				2-Methylnaphthalene	2.84E-02	mg/L	3.8E-04	mg/kg-day	8.6E-04	mg/kg-day	4.4E-01
				Benzene	1.49E+00	mg/L	2.0E-02	mg/kg-day	8.6E-03	mg/kg-day	2.3E+00
				Chloroform	1.20E-02	mg/L	1.6E-04	mg/kg-day	8.6E-04	mg/kg-day	1.9E-01
				Ethylbenzene	4.48E-01	mg/L	6.0E-03	mg/kg-day	2.9E-01	mg/kg-day	2.1E-02
				Naphthalene	2.14E-01	mg/L	2.9E-03	mg/kg-day	8.6E-04	mg/kg-day	3.3E+00
				n-Propylbenzene	2.30E-01	mg/L	3.1E-03	mg/kg-day	4.0E-02	mg/kg-day	7.7E-02
				Tetrachloroethene	2.60E-03	mg/L	3.5E-05	mg/kg-day	1.7E-01	mg/kg-day	2.1E-04
				Toluene	1.51E+00	mg/L	2.0E-02	mg/kg-day	1.1E-01	mg/kg-day	1.8E-01
				Trichloroethene	1.20E-02	mg/L	1.6E-04	mg/kg-day	1.0E-02	mg/kg-day	1.6E-02
				Xylene (Total)	1.96E+00	mg/L	2.6E-02	mg/kg-day	2.9E-02	mg/kg-day	9.1E-01

TABLE H-7.4.7.RME
EPA RAGS PART D TABLE 7b
CALCULATION OF RME CHEMICAL NONCANCER HAZARDS
FUTURE REDEVELOPED CHILD RESIDENT
SITE 22, ALAMEDA POINT, ALAMEDA, CALIFORNIA

Scenario Timeframe:	Future-Redeveloped
Receptor Population:	Resident
Receptor Age:	Child

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Non-Cancer Hazard Calculations				
					Value	Units	Intake/Exposure Concentration		RfD/RfC		Hazard Quotient
							Value	Units	Value	Units	
			Exp. Route Total								7.6E+00
		Exposure Point Total									8.3E+01
	Exposure Medium Total										8.5E+01
Medium Total											8.5E+01
										Total of Receptor Hazards Across All Media	8.8E+01

Notes:

EPC	Exposure point concentration
mg/kg	Milligram per kilogram
mg/kg-day	Milligram per kilogram per day
RfD	Reference dose
RfC	Reference concentration
RME	Reasonable maximum expsoure
VOC	Volatile organic compound
–	Not Applicable or Not Available

(a) See the Vapor Intrusion to Indoor Air Evaluation for determination of the modeled indoor air concentration.

HHRA RISK TABLES

Reasonable Maximum Exposure
Site 23
Alameda Point, Alameda, California

TABLE H-7.5.1.RME
EPA RAGS PART D TABLE 7b
CALCULATION OF RME CHEMICAL NONCANCER HAZARDS
CURRENT INDUSTRIAL WORKER
SITE 23, ALAMEDA POINT, ALAMEDA, CALIFORNIA

Scenario Timeframe:	Future
Receptor Population:	Industrial Worker
Receptor Age:	Adult

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Non-Cancer Hazard Calculations				
					Value	Units	Intake/Exposure Concentration		RfD/RfC		Hazard Quotient
							Value	Units	Value	Units	
Soil (0-2)	Soil	Site Soil	Ingestion	Arsenic	4.20E+00	mg/kg	4.1E-06	mg/kg-day	3.0E-04	mg/kg-day	1.4E-02
				Benz(a)anthracene	1.34E-01	mg/kg	1.3E-07	mg/kg-day	--	--	--
				Benzo(a)pyrene	1.44E-01	mg/kg	1.4E-07	mg/kg-day	--	--	--
				Benzo(b)fluoranthene	1.51E-01	mg/kg	1.5E-07	mg/kg-day	--	--	--
				Benzo(k)fluoranthene	1.03E-01	mg/kg	1.0E-07	mg/kg-day	--	--	--
				Dibenz(a,h)anthracene	4.73E-02	mg/kg	4.6E-08	mg/kg-day	--	--	--
				Indeno(1,2,3-cd)pyrene	1.21E-01	mg/kg	1.2E-07	mg/kg-day	--	--	--
			Exp. Route Total								1.4E-02
			Dermal	Arsenic	4.20E+00	mg/kg	8.1E-07	mg/kg-day	3.0E-04	mg/kg-day	2.7E-03
				Benz(a)anthracene	1.34E-01	mg/kg	1.1E-07	mg/kg-day	--	--	--
				Benzo(a)pyrene	1.44E-01	mg/kg	1.2E-07	mg/kg-day	--	--	--
				Benzo(b)fluoranthene	1.51E-01	mg/kg	1.3E-07	mg/kg-day	--	--	--
				Benzo(k)fluoranthene	1.03E-01	mg/kg	8.6E-08	mg/kg-day	--	--	--
				Dibenz(a,h)anthracene	4.73E-02	mg/kg	4.0E-08	mg/kg-day	--	--	--
				Indeno(1,2,3-cd)pyrene	1.21E-01	mg/kg	1.0E-07	mg/kg-day	--	--	--
			Exp. Route Total								2.7E-03
		Exposure Point Total									1.6E-02
	Exposure Medium Total										1.6E-02
	Air	Outdoor Air	Inhalation (particulates)	Arsenic	4.20E+00	mg/kg	6.2E-10	mg/kg-day	--	--	--
				Benz(a)anthracene	1.34E-01	mg/kg	2.0E-11	mg/kg-day	--	--	--
				Benzo(a)pyrene	1.44E-01	mg/kg	2.1E-11	mg/kg-day	--	--	--
				Benzo(b)fluoranthene	1.51E-01	mg/kg	2.2E-11	mg/kg-day	--	--	--
				Benzo(k)fluoranthene	1.03E-01	mg/kg	1.5E-11	mg/kg-day	--	--	--
				Dibenz(a,h)anthracene	4.73E-02	mg/kg	7.0E-12	mg/kg-day	--	--	--
				Indeno(1,2,3-cd)pyrene	1.21E-01	mg/kg	1.8E-11	mg/kg-day	--	--	--
			Exp. Route Total								0.0E+00
		Exposure Point Total									0.0E+00
	Exposure Medium Total										0.0E+00
Medium Total											1.6E-02
										Total of Receptor Hazards Across All Media	1.6E-02

Notes:

EPC Exposure point concentration
mg/kg Milligram per kilogram

TABLE H-7.5.1.RME
EPA RAGS PART D TABLE 7b
CALCULATION OF RME CHEMICAL NONCANCER HAZARDS
CURRENT INDUSTRIAL WORKER
SITE 23, ALAMEDA POINT, ALAMEDA, CALIFORNIA

Scenario Timeframe:	Future
Receptor Population:	Industrial Worker
Receptor Age:	Adult

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Non-Cancer Hazard Calculations				
					Value	Units	Intake/Exposure Concentration		RfD/RfC		Hazard Quotient
							Value	Units	Value	Units	

mg/kg-day	Milligram per kilogram per day
RfD	Reference dose
RfC	Reference concentration
RME	Reasonable maximum exposure
–	Not Applicable or Not Available

TABLE H-7.5.2.RME
EPA RAGS PART D TABLE 7b
CALCULATION OF RME CHEMICAL NONCANCER HAZARDS
CURRENT CONSTRUCTION WORKER
SITE 23, ALAMEDA POINT, ALAMEDA, CALIFORNIA

Scenario Timeframe:	Future
Receptor Population:	Construction Worker
Receptor Age:	Adult

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Non-Cancer Hazard Calculations				
					Value	Units	Intake/Exposure Concentration		RfD/RfC		Hazard Quotient
							Value	Units	Value	Units	
Soil (0-2)	Soil	Site Soil	Ingestion	Arsenic	4.20E+00	mg/kg	1.4E-05	mg/kg-day	3.0E-04	mg/kg-day	4.5E-02
				Benz(a)anthracene	1.34E-01	mg/kg	4.3E-07	mg/kg-day	--	--	--
				Benzo(a)pyrene	1.44E-01	mg/kg	4.6E-07	mg/kg-day	--	--	--
				Benzo(b)fluoranthene	1.51E-01	mg/kg	4.9E-07	mg/kg-day	--	--	--
				Benzo(k)fluoranthene	1.03E-01	mg/kg	3.3E-07	mg/kg-day	--	--	--
				Dibenz(a,h)anthracene	4.73E-02	mg/kg	1.5E-07	mg/kg-day	--	--	--
				Indeno(1,2,3-cd)pyrene	1.21E-01	mg/kg	3.9E-07	mg/kg-day	--	--	--
			Exp. Route Total								4.5E-02
			Dermal	Arsenic	4.20E+00	mg/kg	1.2E-06	mg/kg-day	3.0E-04	mg/kg-day	4.1E-03
				Benz(a)anthracene	1.34E-01	mg/kg	1.7E-07	mg/kg-day	--	--	--
				Benzo(a)pyrene	1.44E-01	mg/kg	1.8E-07	mg/kg-day	--	--	--
				Benzo(b)fluoranthene	1.51E-01	mg/kg	1.9E-07	mg/kg-day	--	--	--
				Benzo(k)fluoranthene	1.03E-01	mg/kg	1.3E-07	mg/kg-day	--	--	--
				Dibenz(a,h)anthracene	4.73E-02	mg/kg	6.0E-08	mg/kg-day	--	--	--
				Indeno(1,2,3-cd)pyrene	1.21E-01	mg/kg	1.5E-07	mg/kg-day	--	--	--
			Exp. Route Total								4.1E-03
		Exposure Point Total									4.9E-02
	Exposure Medium Total										4.9E-02
	Air	Outdoor Air	Inhalation (particulates)	Arsenic	4.20E+00	mg/kg	6.2E-10	mg/kg-day	--	--	--
				Benz(a)anthracene	1.34E-01	mg/kg	2.0E-11	mg/kg-day	--	--	--
				Benzo(a)pyrene	1.44E-01	mg/kg	2.1E-11	mg/kg-day	--	--	--
				Benzo(b)fluoranthene	1.51E-01	mg/kg	2.2E-11	mg/kg-day	--	--	--
				Benzo(k)fluoranthene	1.03E-01	mg/kg	1.5E-11	mg/kg-day	--	--	--
				Dibenz(a,h)anthracene	4.73E-02	mg/kg	7.0E-12	mg/kg-day	--	--	--
				Indeno(1,2,3-cd)pyrene	1.21E-01	mg/kg	1.8E-11	mg/kg-day	--	--	--
			Exp. Route Total								0.0E+00
		Exposure Point Total									0.0E+00
	Exposure Medium Total										0.0E+00
Medium Total											4.9E-02
										Total of Receptor Hazards Across All Media	4.9E-02

Notes:

EPC — Exposure point concentration
mg/kg — Milligram per kilogram

TABLE H-7.5.2.RME
EPA RAGS PART D TABLE 7b
CALCULATION OF RME CHEMICAL NONCANCER HAZARDS
CURRENT CONSTRUCTION WORKER
SITE 23, ALAMEDA POINT, ALAMEDA, CALIFORNIA

Scenario Timeframe:	Future
Receptor Population:	Construction Worker
Receptor Age:	Adult

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Non-Cancer Hazard Calculations				
					Value	Units	Intake/Exposure Concentration		RfD/RfC		Hazard Quotient
							Value	Units	Value	Units	

mg/kg-day	Milligram per kilogram per day
RfD	Reference dose
RfC	Reference concentration
RME	Reasonable maximum exposure
--	Not Applicable or Not Available

TABLE H-7.5.3.RME
EPA RAGS PART D TABLE 7b
CALCULATION OF RME CHEMICAL NONCANCER HAZARDS
CURRENT ADULT RESIDENT
SITE 23, ALAMEDA POINT, ALAMEDA, CALIFORNIA

Scenario Timeframe:	Future
Receptor Population:	Resident
Receptor Age:	Adult

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Non-Cancer Hazard Calculations				
					Value	Units	Intake/Exposure Concentration		RfD/RfC		Hazard Quotient
							Value	Units	Value	Units	
Soil (0-2)	Soil	Site Soil	Ingestion	Arsenic	4.20E+00	mg/kg	5.8E-06	mg/kg-day	3.0E-04	mg/kg-day	1.9E-02
				Benz(a)anthracene	1.34E-01	mg/kg	1.8E-07	mg/kg-day	--	--	--
				Benzo(a)pyrene	1.44E-01	mg/kg	2.0E-07	mg/kg-day	--	--	--
				Benzo(b)fluoranthene	1.51E-01	mg/kg	2.1E-07	mg/kg-day	--	--	--
				Benzo(k)fluoranthene	1.03E-01	mg/kg	1.4E-07	mg/kg-day	--	--	--
				Dibenz(a,h)anthracene	4.73E-02	mg/kg	6.5E-08	mg/kg-day	--	--	--
				Indeno(1,2,3-cd)pyrene	1.21E-01	mg/kg	1.7E-07	mg/kg-day	--	--	--
			Exp. Route Total								1.9E-02
			Dermal	Arsenic	4.20E+00	mg/kg	6.9E-07	mg/kg-day	3.0E-04	mg/kg-day	2.3E-03
				Benz(a)anthracene	1.34E-01	mg/kg	9.5E-08	mg/kg-day	--	--	--
				Benzo(a)pyrene	1.44E-01	mg/kg	1.0E-07	mg/kg-day	--	--	--
				Benzo(b)fluoranthene	1.51E-01	mg/kg	1.1E-07	mg/kg-day	--	--	--
				Benzo(k)fluoranthene	1.03E-01	mg/kg	7.3E-08	mg/kg-day	--	--	--
				Dibenz(a,h)anthracene	4.73E-02	mg/kg	3.4E-08	mg/kg-day	--	--	--
				Indeno(1,2,3-cd)pyrene	1.21E-01	mg/kg	8.6E-08	mg/kg-day	--	--	--
			Exp. Route Total								2.3E-03
		Exposure Point Total									2.1E-02
	Exposure Medium Total										2.1E-02
	Homegrown Produce	Homegrown Produce	Ingestion	Arsenic	4.20E+00	mg/kg	2.1E-05	mg/kg-day	3.0E-04	mg/kg-day	7.1E-02
				Benz(a)anthracene	1.34E-01	mg/kg	6.1E-07	mg/kg-day	--	--	--
				Benzo(a)pyrene	1.44E-01	mg/kg	5.0E-07	mg/kg-day	--	--	--
				Benzo(b)fluoranthene	1.51E-01	mg/kg	4.9E-07	mg/kg-day	--	--	--
				Benzo(k)fluoranthene	1.03E-01	mg/kg	3.3E-07	mg/kg-day	--	--	--
				Dibenz(a,h)anthracene	4.73E-02	mg/kg	2.5E-07	mg/kg-day	--	--	--
				Indeno(1,2,3-cd)pyrene	1.21E-01	mg/kg	3.1E-07	mg/kg-day	--	--	--
			Exp. Route Total								7.1E-02
		Exposure Point Total									7.1E-02
	Exposure Medium Total										7.1E-02
	Air	Outdoor Air	Inhalation (particulates)	Arsenic	4.20E+00	mg/kg	8.7E-10	mg/kg-day	--	--	--
				Benz(a)anthracene	1.34E-01	mg/kg	2.8E-11	mg/kg-day	--	--	--
				Benzo(a)pyrene	1.44E-01	mg/kg	3.0E-11	mg/kg-day	--	--	--
				Benzo(b)fluoranthene	1.51E-01	mg/kg	3.1E-11	mg/kg-day	--	--	--
				Benzo(k)fluoranthene	1.03E-01	mg/kg	2.1E-11	mg/kg-day	--	--	--

TABLE H-7.5.3.RME
EPA RAGS PART D TABLE 7b
CALCULATION OF RME CHEMICAL NONCANCER HAZARDS
CURRENT ADULT RESIDENT
SITE 23, ALAMEDA POINT, ALAMEDA, CALIFORNIA

Scenario Timeframe:	Future
Receptor Population:	Resident
Receptor Age:	Adult

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Non-Cancer Hazard Calculations				
					Value	Units	Intake/Exposure Concentration		RfD/RfC		Hazard Quotient
							Value	Units	Value	Units	
				Dibenz(a,h)anthracene	4.73E-02	mg/kg	9.8E-12	mg/kg-day	--	--	--
				Indeno(1,2,3-cd)pyrene	1.21E-01	mg/kg	2.5E-11	mg/kg-day	--	--	--
			Exp. Route Total								0.0E+00
		Exposure Point Total									0.0E+00
	Exposure Medium Total										0.0E+00
Medium Total											9.2E-02
Groundwater	Groundwater	Tap	Ingestion	1,2,4-Trimethylbenzene	3.35E-01	mg/L	9.2E-03	mg/kg-day	5.0E-02	mg/kg-day	1.8E-01
				2-Butanone	1.13E+00	mg/L	3.1E-02	mg/kg-day	6.0E-01	mg/kg-day	5.2E-02
				2-Methylnaphthalene	1.89E-02	mg/L	5.2E-04	mg/kg-day	9.0E-03	mg/kg-day	5.8E-02
				Arsenic	1.15E-02	mg/L	3.2E-04	mg/kg-day	3.0E-04	mg/kg-day	1.1E+00
				Benzene	1.00E-03	mg/L	2.7E-05	mg/kg-day	4.0E-03	mg/kg-day	6.8E-03
				Benzo(a)pyrene	6.00E-04	mg/L	1.6E-05	mg/kg-day	--	--	--
				Benzo(b)fluoranthene	8.00E-04	mg/L	2.2E-05	mg/kg-day	--	--	--
				Chrysene	9.00E-04	mg/L	2.5E-05	mg/kg-day	--	--	--
				Ethylbenzene	1.50E-02	mg/L	4.1E-04	mg/kg-day	1.0E-01	mg/kg-day	4.1E-03
				Isopropylbenzene	3.89E-01	mg/L	1.1E-02	mg/kg-day	1.0E-01	mg/kg-day	1.1E-01
				Naphthalene	1.81E-01	mg/L	5.0E-03	mg/kg-day	2.0E-02	mg/kg-day	2.5E-01
				sec-Butylbenzene	3.89E-01	mg/L	1.1E-02	mg/kg-day	4.0E-02	mg/kg-day	2.7E-01
				Thallium	2.82E-03	mg/L	7.7E-05	mg/kg-day	6.6E-05	mg/kg-day	1.2E+00
				Xylene (Total)	1.41E-01	mg/L	3.9E-03	mg/kg-day	2.0E-01	mg/kg-day	1.9E-02
			Exp. Route Total								3.2E+00
			Dermal (bathing/ showering)	1,2,4-Trimethylbenzene	3.35E-01	mg/L	4.0E-03	mg/kg-day	5.0E-02	mg/kg-day	8.0E-02
				2-Butanone	1.13E+00	mg/L	1.6E-04	mg/kg-day	6.0E-01	mg/kg-day	2.6E-04
				2-Methylnaphthalene	1.89E-02	mg/L	1.3E-04	mg/kg-day	9.0E-03	mg/kg-day	1.4E-02
				Arsenic	1.15E-02	mg/L	1.6E-06	mg/kg-day	3.0E-04	mg/kg-day	5.5E-03
				Benzene	1.00E-03	mg/L	3.0E-06	mg/kg-day	4.0E-03	mg/kg-day	7.5E-04
				Benzo(a)pyrene	6.00E-04	mg/L	6.0E-05	mg/kg-day	--	--	--
				Benzo(b)fluoranthene	8.00E-04	mg/L	8.0E-05	mg/kg-day	--	--	--
				Chrysene	9.00E-04	mg/L	6.0E-05	mg/kg-day	--	--	--
				Ethylbenzene	1.50E-02	mg/L	1.1E-04	mg/kg-day	1.0E-01	mg/kg-day	1.1E-03
				Isopropylbenzene	3.89E-01	mg/L	4.9E-03	mg/kg-day	1.0E-01	mg/kg-day	4.9E-02
				Naphthalene	1.81E-01	mg/L	1.2E-03	mg/kg-day	2.0E-02	mg/kg-day	6.1E-02
				sec-Butylbenzene	3.89E-01	mg/L	9.8E-03	mg/kg-day	4.0E-02	mg/kg-day	2.5E-01
				Thallium	2.82E-03	mg/L	4.0E-07	mg/kg-day	6.6E-05	mg/kg-day	6.1E-03

TABLE H-7.5.3.RME
EPA RAGS PART D TABLE 7b
CALCULATION OF RME CHEMICAL NONCANCER HAZARDS
CURRENT ADULT RESIDENT
SITE 23, ALAMEDA POINT, ALAMEDA, CALIFORNIA

Scenario Timeframe:	Future
Receptor Population:	Resident
Receptor Age:	Adult

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Non-Cancer Hazard Calculations				
					Value	Units	Intake/Exposure Concentration		RfD/RfC		Hazard Quotient
							Value	Units	Value	Units	
				Xylene (Total)	1.41E-01	mg/L	1.1E-03	mg/kg-day	2.0E-01	mg/kg-day	5.3E-03
			Exp. Route Total								4.7E-01
			Inhalation (bathing/ showering)	1,2,4-Trimethylbenzene	3.35E-01	mg/L	1.1E-03	mg/kg-day	1.7E-03	mg/kg-day	6.5E-01
				2-Butanone	1.13E+00	mg/L	3.7E-03	mg/kg-day	2.9E-01	mg/kg-day	1.3E-02
				2-Methylnaphthalene	1.89E-02	mg/L	6.2E-05	mg/kg-day	8.6E-04	mg/kg-day	7.2E-02
				Benzene	1.00E-03	mg/L	3.3E-06	mg/kg-day	8.6E-03	mg/kg-day	3.8E-04
				Ethylbenzene	1.50E-02	mg/L	4.9E-05	mg/kg-day	2.9E-01	mg/kg-day	1.7E-04
				Isopropylbenzene	3.89E-01	mg/L	1.3E-03	mg/kg-day	1.1E-01	mg/kg-day	1.2E-02
				Naphthalene	1.81E-01	mg/L	6.0E-04	mg/kg-day	8.6E-04	mg/kg-day	6.9E-01
				sec-Butylbenzene	3.89E-01	mg/L	1.3E-03	mg/kg-day	4.0E-02	mg/kg-day	3.2E-02
				Xylene (Total)	1.41E-01	mg/L	4.6E-04	mg/kg-day	2.9E-02	mg/kg-day	1.6E-02
			Exp. Route Total								1.5E+00
		Exposure Point Total									5.1E+00
	Exposure Medium Total										5.1E+00
Medium Total											5.1E+00
										Total of Receptor Hazards Across All Media	5.2E+00

Notes:

EPC	Exposure point concentration
mg/kg	Milligram per kilogram
mg/kg-day	Milligram per kilogram per day
RfD	Reference dose
RfC	Reference concentration
RME	Reasonable maximum exposure
--	Not Applicable or Not Available

TABLE H-7.5.4.RME
EPA RAGS PART D TABLE 7b
CALCULATION OF RME CHEMICAL NONCANCER HAZARDS
CURRENT CHILD RESIDENT
SITE 23, ALAMEDA POINT, ALAMEDA, CALIFORNIA

Scenario Timeframe:	Future
Receptor Population:	Resident
Receptor Age:	Child

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Non-Cancer Hazard Calculations				
					Value	Units	Intake/Exposure Concentration		RfD/RfC		Hazard Quotient
							Value	Units	Value	Units	
Soil (0-2)	Soil	Site Soil	Ingestion	Arsenic	4.20E+00	mg/kg	5.4E-05	mg/kg-day	3.0E-04	mg/kg-day	1.8E-01
				Benz(a)anthracene	1.34E-01	mg/kg	1.7E-06	mg/kg-day	--	--	--
				Benzo(a)pyrene	1.44E-01	mg/kg	1.8E-06	mg/kg-day	--	--	--
				Benzo(b)fluoranthene	1.51E-01	mg/kg	1.9E-06	mg/kg-day	--	--	--
				Benzo(k)fluoranthene	1.03E-01	mg/kg	1.3E-06	mg/kg-day	--	--	--
				Dibenz(a,h)anthracene	4.73E-02	mg/kg	6.0E-07	mg/kg-day	--	--	--
				Indeno(1,2,3-cd)pyrene	1.21E-01	mg/kg	1.5E-06	mg/kg-day	--	--	--
			Exp. Route Total								1.8E-01
			Dermal	Arsenic	4.20E+00	mg/kg	4.5E-06	mg/kg-day	3.0E-04	mg/kg-day	1.5E-02
				Benz(a)anthracene	1.34E-01	mg/kg	6.2E-07	mg/kg-day	--	--	--
				Benzo(a)pyrene	1.44E-01	mg/kg	6.7E-07	mg/kg-day	--	--	--
				Benzo(b)fluoranthene	1.51E-01	mg/kg	7.0E-07	mg/kg-day	--	--	--
				Benzo(k)fluoranthene	1.03E-01	mg/kg	4.8E-07	mg/kg-day	--	--	--
				Dibenz(a,h)anthracene	4.73E-02	mg/kg	2.2E-07	mg/kg-day	--	--	--
				Indeno(1,2,3-cd)pyrene	1.21E-01	mg/kg	5.6E-07	mg/kg-day	--	--	--
			Exp. Route Total								1.5E-02
		Exposure Point Total									1.9E-01
	Exposure Medium Total										1.9E-01
	Homegrown Produce	Homegrown Produce	Ingestion	Arsenic	4.20E+00	mg/kg	2.1E-05	mg/kg-day	3.0E-04	mg/kg-day	7.1E-02
				Benz(a)anthracene	1.34E-01	mg/kg	6.1E-07	mg/kg-day	--	--	--
				Benzo(a)pyrene	1.44E-01	mg/kg	5.0E-07	mg/kg-day	--	--	--
				Benzo(b)fluoranthene	1.51E-01	mg/kg	4.9E-07	mg/kg-day	--	--	--
				Benzo(k)fluoranthene	1.03E-01	mg/kg	3.3E-07	mg/kg-day	--	--	--
				Dibenz(a,h)anthracene	4.73E-02	mg/kg	2.5E-07	mg/kg-day	--	--	--
				Indeno(1,2,3-cd)pyrene	1.21E-01	mg/kg	3.1E-07	mg/kg-day	--	--	--
			Exp. Route Total								7.1E-02
		Exposure Point Total									7.1E-02
	Exposure Medium Total										7.1E-02
	Air	Outdoor Air	Inhalation (particulates)	Arsenic	4.20E+00	mg/kg	2.1E-09	mg/kg-day	--	--	--
				Benz(a)anthracene	1.34E-01	mg/kg	6.5E-11	mg/kg-day	--	--	--
				Benzo(a)pyrene	1.44E-01	mg/kg	7.0E-11	mg/kg-day	--	--	--
				Benzo(b)fluoranthene	1.51E-01	mg/kg	7.4E-11	mg/kg-day	--	--	--
				Benzo(k)fluoranthene	1.03E-01	mg/kg	5.0E-11	mg/kg-day	--	--	--

TABLE H-7.5.4.RME
EPA RAGS PART D TABLE 7b
CALCULATION OF RME CHEMICAL NONCANCER HAZARDS
CURRENT CHILD RESIDENT
SITE 23, ALAMEDA POINT, ALAMEDA, CALIFORNIA

Scenario Timeframe:	Future
Receptor Population:	Resident
Receptor Age:	Child

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Non-Cancer Hazard Calculations				
					Value	Units	Intake/Exposure Concentration		RfD/RfC		Hazard Quotient
							Value	Units	Value	Units	
				Dibenz(a,h)anthracene	4.73E-02	mg/kg	2.3E-11	mg/kg-day	--	--	--
				Indeno(1,2,3-cd)pyrene	1.21E-01	mg/kg	5.9E-11	mg/kg-day	--	--	--
			Exp. Route Total								0.0E+00
		Exposure Point Total									0.0E+00
	Exposure Medium Total										0.0E+00
Medium Total											2.7E-01
Groundwater	Groundwater	Tap	Ingestion	1,2,4-Trimethylbenzene	3.35E-01	mg/L	2.1E-02	mg/kg-day	5.0E-02	mg/kg-day	4.3E-01
				2-Butanone	1.13E+00	mg/L	7.2E-02	mg/kg-day	6.0E-01	mg/kg-day	1.2E-01
				2-Methylnaphthalene	1.89E-02	mg/L	1.2E-03	mg/kg-day	9.0E-03	mg/kg-day	1.3E-01
				Arsenic	1.15E-02	mg/L	7.4E-04	mg/kg-day	3.0E-04	mg/kg-day	2.5E+00
				Benzene	1.00E-03	mg/L	6.4E-05	mg/kg-day	4.0E-03	mg/kg-day	1.6E-02
				Benzo(a)pyrene	6.00E-04	mg/L	3.8E-05	mg/kg-day	--	--	--
				Benzo(b)fluoranthene	8.00E-04	mg/L	5.1E-05	mg/kg-day	--	--	--
				Chrysene	9.00E-04	mg/L	5.8E-05	mg/kg-day	--	--	--
				Ethylbenzene	1.50E-02	mg/L	9.6E-04	mg/kg-day	1.0E-01	mg/kg-day	9.6E-03
				Isopropylbenzene	3.89E-01	mg/L	2.5E-02	mg/kg-day	1.0E-01	mg/kg-day	2.5E-01
				Naphthalene	1.81E-01	mg/L	1.2E-02	mg/kg-day	2.0E-02	mg/kg-day	5.8E-01
				sec-Butylbenzene	3.89E-01	mg/L	2.5E-02	mg/kg-day	4.0E-02	mg/kg-day	6.2E-01
				Thallium	2.82E-03	mg/L	1.8E-04	mg/kg-day	6.6E-05	mg/kg-day	2.7E+00
				Xylene (Total)	1.41E-01	mg/L	9.0E-03	mg/kg-day	2.0E-01	mg/kg-day	4.5E-02
			Exp. Route Total								7.4E+00
			Dermal (bathing/ showering)	1,2,4-Trimethylbenzene	3.35E-01	mg/L	1.2E-02	mg/kg-day	5.0E-02	mg/kg-day	2.4E-01
				2-Butanone	1.13E+00	mg/L	4.6E-04	mg/kg-day	6.0E-01	mg/kg-day	7.6E-04
				2-Methylnaphthalene	1.89E-02	mg/L	3.7E-04	mg/kg-day	9.0E-03	mg/kg-day	4.2E-02
				Arsenic	1.15E-02	mg/L	4.9E-06	mg/kg-day	3.0E-04	mg/kg-day	1.6E-02
				Benzene	1.00E-03	mg/L	8.9E-06	mg/kg-day	4.0E-03	mg/kg-day	2.2E-03
				Benzo(a)pyrene	6.00E-04	mg/L	1.8E-04	mg/kg-day	--	--	--
				Benzo(b)fluoranthene	8.00E-04	mg/L	2.4E-04	mg/kg-day	--	--	--
				Chrysene	9.00E-04	mg/L	1.8E-04	mg/kg-day	--	--	--
				Ethylbenzene	1.50E-02	mg/L	3.1E-04	mg/kg-day	1.0E-01	mg/kg-day	3.1E-03
				Isopropylbenzene	3.89E-01	mg/L	1.4E-02	mg/kg-day	1.0E-01	mg/kg-day	1.4E-01
				Naphthalene	1.81E-01	mg/L	3.6E-03	mg/kg-day	2.0E-02	mg/kg-day	1.8E-01
				sec-Butylbenzene	3.89E-01	mg/L	2.9E-02	mg/kg-day	4.0E-02	mg/kg-day	7.2E-01
				Thallium	2.82E-03	mg/L	1.2E-06	mg/kg-day	6.6E-05	mg/kg-day	1.8E-02

TABLE H-7.5.4.RME
EPA RAGS PART D TABLE 7b
CALCULATION OF RME CHEMICAL NONCANCER HAZARDS
CURRENT CHILD RESIDENT
SITE 23, ALAMEDA POINT, ALAMEDA, CALIFORNIA

Scenario Timeframe:	Future
Receptor Population:	Resident
Receptor Age:	Child

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Non-Cancer Hazard Calculations				
					Value	Units	Intake/Exposure Concentration		RfD/RfC		Hazard Quotient
							Value	Units	Value	Units	
				Xylene (Total)	1.41E-01	mg/L	3.2E-03	mg/kg-day	2.0E-01	mg/kg-day	1.6E-02
			Exp. Route Total								1.4E+00
			Inhalation (bathing/ showering)	1,2,4-Trimethylbenzene	3.35E-01	mg/L	4.5E-03	mg/kg-day	1.7E-03	mg/kg-day	2.6E+00
				2-Butanone	1.13E+00	mg/L	1.5E-02	mg/kg-day	2.9E-01	mg/kg-day	5.2E-02
				2-Methylnaphthalene	1.89E-02	mg/L	2.5E-04	mg/kg-day	8.6E-04	mg/kg-day	3.0E-01
				Benzene	1.00E-03	mg/L	1.3E-05	mg/kg-day	8.6E-03	mg/kg-day	1.6E-03
				Ethylbenzene	1.50E-02	mg/L	2.0E-04	mg/kg-day	2.9E-01	mg/kg-day	6.9E-04
				Isopropylbenzene	3.89E-01	mg/L	5.2E-03	mg/kg-day	1.1E-01	mg/kg-day	4.7E-02
				Naphthalene	1.81E-01	mg/L	2.4E-03	mg/kg-day	8.6E-04	mg/kg-day	2.8E+00
				sec-Butylbenzene	3.89E-01	mg/L	5.2E-03	mg/kg-day	4.0E-02	mg/kg-day	1.3E-01
				Xylene (Total)	1.41E-01	mg/L	1.9E-03	mg/kg-day	2.9E-02	mg/kg-day	6.5E-02
			Exp. Route Total								6.1E+00
		Exposure Point Total									1.5E+01
	Exposure Medium Total										1.5E+01
Medium Total											1.5E+01
										Total of Receptor Hazards Across All Media	1.5E+01

Notes:

EPC	Exposure point concentration
mg/kg	Milligram per kilogram
mg/kg-day	Milligram per kilogram per day
RfD	Reference dose
RfC	Reference concentration
RME	Reasonable maximum exposure
--	Not Applicable or Not Available

TABLE H-7.5.5.RME
EPA RAGS PART D TABLE 7b
CALCULATION OF RME CHEMICAL NONCANCER HAZARDS
FUTURE DEVELOPED CONSTRUCTION WORKER
SITE 23, ALAMEDA POINT, ALAMEDA, CALIFORNIA

Scenario Timeframe:	Future-Developed
Receptor Population:	Construction Worker
Receptor Age:	Adult

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Non-Cancer Hazard Calculations				
					Value	Units	Intake/Exposure Concentration		RfD/RfC		Hazard Quotient
							Value	Units	Value	Units	
Soil (0-8)	Soil	Site Soil	Ingestion	2-Methylnaphthalene	2.67E-01	mg/kg	8.6E-07	mg/kg-day	9.0E-03	mg/kg-day	9.6E-05
				Arsenic	4.30E+00	mg/kg	1.4E-05	mg/kg-day	3.0E-04	mg/kg-day	4.6E-02
				Benz(a)anthracene	7.44E-02	mg/kg	2.4E-07	mg/kg-day	--	--	--
				Benzo(a)pyrene	8.50E-02	mg/kg	2.7E-07	mg/kg-day	--	--	--
				Benzo(b)fluoranthene	1.22E-02	mg/kg	3.9E-08	mg/kg-day	--	--	--
				Benzo(k)fluoranthene	7.34E-02	mg/kg	2.4E-07	mg/kg-day	--	--	--
				Dibenz(a,h)anthracene	3.09E-02	mg/kg	1.0E-07	mg/kg-day	--	--	--
				Indeno(1,2,3-cd)pyrene	6.43E-02	mg/kg	2.1E-07	mg/kg-day	--	--	--
			Exp. Route Total								4.6E-02
			Dermal	2-Methylnaphthalene	2.67E-01	mg/kg	--	mg/kg-day	9.0E-03	mg/kg-day	--
				Arsenic	4.30E+00	mg/kg	1.2E-06	mg/kg-day	3.0E-04	mg/kg-day	4.2E-03
				Benz(a)anthracene	7.44E-02	mg/kg	9.4E-08	mg/kg-day	--	--	--
				Benzo(a)pyrene	8.50E-02	mg/kg	1.1E-07	mg/kg-day	--	--	--
				Benzo(b)fluoranthene	1.22E-02	mg/kg	1.5E-08	mg/kg-day	--	--	--
				Benzo(k)fluoranthene	7.34E-02	mg/kg	9.2E-08	mg/kg-day	--	--	--
				Dibenz(a,h)anthracene	3.09E-02	mg/kg	3.9E-08	mg/kg-day	--	--	--
				Indeno(1,2,3-cd)pyrene	6.43E-02	mg/kg	8.1E-08	mg/kg-day	--	--	--
			Exp. Route Total								4.2E-03
		Exposure Point Total									5.1E-02
	Exposure Medium Total										5.1E-02
	Air	Outdoor Air	Inhalation (particulates)	2-Methylnaphthalene	2.67E-01	mg/kg	4.0E-11	mg/kg-day	8.6E-04	mg/kg-day	4.6E-08
				Arsenic	4.30E+00	mg/kg	6.4E-10	mg/kg-day	--	--	--
				Benz(a)anthracene	7.44E-02	mg/kg	1.1E-11	mg/kg-day	--	--	--
				Benzo(a)pyrene	8.50E-02	mg/kg	1.3E-11	mg/kg-day	--	--	--
				Benzo(b)fluoranthene	1.22E-02	mg/kg	1.8E-12	mg/kg-day	--	--	--
				Benzo(k)fluoranthene	7.34E-02	mg/kg	1.1E-11	mg/kg-day	--	--	--
				Dibenz(a,h)anthracene	3.09E-02	mg/kg	4.6E-12	mg/kg-day	--	--	--
				Indeno(1,2,3-cd)pyrene	6.43E-02	mg/kg	9.5E-12	mg/kg-day	--	--	--
			Exp. Route Total								4.6E-08
			Inhalation (VOCs)	2-Methylnaphthalene	2.67E-01	mg/kg	1.2E-06	mg/kg-day	8.6E-04	mg/kg-day	1.4E-03
			Exp. Route Total								1.4E-03

TABLE H-7.5.5.RME
EPA RAGS PART D TABLE 7b
CALCULATION OF RME CHEMICAL NONCANCER HAZARDS
FUTURE DEVELOPED CONSTRUCTION WORKER
SITE 23, ALAMEDA POINT, ALAMEDA, CALIFORNIA

Scenario Timeframe:	Future-Developed
Receptor Population:	Construction Worker
Receptor Age:	Adult

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Non-Cancer Hazard Calculations				
					Value	Units	Intake/Exposure Concentration		RfD/RfC		Hazard Quotient
							Value	Units	Value	Units	
		Exposure Point Total									1.4E-03
	Exposure Medium Total										1.4E-03
Medium Total											5.2E-02
										Total of Receptor Hazards Across All Media	5.2E-02

Notes:

EPC	Exposure point concentration
mg/kg	Milligram per kilogram
mg/kg-day	Milligram per kilogram per day
RfD	Reference dose
RfC	Reference concentration
RME	Reasonable maximum expsoure
--	*Not Applicable or Not Available*

TABLE H-7.5.6.RME
EPA RAGS PART D TABLE 7b
CALCULATION OF RME CHEMICAL NONCANCER HAZARDS
FUTURE REDEVELOPED ADULT RESIDENT
SITE 23, ALAMEDA POINT, ALAMEDA, CALIFORNIA

Scenario Timeframe:	Future-Redeveloped
Receptor Population:	Resident
Receptor Age:	Adult

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Non-Cancer Hazard Calculations				
					Value	Units	Intake/Exposure Concentration		RfD/RfC		Hazard Quotient
							Value	Units	Value	Units	
Soil (0-8)	Soil	Site Soil	Ingestion	2-Methylnaphthalene	2.67E-01	mg/kg	3.7E-07	mg/kg-day	9.0E-03	mg/kg-day	4.1E-05
				Arsenic	4.30E+00	mg/kg	5.9E-06	mg/kg-day	3.0E-04	mg/kg-day	2.0E-02
				Benz(a)anthracene	7.44E-02	mg/kg	1.0E-07	mg/kg-day	--	--	--
				Benzo(a)pyrene	8.50E-02	mg/kg	1.2E-07	mg/kg-day	--	--	--
				Benzo(b)fluoranthene	1.22E-02	mg/kg	1.7E-08	mg/kg-day	--	--	--
				Benzo(k)fluoranthene	7.34E-02	mg/kg	1.0E-07	mg/kg-day	--	--	--
				Dibenz(a,h)anthracene	3.09E-02	mg/kg	4.2E-08	mg/kg-day	--	--	--
				Indeno(1,2,3-cd)pyrene	6.43E-02	mg/kg	8.8E-08	mg/kg-day	--	--	--
			Exp. Route Total								4.1E-05
			Dermal	2-Methylnaphthalene	2.67E-01	mg/kg	--	mg/kg-day	9.0E-03	mg/kg-day	--
				Arsenic	4.30E+00	mg/kg	7.1E-07	mg/kg-day	3.0E-04	mg/kg-day	2.4E-03
				Benz(a)anthracene	7.44E-02	mg/kg	5.3E-08	mg/kg-day	--	--	--
				Benzo(a)pyrene	8.50E-02	mg/kg	6.0E-08	mg/kg-day	--	--	--
				Benzo(b)fluoranthene	1.22E-02	mg/kg	8.7E-09	mg/kg-day	--	--	--
				Benzo(k)fluoranthene	7.34E-02	mg/kg	5.2E-08	mg/kg-day	--	--	--
				Dibenz(a,h)anthracene	3.09E-02	mg/kg	2.2E-08	mg/kg-day	--	--	--
				Indeno(1,2,3-cd)pyrene	6.43E-02	mg/kg	4.6E-08	mg/kg-day	--	--	--
			Exp. Route Total								2.4E-03
		Exposure Point Total									2.4E-03
	Exposure Medium Total										2.4E-03
	Homegrown Produce	Homegrown Produce	Ingestion	2-Methylnaphthalene	2.67E-01	mg/kg	--	mg/kg-day	9.0E-03	mg/kg-day	--
				Arsenic	4.30E+00	mg/kg	2.2E-05	mg/kg-day	3.0E-04	mg/kg-day	7.3E-02
				Benz(a)anthracene	7.44E-02	mg/kg	3.4E-07	mg/kg-day	--	--	--
				Benzo(a)pyrene	8.50E-02	mg/kg	3.0E-07	mg/kg-day	--	--	--
				Benzo(b)fluoranthene	1.22E-02	mg/kg	3.9E-08	mg/kg-day	--	--	--
				Benzo(k)fluoranthene	7.34E-02	mg/kg	2.4E-07	mg/kg-day	--	--	--
				Dibenz(a,h)anthracene	3.09E-02	mg/kg	1.6E-07	mg/kg-day	--	--	--
				Indeno(1,2,3-cd)pyrene	6.43E-02	mg/kg	1.6E-07	mg/kg-day	--	--	--
			Exp. Route Total								7.3E-02
		Exposure Point Total									7.3E-02
	Exposure Medium Total										7.3E-02
	Air	Outdoor Air	Inhalation (particulates)	2-Methylnaphthalene	2.67E-01	mg/kg	5.5E-11	mg/kg-day	8.6E-04	mg/kg-day	6.4E-08
				Arsenic	4.30E+00	mg/kg	8.9E-10	mg/kg-day	--	--	--

TABLE H-7.5.6.RME
EPA RAGS PART D TABLE 7b
CALCULATION OF RME CHEMICAL NONCANCER HAZARDS
FUTURE REDEVELOPED ADULT RESIDENT
SITE 23, ALAMEDA POINT, ALAMEDA, CALIFORNIA

Scenario Timeframe:	Future-Redeveloped
Receptor Population:	Resident
Receptor Age:	Adult

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Non-Cancer Hazard Calculations				
					Value	Units	Intake/Exposure Concentration		RfD/RfC		Hazard Quotient
							Value	Units	Value	Units	
				Benz(a)anthracene	7.44E-02	mg/kg	1.5E-11	mg/kg-day	--	--	--
				Benzo(a)pyrene	8.50E-02	mg/kg	1.8E-11	mg/kg-day	--	--	--
				Benzo(b)fluoranthene	1.22E-02	mg/kg	2.5E-12	mg/kg-day	--	--	--
				Benzo(k)fluoranthene	7.34E-02	mg/kg	1.5E-11	mg/kg-day	--	--	--
				Dibenz(a,h)anthracene	3.09E-02	mg/kg	6.4E-12	mg/kg-day	--	--	--
				Indeno(1,2,3-cd)pyrene	6.43E-02	mg/kg	1.3E-11	mg/kg-day	--	--	--
			Exp. Route Total								6.4E-08
			Inhalation (VOCs)	2-Methylnaphthalene	2.67E-01	mg/kg	1.7E-06	mg/kg-day	8.6E-04	mg/kg-day	2.0E-03
			Exp. Route Total								2.0E-03
		Exposure Point Total									2.0E-03
	Exposure Medium Total										2.0E-03
Medium Total											7.7E-02
Groundwater	Groundwater	Tap	Ingestion	1,2,4-Trimethylbenzene	3.35E-01	mg/L	9.2E-03	mg/kg-day	5.0E-02	mg/kg-day	1.8E-01
				2-Butanone	1.13E+00	mg/L	3.1E-02	mg/kg-day	6.0E-01	mg/kg-day	5.2E-02
				2-Methylnaphthalene	1.89E-02	mg/L	5.2E-04	mg/kg-day	9.0E-03	mg/kg-day	5.8E-02
				Arsenic	1.15E-02	mg/L	3.2E-04	mg/kg-day	3.0E-04	mg/kg-day	1.1E+00
				Benzene	1.00E-03	mg/L	2.7E-05	mg/kg-day	4.0E-03	mg/kg-day	6.8E-03
				Benzo(a)pyrene	6.00E-04	mg/L	1.6E-05	mg/kg-day	--	--	--
				Benzo(b)fluoranthene	8.00E-04	mg/L	2.2E-05	mg/kg-day	--	--	--
				Chrysene	9.00E-04	mg/L	2.5E-05	mg/kg-day	--	--	--
				Ethylbenzene	1.50E-02	mg/L	4.1E-04	mg/kg-day	1.0E-01	mg/kg-day	4.1E-03
				Isopropylbenzene	3.89E-01	mg/L	1.1E-02	mg/kg-day	1.0E-01	mg/kg-day	1.1E-01
				Naphthalene	1.81E-01	mg/L	5.0E-03	mg/kg-day	2.0E-02	mg/kg-day	2.5E-01
				sec-Butylbenzene	3.89E-01	mg/L	1.1E-02	mg/kg-day	4.0E-02	mg/kg-day	2.7E-01
				Thallium	2.82E-03	mg/L	7.7E-05	mg/kg-day	6.6E-05	mg/kg-day	1.2E+00
				Xylene (Total)	1.41E-01	mg/L	3.9E-03	mg/kg-day	2.0E-01	mg/kg-day	1.9E-02
			Exp. Route Total								3.2E+00
			Dermal (bathing/ showering)	1,2,4-Trimethylbenzene	3.35E-01	mg/L	4.0E-03	mg/kg-day	5.0E-02	mg/kg-day	8.0E-02
				2-Butanone	1.13E+00	mg/L	1.6E-04	mg/kg-day	6.0E-01	mg/kg-day	2.6E-04
				2-Methylnaphthalene	1.89E-02	mg/L	1.3E-04	mg/kg-day	9.0E-03	mg/kg-day	1.4E-02
				Arsenic	1.15E-02	mg/L	1.6E-06	mg/kg-day	3.0E-04	mg/kg-day	5.5E-03
				Benzene	1.00E-03	mg/L	3.0E-06	mg/kg-day	4.0E-03	mg/kg-day	7.5E-04
				Benzo(a)pyrene	6.00E-04	mg/L	6.0E-05	mg/kg-day	--	--	--

TABLE H-7.5.6.RME
EPA RAGS PART D TABLE 7b
CALCULATION OF RME CHEMICAL NONCANCER HAZARDS
FUTURE REDEVELOPED ADULT RESIDENT
SITE 23, ALAMEDA POINT, ALAMEDA, CALIFORNIA

Scenario Timeframe:	*Future-Redeveloped*
Receptor Population:	Resident
Receptor Age:	Adult

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Non-Cancer Hazard Calculations				
					Value	Units	Intake/Exposure Concentration		RfD/RfC		Hazard Quotient
							Value	Units	Value	Units	
				Benzo(b)fluoranthene	8.00E-04	mg/L	8.0E-05	mg/kg-day	--	--	--
				Chrysene	9.00E-04	mg/L	6.0E-05	mg/kg-day	--	--	--
				Ethylbenzene	1.50E-02	mg/L	1.1E-04	mg/kg-day	1.0E-01	mg/kg-day	1.1E-03
				Isopropylbenzene	3.89E-01	mg/L	4.9E-03	mg/kg-day	1.0E-01	mg/kg-day	4.9E-02
				Naphthalene	1.81E-01	mg/L	1.2E-03	mg/kg-day	2.0E-02	mg/kg-day	6.1E-02
				sec-Butylbenzene	3.89E-01	mg/L	9.8E-03	mg/kg-day	4.0E-02	mg/kg-day	2.5E-01
				Thallium	2.82E-03	mg/L	4.0E-07	mg/kg-day	6.6E-05	mg/kg-day	6.1E-03
				Xylene (Total)	1.41E-01	mg/L	1.1E-03	mg/kg-day	2.0E-01	mg/kg-day	5.3E-03
			Exp. Route Total								4.7E-01
			Inhalation (bathing/ showering)	1,2,4-Trimethylbenzene	3.35E-01	mg/L	1.1E-03	mg/kg-day	1.7E-03	mg/kg-day	6.5E-01
				2-Butanone	1.13E+00	mg/L	3.7E-03	mg/kg-day	2.9E-01	mg/kg-day	1.3E-02
				2-Methylnaphthalene	1.89E-02	mg/L	6.2E-05	mg/kg-day	8.6E-04	mg/kg-day	7.2E-02
				Benzene	1.00E-03	mg/L	3.3E-06	mg/kg-day	8.6E-03	mg/kg-day	3.8E-04
				Ethylbenzene	1.50E-02	mg/L	4.9E-05	mg/kg-day	2.9E-01	mg/kg-day	1.7E-04
				Isopropylbenzene	3.89E-01	mg/L	1.3E-03	mg/kg-day	1.1E-01	mg/kg-day	1.2E-02
				Naphthalene	1.81E-01	mg/L	6.0E-04	mg/kg-day	8.6E-04	mg/kg-day	6.9E-01
				sec-Butylbenzene	3.89E-01	mg/L	1.3E-03	mg/kg-day	4.0E-02	mg/kg-day	3.2E-02
				Xylene (Total)	1.41E-01	mg/L	4.6E-04	mg/kg-day	2.9E-02	mg/kg-day	1.6E-02
			Exp. Route Total								1.5E+00
		Exposure Point Total									5.1E+00
	Exposure Medium Total										5.1E+00
Medium Total											5.1E+00
										Total of Receptor Hazards Across All Media	5.2E+00

Notes:

EPC	Exposure point concentration
mg/kg	Milligram per kilogram
mg/kg-day	Milligram per kilogram per day
RfD	Reference dose
RfC	Reference concentration
RME	Reasonable maximum expsoure
--	Not Applicable or Not Available

TABLE H-7.5.7.RME
EPA RAGS PART D TABLE 7b
CALCULATION OF RME CHEMICAL NONCANCER HAZARDS
FUTURE REDEVELOPED CHILD RESIDENT
SITE 23, ALAMEDA POINT, ALAMEDA, CALIFORNIA

Scenario Timeframe:	*Future-Redeveloped*
Receptor Population:	Resident
Receptor Age:	Child

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Non-Cancer Hazard Calculations				
					Value	Units	Intake/Exposure Concentration		RfD/RfC		Hazard Quotient
							Value	Units	Value	Units	
Soil (0-8)	Soil	Site Soil	Ingestion	2-Methylnaphthalene	2.67E-01	mg/kg	3.4E-06	mg/kg-day	9.0E-03	mg/kg-day	3.8E-04
				Arsenic	4.30E+00	mg/kg	5.5E-05	mg/kg-day	3.0E-04	mg/kg-day	1.8E-01
				Benz(a)anthracene	7.44E-02	mg/kg	9.5E-07	mg/kg-day	--	--	--
				Benzo(a)pyrene	8.50E-02	mg/kg	1.1E-06	mg/kg-day	--	--	--
				Benzo(b)fluoranthene	1.22E-02	mg/kg	1.6E-07	mg/kg-day	--	--	--
				Benzo(k)fluoranthene	7.34E-02	mg/kg	9.4E-07	mg/kg-day	--	--	--
				Dibenz(a,h)anthracene	3.09E-02	mg/kg	4.0E-07	mg/kg-day	--	--	--
				Indeno(1,2,3-cd)pyrene	6.43E-02	mg/kg	8.2E-07	mg/kg-day	--	--	--
			Exp. Route Total								1.8E-01
			Dermal	2-Methylnaphthalene	2.67E-01	mg/kg	--	mg/kg-day	9.0E-03	mg/kg-day	--
				Arsenic	4.30E+00	mg/kg	4.6E-06	mg/kg-day	3.0E-04	mg/kg-day	1.5E-02
				Benz(a)anthracene	7.44E-02	mg/kg	3.5E-07	mg/kg-day	--	--	--
				Benzo(a)pyrene	8.50E-02	mg/kg	4.0E-07	mg/kg-day	--	--	--
				Benzo(b)fluoranthene	1.22E-02	mg/kg	5.7E-08	mg/kg-day	--	--	--
				Benzo(k)fluoranthene	7.34E-02	mg/kg	3.4E-07	mg/kg-day	--	--	--
				Dibenz(a,h)anthracene	3.09E-02	mg/kg	1.4E-07	mg/kg-day	--	--	--
				Indeno(1,2,3-cd)pyrene	6.43E-02	mg/kg	3.0E-07	mg/kg-day	--	--	--
			Exp. Route Total								1.5E-02
		Exposure Point Total									2.0E-01
	Exposure Medium Total										2.0E-01
	Homegrown Produce	Homegrown Produce	Ingestion	2-Methylnaphthalene	2.67E-01	mg/kg	--	mg/kg-day	9.0E-03	mg/kg-day	--
				Arsenic	4.30E+00	mg/kg	2.2E-05	mg/kg-day	3.0E-04	mg/kg-day	7.3E-02
				Benz(a)anthracene	7.44E-02	mg/kg	3.4E-07	mg/kg-day	--	--	--
				Benzo(a)pyrene	8.50E-02	mg/kg	3.0E-07	mg/kg-day	--	--	--
				Benzo(b)fluoranthene	1.22E-02	mg/kg	3.9E-08	mg/kg-day	--	--	--
				Benzo(k)fluoranthene	7.34E-02	mg/kg	2.4E-07	mg/kg-day	--	--	--
				Dibenz(a,h)anthracene	3.09E-02	mg/kg	1.6E-07	mg/kg-day	--	--	--
				Indeno(1,2,3-cd)pyrene	6.43E-02	mg/kg	1.6E-07	mg/kg-day	--	--	--
			Exp. Route Total								7.3E-02
		Exposure Point Total									7.3E-02
	Exposure Medium Total										7.3E-02
	Air	Outdoor Air	Inhalation (particulates)	2-Methylnaphthalene	2.67E-01	mg/kg	1.3E-10	mg/kg-day	8.6E-04	mg/kg-day	1.5E-07
				Arsenic	4.30E+00	mg/kg	2.1E-09	mg/kg-day	--	--	--

TABLE H-7.5.7.RME
EPA RAGS PART D TABLE 7b
CALCULATION OF RME CHEMICAL NONCANCER HAZARDS
FUTURE REDEVELOPED CHILD RESIDENT
SITE 23, ALAMEDA POINT, ALAMEDA, CALIFORNIA

Scenario Timeframe:	Future-Redeveloped
Receptor Population:	Resident
Receptor Age:	Child

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Non-Cancer Hazard Calculations				
					Value	Units	Intake/Exposure Concentration		RfD/RfC		Hazard Quotient
							Value	Units	Value	Units	
				Benz(a)anthracene	7.44E-02	mg/kg	3.6E-11	mg/kg-day	--	--	--
				Benzo(a)pyrene	8.50E-02	mg/kg	4.1E-11	mg/kg-day	--	--	--
				Benzo(b)fluoranthene	1.22E-02	mg/kg	5.9E-12	mg/kg-day	--	--	--
				Benzo(k)fluoranthene	7.34E-02	mg/kg	3.6E-11	mg/kg-day	--	--	--
				Dibenz(a,h)anthracene	3.09E-02	mg/kg	1.5E-11	mg/kg-day	--	--	--
				Indeno(1,2,3-cd)pyrene	6.43E-02	mg/kg	3.1E-11	mg/kg-day	--	--	--
			Exp. Route Total								1.5E-07
			Inhalation (VOCs)	2-Methylnaphthalene	2.67E-01	mg/kg	4.0E-06	mg/kg-day	8.6E-04	mg/kg-day	4.7E-03
			Exp. Route Total								4.7E-03
		Exposure Point Total									4.7E-03
	Exposure Medium Total										4.7E-03
Medium Total											2.8E-01
Groundwater	Groundwater	Tap	Ingestion	1,2,4-Trimethylbenzene	3.35E-01	mg/L	2.1E-02	mg/kg-day	5.0E-02	mg/kg-day	4.3E-01
				2-Butanone	1.13E+00	mg/L	7.2E-02	mg/kg-day	6.0E-01	mg/kg-day	1.2E-01
				2-Methylnaphthalene	1.89E-02	mg/L	1.2E-03	mg/kg-day	9.0E-03	mg/kg-day	1.3E-01
				Arsenic	1.15E-02	mg/L	7.4E-04	mg/kg-day	3.0E-04	mg/kg-day	2.5E+00
				Benzene	1.00E-03	mg/L	6.4E-05	mg/kg-day	4.0E-03	mg/kg-day	1.6E-02
				Benzo(a)pyrene	6.00E-04	mg/L	3.8E-05	mg/kg-day	--	--	--
				Benzo(b)fluoranthene	8.00E-04	mg/L	5.1E-05	mg/kg-day	--	--	--
				Chrysene	9.00E-04	mg/L	5.8E-05	mg/kg-day	--	--	--
				Ethylbenzene	1.50E-02	mg/L	9.6E-04	mg/kg-day	1.0E-01	mg/kg-day	9.6E-03
				Isopropylbenzene	3.89E-01	mg/L	2.5E-02	mg/kg-day	1.0E-01	mg/kg-day	2.5E-01
				Naphthalene	1.81E-01	mg/L	1.2E-02	mg/kg-day	2.0E-02	mg/kg-day	5.8E-01
				sec-Butylbenzene	3.89E-01	mg/L	2.5E-02	mg/kg-day	4.0E-02	mg/kg-day	6.2E-01
				Thallium	2.82E-03	mg/L	1.8E-04	mg/kg-day	6.6E-05	mg/kg-day	2.7E+00
				Xylene (Total)	1.41E-01	mg/L	9.0E-03	mg/kg-day	2.0E-01	mg/kg-day	4.5E-02
			Exp. Route Total								7.4E+00
			Dermal (bathing/ showering)	1,2,4-Trimethylbenzene	3.35E-01	mg/L	1.2E-02	mg/kg-day	5.0E-02	mg/kg-day	2.4E-01
				2-Butanone	1.13E+00	mg/L	4.6E-04	mg/kg-day	6.0E-01	mg/kg-day	7.6E-04
				2-Methylnaphthalene	1.89E-02	mg/L	3.7E-04	mg/kg-day	9.0E-03	mg/kg-day	4.2E-02
				Arsenic	1.15E-02	mg/L	4.9E-06	mg/kg-day	3.0E-04	mg/kg-day	1.6E-02
				Benzene	1.00E-03	mg/L	8.9E-06	mg/kg-day	4.0E-03	mg/kg-day	2.2E-03
				Benzo(a)pyrene	6.00E-04	mg/L	1.8E-04	mg/kg-day	--	--	--

TABLE H-7.5.7.RME
EPA RAGS PART D TABLE 7b
CALCULATION OF RME CHEMICAL NONCANCER HAZARDS
FUTURE REDEVELOPED CHILD RESIDENT
SITE 23, ALAMEDA POINT, ALAMEDA, CALIFORNIA

Scenario Timeframe:	Future-Redeveloped
Receptor Population:	Resident
Receptor Age:	Child

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Non-Cancer Hazard Calculations				
					Value	Units	Intake/Exposure Concentration		RfD/RfC		Hazard Quotient
							Value	Units	Value	Units	
				Benzo(b)fluoranthene	8.00E-04	mg/L	2.4E-04	mg/kg-day	--	--	--
				Chrysene	9.00E-04	mg/L	1.8E-04	mg/kg-day	--	--	--
				Ethylbenzene	1.50E-02	mg/L	3.1E-04	mg/kg-day	1.0E-01	mg/kg-day	3.1E-03
				Isopropylbenzene	3.89E-01	mg/L	1.4E-02	mg/kg-day	1.0E-01	mg/kg-day	1.4E-01
				Naphthalene	1.81E-01	mg/L	3.6E-03	mg/kg-day	2.0E-02	mg/kg-day	1.8E-01
				sec-Butylbenzene	3.89E-01	mg/L	2.9E-02	mg/kg-day	4.0E-02	mg/kg-day	7.2E-01
				Thallium	2.82E-03	mg/L	1.2E-06	mg/kg-day	6.6E-05	mg/kg-day	1.8E-02
				Xylene (Total)	1.41E-01	mg/L	3.2E-03	mg/kg-day	2.0E-01	mg/kg-day	1.6E-02
			Exp. Route Total								1.4E+00
			Inhalation (bathing/ showering)	1,2,4-Trimethylbenzene	3.35E-01	mg/L	4.5E-03	mg/kg-day	1.7E-03	mg/kg-day	2.6E+00
				2-Butanone	1.13E+00	mg/L	1.5E-02	mg/kg-day	2.9E-01	mg/kg-day	5.2E-02
				2-Methylnaphthalene	1.89E-02	mg/L	2.5E-04	mg/kg-day	8.6E-04	mg/kg-day	3.0E-01
				Benzene	1.00E-03	mg/L	1.3E-05	mg/kg-day	8.6E-03	mg/kg-day	1.6E-03
				Ethylbenzene	1.50E-02	mg/L	2.0E-04	mg/kg-day	2.9E-01	mg/kg-day	6.9E-04
				Isopropylbenzene	3.89E-01	mg/L	5.2E-03	mg/kg-day	1.1E-01	mg/kg-day	4.7E-02
				Naphthalene	1.81E-01	mg/L	2.4E-03	mg/kg-day	8.6E-04	mg/kg-day	2.8E+00
				sec-Butylbenzene	3.89E-01	mg/L	5.2E-03	mg/kg-day	4.0E-02	mg/kg-day	1.3E-01
				Xylene (Total)	1.41E-01	mg/L	1.9E-03	mg/kg-day	2.9E-02	mg/kg-day	8.5E-02
			Exp. Route Total								6.1E+00
		Exposure Point Total									1.5E+01
	Exposure Medium Total										1.5E+01
Medium Total											1.5E+01
										Total of Receptor Hazards Across All Media	1.5E+01

Notes:

EPC	Exposure point concentration
mg/kg	Milligram per kilogram
mg/kg-day	Milligram per kilogram per day
RfD	Reference dose
RfC	Reference concentration
RME	Reasonable maximum expsoure
--	Not Applicable or Not Available

HHRA RISK TABLES

Reasonable Maximum Exposure
Site 09
Alameda Point, Alameda, California

TABLE H-8.1.1.RME
EPA RAGS PART D TABLE 7a
CALCULATION OF RME CHEMICAL CANCER RISKS
CURRENT INDUSTRIAL WORKER
SITE 09, ALAMEDA POINT, ALAMEDA, CALIFORNIA

Scenario Timeframe:	Future
Receptor Population:	Industrial Worker
Receptor Age:	Adult

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations				
					Value	Units	Intake/Exposure Concentration		CSF/Unit Risk		Cancer Risk
							Value	Units	Value	Units	
Soil (0-2)	Soil	Site Soil	Ingestion	Arsenic	5.90E+00	mg/kg	2.1E-06	mg/kg-day	1.5E+00	(mg/kg-day)-1	3.1E-06
			Exp. Route Total								3.1E-06
			Dermal	Arsenic	5.90E+00	mg/kg	4.1E-07	mg/kg-day	1.5E+00	(mg/kg-day)-1	6.1E-07
			Exp. Route Total								6.1E-07
		Exposure Point Total									3.7E-06
	Exposure Medium Total										3.7E-06
	Air	Outdoor Air	Inhalation (particulates)	Arsenic	5.90E+00	mg/kg	3.1E-10	mg/kg-day	1.5E+01	(mg/kg-day)-1	4.7E-09
			Exp. Route Total								4.7E-09
		Exposure Point Total									4.7E-09
	Exposure Medium Total										4.7E-09
Medium Total											3.7E-06
Groundwater	Groundwater	Indoor Air (Vapor Intrusion)	Inhalation	Benzene	7.90E-02	(a) ug/m^3	5.5E-06	mg/kg-day	2.7E-02	(mg/kg-day)-1	1.5E-07
				Vinyl Chloride	4.58E+00	(a) ug/m^3	3.2E-04	mg/kg-day	1.6E-02	(mg/kg-day)-1	5.1E-06
			Exp. Route Total								5.3E-06
		Exposure Point Total									5.3E-06
	Exposure Medium Total										5.3E-06
Medium Total											5.3E-06
										Total of Receptor Risks Across All Media	9.0E-06

Notes:

CSF	Cancer slope factor
EPC	Exposure point concentration
mg/kg	Milligram per kilogram
mg/kg-day	Milligram per kilogram per day
(mg/kg-day)-1	1/(Milligram per kilogram per day)
mg/l	Milligrams per liter
RME	Reasonable maximum exposure

(a) See the Vapor Intrusion to Indoor Air Evaluation for determination of the modeled indoor air concentration.

TABLE H-8.1.2.RME
EPA RAGS PART D TABLE 7a
CALCULATION OF RME CHEMICAL CANCER RISKS
CURRENT CONSTRUCTION WORKER
SITE 09, ALAMEDA POINT, ALAMEDA, CALIFORNIA

Scenario Timeframe:	Future
Receptor Population:	Construction Worker
Receptor Age:	Adult

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations				
					Value	Units	Intake/Exposure Concentration		CSF/Unit Risk		Cancer Risk
							Value	Units	Value	Units	
Soil (0-2)	Soil	Site Soil	Ingestion	Arsenic	5.90E+00	mg/kg	2.7E-07	mg/kg-day	1.5E+00	(mg/kg-day)-1	4.1E-07
			Exp. Route Total								4.1E-07
			Dermal	Arsenic	5.90E+00	mg/kg	2.4E-08	mg/kg-day	1.5E+00	(mg/kg-day)-1	3.7E-08
			Exp. Route Total								3.7E-08
		Exposure Point Total									4.4E-07
	Exposure Medium Total										4.4E-07
	Air	Outdoor Air	Inhalation (particulates)	Arsenic	5.90E+00	mg/kg	1.2E-11	mg/kg-day	1.5E+01	(mg/kg-day)-1	1.9E-10
			Exp. Route Total								1.9E-10
		Exposure Point Total									1.9E-10
	Exposure Medium Total										1.9E-10
Medium Total											4.5E-07
										Total of Receptor Risks Across All Media	4.5E-07

Notes:

CSF	Cancer slope factor
EPC	Exposure point concentration
mg/kg	Milligram per kilogram
mg/kg-day	Milligram per kilogram per day
(mg/kg-day)-1	1/(Milligram per kilogram per day)
RME	Reasonable maximum exposure

TABLE H-8.1.3.RME
EPA RAGS PART D TABLE 7a
CALCULATION OF RME CHEMICAL CANCER RISKS
CURRENT ADULT RESIDENT
SITE 09, ALAMEDA POINT, ALAMEDA, CALIFORNIA

Scenario Timeframe:	Future
Receptor Population:	Resident
Receptor Age:	Adult

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations				
					Value	Units	Intake/Exposure Concentration		CSF/Unit Risk		Cancer Risk
							Value	Units	Value	Units	
Soil (0-2)	Soil	Site Soil	Ingestion	Arsenic	5.90E+00	mg/kg	2.8E-06	mg/kg-day	1.5E+00	(mg/kg-day)-1	4.2E-06
			Exp. Route Total								4.2E-06
			Dermal	Arsenic	5.90E+00	mg/kg	3.3E-07	mg/kg-day	1.5E+00	(mg/kg-day)-1	5.0E-07
			Exp. Route Total								5.0E-07
		Exposure Point Total									4.7E-06
	Exposure Medium Total										4.7E-06
	Homegrown Produce	Homegrown Produce	Ingestion	Arsenic	5.90E+00	mg/kg	1.0E-05	mg/kg-day	1.5E+00	(mg/kg-day)-1	1.5E-05
			Exp. Route Total								1.5E-05
		Exposure Point Total									1.5E-05
	Exposure Medium Total										1.5E-05
	Air	Outdoor Air	Inhalation (particulates)	Arsenic	5.90E+00	mg/kg	4.2E-10	mg/kg-day	1.5E+01	(mg/kg-day)-1	6.3E-09
			Exp. Route Total								6.3E-09
		Exposure Point Total									6.3E-09
	Exposure Medium Total										6.3E-09
Medium Total											2.0E-05
Groundwater	Groundwater	Indoor Air (Vapor Intrusion)	Inhalation	Benzene	7.90E-01	(a) ug/m^3	7.4E-05	mg/kg-day	2.7E-02	(mg/kg-day)-1	2.0E-06
				Vinyl Chloride	4.58E+01	(a) ug/m^3	4.3E-03	mg/kg-day	3.1E-02	(mg/kg-day)-1	1.3E-04
			Exp. Route Total								1.3E-04
		Exposure Point Total									1.3E-04
		Tap	Ingestion	1,1-Dichloroethane	2.03E-02	mg/L	1.9E-04	mg/kg-day	--	--	--
				1,2-Dichloroethane	6.00E-04	mg/L	5.6E-06	mg/kg-day	9.1E-02	(mg/kg-day)-1	5.1E-07
				1,2-Dichloroethene (Total)	4.34E-01	mg/L	4.1E-03	mg/kg-day	--	--	--
				1,2-Dichloropropane	2.00E-03	mg/L	1.9E-05	mg/kg-day	6.8E-02	(mg/kg-day)-1	1.3E-06
				1,2,3-Trichloropropane	3.00E-04	mg/L	2.8E-06	mg/kg-day	2.0E+00	(mg/kg-day)-1	5.6E-06
				1,3-Dichloropropane	9.00E-04	mg/L	8.5E-06	mg/kg-day	6.8E-02	(mg/kg-day)-1	5.7E-07
				2,2'-Oxybis(1-chloropropane)	7.00E-04	mg/L	6.6E-06	mg/kg-day	--	--	--
				2-Methylnaphthalene	9.28E-01	mg/L	8.7E-03	mg/kg-day	--	--	--
				4-Methylphenol	1.20E+00	mg/L	1.1E-02	mg/kg-day	--	--	--
				Antimony	1.05E-02	mg/L	9.9E-05	mg/kg-day	--	--	--
				Arsenic	3.70E-02	mg/L	3.5E-04	mg/kg-day	1.5E+00	(mg/kg-day)-1	5.2E-04
				Benzene	2.00E-03	mg/L	1.9E-05	mg/kg-day	5.5E-02	(mg/kg-day)-1	1.0E-06
				Benz(a)anthracene	1.00E-03	mg/L	9.4E-06	mg/kg-day	7.3E-01	(mg/kg-day)-1	6.9E-06
				Benzo(a)pyrene	2.00E-03	mg/L	1.9E-05	mg/kg-day	7.3E+00	(mg/kg-day)-1	1.4E-04

TABLE H-8.1.3.RME
EPA RAGS PART D TABLE 7a
CALCULATION OF RME CHEMICAL CANCER RISKS
CURRENT ADULT RESIDENT
SITE 09, ALAMEDA POINT, ALAMEDA, CALIFORNIA

Scenario Timeframe:	Future
Receptor Population:	Resident
Receptor Age:	Adult

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations				
					Value	Units	Intake/Exposure Concentration		CSF/Unit Risk		Cancer Risk
							Value	Units	Value	Units	
				Benzo(b)fluoranthene	2.00E-03	mg/L	1.9E-05	mg/kg-day	7.3E-01	(mg/kg-day)-1	1.4E-05
				Benzo(k)fluoranthene	8.00E-04	mg/L	7.5E-06	mg/kg-day	7.3E-02	(mg/kg-day)-1	5.5E-07
				Chloroethane	5.00E-03	mg/L	4.7E-05	mg/kg-day	2.9E-03	(mg/kg-day)-1	1.4E-07
				Chrysene	1.00E-03	mg/L	9.4E-06	mg/kg-day	7.3E-03	(mg/kg-day)-1	6.9E-08
				Ethylbenzene	2.11E-02	mg/L	2.0E-04	mg/kg-day	3.9E-03	(mg/kg-day)-1	7.6E-07
				Indeno(1,2,3-cd)pyrene	1.00E-03	mg/L	9.4E-06	mg/kg-day	7.3E-01	(mg/kg-day)-1	6.9E-06
				Lead	5.80E-03	mg/L	5.4E-05	mg/kg-day	--	(mg/kg-day)-1	--
				Manganese	2.25E+00	mg/L	2.1E-02	mg/kg-day	--	(mg/kg-day)-1	--
				Methyl-t-butyl ether	1.13E-02	mg/L	1.1E-04	mg/kg-day	3.3E-03	(mg/kg-day)-1	3.5E-07
				Naphthalene	3.32E+00	mg/L	3.1E-02	mg/kg-day	--	(mg/kg-day)-1	--
				Pentachlorophenol	2.00E-03	mg/L	1.9E-05	mg/kg-day	1.2E-01	(mg/kg-day)-1	2.3E-06
				Tetrachloroethene	3.00E-03	mg/L	2.8E-05	mg/kg-day	5.2E-02	(mg/kg-day)-1	1.5E-06
				Trichloroethene	1.29E-02	mg/L	1.2E-04	mg/kg-day	4.0E-01	(mg/kg-day)-1	4.8E-05
				Vinyl chloride	3.04E-02	mg/L	2.9E-04	mg/kg-day	1.5E+00	(mg/kg-day)-1	4.3E-04
				Xylene (Total)	2.06E-01	mg/L	1.9E-03	mg/kg-day	--	(mg/kg-day)-1	--
			Exp. Route Total								1.2E-03
			Dermal (bathing/ showering)	1,1-Dichloroethane	2.03E-02	mg/L	6.7E-06	mg/kg-day	--	--	--
				1,2-Dichloroethane	6.00E-04	mg/L	1.2E-07	mg/kg-day	9.1E-02	(mg/kg-day)-1	1.1E-08
				1,2-Dichloroethene (Total)	4.34E-01	mg/L	1.6E-04	mg/kg-day	--	--	--
				1,2-Dichloropropane	2.00E-03	mg/L	7.6E-07	mg/kg-day	6.8E-02	(mg/kg-day)-1	5.2E-08
				1,2,3-Trichloropropane	3.00E-04	mg/L	1.1E-07	mg/kg-day	2.0E+00	(mg/kg-day)-1	2.2E-07
				1,3-Dichloropropane	9.00E-04	mg/L	3.4E-07	mg/kg-day	6.8E-02	(mg/kg-day)-1	2.3E-08
				2,2'-Oxybis(1-chloropropane)	7.00E-04	mg/L	2.6E-07	mg/kg-day	--	--	--
				2-Methylnaphthalene	9.28E-01	mg/L	2.1E-03	mg/kg-day	--	--	--
				4-Methylphenol	1.20E+00	mg/L	4.4E-04	mg/kg-day	--	--	--
				Antimony	1.05E-02	mg/L	5.1E-07	mg/kg-day	--	--	--
				Arsenic	3.70E-02	mg/L	1.8E-06	mg/kg-day	1.5E+00	(mg/kg-day)-1	2.7E-06
				Benzene	2.00E-03	mg/L	2.1E-06	mg/kg-day	5.5E-02	(mg/kg-day)-1	1.1E-07
				Benz(a)anthracene	1.00E-03	mg/L	2.3E-05	mg/kg-day	7.3E-01	(mg/kg-day)-1	1.7E-05
				Benzo(a)pyrene	2.00E-03	mg/L	6.9E-05	mg/kg-day	7.3E+00	(mg/kg-day)-1	5.0E-04
				Benzo(b)fluoranthene	2.00E-03	mg/L	6.9E-05	mg/kg-day	7.3E-01	(mg/kg-day)-1	5.0E-05
				Benzo(k)fluoranthene	8.00E-04	mg/L	8.6E-06	mg/kg-day	7.3E-02	(mg/kg-day)-1	6.3E-07
				Chloroethane	5.00E-03	mg/L	1.5E-06	mg/kg-day	2.9E-03	(mg/kg-day)-1	4.3E-09
				Chrysene	1.00E-03	mg/L	2.3E-05	mg/kg-day	7.3E-03	(mg/kg-day)-1	1.7E-07
				Ethylbenzene	2.11E-02	mg/L	5.1E-05	mg/kg-day	3.9E-03	(mg/kg-day)-1	2.0E-07
				Indeno(1,2,3-cd)pyrene	1.00E-03	mg/L	4.9E-05	mg/kg-day	7.3E-01	(mg/kg-day)-1	3.6E-05
				Lead	5.80E-03	mg/L	2.8E-07	mg/kg-day	--	(mg/kg-day)-1	--

TABLE H-8.1.3.RME
EPA RAGS PART D TABLE 7a
CALCULATION OF RME CHEMICAL CANCER RISKS
CURRENT ADULT RESIDENT
SITE 09, ALAMEDA POINT, ALAMEDA, CALIFORNIA

Scenario Timeframe:	Future
Receptor Population:	Resident
Receptor Age:	Adult

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations				
					Value	Units	Intake/Exposure Concentration		CSF/Unit Risk		Cancer Risk
							Value	Units	Value	Units	
				Manganese	2.25E+00	mg/L	1.1E-04	mg/kg-day	--	(mg/kg-day)-1	--
				Methyl-t-butyl ether	1.13E-02	mg/L	1.2E-06	mg/kg-day	3.3E-03	(mg/kg-day)-1	3.9E-09
				Naphthalene	3.32E+00	mg/L	7.7E-03	mg/kg-day	--	(mg/kg-day)-1	--
				Pentachlorophenol	2.00E-03	mg/L	3.8E-05	mg/kg-day	1.2E-01	(mg/kg-day)-1	4.6E-06
				Tetrachloroethene	3.00E-03	mg/L	4.9E-06	mg/kg-day	5.2E-02	(mg/kg-day)-1	2.5E-07
				Trichloroethene	1.29E-02	mg/L	7.6E-06	mg/kg-day	4.0E-01	(mg/kg-day)-1	3.0E-06
				Vinyl chloride	3.04E-02	mg/L	8.3E-06	mg/kg-day	1.5E+00	(mg/kg-day)-1	1.3E-05
				Xylene (Total)	2.06E-01	mg/L	5.4E-04	mg/kg-day	--	(mg/kg-day)-1	--
			Exp. Route Total								6.3E-04
			Inhalation (bathing/ showering)	1,1-Dichloroethane	2.03E-02	mg/L	2.3E-05	mg/kg-day	--	--	--
				1,2-Dichloroethane	6.00E-04	mg/L	6.8E-07	mg/kg-day	9.1E-02	(mg/kg-day)-1	6.2E-08
				1,2-Dichloroethene (Total)	4.34E-01	mg/L	4.9E-04	mg/kg-day	--	--	--
				1,2-Dichloropropane	2.00E-03	mg/L	2.3E-06	mg/kg-day	6.8E-02	(mg/kg-day)-1	1.5E-07
				1,2,3-Trichloropropane	3.00E-04	mg/L	3.4E-07	mg/kg-day	2.0E+00	(mg/kg-day)-1	6.8E-07
				1,3-Dichloropropane	9.00E-04	mg/L	1.0E-06	mg/kg-day	6.8E-02	(mg/kg-day)-1	6.9E-08
				2,2'-Oxybis(1-chloropropane)	7.00E-04	mg/L	7.9E-07	mg/kg-day	--	--	--
				2-Methylnaphthalene	9.28E-01	mg/L	1.0E-03	mg/kg-day	--	(mg/kg-day)-1	--
				Benzene	2.00E-03	mg/L	2.3E-06	mg/kg-day	2.7E-02	(mg/kg-day)-1	6.1E-08
				Chloroethane	5.00E-03	mg/L	5.7E-06	mg/kg-day	2.9E-03	(mg/kg-day)-1	1.6E-08
				Ethylbenzene	2.11E-02	mg/L	2.4E-05	mg/kg-day	3.9E-03	(mg/kg-day)-1	9.2E-08
				Methyl-t-butyl ether	1.13E-02	mg/L	1.3E-05	mg/kg-day	3.5E-04	(mg/kg-day)-1	4.5E-09
				Naphthalene	3.32E+00	mg/L	3.8E-03	mg/kg-day	--	(mg/kg-day)-1	--
				Tetrachloroethene	3.00E-03	mg/L	3.4E-06	mg/kg-day	1.0E-02	(mg/kg-day)-1	3.4E-08
				Trichloroethene	1.29E-02	mg/L	1.5E-05	mg/kg-day	4.0E-01	(mg/kg-day)-1	5.8E-06
				Vinyl chloride	3.04E-02	mg/L	3.4E-05	mg/kg-day	3.1E-02	(mg/kg-day)-1	1.1E-06
				Xylene (Total)	2.06E-01	mg/L	2.3E-04	mg/kg-day	--	(mg/kg-day)-1	--
			Exp. Route Total								8.1E-06
		Exposure Point Total									1.8E-03
	Exposure Medium Total										1.9E-03
Medium Total											1.9E-03
										Total of Receptor Risks Across All Media	2.0E-03

Notes:

--	*Not Applicable or Not Available*
CSF	Cancer slope factor
EPC	Exposure point concentration
mg/kg	Milligram per kilogram

TABLE H-8.1.3.RME
EPA RAGS PART D TABLE 7a
CALCULATION OF RME CHEMICAL CANCER RISKS
CURRENT ADULT RESIDENT
SITE 09, ALAMEDA POINT, ALAMEDA, CALIFORNIA

Scenario Timeframe:	Future
Receptor Population:	Resident
Receptor Age:	Adult

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations				
					Value	Units	Intake/Exposure Concentration		CSF/Unit Risk		Cancer Risk
							Value	Units	Value	Units	

mg/kg-day Milligram per kilogram per day
(mg/kg-day)-1 1/(Milligram per kilogram per day)
RME Reasonable maximum exposure
(a) See the Vapor Intrusion to Indoor Air Evaluation for determination of the modeled indoor air concentration.

TABLE H-8.1.4.RME
EPA RAGS PART D TABLE 7a
CALCULATION OF RME CHEMICAL CANCER RISKS
CURRENT CHILD RESIDENT
SITE 09, ALAMEDA POINT, ALAMEDA, CALIFORNIA

Scenario Timeframe:	Future
Receptor Population:	Resident
Receptor Age:	Child

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations				
					Value	Units	Intake/Exposure Concentration		CSF/Unit Risk		Cancer Risk
							Value	Units	Value	Units	
Soil (0-2)	Soil	Site Soil	Ingestion	Arsenic	5.90E+00	mg/kg	6.5E-06	mg/kg-day	1.5E+00	(mg/kg-day)-1	9.7E-06
			Exp. Route Total								9.7E-06
			Dermal	Arsenic	5.90E+00	mg/kg	5.4E-07	mg/kg-day	1.5E+00	(mg/kg-day)-1	8.1E-07
			Exp. Route Total								8.1E-07
		Exposure Point Total									1.1E-05
	Exposure Medium Total										1.1E-05
	Homegrown Produce	Homegrown Produce	Ingestion	Arsenic	5.90E+00	mg/kg	2.6E-06	mg/kg-day	1.5E+00	(mg/kg-day)-1	3.8E-06
			Exp. Route Total								3.8E-06
		Exposure Point Total									3.8E-06
	Exposure Medium Total										3.8E-06
	Air	Outdoor Air	Inhalation (particulates)	Arsenic	5.90E+00	mg/kg	2.5E-10	mg/kg-day	1.5E+01	(mg/kg-day)-1	3.7E-09
			Exp. Route Total								3.7E-09
		Exposure Point Total									3.7E-09
	Exposure Medium Total										3.7E-09
Medium Total											1.4E-05
Groundwater	Groundwater	Indoor Air (Vapor Intrusion)	Inhalation	Benzene	7.90E-01	(a) ug/m^3	4.4E-05	mg/kg-day	2.7E-02	(mg/kg-day)-1	1.2E-06
				Vinyl Chloride	4.58E+01	(a) ug/m^3	2.5E-03	mg/kg-day	3.1E-02	(mg/kg-day)-1	7.8E-05
			Exp. Route Total								8.0E-05
		Exposure Point Total									8.0E-05
		Tap	Ingestion	1,1-Dichloroethane	2.03E-02	mg/L	1.1E-04	mg/kg-day	--	--	--
				1,2-Dichloroethane	6.00E-04	mg/L	3.3E-06	mg/kg-day	9.1E-02	(mg/kg-day)-1	3.0E-07
				1,2-Dichloroethene (Total)	4.34E-01	mg/L	2.4E-03	mg/kg-day	--	--	--
				1,2-Dichloropropane	2.00E-03	mg/L	1.1E-05	mg/kg-day	6.8E-02	(mg/kg-day)-1	7.5E-07
				1,2,3-Trichloropropane	3.00E-04	mg/L	1.6E-06	mg/kg-day	2.0E+00	(mg/kg-day)-1	3.3E-06
				1,3-Dichloropropane	9.00E-04	mg/L	4.9E-06	mg/kg-day	6.8E-02	(mg/kg-day)-1	3.4E-07
				2,2'-Oxybis(1-chloropropane)	7.00E-04	mg/L	3.8E-06	mg/kg-day	--	--	--
				2-Methylnaphthalene	9.28E-01	mg/L	5.1E-03	mg/kg-day	--	--	--
				4-Methylphenol	1.20E+00	mg/L	6.6E-03	mg/kg-day	--	--	--
				Antimony	1.05E-02	mg/L	5.8E-05	mg/kg-day	--	--	--
				Arsenic	3.70E-02	mg/L	2.0E-04	mg/kg-day	1.5E+00	(mg/kg-day)-1	3.0E-04
				Benzene	2.00E-03	mg/L	1.1E-05	mg/kg-day	5.5E-02	(mg/kg-day)-1	6.0E-07
				Benz(a)anthracene	1.00E-03	mg/L	5.5E-06	mg/kg-day	7.3E-01	(mg/kg-day)-1	4.0E-06
				Benzo(a)pyrene	2.00E-03	mg/L	1.1E-05	mg/kg-day	7.3E+00	(mg/kg-day)-1	8.0E-05

TABLE H-8.1.4.RME
EPA RAGS PART D TABLE 7a
CALCULATION OF RME CHEMICAL CANCER RISKS
CURRENT CHILD RESIDENT
SITE 09, ALAMEDA POINT, ALAMEDA, CALIFORNIA

Scenario Timeframe:	Future
Receptor Population:	Resident
Receptor Age:	Child

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations				
					Value	Units	Intake/Exposure Concentration		CSF/Unit Risk		Cancer Risk
							Value	Units	Value	Units	
				Benzo(b)fluoranthene	2.00E-03	mg/L	1.1E-05	mg/kg-day	7.3E-01	(mg/kg-day)-1	8.0E-06
				Benzo(k)fluoranthene	8.00E-04	mg/L	4.4E-06	mg/kg-day	7.3E-02	(mg/kg-day)-1	3.2E-07
				Chloroethane	5.00E-03	mg/L	2.7E-05	mg/kg-day	2.9E-03	(mg/kg-day)-1	7.9E-08
				Chrysene	1.00E-03	mg/L	5.5E-06	mg/kg-day	7.3E-03	(mg/kg-day)-1	4.0E-08
				Ethylbenzene	2.11E-02	mg/L	1.2E-04	mg/kg-day	3.9E-03	(mg/kg-day)-1	4.5E-07
				Indeno(1,2,3-cd)pyrene	1.00E-03	mg/L	5.5E-06	mg/kg-day	7.3E-01	(mg/kg-day)-1	4.0E-06
				Lead	5.80E-03	mg/L	3.2E-05	mg/kg-day	--	(mg/kg-day)-1	--
				Manganese	2.25E+00	mg/L	1.2E-02	mg/kg-day	--	(mg/kg-day)-1	--
				Methyl-t-butyl ether	1.13E-02	mg/L	6.2E-05	mg/kg-day	3.3E-03	(mg/kg-day)-1	2.0E-07
				Naphthalene	3.32E+00	mg/L	1.8E-02	mg/kg-day	--	(mg/kg-day)-1	--
				Pentachlorophenol	2.00E-03	mg/L	1.1E-05	mg/kg-day	1.2E-01	(mg/kg-day)-1	1.3E-06
				Tetrachloroethene	3.00E-03	mg/L	1.6E-05	mg/kg-day	5.2E-02	(mg/kg-day)-1	8.5E-07
				Trichloroethene	1.29E-02	mg/L	7.1E-05	mg/kg-day	4.0E-01	(mg/kg-day)-1	2.8E-05
				Vinyl chloride	3.04E-02	mg/L	1.7E-04	mg/kg-day	1.5E+00	(mg/kg-day)-1	2.5E-04
				Xylene (Total)	2.06E-01	mg/L	1.1E-03	mg/kg-day	--	(mg/kg-day)-1	--
			Exp. Route Total								6.9E-04
			Dermal (bathing/ showering)	1,1-Dichloroethane	2.03E-02	mg/L	4.9E-06	mg/kg-day	--	--	--
				1,2-Dichloroethane	6.00E-04	mg/L	9.1E-08	mg/kg-day	9.1E-02	(mg/kg-day)-1	8.3E-09
				1,2-Dichloroethene (Total)	4.34E-01	mg/L	1.2E-04	mg/kg-day	--	--	--
				1,2-Dichloropropane	2.00E-03	mg/L	5.6E-07	mg/kg-day	6.8E-02	(mg/kg-day)-1	3.8E-08
				1,2,3-Trichloropropane	3.00E-04	mg/L	8.1E-08	mg/kg-day	2.0E+00	(mg/kg-day)-1	1.6E-07
				1,3-Dichloropropane	9.00E-04	mg/L	2.5E-07	mg/kg-day	6.8E-02	(mg/kg-day)-1	1.7E-08
				2,2'-Oxybis(1-chloropropane)	7.00E-04	mg/L	1.9E-07	mg/kg-day	--	--	--
				2-Methylnaphthalene	9.28E-01	mg/L	1.6E-03	mg/kg-day	--	--	--
				4-Methylphenol	1.20E+00	mg/L	3.3E-04	mg/kg-day	--	--	--
				Antimony	1.05E-02	mg/L	3.8E-07	mg/kg-day	--	--	--
				Arsenic	3.70E-02	mg/L	1.3E-06	mg/kg-day	1.5E+00	(mg/kg-day)-1	2.0E-06
				Benzene	2.00E-03	mg/L	1.5E-06	mg/kg-day	5.5E-02	(mg/kg-day)-1	8.4E-08
				Benz(a)anthracene	1.00E-03	mg/L	1.7E-05	mg/kg-day	7.3E-01	(mg/kg-day)-1	1.2E-05
				Benzo(a)pyrene	2.00E-03	mg/L	5.1E-05	mg/kg-day	7.3E+00	(mg/kg-day)-1	3.7E-04
				Benzo(b)fluoranthene	2.00E-03	mg/L	5.1E-05	mg/kg-day	7.3E-01	(mg/kg-day)-1	3.7E-05
				Benzo(k)fluoranthene	8.00E-04	mg/L	6.4E-06	mg/kg-day	7.3E-02	(mg/kg-day)-1	4.6E-07
				Chloroethane	5.00E-03	mg/L	1.1E-06	mg/kg-day	2.9E-03	(mg/kg-day)-1	3.2E-09
				Chrysene	1.00E-03	mg/L	1.7E-05	mg/kg-day	7.3E-03	(mg/kg-day)-1	1.2E-07
				Ethylbenzene	2.11E-02	mg/L	3.7E-05	mg/kg-day	3.9E-03	(mg/kg-day)-1	1.4E-07
				Indeno(1,2,3-cd)pyrene	1.00E-03	mg/L	3.6E-05	mg/kg-day	7.3E-01	(mg/kg-day)-1	2.6E-05
				Lead	5.80E-03	mg/L	2.1E-07	mg/kg-day	--	(mg/kg-day)-1	--

TABLE H-8.1.4.RME
EPA RAGS PART D TABLE 7a
CALCULATION OF RME CHEMICAL CANCER RISKS
CURRENT CHILD RESIDENT
SITE 09, ALAMEDA POINT, ALAMEDA, CALIFORNIA

Scenario Timeframe:	Future
Receptor Population:	Resident
Receptor Age:	Child

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations				
					Value	Units	Intake/Exposure Concentration		CSF/Unit Risk		Cancer Risk
							Value	Units	Value	Units	
				Manganese	2.25E+00	mg/L	8.1E-05	mg/kg-day	--	(mg/kg-day)-1	--
				Methyl-t-butyl ether	1.13E-02	mg/L	8.7E-07	mg/kg-day	3.3E-03	(mg/kg-day)-1	2.9E-09
				Naphthalene	3.32E+00	mg/L	5.6E-03	mg/kg-day	--	(mg/kg-day)-1	--
				Pentachlorophenol	2.00E-03	mg/L	2.8E-05	mg/kg-day	1.2E-01	(mg/kg-day)-1	3.4E-06
				Tetrachloroethene	3.00E-03	mg/L	3.6E-06	mg/kg-day	5.2E-02	(mg/kg-day)-1	1.9E-07
				Trichloroethene	1.29E-02	mg/L	5.6E-06	mg/kg-day	4.0E-01	(mg/kg-day)-1	2.2E-06
				Vinyl chloride	3.04E-02	mg/L	6.2E-06	mg/kg-day	1.5E+00	(mg/kg-day)-1	9.2E-06
				Xylene (Total)	2.06E-01	mg/L	3.9E-04	mg/kg-day	--	(mg/kg-day)-1	--
			Exp. Route Total								4.6E-04
			Inhalation (bathing/ showering)	1,1-Dichloroethane	2.03E-02	mg/L	2.3E-05	mg/kg-day	--	--	--
				1,2-Dichloroethane	6.00E-04	mg/L	6.9E-07	mg/kg-day	9.1E-02	(mg/kg-day)-1	6.3E-08
				1,2-Dichloroethene (Total)	4.34E-01	mg/L	5.0E-04	mg/kg-day	--	--	--
				1,2-Dichloropropane	2.00E-03	mg/L	2.3E-06	mg/kg-day	6.8E-02	(mg/kg-day)-1	1.6E-07
				1,2,3-Trichloropropane	3.00E-04	mg/L	3.5E-07	mg/kg-day	2.0E+00	(mg/kg-day)-1	6.9E-07
				1,3-Dichloropropane	9.00E-04	mg/L	1.0E-06	mg/kg-day	6.8E-02	(mg/kg-day)-1	7.0E-08
				2,2'-Oxybis(1-chloropropane)	7.00E-04	mg/L	8.1E-07	mg/kg-day	--	--	--
				2-Methylnaphthalene	9.28E-01	mg/L	1.1E-03	mg/kg-day	--	(mg/kg-day)-1	--
				Benzene	2.00E-03	mg/L	2.3E-06	mg/kg-day	2.7E-02	(mg/kg-day)-1	6.2E-08
				Chloroethane	5.00E-03	mg/L	5.8E-06	mg/kg-day	2.9E-03	(mg/kg-day)-1	1.7E-08
				Ethylbenzene	2.11E-02	mg/L	2.4E-05	mg/kg-day	3.9E-03	(mg/kg-day)-1	9.3E-08
				Methyl-t-butyl ether	1.13E-02	mg/L	1.3E-05	mg/kg-day	3.5E-04	(mg/kg-day)-1	4.6E-09
				Naphthalene	3.32E+00	mg/L	3.8E-03	mg/kg-day	--	(mg/kg-day)-1	--
				Tetrachloroethene	3.00E-03	mg/L	3.5E-06	mg/kg-day	1.0E-02	(mg/kg-day)-1	3.5E-08
				Trichloroethene	1.29E-02	mg/L	1.5E-05	mg/kg-day	4.0E-01	(mg/kg-day)-1	5.9E-06
				Vinyl chloride	3.04E-02	mg/L	3.5E-05	mg/kg-day	3.1E-02	(mg/kg-day)-1	1.1E-06
				Xylene (Total)	2.06E-01	mg/L	2.4E-04	mg/kg-day	--	(mg/kg-day)-1	--
			Exp. Route Total								8.2E-06
		Exposure Point Total									1.2E-03
	Exposure Medium Total										1.2E-03
Medium Total											1.2E-03
										Total of Receptor Risks Across All Media	1.3E-03

Notes:

--	Not Applicable or Not Available
CSF	Cancer slope factor
EPC	Exposure point concentration
mg/kg	Milligram per kilogram

TABLE H-8.1.4.RME
EPA RAGS PART D TABLE 7a
CALCULATION OF RME CHEMICAL CANCER RISKS
CURRENT CHILD RESIDENT
SITE 09, ALAMEDA POINT, ALAMEDA, CALIFORNIA

Scenario Timeframe:	Future
Receptor Population:	Resident
Receptor Age:	Child

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations				
					Value	Units	Intake/Exposure Concentration		CSF/Unit Risk		Cancer Risk
							Value	Units	Value	Units	

mg/kg-day Milligram per kilogram per day
(mg/kg-day)-1 1/(Milligram per kilogram per day)
RME Reasonable maximum exposure
(a) See the Vapor Intrusion to Indoor Air Evaluation for determination of the modeled indoor air concentration.

TABLE H-8.1.5.RME
EPA RAGS PART D TABLE 7a
CALCULATION OF RME CHEMICAL CANCER RISKS
FUTURE DEVELOPED CONSTRUCTION WORKER
SITE 09, ALAMEDA POINT, ALAMEDA, CALIFORNIA

Scenario Timeframe:	Future-Developed
Receptor Population:	Construction Worker
Receptor Age:	Adult

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations				
					Value	Units	Intake/Exposure Concentration		CSF/Unit Risk		Cancer Risk
							Value	Units	Value	Units	
Soil (0-8)	Soil	Site Soil	Ingestion	Arsenic	4.52E+00	mg/kg	2.1E-07	mg/kg-day	1.5E+00	(mg/kg-day)-1	3.1E-07
			Exp. Route Total								3.1E-07
			Dermal	Arsenic	4.52E+00	mg/kg	1.9E-08	mg/kg-day	1.5E+00	(mg/kg-day)-1	2.8E-08
			Exp. Route Total								2.8E-08
		Exposure Point Total									3.4E-07
	Exposure Medium Total										3.4E-07
	Air	Outdoor Air	Inhalation (particulates)	Arsenic	4.52E+00	mg/kg	9.6E-12	mg/kg-day	1.5E+01	(mg/kg-day)-1	1.4E-10
			Exp. Route Total								1.4E-10
		Exposure Point Total									1.4E-10
	Exposure Medium Total										1.4E-10
Medium Total											3.4E-07
										Total of Receptor Risks Across All Media	3.4E-07

Notes:

CSF	Cancer slope factor
EPC	Exposure point concentration
mg/kg	Milligram per kilogram
mg/kg-day	Milligram per kilogram per day
(mg/kg-day)-1	1/(Milligram per kilogram per day)
RME	Reasonable maximum exposure

TABLE H-8.1.6.RME
EPA RAGS PART D TABLE 7a
CALCULATION OF RME CHEMICAL CANCER RISKS
FUTURE REDEVELOPED ADULT RESIDENT
SITE 09, ALAMEDA POINT, ALAMEDA, CALIFORNIA

Scenario Timeframe:	*Future-Redeveloped*
Receptor Population:	Resident
Receptor Age:	Adult

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations				
					Value	Units	Intake/Exposure Concentration		CSF/Unit Risk		Cancer Risk
							Value	Units	Value	Units	
Soil (0-8)	Soil	Site Soil	Ingestion	Arsenic	4.52E+00	mg/kg	2.1E-06	mg/kg-day	1.5E+00	(mg/kg-day)-1	3.2E-06
			Exp. Route Total								3.2E-06
			Dermal	Arsenic	4.52E+00	mg/kg	2.5E-07	mg/kg-day	1.5E+00	(mg/kg-day)-1	3.8E-07
			Exp. Route Total								3.8E-07
		Exposure Point Total									3.6E-06
	Exposure Medium Total										3.6E-06
	Homegrown Produce	Homegrown Produce	Ingestion	Arsenic	4.52E+00	mg/kg	7.9E-06	mg/kg-day	1.5E+00	(mg/kg-day)-1	1.2E-05
			Exp. Route Total								1.2E-05
		Exposure Point Total									1.2E-05
	Exposure Medium Total										1.2E-05
	Air	Outdoor Air	Inhalation (particulates)	Arsenic	4.52E+00	mg/kg	3.2E-10	mg/kg-day	1.5E+01	(mg/kg-day)-1	4.8E-09
			Exp. Route Total								4.8E-09
		Exposure Point Total									4.8E-09
	Exposure Medium Total										4.8E-09
Medium Total											1.5E-05
Groundwater	*Groundwater*	Indoor Air (Vapor Intrusion)	Inhalation	Benzene	7.90E-01	(a) ug/m^3	7.4E-05	mg/kg-day	2.7E-02	(mg/kg-day)-1	2.0E-06
				Vinyl Chloride	4.58E+01	(a) ug/m^3	4.3E-03	mg/kg-day	3.1E-02	(mg/kg-day)-1	1.3E-04
			Exp. Route Total								1.3E-04
		Exposure Point Total									1.3E-04
		Tap	Ingestion	1,1-Dichloroethane	2.03E-02	mg/L	1.9E-04	mg/kg-day	--	--	--
				1,2-Dichloroethane	6.00E-04	mg/L	5.6E-06	mg/kg-day	9.1E-02	(mg/kg-day)-1	5.1E-07
				1,2-Dichloroethene (Total)	4.34E-01	mg/L	4.1E-03	mg/kg-day	--	--	--
				1,2-Dichloropropane	2.00E-03	mg/L	1.9E-05	mg/kg-day	6.8E-02	(mg/kg-day)-1	1.3E-06
				1,2,3-Trichloropropane	3.00E-04	mg/L	2.8E-06	mg/kg-day	2.0E+00	(mg/kg-day)-1	5.6E-06
				1,3-Dichloropropane	9.00E-04	mg/L	8.5E-06	mg/kg-day	6.8E-02	(mg/kg-day)-1	5.7E-07
				2,2'-Oxybis(1-chloropropane)	7.00E-04	mg/L	6.6E-06	mg/kg-day	--	--	--
				2-Methylnaphthalene	9.28E-01	mg/L	8.7E-03	mg/kg-day	--	--	--
				4-Methylphenol	1.20E+00	mg/L	1.1E-02	mg/kg-day	--	--	--
				Antimony	1.05E-02	mg/L	9.9E-05	mg/kg-day	--	--	--
				Arsenic	3.70E-02	mg/L	3.5E-04	mg/kg-day	1.5E+00	(mg/kg-day)-1	5.2E-04
				Benzene	2.00E-03	mg/L	1.9E-05	mg/kg-day	5.5E-02	(mg/kg-day)-1	1.0E-06
				Benz(a)anthracene	1.00E-03	mg/L	9.4E-06	mg/kg-day	7.3E-01	(mg/kg-day)-1	6.9E-06
				Benzo(a)pyrene	2.00E-03	mg/L	1.9E-05	mg/kg-day	7.3E+00	(mg/kg-day)-1	1.4E-04

TABLE H-8.1.6.RME
EPA RAGS PART D TABLE 7a
CALCULATION OF RME CHEMICAL CANCER RISKS
FUTURE REDEVELOPED ADULT RESIDENT
SITE 09, ALAMEDA POINT, ALAMEDA, CALIFORNIA

Scenario Timeframe:	Future-Redeveloped
Receptor Population:	Resident
Receptor Age:	Adult

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations				
					Value	Units	Intake/Exposure Concentration		CSF/Unit Risk		Cancer Risk
							Value	Units	Value	Units	
				Benzo(b)fluoranthene	2.00E-03	mg/L	1.9E-05	mg/kg-day	7.3E-01	(mg/kg-day)-1	1.4E-05
				Benzo(k)fluoranthene	8.00E-04	mg/L	7.5E-06	mg/kg-day	7.3E-02	(mg/kg-day)-1	5.5E-07
				Chloroethane	5.00E-03	mg/L	4.7E-05	mg/kg-day	2.9E-03	(mg/kg-day)-1	1.4E-07
				Chrysene	1.00E-03	mg/L	9.4E-06	mg/kg-day	7.3E-03	(mg/kg-day)-1	6.9E-08
				Ethylbenzene	2.11E-02	mg/L	2.0E-04	mg/kg-day	3.9E-03	(mg/kg-day)-1	7.6E-07
				Indeno(1,2,3-cd)pyrene	1.00E-03	mg/L	9.4E-06	mg/kg-day	7.3E-01	(mg/kg-day)-1	6.9E-06
				Lead	5.80E-03	mg/L	5.4E-05	mg/kg-day	--	(mg/kg-day)-1	--
				Manganese	2.25E+00	mg/L	2.1E-02	mg/kg-day	--	(mg/kg-day)-1	--
				Methyl-t-butyl ether	1.13E-02	mg/L	1.1E-04	mg/kg-day	3.3E-03	(mg/kg-day)-1	3.5E-07
				Naphthalene	3.32E+00	mg/L	3.1E-02	mg/kg-day	--	(mg/kg-day)-1	--
				Pentachlorophenol	2.00E-03	mg/L	1.9E-05	mg/kg-day	1.2E-01	(mg/kg-day)-1	2.3E-06
				Tetrachloroethene	3.00E-03	mg/L	2.8E-05	mg/kg-day	5.2E-02	(mg/kg-day)-1	1.5E-06
				Trichloroethene	1.29E-02	mg/L	1.2E-04	mg/kg-day	4.0E-01	(mg/kg-day)-1	4.8E-05
				Vinyl chloride	3.04E-02	mg/L	2.9E-04	mg/kg-day	1.5E+00	(mg/kg-day)-1	4.3E-04
				Xylene (Total)	2.06E-01	mg/L	1.9E-03	mg/kg-day	--	(mg/kg-day)-1	--
			Exp. Route Total								1.2E-03
			Dermal (bathing/ showering)	1,1-Dichloroethane	2.03E-02	mg/L	6.7E-06	mg/kg-day	--	--	--
				1,2-Dichloroethane	6.00E-04	mg/L	1.2E-07	mg/kg-day	9.1E-02	(mg/kg-day)-1	1.1E-08
				1,2-Dichloroethene (Total)	4.34E-01	mg/L	1.6E-04	mg/kg-day	--	--	--
				1,2-Dichloropropane	2.00E-03	mg/L	7.6E-07	mg/kg-day	6.8E-02	(mg/kg-day)-1	5.2E-08
				1,2,3-Trichloropropane	3.00E-04	mg/L	1.1E-07	mg/kg-day	2.0E+00	(mg/kg-day)-1	2.2E-07
				1,3-Dichloropropane	9.00E-04	mg/L	3.4E-07	mg/kg-day	6.8E-02	(mg/kg-day)-1	2.3E-08
				2,2'-Oxybis(1-chloropropane)	7.00E-04	mg/L	2.6E-07	mg/kg-day	--	--	--
				2-Methylnaphthalene	9.28E-01	mg/L	2.1E-03	mg/kg-day	--	--	--
				4-Methylphenol	1.20E+00	mg/L	4.4E-04	mg/kg-day	--	--	--
				Antimony	1.05E-02	mg/L	5.1E-07	mg/kg-day	--	--	--
				Arsenic	3.70E-02	mg/L	1.8E-06	mg/kg-day	1.5E+00	(mg/kg-day)-1	2.7E-06
				Benzene	2.00E-03	mg/L	2.1E-06	mg/kg-day	5.5E-02	(mg/kg-day)-1	1.1E-07
				Benz(a)anthracene	1.00E-03	mg/L	2.3E-05	mg/kg-day	7.3E-01	(mg/kg-day)-1	1.7E-05
				Benzo(a)pyrene	2.00E-03	mg/L	6.9E-05	mg/kg-day	7.3E+00	(mg/kg-day)-1	5.0E-04
				Benzo(b)fluoranthene	2.00E-03	mg/L	6.9E-05	mg/kg-day	7.3E-01	(mg/kg-day)-1	5.0E-05
				Benzo(k)fluoranthene	8.00E-04	mg/L	8.6E-06	mg/kg-day	7.3E-02	(mg/kg-day)-1	6.3E-07
				Chloroethane	5.00E-03	mg/L	1.5E-06	mg/kg-day	2.9E-03	(mg/kg-day)-1	4.3E-09
				Chrysene	1.00E-03	mg/L	2.3E-05	mg/kg-day	7.3E-03	(mg/kg-day)-1	1.7E-07
				Ethylbenzene	2.11E-02	mg/L	5.1E-05	mg/kg-day	3.9E-03	(mg/kg-day)-1	2.0E-07
				Indeno(1,2,3-cd)pyrene	1.00E-03	mg/L	4.9E-05	mg/kg-day	7.3E-01	(mg/kg-day)-1	3.6E-05
				Lead	5.80E-03	mg/L	2.8E-07	mg/kg-day	--	(mg/kg-day)-1	--

TABLE H-8.1.6.RME
EPA RAGS PART D TABLE 7a
CALCULATION OF RME CHEMICAL CANCER RISKS
FUTURE REDEVELOPED ADULT RESIDENT
SITE 09, ALAMEDA POINT, ALAMEDA, CALIFORNIA

Scenario Timeframe:	Future-Redeveloped
Receptor Population:	Resident
Receptor Age:	Adult

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations				
					Value	Units	Intake/Exposure Concentration		CSF/Unit Risk		Cancer Risk
							Value	Units	Value	Units	
				Manganese	2.25E+00	mg/L	1.1E-04	mg/kg-day	--	(mg/kg-day)-1	--
				Methyl-t-butyl ether	1.13E-02	mg/L	1.2E-06	mg/kg-day	3.3E-03	(mg/kg-day)-1	3.9E-09
				Naphthalene	3.32E+00	mg/L	7.7E-03	mg/kg-day	--	(mg/kg-day)-1	--
				Pentachlorophenol	2.00E-03	mg/L	3.8E-05	mg/kg-day	1.2E-01	(mg/kg-day)-1	4.6E-06
				Tetrachloroethene	3.00E-03	mg/L	4.9E-06	mg/kg-day	5.2E-02	(mg/kg-day)-1	2.5E-07
				Trichloroethene	1.29E-02	mg/L	7.6E-06	mg/kg-day	4.0E-01	(mg/kg-day)-1	3.0E-06
				Vinyl chloride	3.04E-02	mg/L	8.3E-06	mg/kg-day	1.5E+00	(mg/kg-day)-1	1.3E-05
				Xylene (Total)	2.06E-01	mg/L	5.4E-04	mg/kg-day	--	(mg/kg-day)-1	--
			Exp. Route Total								6.3E-04
			Inhalation (bathing/ showering)	1,1-Dichloroethane	2.03E-02	mg/L	2.3E-05	mg/kg-day	--	--	--
				1,2-Dichloroethane	6.00E-04	mg/L	6.8E-07	mg/kg-day	9.1E-02	(mg/kg-day)-1	6.2E-08
				1,2-Dichloroethene (Total)	4.34E-01	mg/L	4.9E-04	mg/kg-day	--	--	--
				1,2-Dichloropropane	2.00E-03	mg/L	2.3E-06	mg/kg-day	6.8E-02	(mg/kg-day)-1	1.5E-07
				1,2,3-Trichloropropane	3.00E-04	mg/L	3.4E-07	mg/kg-day	2.0E+00	(mg/kg-day)-1	6.8E-07
				1,3-Dichloropropane	9.00E-04	mg/L	1.0E-06	mg/kg-day	6.8E-02	(mg/kg-day)-1	6.9E-08
				2,2'-Oxybis(1-chloropropane)	7.00E-04	mg/L	7.9E-07	mg/kg-day	--	--	--
				2-Methylnaphthalene	9.28E-01	mg/L	1.0E-03	mg/kg-day	--	(mg/kg-day)-1	--
				Benzene	2.00E-03	mg/L	2.3E-06	mg/kg-day	2.7E-02	(mg/kg-day)-1	6.1E-08
				Chloroethane	5.00E-03	mg/L	5.7E-06	mg/kg-day	2.9E-03	(mg/kg-day)-1	1.6E-08
				Ethylbenzene	2.11E-02	mg/L	2.4E-05	mg/kg-day	3.9E-03	(mg/kg-day)-1	9.2E-08
				Methyl-t-butyl ether	1.13E-02	mg/L	1.3E-05	mg/kg-day	3.5E-04	(mg/kg-day)-1	4.5E-09
				Naphthalene	3.32E+00	mg/L	3.8E-03	mg/kg-day	--	(mg/kg-day)-1	--
				Tetrachloroethene	3.00E-03	mg/L	3.4E-06	mg/kg-day	1.0E-02	(mg/kg-day)-1	3.4E-08
				Trichloroethene	1.29E-02	mg/L	1.5E-05	mg/kg-day	4.0E-01	(mg/kg-day)-1	5.8E-06
				Vinyl chloride	3.04E-02	mg/L	3.4E-05	mg/kg-day	3.1E-02	(mg/kg-day)-1	1.1E-06
				Xylene (Total)	2.06E-01	mg/L	2.3E-04	mg/kg-day	--	(mg/kg-day)-1	--
			Exp. Route Total								8.1E-06
		Exposure Point Total									1.8E-03
	Exposure Medium Total										1.9E-03
Medium Total											1.9E-03
										Total of Receptor Risks Across All Media	2.0E-03

Notes:

--	Not Applicable or Not Available
CSF	Cancer slope factor
EPC	Exposure point concentration
mg/kg	Milligram per kilogram

TABLE H-8.1.6.RME
EPA RAGS PART D TABLE 7a
CALCULATION OF RME CHEMICAL CANCER RISKS
FUTURE REDEVELOPED ADULT RESIDENT
SITE 09, ALAMEDA POINT, ALAMEDA, CALIFORNIA

Scenario Timeframe:	Future-Redeveloped
Receptor Population:	Resident
Receptor Age:	Adult

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations				
					Value	Units	Intake/Exposure Concentration		CSF/Unit Risk		Cancer Risk
							Value	Units	Value	Units	

mg/kg-day	Milligram per kilogram per day
(mg/kg-day)-1	1/(Milligram per kilogram per day)
RME	Reasonable maximum exposure

(a) See the Vapor Intrusion to Indoor Air Evaluation for determination of the modeled indoor air concentration.

TABLE H-8.1.7.RME
EPA RAGS PART D TABLE 7b
CALCULATION OF RME CHEMICAL CANCER RISKS
FUTURE REDEVELOPED CHILD RESIDENT
SITE 09, ALAMEDA POINT, ALAMEDA, CALIFORNIA

Scenario Timeframe:	Future-Redeveloped
Receptor Population:	Resident
Receptor Age:	Child

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations				
					Value	Units	Intake/Exposure Concentration		CSF/Unit Risk		Cancer Risk
							Value	Units	Value	Units	
Soil (0-8)	Soil	Site Soil	Ingestion	Arsenic	4.52E+00	mg/kg	5.0E-06	mg/kg-day	1.5E+00	(mg/kg-day)-1	7.4E-06
			Exp. Route Total								7.4E-06
			Dermal	Arsenic	4.52E+00	mg/kg	4.2E-07	mg/kg-day	1.5E+00	(mg/kg-day)-1	6.2E-07
			Exp. Route Total								6.2E-07
		Exposure Point Total									8.1E-06
	Exposure Medium Total										8.1E-06
	Homegrown Produce	Homegrown Produce	Ingestion	Arsenic	4.52E+00	mg/kg	2.0E-06	mg/kg-day	1.5E+00	(mg/kg-day)-1	2.9E-06
			Exp. Route Total								2.9E-06
		Exposure Point Total									2.9E-06
	Exposure Medium Total										2.9E-06
	Air	Outdoor Air	Inhalation (particulates)	Arsenic	4.52E+00	mg/kg	1.9E-10	mg/kg-day	1.5E+01	(mg/kg-day)-1	2.8E-09
			Exp. Route Total								2.8E-09
		Exposure Point Total									2.8E-09
	Exposure Medium Total										2.8E-09
Medium Total											1.1E-05
Groundwater	Groundwater	Indoor Air (Vapor Intrusion)	Inhalation	Benzene	7.90E-01	(a) ug/m^3	4.4E-05	mg/kg-day	2.7E-02	(mg/kg-day)-1	1.2E-06
				Vinyl Chloride	4.58E+01	(a) ug/m^3	2.5E-03	mg/kg-day	3.1E-02	(mg/kg-day)-1	7.8E-05
			Exp. Route Total								8.0E-05
		Exposure Point Total									8.0E-05
		Tap	Ingestion	1,1-Dichloroethane	2.03E-02	mg/L	1.1E-04	mg/kg-day	--	--	--
				1,2-Dichloroethane	6.00E-04	mg/L	3.3E-06	mg/kg-day	9.1E-02	(mg/kg-day)-1	3.0E-07
				1,2-Dichloroethene (Total)	4.34E-01	mg/L	2.4E-03	mg/kg-day	--	--	--
				1,2-Dichloropropane	2.00E-03	mg/L	1.1E-05	mg/kg-day	6.8E-02	(mg/kg-day)-1	7.5E-07
				1,2,3-Trichloropropane	3.00E-04	mg/L	1.6E-06	mg/kg-day	2.0E+00	(mg/kg-day)-1	3.3E-06
				1,3-Dichloropropane	9.00E-04	mg/L	4.9E-06	mg/kg-day	6.8E-02	(mg/kg-day)-1	3.4E-07
				2,2'-Oxybis(1-chloropropane)	7.00E-04	mg/L	3.8E-06	mg/kg-day	--	--	--
				2-Methylnaphthalene	9.28E-01	mg/L	5.1E-03	mg/kg-day	--	--	--
				4-Methylphenol	1.20E+00	mg/L	6.6E-03	mg/kg-day	--	--	--
				Antimony	1.05E-02	mg/L	5.8E-05	mg/kg-day	--	--	--
				Arsenic	3.70E-02	mg/L	2.0E-04	mg/kg-day	1.5E+00	(mg/kg-day)-1	3.0E-04
				Benzene	2.00E-03	mg/L	1.1E-05	mg/kg-day	5.5E-02	(mg/kg-day)-1	6.0E-07
				Benz(a)anthracene	1.00E-03	mg/L	5.5E-06	mg/kg-day	7.3E-01	(mg/kg-day)-1	4.0E-06
				Benzo(a)pyrene	2.00E-03	mg/L	1.1E-05	mg/kg-day	7.3E+00	(mg/kg-day)-1	8.0E-05

TABLE H-8.1.7.RME
EPA RAGS PART D TABLE 7b
CALCULATION OF RME CHEMICAL CANCER RISKS
FUTURE REDEVELOPED CHILD RESIDENT
SITE 09, ALAMEDA POINT, ALAMEDA, CALIFORNIA

Scenario Timeframe:	Future-Redeveloped
Receptor Population:	Resident
Receptor Age:	Child

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations				
					Value	Units	Intake/Exposure Concentration		CSF/Unit Risk		Cancer Risk
							Value	Units	Value	Units	
				Benzo(b)fluoranthene	2.00E-03	mg/L	1.1E-05	mg/kg-day	7.3E-01	(mg/kg-day)-1	8.0E-06
				Benzo(k)fluoranthene	8.00E-04	mg/L	4.4E-06	mg/kg-day	7.3E-02	(mg/kg-day)-1	3.2E-07
				Chloroethane	5.00E-03	mg/L	2.7E-05	mg/kg-day	2.9E-03	(mg/kg-day)-1	7.9E-08
				Chrysene	1.00E-03	mg/L	5.5E-06	mg/kg-day	7.3E-03	(mg/kg-day)-1	4.0E-08
				Ethylbenzene	2.11E-02	mg/L	1.2E-04	mg/kg-day	3.9E-03	(mg/kg-day)-1	4.5E-07
				Indeno(1,2,3-cd)pyrene	1.00E-03	mg/L	5.5E-06	mg/kg-day	7.3E-01	(mg/kg-day)-1	4.0E-06
				Lead	5.80E-03	mg/L	3.2E-05	mg/kg-day	--	(mg/kg-day)-1	--
				Manganese	2.25E+00	mg/L	1.2E-02	mg/kg-day	--	(mg/kg-day)-1	--
				Methyl-t-butyl ether	1.13E-02	mg/L	6.2E-05	mg/kg-day	3.3E-03	(mg/kg-day)-1	2.0E-07
				Naphthalene	3.32E+00	mg/L	1.8E-02	mg/kg-day	--	(mg/kg-day)-1	--
				Pentachlorophenol	2.00E-03	mg/L	1.1E-05	mg/kg-day	1.2E-01	(mg/kg-day)-1	1.3E-06
				Tetrachloroethene	3.00E-03	mg/L	1.6E-05	mg/kg-day	5.2E-02	(mg/kg-day)-1	8.5E-07
				Trichloroethene	1.29E-02	mg/L	7.1E-05	mg/kg-day	4.0E-01	(mg/kg-day)-1	2.8E-05
				Vinyl chloride	3.04E-02	mg/L	1.7E-04	mg/kg-day	1.5E+00	(mg/kg-day)-1	2.5E-04
				Xylene (Total)	2.06E-01	mg/L	1.1E-03	mg/kg-day	--	(mg/kg-day)-1	--
			Exp. Route Total								6.9E-04
			Dermal (bathing/ showering)	1,1-Dichloroethane	2.03E-02	mg/L	4.9E-06	mg/kg-day	--	--	--
				1,2-Dichloroethane	6.00E-04	mg/L	9.1E-08	mg/kg-day	9.1E-02	(mg/kg-day)-1	8.3E-09
				1,2-Dichloroethene (Total)	4.34E-01	mg/L	1.2E-04	mg/kg-day	--	--	--
				1,2-Dichloropropane	2.00E-03	mg/L	5.6E-07	mg/kg-day	6.8E-02	(mg/kg-day)-1	3.8E-08
				1,2,3-Trichloropropane	3.00E-04	mg/L	8.1E-08	mg/kg-day	2.0E+00	(mg/kg-day)-1	1.6E-07
				1,3-Dichloropropane	9.00E-04	mg/L	2.5E-07	mg/kg-day	6.8E-02	(mg/kg-day)-1	1.7E-08
				2,2'-Oxybis(1-chloropropane)	7.00E-04	mg/L	1.9E-07	mg/kg-day	--	--	--
				2-Methylnaphthalene	9.28E-01	mg/L	1.6E-03	mg/kg-day	--	--	--
				4-Methylphenol	1.20E+00	mg/L	3.3E-04	mg/kg-day	--	--	--
				Antimony	1.05E-02	mg/L	3.8E-07	mg/kg-day	--	--	--
				Arsenic	3.70E-02	mg/L	1.3E-06	mg/kg-day	1.5E+00	(mg/kg-day)-1	2.0E-06
				Benzene	2.00E-03	mg/L	1.5E-06	mg/kg-day	5.5E-02	(mg/kg-day)-1	8.4E-08
				Benz(a)anthracene	1.00E-03	mg/L	1.7E-05	mg/kg-day	7.3E-01	(mg/kg-day)-1	1.2E-05
				Benzo(a)pyrene	2.00E-03	mg/L	5.1E-05	mg/kg-day	7.3E+00	(mg/kg-day)-1	3.7E-04
				Benzo(b)fluoranthene	2.00E-03	mg/L	5.1E-05	mg/kg-day	7.3E-01	(mg/kg-day)-1	3.7E-05
				Benzo(k)fluoranthene	8.00E-04	mg/L	6.4E-06	mg/kg-day	7.3E-02	(mg/kg-day)-1	4.6E-07
				Chloroethane	5.00E-03	mg/L	1.1E-06	mg/kg-day	2.9E-03	(mg/kg-day)-1	3.2E-09
				Chrysene	1.00E-03	mg/L	1.7E-05	mg/kg-day	7.3E-03	(mg/kg-day)-1	1.2E-07
				Ethylbenzene	2.11E-02	mg/L	3.7E-05	mg/kg-day	3.9E-03	(mg/kg-day)-1	1.4E-07
				Indeno(1,2,3-cd)pyrene	1.00E-03	mg/L	3.6E-05	mg/kg-day	7.3E-01	(mg/kg-day)-1	2.6E-05
				Lead	5.80E-03	mg/L	2.1E-07	mg/kg-day	--	(mg/kg-day)-1	--

TABLE H-8.1.7.RME
EPA RAGS PART D TABLE 7b
CALCULATION OF RME CHEMICAL CANCER RISKS
FUTURE REDEVELOPED CHILD RESIDENT
SITE 09, ALAMEDA POINT, ALAMEDA, CALIFORNIA

Scenario Timeframe:	Future-Redeveloped
Receptor Population:	Resident
Receptor Age:	Child

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations				
					Value	Units	Intake/Exposure Concentration		CSF/Unit Risk		Cancer Risk
							Value	Units	Value	Units	
				Manganese	2.25E+00	mg/L	8.1E-05	mg/kg-day	--	(mg/kg-day)-1	--
				Methyl-t-butyl ether	1.13E-02	mg/L	8.7E-07	mg/kg-day	3.3E-03	(mg/kg-day)-1	2.9E-09
				Naphthalene	3.32E+00	mg/L	5.6E-03	mg/kg-day	--	(mg/kg-day)-1	--
				Pentachlorophenol	2.00E-03	mg/L	2.8E-05	mg/kg-day	1.2E-01	(mg/kg-day)-1	3.4E-06
				Tetrachloroethene	3.00E-03	mg/L	3.6E-06	mg/kg-day	5.2E-02	(mg/kg-day)-1	1.9E-07
				Trichloroethene	1.29E-02	mg/L	5.6E-06	mg/kg-day	4.0E-01	(mg/kg-day)-1	2.2E-06
				Vinyl chloride	3.04E-02	mg/L	6.2E-06	mg/kg-day	1.5E+00	(mg/kg-day)-1	9.2E-06
				Xylene (Total)	2.06E-01	mg/L	3.9E-04	mg/kg-day	--	(mg/kg-day)-1	--
			Exp. Route Total								4.6E-04
			Inhalation (bathing/ showering)	1,1-Dichloroethane	2.03E-02	mg/L	2.3E-05	mg/kg-day	--	--	--
				1,2-Dichloroethane	6.00E-04	mg/L	6.9E-07	mg/kg-day	9.1E-02	(mg/kg-day)-1	6.3E-08
				1,2-Dichloroethene (Total)	4.34E-01	mg/L	5.0E-04	mg/kg-day	--	--	--
				1,2-Dichloropropane	2.00E-03	mg/L	2.3E-06	mg/kg-day	6.8E-02	(mg/kg-day)-1	1.6E-07
				1,2,3-Trichloropropane	3.00E-04	mg/L	3.5E-07	mg/kg-day	2.0E+00	(mg/kg-day)-1	6.9E-07
				1,3-Dichloropropane	9.00E-04	mg/L	1.0E-06	mg/kg-day	6.8E-02	(mg/kg-day)-1	7.0E-08
				2,2'-Oxybis(1-chloropropane)	7.00E-04	mg/L	8.1E-07	mg/kg-day	--	--	--
				2-Methylnaphthalene	9.28E-01	mg/L	1.1E-03	mg/kg-day	--	(mg/kg-day)-1	--
				Benzene	2.00E-03	mg/L	2.3E-06	mg/kg-day	2.7E-02	(mg/kg-day)-1	6.2E-08
				Chloroethane	5.00E-03	mg/L	5.8E-06	mg/kg-day	2.9E-03	(mg/kg-day)-1	1.7E-08
				Ethylbenzene	2.11E-02	mg/L	2.4E-05	mg/kg-day	3.9E-03	(mg/kg-day)-1	9.3E-08
				Methyl-t-butyl ether	1.13E-02	mg/L	1.3E-05	mg/kg-day	3.5E-04	(mg/kg-day)-1	4.6E-09
				Naphthalene	3.32E+00	mg/L	3.8E-03	mg/kg-day	--	(mg/kg-day)-1	--
				Tetrachloroethene	3.00E-03	mg/L	3.5E-06	mg/kg-day	1.0E-02	(mg/kg-day)-1	3.5E-08
				Trichloroethene	1.29E-02	mg/L	1.5E-05	mg/kg-day	4.0E-01	(mg/kg-day)-1	5.9E-06
				Vinyl chloride	3.04E-02	mg/L	3.5E-05	mg/kg-day	3.1E-02	(mg/kg-day)-1	1.1E-06
				Xylene (Total)	2.06E-01	mg/L	2.4E-04	mg/kg-day	--	(mg/kg-day)-1	--
			Exp. Route Total								8.2E-06
		Exposure Point Total									1.2E-03
	Exposure Medium Total										1.2E-03
Medium Total											1.2E-03
										Total of Receptor Risks Across All Media	1.2E-03

Notes:

--	Not Applicable or Not Available
CSF	Cancer slope factor
EPC	Exposure point concentration
mg/kg	Milligram per kilogram

TABLE H-8.1.7.RME
EPA RAGS PART D TABLE 7b
CALCULATION OF RME CHEMICAL CANCER RISKS
FUTURE REDEVELOPED CHILD RESIDENT
SITE 09, ALAMEDA POINT, ALAMEDA, CALIFORNIA

Scenario Timeframe:	Future-Redeveloped
Receptor Population:	Resident
Receptor Age:	Child

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations				
					Value	Units	Intake/Exposure Concentration		CSF/Unit Risk		Cancer Risk
							Value	Units	Value	Units	

mg/kg-day	Milligram per kilogram per day
(mg/kg-day)-1	1/(Milligram per kilogram per day)
RME	Reasonable maximum exposure

(a) See the Vapor Intrusion to Indoor Air Evaluation for determination of the modeled indoor air concentration.

HHRA RISK TABLES

Reasonable Maximum Exposure
Site 13
Alameda Point, Alameda, California

TABLE H-8.2.1.RME
EPA RAGS PART D TABLE 7a
CALCULATION OF RME CHEMICAL CANCER RISKS
CURRENT INDUSTRIAL WORKER
SITE 13, ALAMEDA POINT, ALAMEDA, CALIFORNIA

Scenario Timeframe:	Future
Receptor Population:	Industrial Worker
Receptor Age:	Adult

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations				
					Value	Units	Intake/Exposure Concentration		CSF/Unit Risk		Cancer Risk
							Value	Units	Value	Units	
Soil (0-2)	Soil	Site Soil	Ingestion	Arsenic	9.62E+00	mg/kg	3.4E-06	mg/kg-day	1.5E+00	(mg/kg-day)-1	5.0E-06
				Benz(a)anthracene	1.46E-01	mg/kg	5.1E-08	mg/kg-day	7.3E-01	(mg/kg-day)-1	3.7E-08
				Benzo(a)pyrene	1.32E-01	mg/kg	4.6E-08	mg/kg-day	7.3E+00	(mg/kg-day)-1	3.4E-07
				Benzo(b)fluoranthene	1.29E-01	mg/kg	4.5E-08	mg/kg-day	7.3E-01	(mg/kg-day)-1	3.3E-08
				Benzo(k)fluoranthene	7.96E-02	mg/kg	2.8E-08	mg/kg-day	7.3E-02	(mg/kg-day)-1	2.0E-09
				Chromium	4.21E+01	mg/kg	1.5E-05	mg/kg-day	--	--	--
				Dibenz(a,h)anthracene	4.05E-02	mg/kg	1.4E-08	mg/kg-day	7.3E+00	(mg/kg-day)-1	1.0E-07
				Indeno(1,2,3-cd)pyrene	8.30E-02	mg/kg	2.9E-08	mg/kg-day	7.3E-01	(mg/kg-day)-1	2.1E-08
				Lead	1.39E+02	mg/kg	4.9E-05	mg/kg-day	--	--	--
			Exp. Route Total								5.6E-06
			Dermal	Arsenic	9.62E+00	mg/kg	6.7E-07	mg/kg-day	1.5E+00	(mg/kg-day)-1	1.0E-06
				Benz(a)anthracene	1.46E-01	mg/kg	4.4E-08	mg/kg-day	7.3E-01	(mg/kg-day)-1	3.2E-08
				Benzo(a)pyrene	1.32E-01	mg/kg	4.0E-08	mg/kg-day	7.3E+00	(mg/kg-day)-1	2.9E-07
				Benzo(b)fluoranthene	1.29E-01	mg/kg	3.9E-08	mg/kg-day	7.3E-01	(mg/kg-day)-1	2.8E-08
				Benzo(k)fluoranthene	7.96E-02	mg/kg	2.4E-08	mg/kg-day	7.3E-02	(mg/kg-day)-1	1.7E-09
				Chromium	4.21E+01	mg/kg	9.7E-07	mg/kg-day	--	--	--
				Dibenz(a,h)anthracene	4.05E-02	mg/kg	1.2E-08	mg/kg-day	7.3E+00	(mg/kg-day)-1	8.9E-08
				Indeno(1,2,3-cd)pyrene	8.30E-02	mg/kg	2.5E-08	mg/kg-day	7.3E-01	(mg/kg-day)-1	1.8E-08
				Lead	1.39E+02	mg/kg	3.2E-06	mg/kg-day	--	--	--
			Exp. Route Total								1.5E-06
		Exposure Point Total									7.0E-06
	Exposure Medium Total										7.0E-06
	Air	Outdoor Air	Inhalation (particulates)	Arsenic	9.62E+00	mg/kg	5.1E-10	mg/kg-day	1.5E+01	(mg/kg-day)-1	7.6E-09
				Benz(a)anthracene	1.46E-01	mg/kg	7.7E-12	mg/kg-day	7.3E-01	(mg/kg-day)-1	5.6E-12
				Benzo(a)pyrene	1.32E-01	mg/kg	7.0E-12	mg/kg-day	7.3E+00	(mg/kg-day)-1	5.1E-11
				Benzo(b)fluoranthene	1.29E-01	mg/kg	6.8E-12	mg/kg-day	7.3E-01	(mg/kg-day)-1	5.0E-12
				Benzo(k)fluoranthene	7.96E-02	mg/kg	4.2E-12	mg/kg-day	7.3E-02	(mg/kg-day)-1	3.1E-13
				Chromium	4.21E+01	mg/kg	2.2E-09	mg/kg-day	--	--	--
				Dibenz(a,h)anthracene	4.05E-02	mg/kg	2.1E-12	mg/kg-day	7.3E+00	(mg/kg-day)-1	1.6E-11
				Indeno(1,2,3-cd)pyrene	8.30E-02	mg/kg	4.4E-12	mg/kg-day	7.3E-01	(mg/kg-day)-1	3.2E-12
				Lead	1.39E+02	mg/kg	7.4E-09	mg/kg-day	--	--	--
			Exp. Route Total								7.7E-09

TABLE H-8.2.1.RME
EPA RAGS PART D TABLE 7a
CALCULATION OF RME CHEMICAL CANCER RISKS
CURRENT INDUSTRIAL WORKER
SITE 13, ALAMEDA POINT, ALAMEDA, CALIFORNIA

Scenario Timeframe:	Future
Receptor Population:	Industrial Worker
Receptor Age:	Adult

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations				
					Value	Units	Intake/Exposure Concentration		CSF/Unit Risk		Cancer Risk
							Value	Units	Value	Units	
		Exposure Point Total									7.7E-09
	Exposure Medium Total										7.7E-09
Medium Total											7.0E-06
										Total of Receptor Risks Across All Media	7.0E-06

Notes:

–	*Not Applicable or Not Available*
CSF	Cancer slope factor
EPC	Exposure point concentration
mg/kg	Milligram per kilogram
mg/kg-day	Milligram per kilogram per day
(mg/kg-day)-1	1/(Milligram per kilogram per day)
RME	Reasonable maximum exposure

TABLE H-8.2.2.RME
EPA RAGS PART D TABLE 7a
CALCULATION OF RME CHEMICAL CANCER RISKS
CURRENT CONSTRUCTION WORKER
SITE 13, ALAMEDA POINT, ALAMEDA, CALIFORNIA

Scenario Timeframe:	Future
Receptor Population:	Construction Worker
Receptor Age:	Adult

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations				
					Value	Units	Intake/Exposure Concentration		CSF/Unit Risk		Cancer Risk
							Value	Units	Value	Units	
Soil (0-2)	Soil	Site Soil	Ingestion	Arsenic	9.62E+00	mg/kg	4.4E-07	mg/kg-day	1.5E+00	(mg/kg-day)-1	6.7E-07
				Benz(a)anthracene	1.46E-01	mg/kg	6.7E-09	mg/kg-day	7.3E-01	(mg/kg-day)-1	4.9E-09
				Benzo(a)pyrene	1.32E-01	mg/kg	6.1E-09	mg/kg-day	7.3E+00	(mg/kg-day)-1	4.4E-08
				Benzo(b)fluoranthene	1.29E-01	mg/kg	6.0E-09	mg/kg-day	7.3E-01	(mg/kg-day)-1	4.3E-09
				Benzo(k)fluoranthene	7.96E-02	mg/kg	3.7E-09	mg/kg-day	7.3E-02	(mg/kg-day)-1	2.7E-10
				Chromium	4.21E+01	mg/kg	1.9E-06	mg/kg-day	--	--	--
				Dibenz(a,h)anthracene	4.05E-02	mg/kg	1.9E-09	mg/kg-day	7.3E+00	(mg/kg-day)-1	1.4E-08
				Indeno(1,2,3-cd)pyrene	8.30E-02	mg/kg	3.8E-09	mg/kg-day	7.3E-01	(mg/kg-day)-1	2.8E-09
				Lead	1.39E+02	mg/kg	6.4E-06	mg/kg-day	--	--	--
			Exp. Route Total								7.4E-07
			Dermal	Arsenic	9.62E+00	mg/kg	4.0E-08	mg/kg-day	1.5E+00	(mg/kg-day)-1	6.0E-08
				Benz(a)anthracene	1.46E-01	mg/kg	2.6E-09	mg/kg-day	7.3E-01	(mg/kg-day)-1	1.9E-09
				Benzo(a)pyrene	1.32E-01	mg/kg	2.4E-09	mg/kg-day	7.3E+00	(mg/kg-day)-1	1.7E-08
				Benzo(b)fluoranthene	1.29E-01	mg/kg	2.3E-09	mg/kg-day	7.3E-01	(mg/kg-day)-1	1.7E-09
				Benzo(k)fluoranthene	7.96E-02	mg/kg	1.4E-09	mg/kg-day	7.3E-02	(mg/kg-day)-1	1.0E-10
				Chromium	4.21E+01	mg/kg	5.8E-08	mg/kg-day	--	--	--
				Dibenz(a,h)anthracene	4.05E-02	mg/kg	7.3E-10	mg/kg-day	7.3E+00	(mg/kg-day)-1	5.3E-09
				Indeno(1,2,3-cd)pyrene	8.30E-02	mg/kg	1.5E-09	mg/kg-day	7.3E-01	(mg/kg-day)-1	1.1E-09
				Lead	1.39E+02	mg/kg	1.9E-07	mg/kg-day	--	--	--
			Exp. Route Total								8.7E-08
		Exposure Point Total									8.2E-07
	Exposure Medium Total										8.2E-07
	Air	Outdoor Air	Inhalation (particulates)	Arsenic	9.62E+00	mg/kg	2.0E-11	mg/kg-day	1.5E+01	(mg/kg-day)-1	3.1E-10
				Benz(a)anthracene	1.46E-01	mg/kg	3.1E-13	mg/kg-day	7.3E-01	(mg/kg-day)-1	2.3E-13
				Benzo(a)pyrene	1.32E-01	mg/kg	2.8E-13	mg/kg-day	7.3E+00	(mg/kg-day)-1	2.0E-12
				Benzo(b)fluoranthene	1.29E-01	mg/kg	2.7E-13	mg/kg-day	7.3E-01	(mg/kg-day)-1	2.0E-13
				Benzo(k)fluoranthene	7.96E-02	mg/kg	1.7E-13	mg/kg-day	7.3E-02	(mg/kg-day)-1	1.2E-14
				Chromium	4.21E+01	mg/kg	8.9E-11	mg/kg-day	--	--	--
				Dibenz(a,h)anthracene	4.05E-02	mg/kg	8.6E-14	mg/kg-day	7.3E+00	(mg/kg-day)-1	6.3E-13
				Indeno(1,2,3-cd)pyrene	8.30E-02	mg/kg	1.8E-13	mg/kg-day	7.3E-01	(mg/kg-day)-1	1.3E-13
				Lead	1.39E+02	mg/kg	2.9E-10	mg/kg-day	--	--	--
			Exp. Route Total								3.1E-10

TABLE H-8.2.2.RME
EPA RAGS PART D TABLE 7a
CALCULATION OF RME CHEMICAL CANCER RISKS
CURRENT CONSTRUCTION WORKER
SITE 13, ALAMEDA POINT, ALAMEDA, CALIFORNIA

Scenario Timeframe:	Future
Receptor Population:	Construction Worker
Receptor Age:	Adult

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations				
					Value	Units	Intake/Exposure Concentration		CSF/Unit Risk		Cancer Risk
							Value	Units	Value	Units	
		Exposure Point Total									3.1E-10
	Exposure Medium Total										3.1E-10
Medium Total											8.2E-07
										Total of Receptor Risks Across All Media	8.2E-07

Notes:

--	Not Applicable or Not Available
CSF	Cancer slope factor
EPC	Exposure point concentration
mg/kg	Milligram per kilogram
mg/kg-day	Milligram per kilogram per day
(mg/kg-day)-1	1/(Milligram per kilogram per day)
RME	Reasonable maximum exposure

TABLE H-8.2.3.RME
EPA RAGS PART D TABLE 7a
CALCULATION OF RME CHEMICAL CANCER RISKS
CURRENT ADULT RESIDENT
SITE 13, ALAMEDA POINT, ALAMEDA, CALIFORNIA

Scenario Timeframe:	Future
Receptor Population:	Resident
Receptor Age:	Adult

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations				
					Value	Units	Intake/Exposure Concentration		CSF/Unit Risk		Cancer Risk
							Value	Units	Value	Units	
Soil (0-2)	Soil	Site Soil	Ingestion	Arsenic	9.62E+00	mg/kg	4.5E-06	mg/kg-day	1.5E+00	(mg/kg-day)-1	6.8E-06
				Benz(a)anthracene	1.46E-01	mg/kg	6.9E-08	mg/kg-day	7.3E-01	(mg/kg-day)-1	5.0E-08
				Benzo(a)pyrene	1.32E-01	mg/kg	6.2E-08	mg/kg-day	7.3E+00	(mg/kg-day)-1	4.5E-07
				Benzo(b)fluoranthene	1.29E-01	mg/kg	6.1E-08	mg/kg-day	7.3E-01	(mg/kg-day)-1	4.4E-08
				Benzo(k)fluoranthene	7.96E-02	mg/kg	3.7E-08	mg/kg-day	7.3E-02	(mg/kg-day)-1	2.7E-09
				Chromium	4.21E+01	mg/kg	2.0E-05	mg/kg-day	--	--	--
				Dibenz(a,h)anthracene	4.05E-02	mg/kg	1.9E-08	mg/kg-day	7.3E+00	(mg/kg-day)-1	1.4E-07
				Indeno(1,2,3-cd)pyrene	8.30E-02	mg/kg	3.9E-08	mg/kg-day	7.3E-01	(mg/kg-day)-1	2.8E-08
				Lead	1.39E+02	mg/kg	6.5E-05	mg/kg-day	--	--	--
			Exp. Route Total								7.5E-06
			Dermal	Arsenic	9.62E+00	mg/kg	5.4E-07	mg/kg-day	1.5E+00	(mg/kg-day)-1	8.1E-07
				Benz(a)anthracene	1.46E-01	mg/kg	3.6E-08	mg/kg-day	7.3E-01	(mg/kg-day)-1	2.6E-08
				Benzo(a)pyrene	1.32E-01	mg/kg	3.2E-08	mg/kg-day	7.3E+00	(mg/kg-day)-1	2.3E-07
				Benzo(b)fluoranthene	1.29E-01	mg/kg	3.1E-08	mg/kg-day	7.3E-01	(mg/kg-day)-1	2.3E-08
				Benzo(k)fluoranthene	7.96E-02	mg/kg	1.9E-08	mg/kg-day	7.3E-02	(mg/kg-day)-1	1.4E-09
				Chromium	4.21E+01	mg/kg	7.9E-07	mg/kg-day	--	--	--
				Dibenz(a,h)anthracene	4.05E-02	mg/kg	9.9E-09	mg/kg-day	7.3E+00	(mg/kg-day)-1	7.2E-08
				Indeno(1,2,3-cd)pyrene	8.30E-02	mg/kg	2.0E-08	mg/kg-day	7.3E-01	(mg/kg-day)-1	1.5E-08
				Lead	1.39E+02	mg/kg	2.6E-06	mg/kg-day	--	--	--
			Exp. Route Total								1.2E-06
		Exposure Point Total									8.7E-06
	Exposure Medium Total										8.7E-06
	Homegrown Produce	Homegrown Produce	Ingestion	Arsenic	9.62E+00	mg/kg	1.7E-05	mg/kg-day	1.5E+00	(mg/kg-day)-1	2.5E-05
				Benz(a)anthracene	1.46E-01	mg/kg	2.3E-07	mg/kg-day	7.3E-01	(mg/kg-day)-1	1.7E-07
				Benzo(a)pyrene	1.32E-01	mg/kg	1.6E-07	mg/kg-day	7.3E+00	(mg/kg-day)-1	1.2E-06
				Benzo(b)fluoranthene	1.29E-01	mg/kg	1.4E-07	mg/kg-day	7.3E-01	(mg/kg-day)-1	1.0E-07
				Benzo(k)fluoranthene	7.96E-02	mg/kg	8.8E-08	mg/kg-day	7.3E-02	(mg/kg-day)-1	6.4E-09
				Chromium	4.21E+01	mg/kg	--	mg/kg-day	--	--	--
				Dibenz(a,h)anthracene	4.05E-02	mg/kg	7.4E-08	mg/kg-day	7.3E+00	(mg/kg-day)-1	5.4E-07
				Indeno(1,2,3-cd)pyrene	8.30E-02	mg/kg	7.2E-08	mg/kg-day	7.3E-01	(mg/kg-day)-1	5.3E-08
				Lead	1.39E+02	mg/kg	--	mg/kg-day	--	--	--
			Exp. Route Total								2.7E-05

TABLE H-8.2.3.RME
EPA RAGS PART D TABLE 7a
CALCULATION OF RME CHEMICAL CANCER RISKS
CURRENT ADULT RESIDENT
SITE 13, ALAMEDA POINT, ALAMEDA, CALIFORNIA

Scenario Timeframe:	*Future*
Receptor Population:	Resident
Receptor Age:	Adult

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations				
					Value	Units	Intake/Exposure Concentration		CSF/Unit Risk		Cancer Risk
							Value	Units	Value	Units	
		Exposure Point Total									2.7E-05
	Exposure Medium Total										2.7E-05
	Air	Outdoor Air	Inhalation (particulates)	Arsenic	9.62E+00	mg/kg	6.8E-10	mg/kg-day	1.5E+01	(mg/kg-day)-1	1.0E-08
				Benz(a)anthracene	1.46E-01	mg/kg	1.0E-11	mg/kg-day	7.3E-01	(mg/kg-day)-1	7.6E-12
				Benzo(a)pyrene	1.32E-01	mg/kg	9.4E-12	mg/kg-day	7.3E+00	(mg/kg-day)-1	6.8E-11
				Benzo(b)fluoranthene	1.29E-01	mg/kg	9.1E-12	mg/kg-day	7.3E-01	(mg/kg-day)-1	6.7E-12
				Benzo(k)fluoranthene	7.96E-02	mg/kg	5.6E-12	mg/kg-day	7.3E-02	(mg/kg-day)-1	4.1E-13
				Chromium	4.21E+01	mg/kg	3.0E-09	mg/kg-day	--	--	--
				Dibenz(a,h)anthracene	4.05E-02	mg/kg	2.9E-12	mg/kg-day	7.3E+00	(mg/kg-day)-1	2.1E-11
				Indeno(1,2,3-cd)pyrene	8.30E-02	mg/kg	5.9E-12	mg/kg-day	7.3E-01	(mg/kg-day)-1	4.3E-12
				Lead	1.39E+02	mg/kg	9.9E-09	mg/kg-day	--	--	--
			Exp. Route Total								1.0E-08
		Exposure Point Total									1.0E-08
	Exposure Medium Total										1.0E-08
Medium Total											3.6E-05
Groundwater	Groundwater	Tap	Ingestion	1,2-Dichloroethane	4.02E-04	mg/L	3.8E-06	mg/kg-day	9.1E-02	(mg/kg-day)-1	3.4E-07
				2-Methylnaphthalene	1.16E-02	mg/L	1.1E-04	mg/kg-day	--	--	--
				Arsenic	2.86E-02	mg/L	2.7E-04	mg/kg-day	1.5E+00	(mg/kg-day)-1	4.0E-04
				Benzene	4.61E-03	mg/L	4.3E-05	mg/kg-day	5.5E-02	(mg/kg-day)-1	2.4E-06
				Ethylbenzene	1.02E-03	mg/L	9.6E-06	mg/kg-day	3.9E-03	(mg/kg-day)-1	3.7E-08
				Manganese	7.80E+00	mg/L	7.3E-02	mg/kg-day	--	--	--
				Naphthalene	3.48E-02	mg/L	3.3E-04	mg/kg-day	--	--	--
				Pentachlorophenol	7.00E-03	mg/L	6.6E-05	mg/kg-day	1.2E-01	(mg/kg-day)-1	7.9E-06
				Thallium	2.62E-03	mg/L	2.5E-05	mg/kg-day	--	--	--
				Trichloroethene	9.06E-04	mg/L	8.5E-06	mg/kg-day	4.0E-01	(mg/kg-day)-1	3.4E-06
			Exp. Route Total								4.2E-04
			Dermal (bathing/ showering)	1,2-Dichloroethane	4.02E-04	mg/L	8.3E-08	mg/kg-day	9.1E-02	(mg/kg-day)-1	7.5E-09
				2-Methylnaphthalene	1.16E-02	mg/L	2.7E-05	mg/kg-day	--	--	--
				Arsenic	2.86E-02	mg/L	1.4E-06	mg/kg-day	1.5E+00	(mg/kg-day)-1	2.1E-06
				Benzene	4.61E-03	mg/L	4.7E-06	mg/kg-day	5.5E-02	(mg/kg-day)-1	2.6E-07
				Ethylbenzene	1.02E-03	mg/L	2.5E-06	mg/kg-day	3.9E-03	(mg/kg-day)-1	9.4E-09
				Manganese	7.80E+00	mg/L	3.8E-04	mg/kg-day	--	--	--

TABLE H-8.2.3.RME
EPA RAGS PART D TABLE 7a
CALCULATION OF RME CHEMICAL CANCER RISKS
CURRENT ADULT RESIDENT
SITE 13, ALAMEDA POINT, ALAMEDA, CALIFORNIA

Scenario Timeframe:	Future
Receptor Population:	Resident
Receptor Age:	Adult

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations				
					Value	Units	Intake/Exposure Concentration		CSF/Unit Risk		Cancer Risk
							Value	Units	Value	Units	
				Naphthalene	3.48E-02	mg/L	8.0E-05	mg/kg-day	--	--	--
				Pentachlorophenol	7.00E-03	mg/L	1.3E-04	mg/kg-day	1.2E-01	(mg/kg-day)-1	1.6E-05
				Thallium	2.62E-03	mg/L	1.3E-07	mg/kg-day	--	--	--
				Trichloroethene	9.06E-04	mg/L	5.3E-07	mg/kg-day	4.0E-01	(mg/kg-day)-1	2.1E-07
			Exp. Route Total								1.9E-05
			Inhalation (bathing/ showering)	1,2-Dichloroethane	4.02E-04	mg/L	4.5E-07	mg/kg-day	9.1E-02	(mg/kg-day)-1	4.1E-08
				2-Methylnaphthalene	1.16E-02	mg/L	1.3E-05	mg/kg-day	--	--	--
				Benzene	4.61E-03	mg/L	5.2E-06	mg/kg-day	2.7E-02	(mg/kg-day)-1	1.4E-07
				Ethylbenzene	1.02E-03	mg/L	1.2E-06	mg/kg-day	3.9E-03	(mg/kg-day)-1	4.4E-09
				Naphthalene	3.48E-02	mg/L	3.9E-05	mg/kg-day	--	--	--
				Trichloroethene	9.06E-04	mg/L	1.0E-06	mg/kg-day	4.0E-01	(mg/kg-day)-1	4.1E-07
			Exp. Route Total								6.0E-07
		Exposure Point Total									4.4E-04
	Exposure Medium Total										4.4E-04
Medium Total											4.4E-04
										Total of Receptor Risks Across All Media	4.7E-04

Notes:

--	Not Applicable or Not Available
CSF	Cancer slope factor
EPC	Exposure point concentration
mg/kg	Milligram per kilogram
mg/kg-day	Milligram per kilogram per day
(mg/kg-day)-1	1/(Milligram per kilogram per day)
RME	Reasonable maximum exposure

TABLE H-8.2.4.RME
EPA RAGS PART D TABLE 7a
CALCULATION OF RME CHEMICAL CANCER RISKS
CURRENT CHILD RESIDENT
SITE 13, ALAMEDA POINT, ALAMEDA, CALIFORNIA

Scenario Timeframe:	Future
Receptor Population:	Resident
Receptor Age:	Child

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations				
					Value	Units	Intake/Exposure Concentration		CSF/Unit Risk		Cancer Risk
							Value	Units	Value	Units	
Soil (0-2)	Soil	Site Soil	Ingestion	Arsenic	9.62E+00	mg/kg	1.1E-05	mg/kg-day	1.5E+00	(mg/kg-day)-1	1.6E-05
				Benz(a)anthracene	1.46E-01	mg/kg	1.6E-07	mg/kg-day	7.3E-01	(mg/kg-day)-1	1.2E-07
				Benzo(a)pyrene	1.32E-01	mg/kg	1.4E-07	mg/kg-day	7.3E+00	(mg/kg-day)-1	1.1E-06
				Benzo(b)fluoranthene	1.29E-01	mg/kg	1.4E-07	mg/kg-day	7.3E-01	(mg/kg-day)-1	1.0E-07
				Benzo(k)fluoranthene	7.96E-02	mg/kg	8.7E-08	mg/kg-day	7.3E-02	(mg/kg-day)-1	6.4E-09
				Chromium	4.21E+01	mg/kg	4.6E-05	mg/kg-day	--	--	--
				Dibenz(a,h)anthracene	4.05E-02	mg/kg	4.4E-08	mg/kg-day	7.3E+00	(mg/kg-day)-1	3.2E-07
				Indeno(1,2,3-cd)pyrene	8.30E-02	mg/kg	9.1E-08	mg/kg-day	7.3E-01	(mg/kg-day)-1	6.6E-08
				Lead	1.39E+02	mg/kg	1.5E-04	mg/kg-day	--	--	--
			Exp. Route Total								1.7E-05
			Dermal	Arsenic	9.62E+00	mg/kg	8.9E-07	mg/kg-day	1.5E+00	(mg/kg-day)-1	1.3E-06
				Benz(a)anthracene	1.46E-01	mg/kg	5.8E-08	mg/kg-day	7.3E-01	(mg/kg-day)-1	4.3E-08
				Benzo(a)pyrene	1.32E-01	mg/kg	5.3E-08	mg/kg-day	7.3E+00	(mg/kg-day)-1	3.8E-07
				Benzo(b)fluoranthene	1.29E-01	mg/kg	5.1E-08	mg/kg-day	7.3E-01	(mg/kg-day)-1	3.8E-08
				Benzo(k)fluoranthene	7.96E-02	mg/kg	3.2E-08	mg/kg-day	7.3E-02	(mg/kg-day)-1	2.3E-09
				Chromium	4.21E+01	mg/kg	1.3E-06	mg/kg-day	--	--	--
				Dibenz(a,h)anthracene	4.05E-02	mg/kg	1.6E-08	mg/kg-day	7.3E+00	(mg/kg-day)-1	1.2E-07
				Indeno(1,2,3-cd)pyrene	8.30E-02	mg/kg	3.3E-08	mg/kg-day	7.3E-01	(mg/kg-day)-1	2.4E-08
				Lead	1.39E+02	mg/kg	4.3E-06	mg/kg-day	--	--	--
			Exp. Route Total								1.9E-06
		Exposure Point Total									1.9E-05
	Exposure Medium Total										1.9E-05
	Homegrown Produce	Homegrown Produce	Ingestion	Arsenic	9.62E+00	mg/kg	4.2E-06	mg/kg-day	1.5E+00	(mg/kg-day)-1	6.3E-06
				Benz(a)anthracene	1.46E-01	mg/kg	5.7E-08	mg/kg-day	7.3E-01	(mg/kg-day)-1	4.2E-08
				Benzo(a)pyrene	1.32E-01	mg/kg	4.0E-08	mg/kg-day	7.3E+00	(mg/kg-day)-1	2.9E-07
				Benzo(b)fluoranthene	1.29E-01	mg/kg	3.6E-08	mg/kg-day	7.3E-01	(mg/kg-day)-1	2.6E-08
				Benzo(k)fluoranthene	7.96E-02	mg/kg	2.2E-08	mg/kg-day	7.3E-02	(mg/kg-day)-1	1.6E-09
				Chromium	4.21E+01	mg/kg	--	mg/kg-day	--	--	--
				Dibenz(a,h)anthracene	4.05E-02	mg/kg	1.8E-08	mg/kg-day	7.3E+00	(mg/kg-day)-1	1.3E-07
				Indeno(1,2,3-cd)pyrene	8.30E-02	mg/kg	1.8E-08	mg/kg-day	7.3E-01	(mg/kg-day)-1	1.3E-08
				Lead	1.39E+02	mg/kg	--	mg/kg-day	--	--	--
			Exp. Route Total								6.8E-06

TABLE H-8.2.4.RME
EPA RAGS PART D TABLE 7a
CALCULATION OF RME CHEMICAL CANCER RISKS
CURRENT CHILD RESIDENT
SITE 13, ALAMEDA POINT, ALAMEDA, CALIFORNIA

Scenario Timeframe:	Future
Receptor Population:	Resident
Receptor Age:	Child

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations				
					Value	Units	Intake/Exposure Concentration		CSF/Unit Risk		Cancer Risk
							Value	Units	Value	Units	
		Exposure Point Total									6.8E-06
	Exposure Medium Total										6.8E-06
	Air	Outdoor Air	Inhalation (particulates)	Arsenic	9.62E+00	mg/kg	4.0E-10	mg/kg-day	1.5E+01	(mg/kg-day)-1	6.0E-09
				Benz(a)anthracene	1.46E-01	mg/kg	6.1E-12	mg/kg-day	7.3E-01	(mg/kg-day)-1	4.5E-12
				Benzo(a)pyrene	1.32E-01	mg/kg	5.5E-12	mg/kg-day	7.3E+00	(mg/kg-day)-1	4.0E-11
				Benzo(b)fluoranthene	1.29E-01	mg/kg	5.4E-12	mg/kg-day	7.3E-01	(mg/kg-day)-1	3.9E-12
				Benzo(k)fluoranthene	7.96E-02	mg/kg	3.3E-12	mg/kg-day	7.3E-02	(mg/kg-day)-1	2.4E-13
				Chromium	4.21E+01	mg/kg	1.8E-09	mg/kg-day	--	--	--
				Dibenz(a,h)anthracene	4.05E-02	mg/kg	1.7E-12	mg/kg-day	7.3E+00	(mg/kg-day)-1	1.2E-11
				Indeno(1,2,3-cd)pyrene	8.30E-02	mg/kg	3.5E-12	mg/kg-day	7.3E-01	(mg/kg-day)-1	2.5E-12
				Lead	1.39E+02	mg/kg	5.8E-09	mg/kg-day	--	--	--
			Exp. Route Total								6.1E-09
		Exposure Point Total									6.1E-09
	Exposure Medium Total										6.1E-09
Medium Total											2.6E-05
Groundwater	Groundwater	Tap	Ingestion	1,2-Dichloroethane	4.02E-04	mg/L	2.2E-06	mg/kg-day	9.1E-02	(mg/kg-day)-1	2.0E-07
				2-Methylnaphthalene	1.16E-02	mg/L	6.4E-05	mg/kg-day	--	--	--
				Arsenic	2.86E-02	mg/L	1.6E-04	mg/kg-day	1.5E+00	(mg/kg-day)-1	2.4E-04
				Benzene	4.61E-03	mg/L	2.5E-05	mg/kg-day	5.5E-02	(mg/kg-day)-1	1.4E-06
				Ethylbenzene	1.02E-03	mg/L	5.6E-06	mg/kg-day	3.9E-03	(mg/kg-day)-1	2.2E-08
				Manganese	7.80E+00	mg/L	4.3E-02	mg/kg-day	--	--	--
				Naphthalene	3.48E-02	mg/L	1.9E-04	mg/kg-day	--	--	--
				Pentachlorophenol	7.00E-03	mg/L	3.8E-05	mg/kg-day	1.2E-01	(mg/kg-day)-1	4.6E-06
				Thallium	2.62E-03	mg/L	1.4E-05	mg/kg-day	--	--	--
				Trichloroethene	9.06E-04	mg/L	5.0E-06	mg/kg-day	4.0E-01	(mg/kg-day)-1	2.0E-06
			Exp. Route Total								2.4E-04
			Dermal (bathing/ showering)	1,2-Dichloroethane	4.02E-04	mg/L	6.1E-08	mg/kg-day	9.1E-02	(mg/kg-day)-1	5.6E-09
				2-Methylnaphthalene	1.16E-02	mg/L	2.0E-05	mg/kg-day	--	--	--
				Arsenic	2.86E-02	mg/L	1.0E-06	mg/kg-day	1.5E+00	(mg/kg-day)-1	1.6E-06
				Benzene	4.61E-03	mg/L	3.5E-06	mg/kg-day	5.5E-02	(mg/kg-day)-1	1.9E-07
				Ethylbenzene	1.02E-03	mg/L	1.8E-06	mg/kg-day	3.9E-03	(mg/kg-day)-1	7.0E-09
				Manganese	7.80E+00	mg/L	2.8E-04	mg/kg-day	--	--	--

TABLE H-8.2.4.RME
EPA RAGS PART D TABLE 7a
CALCULATION OF RME CHEMICAL CANCER RISKS
CURRENT CHILD RESIDENT
SITE 13, ALAMEDA POINT, ALAMEDA, CALIFORNIA

Scenario Timeframe:	Future
Receptor Population:	Resident
Receptor Age:	Child

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations				
					Value	Units	Intake/Exposure Concentration		CSF/Unit Risk		Cancer Risk
							Value	Units	Value	Units	
				Naphthalene	3.48E-02	mg/L	5.9E-05	mg/kg-day	--	--	--
				Pentachlorophenol	7.00E-03	mg/L	9.9E-05	mg/kg-day	1.2E-01	(mg/kg-day)-1	1.2E-05
				Thallium	2.62E-03	mg/L	9.5E-08	mg/kg-day	--	--	--
				Trichloroethene	9.06E-04	mg/L	3.9E-07	mg/kg-day	4.0E-01	(mg/kg-day)-1	1.6E-07
			Exp. Route Total								1.4E-05
			Inhalation (bathing/ showering)	1,2-Dichloroethane	4.02E-04	mg/L	4.6E-07	mg/kg-day	9.1E-02	(mg/kg-day)-1	4.2E-08
				2-Methylnaphthalene	1.16E-02	mg/L	1.3E-05	mg/kg-day	--	--	--
				Benzene	4.61E-03	mg/L	5.3E-06	mg/kg-day	2.7E-02	(mg/kg-day)-1	1.4E-07
				Ethylbenzene	1.02E-03	mg/L	1.2E-06	mg/kg-day	3.9E-03	(mg/kg-day)-1	4.5E-09
				Naphthalene	3.48E-02	mg/L	4.0E-05	mg/kg-day	--	--	--
				Trichloroethene	9.06E-04	mg/L	1.0E-06	mg/kg-day	4.0E-01	(mg/kg-day)-1	4.2E-07
			Exp. Route Total								6.1E-07
		Exposure Point Total									2.6E-04
	Exposure Medium Total										2.6E-04
Medium Total											2.6E-04
										Total of Receptor Risks Across All Media	2.6E-04

Notes:

--	Not Applicable or Not Available
CSF	Cancer slope factor
EPC	Exposure point concentration
mg/kg	Milligram per kilogram
mg/kg-day	Milligram per kilogram per day
(mg/kg-day)-1	1/(Milligram per kilogram per day)
RME	Reasonable maximum exposure

TABLE H-8.2.5.RME
EPA RAGS PART D TABLE 7a
CALCULATION OF RME CHEMICAL CANCER RISKS
FUTURE DEVELOPED CONSTRUCTION WORKER
SITE 13, ALAMEDA POINT, ALAMEDA, CALIFORNIA

Scenario Timeframe:	Future-Developed
Receptor Population:	Construction Worker
Receptor Age:	Adult

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations				
					Value	Units	Intake/Exposure Concentration		CSF/Unit Risk		Cancer Risk
							Value	Units	Value	Units	
Soil (0-8)	Soil	Site Soil	Ingestion	2-Methylnaphthalene	1.14E+01	mg/kg	5.2E-07	mg/kg-day	--	--	--
				Arsenic	6.16E+00	mg/kg	2.8E-07	mg/kg-day	1.5E+00	(mg/kg-day)-1	4.3E-07
				Benzene	8.97E-02	mg/kg	4.1E-09	mg/kg-day	5.5E-02	(mg/kg-day)-1	2.3E-10
				Benz(a)anthracene	1.62E-01	mg/kg	7.5E-09	mg/kg-day	7.3E-01	(mg/kg-day)-1	5.5E-09
				Benzo(a)pyrene	1.39E-01	mg/kg	6.4E-09	mg/kg-day	7.3E+00	(mg/kg-day)-1	4.7E-08
				Benzo(b)fluoranthene	1.31E-01	mg/kg	6.0E-09	mg/kg-day	7.3E-01	(mg/kg-day)-1	4.4E-09
				Benzo(k)fluoranthene	9.57E-02	mg/kg	4.4E-09	mg/kg-day	7.3E-02	(mg/kg-day)-1	3.2E-10
				Chromium	3.69E+01	mg/kg	1.7E-06	mg/kg-day	--	--	--
				Chrysene	2.79E-01	mg/kg	1.3E-08	mg/kg-day	7.3E-03	(mg/kg-day)-1	9.4E-11
				Dibenz(a,h)anthracene	4.83E-02	mg/kg	2.2E-09	mg/kg-day	7.3E+00	(mg/kg-day)-1	1.6E-08
				Indeno(1,2,3-cd)pyrene	9.28E-02	mg/kg	4.3E-09	mg/kg-day	7.3E-01	(mg/kg-day)-1	3.1E-09
				Lead	5.47E+01	mg/kg	2.5E-06	mg/kg-day	--	--	--
				Vanadium	2.98E+01	mg/kg	1.4E-06	mg/kg-day	--	--	--
			Exp. Route Total								5.0E-07
			Dermal	2-Methylnaphthalene	1.14E+01	mg/kg	--	mg/kg-day	--	--	--
				Arsenic	6.16E+00	mg/kg	2.6E-08	mg/kg-day	1.5E+00	(mg/kg-day)-1	3.8E-08
				Benzene	8.97E-02	mg/kg	--	mg/kg-day	5.5E-02	(mg/kg-day)-1	--
				Benz(a)anthracene	1.62E-01	mg/kg	2.9E-09	mg/kg-day	7.3E-01	(mg/kg-day)-1	2.1E-09
				Benzo(a)pyrene	1.39E-01	mg/kg	2.5E-09	mg/kg-day	7.3E+00	(mg/kg-day)-1	1.8E-08
				Benzo(b)fluoranthene	1.31E-01	mg/kg	2.4E-09	mg/kg-day	7.3E-01	(mg/kg-day)-1	1.7E-09
				Benzo(k)fluoranthene	9.57E-02	mg/kg	1.7E-09	mg/kg-day	7.3E-02	(mg/kg-day)-1	1.3E-10
				Chromium	3.69E+01	mg/kg	5.1E-08	mg/kg-day	--	--	--
				Chrysene	2.79E-01	mg/kg	5.0E-09	mg/kg-day	7.3E-03	(mg/kg-day)-1	3.7E-11
				Dibenz(a,h)anthracene	4.83E-02	mg/kg	8.7E-10	mg/kg-day	7.3E+00	(mg/kg-day)-1	6.3E-09
				Indeno(1,2,3-cd)pyrene	9.28E-02	mg/kg	1.7E-09	mg/kg-day	7.3E-01	(mg/kg-day)-1	1.2E-09
				Lead	5.47E+01	mg/kg	7.6E-08	mg/kg-day	--	--	--
				Vanadium	2.98E+01	mg/kg	4.1E-08	mg/kg-day	--	--	--
			Exp. Route Total								6.8E-08
		Exposure Point Total									5.7E-07
	Exposure Medium Total										5.7E-07
	Air	Outdoor Air	Inhalation (particulates)	2-Methylnaphthalene	1.14E+01	mg/kg	2.4E-11	mg/kg-day	--	--	--
				Arsenic	6.16E+00	mg/kg	1.3E-11	mg/kg-day	1.5E+01	(mg/kg-day)-1	2.0E-10
				Benzene	8.97E-02	mg/kg	1.9E-13	mg/kg-day	2.7E-02	(mg/kg-day)-1	5.1E-15
				Benz(a)anthracene	1.62E-01	mg/kg	3.4E-13	mg/kg-day	7.3E-01	(mg/kg-day)-1	2.5E-13
				Benzo(a)pyrene	1.39E-01	mg/kg	2.9E-13	mg/kg-day	7.3E+00	(mg/kg-day)-1	2.1E-12

TABLE H-8.2.5.RME
EPA RAGS PART D TABLE 7a
CALCULATION OF RME CHEMICAL CANCER RISKS
FUTURE DEVELOPED CONSTRUCTION WORKER
SITE 13, ALAMEDA POINT, ALAMEDA, CALIFORNIA

Scenario Timeframe:	Future-Developed
Receptor Population:	Construction Worker
Receptor Age:	Adult

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations				
					Value	Units	Intake/Exposure Concentration		CSF/Unit Risk		Cancer Risk
							Value	Units	Value	Units	
				Benzo(b)fluoranthene	1.31E-01	mg/kg	2.8E-13	mg/kg-day	7.3E-01	(mg/kg-day)-1	2.0E-13
				Benzo(k)fluoranthene	9.57E-02	mg/kg	2.0E-13	mg/kg-day	7.3E-02	(mg/kg-day)-1	1.5E-14
				Chromium	3.69E+01	mg/kg	7.8E-11	mg/kg-day	--	--	--
				Chrysene	2.79E-01	mg/kg	5.9E-13	mg/kg-day	7.3E-03	(mg/kg-day)-1	4.3E-15
				Dibenz(a,h)anthracene	4.83E-02	mg/kg	1.0E-13	mg/kg-day	7.3E+00	(mg/kg-day)-1	7.5E-13
				Indeno(1,2,3-cd)pyrene	9.28E-02	mg/kg	2.0E-13	mg/kg-day	7.3E-01	(mg/kg-day)-1	1.4E-13
				Lead	5.47E+01	mg/kg	1.2E-10	mg/kg-day	--	--	--
				Vanadium	2.98E+01	mg/kg	6.3E-11	mg/kg-day	--	--	--
			Exp. Route Total								2.0E-10
			Inhalation (VOCs)	2-Methylnaphthalene	1.14E+01	mg/kg	7.4E-07	mg/kg-day	--	--	--
				Benzene	8.97E-02	mg/kg	9.3E-08	mg/kg-day	2.7E-02	(mg/kg-day)-1	2.5E-09
			Exp. Route Total								2.5E-09
		Exposure Point Total									2.7E-09
	Exposure Medium Total										2.7E-09
Medium Total											5.7E-07
										Total of Receptor Risks Across All Media	5.7E-07

Notes:

--	Not Applicable or Not Available
CSF	Cancer slope factor
EPC	Exposure point concentration
mg/kg	Milligram per kilogram
mg/kg-day	Milligram per kilogram per day
(mg/kg-day)-1	1/(Milligram per kilogram per day)
RME	Reasonable maximum exposure
VOC	Volatile organic compound

TABLE H-8.2.6.RME
EPA RAGS PART D TABLE 7a
CALCULATION OF RME CHEMICAL CANCER RISKS
FUTURE REDEVELOPED ADULT RESIDENT
SITE 13, ALAMEDA POINT, ALAMEDA, CALIFORNIA

Scenario Timeframe:	Future-Redeveloped
Receptor Population:	Resident
Receptor Age:	Adult

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations				
					Value	Units	Intake/Exposure Concentration		CSF/Unit Risk		Cancer Risk
							Value	Units	Value	Units	
Soil (0-8)	Soil	Site Soil	Ingestion	2-Methylnaphthalene	1.14E+01	mg/kg	5.3E-06	mg/kg-day	--	--	--
				Arsenic	6.16E+00	mg/kg	2.9E-06	mg/kg-day	1.5E+00	(mg/kg-day)-1	4.3E-06
				Benzene	8.97E-02	mg/kg	4.2E-08	mg/kg-day	5.5E-02	(mg/kg-day)-1	2.3E-09
				Benz(a)anthracene	1.62E-01	mg/kg	7.6E-08	mg/kg-day	7.3E-01	(mg/kg-day)-1	5.6E-08
				Benzo(a)pyrene	1.39E-01	mg/kg	6.5E-08	mg/kg-day	7.3E+00	(mg/kg-day)-1	4.8E-07
				Benzo(b)fluoranthene	1.31E-01	mg/kg	6.2E-08	mg/kg-day	7.3E-01	(mg/kg-day)-1	4.5E-08
				Benzo(k)fluoranthene	9.57E-02	mg/kg	4.5E-08	mg/kg-day	7.3E-02	(mg/kg-day)-1	3.3E-09
				Chromium	3.69E+01	mg/kg	1.7E-05	mg/kg-day	--	--	--
				Chrysene	2.79E-01	mg/kg	1.3E-07	mg/kg-day	7.3E-03	(mg/kg-day)-1	9.6E-10
				Dibenz(a,h)anthracene	4.83E-02	mg/kg	2.3E-08	mg/kg-day	7.3E+00	(mg/kg-day)-1	1.7E-07
				Indeno(1,2,3-cd)pyrene	9.28E-02	mg/kg	4.4E-08	mg/kg-day	7.3E-01	(mg/kg-day)-1	3.2E-08
				Lead	5.47E+01	mg/kg	2.6E-05	mg/kg-day	--	--	--
				Vanadium	2.98E+01	mg/kg	1.4E-05	mg/kg-day	--	--	--
			Exp. Route Total								5.1E-06
			Dermal	2-Methylnaphthalene	1.14E+01	mg/kg	--	mg/kg-day	--	--	--
				Arsenic	6.16E+00	mg/kg	3.5E-07	mg/kg-day	1.5E+00	(mg/kg-day)-1	5.2E-07
				Benzene	8.97E-02	mg/kg	--	mg/kg-day	5.5E-02	(mg/kg-day)-1	--
				Benz(a)anthracene	1.62E-01	mg/kg	3.9E-08	mg/kg-day	7.3E-01	(mg/kg-day)-1	2.9E-08
				Benzo(a)pyrene	1.39E-01	mg/kg	3.4E-08	mg/kg-day	7.3E+00	(mg/kg-day)-1	2.5E-07
				Benzo(b)fluoranthene	1.31E-01	mg/kg	3.2E-08	mg/kg-day	7.3E-01	(mg/kg-day)-1	2.3E-08
				Benzo(k)fluoranthene	9.57E-02	mg/kg	2.3E-08	mg/kg-day	7.3E-02	(mg/kg-day)-1	1.7E-09
				Chromium	3.69E+01	mg/kg	6.9E-07	mg/kg-day	--	--	--
				Chrysene	2.79E-01	mg/kg	6.8E-08	mg/kg-day	7.3E-03	(mg/kg-day)-1	5.0E-10
				Dibenz(a,h)anthracene	4.83E-02	mg/kg	1.2E-08	mg/kg-day	7.3E+00	(mg/kg-day)-1	8.6E-08
				Indeno(1,2,3-cd)pyrene	9.28E-02	mg/kg	2.3E-08	mg/kg-day	7.3E-01	(mg/kg-day)-1	1.7E-08
				Lead	5.47E+01	mg/kg	1.0E-06	mg/kg-day	--	--	--
				Vanadium	2.98E+01	mg/kg	5.6E-07	mg/kg-day	--	--	--
			Exp. Route Total								8.2E-07
		Exposure Point Total									5.9E-06
	Exposure Medium Total										5.9E-06
	Homegrown Produce	Homegrown Produce	Ingestion	2-Methylnaphthalene	1.14E+01	mg/kg	--	mg/kg-day	--	--	--
				Arsenic	6.16E+00	mg/kg	1.1E-05	mg/kg-day	1.5E+00	(mg/kg-day)-1	1.6E-05
				Benzene	8.97E-02	mg/kg	--	mg/kg-day	5.5E-02	(mg/kg-day)-1	--
				Benz(a)anthracene	1.62E-01	mg/kg	2.5E-07	mg/kg-day	7.3E-01	(mg/kg-day)-1	1.9E-07

TABLE H-8.2.6.RME
EPA RAGS PART D TABLE 7a
CALCULATION OF RME CHEMICAL CANCER RISKS
FUTURE REDEVELOPED ADULT RESIDENT
SITE 13, ALAMEDA POINT, ALAMEDA, CALIFORNIA

Scenario Timeframe:	Future-Redeveloped
Receptor Population:	Resident
Receptor Age:	Adult

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations				
					Value	Units	Intake/Exposure Concentration		CSF/Unit Risk		Cancer Risk
							Value	Units	Value	Units	
				Benzo(a)pyrene	1.39E-01	mg/kg	1.7E-07	mg/kg-day	7.3E+00	(mg/kg-day)-1	1.2E-06
				Benzo(b)fluoranthene	1.31E-01	mg/kg	1.4E-07	mg/kg-day	7.3E-01	(mg/kg-day)-1	1.1E-07
				Benzo(k)fluoranthene	9.57E-02	mg/kg	1.1E-07	mg/kg-day	7.3E-02	(mg/kg-day)-1	7.7E-09
				Chromium	3.69E+01	mg/kg	--	mg/kg-day	--	--	--
				Chrysene	2.79E-01	mg/kg	3.9E-07	mg/kg-day	7.3E-03	(mg/kg-day)-1	2.9E-09
				Dibenz(a,h)anthracene	4.83E-02	mg/kg	8.8E-08	mg/kg-day	7.3E+00	(mg/kg-day)-1	6.4E-07
				Indeno(1,2,3-cd)pyrene	9.28E-02	mg/kg	8.1E-08	mg/kg-day	7.3E-01	(mg/kg-day)-1	5.9E-08
				Lead	5.47E+01	mg/kg	--	mg/kg-day	--	--	--
				Vanadium	2.98E+01	mg/kg	--	mg/kg-day	--	--	--
			Exp. Route Total								1.8E-05
		Exposure Point Total									1.8E-05
	Exposure Medium Total										1.8E-05
	Air	Outdoor Air	Inhalation (particulates)	2-Methylnaphthalene	1.14E+01	mg/kg	8.0E-10	mg/kg-day	--	--	--
				Arsenic	6.16E+00	mg/kg	4.4E-10	mg/kg-day	1.5E+01	(mg/kg-day)-1	6.5E-09
				Benzene	8.97E-02	mg/kg	6.4E-12	mg/kg-day	2.7E-02	(mg/kg-day)-1	1.7E-13
				Benz(a)anthracene	1.62E-01	mg/kg	1.1E-11	mg/kg-day	7.3E-01	(mg/kg-day)-1	8.4E-12
				Benzo(a)pyrene	1.39E-01	mg/kg	9.9E-12	mg/kg-day	7.3E+00	(mg/kg-day)-1	7.2E-11
				Benzo(b)fluoranthene	1.31E-01	mg/kg	9.3E-12	mg/kg-day	7.3E-01	(mg/kg-day)-1	6.8E-12
				Benzo(k)fluoranthene	9.57E-02	mg/kg	6.8E-12	mg/kg-day	7.3E-02	(mg/kg-day)-1	5.0E-13
				Chromium	3.69E+01	mg/kg	2.6E-09	mg/kg-day	--	--	--
				Chrysene	2.79E-01	mg/kg	2.0E-11	mg/kg-day	7.3E-03	(mg/kg-day)-1	1.4E-13
				Dibenz(a,h)anthracene	4.83E-02	mg/kg	3.4E-12	mg/kg-day	7.3E+00	(mg/kg-day)-1	2.5E-11
				Indeno(1,2,3-cd)pyrene	9.28E-02	mg/kg	6.6E-12	mg/kg-day	7.3E-01	(mg/kg-day)-1	4.8E-12
				Lead	5.47E+01	mg/kg	3.9E-09	mg/kg-day	--	--	--
				Vanadium	2.98E+01	mg/kg	2.1E-09	mg/kg-day	--	--	--
			Exp. Route Total								6.6E-09
			Inhalation (VOCs)	2-Methylnaphthalene	1.14E+01	mg/kg	2.5E-05	mg/kg-day	--	--	--
				Benzene	8.97E-02	mg/kg	3.1E-06	mg/kg-day	2.7E-02	(mg/kg-day)-1	8.4E-08
			Exp. Route Total								8.4E-08
		Exposure Point Total									9.1E-08
	Exposure Medium Total										9.1E-08
Medium Total											2.4E-05

TABLE H-8.2.6.RME
EPA RAGS PART D TABLE 7a
CALCULATION OF RME CHEMICAL CANCER RISKS
FUTURE REDEVELOPED ADULT RESIDENT
SITE 13, ALAMEDA POINT, ALAMEDA, CALIFORNIA

Scenario Timeframe:	Future-Redeveloped
Receptor Population:	Resident
Receptor Age:	Adult

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations				
					Value	Units	Intake/Exposure Concentration		CSF/Unit Risk		Cancer Risk
							Value	Units	Value	Units	
Groundwater	Groundwater	Tap	Ingestion	1,2-Dichloroethane	4.02E-04	mg/L	3.8E-06	mg/kg-day	9.1E-02	(mg/kg-day)-1	3.4E-07
				2-Methylnaphthalene	1.16E-02	mg/L	1.1E-04	mg/kg-day	--	--	--
				Arsenic	2.86E-02	mg/L	2.7E-04	mg/kg-day	1.5E+00	(mg/kg-day)-1	4.0E-04
				Benzene	4.61E-03	mg/L	4.3E-05	mg/kg-day	5.5E-02	(mg/kg-day)-1	2.4E-06
				Ethylbenzene	1.02E-03	mg/L	9.6E-06	mg/kg-day	3.9E-03	(mg/kg-day)-1	3.7E-08
				Manganese	7.80E+00	mg/L	7.3E-02	mg/kg-day	--	--	--
				Naphthalene	3.48E-02	mg/L	3.3E-04	mg/kg-day	--	--	--
				Pentachlorophenol	7.00E-03	mg/L	6.6E-05	mg/kg-day	1.2E-01	(mg/kg-day)-1	7.9E-06
				Thallium	2.62E-03	mg/L	2.5E-05	mg/kg-day	--	--	--
				Trichloroethene	9.06E-04	mg/L	8.5E-06	mg/kg-day	4.0E-01	(mg/kg-day)-1	3.4E-06
			Exp. Route Total								4.2E-04
			Dermal (bathing/ showering)	1,2-Dichloroethane	4.02E-04	mg/L	8.3E-08	mg/kg-day	9.1E-02	(mg/kg-day)-1	7.5E-09
				2-Methylnaphthalene	1.16E-02	mg/L	2.7E-05	mg/kg-day	--	--	--
				Arsenic	2.86E-02	mg/L	1.4E-06	mg/kg-day	1.5E+00	(mg/kg-day)-1	2.1E-06
				Benzene	4.61E-03	mg/L	4.7E-06	mg/kg-day	5.5E-02	(mg/kg-day)-1	2.6E-07
				Ethylbenzene	1.02E-03	mg/L	2.5E-06	mg/kg-day	3.9E-03	(mg/kg-day)-1	9.4E-09
				Manganese	7.80E+00	mg/L	3.8E-04	mg/kg-day	--	--	--
				Naphthalene	3.48E-02	mg/L	6.0E-05	mg/kg-day	--	--	--
				Pentachlorophenol	7.00E-03	mg/L	1.3E-04	mg/kg-day	1.2E-01	(mg/kg-day)-1	1.6E-05
				Thallium	2.62E-03	mg/L	1.3E-07	mg/kg-day	--	--	--
				Trichloroethene	9.06E-04	mg/L	5.3E-07	mg/kg-day	4.0E-01	(mg/kg-day)-1	2.1E-07
			Exp. Route Total								1.9E-05
			Inhalation (bathing/ showering)	1,2-Dichloroethane	4.02E-04	mg/L	4.5E-07	mg/kg-day	9.1E-02	(mg/kg-day)-1	4.1E-08
				2-Methylnaphthalene	1.16E-02	mg/L	1.3E-05	mg/kg-day	--	--	--
				Benzene	4.61E-03	mg/L	5.2E-06	mg/kg-day	2.7E-02	(mg/kg-day)-1	1.4E-07
				Ethylbenzene	1.02E-03	mg/L	1.2E-06	mg/kg-day	3.9E-03	(mg/kg-day)-1	4.4E-09
				Naphthalene	3.48E-02	mg/L	3.9E-05	mg/kg-day	--	--	--
				Trichloroethene	9.06E-04	mg/L	1.0E-06	mg/kg-day	4.0E-01	(mg/kg-day)-1	4.1E-07
			Exp. Route Total								6.0E-07
		Exposure Point Total									4.4E-04
	Exposure Medium Total										4.4E-04
Medium Total											4.4E-04
										Total of Receptor Risks Across All Media	4.6E-04

TABLE H-8.2.6.RME
EPA RAGS PART D TABLE 7a
CALCULATION OF RME CHEMICAL CANCER RISKS
FUTURE REDEVELOPED ADULT RESIDENT
SITE 13, ALAMEDA POINT, ALAMEDA, CALIFORNIA

Scenario Timeframe:	Future-Redeveloped
Receptor Population:	Resident
Receptor Age:	Adult

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations				
					Value	Units	Intake/Exposure Concentration		CSF/Unit Risk		Cancer Risk
							Value	Units	Value	Units	

Notes:

--	Not Applicable or Not Available
CSF	Cancer slope factor
EPC	Exposure point concentration
mg/kg	Milligram per kilogram
mg/kg-day	Milligram per kilogram per day
(mg/kg-day)-1	1/(Milligram per kilogram per day)
RME	Reasonable maximum exposure
VOC	Volatile organic compound

TABLE H-8.2.7.RME
EPA RAGS PART D TABLE 7b
CALCULATION OF RME CHEMICAL CANCER RISKS
FUTURE REDEVELOPED CHILD RESIDENT
SITE 13, ALAMEDA POINT, ALAMEDA, CALIFORNIA

Scenario Timeframe:	Future-Redeveloped
Receptor Population:	Resident
Receptor Age:	Child

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations				
					Value	Units	Intake/Exposure Concentration		CSF/Unit Risk		Cancer Risk
							Value	Units	Value	Units	
Soil (0-8)	Soil	Site Soil	Ingestion	2-Methylnaphthalene	1.14E+01	mg/kg	1.2E-05	mg/kg-day	--	--	--
				Arsenic	6.16E+00	mg/kg	6.8E-06	mg/kg-day	1.5E+00	(mg/kg-day)-1	1.0E-05
				Benzene	8.97E-02	mg/kg	9.8E-08	mg/kg-day	5.5E-02	(mg/kg-day)-1	5.4E-09
				Benz(a)anthracene	1.62E-01	mg/kg	1.8E-07	mg/kg-day	7.3E-01	(mg/kg-day)-1	1.3E-07
				Benzo(a)pyrene	1.39E-01	mg/kg	1.5E-07	mg/kg-day	7.3E+00	(mg/kg-day)-1	1.1E-06
				Benzo(b)fluoranthene	1.31E-01	mg/kg	1.4E-07	mg/kg-day	7.3E-01	(mg/kg-day)-1	1.0E-07
				Benzo(k)fluoranthene	9.57E-02	mg/kg	1.0E-07	mg/kg-day	7.3E-02	(mg/kg-day)-1	7.7E-09
				Chromium	3.69E+01	mg/kg	4.0E-05	mg/kg-day	--	--	--
				Chrysene	2.79E-01	mg/kg	3.1E-07	mg/kg-day	7.3E-03	(mg/kg-day)-1	2.2E-09
				Dibenz(a,h)anthracene	4.83E-02	mg/kg	5.3E-08	mg/kg-day	7.3E+00	(mg/kg-day)-1	3.9E-07
				Indeno(1,2,3-cd)pyrene	9.28E-02	mg/kg	1.0E-07	mg/kg-day	7.3E-01	(mg/kg-day)-1	7.4E-08
				Lead	5.47E+01	mg/kg	6.0E-05	mg/kg-day	--	--	--
				Vanadium	2.98E+01	mg/kg	3.3E-05	mg/kg-day	--	--	--
			Exp. Route Total								1.2E-05
			Dermal	2-Methylnaphthalene	1.14E+01	mg/kg	--	mg/kg-day	--	--	--
				Arsenic	6.16E+00	mg/kg	5.7E-07	mg/kg-day	1.5E+00	(mg/kg-day)-1	8.5E-07
				Benzene	8.97E-02	mg/kg	--	mg/kg-day	5.5E-02	(mg/kg-day)-1	--
				Benz(a)anthracene	1.62E-01	mg/kg	6.5E-08	mg/kg-day	7.3E-01	(mg/kg-day)-1	4.7E-08
				Benzo(a)pyrene	1.39E-01	mg/kg	5.5E-08	mg/kg-day	7.3E+00	(mg/kg-day)-1	4.0E-07
				Benzo(b)fluoranthene	1.31E-01	mg/kg	5.2E-08	mg/kg-day	7.3E-01	(mg/kg-day)-1	3.8E-08
				Benzo(k)fluoranthene	9.57E-02	mg/kg	3.8E-08	mg/kg-day	7.3E-02	(mg/kg-day)-1	2.8E-09
				Chromium	3.69E+01	mg/kg	1.1E-06	mg/kg-day	--	--	--
				Chrysene	2.79E-01	mg/kg	1.1E-07	mg/kg-day	7.3E-03	(mg/kg-day)-1	8.1E-10
				Dibenz(a,h)anthracene	4.83E-02	mg/kg	1.9E-08	mg/kg-day	7.3E+00	(mg/kg-day)-1	1.4E-07
				Indeno(1,2,3-cd)pyrene	9.28E-02	mg/kg	3.7E-08	mg/kg-day	7.3E-01	(mg/kg-day)-1	2.7E-08
				Lead	5.47E+01	mg/kg	1.7E-06	mg/kg-day	--	--	--
				Vanadium	2.98E+01	mg/kg	9.2E-07	mg/kg-day	--	--	--
			Exp. Route Total								1.3E-06
		Exposure Point Total									1.3E-05
	Exposure Medium Total										1.3E-05
	Homegrown Produce	Homegrown Produce	Ingestion	2-Methylnaphthalene	1.14E+01	mg/kg	--	mg/kg-day	--	--	--
				Arsenic	6.16E+00	mg/kg	2.7E-06	mg/kg-day	1.5E+00	(mg/kg-day)-1	4.0E-06
				Benzene	8.97E-02	mg/kg	--	mg/kg-day	5.5E-02	(mg/kg-day)-1	--
				Benz(a)anthracene	1.62E-01	mg/kg	6.4E-08	mg/kg-day	7.3E-01	(mg/kg-day)-1	4.6E-08

TABLE H-8.2.7.RME
EPA RAGS PART D TABLE 7b
CALCULATION OF RME CHEMICAL CANCER RISKS
FUTURE REDEVELOPED CHILD RESIDENT
SITE 13, ALAMEDA POINT, ALAMEDA, CALIFORNIA

Scenario Timeframe:	*Future-Redeveloped*
Receptor Population:	Resident
Receptor Age:	Child

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations				
					Value	Units	Intake/Exposure Concentration		CSF/Unit Risk		Cancer Risk
							Value	Units	Value	Units	
				Benzo(a)pyrene	1.39E-01	mg/kg	4.2E-08	mg/kg-day	7.3E+00	(mg/kg-day)-1	3.0E-07
				Benzo(b)fluoranthene	1.31E-01	mg/kg	3.6E-08	mg/kg-day	7.3E-01	(mg/kg-day)-1	2.6E-08
				Benzo(k)fluoranthene	9.57E-02	mg/kg	2.6E-08	mg/kg-day	7.3E-02	(mg/kg-day)-1	1.9E-09
				Chromium	3.69E+01	mg/kg	--	mg/kg-day	--	--	--
				Chrysene	2.79E-01	mg/kg	9.8E-08	mg/kg-day	7.3E-03	(mg/kg-day)-1	7.2E-10
				Dibenz(a,h)anthracene	4.83E-02	mg/kg	2.2E-08	mg/kg-day	7.3E+00	(mg/kg-day)-1	1.6E-07
				Indeno(1,2,3-cd)pyrene	9.28E-02	mg/kg	2.0E-08	mg/kg-day	7.3E-01	(mg/kg-day)-1	1.5E-08
				Lead	5.47E+01	mg/kg	--	mg/kg-day	--	--	--
				Vanadium	2.98E+01	mg/kg	--	mg/kg-day	--	--	--
			Exp. Route Total								4.6E-06
		Exposure Point Total									4.6E-06
	Exposure Medium Total										4.6E-06
	Air	Outdoor Air	Inhalation (particulates)	2-Methylnaphthalene	1.14E+01	mg/kg	4.7E-10	mg/kg-day	--	--	--
				Arsenic	6.16E+00	mg/kg	2.6E-10	mg/kg-day	1.5E+01	(mg/kg-day)-1	3.9E-09
				Benzene	8.97E-02	mg/kg	3.8E-12	mg/kg-day	2.7E-02	(mg/kg-day)-1	1.0E-13
				Benz(a)anthracene	1.62E-01	mg/kg	6.8E-12	mg/kg-day	7.3E-01	(mg/kg-day)-1	4.9E-12
				Benzo(a)pyrene	1.39E-01	mg/kg	5.8E-12	mg/kg-day	7.3E+00	(mg/kg-day)-1	4.2E-11
				Benzo(b)fluoranthene	1.31E-01	mg/kg	5.5E-12	mg/kg-day	7.3E-01	(mg/kg-day)-1	4.0E-12
				Benzo(k)fluoranthene	9.57E-02	mg/kg	4.0E-12	mg/kg-day	7.3E-02	(mg/kg-day)-1	2.9E-13
				Chromium	3.69E+01	mg/kg	1.5E-09	mg/kg-day	--	--	--
				Chrysene	2.79E-01	mg/kg	1.2E-11	mg/kg-day	7.3E-03	(mg/kg-day)-1	8.5E-14
				Dibenz(a,h)anthracene	4.83E-02	mg/kg	2.0E-12	mg/kg-day	7.3E+00	(mg/kg-day)-1	1.5E-11
				Indeno(1,2,3-cd)pyrene	9.28E-02	mg/kg	3.9E-12	mg/kg-day	7.3E-01	(mg/kg-day)-1	2.8E-12
				Lead	5.47E+01	mg/kg	2.3E-09	mg/kg-day	--	--	--
				Vanadium	2.98E+01	mg/kg	1.2E-09	mg/kg-day	--	--	--
			Exp. Route Total								3.9E-09
			Inhalation (VOCs)	2-Methylnaphthalene	1.14E+01	mg/kg	1.5E-05	mg/kg-day	--	--	--
				Benzene	8.97E-02	mg/kg	1.8E-06	mg/kg-day	2.7E-02	(mg/kg-day)-1	5.0E-08
			Exp. Route Total								5.0E-08
		Exposure Point Total									5.3E-08
	Exposure Medium Total										5.3E-08
Medium Total											1.8E-05

TABLE H-8.2.7.RME
EPA RAGS PART D TABLE 7b
CALCULATION OF RME CHEMICAL CANCER RISKS
FUTURE REDEVELOPED CHILD RESIDENT
SITE 13, ALAMEDA POINT, ALAMEDA, CALIFORNIA

Scenario Timeframe:	Future-Redeveloped
Receptor Population:	Resident
Receptor Age:	Child

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations				
					Value	Units	Intake/Exposure Concentration		CSF/Unit Risk		Cancer Risk
							Value	Units	Value	Units	
Groundwater	Groundwater	Tap	Ingestion	1,2-Dichloroethane	4.02E-04	mg/L	2.2E-06	mg/kg-day	9.1E-02	(mg/kg-day)-1	2.0E-07
				2-Methylnaphthalene	1.16E-02	mg/L	6.4E-05	mg/kg-day	--	--	--
				Arsenic	2.86E-02	mg/L	1.6E-04	mg/kg-day	1.5E+00	(mg/kg-day)-1	2.4E-04
				Benzene	4.61E-03	mg/L	2.5E-05	mg/kg-day	5.5E-02	(mg/kg-day)-1	1.4E-06
				Ethylbenzene	1.02E-03	mg/L	5.6E-06	mg/kg-day	3.9E-03	(mg/kg-day)-1	2.2E-08
				Manganese	7.80E+00	mg/L	4.3E-02	mg/kg-day	--	--	--
				Naphthalene	3.48E-02	mg/L	1.9E-04	mg/kg-day	--	--	--
				Pentachlorophenol	7.00E-03	mg/L	3.8E-05	mg/kg-day	1.2E-01	(mg/kg-day)-1	4.6E-06
				Thallium	2.62E-03	mg/L	1.4E-05	mg/kg-day	--	--	--
				Trichloroethene	9.06E-04	mg/L	5.0E-06	mg/kg-day	4.0E-01	(mg/kg-day)-1	2.0E-06
			Exp. Route Total								2.4E-04
			Dermal (bathing/ showering)	1,2-Dichloroethane	4.02E-04	mg/L	6.1E-08	mg/kg-day	9.1E-02	(mg/kg-day)-1	5.6E-09
				2-Methylnaphthalene	1.16E-02	mg/L	2.0E-05	mg/kg-day	--	--	--
				Arsenic	2.86E-02	mg/L	1.0E-06	mg/kg-day	1.5E+00	(mg/kg-day)-1	1.6E-06
				Benzene	4.61E-03	mg/L	3.5E-06	mg/kg-day	5.5E-02	(mg/kg-day)-1	1.9E-07
				Ethylbenzene	1.02E-03	mg/L	1.8E-06	mg/kg-day	3.9E-03	(mg/kg-day)-1	7.0E-09
				Manganese	7.80E+00	mg/L	2.8E-04	mg/kg-day	--	--	--
				Naphthalene	3.48E-02	mg/L	5.9E-05	mg/kg-day	--	--	--
				Pentachlorophenol	7.00E-03	mg/L	9.9E-05	mg/kg-day	1.2E-01	(mg/kg-day)-1	1.2E-05
				Thallium	2.62E-03	mg/L	9.5E-08	mg/kg-day	--	--	--
				Trichloroethene	9.06E-04	mg/L	3.9E-07	mg/kg-day	4.0E-01	(mg/kg-day)-1	1.6E-07
			Exp. Route Total								1.4E-05
			Inhalation (bathing/ showering)	1,2-Dichloroethane	4.02E-04	mg/L	4.6E-07	mg/kg-day	9.1E-02	(mg/kg-day)-1	4.2E-08
				2-Methylnaphthalene	1.16E-02	mg/L	1.3E-05	mg/kg-day	--	--	--
				Benzene	4.61E-03	mg/L	5.3E-06	mg/kg-day	2.7E-02	(mg/kg-day)-1	1.4E-07
				Ethylbenzene	1.02E-03	mg/L	1.2E-06	mg/kg-day	3.9E-03	(mg/kg-day)-1	4.5E-09
				Naphthalene	3.48E-02	mg/L	4.0E-05	mg/kg-day	--	--	--
				Trichloroethene	9.06E-04	mg/L	1.0E-06	mg/kg-day	4.0E-01	(mg/kg-day)-1	4.2E-07
			Exp. Route Total								6.1E-07
		Exposure Point Total									2.6E-04
	Exposure Medium Total										2.6E-04
Medium Total											2.6E-04
										Total of Receptor Risks Across All Media	2.8E-04

TABLE H-8.2.7.RME
EPA RAGS PART D TABLE 7b
CALCULATION OF RME CHEMICAL CANCER RISKS
FUTURE REDEVELOPED CHILD RESIDENT
SITE 13, ALAMEDA POINT, ALAMEDA, CALIFORNIA

Scenario Timeframe:	Future-Redeveloped
Receptor Population:	Resident
Receptor Age:	Child

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations				
					Value	Units	Intake/Exposure Concentration		CSF/Unit Risk		Cancer Risk
							Value	Units	Value	Units	

Notes:

–	Not Applicable or Not Available
CSF	Cancer slope factor
EPC	Exposure point concentration
mg/kg	Milligram per kilogram
mg/kg-day	Milligram per kilogram per day
(mg/kg-day)-1	1/(Milligram per kilogram per day)
RME	Reasonable maximum exposure
VOC	Volatile organic compound

HHRA RISK TABLES

Reasonable Maximum Exposure
Site 19
Alameda Point, Alameda, California

TABLE H-8.3.1.RME
EPA RAGS PART D TABLE 7a
CALCULATION OF RME CHEMICAL CANCER RISKS
CURRENT INDUSTRIAL WORKER
SITE 19, ALAMEDA POINT, ALAMEDA, CALIFORNIA

Scenario Timeframe:	Current/Future
Receptor Population:	Industrial Worker
Receptor Age:	Adult

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations				
					Value	Units	Intake/Exposure Concentration		CSF/Unit Risk		Cancer Risk
							Value	Units	Value	Units	
Soil (0-2)	Soil	Site Soil	Ingestion	Arsenic	8.89E+00	mg/kg	3.1E-06	mg/kg-day	1.5E+00	(mg/kg-day)-1	4.7E-06
				Benzo(a)pyrene	8.04E-02	mg/kg	2.8E-08	mg/kg-day	7.3E+00	(mg/kg-day)-1	2.1E-07
			Exp. Route Total								4.9E-06
			Dermal	Arsenic	8.89E+00	mg/kg	6.2E-07	mg/kg-day	1.5E+00	(mg/kg-day)-1	9.2E-07
				Benzo(a)pyrene	8.04E-02	mg/kg	2.4E-08	mg/kg-day	7.3E+00	(mg/kg-day)-1	1.8E-07
			Exp. Route Total								1.1E-06
		Exposure Point Total									6.0E-06
	Exposure Medium Total										6.0E-06
	Air	Outdoor Air	Inhalation (particulates)	Arsenic	8.89E+00	mg/kg	4.7E-10	mg/kg-day	1.5E+01	(mg/kg-day)-1	7.1E-09
				Benzo(a)pyrene	8.04E-02	mg/kg	4.3E-12	mg/kg-day	7.3E+00	(mg/kg-day)-1	3.1E-11
			Exp. Route Total								7.1E-09
		Exposure Point Total									7.1E-09
	Exposure Medium Total										7.1E-09
Medium Total											6.0E-06
										Total of Receptor Risks Across All Media	6.0E-06

Notes:

CSF	Cancer slope factor
EPC	Exposure point concentration
mg/kg	Milligram per kilogram
mg/kg-day	Milligram per kilogram per day
(mg/kg-day)-1	*1/(Milligram per kilogram per day)*
RME	Reasonable maximum exposure

TABLE H-8.3.2.RME
EPA RAGS PART D TABLE 7a
CALCULATION OF RME CHEMICAL CANCER RISKS
CURRENT CONSTRUCTION WORKER
SITE 19, ALAMEDA POINT, ALAMEDA, CALIFORNIA

Scenario Timeframe:	Current/Future
Receptor Population:	Construction Worker
Receptor Age:	Adult

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations				
					Value	Units	Intake/Exposure Concentration		CSF/Unit Risk		Cancer Risk
							Value	Units	Value	Units	
Soil (0-2)	Soil	Site Soil	Ingestion	Arsenic	8.89E+00	mg/kg	4.1E-07	mg/kg-day	1.5E+00	(mg/kg-day)-1	6.2E-07
				Benzo(a)pyrene	8.04E-02	mg/kg	3.7E-09	mg/kg-day	7.3E+00	(mg/kg-day)-1	2.7E-08
			Exp. Route Total								6.4E-07
			Dermal	Arsenic	8.89E+00	mg/kg	3.7E-08	mg/kg-day	1.5E+00	(mg/kg-day)-1	5.5E-08
				Benzo(a)pyrene	8.04E-02	mg/kg	1.4E-09	mg/kg-day	7.3E+00	(mg/kg-day)-1	1.1E-08
			Exp. Route Total								6.6E-08
		Exposure Point Total									7.1E-07
	Exposure Medium Total										7.1E-07
	Air	Outdoor Air	Inhalation (particulates)	Arsenic	8.89E+00	mg/kg	1.9E-11	mg/kg-day	1.5E+01	(mg/kg-day)-1	2.8E-10
				Benzo(a)pyrene	8.04E-02	mg/kg	1.7E-13	mg/kg-day	7.3E+00	(mg/kg-day)-1	1.2E-12
			Exp. Route Total								2.8E-10
		Exposure Point Total									2.8E-10
	Exposure Medium Total										2.8E-10
Medium Total											7.1E-07
										Total of Receptor Risks Across All Media	7.1E-07

Notes:

CSF	Cancer slope factor
EPC	Exposure point concentration
mg/kg	Milligram per kilogram
mg/kg-day	Milligram per kilogram per day
(mg/kg-day)-1	1/(Milligram per kilogram per day)
RME	Reasonable maximum exposure

TABLE H-8.3.3.RME
EPA RAGS PART D TABLE 7a
CALCULATION OF RME CHEMICAL CANCER RISKS
CURRENT ADULT RESIDENT
SITE 19, ALAMEDA POINT, ALAMEDA, CALIFORNIA

Scenario Timeframe:	Current/Future
Receptor Population:	Resident
Receptor Age:	Adult

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations				
					Value	Units	Intake/Exposure Concentration		CSF/Unit Risk		Cancer Risk
							Value	Units	Value	Units	
Soil (0-2)	Soil	Site Soil	Ingestion	Arsenic	8.89E+00	mg/kg	4.2E-06	mg/kg-day	1.5E+00	(mg/kg-day)-1	6.3E-06
				Benzo(a)pyrene	8.04E-02	mg/kg	3.8E-08	mg/kg-day	7.3E+00	(mg/kg-day)-1	2.8E-07
			Exp. Route Total								6.5E-06
			Dermal	Arsenic	8.89E+00	mg/kg	5.0E-07	mg/kg-day	1.5E+00	(mg/kg-day)-1	7.5E-07
				Benzo(a)pyrene	8.04E-02	mg/kg	2.0E-08	mg/kg-day	7.3E+00	(mg/kg-day)-1	1.4E-07
			Exp. Route Total								8.9E-07
		Exposure Point Total									7.4E-06
	Exposure Medium Total										7.4E-06
	Homegrown Produce	Homegrown Produce	Ingestion	Arsenic	8.89E+00	mg/kg	1.5E-05	mg/kg-day	1.5E+00	(mg/kg-day)-1	2.3E-05
				Benzo(a)pyrene	8.04E-02	mg/kg	9.6E-08	mg/kg-day	7.3E+00	(mg/kg-day)-1	7.0E-07
			Exp. Route Total								2.4E-05
		Exposure Point Total									2.4E-05
	Exposure Medium Total										2.4E-05
	Air	Outdoor Air	Inhalation (particulates)	Arsenic	8.89E+00	mg/kg	6.3E-10	mg/kg-day	1.5E+01	(mg/kg-day)-1	9.5E-09
				Benzo(a)pyrene	8.04E-02	mg/kg	5.7E-12	mg/kg-day	7.3E+00	(mg/kg-day)-1	4.2E-11
			Exp. Route Total								9.5E-09
		Exposure Point Total									9.5E-09
	Exposure Medium Total										9.5E-09
Medium Total											3.1E-05
Groundwater	Groundwater	Tap	Ingestion	1,1-Dichloroethane	2.49E-02	mg/L	2.3E-04	mg/kg-day	–	–	–
				1,2-Dichloroethane	4.45E-04	mg/L	4.2E-06	mg/kg-day	9.1E-02	(mg/kg-day)-1	3.8E-07
				1,2-Dichloropropane	1.11E-03	mg/L	1.0E-05	mg/kg-day	6.8E-02	(mg/kg-day)-1	7.1E-07
				Arsenic	9.64E-03	mg/L	9.1E-05	mg/kg-day	1.5E+00	(mg/kg-day)-1	1.4E-04
				Benzene	6.04E-04	mg/L	5.7E-06	mg/kg-day	5.5E-02	(mg/kg-day)-1	3.1E-07
				Manganese	5.17E+00	mg/L	4.9E-02	mg/kg-day	–	–	–
				Tetrachloroethene	9.35E-03	mg/L	8.8E-05	mg/kg-day	5.2E-02	(mg/kg-day)-1	4.6E-06
				Trichloroethene	2.34E-03	mg/L	2.2E-05	mg/kg-day	4.0E-01	(mg/kg-day)-1	8.8E-06
			Exp. Route Total								1.5E-04
			Dermal (bathing/ showering)	1,1-Dichloroethane	2.49E-02	mg/L	8.2E-06	mg/kg-day	–	–	–
				1,2-Dichloroethane	4.45E-04	mg/L	9.2E-08	mg/kg-day	9.1E-02	(mg/kg-day)-1	8.3E-09
				1,2-Dichloropropane	1.11E-03	mg/L	4.2E-07	mg/kg-day	6.8E-02	(mg/kg-day)-1	2.9E-08

TABLE H-8.3.3.RME
EPA RAGS PART D TABLE 7a
CALCULATION OF RME CHEMICAL CANCER RISKS
CURRENT ADULT RESIDENT
SITE 19, ALAMEDA POINT, ALAMEDA, CALIFORNIA

Scenario Timeframe:	Current/Future
Receptor Population:	Resident
Receptor Age:	Adult

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations				
					Value	Units	Intake/Exposure Concentration		CSF/Unit Risk		Cancer Risk
							Value	Units	Value	Units	
				Arsenic	9.64E-03	mg/L	4.7E-07	mg/kg-day	1.5E+00	(mg/kg-day)-1	7.1E-07
				Benzene	6.04E-04	mg/L	6.2E-07	mg/kg-day	5.5E-02	(mg/kg-day)-1	3.4E-08
				Manganese	5.17E+00	mg/L	2.5E-04	mg/kg-day	--	--	--
				Tetrachloroethene	9.35E-03	mg/L	1.5E-05	mg/kg-day	5.2E-02	(mg/kg-day)-1	7.9E-07
				Trichloroethene	2.34E-03	mg/L	1.4E-06	mg/kg-day	4.0E-01	(mg/kg-day)-1	5.5E-07
			Exp. Route Total								2.1E-06
			Inhalation (bathing/ showering)	1,1-Dichloroethane	2.49E-02	mg/L	2.8E-05	mg/kg-day	--	--	--
				1,2-Dichloroethane	4.45E-04	mg/L	5.0E-07	mg/kg-day	9.1E-02	(mg/kg-day)-1	4.6E-08
				1,2-Dichloropropane	1.11E-03	mg/L	1.3E-06	mg/kg-day	6.8E-02	(mg/kg-day)-1	8.5E-08
				Benzene	6.04E-04	mg/L	6.8E-07	mg/kg-day	2.7E-02	(mg/kg-day)-1	1.8E-08
				Tetrachloroethene	9.35E-03	mg/L	1.1E-05	mg/kg-day	1.0E-02	(mg/kg-day)-1	1.1E-07
				Trichloroethene	2.34E-03	mg/L	2.6E-06	mg/kg-day	4.0E-01	(mg/kg-day)-1	1.1E-06
			Exp. Route Total								1.3E-06
		Exposure Point Total									1.5E-04
	Exposure Medium Total										1.5E-04
Medium Total											1.5E-04
										Total of Receptor Risks Across All Media	1.9E-04

Notes:

CSF	Cancer slope factor
EPC	Exposure point concentration
mg/kg	Milligram per kilogram
mg/kg-day	*Milligram per kilogram per day*
(mg/kg-day)-1	1/(Milligram per kilogram per day)
RME	Reasonable maximum exposure
--	Not Applicable or Not Available

TABLE H-8.3.4.RME
EPA RAGS PART D TABLE 7a
CALCULATION OF RME CHEMICAL CANCER RISKS
CURRENT CHILD RESIDENT
SITE 19, ALAMEDA POINT, ALAMEDA, CALIFORNIA

Scenario Timeframe:	Current/Future
Receptor Population:	Resident
Receptor Age:	Child

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations				
					Value	Units	Intake/Exposure Concentration		CSF/Unit Risk		Cancer Risk
							Value	Units	Value	Units	
Soil (0-2)	Soil	Site Soil	Ingestion	Arsenic	8.89E+00	mg/kg	9.7E-06	mg/kg-day	1.5E+00	(mg/kg-day)-1	1.5E-05
				Benzo(a)pyrene	8.04E-02	mg/kg	8.8E-08	mg/kg-day	7.3E+00	(mg/kg-day)-1	6.4E-07
			Exp. Route Total								1.5E-05
			Dermal	Arsenic	8.89E+00	mg/kg	8.2E-07	mg/kg-day	1.5E+00	(mg/kg-day)-1	1.2E-06
				Benzo(a)pyrene	8.04E-02	mg/kg	3.2E-08	mg/kg-day	7.3E+00	(mg/kg-day)-1	2.3E-07
			Exp. Route Total								1.5E-06
		Exposure Point Total									1.7E-05
	Exposure Medium Total										1.7E-05
	Homegrown Produce	Homegrown Produce	Ingestion	Arsenic	8.89E+00	mg/kg	3.9E-06	mg/kg-day	1.5E+00	(mg/kg-day)-1	5.8E-06
				Benzo(a)pyrene	8.04E-02	mg/kg	2.4E-08	mg/kg-day	7.3E+00	(mg/kg-day)-1	1.8E-07
			Exp. Route Total								6.0E-06
		Exposure Point Total									6.0E-06
	Exposure Medium Total										6.0E-06
	Air	Outdoor Air	Inhalation (particulates)	Arsenic	8.89E+00	mg/kg	3.7E-10	mg/kg-day	1.5E+01	(mg/kg-day)-1	5.6E-09
				Benzo(a)pyrene	8.04E-02	mg/kg	3.4E-12	mg/kg-day	7.3E+00	(mg/kg-day)-1	2.5E-11
			Exp. Route Total								5.6E-09
		Exposure Point Total									5.6E-09
	Exposure Medium Total										5.6E-09
Medium Total											2.3E-05
Groundwater	Groundwater	Tap	Ingestion	1,1-Dichloroethane	2.49E-02	mg/L	1.4E-04	mg/kg-day	--	--	--
				1,2-Dichloroethane	4.45E-04	mg/L	2.4E-06	mg/kg-day	9.1E-02	(mg/kg-day)-1	2.2E-07
				1,2-Dichloropropane	1.11E-03	mg/L	6.1E-06	mg/kg-day	6.8E-02	(mg/kg-day)-1	4.1E-07
				Arsenic	9.64E-03	mg/L	5.3E-05	mg/kg-day	1.5E+00	(mg/kg-day)-1	7.9E-05
				Benzene	6.04E-04	mg/L	3.3E-06	mg/kg-day	5.5E-02	(mg/kg-day)-1	1.8E-07
				Manganese	5.17E+00	mg/L	2.8E-02	mg/kg-day	--	--	--
				Tetrachloroethene	9.35E-03	mg/L	5.1E-05	mg/kg-day	5.2E-02	(mg/kg-day)-1	2.7E-06
				Trichloroethene	2.34E-03	mg/L	1.3E-05	mg/kg-day	4.0E-01	(mg/kg-day)-1	5.1E-06
			Exp. Route Total								8.8E-05
			Dermal (bathing/ showering)	1,1-Dichloroethane	2.49E-02	mg/L	6.0E-06	mg/kg-day	--	--	--
				1,2-Dichloroethane	4.45E-04	mg/L	6.8E-08	mg/kg-day	9.1E-02	(mg/kg-day)-1	6.2E-09
				1,2-Dichloropropane	1.11E-03	mg/L	3.1E-07	mg/kg-day	6.8E-02	(mg/kg-day)-1	2.1E-08

TABLE H-8.3.4.RME
EPA RAGS PART D TABLE 7a
CALCULATION OF RME CHEMICAL CANCER RISKS
CURRENT CHILD RESIDENT
SITE 19, ALAMEDA POINT, ALAMEDA, CALIFORNIA

Scenario Timeframe:	Current/Future
Receptor Population:	Resident
Receptor Age:	Child

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations				
					Value	Units	Intake/Exposure Concentration		CSF/Unit Risk		Cancer Risk
							Value	Units	Value	Units	
				Arsenic	9.64E-03	mg/L	3.5E-07	mg/kg-day	1.5E+00	(mg/kg-day)-1	5.2E-07
				Benzene	6.04E-04	mg/L	4.6E-07	mg/kg-day	5.5E-02	(mg/kg-day)-1	2.5E-08
				Manganese	5.17E+00	mg/L	1.9E-04	mg/kg-day	--	--	--
				Tetrachloroethene	9.35E-03	mg/L	1.1E-05	mg/kg-day	5.2E-02	(mg/kg-day)-1	5.8E-07
				Trichloroethene	2.34E-03	mg/L	1.0E-06	mg/kg-day	4.0E-01	(mg/kg-day)-1	4.1E-07
			Exp. Route Total								1.6E-06
			Inhalation (bathing/ showering)	1,1-Dichloroethane	2.49E-02	mg/L	2.9E-05	mg/kg-day	--	--	--
				1,2-Dichloroethane	4.45E-04	mg/L	5.1E-07	mg/kg-day	9.1E-02	(mg/kg-day)-1	4.7E-08
				1,2-Dichloropropane	1.11E-03	mg/L	1.3E-06	mg/kg-day	6.8E-02	(mg/kg-day)-1	8.7E-08
				Benzene	6.04E-04	mg/L	7.0E-07	mg/kg-day	2.7E-02	(mg/kg-day)-1	1.9E-08
				Tetrachloroethene	9.35E-03	mg/L	1.1E-05	mg/kg-day	1.0E-02	(mg/kg-day)-1	1.1E-07
				Trichloroethene	2.34E-03	mg/L	2.7E-06	mg/kg-day	4.0E-01	(mg/kg-day)-1	1.1E-06
			Exp. Route Total								1.3E-06
		Exposure Point Total									9.1E-05
	Exposure Medium Total										9.1E-05
Medium Total											9.1E-05
										Total of Receptor Risks Across All Media	1.1E-04

Notes:

CSF	Cancer slope factor
EPC	Exposure point concentration
mg/kg	Milligram per kilogram
mg/kg-day	Milligram per kilogram per day
(mg/kg-day)-1	1/(Milligram per kilogram per day)
RME	Reasonable maximum exposure
--	Not Applicable or Not Available

TABLE H-8.3.5.RME
EPA RAGS PART D TABLE 7a
CALCULATION OF RME CHEMICAL CANCER RISKS
FUTURE DEVELOPED CONSTRUCTION WORKER
SITE 19, ALAMEDA POINT, ALAMEDA, CALIFORNIA

Scenario Timeframe:	Future-Developed
Receptor Population:	Construction Worker
Receptor Age:	Adult

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations				
					Value	Units	Intake/Exposure Concentration		CSF/Unit Risk		Cancer Risk
							Value	Units	Value	Units	
Soil (0-8)	Soil	Site Soil	Ingestion	Arsenic	7.75E+00	mg/kg	3.6E-07	mg/kg-day	1.5E+00	(mg/kg-day)-1	5.4E-07
				Benzo(a)pyrene	5.51E-02	mg/kg	2.5E-09	mg/kg-day	7.3E+00	(mg/kg-day)-1	1.9E-08
				Lead	5.50E+01	mg/kg	2.5E-06	mg/kg-day	--	--	--
			Exp. Route Total								5.5E-07
			Dermal	Arsenic	7.75E+00	mg/kg	3.2E-08	mg/kg-day	1.5E+00	(mg/kg-day)-1	4.8E-08
				Benzo(a)pyrene	5.51E-02	mg/kg	9.9E-10	mg/kg-day	7.3E+00	(mg/kg-day)-1	7.2E-09
				Lead	5.50E+01	mg/kg	7.6E-08	mg/kg-day	--	--	--
			Exp. Route Total								5.5E-08
		Exposure Point Total									6.1E-07
	Exposure Medium Total										6.1E-07
	Air	Outdoor Air	Inhalation (particulates)	Arsenic	7.75E+00	mg/kg	1.6E-11	mg/kg-day	1.5E+01	(mg/kg-day)-1	2.5E-10
				Benzo(a)pyrene	5.51E-02	mg/kg	1.2E-13	mg/kg-day	7.3E+00	(mg/kg-day)-1	8.5E-13
				Lead	5.50E+01	mg/kg	1.2E-10	mg/kg-day	--	--	--
			Exp. Route Total								2.5E-10
		Exposure Point Total									2.5E-10
	Exposure Medium Total										2.5E-10
Medium Total											6.1E-07
										Total of Receptor Risks Across All Media	6.1E-07

Notes:

CSF	Cancer slope factor
EPC	Exposure point concentration
mg/kg	Milligram per kilogram
mg/kg-day	Milligram per kilogram per day
(mg/kg-day)-1	1/(Milligram per kilogram per day)
RME	*Reasonable maximum exposure*
--	Not Applicable or Not Available

TABLE H-8.3.6.RME
EPA RAGS PART D TABLE 7a
CALCULATION OF RME CHEMICAL CANCER RISKS
FUTURE REDEVELOPED ADULT RESIDENT
SITE 19, ALAMEDA POINT, ALAMEDA, CALIFORNIA

Scenario Timeframe:	Future-Redeveloped
Receptor Population:	Resident
Receptor Age:	Adult

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations				
					Value	Units	Intake/Exposure Concentration		CSF/Unit Risk		Cancer Risk
							Value	Units	Value	Units	
Soil (0-8)	Soil	Site Soil	Ingestion	Arsenic	7.75E+00	mg/kg	3.6E-06	mg/kg-day	1.5E+00	(mg/kg-day)-1	5.5E-06
				Benzo(a)pyrene	5.51E-02	mg/kg	2.6E-08	mg/kg-day	7.3E+00	(mg/kg-day)-1	1.9E-07
				Lead	5.50E+01	mg/kg	2.6E-05	mg/kg-day	--	--	--
			Exp. Route Total								5.6E-06
			Dermal	Arsenic	7.75E+00	mg/kg	4.4E-07	mg/kg-day	1.5E+00	(mg/kg-day)-1	6.5E-07
				Benzo(a)pyrene	5.51E-02	mg/kg	1.3E-08	mg/kg-day	7.3E+00	(mg/kg-day)-1	9.8E-08
				Lead	5.50E+01	mg/kg	1.0E-06	mg/kg-day	--	--	--
			Exp. Route Total								7.5E-07
		Exposure Point Total									6.4E-06
	Exposure Medium Total										6.4E-06
	Homegrown Produce	Homegrown Produce	Ingestion	Arsenic	7.75E+00	mg/kg	1.3E-05	mg/kg-day	1.5E+00	(mg/kg-day)-1	2.0E-05
				Benzo(a)pyrene	5.51E-02	mg/kg	6.6E-08	mg/kg-day	7.3E+00	(mg/kg-day)-1	4.8E-07
				Lead	5.50E+01	mg/kg	--	mg/kg-day	--	--	--
			Exp. Route Total								2.1E-05
		Exposure Point Total									2.1E-05
	Exposure Medium Total										2.1E-05
	Air	Outdoor Air	Inhalation (particulates)	Arsenic	7.75E+00	mg/kg	5.5E-10	mg/kg-day	1.5E+01	(mg/kg-day)-1	8.2E-09
				Benzo(a)pyrene	5.51E-02	mg/kg	3.9E-12	mg/kg-day	7.3E+00	(mg/kg-day)-1	2.9E-11
				Lead	5.50E+01	mg/kg	3.9E-09	mg/kg-day	--	--	--
			Exp. Route Total								8.3E-09
		Exposure Point Total									8.3E-09
	Exposure Medium Total										8.3E-09
Medium Total											2.7E-05
Groundwater	Groundwater	Tap	Ingestion	1,1-Dichloroethane	2.49E-02	mg/L	2.3E-04	mg/kg-day	--	--	--
				1,2-Dichloroethane	4.45E-04	mg/L	4.2E-06	mg/kg-day	9.1E-02	(mg/kg-day)-1	3.8E-07
				1,2-Dichloropropane	1.11E-03	mg/L	1.0E-05	mg/kg-day	6.8E-02	(mg/kg-day)-1	7.1E-07
				Arsenic	9.64E-03	mg/L	9.1E-05	mg/kg-day	1.5E+00	(mg/kg-day)-1	1.4E-04
				Benzene	6.04E-04	mg/L	5.7E-06	mg/kg-day	5.5E-02	(mg/kg-day)-1	3.1E-07
				Manganese	5.17E+00	mg/L	4.9E-02	mg/kg-day	--	--	--
				Tetrachloroethene	9.35E-03	mg/L	8.8E-05	mg/kg-day	5.2E-02	(mg/kg-day)-1	4.6E-06
				Trichloroethene	2.34E-03	mg/L	2.2E-05	mg/kg-day	4.0E-01	(mg/kg-day)-1	8.8E-06
			Exp. Route Total								1.5E-04

TABLE H-8.3.6.RME
EPA RAGS PART D TABLE 7a
CALCULATION OF RME CHEMICAL CANCER RISKS
FUTURE REDEVELOPED ADULT RESIDENT
SITE 19, ALAMEDA POINT, ALAMEDA, CALIFORNIA

Scenario Timeframe:	Future-Redeveloped
Receptor Population:	Resident
Receptor Age:	Adult

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations				
					Value	Units	Intake/Exposure Concentration		CSF/Unit Risk		Cancer Risk
							Value	Units	Value	Units	
			Dermal (bathing/ showering)	1,1-Dichloroethane	2.49E-02	mg/L	8.2E-06	mg/kg-day	--	--	--
				1,2-Dichloroethane	4.45E-04	mg/L	9.2E-08	mg/kg-day	9.1E-02	(mg/kg-day)-1	8.3E-09
				1,2-Dichloropropane	1.11E-03	mg/L	4.2E-07	mg/kg-day	6.8E-02	(mg/kg-day)-1	2.9E-08
				Arsenic	9.64E-03	mg/L	4.7E-07	mg/kg-day	1.5E+00	(mg/kg-day)-1	7.1E-07
				Benzene	6.04E-04	mg/L	6.2E-07	mg/kg-day	5.5E-02	(mg/kg-day)-1	3.4E-08
				Manganese	5.17E+00	mg/L	2.5E-04	mg/kg-day	--	--	--
				Tetrachloroethene	9.35E-03	mg/L	1.5E-05	mg/kg-day	5.2E-02	(mg/kg-day)-1	7.9E-07
				Trichloroethene	2.34E-03	mg/L	1.4E-06	mg/kg-day	4.0E-01	(mg/kg-day)-1	5.5E-07
			Exp. Route Total								2.1E-06
			Inhalation (bathing/ showering)	1,1-Dichloroethane	2.49E-02	mg/L	2.8E-05	mg/kg-day	--	--	--
				1,2-Dichloroethane	4.45E-04	mg/L	5.0E-07	mg/kg-day	9.1E-02	(mg/kg-day)-1	4.6E-08
				1,2-Dichloropropane	1.11E-03	mg/L	1.3E-06	mg/kg-day	6.8E-02	(mg/kg-day)-1	8.5E-08
				Benzene	6.04E-04	mg/L	6.8E-07	mg/kg-day	2.7E-02	(mg/kg-day)-1	1.8E-08
				Tetrachloroethene	9.35E-03	mg/L	1.1E-05	mg/kg-day	1.0E-02	(mg/kg-day)-1	1.1E-07
				Trichloroethene	2.34E-03	mg/L	2.6E-06	mg/kg-day	4.0E-01	(mg/kg-day)-1	1.1E-06
			Exp. Route Total								1.3E-06
		Exposure Point Total									1.5E-04
	Exposure Medium Total										1.5E-04
Medium Total											1.5E-04
										Total of Receptor Risks Across All Media	1.8E-04

Notes:

CSF	Cancer slope factor
EPC	Exposure point concentration
mg/kg	Milligram per kilogram
mg/kg-day	Milligram per kilogram per day
(mg/kg-day)-1	1/(Milligram per kilogram per day)
RME	Reasonable maximum exposure
--	Not Applicable or Not Available

TABLE H-8.3.7.RME
EPA RAGS PART D TABLE 7b
CALCULATION OF RME CHEMICAL CANCER RISKS
FUTURE REDEVELOPED CHILD RESIDENT
SITE 19, ALAMEDA POINT, ALAMEDA, CALIFORNIA

Scenario Timeframe:	*Future-Redeveloped*
Receptor Population:	Resident
Receptor Age:	Child

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations				
					Value	Units	Intake/Exposure Concentration		CSF/Unit Risk		Cancer Risk
							Value	Units	Value	Units	
Soil (0-8)	Soil	Site Soil	Ingestion	Arsenic	7.75E+00	mg/kg	8.5E-06	mg/kg-day	1.5E+00	(mg/kg-day)-1	1.3E-05
				Benzo(a)pyrene	5.51E-02	mg/kg	6.0E-08	mg/kg-day	7.3E+00	(mg/kg-day)-1	4.4E-07
				Lead	5.50E+01	mg/kg	6.0E-05	mg/kg-day	--	--	--
			Exp. Route Total								1.3E-05
			Dermal	Arsenic	7.75E+00	mg/kg	7.1E-07	mg/kg-day	1.5E+00	(mg/kg-day)-1	1.1E-06
				Benzo(a)pyrene	5.51E-02	mg/kg	2.2E-08	mg/kg-day	7.3E+00	(mg/kg-day)-1	1.6E-07
				Lead	5.50E+01	mg/kg	1.7E-06	mg/kg-day	--	--	--
			Exp. Route Total								1.2E-06
		Exposure Point Total									1.4E-05
	Exposure Medium Total										1.4E-05
	Homegrown Produce	Homegrown Produce	Ingestion	Arsenic	7.75E+00	mg/kg	3.4E-06	mg/kg-day	1.5E+00	(mg/kg-day)-1	5.1E-06
				Benzo(a)pyrene	5.51E-02	mg/kg	1.6E-08	mg/kg-day	7.3E+00	(mg/kg-day)-1	1.2E-07
				Lead	5.50E+01	mg/kg	--	mg/kg-day	--	--	--
			Exp. Route Total								5.2E-06
		Exposure Point Total									5.2E-06
	Exposure Medium Total										5.2E-06
	Air	Outdoor Air	Inhalation (particulates)	Arsenic	7.75E+00	mg/kg	3.2E-10	mg/kg-day	1.5E+01	(mg/kg-day)-1	4.9E-09
				Benzo(a)pyrene	5.51E-02	mg/kg	2.3E-12	mg/kg-day	7.3E+00	(mg/kg-day)-1	1.7E-11
				Lead	5.50E+01	mg/kg	2.3E-09	mg/kg-day	--	--	--
			Exp. Route Total								4.9E-09
		Exposure Point Total									4.9E-09
	Exposure Medium Total										4.9E-09
Medium Total											2.0E-05
Groundwater	Groundwater	Tap	Ingestion	1,1-Dichloroethane	2.49E-02	mg/L	1.4E-04	mg/kg-day	--	--	--
				1,2-Dichloroethane	4.45E-04	mg/L	2.4E-06	mg/kg-day	9.1E-02	(mg/kg-day)-1	2.2E-07
				1,2-Dichloropropane	1.11E-03	mg/L	6.1E-06	mg/kg-day	6.8E-02	(mg/kg-day)-1	4.1E-07
				Arsenic	9.64E-03	mg/L	5.3E-05	mg/kg-day	1.5E+00	(mg/kg-day)-1	7.9E-05
				Benzene	6.04E-04	mg/L	3.3E-06	mg/kg-day	5.5E-02	(mg/kg-day)-1	1.8E-07
				Manganese	5.17E+00	mg/L	2.8E-02	mg/kg-day	--	--	--
				Tetrachloroethene	9.35E-03	mg/L	5.1E-05	mg/kg-day	5.2E-02	(mg/kg-day)-1	2.7E-06
				Trichloroethene	2.34E-03	mg/L	1.3E-05	mg/kg-day	4.0E-01	(mg/kg-day)-1	5.1E-06
			Exp. Route Total								8.8E-05

TABLE H-8.3.7.RME
EPA RAGS PART D TABLE 7b
CALCULATION OF RME CHEMICAL CANCER RISKS
FUTURE REDEVELOPED CHILD RESIDENT
SITE 19, ALAMEDA POINT, ALAMEDA, CALIFORNIA

Scenario Timeframe:	Future-Redeveloped
Receptor Population:	Resident
Receptor Age:	Child

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations				
					Value	Units	Intake/Exposure Concentration		CSF/Unit Risk		Cancer Risk
							Value	Units	Value	Units	
			Dermal (bathing/ showering)	1,1-Dichloroethane	2.49E-02	mg/L	6.0E-06	mg/kg-day	--	--	--
				1,2-Dichloroethane	4.45E-04	mg/L	6.8E-08	mg/kg-day	9.1E-02	(mg/kg-day)-1	6.2E-09
				1,2-Dichloropropane	1.11E-03	mg/L	3.1E-07	mg/kg-day	6.8E-02	(mg/kg-day)-1	2.1E-08
				Arsenic	9.64E-03	mg/L	3.5E-07	mg/kg-day	1.5E+00	(mg/kg-day)-1	5.2E-07
				Benzene	6.04E-04	mg/L	4.6E-07	mg/kg-day	5.5E-02	(mg/kg-day)-1	2.5E-08
				Manganese	5.17E+00	mg/L	1.9E-04	mg/kg-day	--	--	--
				Tetrachloroethene	9.35E-03	mg/L	1.1E-05	mg/kg-day	5.2E-02	(mg/kg-day)-1	5.8E-07
				Trichloroethene	2.34E-03	mg/L	1.0E-06	mg/kg-day	4.0E-01	(mg/kg-day)-1	4.1E-07
			Exp. Route Total								1.6E-06
			Inhalation (bathing/ showering)	1,1-Dichloroethane	2.49E-02	mg/L	2.9E-05	mg/kg-day	--	--	--
				1,2-Dichloroethane	4.45E-04	mg/L	5.1E-07	mg/kg-day	9.1E-02	(mg/kg-day)-1	4.7E-08
				1,2-Dichloropropane	1.11E-03	mg/L	1.3E-06	mg/kg-day	6.8E-02	(mg/kg-day)-1	8.7E-08
				Benzene	6.04E-04	mg/L	7.0E-07	mg/kg-day	2.7E-02	(mg/kg-day)-1	1.9E-08
				Tetrachloroethene	9.35E-03	mg/L	1.1E-05	mg/kg-day	1.0E-02	(mg/kg-day)-1	1.1E-07
				Trichloroethene	2.34E-03	mg/L	2.7E-06	mg/kg-day	4.0E-01	(mg/kg-day)-1	1.1E-06
			Exp. Route Total								1.3E-06
		Exposure Point Total									9.1E-05
	Exposure Medium Total										9.1E-05
Medium Total											9.1E-05
										Total of Receptor Risks Across All Media	1.1E-04

Notes:

CSF	Cancer slope factor
EPC	Exposure point concentration
mg/kg	Milligram per kilogram
mg/kg-day	Milligram per kilogram per day
(mg/kg-day)-1	1/(Milligram per kilogram per day)
RME	Reasonable maximum exposure
--	Not Applicable or Not Available

HHRA RISK TABLES

Reasonable Maximum Exposure
Site 22
Alameda Point, Alameda, California

TABLE H-8.4.1.RME
EPA RAGS PART D TABLE 7a
CALCULATION OF RME CHEMICAL CANCER RISKS
CURRENT INDUSTRIAL WORKER
SITE 22, ALAMEDA POINT, ALAMEDA, CALIFORNIA

Scenario Timeframe:	Current
Receptor Population:	Industrial Worker
Receptor Age:	Adult

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations				
					Value	Units	Intake/Exposure Concentration		CSF/Unit Risk		Cancer Risk
							Value	Units	Value	Units	
Soil (0-2)	Soil	Site Soil	Ingestion	2-Methylnaphthalene	4.60E-01	mg/kg	1.6E-07	mg/kg-day	--	--	--
				Arsenic	1.04E+01	mg/kg	3.6E-06	mg/kg-day	1.5E+00	(mg/kg-day)-1	5.5E-06
				Benzo(a)pyrene	5.12E-02	mg/kg	1.8E-08	mg/kg-day	7.3E+00	(mg/kg-day)-1	1.3E-07
				Lead	1.52E+03	mg/kg	5.3E-04	mg/kg-day	--	--	--
			Exp. Route Total								5.6E-06
			Dermal	2-Methylnaphthalene	4.60E-01	mg/kg	--	mg/kg-day	--	--	--
				Arsenic	1.04E+01	mg/kg	7.2E-07	mg/kg-day	1.5E+00	(mg/kg-day)-1	1.1E-06
				Benzo(a)pyrene	5.12E-02	mg/kg	1.5E-08	mg/kg-day	7.3E+00	(mg/kg-day)-1	1.1E-07
				Lead	1.52E+03	mg/kg	3.5E-05	mg/kg-day	--	--	--
			Exp. Route Total								1.2E-06
		Exposure Point Total									6.8E-06
	Exposure Medium Total										6.8E-06
	Air	Outdoor Air	Inhalation (particulates)	2-Methylnaphthalene	4.60E-01	mg/kg	2.4E-11	mg/kg-day	--	--	--
				Arsenic	1.04E+01	mg/kg	5.5E-10	mg/kg-day	1.5E+01	(mg/kg-day)-1	8.3E-09
				Benzo(a)pyrene	5.12E-02	mg/kg	2.7E-12	mg/kg-day	7.3E+00	(mg/kg-day)-1	2.0E-11
				Lead	1.52E+03	mg/kg	8.0E-08	mg/kg-day	--	--	--
			Exp. Route Total								8.3E-09
		Exposure Point Total									8.3E-09
	Exposure Medium Total										8.3E-09
Medium Total											6.8E-06
Groundwater	Groundwater	Indoor Air (Vapor Intrusion)	Inhalation	Benzene	1.40E+00	(a) ug/m3	9.8E-05	mg/kg-day	2.7E-02	(mg/kg-day)-1	2.6E-06
				Ethylbenzene	1.10E+00	(a) ug/m3	7.7E-05	mg/kg-day	3.9E-03	(mg/kg-day)-1	3.0E-07
				o-Xylene	2.60E+00	(a) ug/m3	1.8E-04	mg/kg-day	--	(mg/kg-day)-1	--
				m-Xylene	4.70E-01	(a) ug/m3	3.3E-05	mg/kg-day	--	(mg/kg-day)-1	--
				Toluene	2.90E+00	(a) ug/m3	2.0E-04	mg/kg-day	--	(mg/kg-day)-1	--
			Exp. Route Total								2.9E-06
		Exposure Point Total									2.9E-06

TABLE H-8.4.1.RME
EPA RAGS PART D TABLE 7a
CALCULATION OF RME CHEMICAL CANCER RISKS
CURRENT INDUSTRIAL WORKER
SITE 22, ALAMEDA POINT, ALAMEDA, CALIFORNIA

Scenario Timeframe:	Current
Receptor Population:	Industrial Worker
Receptor Age:	Adult

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations				
					Value	Units	Intake/Exposure Concentration		CSF/Unit Risk		Cancer Risk
							Value	Units	Value	Units	
	Exposure Medium Total										2.9E-06
Medium Total											2.9E-06
										Total of Receptor Risks Across All Media	9.7E-06

Notes:

CSF	Cancer slope factor
EPC	Exposure point concentration
mg/kg	Milligram per kilogram
mg/kg-day	Milligram per kilogram per day
(mg/kg-day)-1	1/(Milligram per kilogram per day)
RME	Reasonable maximum exposure
--	Not Applicable or Not Available

(a) See the Vapor Intrusion to Indoor Air Evaluation for determination of the modeled indoor air concentration.

TABLE H-8.4.2.RME
EPA RAGS PART D TABLE 7a
CALCULATION OF RME CHEMICAL CANCER RISKS
CURRENT CONSTRUCTION WORKER
SITE 22, ALAMEDA POINT, ALAMEDA, CALIFORNIA

Scenario Timeframe:	Current
Receptor Population:	Construction Worker
Receptor Age:	Adult

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations				
					Value	Units	Intake/Exposure Concentration		CSF/Unit Risk		Cancer Risk
							Value	Units	Value	Units	
Soil (0-2)	Soil	Site Soil	Ingestion	2-Methylnaphthalene	4.60E-01	mg/kg	2.1E-08	mg/kg-day	--	--	--
				Arsenic	1.04E+01	mg/kg	4.8E-07	mg/kg-day	1.5E+00	(mg/kg-day)-1	7.2E-07
				Benzo(a)pyrene	5.12E-02	mg/kg	2.4E-09	mg/kg-day	7.3E+00	(mg/kg-day)-1	1.7E-08
				Lead	1.52E+03	mg/kg	7.0E-05	mg/kg-day	--	--	--
			Exp. Route Total								7.4E-07
			Dermal	2-Methylnaphthalene	4.60E-01	mg/kg	--	mg/kg-day	--	--	--
				Arsenic	1.04E+01	mg/kg	4.3E-08	mg/kg-day	1.5E+00	(mg/kg-day)-1	6.5E-08
				Benzo(a)pyrene	5.12E-02	mg/kg	9.2E-10	mg/kg-day	7.3E+00	(mg/kg-day)-1	6.7E-09
				Lead	1.52E+03	mg/kg	2.1E-06	mg/kg-day	--	--	--
			Exp. Route Total								7.2E-08
		Exposure Point Total									8.1E-07
	Exposure Medium Total										8.1E-07
	Air	Outdoor Air	Inhalation (particulates)	2-Methylnaphthalene	4.60E-01	mg/kg	9.7E-13	mg/kg-day	--	--	--
				Arsenic	1.04E+01	mg/kg	2.2E-11	mg/kg-day	1.5E+01	(mg/kg-day)-1	3.3E-10
				Benzo(a)pyrene	5.12E-02	mg/kg	1.1E-13	mg/kg-day	7.3E+00	(mg/kg-day)-1	7.9E-13
				Lead	1.52E+03	mg/kg	3.2E-09	mg/kg-day	--	--	--
			Exp. Route Total								3.3E-10
		Exposure Point Total									3.3E-10
	Exposure Medium Total										3.3E-10
Medium Total											8.1E-07
										Total of Receptor Risks Across All Media	8.1E-07

Notes:

CSF	Cancer slope factor
EPC	Exposure point concentration
mg/kg	Milligram per kilogram
mg/kg-day	Milligram per kilogram per day
(mg/kg-day)-1	1/(Milligram per kilogram per day)
RME	Reasonable maximum exposure
--	Not Applicable or Not Available

TABLE H-8.4.3.RME
EPA RAGS PART D TABLE 7a
CALCULATION OF RME CHEMICAL CANCER RISKS
CURRENT ADULT RESIDENT
SITE 22, ALAMEDA POINT, ALAMEDA, CALIFORNIA

Scenario Timeframe:	Future
Receptor Population:	Resident
Receptor Age:	Adult

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations				
					Value	Units	Intake/Exposure Concentration		CSF/Unit Risk		Cancer Risk
							Value	Units	Value	Units	
Soil (0-2)	Soil	Site Soil	Ingestion	2-Methylnaphthalene	4.60E-01	mg/kg	2.2E-07	mg/kg-day	–	–	–
				Arsenic	1.04E+01	mg/kg	4.9E-06	mg/kg-day	1.5E+00	(mg/kg-day)-1	7.3E-06
				Benzo(a)pyrene	5.12E-02	mg/kg	2.4E-08	mg/kg-day	7.3E+00	(mg/kg-day)-1	1.8E-07
				Lead	1.52E+03	mg/kg	7.1E-04	mg/kg-day	–	–	–
			Exp. Route Total								7.5E-06
			Dermal	2-Methylnaphthalene	4.60E-01	mg/kg	–	mg/kg-day	–	–	–
				Arsenic	1.04E+01	mg/kg	5.9E-07	mg/kg-day	1.5E+00	(mg/kg-day)-1	8.8E-07
				Benzo(a)pyrene	5.12E-02	mg/kg	1.2E-08	mg/kg-day	7.3E+00	(mg/kg-day)-1	9.1E-08
				Lead	1.52E+03	mg/kg	2.8E-05	mg/kg-day	–	–	–
			Exp. Route Total								9.7E-07
		Exposure Point Total									8.5E-06
	Exposure Medium Total										8.5E-06
	Homegrown Produce	Homegrown Produce	Ingestion	2-Methylnaphthalene	4.60E-01	mg/kg	–	mg/kg-day	–	–	–
				Arsenic	1.04E+01	mg/kg	1.8E-05	mg/kg-day	1.5E+00	(mg/kg-day)-1	2.7E-05
				Benzo(a)pyrene	5.12E-02	mg/kg	6.1E-08	mg/kg-day	7.3E+00	(mg/kg-day)-1	4.5E-07
				Lead	1.52E+03	mg/kg	–	mg/kg-day	–	–	–
			Exp. Route Total								2.8E-05
		Exposure Point Total									2.8E-05
	Exposure Medium Total										2.8E-05
	Air	Outdoor Air	Inhalation (particulates)	2-Methylnaphthalene	4.60E-01	mg/kg	3.3E-11	mg/kg-day	–	–	–
				Arsenic	1.04E+01	mg/kg	7.4E-10	mg/kg-day	1.5E+01	(mg/kg-day)-1	1.1E-08
				Benzo(a)pyrene	5.12E-02	mg/kg	3.6E-12	mg/kg-day	7.3E+00	(mg/kg-day)-1	2.6E-11
				Lead	1.52E+03	mg/kg	1.1E-07	mg/kg-day	–	–	–
			Exp. Route Total								1.1E-08
		Exposure Point Total									1.1E-08
	Exposure Medium Total										1.1E-08
Medium Total											3.6E-05
Groundwater	Groundwater	Indoor Air (Vapor Intrusion)	Inhalation	Benzene	1.40E+01	(a) ug/m3	1.3E-03	mg/kg-day	2.7E-02	(mg/kg-day)-1	3.5E-05
				Ethylbenzene	1.10E+01	(a) ug/m3	1.0E-03	mg/kg-day	3.9E-03	(mg/kg-day)-1	4.0E-06
				o-Xylene	2.60E+01	(a) ug/m3	2.4E-03	mg/kg-day	–	(mg/kg-day)-1	–
				m-Xylene	4.70E+00	(a) ug/m3	4.4E-04	mg/kg-day	–	(mg/kg-day)-1	–
				Toluene	2.90E+01	(a) ug/m3	2.7E-03	mg/kg-day	–	(mg/kg-day)-1	–
			Exp. Route Total								3.9E-05
		Exposure Point Total									3.9E-05

TABLE H-8.4.3.RME
EPA RAGS PART D TABLE 7a
CALCULATION OF RME CHEMICAL CANCER RISKS
CURRENT ADULT RESIDENT
SITE 22, ALAMEDA POINT, ALAMEDA, CALIFORNIA

Scenario Timeframe:	Future
Receptor Population:	Resident
Receptor Age:	Adult

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations				
					Value	Units	Intake/Exposure Concentration		CSF/Unit Risk		Cancer Risk
							Value	Units	Value	Units	
		Tap	Ingestion	1,2-Dichloroethane	6.95E-03	mg/L	6.5E-05	mg/kg-day	9.1E-02	(mg/kg-day)-1	5.9E-06
				2-Methylnaphthalene	2.84E-02	mg/L	2.7E-04	mg/kg-day	--	--	--
				Arsenic	4.10E-02	mg/L	3.9E-04	mg/kg-day	1.5E+00	(mg/kg-day)-1	5.8E-04
				Benzene	1.49E+00	mg/L	1.4E-02	mg/kg-day	5.5E-02	(mg/kg-day)-1	7.7E-04
				Chloroform	1.20E-02	mg/L	1.1E-04	mg/kg-day	--	--	--
				Ethylbenzene	4.48E-01	mg/L	4.2E-03	mg/kg-day	3.9E-03	(mg/kg-day)-1	1.6E-05
				Manganese	1.10E+01	mg/L	1.0E-01	mg/kg-day	--	--	--
				Naphthalene	2.14E-01	mg/L	2.0E-03	mg/kg-day	--	--	--
				n-Propylbenzene	2.30E-01	mg/L	2.2E-03	mg/kg-day	--	--	--
				Tetrachloroethene	2.60E-03	mg/L	2.4E-05	mg/kg-day	5.2E-02	(mg/kg-day)-1	1.3E-06
				Thallium	3.74E-03	mg/L	3.5E-05	mg/kg-day	--	--	--
				Toluene	1.51E+00	mg/L	1.4E-02	mg/kg-day	--	--	--
				Trichloroethene	1.20E-02	mg/L	1.1E-04	mg/kg-day	4.0E-01	(mg/kg-day)-1	4.5E-05
				Xylene (Total)	1.96E+00	mg/L	1.8E-02	mg/kg-day	--	--	--
			Exp. Route Total								1.4E-03
			Dermal (bathing/ showering)	1,2-Dichloroethane	6.95E-03	mg/L	1.4E-06	mg/kg-day	9.1E-02	(mg/kg-day)-1	1.3E-07
				2-Methylnaphthalene	2.84E-02	mg/L	6.5E-05	mg/kg-day	--	--	--
				Arsenic	4.10E-02	mg/L	2.0E-06	mg/kg-day	1.5E+00	(mg/kg-day)-1	3.0E-06
				Benzene	1.49E+00	mg/L	1.5E-03	mg/kg-day	5.5E-02	(mg/kg-day)-1	8.4E-05
				Chloroform	1.20E-02	mg/L	4.0E-06	mg/kg-day	--	--	--
				Ethylbenzene	4.48E-01	mg/L	1.1E-03	mg/kg-day	3.9E-03	(mg/kg-day)-1	4.1E-06
				Manganese	1.10E+01	mg/L	5.4E-04	mg/kg-day	--	--	--
				Naphthalene	2.14E-01	mg/L	4.9E-04	mg/kg-day	--	--	--
				n-Propylbenzene	2.30E-01	mg/L	1.0E-03	mg/kg-day	--	--	--
				Tetrachloroethene	2.60E-03	mg/L	4.2E-06	mg/kg-day	5.2E-02	(mg/kg-day)-1	2.2E-07
				Thallium	3.74E-03	mg/L	1.8E-07	mg/kg-day	--	--	--
				Toluene	1.51E+00	mg/L	2.3E-03	mg/kg-day	--	--	--
				Trichloroethene	1.20E-02	mg/L	7.1E-06	mg/kg-day	4.0E-01	(mg/kg-day)-1	2.8E-06
				Xylene (Total)	1.96E+00	mg/L	5.1E-03	mg/kg-day	--	--	--
			Exp. Route Total								9.5E-05

TABLE H-8.4.3.RME
EPA RAGS PART D TABLE 7a
CALCULATION OF RME CHEMICAL CANCER RISKS
CURRENT ADULT RESIDENT
SITE 22, ALAMEDA POINT, ALAMEDA, CALIFORNIA

Scenario Timeframe:	Future
Receptor Population:	Resident
Receptor Age:	Adult

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations				
					Value	Units	Intake/Exposure Concentration		CSF/Unit Risk		Cancer Risk
							Value	Units	Value	Units	
			Inhalation (bathing/ showering)	1,2-Dichloroethane	6.95E-03	mg/L	7.9E-06	mg/kg-day	9.1E-02	(mg/kg-day)-1	7.1E-07
				2-Methylnaphthalene	2.84E-02	mg/L	3.2E-05	mg/kg-day	--	--	--
				Benzene	1.49E+00	mg/L	1.7E-03	mg/kg-day	2.7E-02	(mg/kg-day)-1	4.5E-05
				Chloroform	1.20E-02	mg/L	1.4E-05	mg/kg-day	8.1E-02	(mg/kg-day)-1	1.1E-06
				Ethylbenzene	4.48E-01	mg/L	5.1E-04	mg/kg-day	3.9E-03	(mg/kg-day)-1	1.9E-06
				Naphthalene	2.14E-01	mg/L	2.4E-04	mg/kg-day	--	--	--
				n-Propylbenzene	2.30E-01	mg/L	2.6E-04	mg/kg-day	--	--	--
				Tetrachloroethene	2.60E-03	mg/L	2.9E-06	mg/kg-day	1.0E-02	(mg/kg-day)-1	2.9E-08
				Toluene	1.51E+00	mg/L	1.7E-03	mg/kg-day	--	--	--
				Trichloroethene	1.20E-02	mg/L	1.4E-05	mg/kg-day	4.0E-01	(mg/kg-day)-1	5.4E-06
				Xylene (Total)	1.96E+00	mg/L	2.2E-03	mg/kg-day	--	--	--
			Exp. Route Total								5.5E-05
		Exposure Point Total									1.6E-03
	Exposure Medium Total										1.6E-03
Medium Total											1.6E-03
										Total of Receptor Risks Across All Media	1.6E-03

Notes:

CSF	Cancer slope factor
EPC	Exposure point concentration
mg/kg	Milligram per kilogram
mg/kg-day	Milligram per kilogram per day
(mg/kg-day)-1	1/(Milligram per kilogram per day)
RME	Reasonable maximum exposure
--	Not Applicable or Not Available

(a) See the Vapor Intrusion to Indoor Air Evaluation for determination of the modeled indoor air concentration.

TABLE H-8.4.4.RME
EPA RAGS PART D TABLE 7a
CALCULATION OF RME CHEMICAL CANCER RISKS
CURRENT CHILD RESIDENT
SITE 22, ALAMEDA POINT, ALAMEDA, CALIFORNIA

Scenario Timeframe:	*Future*
Receptor Population:	Resident
Receptor Age:	Child

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations				
					Value	Units	Intake/Exposure Concentration		CSF/Unit Risk		Cancer Risk
							Value	Units	Value	Units	
Soil (0-2)	Soil	Site Soil	Ingestion	2-Methylnaphthalene	4.60E-01	mg/kg	5.0E-07	mg/kg-day	–	–	–
				Arsenic	1.04E+01	mg/kg	1.1E-05	mg/kg-day	1.5E+00	(mg/kg-day)-1	1.7E-05
				Benzo(a)pyrene	5.12E-02	mg/kg	5.6E-06	mg/kg-day	7.3E+00	(mg/kg-day)-1	4.1E-07
				Lead	1.52E+03	mg/kg	1.7E-03	mg/kg-day	–	–	–
			Exp. Route Total								1.8E-05
			Dermal	2-Methylnaphthalene	4.60E-01	mg/kg	–	mg/kg-day	–	–	–
				Arsenic	1.04E+01	mg/kg	9.6E-07	mg/kg-day	1.5E+00	(mg/kg-day)-1	1.4E-06
				Benzo(a)pyrene	5.12E-02	mg/kg	2.0E-06	mg/kg-day	7.3E+00	(mg/kg-day)-1	1.5E-07
				Lead	1.52E+03	mg/kg	4.7E-05	mg/kg-day	–	–	–
			Exp. Route Total								1.6E-06
		Exposure Point Total									1.9E-05
	Exposure Medium Total										1.9E-05
	Homegrown Produce	Homegrown Produce	Ingestion	2-Methylnaphthalene	4.60E-01	mg/kg	–	mg/kg-day	–	–	–
				Arsenic	1.04E+01	mg/kg	4.5E-06	mg/kg-day	1.5E+00	(mg/kg-day)-1	6.6E-06
				Benzo(a)pyrene	5.12E-02	mg/kg	1.5E-06	mg/kg-day	7.3E+00	(mg/kg-day)-1	1.1E-07
				Lead	1.52E+03	mg/kg	–	mg/kg-day	–	–	–
			Exp. Route Total								6.9E-06
		Exposure Point Total									6.9E-06
	Exposure Medium Total										6.9E-06
	Air	Outdoor Air	Inhalation (particulates)	2-Methylnaphthalene	4.60E-01	mg/kg	1.9E-11	mg/kg-day	–	–	–
				Arsenic	1.04E+01	mg/kg	4.4E-10	mg/kg-day	1.5E+01	(mg/kg-day)-1	6.5E-09
				Benzo(a)pyrene	5.12E-02	mg/kg	2.1E-12	mg/kg-day	7.3E+00	(mg/kg-day)-1	1.6E-11
				Lead	1.52E+03	mg/kg	6.4E-08	mg/kg-day	–	–	–
			Exp. Route Total								6.5E-09
		Exposure Point Total									6.5E-09
	Exposure Medium Total										6.5E-09
Medium Total											2.6E-05
Groundwater	Groundwater	Indoor Air (Vapor Intrusion)	Inhalation	Benzene	1.40E+01	(a) ug/m3	7.7E-04	mg/kg-day	2.7E-02	(mg/kg-day)-1	2.1E-05
				Ethylbenzene	1.10E+01	(a) ug/m3	6.1E-04	mg/kg-day	3.9E-03	(mg/kg-day)-1	2.3E-06
				o-Xylene	2.60E+01	(a) ug/m3	1.4E-03	mg/kg-day	–	–	–
				m-Xylene	4.70E+00	(a) ug/m3	2.6E-04	mg/kg-day	–	–	–
				Toluene	2.90E+01	(a) ug/m3	1.6E-03	mg/kg-day	–	–	–
			Exp. Route Total								2.3E-05
		Exposure Point Total									2.3E-05

TABLE H-8.4.4.RME
EPA RAGS PART D TABLE 7a
CALCULATION OF RME CHEMICAL CANCER RISKS
CURRENT CHILD RESIDENT
SITE 22, ALAMEDA POINT, ALAMEDA, CALIFORNIA

Scenario Timeframe:	Future
Receptor Population:	Resident
Receptor Age:	Child

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations				
					Value	Units	Intake/Exposure Concentration		CSF/Unit Risk		Cancer Risk
							Value	Units	Value	Units	
		Tap	Ingestion	1,2-Dichloroethane	6.95E-03	mg/L	3.8E-05	mg/kg-day	9.1E-02	(mg/kg-day)-1	3.5E-06
				2-Methylnaphthalene	2.84E-02	mg/L	1.6E-04	mg/kg-day	–	–	–
				Arsenic	4.10E-02	mg/L	2.2E-04	mg/kg-day	1.5E+00	(mg/kg-day)-1	3.4E-04
				Benzene	1.49E+00	mg/L	8.2E-03	mg/kg-day	5.5E-02	(mg/kg-day)-1	4.5E-04
				Chloroform	1.20E-02	mg/L	6.6E-05	mg/kg-day	–	–	–
				Ethylbenzene	4.48E-01	mg/L	2.5E-03	mg/kg-day	3.9E-03	(mg/kg-day)-1	9.5E-06
				Manganese	1.10E+01	mg/L	6.0E-02	mg/kg-day	–	–	–
				Naphthalene	2.14E-01	mg/L	1.2E-03	mg/kg-day	–	–	–
				n-Propylbenzene	2.30E-01	mg/L	1.3E-03	mg/kg-day	–	–	–
				Tetrachloroethene	2.60E-03	mg/L	1.4E-05	mg/kg-day	5.2E-02	(mg/kg-day)-1	7.4E-07
				Thallium	3.74E-03	mg/L	2.0E-05	mg/kg-day	–	–	–
				Toluene	1.51E+00	mg/L	8.3E-03	mg/kg-day	–	–	–
				Trichloroethene	1.20E-02	mg/L	6.6E-05	mg/kg-day	4.0E-01	(mg/kg-day)-1	2.6E-05
				Xylene (Total)	1.96E+00	mg/L	1.1E-02	mg/kg-day	–	–	–
			Exp. Route Total								8.3E-04
			Dermal (bathing/ showering)	1,2-Dichloroethane	6.95E-03	mg/L	1.1E-06	mg/kg-day	9.1E-02	(mg/kg-day)-1	9.6E-06
				2-Methylnaphthalene	2.84E-02	mg/L	4.8E-05	mg/kg-day	–	–	–
				Arsenic	4.10E-02	mg/L	1.5E-06	mg/kg-day	1.5E+00	(mg/kg-day)-1	2.2E-06
				Benzene	1.49E+00	mg/L	1.1E-03	mg/kg-day	5.5E-02	(mg/kg-day)-1	6.2E-05
				Chloroform	1.20E-02	mg/L	3.0E-06	mg/kg-day	–	–	–
				Ethylbenzene	4.48E-01	mg/L	7.9E-04	mg/kg-day	3.9E-03	(mg/kg-day)-1	3.1E-06
				Manganese	1.10E+01	mg/L	4.0E-04	mg/kg-day	–	–	–
				Naphthalene	2.14E-01	mg/L	3.6E-04	mg/kg-day	–	–	–
				n-Propylbenzene	2.30E-01	mg/L	7.6E-04	mg/kg-day	–	–	–
				Tetrachloroethene	2.60E-03	mg/L	3.1E-06	mg/kg-day	5.2E-02	(mg/kg-day)-1	1.6E-07
				Thallium	3.74E-03	mg/L	1.4E-07	mg/kg-day	–	–	–
				Toluene	1.51E+00	mg/L	1.7E-03	mg/kg-day	–	–	–
				Trichloroethene	1.20E-02	mg/L	5.2E-06	mg/kg-day	4.0E-01	(mg/kg-day)-1	2.1E-06
				Xylene (Total)	1.96E+00	mg/L	3.8E-03	mg/kg-day	–	–	–
			Exp. Route Total								7.0E-05

TABLE H-8.4.4.RME
EPA RAGS PART D TABLE 7a
CALCULATION OF RME CHEMICAL CANCER RISKS
CURRENT CHILD RESIDENT
SITE 22, ALAMEDA POINT, ALAMEDA, CALIFORNIA

Scenario Timeframe:	Future
Receptor Population:	Resident
Receptor Age:	Child

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations				
					Value	Units	Intake/Exposure Concentration		CSF/Unit Risk		Cancer Risk
							Value	Units	Value	Units	
			Inhalation (bathing/ showering)	1,2-Dichloroethane	8.95E-03	mg/L	8.0E-06	mg/kg-day	9.1E-02	(mg/kg-day)-1	7.3E-07
				2-Methylnaphthalene	2.84E-02	mg/L	3.3E-05	mg/kg-day	--	--	--
				Benzene	1.49E+00	mg/L	1.7E-03	mg/kg-day	2.7E-02	(mg/kg-day)-1	4.6E-05
				Chloroform	1.20E-02	mg/L	1.4E-05	mg/kg-day	8.1E-02	(mg/kg-day)-1	1.1E-06
				Ethylbenzene	4.48E-01	mg/L	5.2E-04	mg/kg-day	3.9E-03	(mg/kg-day)-1	2.0E-06
				Naphthalene	2.14E-01	mg/L	2.5E-04	mg/kg-day	--	--	--
				n-Propylbenzene	2.30E-01	mg/L	2.6E-04	mg/kg-day	--	--	--
				Tetrachloroethene	2.60E-03	mg/L	3.0E-06	mg/kg-day	1.0E-02	(mg/kg-day)-1	3.0E-08
				Toluene	1.51E+00	mg/L	1.7E-03	mg/kg-day	--	--	--
				Trichloroethene	1.20E-02	mg/L	1.4E-05	mg/kg-day	4.0E-01	(mg/kg-day)-1	5.5E-06
				Xylene (Total)	1.96E+00	mg/L	2.3E-03	mg/kg-day	--	--	--
			Exp. Route Total								5.6E-05
		Exposure Point Total									9.5E-04
	Exposure Medium Total										9.7E-04
Medium Total											9.7E-04
										Total of Receptor Risks Across All Media	1.0E-03

Notes:

CSF	Cancer slope factor
EPC	Exposure point concentration
mg/kg	Milligram per kilogram
mg/kg-day	Milligram per kilogram per day
(mg/kg-day)-1	1/(Milligram per kilogram per day)
RME	Reasonable maximum exposure
--	Not Applicable or Not Available

(a) See the Vapor Intrusion to Indoor Air Evaluation for determination of the modeled indoor air concentration.

TABLE H-8.4.5.RME
EPA RAGS PART D TABLE 7a
CALCULATION OF RME CHEMICAL CANCER RISKS
FUTURE DEVELOPED CONSTRUCTION WORKER
SITE 22, ALAMEDA POINT, ALAMEDA, CALIFORNIA

Scenario Timeframe:	Future-Developed
Receptor Population:	Construction Worker
Receptor Age:	Adult

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations				
					Value	Units	Intake/Exposure Concentration		CSF/Unit Risk		Cancer Risk
							Value	Units	Value	Units	
Soil (0-8)	Soil	Site Soil	Ingestion	2-Methylnaphthalene	1.42E+01	mg/kg	6.6E-07	mg/kg-day	--	--	--
				Arsenic	7.36E+00	mg/kg	3.4E-07	mg/kg-day	1.5E+00	(mg/kg-day)-1	5.1E-07
				Benzene	3.30E+00	mg/kg	1.5E-07	mg/kg-day	5.5E-02	(mg/kg-day)-1	8.4E-09
				Benzo(a)pyrene	6.71E-02	mg/kg	3.1E-09	mg/kg-day	7.3E+00	(mg/kg-day)-1	2.3E-08
				Ethylbenzene	1.12E+02	mg/kg	5.2E-06	mg/kg-day	3.9E-03	(mg/kg-day)-1	2.0E-08
				Lead	1.14E+03	mg/kg	5.3E-05	mg/kg-day	--	--	--
				Toluene	1.44E+02	mg/kg	6.6E-06	mg/kg-day	--	--	--
				Xylene (Total)	5.05E+02	mg/kg	2.3E-05	mg/kg-day	--	--	--
			Exp. Route Total								5.6E-07
			Dermal	2-Methylnaphthalene	1.42E+01	mg/kg	--	mg/kg-day	--	--	--
				Arsenic	7.36E+00	mg/kg	3.1E-08	mg/kg-day	1.5E+00	(mg/kg-day)-1	4.6E-08
				Benzene	3.30E+00	mg/kg	--	mg/kg-day	5.5E-02	(mg/kg-day)-1	--
				Benzo(a)pyrene	6.71E-02	mg/kg	1.2E-09	mg/kg-day	7.3E+00	(mg/kg-day)-1	8.8E-09
				Ethylbenzene	1.12E+02	mg/kg	--	mg/kg-day	3.9E-03	(mg/kg-day)-1	--
				Lead	1.14E+03	mg/kg	1.6E-06	mg/kg-day	--	--	--
				Toluene	1.44E+02	mg/kg	--	mg/kg-day	--	--	--
				Xylene (Total)	5.05E+02	mg/kg	--	mg/kg-day	--	--	--
			Exp. Route Total								5.5E-08
		Exposure Point Total									6.1E-07
	Exposure Medium Total										6.1E-07
	Air	Outdoor Air	Inhalation (particulates)	2-Methylnaphthalene	1.42E+01	mg/kg	3.0E-11	mg/kg-day	--	--	--
				Arsenic	7.36E+00	mg/kg	1.6E-11	mg/kg-day	1.5E+01	(mg/kg-day)-1	2.3E-10
				Benzene	3.30E+00	mg/kg	7.0E-12	mg/kg-day	2.7E-02	(mg/kg-day)-1	1.9E-13
				Benzo(a)pyrene	6.71E-02	mg/kg	1.4E-13	mg/kg-day	7.3E+00	(mg/kg-day)-1	1.0E-12
				Ethylbenzene	1.12E+02	mg/kg	2.4E-10	mg/kg-day	3.9E-03	(mg/kg-day)-1	9.1E-13
				Lead	1.14E+03	mg/kg	2.4E-09	mg/kg-day	--	--	--
				Toluene	1.44E+02	mg/kg	3.0E-10	mg/kg-day	--	--	--
				Xylene (Total)	5.05E+02	mg/kg	1.1E-09	mg/kg-day	--	--	--
			Exp. Route Total								2.4E-10

TABLE H-8.4.5.RME
EPA RAGS PART D TABLE 7a
CALCULATION OF RME CHEMICAL CANCER RISKS
FUTURE DEVELOPED CONSTRUCTION WORKER
SITE 22, ALAMEDA POINT, ALAMEDA, CALIFORNIA

Scenario Timeframe:	Future-Developed
Receptor Population:	Construction Worker
Receptor Age:	Adult

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations				
					Value	Units	Intake/Exposure Concentration		CSF/Unit Risk		Cancer Risk
							Value	Units	Value	Units	
			Inhalation (VOCs)	2-Methylnaphthalene	1.42E+01	mg/kg	9.2E-07	mg/kg-day	--	--	--
				Benzene	3.30E+00	mg/kg	3.4E-06	mg/kg-day	2.7E-02	(mg/kg-day)-1	9.2E-08
				Ethylbenzene	1.12E+02	mg/kg	5.8E-05	mg/kg-day	3.9E-03	(mg/kg-day)-1	2.2E-07
				Toluene	1.44E+02	mg/kg	1.0E-04	mg/kg-day	--	--	--
				Xylene (Total)	5.05E+02	mg/kg	2.3E-04	mg/kg-day	--	--	--
			Exp. Route Total								3.2E-07
		Exposure Point Total									3.2E-07
	Exposure Medium Total										3.2E-07
Medium Total											9.3E-07
										Total of Receptor Risks Across All Media	9.3E-07

Notes:

CSF	Cancer slope factor
EPC	Exposure point concentration
mg/kg	Milligram per kilogram
mg/kg-day	Milligram per kilogram per day
(mg/kg-day)-1	1/(Milligram per kilogram per day)
RME	Reasonable maximum exposure
VOC	Volatile organic compound
--	Not Applicable or Not Available

TABLE H-8.4.6.RME
EPA RAGS PART D TABLE 7a
CALCULATION OF RME CHEMICAL CANCER RISKS
FUTURE REDEVELOPED ADULT RESIDENT
SITE 22, ALAMEDA POINT, ALAMEDA, CALIFORNIA

Scenario Timeframe:	Future-Redeveloped
Receptor Population:	Resident
Receptor Age:	Adult

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations				
					Value	Units	Intake/Exposure Concentration		CSF/Unit Risk		Cancer Risk
							Value	Units	Value	Units	
Soil (0-8)	Soil	Site Soil	Ingestion	2-Methylnaphthalene	1.42E+01	mg/kg	6.7E-06	mg/kg-day	--	--	--
				Arsenic	7.36E+00	mg/kg	3.5E-06	mg/kg-day	1.5E+00	(mg/kg-day)-1	5.2E-06
				Benzene	3.30E+00	mg/kg	1.5E-06	mg/kg-day	5.5E-02	(mg/kg-day)-1	8.5E-08
				Benzo(a)pyrene	6.71E-02	mg/kg	3.2E-08	mg/kg-day	7.3E+00	(mg/kg-day)-1	2.3E-07
				Ethylbenzene	1.12E+02	mg/kg	5.3E-05	mg/kg-day	3.9E-03	(mg/kg-day)-1	2.0E-07
				Lead	1.14E+03	mg/kg	5.4E-04	mg/kg-day	--	--	--
				Toluene	1.44E+02	mg/kg	6.8E-05	mg/kg-day	--	--	--
				Xylene (Total)	5.05E+02	mg/kg	2.4E-04	mg/kg-day	--	--	--
			Exp. Route Total								5.7E-06
			Dermal	2-Methylnaphthalene	1.42E+01	mg/kg	--	mg/kg-day	--	--	--
				Arsenic	7.36E+00	mg/kg	4.1E-07	mg/kg-day	1.5E+00	(mg/kg-day)-1	6.2E-07
				Benzene	3.30E+00	mg/kg	--	mg/kg-day	5.5E-02	(mg/kg-day)-1	--
				Benzo(a)pyrene	6.71E-02	mg/kg	1.6E-08	mg/kg-day	7.3E+00	(mg/kg-day)-1	1.2E-07
				Ethylbenzene	1.12E+02	mg/kg	--	mg/kg-day	3.9E-03	(mg/kg-day)-1	--
				Lead	1.14E+03	mg/kg	2.1E-05	mg/kg-day	--	--	--
				Toluene	1.44E+02	mg/kg	--	mg/kg-day	--	--	--
				Xylene (Total)	5.05E+02	mg/kg	--	mg/kg-day	--	--	--
			Exp. Route Total								7.4E-07
		Exposure Point Total									6.4E-06
	Exposure Medium Total										6.4E-06
	Homegrown Produce	Homegrown Produce	Ingestion	2-Methylnaphthalene	1.42E+01	mg/kg	--	mg/kg-day	--	--	--
				Arsenic	7.36E+00	mg/kg	1.3E-05	mg/kg-day	1.5E+00	(mg/kg-day)-1	1.9E-05
				Benzene	3.30E+00	mg/kg	--	mg/kg-day	5.5E-02	(mg/kg-day)-1	--
				Benzo(a)pyrene	6.71E-02	mg/kg	8.0E-08	mg/kg-day	7.3E+00	(mg/kg-day)-1	5.9E-07
				Ethylbenzene	1.12E+02	mg/kg	--	mg/kg-day	3.9E-03	(mg/kg-day)-1	--
				Lead	1.14E+03	mg/kg	--	mg/kg-day	--	--	--
				Toluene	1.44E+02	mg/kg	--	mg/kg-day	--	--	--
				Xylene (Total)	5.05E+02	mg/kg	--	mg/kg-day	--	--	--
			Exp. Route Total								2.0E-05
		Exposure Point Total									2.0E-05
	Exposure Medium Total										2.0E-05
	Air	Outdoor Air	Inhalation (particulates)	2-Methylnaphthalene	1.42E+01	mg/kg	1.0E-09	mg/kg-day	--	--	--
				Arsenic	7.36E+00	mg/kg	5.2E-10	mg/kg-day	1.5E+01	(mg/kg-day)-1	7.8E-09

TABLE H-8.4.6.RME
EPA RAGS PART D TABLE 7a
CALCULATION OF RME CHEMICAL CANCER RISKS
FUTURE REDEVELOPED ADULT RESIDENT
SITE 22, ALAMEDA POINT, ALAMEDA, CALIFORNIA

Scenario Timeframe:	Future-Redeveloped
Receptor Population:	Resident
Receptor Age:	Adult

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations				
					Value	Units	Intake/Exposure Concentration		CSF/Unit Risk		Cancer Risk
							Value	Units	Value	Units	
				Benzene	3.30E+00	mg/kg	2.3E-10	mg/kg-day	2.7E-02	(mg/kg-day)-1	6.3E-12
				Benzo(a)pyrene	6.71E-02	mg/kg	4.8E-12	mg/kg-day	7.3E+00	(mg/kg-day)-1	3.5E-11
				Ethylbenzene	1.12E+02	mg/kg	8.0E-09	mg/kg-day	3.9E-03	(mg/kg-day)-1	3.1E-11
				Lead	1.14E+03	mg/kg	8.1E-08	mg/kg-day	--	--	--
				Toluene	1.44E+02	mg/kg	1.0E-08	mg/kg-day	--	--	--
				Xylene (Total)	5.05E+02	mg/kg	3.6E-08	mg/kg-day	--	--	--
			Exp. Route Total								7.9E-09
			Inhalation (VOCs)	2-Methylnaphthalene	1.42E+01	mg/kg	3.1E-05	mg/kg-day	--	--	--
				Benzene	3.30E+00	mg/kg	1.1E-04	mg/kg-day	2.7E-02	(mg/kg-day)-1	3.1E-06
				Ethylbenzene	1.12E+02	mg/kg	1.9E-03	mg/kg-day	3.9E-03	(mg/kg-day)-1	7.5E-06
				Toluene	1.44E+02	mg/kg	3.4E-03	mg/kg-day	--	--	--
				Xylene (Total)	5.05E+02	mg/kg	7.7E-03	mg/kg-day	--	--	--
			Exp. Route Total								1.1E-05
		Exposure Point Total									1.1E-05
	Exposure Medium Total										1.1E-05
Medium Total											3.7E-05
Groundwater	Groundwater	Indoor Air (Vapor Intrusion)	Inhalation	Benzene	1.40E+01	(a) ug/m3	1.3E-03	mg/kg-day	2.7E-02	(mg/kg-day)-1	3.5E-05
				Ethylbenzene	1.10E+01	(a) ug/m3	1.0E-03	mg/kg-day	3.9E-03	(mg/kg-day)-1	4.0E-06
				o-Xylene	2.60E+01	(a) ug/m3	2.4E-03	mg/kg-day	--	(mg/kg-day)-1	--
				m-Xylene	4.70E+00	(a) ug/m3	4.4E-04	mg/kg-day	--	(mg/kg-day)-1	--
				Toluene	2.90E+01	(a) ug/m3	2.7E-03	mg/kg-day	--	(mg/kg-day)-1	--
			Exp. Route Total								3.9E-05
		Exposure Point Total									3.9E-05
		Tap	Ingestion	1,2-Dichloroethane	6.95E-03	mg/L	6.5E-05	mg/kg-day	9.1E-02	(mg/kg-day)-1	5.9E-06
				2-Methylnaphthalene	2.84E-02	mg/L	2.7E-04	mg/kg-day	--	--	--
				Arsenic	4.10E-02	mg/L	3.9E-04	mg/kg-day	1.5E+00	(mg/kg-day)-1	5.8E-04
				Benzene	1.49E+00	mg/L	1.4E-02	mg/kg-day	5.5E-02	(mg/kg-day)-1	7.7E-04
				Chloroform	1.20E-02	mg/L	1.1E-04	mg/kg-day	--	--	--
				Ethylbenzene	4.48E-01	mg/L	4.2E-03	mg/kg-day	3.9E-03	(mg/kg-day)-1	1.6E-05
				Manganese	1.10E+01	mg/L	1.0E-01	mg/kg-day	--	--	--
				Naphthalene	2.14E-01	mg/L	2.0E-03	mg/kg-day	--	--	--
				n-Propylbenzene	2.30E-01	mg/L	2.2E-03	mg/kg-day	--	--	--

TABLE H-8.4.6.RME
EPA RAGS PART D TABLE 7a
CALCULATION OF RME CHEMICAL CANCER RISKS
FUTURE REDEVELOPED ADULT RESIDENT
SITE 22, ALAMEDA POINT, ALAMEDA, CALIFORNIA

Scenario Timeframe:	Future-Redeveloped
Receptor Population:	Resident
Receptor Age:	Adult

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations				
					Value	Units	Intake/Exposure Concentration		CSF/Unit Risk		Cancer Risk
							Value	Units	Value	Units	
				Tetrachloroethene	2.60E-03	mg/L	2.4E-05	mg/kg-day	5.2E-02	(mg/kg-day)-1	1.3E-06
				Thallium	3.74E-03	mg/L	3.5E-05	mg/kg-day	--	--	--
				Toluene	1.51E+00	mg/L	1.4E-02	mg/kg-day	--	--	--
				Trichloroethene	1.20E-02	mg/L	1.1E-04	mg/kg-day	4.0E-01	(mg/kg-day)-1	4.5E-05
				Xylene (Total)	1.96E+00	mg/L	1.8E-02	mg/kg-day	--	--	--
			Exp. Route Total								1.4E-03
			Dermal (bathing/ showering)	1,2-Dichloroethane	6.95E-03	mg/L	1.4E-06	mg/kg-day	9.1E-02	(mg/kg-day)-1	1.3E-07
				2-Methylnaphthalene	2.84E-02	mg/L	6.5E-05	mg/kg-day	--	--	--
				Arsenic	4.10E-02	mg/L	2.0E-06	mg/kg-day	1.5E+00	(mg/kg-day)-1	3.0E-06
				Benzene	1.49E+00	mg/L	1.5E-03	mg/kg-day	5.5E-02	(mg/kg-day)-1	8.4E-05
				Chloroform	1.20E-02	mg/L	4.0E-06	mg/kg-day	--	--	--
				Ethylbenzene	4.48E-01	mg/L	1.1E-03	mg/kg-day	3.9E-03	(mg/kg-day)-1	4.1E-06
				Manganese	1.10E+01	mg/L	5.4E-04	mg/kg-day	--	--	--
				Naphthalene	2.14E-01	mg/L	4.9E-04	mg/kg-day	--	--	--
				n-Propylbenzene	2.30E-01	mg/L	1.0E-03	mg/kg-day	--	--	--
				Tetrachloroethene	2.60E-03	mg/L	4.2E-06	mg/kg-day	5.2E-02	(mg/kg-day)-1	2.2E-07
				Thallium	3.74E-03	mg/L	1.8E-07	mg/kg-day	--	--	--
				Toluene	1.51E+00	mg/L	2.3E-03	mg/kg-day	--	--	--
				Trichloroethene	1.20E-02	mg/L	7.1E-06	mg/kg-day	4.0E-01	(mg/kg-day)-1	2.8E-06
				Xylene (Total)	1.96E+00	mg/L	5.1E-03	mg/kg-day	--	--	--
			Exp. Route Total								9.5E-05
			Inhalation (bathing/ showering)	1,2-Dichloroethane	6.95E-03	mg/L	7.9E-06	mg/kg-day	9.1E-02	(mg/kg-day)-1	7.1E-07
				2-Methylnaphthalene	2.84E-02	mg/L	3.2E-05	mg/kg-day	--	--	--
				Benzene	1.49E+00	mg/L	1.7E-03	mg/kg-day	2.7E-02	(mg/kg-day)-1	4.5E-05
				Chloroform	1.20E-02	mg/L	1.4E-05	mg/kg-day	8.1E-02	(mg/kg-day)-1	1.1E-06
				Ethylbenzene	4.48E-01	mg/L	5.1E-04	mg/kg-day	3.9E-03	(mg/kg-day)-1	1.9E-06
				Naphthalene	2.14E-01	mg/L	2.4E-04	mg/kg-day	--	--	--
				n-Propylbenzene	2.30E-01	mg/L	2.6E-04	mg/kg-day	--	--	--
				Tetrachloroethene	2.60E-03	mg/L	2.9E-06	mg/kg-day	1.0E-02	(mg/kg-day)-1	2.9E-08
				Toluene	1.51E+00	mg/L	1.7E-03	mg/kg-day	--	--	--
				Trichloroethene	1.20E-02	mg/L	1.4E-05	mg/kg-day	4.0E-01	(mg/kg-day)-1	5.4E-06
				Xylene (Total)	1.96E+00	mg/L	2.2E-03	mg/kg-day	--	--	--

TABLE H-8.4.6.RME
EPA RAGS PART D TABLE 7a
CALCULATION OF RME CHEMICAL CANCER RISKS
FUTURE REDEVELOPED ADULT RESIDENT
SITE 22, ALAMEDA POINT, ALAMEDA, CALIFORNIA

Scenario Timeframe:	Future-Redeveloped
Receptor Population:	Resident
Receptor Age:	Adult

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations				
					Value	Units	Intake/Exposure Concentration		CSF/Unit Risk		Cancer Risk
							Value	Units	Value	Units	
			Exp. Route Total								5.5E-05
		Exposure Point Total									1.6E-03
	Exposure Medium Total										1.6E-03
Medium Total											1.6E-03
										Total of Receptor Risks Across All Media	1.6E-03

Notes:

CSF	Cancer slope factor
EPC	Exposure point concentration
mg/kg	Milligram per kilogram
mg/kg-day	Milligram per kilogram per day
(mg/kg-day)-1	1/(Milligram per kilogram per day)
RME	Reasonable maximum exposure
VOC	Volatile organic compound
--	Not Applicable or Not Available

(a) See the Vapor Intrusion to Indoor Air Evaluation for determination of the modeled indoor air concentration.

TABLE H-8.4.7.RME
EPA RAGS PART D TABLE 7b
CALCULATION OF RME CHEMICAL CANCER RISKS
FUTURE REDEVELOPED CHILD RESIDENT
SITE 22, ALAMEDA POINT, ALAMEDA, CALIFORNIA

Scenario Timeframe:	Future-Redeveloped
Receptor Population:	Resident
Receptor Age:	Child

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations				
					Value	Units	Intake/Exposure Concentration		CSF/Unit Risk		Cancer Risk
							Value	Units	Value	Units	
Soil (0-8)	Soil	Site Soil	Ingestion	2-Methylnaphthalene	1.42E+01	mg/kg	1.6E-05	mg/kg-day	--	--	--
				Arsenic	7.36E+00	mg/kg	8.1E-06	mg/kg-day	1.5E+00	(mg/kg-day)-1	1.2E-05
				Benzene	3.30E+00	mg/kg	3.6E-06	mg/kg-day	5.5E-02	(mg/kg-day)-1	2.0E-07
				Benzo(a)pyrene	6.71E-02	mg/kg	7.4E-08	mg/kg-day	7.3E+00	(mg/kg-day)-1	5.4E-07
				Ethylbenzene	1.12E+02	mg/kg	1.2E-04	mg/kg-day	3.9E-03	(mg/kg-day)-1	4.7E-07
				Lead	1.14E+03	mg/kg	1.2E-03	mg/kg-day	--	--	--
				Toluene	1.44E+02	mg/kg	1.6E-04	mg/kg-day	--	--	--
				Xylene (Total)	5.05E+02	mg/kg	5.5E-04	mg/kg-day	--	--	--
			Exp. Route Total								1.3E-05
			Dermal	2-Methylnaphthalene	1.42E+01	mg/kg	--	mg/kg-day	--	--	--
				Arsenic	7.36E+00	mg/kg	6.8E-07	mg/kg-day	1.5E+00	(mg/kg-day)-1	1.0E-06
				Benzene	3.30E+00	mg/kg	--	mg/kg-day	5.5E-02	(mg/kg-day)-1	--
				Benzo(a)pyrene	6.71E-02	mg/kg	2.7E-08	mg/kg-day	7.3E+00	(mg/kg-day)-1	2.0E-07
				Ethylbenzene	1.12E+02	mg/kg	--	mg/kg-day	3.9E-03	(mg/kg-day)-1	--
				Lead	1.14E+03	mg/kg	3.5E-05	mg/kg-day	--	--	--
				Toluene	1.44E+02	mg/kg	--	mg/kg-day	--	--	--
				Xylene (Total)	5.05E+02	mg/kg	--	mg/kg-day	--	--	--
			Exp. Route Total								1.2E-06
		Exposure Point Total									1.5E-05
	Exposure Medium Total										1.5E-05
	Homegrown Produce	Homegrown Produce	Ingestion	2-Methylnaphthalene	1.42E+01	mg/kg	--	mg/kg-day	--	--	--
				Arsenic	7.36E+00	mg/kg	3.2E-06	mg/kg-day	1.5E+00	(mg/kg-day)-1	4.8E-06
				Benzene	3.30E+00	mg/kg	--	mg/kg-day	5.5E-02	(mg/kg-day)-1	--
				Benzo(a)pyrene	6.71E-02	mg/kg	2.0E-08	mg/kg-day	7.3E+00	(mg/kg-day)-1	1.5E-07
				Ethylbenzene	1.12E+02	mg/kg	--	mg/kg-day	3.9E-03	(mg/kg-day)-1	--
				Lead	1.14E+03	mg/kg	--	mg/kg-day	--	--	--
				Toluene	1.44E+02	mg/kg	--	mg/kg-day	--	--	--
				Xylene (Total)	5.05E+02	mg/kg	--	mg/kg-day	--	--	--
			Exp. Route Total								4.9E-06
		Exposure Point Total									4.9E-06
	Exposure Medium Total										4.9E-06
	Air	Outdoor Air	Inhalation (particulates)	2-Methylnaphthalene	1.42E+01	mg/kg	5.9E-10	mg/kg-day	--	--	--
				Arsenic	7.36E+00	mg/kg	3.1E-10	mg/kg-day	1.5E+01	(mg/kg-day)-1	4.6E-09

TABLE H-8.4.7.RME
EPA RAGS PART D TABLE 7b
CALCULATION OF RME CHEMICAL CANCER RISKS
FUTURE REDEVELOPED CHILD RESIDENT
SITE 22, ALAMEDA POINT, ALAMEDA, CALIFORNIA

Scenario Timeframe:	Future-Redeveloped
Receptor Population:	Resident
Receptor Age:	Child

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations				
					Value	Units	Intake/Exposure Concentration		CSF/Unit Risk		Cancer Risk
							Value	Units	Value	Units	
				Benzene	3.30E+00	mg/kg	1.4E-10	mg/kg-day	2.7E-02	(mg/kg-day)-1	3.7E-12
				Benzo(a)pyrene	6.71E-02	mg/kg	2.8E-12	mg/kg-day	7.3E+00	(mg/kg-day)-1	2.0E-11
				Ethylbenzene	1.12E+02	mg/kg	4.7E-09	mg/kg-day	3.9E-03	(mg/kg-day)-1	1.8E-11
				Lead	1.14E+03	mg/kg	4.8E-08	mg/kg-day	--	--	--
				Toluene	1.44E+02	mg/kg	6.0E-09	mg/kg-day	--	--	--
				Xylene (Total)	5.05E+02	mg/kg	2.1E-08	mg/kg-day	--	--	--
			Exp. Route Total								4.7E-09
			Inhalation (VOCs)	2-Methylnaphthalene	1.42E+01	mg/kg	1.8E-05	mg/kg-day	--	--	--
				Benzene	3.30E+00	mg/kg	6.8E-05	mg/kg-day	2.7E-02	(mg/kg-day)-1	1.8E-06
				Ethylbenzene	1.12E+02	mg/kg	1.1E-03	mg/kg-day	3.9E-03	(mg/kg-day)-1	4.4E-06
				Toluene	1.44E+02	mg/kg	2.0E-03	mg/kg-day	--	--	--
				Xylene (Total)	5.05E+02	mg/kg	4.6E-03	mg/kg-day	--	--	--
			Exp. Route Total								6.2E-06
		Exposure Point Total									6.2E-06
	Exposure Medium Total										6.2E-06
Medium Total											2.6E-05
Groundwater	Groundwater	Indoor Air (Vapor Intrusion)	Inhalation	Benzene	1.40E+01	(a) ug/m3	7.7E-04	mg/kg-day	2.7E-02	(mg/kg-day)-1	2.1E-05
				Ethylbenzene	1.10E+01	(a) ug/m3	6.1E-04	mg/kg-day	3.9E-03	(mg/kg-day)-1	2.3E-06
				o-Xylene	2.60E+01	(a) ug/m3	1.4E-03	mg/kg-day	--	(mg/kg-day)-1	--
				m-Xylene	4.70E+00	(a) ug/m3	2.6E-04	mg/kg-day	--	(mg/kg-day)-1	--
				Toluene	2.90E+01	(a) ug/m3	1.6E-03	mg/kg-day	--	(mg/kg-day)-1	--
			Exp. Route Total								2.3E-05
		Exposure Point Total									2.3E-05
		Tap	Ingestion	1,2-Dichloroethane	6.95E-03	mg/L	3.8E-05	mg/kg-day	9.1E-02	(mg/kg-day)-1	3.5E-06
				2-Methylnaphthalene	2.84E-02	mg/L	1.6E-04	mg/kg-day	--	--	--
				Arsenic	4.10E-02	mg/L	2.2E-04	mg/kg-day	1.5E+00	(mg/kg-day)-1	3.4E-04
				Benzene	1.49E+00	mg/L	8.2E-03	mg/kg-day	5.5E-02	(mg/kg-day)-1	4.5E-04
				Chloroform	1.20E-02	mg/L	6.6E-05	mg/kg-day	--	--	--
				Ethylbenzene	4.48E-01	mg/L	2.5E-03	mg/kg-day	3.9E-03	(mg/kg-day)-1	9.5E-06
				Manganese	1.10E+01	mg/L	6.0E-02	mg/kg-day	--	--	--
				Naphthalene	2.14E-01	mg/L	1.2E-03	mg/kg-day	--	--	--
				n-Propylbenzene	2.30E-01	mg/L	1.3E-03	mg/kg-day	--	--	--

TABLE H-8.4.7.RME
EPA RAGS PART D TABLE 7b
CALCULATION OF RME CHEMICAL CANCER RISKS
FUTURE REDEVELOPED CHILD RESIDENT
SITE 22, ALAMEDA POINT, ALAMEDA, CALIFORNIA

Scenario Timeframe:	Future-Redeveloped
Receptor Population:	Resident
Receptor Age:	Child

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations				
					Value	Units	Intake/Exposure Concentration		CSF/Unit Risk		Cancer Risk
							Value	Units	Value	Units	
				Tetrachloroethene	2.60E-03	mg/L	1.4E-05	mg/kg-day	5.2E-02	(mg/kg-day)-1	7.4E-07
				Thallium	3.74E-03	mg/L	2.0E-05	mg/kg-day	--	--	--
				Toluene	1.51E+00	mg/L	8.3E-03	mg/kg-day	--	--	--
				Trichloroethene	1.20E-02	mg/L	6.6E-05	mg/kg-day	4.0E-01	(mg/kg-day)-1	2.6E-05
				Xylene (Total)	1.96E+00	mg/L	1.1E-02	mg/kg-day	--	--	--
			Exp. Route Total								8.3E-04
			Dermal (bathing/ showering)	1,2-Dichloroethane	6.95E-03	mg/L	1.1E-06	mg/kg-day	9.1E-02	(mg/kg-day)-1	9.6E-08
				2-Methylnaphthalene	2.84E-02	mg/L	4.6E-05	mg/kg-day	--	--	--
				Arsenic	4.10E-02	mg/L	1.5E-06	mg/kg-day	1.5E+00	(mg/kg-day)-1	2.2E-06
				Benzene	1.49E+00	mg/L	1.1E-03	mg/kg-day	5.5E-02	(mg/kg-day)-1	6.2E-05
				Chloroform	1.20E-02	mg/L	3.0E-06	mg/kg-day	--	--	--
				Ethylbenzene	4.48E-01	mg/L	7.9E-04	mg/kg-day	3.9E-03	(mg/kg-day)-1	3.1E-06
				Manganese	1.10E+01	mg/L	4.0E-04	mg/kg-day	--	--	--
				Naphthalene	2.14E-01	mg/L	3.6E-04	mg/kg-day	--	--	--
				n-Propylbenzene	2.30E-01	mg/L	7.6E-04	mg/kg-day	--	--	--
				Tetrachloroethene	2.60E-03	mg/L	3.1E-06	mg/kg-day	5.2E-02	(mg/kg-day)-1	1.6E-07
				Thallium	3.74E-03	mg/L	1.4E-07	mg/kg-day	--	--	--
				Toluene	1.51E+00	mg/L	1.7E-03	mg/kg-day	--	--	--
				Trichloroethene	1.20E-02	mg/L	5.2E-06	mg/kg-day	4.0E-01	(mg/kg-day)-1	2.1E-06
				Xylene (Total)	1.96E+00	mg/L	3.8E-03	mg/kg-day	--	--	--
			Exp. Route Total								7.0E-05
			Inhalation (bathing/ showering)	1,2-Dichloroethane	6.95E-03	mg/L	8.0E-06	mg/kg-day	9.1E-02	(mg/kg-day)-1	7.3E-07
				2-Methylnaphthalene	2.84E-02	mg/L	3.3E-05	mg/kg-day	--	--	--
				Benzene	1.49E+00	mg/L	1.7E-03	mg/kg-day	2.7E-02	(mg/kg-day)-1	4.6E-05
				Chloroform	1.20E-02	mg/L	1.4E-05	mg/kg-day	8.1E-02	(mg/kg-day)-1	1.1E-06
				Ethylbenzene	4.48E-01	mg/L	5.2E-04	mg/kg-day	3.9E-03	(mg/kg-day)-1	2.0E-06
				Naphthalene	2.14E-01	mg/L	2.5E-04	mg/kg-day	--	--	--
				n-Propylbenzene	2.30E-01	mg/L	2.6E-04	mg/kg-day	--	--	--
				Tetrachloroethene	2.60E-03	mg/L	3.0E-06	mg/kg-day	1.0E-02	(mg/kg-day)-1	3.0E-08
				Toluene	1.51E+00	mg/L	1.7E-03	mg/kg-day	--	--	--
				Trichloroethene	1.20E-02	mg/L	1.4E-05	mg/kg-day	4.0E-01	(mg/kg-day)-1	5.5E-06
				Xylene (Total)	1.96E+00	mg/L	2.3E-03	mg/kg-day	--	--	--

TABLE H-8.4.7.RME
EPA RAGS PART D TABLE 7b
CALCULATION OF RME CHEMICAL CANCER RISKS
FUTURE REDEVELOPED CHILD RESIDENT
SITE 22, ALAMEDA POINT, ALAMEDA, CALIFORNIA

Scenario Timeframe:	Future-Redeveloped
Receptor Population:	Resident
Receptor Age:	Child

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations				
					Value	Units	Intake/Exposure Concentration		CSF/Unit Risk		Cancer Risk
							Value	Units	Value	Units	
			Exp. Route Total								5.6E-05
		Exposure Point Total									9.5E-04
	Exposure Medium Total										9.7E-04
Medium Total											9.7E-04
										Total of Receptor Risks Across All Media	1.0E-03

Notes:

CSF	Cancer slope factor
EPC	Exposure point concentration
mg/kg	Milligram per kilogram
mg/kg-day	Milligram per kilogram per day
(mg/kg-day)-1	1/(Milligram per kilogram per day)
RME	Reasonable maximum exposure
VOC	Volatile organic compound
--	Not Applicable or Not Available

(a) See the Vapor Intrusion to Indoor Air Evaluation for determination of the modeled indoor air concentration.

HHRA RISK TABLES

Reasonable Maximum Exposure
Site 23
Alameda Point, Alameda, California

TABLE H-8.5.1.RME
EPA RAGS PART D TABLE 7a
CALCULATION OF RME CHEMICAL CANCER RISKS
CURRENT INDUSTRIAL WORKER
SITE 23, ALAMEDA POINT, ALAMEDA, CALIFORNIA

Scenario Timeframe:	Future
Receptor Population:	Industrial Worker
Receptor Age:	Adult

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations				
					Value	Units	Intake/Exposure Concentration		CSF/Unit Risk		Cancer Risk
							Value	Units	Value	Units	
Soil (0-2)	Soil	Site Soil	Ingestion	Arsenic	4.20E+00	mg/kg	1.5E-06	mg/kg-day	1.5E+00	(mg/kg-day)-1	2.2E-06
				Benz(a)anthracene	1.34E-01	mg/kg	4.7E-08	mg/kg-day	7.3E-01	(mg/kg-day)-1	3.4E-08
				Benzo(a)pyrene	1.44E-01	mg/kg	5.0E-08	mg/kg-day	7.3E+00	(mg/kg-day)-1	3.7E-07
				Benzo(b)fluoranthene	1.51E-01	mg/kg	5.3E-08	mg/kg-day	7.3E-01	(mg/kg-day)-1	3.9E-08
				Benzo(k)fluoranthene	1.03E-01	mg/kg	3.6E-08	mg/kg-day	7.3E-02	(mg/kg-day)-1	2.6E-09
				Dibenz(a,h)anthracene	4.73E-02	mg/kg	1.7E-08	mg/kg-day	7.3E+00	(mg/kg-day)-1	1.2E-07
				Indeno(1,2,3-cd)pyrene	1.21E-01	mg/kg	4.2E-08	mg/kg-day	7.3E-01	(mg/kg-day)-1	3.1E-08
			Exp. Route Total								2.8E-06
			Dermal	Arsenic	4.20E+00	mg/kg	2.9E-07	mg/kg-day	1.5E+00	(mg/kg-day)-1	4.4E-07
				Benz(a)anthracene	1.34E-01	mg/kg	4.0E-08	mg/kg-day	7.3E-01	(mg/kg-day)-1	2.9E-08
				Benzo(a)pyrene	1.44E-01	mg/kg	4.3E-08	mg/kg-day	7.3E+00	(mg/kg-day)-1	3.2E-07
				Benzo(b)fluoranthene	1.51E-01	mg/kg	4.5E-08	mg/kg-day	7.3E-01	(mg/kg-day)-1	3.3E-08
				Benzo(k)fluoranthene	1.03E-01	mg/kg	3.1E-08	mg/kg-day	7.3E-02	(mg/kg-day)-1	2.3E-09
				Dibenz(a,h)anthracene	4.73E-02	mg/kg	1.4E-08	mg/kg-day	7.3E+00	(mg/kg-day)-1	1.0E-07
				Indeno(1,2,3-cd)pyrene	1.21E-01	mg/kg	3.6E-08	mg/kg-day	7.3E-01	(mg/kg-day)-1	2.6E-08
			Exp. Route Total								9.5E-07
		Exposure Point Total									3.7E-06
	Exposure Medium Total										3.7E-06
	Air	Outdoor Air	Inhalation (particulates)	Arsenic	4.20E+00	mg/kg	2.2E-10	mg/kg-day	1.5E+01	(mg/kg-day)-1	3.3E-09
				Benz(a)anthracene	1.34E-01	mg/kg	7.1E-12	mg/kg-day	7.3E-01	(mg/kg-day)-1	5.2E-12
				Benzo(a)pyrene	1.44E-01	mg/kg	7.6E-12	mg/kg-day	7.3E+00	(mg/kg-day)-1	5.6E-11
				Benzo(b)fluoranthene	1.51E-01	mg/kg	8.0E-12	mg/kg-day	7.3E-01	(mg/kg-day)-1	5.8E-12
				Benzo(k)fluoranthene	1.03E-01	mg/kg	5.5E-12	mg/kg-day	7.3E-02	(mg/kg-day)-1	4.0E-13
				Dibenz(a,h)anthracene	4.73E-02	mg/kg	2.5E-12	mg/kg-day	7.3E+00	(mg/kg-day)-1	1.8E-11
				Indeno(1,2,3-cd)pyrene	1.21E-01	mg/kg	6.4E-12	mg/kg-day	7.3E-01	(mg/kg-day)-1	4.7E-12
			Exp. Route Total								3.4E-09
		Exposure Point Total									3.4E-09
	Exposure Medium Total										3.4E-09
Medium Total											3.7E-06
										Total of Receptor Risks Across All Media	3.7E-06

Notes:

CSF Cancer slope factor
EPC Exposure point concentration

TABLE H-8.5.1.RME
EPA RAGS PART D TABLE 7a
CALCULATION OF RME CHEMICAL CANCER RISKS
CURRENT INDUSTRIAL WORKER
SITE 23, ALAMEDA POINT, ALAMEDA, CALIFORNIA

Scenario Timeframe:	Future
Receptor Population:	Industrial Worker
Receptor Age:	Adult

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations				
					Value	Units	Intake/Exposure Concentration		CSF/Unit Risk		Cancer Risk
							Value	Units	Value	Units	

mg/kg	Milligram per kilogram
mg/kg-day	Milligram per kilogram per day
(mg/kg-day)-1	1/(Milligram per kilogram per day)
RME	Reasonable maximum exposure

TABLE H-8.5.2.RME
EPA RAGS PART D TABLE 7a
CALCULATION OF RME CHEMICAL CANCER RISKS
CURRENT CONSTRUCTION WORKER
SITE 23, ALAMEDA POINT, ALAMEDA, CALIFORNIA

Scenario Timeframe:	Future
Receptor Population:	Construction Worker
Receptor Age:	Adult

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations				
					Value	Units	Intake/Exposure Concentration		CSF/Unit Risk		Cancer Risk
							Value	Units	Value	Units	
Soil (0-2)	Soil	Site Soil	Ingestion	Arsenic	4.20E+00	mg/kg	1.9E-07	mg/kg-day	1.5E+00	(mg/kg-day)-1	2.9E-07
				Benz(a)anthracene	1.34E-01	mg/kg	6.2E-09	mg/kg-day	7.3E-01	(mg/kg-day)-1	4.5E-09
				Benzo(a)pyrene	1.44E-01	mg/kg	6.6E-09	mg/kg-day	7.3E+00	(mg/kg-day)-1	4.8E-08
				Benzo(b)fluoranthene	1.51E-01	mg/kg	7.0E-09	mg/kg-day	7.3E-01	(mg/kg-day)-1	5.1E-09
				Benzo(k)fluoranthene	1.03E-01	mg/kg	4.8E-09	mg/kg-day	7.3E-02	(mg/kg-day)-1	3.5E-10
				Dibenz(a,h)anthracene	4.73E-02	mg/kg	2.2E-09	mg/kg-day	7.3E+00	(mg/kg-day)-1	1.6E-08
				Indeno(1,2,3-cd)pyrene	1.21E-01	mg/kg	5.6E-09	mg/kg-day	7.3E-01	(mg/kg-day)-1	4.1E-09
			Exp. Route Total								3.7E-07
			Dermal	Arsenic	4.20E+00	mg/kg	1.7E-08	mg/kg-day	1.5E+00	(mg/kg-day)-1	2.6E-08
				Benz(a)anthracene	1.34E-01	mg/kg	2.4E-09	mg/kg-day	7.3E-01	(mg/kg-day)-1	1.8E-09
				Benzo(a)pyrene	1.44E-01	mg/kg	2.6E-09	mg/kg-day	7.3E+00	(mg/kg-day)-1	1.9E-08
				Benzo(b)fluoranthene	1.51E-01	mg/kg	2.7E-09	mg/kg-day	7.3E-01	(mg/kg-day)-1	2.0E-09
				Benzo(k)fluoranthene	1.03E-01	mg/kg	1.9E-09	mg/kg-day	7.3E-02	(mg/kg-day)-1	1.4E-10
				Dibenz(a,h)anthracene	4.73E-02	mg/kg	8.5E-10	mg/kg-day	7.3E+00	(mg/kg-day)-1	6.2E-09
				Indeno(1,2,3-cd)pyrene	1.21E-01	mg/kg	2.2E-09	mg/kg-day	7.3E-01	(mg/kg-day)-1	1.6E-09
			Exp. Route Total								5.7E-08
		Exposure Point Total									4.3E-07
	Exposure Medium Total										4.3E-07
	Air	Outdoor Air	Inhalation (particulates)	Arsenic	4.20E+00	mg/kg	8.9E-12	mg/kg-day	1.5E+01	(mg/kg-day)-1	1.3E-10
				Benz(a)anthracene	1.34E-01	mg/kg	2.8E-13	mg/kg-day	7.3E-01	(mg/kg-day)-1	2.1E-13
				Benzo(a)pyrene	1.44E-01	mg/kg	3.0E-13	mg/kg-day	7.3E+00	(mg/kg-day)-1	2.2E-12
				Benzo(b)fluoranthene	1.51E-01	mg/kg	3.2E-13	mg/kg-day	7.3E-01	(mg/kg-day)-1	2.3E-13
				Benzo(k)fluoranthene	1.03E-01	mg/kg	2.2E-13	mg/kg-day	7.3E-02	(mg/kg-day)-1	1.6E-14
				Dibenz(a,h)anthracene	4.73E-02	mg/kg	1.0E-13	mg/kg-day	7.3E+00	(mg/kg-day)-1	7.3E-13
				Indeno(1,2,3-cd)pyrene	1.21E-01	mg/kg	2.6E-13	mg/kg-day	7.3E-01	(mg/kg-day)-1	1.9E-13
			Exp. Route Total								1.4E-10
		Exposure Point Total									1.4E-10
	Exposure Medium Total										1.4E-10
Medium Total											4.3E-07
										Total of Receptor Risks Across All Media	4.3E-07

Notes:

CSF Cancer slope factor
EPC Exposure point concentration

TABLE H-8.5.2.RME
EPA RAGS PART D TABLE 7a
CALCULATION OF RME CHEMICAL CANCER RISKS
CURRENT CONSTRUCTION WORKER
SITE 23, ALAMEDA POINT, ALAMEDA, CALIFORNIA

Scenario Timeframe:	Future
Receptor Population:	Construction Worker
Receptor Age:	Adult

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations				Cancer Risk
					Value	Units	Intake/Exposure Concentration		CSF/Unit Risk		
							Value	Units	Value	Units	

mg/kg	Milligram per kilogram
mg/kg-day	Milligram per kilogram per day
(mg/kg-day)-1	1/(Milligram per kilogram per day)
RME	Reasonable maximum exposure

TABLE H-8.5.3.RME
EPA RAGS PART D TABLE 7a
CALCULATION OF RME CHEMICAL CANCER RISKS
CURRENT ADULT RESIDENT
SITE 23, ALAMEDA POINT, ALAMEDA, CALIFORNIA

Scenario Timeframe:	Future
Receptor Population:	Resident
Receptor Age:	Adult

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations				
					Value	Units	Intake/Exposure Concentration		CSF/Unit Risk		Cancer Risk
							Value	Units	Value	Units	
Soil (0-2)	Soil	Site Soil	Ingestion	Arsenic	4.20E+00	mg/kg	2.0E-06	mg/kg-day	1.5E+00	(mg/kg-day)-1	3.0E-06
				Benz(a)anthracene	1.34E-01	mg/kg	6.3E-08	mg/kg-day	7.3E-01	(mg/kg-day)-1	4.6E-08
				Benzo(a)pyrene	1.44E-01	mg/kg	6.8E-08	mg/kg-day	7.3E+00	(mg/kg-day)-1	4.9E-07
				Benzo(b)fluoranthene	1.51E-01	mg/kg	7.1E-08	mg/kg-day	7.3E-01	(mg/kg-day)-1	5.2E-08
				Benzo(k)fluoranthene	1.03E-01	mg/kg	4.8E-08	mg/kg-day	7.3E-02	(mg/kg-day)-1	3.5E-09
				Dibenz(a,h)anthracene	4.73E-02	mg/kg	2.2E-08	mg/kg-day	7.3E+00	(mg/kg-day)-1	1.6E-07
				Indeno(1,2,3-cd)pyrene	1.21E-01	mg/kg	5.7E-08	mg/kg-day	7.3E-01	(mg/kg-day)-1	4.1E-08
			Exp. Route Total								3.8E-06
			Dermal	Arsenic	4.20E+00	mg/kg	2.4E-07	mg/kg-day	1.5E+00	(mg/kg-day)-1	3.5E-07
				Benz(a)anthracene	1.34E-01	mg/kg	3.3E-08	mg/kg-day	7.3E-01	(mg/kg-day)-1	2.4E-08
				Benzo(a)pyrene	1.44E-01	mg/kg	3.5E-08	mg/kg-day	7.3E+00	(mg/kg-day)-1	2.6E-07
				Benzo(b)fluoranthene	1.51E-01	mg/kg	3.7E-08	mg/kg-day	7.3E-01	(mg/kg-day)-1	2.7E-08
				Benzo(k)fluoranthene	1.03E-01	mg/kg	2.5E-08	mg/kg-day	7.3E-02	(mg/kg-day)-1	1.8E-09
				Dibenz(a,h)anthracene	4.73E-02	mg/kg	1.2E-08	mg/kg-day	7.3E+00	(mg/kg-day)-1	8.4E-08
				Indeno(1,2,3-cd)pyrene	1.21E-01	mg/kg	2.9E-08	mg/kg-day	7.3E-01	(mg/kg-day)-1	2.2E-08
			Exp. Route Total								7.7E-07
		Exposure Point Total									4.5E-06
	Exposure Medium Total										4.5E-06
	Homegrown Produce	Homegrown Produce	Ingestion	Arsenic	4.20E+00	mg/kg	7.3E-06	mg/kg-day	1.5E+00	(mg/kg-day)-1	1.1E-05
				Benz(a)anthracene	1.34E-01	mg/kg	2.1E-07	mg/kg-day	7.3E-01	(mg/kg-day)-1	1.5E-07
				Benzo(a)pyrene	1.44E-01	mg/kg	1.7E-07	mg/kg-day	7.3E+00	(mg/kg-day)-1	1.3E-06
				Benzo(b)fluoranthene	1.51E-01	mg/kg	1.7E-07	mg/kg-day	7.3E-01	(mg/kg-day)-1	1.2E-07
				Benzo(k)fluoranthene	1.03E-01	mg/kg	1.1E-07	mg/kg-day	7.3E-02	(mg/kg-day)-1	8.3E-09
				Dibenz(a,h)anthracene	4.73E-02	mg/kg	8.6E-08	mg/kg-day	7.3E+00	(mg/kg-day)-1	6.3E-07
				Indeno(1,2,3-cd)pyrene	1.21E-01	mg/kg	1.1E-07	mg/kg-day	7.3E-01	(mg/kg-day)-1	7.7E-08
			Exp. Route Total								1.3E-05
		Exposure Point Total									1.3E-05
	Exposure Medium Total										1.3E-05
	Air	Outdoor Air	Inhalation (particulates)	Arsenic	4.20E+00	mg/kg	3.0E-10	mg/kg-day	1.5E+01	(mg/kg-day)-1	4.5E-09
				Benz(a)anthracene	1.34E-01	mg/kg	9.5E-12	mg/kg-day	7.3E-01	(mg/kg-day)-1	6.9E-12
				Benzo(a)pyrene	1.44E-01	mg/kg	1.0E-11	mg/kg-day	7.3E+00	(mg/kg-day)-1	7.5E-11
				Benzo(b)fluoranthene	1.51E-01	mg/kg	1.1E-11	mg/kg-day	7.3E-01	(mg/kg-day)-1	7.8E-12
				Benzo(k)fluoranthene	1.03E-01	mg/kg	7.3E-12	mg/kg-day	7.3E-02	(mg/kg-day)-1	5.3E-13

TABLE H-8.5.3.RME
EPA RAGS PART D TABLE 7a
CALCULATION OF RME CHEMICAL CANCER RISKS
CURRENT ADULT RESIDENT
SITE 23, ALAMEDA POINT, ALAMEDA, CALIFORNIA

Scenario Timeframe:	*Future*
Receptor Population:	Resident
Receptor Age:	Adult

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations				
					Value	Units	Intake/Exposure Concentration		CSF/Unit Risk		Cancer Risk
							Value	Units	Value	Units	
				Dibenz(a,h)anthracene	4.73E-02	mg/kg	3.4E-12	mg/kg-day	7.3E+00	(mg/kg-day)-1	2.4E-11
				Indeno(1,2,3-cd)pyrene	1.21E-01	mg/kg	8.6E-12	mg/kg-day	7.3E-01	(mg/kg-day)-1	6.3E-12
			Exp. Route Total								4.6E-09
		Exposure Point Total									4.6E-09
	Exposure Medium Total										4.6E-09
Medium Total											1.8E-05
Groundwater	Groundwater	Tap	Ingestion	1,2,4-Trimethylbenzene	3.35E-01	mg/L	3.1E-03	mg/kg-day	--	--	--
				2-Butanone	1.13E+00	mg/L	1.1E-02	mg/kg-day	--	--	--
				2-Methylnaphthalene	1.89E-02	mg/L	1.8E-04	mg/kg-day	--	--	--
				Arsenic	1.15E-02	mg/L	1.1E-04	mg/kg-day	1.5E+00	(mg/kg-day)-1	1.6E-04
				Benzene	1.00E-03	mg/L	9.4E-06	mg/kg-day	5.5E-02	(mg/kg-day)-1	5.2E-07
				Benzo(a)pyrene	6.00E-04	mg/L	5.6E-06	mg/kg-day	7.3E+00	(mg/kg-day)-1	4.1E-05
				Benzo(b)fluoranthene	8.00E-04	mg/L	7.5E-06	mg/kg-day	7.3E-01	(mg/kg-day)-1	5.5E-06
				Chrysene	9.00E-04	mg/L	8.5E-06	mg/kg-day	7.3E-03	(mg/kg-day)-1	6.2E-08
				Ethylbenzene	1.50E-02	mg/L	1.4E-04	mg/kg-day	3.9E-03	(mg/kg-day)-1	5.4E-07
				Isopropylbenzene	3.89E-01	mg/L	3.7E-03	mg/kg-day	--	--	--
				Naphthalene	1.81E-01	mg/L	1.7E-03	mg/kg-day	--	--	--
				sec-Butylbenzene	3.89E-01	mg/L	3.7E-03	mg/kg-day	--	--	--
				Thallium	2.82E-03	mg/L	2.6E-05	mg/kg-day	--	--	--
				Xylene (Total)	1.41E-01	mg/L	1.3E-03	mg/kg-day	--	--	--
			Exp. Route Total								2.1E-04
			Dermal (bathing/ showering)	1,2,4-Trimethylbenzene	3.35E-01	mg/L	1.4E-03	mg/kg-day	--	--	--
				2-Butanone	1.13E+00	mg/L	5.3E-05	mg/kg-day	--	--	--
				2-Methylnaphthalene	1.89E-02	mg/L	4.4E-05	mg/kg-day	--	--	--
				Arsenic	1.15E-02	mg/L	5.6E-07	mg/kg-day	1.5E+00	(mg/kg-day)-1	8.5E-07
				Benzene	1.00E-03	mg/L	1.0E-06	mg/kg-day	5.5E-02	(mg/kg-day)-1	5.7E-08
				Benzo(a)pyrene	6.00E-04	mg/L	2.1E-05	mg/kg-day	7.3E+00	(mg/kg-day)-1	1.5E-04
				Benzo(b)fluoranthene	8.00E-04	mg/L	2.7E-05	mg/kg-day	7.3E-01	(mg/kg-day)-1	2.0E-05
				Chrysene	9.00E-04	mg/L	2.1E-05	mg/kg-day	7.3E-03	(mg/kg-day)-1	1.5E-07
				Ethylbenzene	1.50E-02	mg/L	3.6E-05	mg/kg-day	3.9E-03	(mg/kg-day)-1	1.4E-07
				Isopropylbenzene	3.89E-01	mg/L	1.7E-03	mg/kg-day	--	--	--
				Naphthalene	1.81E-01	mg/L	4.2E-04	mg/kg-day	--	--	--
				sec-Butylbenzene	3.89E-01	mg/L	3.4E-03	mg/kg-day	--	--	--
				Thallium	2.82E-03	mg/L	1.4E-07	mg/kg-day	--	--	--

TABLE H-8.5.3.RME
EPA RAGS PART D TABLE 7a
CALCULATION OF RME CHEMICAL CANCER RISKS
CURRENT ADULT RESIDENT
SITE 23, ALAMEDA POINT, ALAMEDA, CALIFORNIA

Scenario Timeframe:	Future
Receptor Population:	Resident
Receptor Age:	Adult

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations				
					Value	Units	Intake/Exposure Concentration		CSF/Unit Risk		Cancer Risk
							Value	Units	Value	Units	
				Xylene (Total)	1.41E-01	mg/L	3.7E-04	mg/kg-day	--	--	--
			Exp. Route Total								1.7E-04
			Inhalation (bathing/ showering)	1,2,4-Trimethylbenzene	3.35E-01	mg/L	3.8E-04	mg/kg-day	--	--	--
				2-Butanone	1.13E+00	mg/L	1.3E-03	mg/kg-day	--	--	--
				2-Methylnaphthalene	1.89E-02	mg/L	2.1E-05	mg/kg-day	--	--	--
				Benzene	1.00E-03	mg/L	1.1E-06	mg/kg-day	2.7E-02	(mg/kg-day)-1	3.1E-08
				Ethylbenzene	1.50E-02	mg/L	1.7E-05	mg/kg-day	3.9E-03	(mg/kg-day)-1	6.5E-08
				Isopropylbenzene	3.89E-01	mg/L	4.4E-04	mg/kg-day	--	--	--
				Naphthalene	1.81E-01	mg/L	2.0E-04	mg/kg-day	--	--	--
				sec-Butylbenzene	3.89E-01	mg/L	4.4E-04	mg/kg-day	--	--	--
				Xylene (Total)	1.41E-01	mg/L	1.6E-04	mg/kg-day	--	--	--
			Exp. Route Total								9.6E-08
		Exposure Point Total									3.8E-04
	Exposure Medium Total										3.8E-04
Medium Total											3.8E-04
										Total of Receptor Risks Across All Media	4.0E-04

Notes:

CSF	Cancer slope factor
EPC	Exposure point concentration
mg/kg	Milligram per kilogram
mg/kg-day	Milligram per kilogram per day
(mg/kg-day)-1	1/(Milligram per kilogram per day)
RME	Reasonable maximum exposure

TABLE H-8.5.4.RME
EPA RAGS PART D TABLE 7a
CALCULATION OF RME CHEMICAL CANCER RISKS
CURRENT CHILD RESIDENT
SITE 23, ALAMEDA POINT, ALAMEDA, CALIFORNIA

Scenario Timeframe:	Future
Receptor Population:	Resident
Receptor Age:	Child

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations				
					Value	Units	Intake/Exposure Concentration		CSF/Unit Risk		Cancer Risk
							Value	Units	Value	Units	
Soil (0-2)	Soil	Site Soil	Ingestion	Arsenic	4.20E+00	mg/kg	4.6E-06	mg/kg-day	1.5E+00	(mg/kg-day)-1	6.9E-06
				Benz(a)anthracene	1.34E-01	mg/kg	1.5E-07	mg/kg-day	7.3E-01	(mg/kg-day)-1	1.1E-07
				Benzo(a)pyrene	1.44E-01	mg/kg	1.6E-07	mg/kg-day	7.3E+00	(mg/kg-day)-1	1.2E-06
				Benzo(b)fluoranthene	1.51E-01	mg/kg	1.7E-07	mg/kg-day	7.3E-01	(mg/kg-day)-1	1.2E-07
				Benzo(k)fluoranthene	1.03E-01	mg/kg	1.1E-07	mg/kg-day	7.3E-02	(mg/kg-day)-1	8.2E-09
				Dibenz(a,h)anthracene	4.73E-02	mg/kg	5.2E-08	mg/kg-day	7.3E+00	(mg/kg-day)-1	3.8E-07
				Indeno(1,2,3-cd)pyrene	1.21E-01	mg/kg	1.3E-07	mg/kg-day	7.3E-01	(mg/kg-day)-1	9.7E-08
			Exp. Route Total								8.8E-06
			Dermal	Arsenic	4.20E+00	mg/kg	3.9E-07	mg/kg-day	1.5E+00	(mg/kg-day)-1	5.8E-07
				Benz(a)anthracene	1.34E-01	mg/kg	5.3E-08	mg/kg-day	7.3E-01	(mg/kg-day)-1	3.9E-08
				Benzo(a)pyrene	1.44E-01	mg/kg	5.7E-08	mg/kg-day	7.3E+00	(mg/kg-day)-1	4.2E-07
				Benzo(b)fluoranthene	1.51E-01	mg/kg	6.0E-08	mg/kg-day	7.3E-01	(mg/kg-day)-1	4.4E-08
				Benzo(k)fluoranthene	1.03E-01	mg/kg	4.1E-08	mg/kg-day	7.3E-02	(mg/kg-day)-1	3.0E-09
				Dibenz(a,h)anthracene	4.73E-02	mg/kg	1.9E-08	mg/kg-day	7.3E+00	(mg/kg-day)-1	1.4E-07
				Indeno(1,2,3-cd)pyrene	1.21E-01	mg/kg	4.8E-08	mg/kg-day	7.3E-01	(mg/kg-day)-1	3.5E-08
			Exp. Route Total								1.3E-06
		Exposure Point Total									1.0E-05
	Exposure Medium Total										1.0E-05
	Homegrown Produce	Homegrown Produce	Ingestion	Arsenic	4.20E+00	mg/kg	1.8E-06	mg/kg-day	1.5E+00	(mg/kg-day)-1	2.7E-06
				Benz(a)anthracene	1.34E-01	mg/kg	5.3E-08	mg/kg-day	7.3E-01	(mg/kg-day)-1	3.8E-08
				Benzo(a)pyrene	1.44E-01	mg/kg	4.3E-08	mg/kg-day	7.3E+00	(mg/kg-day)-1	3.1E-07
				Benzo(b)fluoranthene	1.51E-01	mg/kg	4.2E-08	mg/kg-day	7.3E-01	(mg/kg-day)-1	3.0E-08
				Benzo(k)fluoranthene	1.03E-01	mg/kg	2.8E-08	mg/kg-day	7.3E-02	(mg/kg-day)-1	2.1E-09
				Dibenz(a,h)anthracene	4.73E-02	mg/kg	2.1E-08	mg/kg-day	7.3E+00	(mg/kg-day)-1	1.6E-07
				Indeno(1,2,3-cd)pyrene	1.21E-01	mg/kg	2.6E-08	mg/kg-day	7.3E-01	(mg/kg-day)-1	1.9E-08
			Exp. Route Total								3.3E-06
		Exposure Point Total									3.3E-06
	Exposure Medium Total										3.3E-06
	Air	Outdoor Air	Inhalation (particulates)	Arsenic	4.20E+00	mg/kg	1.8E-10	mg/kg-day	1.5E+01	(mg/kg-day)-1	2.6E-09
				Benz(a)anthracene	1.34E-01	mg/kg	5.6E-12	mg/kg-day	7.3E-01	(mg/kg-day)-1	4.1E-12
				Benzo(a)pyrene	1.44E-01	mg/kg	6.0E-12	mg/kg-day	7.3E+00	(mg/kg-day)-1	4.4E-11
				Benzo(b)fluoranthene	1.51E-01	mg/kg	6.3E-12	mg/kg-day	7.3E-01	(mg/kg-day)-1	4.6E-12
				Benzo(k)fluoranthene	1.03E-01	mg/kg	4.3E-12	mg/kg-day	7.3E-02	(mg/kg-day)-1	3.1E-13

TABLE H-8.5.4.RME
EPA RAGS PART D TABLE 7a
CALCULATION OF RME CHEMICAL CANCER RISKS
CURRENT CHILD RESIDENT
SITE 23, ALAMEDA POINT, ALAMEDA, CALIFORNIA

Scenario Timeframe:	Future
Receptor Population:	Resident
Receptor Age:	Child

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations				
					Value	Units	Intake/Exposure Concentration		CSF/Unit Risk		Cancer Risk
							Value	Units	Value	Units	
				Dibenz(a,h)anthracene	4.73E-02	mg/kg	2.0E-12	mg/kg-day	7.3E+00	(mg/kg-day)-1	1.4E-11
				Indeno(1,2,3-cd)pyrene	1.21E-01	mg/kg	5.1E-12	mg/kg-day	7.3E-01	(mg/kg-day)-1	3.7E-12
			Exp. Route Total								2.7E-09
		Exposure Point Total									2.7E-09
	Exposure Medium Total										2.7E-09
Medium Total											1.3E-05
Groundwater	Groundwater	Tap	Ingestion	1,2,4-Trimethylbenzene	3.35E-01	mg/L	1.8E-03	mg/kg-day	–	–	–
				2-Butanone	1.13E+00	mg/L	6.2E-03	mg/kg-day	–	–	–
				2-Methylnaphthalene	1.89E-02	mg/L	1.0E-04	mg/kg-day	–	–	–
				Arsenic	1.15E-02	mg/L	6.3E-05	mg/kg-day	1.5E+00	(mg/kg-day)-1	9.5E-05
				Benzene	1.00E-03	mg/L	5.5E-06	mg/kg-day	5.5E-02	(mg/kg-day)-1	3.0E-07
				Benzo(a)pyrene	6.00E-04	mg/L	3.3E-06	mg/kg-day	7.3E+00	(mg/kg-day)-1	2.4E-05
				Benzo(b)fluoranthene	8.00E-04	mg/L	4.4E-06	mg/kg-day	7.3E-01	(mg/kg-day)-1	3.2E-06
				Chrysene	9.00E-04	mg/L	4.9E-06	mg/kg-day	7.3E-03	(mg/kg-day)-1	3.6E-08
				Ethylbenzene	1.50E-02	mg/L	8.2E-05	mg/kg-day	3.9E-03	(mg/kg-day)-1	3.2E-07
				Isopropylbenzene	3.89E-01	mg/L	2.1E-03	mg/kg-day	–	–	–
				Naphthalene	1.81E-01	mg/L	9.9E-04	mg/kg-day	–	–	–
				sec-Butylbenzene	3.89E-01	mg/L	2.1E-03	mg/kg-day	–	–	–
				Thallium	2.82E-03	mg/L	1.5E-05	mg/kg-day	–	–	–
				Xylene (Total)	1.41E-01	mg/L	7.7E-04	mg/kg-day	–	–	–
			Exp. Route Total								1.2E-04
			Dermal (bathing/ showering)	1,2,4-Trimethylbenzene	3.35E-01	mg/L	1.0E-03	mg/kg-day	–	–	–
				2-Butanone	1.13E+00	mg/L	3.9E-05	mg/kg-day	–	–	–
				2-Methylnaphthalene	1.89E-02	mg/L	3.2E-05	mg/kg-day	–	–	–
				Arsenic	1.15E-02	mg/L	4.2E-07	mg/kg-day	1.5E+00	(mg/kg-day)-1	6.2E-07
				Benzene	1.00E-03	mg/L	7.6E-07	mg/kg-day	5.5E-02	(mg/kg-day)-1	4.2E-08
				Benzo(a)pyrene	6.00E-04	mg/L	1.5E-05	mg/kg-day	7.3E+00	(mg/kg-day)-1	1.1E-04
				Benzo(b)fluoranthene	8.00E-04	mg/L	2.0E-05	mg/kg-day	7.3E-01	(mg/kg-day)-1	1.5E-05
				Chrysene	9.00E-04	mg/L	1.5E-05	mg/kg-day	7.3E-03	(mg/kg-day)-1	1.1E-07
				Ethylbenzene	1.50E-02	mg/L	2.7E-05	mg/kg-day	3.9E-03	(mg/kg-day)-1	1.0E-07
				Isopropylbenzene	3.89E-01	mg/L	1.2E-03	mg/kg-day	–	–	–
				Naphthalene	1.81E-01	mg/L	3.1E-04	mg/kg-day	–	–	–
				sec-Butylbenzene	3.89E-01	mg/L	2.5E-03	mg/kg-day	–	–	–
				Thallium	2.82E-03	mg/L	1.0E-07	mg/kg-day	–	–	–

TABLE H-8.5.4.RME
EPA RAGS PART D TABLE 7a
CALCULATION OF RME CHEMICAL CANCER RISKS
CURRENT CHILD RESIDENT
SITE 23, ALAMEDA POINT, ALAMEDA, CALIFORNIA

Scenario Timeframe:	Future
Receptor Population:	Resident
Receptor Age:	Child

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations				
					Value	Units	Intake/Exposure Concentration		CSF/Unit Risk		Cancer Risk
							Value	Units	Value	Units	
				Xylene (Total)	1.41E-01	mg/L	2.7E-04	mg/kg-day	–	–	–
			Exp. Route Total								1.3E-04
			Inhalation (bathing/ showering)	1,2,4-Trimethylbenzene	3.35E-01	mg/L	3.9E-04	mg/kg-day	–	–	–
				2-Butanone	1.13E+00	mg/L	1.3E-03	mg/kg-day	–	–	–
				2-Methylnaphthalene	1.89E-02	mg/L	2.2E-05	mg/kg-day	–	–	–
				Benzene	1.00E-03	mg/L	1.2E-06	mg/kg-day	2.7E-02	(mg/kg-day)-1	3.1E-08
				Ethylbenzene	1.50E-02	mg/L	1.7E-05	mg/kg-day	3.9E-03	(mg/kg-day)-1	6.6E-08
				Isopropylbenzene	3.89E-01	mg/L	4.5E-04	mg/kg-day	–	–	–
				Naphthalene	1.81E-01	mg/L	2.1E-04	mg/kg-day	–	–	–
				sec-Butylbenzene	3.89E-01	mg/L	4.5E-04	mg/kg-day	–	–	–
				Xylene (Total)	1.41E-01	mg/L	1.6E-04	mg/kg-day	–	–	–
			Exp. Route Total								9.8E-08
		Exposure Point Total									2.5E-04
	Exposure Medium Total										2.5E-04
Medium Total											2.5E-04
										Total of Receptor Risks Across All Media	2.6E-04

Notes:

CSF	Cancer slope factor
EPC	Exposure point concentration
mg/kg	Milligram per kilogram
mg/kg-day	Milligram per kilogram per day
(mg/kg-day)-1	1/(Milligram per kilogram per day)
RME	Reasonable maximum exposure

TABLE H-8.5.5.RME
EPA RAGS PART D TABLE 7a
CALCULATION OF RME CHEMICAL CANCER RISKS
FUTURE DEVELOPED CONSTRUCTION WORKER
SITE 23, ALAMEDA POINT, ALAMEDA, CALIFORNIA

Scenario Timeframe:	Future-Developed
Receptor Population:	Construction Worker
Receptor Age:	Adult

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations				
					Value	Units	Intake/Exposure Concentration		CSF/Unit Risk		Cancer Risk
							Value	Units	Value	Units	
Soil (0-8)	Soil	Site Soil	Ingestion	2-Methylnaphthalene	2.67E-01	mg/kg	1.2E-08	mg/kg-day	--	--	--
				Arsenic	4.30E+00	mg/kg	2.0E-07	mg/kg-day	1.5E+00	(mg/kg-day)-1	3.0E-07
				Benz(a)anthracene	7.44E-02	mg/kg	3.4E-09	mg/kg-day	7.3E-01	(mg/kg-day)-1	2.5E-09
				Benzo(a)pyrene	8.50E-02	mg/kg	3.9E-09	mg/kg-day	7.3E+00	(mg/kg-day)-1	2.9E-08
				Benzo(b)fluoranthene	1.22E-02	mg/kg	5.6E-10	mg/kg-day	7.3E-01	(mg/kg-day)-1	4.1E-10
				Benzo(k)fluoranthene	7.34E-02	mg/kg	3.4E-09	mg/kg-day	7.3E-02	(mg/kg-day)-1	2.5E-10
				Dibenz(a,h)anthracene	3.09E-02	mg/kg	1.4E-09	mg/kg-day	7.3E+00	(mg/kg-day)-1	1.0E-08
				Indeno(1,2,3-cd)pyrene	6.43E-02	mg/kg	3.0E-09	mg/kg-day	7.3E-01	(mg/kg-day)-1	2.2E-09
			Exp. Route Total								3.4E-07
			Dermal	2-Methylnaphthalene	2.67E-01	mg/kg	--	mg/kg-day	--	--	--
				Arsenic	4.30E+00	mg/kg	1.8E-08	mg/kg-day	1.5E+00	(mg/kg-day)-1	2.7E-08
				Benz(a)anthracene	7.44E-02	mg/kg	1.3E-09	mg/kg-day	7.3E-01	(mg/kg-day)-1	9.8E-10
				Benzo(a)pyrene	8.50E-02	mg/kg	1.5E-09	mg/kg-day	7.3E+00	(mg/kg-day)-1	1.1E-08
				Benzo(b)fluoranthene	1.22E-02	mg/kg	2.2E-10	mg/kg-day	7.3E-01	(mg/kg-day)-1	1.6E-10
				Benzo(k)fluoranthene	7.34E-02	mg/kg	1.3E-09	mg/kg-day	7.3E-02	(mg/kg-day)-1	9.6E-11
				Dibenz(a,h)anthracene	3.09E-02	mg/kg	5.6E-10	mg/kg-day	7.3E+00	(mg/kg-day)-1	4.1E-09
				Indeno(1,2,3-cd)pyrene	6.43E-02	mg/kg	1.2E-09	mg/kg-day	7.3E-01	(mg/kg-day)-1	8.4E-10
			Exp. Route Total								4.4E-08
		Exposure Point Total									3.9E-07
	Exposure Medium Total										3.9E-07
	Air	Outdoor Air	Inhalation (particulates)	2-Methylnaphthalene	2.67E-01	mg/kg	5.7E-13	mg/kg-day	--	--	--
				Arsenic	4.30E+00	mg/kg	9.1E-12	mg/kg-day	1.5E+01	(mg/kg-day)-1	1.4E-10
				Benz(a)anthracene	7.44E-02	mg/kg	1.6E-13	mg/kg-day	7.3E-01	(mg/kg-day)-1	1.2E-13
				Benzo(a)pyrene	8.50E-02	mg/kg	1.8E-13	mg/kg-day	7.3E+00	(mg/kg-day)-1	1.3E-12
				Benzo(b)fluoranthene	1.22E-02	mg/kg	2.6E-14	mg/kg-day	7.3E-01	(mg/kg-day)-1	1.9E-14
				Benzo(k)fluoranthene	7.34E-02	mg/kg	1.6E-13	mg/kg-day	7.3E-02	(mg/kg-day)-1	1.1E-14
				Dibenz(a,h)anthracene	3.09E-02	mg/kg	6.5E-14	mg/kg-day	7.3E+00	(mg/kg-day)-1	4.8E-13
				Indeno(1,2,3-cd)pyrene	6.43E-02	mg/kg	1.4E-13	mg/kg-day	7.3E-01	(mg/kg-day)-1	9.9E-14
			Exp. Route Total								1.4E-10

TABLE H-8.5.5.RME
EPA RAGS PART D TABLE 7a
CALCULATION OF RME CHEMICAL CANCER RISKS
FUTURE DEVELOPED CONSTRUCTION WORKER
SITE 23, ALAMEDA POINT, ALAMEDA, CALIFORNIA

Scenario Timeframe:	Future-Developed
Receptor Population:	Construction Worker
Receptor Age:	Adult

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations				
					Value	Units	Intake/Exposure Concentration		CSF/Unit Risk		Cancer Risk
							Value	Units	Value	Units	
			Inhalation (VOCs)	2-Methylnaphthalene	2.67E-01	mg/kg	1.7E-08	mg/kg-day	--	--	--
			Exp. Route Total								0.0E+00
		Exposure Point Total									1.4E-10
	Exposure Medium Total										1.4E-10
Medium Total											3.9E-07
										Total of Receptor Risks Across All Media	3.9E-07

Notes:

CSF	Cancer slope factor
EPC	Exposure point concentration
mg/kg	Milligram per kilogram
mg/kg-day	Milligram per kilogram per day
(mg/kg-day)-1	1/(Milligram per kilogram per day)
RME	Reasonable maximum exposure

TABLE H-8.5.6.RME
EPA RAGS PART D TABLE 7a
CALCULATION OF RME CHEMICAL CANCER RISKS
FUTURE REDEVELOPED ADULT RESIDENT
SITE 23, ALAMEDA POINT, ALAMEDA, CALIFORNIA

Scenario Timeframe:	Future-Redeveloped
Receptor Population:	Resident
Receptor Age:	Adult

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations				
					Value	Units	Intake/Exposure Concentration		CSF/Unit Risk		Cancer Risk
							Value	Units	Value	Units	
Soil (0-8)	Soil	Site Soil	Ingestion	2-Methylnaphthalene	2.67E-01	mg/kg	1.3E-07	mg/kg-day	--	--	--
				Arsenic	4.30E+00	mg/kg	2.0E-06	mg/kg-day	1.5E+00	(mg/kg-day)-1	3.0E-06
				Benz(a)anthracene	7.44E-02	mg/kg	3.5E-08	mg/kg-day	7.3E-01	(mg/kg-day)-1	2.6E-08
				Benzo(a)pyrene	8.50E-02	mg/kg	4.0E-08	mg/kg-day	7.3E+00	(mg/kg-day)-1	2.9E-07
				Benzo(b)fluoranthene	1.22E-02	mg/kg	5.7E-09	mg/kg-day	7.3E-01	(mg/kg-day)-1	4.2E-09
				Benzo(k)fluoranthene	7.34E-02	mg/kg	3.4E-08	mg/kg-day	7.3E-02	(mg/kg-day)-1	2.5E-09
				Dibenz(a,h)anthracene	3.09E-02	mg/kg	1.5E-08	mg/kg-day	7.3E+00	(mg/kg-day)-1	1.1E-07
				Indeno(1,2,3-cd)pyrene	6.43E-02	mg/kg	3.0E-08	mg/kg-day	7.3E-01	(mg/kg-day)-1	2.2E-08
			Exp. Route Total								3.5E-06
			Dermal	2-Methylnaphthalene	2.67E-01	mg/kg	--	mg/kg-day	--	--	--
				Arsenic	4.30E+00	mg/kg	2.4E-07	mg/kg-day	1.5E+00	(mg/kg-day)-1	3.6E-07
				Benz(a)anthracene	7.44E-02	mg/kg	1.8E-08	mg/kg-day	7.3E-01	(mg/kg-day)-1	1.3E-08
				Benzo(a)pyrene	8.50E-02	mg/kg	2.1E-08	mg/kg-day	7.3E+00	(mg/kg-day)-1	1.5E-07
				Benzo(b)fluoranthene	1.22E-02	mg/kg	3.0E-09	mg/kg-day	7.3E-01	(mg/kg-day)-1	2.2E-09
				Benzo(k)fluoranthene	7.34E-02	mg/kg	1.8E-08	mg/kg-day	7.3E-02	(mg/kg-day)-1	1.3E-09
				Dibenz(a,h)anthracene	3.09E-02	mg/kg	7.5E-09	mg/kg-day	7.3E+00	(mg/kg-day)-1	5.5E-08
				Indeno(1,2,3-cd)pyrene	6.43E-02	mg/kg	1.6E-08	mg/kg-day	7.3E-01	(mg/kg-day)-1	1.1E-08
			Exp. Route Total								6.0E-07
		Exposure Point Total									4.1E-06
	Exposure Medium Total										4.1E-06
	Homegrown Produce	Homegrown Produce	Ingestion	2-Methylnaphthalene	2.67E-01	mg/kg	--	mg/kg-day	--	--	--
				Arsenic	4.30E+00	mg/kg	7.5E-06	mg/kg-day	1.5E+00	(mg/kg-day)-1	1.1E-05
				Benz(a)anthracene	7.44E-02	mg/kg	1.2E-07	mg/kg-day	7.3E-01	(mg/kg-day)-1	8.5E-08
				Benzo(a)pyrene	8.50E-02	mg/kg	1.0E-07	mg/kg-day	7.3E+00	(mg/kg-day)-1	7.4E-07
				Benzo(b)fluoranthene	1.22E-02	mg/kg	1.3E-08	mg/kg-day	7.3E-01	(mg/kg-day)-1	9.8E-09
				Benzo(k)fluoranthene	7.34E-02	mg/kg	8.1E-08	mg/kg-day	7.3E-02	(mg/kg-day)-1	5.9E-09
				Dibenz(a,h)anthracene	3.09E-02	mg/kg	5.6E-08	mg/kg-day	7.3E+00	(mg/kg-day)-1	4.1E-07
				Indeno(1,2,3-cd)pyrene	6.43E-02	mg/kg	5.6E-08	mg/kg-day	7.3E-01	(mg/kg-day)-1	4.1E-08
			Exp. Route Total								1.3E-05
		Exposure Point Total									1.3E-05
	Exposure Medium Total										1.3E-05
	Air	Outdoor Air	Inhalation (particulates)	2-Methylnaphthalene	2.67E-01	mg/kg	1.9E-11	mg/kg-day	--	--	--
				Arsenic	4.30E+00	mg/kg	3.0E-10	mg/kg-day	1.5E+01	(mg/kg-day)-1	4.6E-09

TABLE H-8.5.6.RME
EPA RAGS PART D TABLE 7a
CALCULATION OF RME CHEMICAL CANCER RISKS
FUTURE REDEVELOPED ADULT RESIDENT
SITE 23, ALAMEDA POINT, ALAMEDA, CALIFORNIA

Scenario Timeframe:	Future-Redeveloped
Receptor Population:	Resident
Receptor Age:	Adult

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations				
					Value	Units	Intake/Exposure Concentration		CSF/Unit Risk		Cancer Risk
							Value	Units	Value	Units	
				Benz(a)anthracene	7.44E-02	mg/kg	5.3E-12	mg/kg-day	7.3E-01	(mg/kg-day)-1	3.8E-12
				Benzo(a)pyrene	8.50E-02	mg/kg	6.0E-12	mg/kg-day	7.3E+00	(mg/kg-day)-1	4.4E-11
				Benzo(b)fluoranthene	1.22E-02	mg/kg	8.6E-13	mg/kg-day	7.3E-01	(mg/kg-day)-1	6.3E-13
				Benzo(k)fluoranthene	7.34E-02	mg/kg	5.2E-12	mg/kg-day	7.3E-02	(mg/kg-day)-1	3.8E-13
				Dibenz(a,h)anthracene	3.09E-02	mg/kg	2.2E-12	mg/kg-day	7.3E+00	(mg/kg-day)-1	1.6E-11
				Indeno(1,2,3-cd)pyrene	6.43E-02	mg/kg	4.6E-12	mg/kg-day	7.3E-01	(mg/kg-day)-1	3.3E-12
			Exp. Route Total								4.6E-09
			Inhalation (VOCs)	2-Methylnaphthalene	2.67E-01	mg/kg	5.8E-07	mg/kg-day	--	--	--
			Exp. Route Total								0.0E+00
		Exposure Point Total									4.6E-09
	Exposure Medium Total										4.6E-09
Medium Total											1.7E-05
Groundwater	Groundwater	Tap	Ingestion	1,2,4-Trimethylbenzene	3.35E-01	mg/L	3.1E-03	mg/kg-day	--	--	--
				2-Butanone	1.13E+00	mg/L	1.1E-02	mg/kg-day	--	--	--
				2-Methylnaphthalene	1.89E-02	mg/L	1.8E-04	mg/kg-day	--	--	--
				Arsenic	1.15E-02	mg/L	1.1E-04	mg/kg-day	1.5E+00	(mg/kg-day)-1	1.6E-04
				Benzene	1.00E-03	mg/L	9.4E-06	mg/kg-day	5.5E-02	(mg/kg-day)-1	5.2E-07
				Benzo(a)pyrene	6.00E-04	mg/L	5.6E-06	mg/kg-day	7.3E+00	(mg/kg-day)-1	4.1E-05
				Benzo(b)fluoranthene	8.00E-04	mg/L	7.5E-06	mg/kg-day	7.3E-01	(mg/kg-day)-1	5.5E-06
				Chrysene	9.00E-04	mg/L	8.5E-06	mg/kg-day	7.3E-03	(mg/kg-day)-1	6.2E-08
				Ethylbenzene	1.50E-02	mg/L	1.4E-04	mg/kg-day	3.9E-03	(mg/kg-day)-1	5.4E-07
				Isopropylbenzene	3.89E-01	mg/L	3.7E-03	mg/kg-day	--	--	--
				Naphthalene	1.81E-01	mg/L	1.7E-03	mg/kg-day	--	--	--
				sec-Butylbenzene	3.89E-01	mg/L	3.7E-03	mg/kg-day	--	--	--
				Thallium	2.82E-03	mg/L	2.6E-05	mg/kg-day	--	--	--
				Xylene (Total)	1.41E-01	mg/L	1.3E-03	mg/kg-day	--	--	--
			Exp. Route Total								2.1E-04
			Dermal (bathing/ showering)	1,2,4-Trimethylbenzene	3.35E-01	mg/L	1.4E-03	mg/kg-day	--	--	--
				2-Butanone	1.13E+00	mg/L	5.3E-05	mg/kg-day	--	--	--
				2-Methylnaphthalene	1.89E-02	mg/L	4.4E-05	mg/kg-day	--	--	--
				Arsenic	1.15E-02	mg/L	5.6E-07	mg/kg-day	1.5E+00	(mg/kg-day)-1	8.5E-07
				Benzene	1.00E-03	mg/L	1.0E-06	mg/kg-day	5.5E-02	(mg/kg-day)-1	5.7E-08
				Benzo(a)pyrene	6.00E-04	mg/L	2.1E-05	mg/kg-day	7.3E+00	(mg/kg-day)-1	1.5E-04

TABLE H-8.5.6.RME
EPA RAGS PART D TABLE 7a
CALCULATION OF RME CHEMICAL CANCER RISKS
FUTURE REDEVELOPED ADULT RESIDENT
SITE 23, ALAMEDA POINT, ALAMEDA, CALIFORNIA

Scenario Timeframe:	Future-Redeveloped
Receptor Population:	Resident
Receptor Age:	Adult

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations				
					Value	Units	Intake/Exposure Concentration		CSF/Unit Risk		Cancer Risk
							Value	Units	Value	Units	
				Benzo(b)fluoranthene	8.00E-04	mg/L	2.7E-05	mg/kg-day	7.3E-01	(mg/kg-day)-1	2.0E-05
				Chrysene	9.00E-04	mg/L	2.1E-05	mg/kg-day	7.3E-03	(mg/kg-day)-1	1.5E-07
				Ethylbenzene	1.50E-02	mg/L	3.6E-05	mg/kg-day	3.9E-03	(mg/kg-day)-1	1.4E-07
				Isopropylbenzene	3.89E-01	mg/L	1.7E-03	mg/kg-day	--	--	--
				Naphthalene	1.81E-01	mg/L	4.2E-04	mg/kg-day	--	--	--
				sec-Butylbenzene	3.89E-01	mg/L	3.4E-03	mg/kg-day	--	--	--
				Thallium	2.82E-03	mg/L	1.4E-07	mg/kg-day	--	--	--
				Xylene (Total)	1.41E-01	mg/L	3.7E-04	mg/kg-day	--	--	--
			Exp. Route Total								1.7E-04
			Inhalation (bathing/ showering)	1,2,4-Trimethylbenzene	3.35E-01	mg/L	3.8E-04	mg/kg-day	--	--	--
				2-Butanone	1.13E+00	mg/L	1.3E-03	mg/kg-day	--	--	--
				2-Methylnaphthalene	1.89E-02	mg/L	2.1E-05	mg/kg-day	--	--	--
				Benzene	1.00E-03	mg/L	1.1E-06	mg/kg-day	2.7E-02	(mg/kg-day)-1	3.1E-08
				Ethylbenzene	1.50E-02	mg/L	1.7E-05	mg/kg-day	3.9E-03	(mg/kg-day)-1	6.5E-08
				Isopropylbenzene	3.89E-01	mg/L	4.4E-04	mg/kg-day	--	--	--
				Naphthalene	1.81E-01	mg/L	2.0E-04	mg/kg-day	--	--	--
				sec-Butylbenzene	3.89E-01	mg/L	4.4E-04	mg/kg-day	--	--	--
				Xylene (Total)	1.41E-01	mg/L	1.6E-04	mg/kg-day	--	--	--
			Exp. Route Total								9.6E-08
		Exposure Point Total									3.8E-04
	Exposure Medium Total										3.8E-04
Medium Total											3.8E-04
										Total of Receptor Risks Across All Media	4.0E-04

Notes:

CSF	Cancer slope factor
EPC	Exposure point concentration
mg/kg	Milligram per kilogram
mg/kg-day	Milligram per kilogram per day
(mg/kg-day)-1	1/(Milligram per kilogram per day)
RME	Reasonable maximum exposure

TABLE H-8.5.7.RME
EPA RAGS PART D TABLE 7b
CALCULATION OF RME CHEMICAL CANCER RISKS
FUTURE REDEVELOPED CHILD RESIDENT
SITE 23, ALAMEDA POINT, ALAMEDA, CALIFORNIA

Scenario Timeframe:	Future-Redeveloped
Receptor Population:	Resident
Receptor Age:	Child

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations				
					Value	Units	Intake/Exposure Concentration		CSF/Unit Risk		Cancer Risk
							Value	Units	Value	Units	
Soil (0-8)	Soil	Site Soil	Ingestion	2-Methylnaphthalene	2.67E-01	mg/kg	2.9E-07	mg/kg-day	--	--	--
				Arsenic	4.30E+00	mg/kg	4.7E-06	mg/kg-day	1.5E+00	(mg/kg-day)-1	7.1E-06
				Benz(a)anthracene	7.44E-02	mg/kg	8.2E-08	mg/kg-day	7.3E-01	(mg/kg-day)-1	6.0E-08
				Benzo(a)pyrene	8.50E-02	mg/kg	9.3E-08	mg/kg-day	7.3E+00	(mg/kg-day)-1	6.8E-07
				Benzo(b)fluoranthene	1.22E-02	mg/kg	1.3E-08	mg/kg-day	7.3E-01	(mg/kg-day)-1	9.7E-09
				Benzo(k)fluoranthene	7.34E-02	mg/kg	8.0E-08	mg/kg-day	7.3E-02	(mg/kg-day)-1	5.9E-09
				Dibenz(a,h)anthracene	3.09E-02	mg/kg	3.4E-08	mg/kg-day	7.3E+00	(mg/kg-day)-1	2.5E-07
				Indeno(1,2,3-cd)pyrene	6.43E-02	mg/kg	7.0E-08	mg/kg-day	7.3E-01	(mg/kg-day)-1	5.1E-08
			Exp. Route Total								8.1E-06
			Dermal	2-Methylnaphthalene	2.67E-01	mg/kg	--	mg/kg-day	--	--	--
				Arsenic	4.30E+00	mg/kg	4.0E-07	mg/kg-day	1.5E+00	(mg/kg-day)-1	5.9E-07
				Benz(a)anthracene	7.44E-02	mg/kg	3.0E-08	mg/kg-day	7.3E-01	(mg/kg-day)-1	2.2E-08
				Benzo(a)pyrene	8.50E-02	mg/kg	3.4E-08	mg/kg-day	7.3E+00	(mg/kg-day)-1	2.5E-07
				Benzo(b)fluoranthene	1.22E-02	mg/kg	4.9E-09	mg/kg-day	7.3E-01	(mg/kg-day)-1	3.5E-09
				Benzo(k)fluoranthene	7.34E-02	mg/kg	2.9E-08	mg/kg-day	7.3E-02	(mg/kg-day)-1	2.1E-09
				Dibenz(a,h)anthracene	3.09E-02	mg/kg	1.2E-08	mg/kg-day	7.3E+00	(mg/kg-day)-1	9.0E-08
				Indeno(1,2,3-cd)pyrene	6.43E-02	mg/kg	2.6E-08	mg/kg-day	7.3E-01	(mg/kg-day)-1	1.9E-08
			Exp. Route Total								9.8E-07
		Exposure Point Total									9.1E-06
	Exposure Medium Total										9.1E-06
	Homegrown Produce	Homegrown Produce	Ingestion	2-Methylnaphthalene	2.67E-01	mg/kg	--	mg/kg-day	--	--	--
				Arsenic	4.30E+00	mg/kg	1.9E-06	mg/kg-day	1.5E+00	(mg/kg-day)-1	2.8E-06
				Benz(a)anthracene	7.44E-02	mg/kg	2.9E-08	mg/kg-day	7.3E-01	(mg/kg-day)-1	2.1E-08
				Benzo(a)pyrene	8.50E-02	mg/kg	2.5E-08	mg/kg-day	7.3E+00	(mg/kg-day)-1	1.9E-07
				Benzo(b)fluoranthene	1.22E-02	mg/kg	3.4E-09	mg/kg-day	7.3E-01	(mg/kg-day)-1	2.5E-09
				Benzo(k)fluoranthene	7.34E-02	mg/kg	2.0E-08	mg/kg-day	7.3E-02	(mg/kg-day)-1	1.5E-09
				Dibenz(a,h)anthracene	3.09E-02	mg/kg	1.4E-08	mg/kg-day	7.3E+00	(mg/kg-day)-1	1.0E-07
				Indeno(1,2,3-cd)pyrene	6.43E-02	mg/kg	1.4E-08	mg/kg-day	7.3E-01	(mg/kg-day)-1	1.0E-08
			Exp. Route Total								3.1E-06
		Exposure Point Total									3.1E-06
	Exposure Medium Total										3.1E-06
	Air	Outdoor Air	Inhalation (particulates)	2-Methylnaphthalene	2.67E-01	mg/kg	1.1E-11	mg/kg-day	--	--	--
				Arsenic	4.30E+00	mg/kg	1.8E-10	mg/kg-day	1.5E+01	(mg/kg-day)-1	2.7E-09

TABLE H-8.5.7.RME
EPA RAGS PART D TABLE 7b
CALCULATION OF RME CHEMICAL CANCER RISKS
FUTURE REDEVELOPED CHILD RESIDENT
SITE 23, ALAMEDA POINT, ALAMEDA, CALIFORNIA

Scenario Timeframe:	Future-Redeveloped
Receptor Population:	Resident
Receptor Age:	Child

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations				
					Value	Units	Intake/Exposure Concentration		CSF/Unit Risk		Cancer Risk
							Value	Units	Value	Units	
				Benz(a)anthracene	7.44E-02	mg/kg	3.1E-12	mg/kg-day	7.3E-01	(mg/kg-day)-1	2.3E-12
				Benzo(a)pyrene	8.50E-02	mg/kg	3.6E-12	mg/kg-day	7.3E+00	(mg/kg-day)-1	2.6E-11
				Benzo(b)fluoranthene	1.22E-02	mg/kg	5.1E-13	mg/kg-day	7.3E-01	(mg/kg-day)-1	3.7E-13
				Benzo(k)fluoranthene	7.34E-02	mg/kg	3.1E-12	mg/kg-day	7.3E-02	(mg/kg-day)-1	2.2E-13
				Dibenz(a,h)anthracene	3.09E-02	mg/kg	1.3E-12	mg/kg-day	7.3E+00	(mg/kg-day)-1	9.4E-12
				Indeno(1,2,3-cd)pyrene	6.43E-02	mg/kg	2.7E-12	mg/kg-day	7.3E-01	(mg/kg-day)-1	2.0E-12
			Exp. Route Total								2.7E-09
			Inhalation (VOCs)	2-Methylnaphthalene	2.67E-01	mg/kg	3.4E-07	mg/kg-day	--	--	--
			Exp. Route Total								0.0E+00
		Exposure Point Total									2.7E-09
	Exposure Medium Total										2.7E-09
Medium Total											1.2E-05
Groundwater	Groundwater	Tap	Ingestion	1,2,4-Trimethylbenzene	3.35E-01	mg/L	1.8E-03	mg/kg-day	--	--	--
				2-Butanone	1.13E+00	mg/L	6.2E-03	mg/kg-day	--	--	--
				2-Methylnaphthalene	1.89E-02	mg/L	1.0E-04	mg/kg-day	--	--	--
				Arsenic	1.15E-02	mg/L	6.3E-05	mg/kg-day	1.5E+00	(mg/kg-day)-1	9.5E-05
				Benzene	1.00E-03	mg/L	5.5E-06	mg/kg-day	5.5E-02	(mg/kg-day)-1	3.0E-07
				Benzo(a)pyrene	6.00E-04	mg/L	3.3E-06	mg/kg-day	7.3E+00	(mg/kg-day)-1	2.4E-05
				Benzo(b)fluoranthene	8.00E-04	mg/L	4.4E-06	mg/kg-day	7.3E-01	(mg/kg-day)-1	3.2E-06
				Chrysene	9.00E-04	mg/L	4.9E-06	mg/kg-day	7.3E-03	(mg/kg-day)-1	3.6E-08
				Ethylbenzene	1.50E-02	mg/L	8.2E-05	mg/kg-day	3.9E-03	(mg/kg-day)-1	3.2E-07
				Isopropylbenzene	3.89E-01	mg/L	2.1E-03	mg/kg-day	--	--	--
				Naphthalene	1.81E-01	mg/L	9.9E-04	mg/kg-day	--	--	--
				sec-Butylbenzene	3.89E-01	mg/L	2.1E-03	mg/kg-day	--	--	--
				Thallium	2.82E-03	mg/L	1.5E-05	mg/kg-day	--	--	--
				Xylene (Total)	1.41E-01	mg/L	7.7E-04	mg/kg-day	--	--	--
			Exp. Route Total								1.2E-04
			Dermal (bathing/ showering)	1,2,4-Trimethylbenzene	3.35E-01	mg/L	1.0E-03	mg/kg-day	--	--	--
				2-Butanone	1.13E+00	mg/L	3.9E-05	mg/kg-day	--	--	--
				2-Methylnaphthalene	1.89E-02	mg/L	3.2E-05	mg/kg-day	--	--	--
				Arsenic	1.15E-02	mg/L	4.2E-07	mg/kg-day	1.5E+00	(mg/kg-day)-1	6.2E-07
				Benzene	1.00E-03	mg/L	7.6E-07	mg/kg-day	5.5E-02	(mg/kg-day)-1	4.2E-08
				Benzo(a)pyrene	6.00E-04	mg/L	1.5E-05	mg/kg-day	7.3E+00	(mg/kg-day)-1	1.1E-04

TABLE H-8.5.7.RME
EPA RAGS PART D TABLE 7b
CALCULATION OF RME CHEMICAL CANCER RISKS
FUTURE REDEVELOPED CHILD RESIDENT
SITE 23, ALAMEDA POINT, ALAMEDA, CALIFORNIA

Scenario Timeframe:	Future-Redeveloped
Receptor Population:	Resident
Receptor Age:	Child

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations				
					Value	Units	Intake/Exposure Concentration		CSF/Unit Risk		Cancer Risk
							Value	Units	Value	Units	
				Benzo(b)fluoranthene	8.00E-04	mg/L	2.0E-05	mg/kg-day	7.3E-01	(mg/kg-day)-1	1.5E-05
				Chrysene	9.00E-04	mg/L	1.5E-05	mg/kg-day	7.3E-03	(mg/kg-day)-1	1.1E-07
				Ethylbenzene	1.50E-02	mg/L	2.7E-05	mg/kg-day	3.9E-03	(mg/kg-day)-1	1.0E-07
				Isopropylbenzene	3.89E-01	mg/L	1.2E-03	mg/kg-day	--	--	--
				Naphthalene	1.81E-01	mg/L	3.1E-04	mg/kg-day	--	--	--
				sec-Butylbenzene	3.89E-01	mg/L	2.5E-03	mg/kg-day	--	--	--
				Thallium	2.82E-03	mg/L	1.0E-07	mg/kg-day	--	--	--
				Xylene (Total)	1.41E-01	mg/L	2.7E-04	mg/kg-day	--	--	--
			Exp. Route Total								1.3E-04
			Inhalation (bathing/ showering)	1,2,4-Trimethylbenzene	3.35E-01	mg/L	3.9E-04	mg/kg-day	--	--	--
				2-Butanone	1.13E+00	mg/L	1.3E-03	mg/kg-day	--	--	--
				2-Methylnaphthalene	1.89E-02	mg/L	2.2E-05	mg/kg-day	--	--	--
				Benzene	1.00E-03	mg/L	1.2E-06	mg/kg-day	2.7E-02	(mg/kg-day)-1	3.1E-08
				Ethylbenzene	1.50E-02	mg/L	1.7E-05	mg/kg-day	3.9E-03	(mg/kg-day)-1	6.6E-08
				Isopropylbenzene	3.89E-01	mg/L	4.5E-04	mg/kg-day	--	--	--
				Naphthalene	1.81E-01	mg/L	2.1E-04	mg/kg-day	--	--	--
				sec-Butylbenzene	3.89E-01	mg/L	4.5E-04	mg/kg-day	--	--	--
				Xylene (Total)	1.41E-01	mg/L	1.6E-04	mg/kg-day	--	--	--
			Exp. Route Total								9.8E-08
		Exposure Point Total									2.5E-04
	Exposure Medium Total										2.5E-04
Medium Total											2.5E-04
										Total of Receptor Risks Across All Media	2.6E-04

Notes:

CSF	Cancer slope factor
EPC	Exposure point concentration
mg/kg	Milligram per kilogram
mg/kg-day	Milligram per kilogram per day
(mg/kg-day)-1	1/(Milligram per kilogram per day)
RME	Reasonable maximum exposure

HHRA RISK TABLES

Reasonable Maximum Exposure
Site 09
Alameda Point, Alameda, California

TABLE H-9.1.1.RME
EPA RAGS PART D TABLE 9
SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCS
CURRENT INDUSTRIAL WORKER
SITE 09, ALAMEDA POINT, ALAMEDA, CALIFORNIA

Scenario Timeframe:	Future
Receptor Population:	Industrial Worker
Receptor Age:	Adult

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk					Non-Carcinogenic Hazard Quotient				
				Ingestion	Inhalation	Dermal	External (Radiation)	Exposure Routes Total	Primary Target Organ(s)	Ingestion	Inhalation	Dermal	Exposure Routes Total
Soil (0-2)	Soil	Site Soil	Arsenic	3.1E-06	--	6.1E-07	--	3.7E-06	Skin	1.9E-02	--	3.8E-03	2.3E-02
			Chemical Total	3.1E-06	--	6.1E-07	--	3.7E-06		1.9E-02	--	3.8E-03	2.3E-02
		Exposure Point Total						3.7E-06					2.3E-02
	Exposure Medium Total							3.7E-06					2.3E-02
	Air	Outdoor Air (Particulates and VOCs)	Arsenic	--	4.7E-09	--	--	4.7E-09	--	--	--	--	--
			Chemical Total	--	4.7E-09	--	--	4.7E-09		--	--	--	0.0E+00
		Exposure Point Total						4.7E-09					0.0E+00
	Exposure Medium Total							4.7E-09					0.0E+00
Medium Total								3.7E-06					2.3E-02
Groundwater	Groundwater	Indoor Air (Vapor Intrusion)	Benzene	--	1.5E-07	--	--	1.5E-07	Blood	--	1.8E-03	--	1.8E-03
			Vinyl Chloride	--	5.1E-06	--	--	5.1E-06	Liver	--	3.1E-02	--	3.1E-02
			Chemical Total	--	5.3E-06	--	--	5.3E-06		--	3.3E-02	--	3.3E-02
		Exposure Point Total						5.3E-06					3.3E-02
	Exposure Medium Total							5.3E-06					3.3E-02
Medium Total								5.3E-06					3.3E-02
Receptor Total							Receptor Risk Total	9.0E-06				Receptor HI Total	5.6E-02

Notes:

--	Not Applicable or Not Available
HI	Hazard Index
RME	Reasonable maximum exposure
VOC	Volatile organic compound

TABLE H-9.1.2.RME
EPA RAGS PART D TABLE 9
SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCS
CURRENT CONSTRUCTION WORKER
SITE 09, ALAMEDA POINT, ALAMEDA, CALIFORNIA

Scenario Timeframe:	Future
Receptor Population:	Construction Worker
Receptor Age:	Adult

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk					Non-Carcinogenic Hazard Quotient				
				Ingestion	Inhalation	Dermal	External (Radiation)	Exposure Routes Total	Primary Target Organ(s)	Ingestion	Inhalation	Dermal	Exposure Routes Total
Soil (0-2)	Soil	Site Soil	Arsenic	4.1E-07	–	3.7E-06	–	4.4E-07	Skin	6.4E-02	–	5.7E-03	6.9E-02
			Chemical Total	4.1E-07	–	3.7E-06	–	4.4E-07		6.4E-02	–	5.7E-03	6.9E-02
		Exposure Point Total						4.4E-07					6.9E-02
	Exposure Medium Total							4.4E-07					6.9E-02
	Air	Outdoor Air (Particulates and VOCs)	Arsenic	–	1.9E-10	–	–	1.9E-10	–	–	–	–	–
			Chemical Total	–	1.9E-10	–	–	1.9E-10		–	–	–	0.0E+00
		Exposure Point Total						1.9E-10					0.0E+00
	Exposure Medium Total							1.9E-10					0.0E+00
Medium Total								4.5E-07					6.9E-02
Receptor Total							Receptor Risk Total	4.5E-07				Receptor HI Total	6.9E-02

Notes:

–	*Not Applicable or Not Available*
HI	Hazard Index
RME	Reasonable maximum exposure
VOC	Volatile organic compound

TABLE H-9.1.3.RME
EPA RAGS PART D TABLE 9
SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCS
CURRENT ADULT RESIDENT
SITE 09, ALAMEDA POINT, ALAMEDA, CALIFORNIA

Scenario Timeframe:	Future
Receptor Population:	Resident
Receptor Age:	Adult

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk					Non-Carcinogenic Hazard Quotient				
				Ingestion	Inhalation	Dermal	External (Radiation)	Exposure Routes Total	Primary Target Organ(s)	Ingestion	Inhalation	Dermal	Exposure Routes Total
Soil (0-2)	Soil	Site Soil	Arsenic	4.2E-06	--	5.0E-07	--	4.7E-06	Skin	2.7E-02	--	3.2E-03	3.0E-02
			Chemical Total	4.2E-06	--	5.0E-07	--	4.7E-06		2.7E-02	--	3.2E-03	3.0E-02
		Exposure Point Total						4.7E-06					3.0E-02
	Exposure Medium Total							4.7E-06					3.0E-02
	Homegrown Produce	Homegrown Produce	Arsenic	1.5E-05	--	--	--	1.5E-05	Skin	1.0E-01	--	--	1.0E-01
			Chemical Total	1.5E-05	--	--	--	1.5E-05		1.0E-01	--	--	1.0E-01
		Exposure Point Total						1.5E-05					1.0E-01
	Exposure Medium Total							1.5E-05					1.0E-01
	Air	Outdoor Air (Particulates and VOCs)	Arsenic	--	6.3E-09	--	--	6.3E-09	--	--	--	--	--
			Chemical Total	--	6.3E-09	--	--	6.3E-09		--	--	--	0.0E+00
		Exposure Point Total						6.3E-09					0.0E+00
	Exposure Medium Total							6.3E-09					0.0E+00
Medium Total								2.0E-05					1.3E-01
Groundwater	Groundwater	Indoor Air (Vapor Intrusion)	Benzene	--	2.0E-06	--	--	2.0E-06	Blood	--	2.6E-02	--	2.6E-02
			Vinyl Chloride	--	1.3E-04	--	--	1.3E-04	Liver	--	4.4E-01	--	4.4E-01
			Chemical Total	--	1.3E-04	--	--	1.3E-04		--	4.6E-01	--	4.6E-01
		Exposure Point Total						1.3E-04					4.6E-01
	Exposure Medium Total							1.3E-04					4.6E-01
	Groundwater	Tap Water (oral/dermal)	1,1-Dichloroethane	--	--	--	--	--	No observed effect	5.6E-03	--	1.9E-04	5.8E-03
			1,2-Dichloroethane	5.1E-07	--	1.1E-06	--	5.2E-07	Kidney, Death	5.5E-04	--	1.2E-05	5.6E-04
			1,2-Dichloroethene (Total)	--	--	--	--	--	Blood	1.2E+00	--	4.8E-02	1.2E+00
			1,2-Dichloropropane	1.3E-06	--	5.2E-08	--	1.3E-06	Nasal	5.0E-02	--	2.0E-03	5.2E-02
			1,2,3-Trichloropropane	5.6E-06	--	2.2E-07	--	5.9E-06	Blood	1.4E-03	--	5.3E-05	1.4E-03
			1,3-Dichloropropane	5.7E-07	--	2.3E-08	--	6.0E-07	Nasal	2.2E-02	--	9.1E-04	2.3E-02
			2,2'-Oxybis(1-chloropropane)	--	--	--	--	--	Blood	4.8E-04	--	1.9E-05	5.0E-04
			2-Methylnaphthalene	--	--	--	--	--	Lung	2.8E+00	--	6.9E-01	3.5E+00
			4-Methylphenol	--	--	--	--	--	CNS, Respiratory, Whole Body	6.6E+00	--	2.6E-01	6.8E+00
			Antimony	--	--	--	--	--	Longevity, Blood, Cholesterol	7.2E-01	--	3.6E-03	7.2E-01
			Arsenic	5.2E-04	--	2.7E-06	--	5.2E-04	Skin	3.4E+00	--	1.8E-02	3.4E+00
			Benzene	1.0E-06	--	1.1E-07	--	1.1E-06	Blood	1.4E-02	--	1.5E-03	1.5E-02
			Benz(a)anthracene	6.9E-06	--	1.7E-05	--	2.4E-05	--	--	--	--	--
			Benzo(a)pyrene	1.4E-04	--	5.0E-04	--	6.4E-04	--	--	--	--	--
			Benzo(b)fluoranthene	1.4E-05	--	5.0E-05	--	6.4E-05	--	--	--	--	--
			Benzo(k)fluoranthene	5.5E-07	--	6.3E-07	--	1.2E-06	--	--	--	--	--
			Chloroethene	1.4E-07	--	4.3E-09	--	1.4E-07	No observed effect	3.4E-04	--	1.1E-05	3.5E-04
			Chrysene	6.9E-06	--	1.7E-07	--	2.4E-07	--	--	--	--	--

TABLE H-9.1.3.RME
EPA RAGS PART D TABLE 9
SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCS
CURRENT ADULT RESIDENT
SITE 09, ALAMEDA POINT, ALAMEDA, CALIFORNIA

Scenario Timeframe:	Future
Receptor Population:	Resident
Receptor Age:	Adult

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk					Non-Carcinogenic Hazard Quotient				
				Ingestion	Inhalation	Dermal	External (Radiation)	Exposure Routes Total	Primary Target Organ(s)	Ingestion	Inhalation	Dermal	Exposure Routes Total
			Ethylbenzene	7.6E-07	--	2.0E-07	--	9.6E-07	Kidney, Liver	5.8E-03	--	1.5E-03	7.3E-03
			Indeno(1,2,3-cd)pyrene	6.9E-06	--	3.6E-05	--	4.3E-05	--	--	--	--	--
			Lead	--	--	--	--	--	--	--	--	--	--
			Manganese	--	--	--	--	--	CNS	2.6E+00	--	1.3E-02	2.6E+00
			Methyl-t-butyl ether	3.5E-07	--	3.9E-09	--	3.5E-07	Liver, Kidney, Eyes	3.6E-04	--	4.0E-06	3.6E-04
			Naphthalene	--	--	--	--	--	Body Weight	4.5E+00	--	1.1E+00	5.7E+00
			Pentachlorophenol	2.3E-06	--	4.6E-06	--	6.8E-06	--	1.8E-03	--	3.7E-03	5.5E-03
			Tetrachloroethene	1.5E-06	--	2.5E-07	--	1.7E-06	Liver	8.2E-03	--	1.4E-03	9.6E-03
			Trichloroethene	4.6E-05	--	3.0E-06	--	5.2E-05	Liver, Kidney, Fetus	1.2E+00	--	7.4E-02	1.3E+00
			Vinyl chloride	4.3E-04	--	1.3E-05	--	4.4E-04	Liver	2.8E-01	--	8.1E-03	2.9E-01
			Xylene (Total)	--	--	--	--	--	Death, Body Weight	2.8E-02	--	7.8E-03	3.6E-02
		Exposure Point Total		1.2E-03	--	6.3E-04	--	1.8E-03		2.3E+01	--	2.2E+00	2.6E+01
		Tap Water	1,1-Dichloroethane	--	--	--	--	--	Kidney	--	4.8E-04	--	4.8E-04
		(Inhalation)	1,2-Dichloroethane	--	6.2E-06	--	--	6.2E-06	GI, Liver	--	1.4E-03	--	1.4E-03
			1,2-Dichloroethene (Total)	--	--	--	--	--	Blood	--	1.4E-01	--	1.4E-01
			1,2-Dichloropropane	--	1.5E-07	--	--	1.5E-07	Nasal	--	6.0E-03	--	6.0E-03
			1,2,3-Trichloropropane	--	6.6E-07	--	--	6.6E-07	Blood	--	7.1E-04	--	7.1E-04
			1,3-Dichloropropane	--	6.9E-06	--	--	6.9E-06	Nasal	--	2.7E-03	--	2.7E-03
			2,2'-Oxybis(1-chloropropane)	--	--	--	--	--	Blood	--	5.8E-05	--	5.8E-05
			2-Methylnaphthalene	--	--	--	--	--	Nasal	--	3.6E+00	--	3.6E+00
			Benzene	--	6.1E-06	--	--	6.1E-06	Blood	--	7.7E-04	--	7.7E-04
			Chloroethane	--	1.6E-06	--	--	1.6E-06	Fetus	--	5.7E-06	--	5.7E-06
			Ethylbenzene	--	9.2E-06	--	--	9.2E-06	Developmental	--	2.4E-04	--	2.4E-04
			Methyl-t-butyl ether	--	4.5E-09	--	--	4.5E-09	Liver, Kidney, Eyes	--	4.3E-05	--	4.3E-05
			Naphthalene	--	--	--	--	--	Nasal	--	1.3E+01	--	1.3E+01
			Tetrachloroethene	--	3.4E-06	--	--	3.4E-06	Liver, Kidney	--	5.8E-05	--	5.8E-05
			Trichloroethene	--	5.8E-06	--	--	5.8E-06	CNS, Liver, Endocrine	--	4.3E-03	--	4.3E-03
			Vinyl chloride	--	1.1E-06	--	--	1.1E-06	Liver	--	3.5E-03	--	3.5E-03
			Xylene (Total)	--	--	--	--	--	CNS	--	2.3E-02	--	2.3E-02
		Exposure Point Total		--	8.1E-06	--	--	8.1E-06		--	1.6E+01	--	1.6E+01
	Exposure Medium Total							1.8E-03					4.2E+01
Medium Total								1.9E-03					4.3E+01
Receptor Total							Receptor Risk Total	2.0E-03				Receptor HI Total	4.3E+01

TABLE H-9.1.3.RME
EPA RAGS PART D TABLE 9
SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCS
CURRENT ADULT RESIDENT
SITE 09, ALAMEDA POINT, ALAMEDA, CALIFORNIA

Scenario Timeframe:	Future
Receptor Population:	Resident
Receptor Age:	Adult

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk					Non-Carcinogenic Hazard Quotient				
				Ingestion	Inhalation	Dermal	External (Radiation)	Exposure Routes Total	Primary Target Organ(s)	Ingestion	Inhalation	Dermal	Exposure Routes Total

Notes:

--	Not Applicable or Not Available
CNS	Central nervous system
HI	Hazard Index
RME	Reasonable maximum exposure
VOC	Volatile organic compound

Total Organ 1 (No Observed Effect) HI Across All Media =	6.1E-03
Total Organ 2 (Nasal) HI Across All Media =	1.6E+01
Total Organ 3 (Kidney) HI Across All Media =	9.4E+00
Total Organ 4 (Nervous System) HI Across All Media =	6.6E+00
Total Organ 5 (Respiratory) HI Across All Media =	6.6E+00
Total Organ 6 (Whole Body) HI Across All Media =	1.3E+00
Total Organ 7 (Body Weight) HI Across All Media =	5.7E+00
Total Organ 8 (Blood) HI Across All Media =	2.1E+00
Total Organ 9 (Lung) HI Across All Media =	3.5E+00
Total Organ 10 (Skin) HI Across All Media =	3.5E+00
Total Organ 11 (Liver) HI Across All Media =	2.0E+00
Total Organ 12 (Gastrointestinal System) HI Across All Media =	1.4E-03
Total Organ 13 (Fetus) HI Across All Media =	1.3E+00
Total Organ 14 (Cholesterol) HI Across All Media =	7.2E-01
Total Organ 15 (Longevity) HI Across All Media =	7.2E-01
Total Organ 16 (Death) HI Across All Media =	3.7E-02
Total Organ 17 (Endocrine system) HI Across All Media =	5.5E-03
Total Organ 18 (Unknown Systems) HI Across All Media =	4.3E-03
Total Organ 19 (Eyes) HI Across All Media =	4.1E-04
Total Organ 20 (Developmental) HI Across All Media =	2.4E-04

TABLE H-9.1.4.RME
EPA RAGS PART D TABLE 9
SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCS
CURRENT CHILD RESIDENT
SITE 09, ALAMEDA POINT, ALAMEDA, CALIFORNIA

Scenario Timeframe:	Future
Receptor Population:	Resident
Receptor Age:	Child

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk					Non-Carcinogenic Hazard Quotient				
				Ingestion	Inhalation	Dermal	External (Radiation)	Exposure Routes Total	Primary Target Organ(s)	Ingestion	Inhalation	Dermal	Exposure Routes Total
Soil (0-2)	Soil	Site Soil	Arsenic	9.7E-06	--	8.1E-07	--	1.1E-05	Skin	2.5E-01	--	2.1E-02	2.7E-01
			Chemical Total	9.7E-06	--	8.1E-07	--	1.1E-05		2.5E-01	--	2.1E-02	2.7E-01
		Exposure Point Total						1.1E-05					2.7E-01
	Exposure Medium Total							1.1E-05					2.7E-01
	Homegrown Produce	Homegrown Produce	Arsenic	3.8E-06	--	--	--	3.8E-06	Skin	1.0E-01	--	--	1.0E-01
			Chemical Total	3.8E-06	--	--	--	3.8E-06		1.0E-01	--	--	1.0E-01
		Exposure Point Total						3.8E-06					1.0E-01
	Exposure Medium Total							3.8E-06					1.0E-01
	Air	Outdoor Air (Particulates and VOCs)	Arsenic	--	3.7E-09	--	--	3.7E-09	--	--	--	--	--
			Chemical Total	--	3.7E-09	--	--	3.7E-09		--	--	--	0.0E+00
		Exposure Point Total						3.7E-09					0.0E+00
	Exposure Medium Total							3.7E-09					0.0E+00
Medium Total								1.4E-05					3.7E-01
Groundwater	Groundwater	Indoor Air (Vapor Intrusion)	Benzene	--	1.2E-06	--	--	1.2E-06	Blood	--	5.9E-02	--	5.9E-02
			Vinyl Chloride	--	7.8E-05	--	--	7.8E-05	Liver	--	1.0E+00	--	1.0E+00
			Chemical Total	--	8.0E-05	--	--	8.0E-05		--	1.1E+00	--	1.1E+00
		Exposure Point Total						8.0E-05					1.1E+00
	Exposure Medium Total							8.0E-05					1.1E+00
	Groundwater	Tap Water (oral/dermal)	1,1-Dichloroethane	--	--	--	--	--	No observed effect	1.3E-02	--	5.7E-04	1.4E-02
			1,2-Dichloroethane	3.0E-07	--	6.3E-09	--	3.1E-07	Kidney, Death	1.3E-03	--	3.5E-05	1.3E-03
			1,2-Dichloroethene (Total)	--	--	--	--	--	Blood	2.8E+00	--	1.4E-01	2.9E+00
			1,2-Dichloropropane	7.5E-07	--	3.8E-08	--	7.8E-07	Nasal	1.2E-01	--	8.0E-03	1.2E-01
			1,2,3-Trichloropropane	3.3E-06	--	1.6E-07	--	3.4E-06	Blood	3.2E-03	--	1.6E-04	3.4E-03
			1,3-Dichloropropane	3.4E-07	--	1.7E-08	--	3.5E-07	Nasal	5.2E-02	--	2.7E-03	5.5E-02
			2,2'-Oxybis(1-chloropropane)	--	--	--	--	--	Blood	1.1E-03	--	5.6E-05	1.2E-03
			2-Methylnaphthalene	--	--	--	--	--	Lung	6.6E+00	--	2.0E+00	8.6E+00
			4-Methylphenol	--	--	--	--	--	CNS, Respiratory, Whole Body	1.5E+01	--	7.6E-01	1.6E+01
			Antimony	--	--	--	--	--	Longevity, Blood, Cholesterol	1.7E+00	--	1.1E-02	1.7E+00
			Arsenic	3.0E-04	--	2.0E-06	--	3.1E-04	Skin	7.9E+00	--	5.2E-02	7.9E+00
			Benzene	6.0E-07	--	8.4E-08	--	6.9E-07	Blood	3.2E-02	--	4.4E-03	3.6E-02
			Benz(a)anthracene	4.0E-06	--	1.2E-05	--	1.6E-05	--	--	--	--	--
			Benzo(a)pyrene	8.0E-05	--	3.7E-04	--	4.5E-04	--	--	--	--	--
			Benzo(b)fluoranthene	8.0E-06	--	3.7E-05	--	4.5E-05	--	--	--	--	--
			Benzo(k)fluoranthene	3.2E-07	--	4.6E-07	--	7.8E-07	--	--	--	--	--
			Chloroethane	7.9E-08	--	3.2E-09	--	8.3E-08	No observed effect	8.0E-04	--	3.2E-05	8.3E-04
			Chrysene	4.0E-06	--	1.2E-07	--	1.6E-07	--	--	--	--	--

TABLE H-9.1.4.RME
EPA RAGS PART D TABLE 9
SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCS
CURRENT CHILD RESIDENT
SITE 09, ALAMEDA POINT, ALAMEDA, CALIFORNIA

Scenario Timeframe:	Future
Receptor Population:	Resident
Receptor Age:	Child

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk					Non-Carcinogenic Hazard Quotient				
				Ingestion	Inhalation	Dermal	External (Radiation)	Exposure Routes Total	Primary Target Organ(s)	Ingestion	Inhalation	Dermal	Exposure Routes Total
			Ethylbenzene	4.5E-07	--	1.4E-07	--	5.9E-07	Kidney, Liver	1.3E-02	--	4.4E-03	1.8E-02
			Indeno(1,2,3-cd)pyrene	4.0E-06	--	2.6E-05	--	3.0E-05	--	--	--	--	--
			Lead	--	--	--	--	--	--	--	--	--	--
			Manganese	--	--	--	--	--	CNS	6.0E+00	--	4.0E-02	6.0E+00
			Methyl-t-butyl ether	2.0E-07	--	2.9E-09	--	2.1E-07	Liver, Kidney, Eyes	8.4E-04	--	1.2E-05	8.5E-04
			Naphthalene	--	--	--	--	--	Body Weight	1.1E+01	--	3.3E+00	1.4E+01
			Pentachlorophenol	1.3E-06	--	3.4E-06	--	4.7E-06	--	4.3E-03	--	1.1E-02	1.5E-02
			Tetrachloroethene	8.5E-07	--	1.9E-07	--	1.0E-06	Liver	1.9E-02	--	4.2E-03	2.3E-02
			Trichloroethene	2.8E-05	--	2.2E-06	--	3.1E-05	Liver, Kidney, Fetus	2.7E+00	--	2.2E-01	3.0E+00
			Vinyl chloride	2.5E-04	--	9.2E-06	--	2.6E-04	Liver	6.5E-01	--	2.4E-02	6.7E-01
			Xylene (Total)	--	--	--	--	--	Death, Body Weight	6.6E-02	--	2.3E-02	8.9E-02
		Exposure Point Total		6.9E-04	--	4.6E-04	--	1.2E-03		5.5E+01	--	6.6E+00	6.1E+01
		Tap Water (Inhalation)	1,1-Dichloroethane	--	--	--	--	--	Kidney	--	1.9E-03	--	1.9E-03
			1,2-Dichloroethane	--	6.3E-06	--	--	6.3E-06	GI, Liver	--	5.8E-03	--	5.8E-03
			1,2-Dichloroethene (Total)	--	--	--	--	--	Blood	--	5.8E-01	--	5.8E-01
			1,2-Dichloropropane	--	1.6E-07	--	--	1.6E-07	Nasal	--	2.4E-02	--	2.4E-02
			1,2,3-Trichloropropane	--	6.9E-07	--	--	6.9E-07	Blood	--	2.9E-03	--	2.9E-03
			1,3-Dichloropropane	--	7.0E-06	--	--	7.0E-06	Nasal	--	1.1E-02	--	1.1E-02
			2,2'-Oxybis(1-chloropropane)	--	--	--	--	--	Blood	--	2.3E-04	--	2.3E-04
			2-Methylnaphthalene	--	--	--	--	--	Nasal	--	1.4E+01	--	1.4E+01
			Benzene	--	6.2E-06	--	--	6.2E-06	Blood	--	3.1E-03	--	3.1E-03
			Chloroethane	--	1.7E-06	--	--	1.7E-06	Fetus	--	2.3E-05	--	2.3E-05
			Ethylbenzene	--	9.3E-06	--	--	9.3E-06	Developmental	--	9.8E-04	--	9.8E-04
			Methyl-t-butyl ether	--	4.6E-09	--	--	4.6E-09	Liver, Kidney, Eyes	--	1.8E-04	--	1.8E-04
			Naphthalene	--	--	--	--	--	Nasal	--	5.2E+01	--	5.2E+01
			Tetrachloroethene	--	3.5E-06	--	--	3.5E-06	Liver, Kidney	--	2.4E-04	--	2.4E-04
			Trichloroethene	--	5.9E-06	--	--	5.9E-06	CNS, Liver, Endocrine	--	1.7E-02	--	1.7E-02
			Vinyl chloride	--	1.1E-06	--	--	1.1E-06	Liver	--	1.4E-02	--	1.4E-02
			Xylene (Total)	--	--	--	--	--	CNS	--	9.5E-02	--	9.5E-02
		Exposure Point Total		--	8.2E-06	--	--	8.2E-06		--	6.7E+01	--	6.7E+01
	Exposure Medium Total							1.2E-03					1.3E+02
Medium Total								1.2E-03					1.3E+02
Receptor Total							Receptor Risk Total	1.3E-03				Receptor HI Total	1.3E+02

TABLE H-9.1.4.RME
EPA RAGS PART D TABLE 9
SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCS
CURRENT CHILD RESIDENT
SITE 09, ALAMEDA POINT, ALAMEDA, CALIFORNIA

Scenario Timeframe:	Future
Receptor Population:	Resident
Receptor Age:	Child

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk					Non-Carcinogenic Hazard Quotient				
				Ingestion	Inhalation	Dermal	External (Radiation)	Exposure Routes Total	Primary Target Organ(s)	Ingestion	Inhalation	Dermal	Exposure Routes Total

Notes:

--	Not Applicable or Not Available
CNS	Central nervous system
HI	Hazard Index
RME	Reasonable maximum exposure
VOC	Volatile organic compound

Total Organ 1 (No Observed Effect) HI Across All Media =	1.4E-02
Total Organ 2 (Nasal) HI Across All Media =	6.7E+01
Total Organ 3 (Kidney) HI Across All Media =	3.0E+00
Total Organ 4 (Nervous System) HI Across All Media =	2.2E+01
Total Organ 5 (Respiratory) HI Across All Media =	1.6E+01
Total Organ 6 (Whole Body) HI Across All Media =	1.6E+01
Total Organ 7 (Body Weight) HI Across All Media =	1.4E+01
Total Organ 8 (Blood) HI Across All Media =	5.3E+00
Total Organ 9 (Lung) HI Across All Media =	8.6E+00
Total Organ 10 (Skin) HI Across All Media =	8.3E+00
Total Organ 11 (Liver) HI Across All Media =	4.8E+00
Total Organ 12 (Gastrointestinal System) HI Across All Media =	5.8E-03
Total Organ 13 (Fetus) HI Across All Media =	3.0E+00
Total Organ 14 (Cholesterol) HI Across All Media =	1.7E+00
Total Organ 15 (Longevity) HI Across All Media =	1.7E+00
Total Organ 16 (Death) HI Across All Media =	9.0E-02
Total Organ 17 (Endocrine system) HI Across All Media =	1.7E-02
Total Organ 18 (Unknown Systems) HI Across All Media =	1.5E-02
Total Organ 19 (Eyes) HI Across All Media =	1.0E-03
Total Organ 20 (Developmental) HI Across All Media =	9.8E-04

TABLE H-9.1.5.RME
EPA RAGS PART D TABLE 9
SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCS
FUTURE DEVELOPED CONSTRUCTION WORKER
SITE 09, ALAMEDA POINT, ALAMEDA, CALIFORNIA

Scenario Timeframe:	*Future-Developed*
Receptor Population:	Construction Worker
Receptor Age:	Adult

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk					Non-Carcinogenic Hazard Quotient				
				Ingestion	Inhalation	Dermal	External (Radiation)	Exposure Routes Total	Primary Target Organ(s)	Ingestion	Inhalation	Dermal	Exposure Routes Total
Soil (0-8)	Soil	Site Soil	Arsenic	3.1E-07	–	2.8E-06	–	3.4E-07	Skin	4.9E-02	–	4.4E-03	5.3E-02
			Chemical Total	3.1E-07	–	2.8E-06	–	3.4E-07		4.9E-02	–	4.4E-03	5.3E-02
		Exposure Point Total						3.4E-07					5.3E-02
	Exposure Medium Total							3.4E-07					5.3E-02
	Air	Outdoor Air (Particulates and VOCs)	Arsenic	–	1.4E-10	–	–	1.4E-10	–	–	–	–	–
			Chemical Total	–	1.4E-10	–	–	1.4E-10		–	–	–	0.0E+00
		Exposure Point Total						1.4E-10					0.0E+00
	Exposure Medium Total							1.4E-10					0.0E+00
Medium Total								3.4E-07					5.3E-02
Receptor Total							Receptor Risk Total	3.4E-07				Receptor HI Total	5.3E-02

Notes:

–	Not Applicable or Not Available
HI	Hazard Index
RME	Reasonable maximum exposure
VOC	Volatile organic compound

TABLE H-9.1.6.RME
EPA RAGS PART D TABLE 9
SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCS
FUTURE REDEVELOPED ADULT RESIDENT
SITE 09, ALAMEDA POINT, ALAMEDA, CALIFORNIA

Scenario Timeframe:	Future-Redeveloped
Receptor Population:	Resident
Receptor Age:	Adult

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk					Non-Carcinogenic Hazard Quotient				
				Ingestion	Inhalation	Dermal	External (Radiation)	Exposure Routes Total	Primary Target Organ(s)	Ingestion	Inhalation	Dermal	Exposure Routes Total
Soil (0-8)	Soil	Site Soil	Arsenic	3.2E-06	--	3.8E-07	--	3.6E-06	Skin	2.1E-02	--	2.5E-03	2.3E-02
			Chemical Total	3.2E-06	--	3.8E-07	--	3.6E-06		2.1E-02	--	2.5E-03	2.3E-02
		Exposure Point Total						3.6E-06					2.3E-02
	Exposure Medium Total							3.6E-06					2.3E-02
	Homegrown Produce	Homegrown Produce	Arsenic	1.2E-05	--	--	--	1.2E-05	Skin	7.6E-02	--	--	7.6E-02
			Chemical Total	1.2E-05	--	--	--	1.2E-05		7.6E-02	--	--	7.6E-02
		Exposure Point Total						1.2E-05					7.6E-02
	Exposure Medium Total							1.2E-05					7.6E-02
	Air	Outdoor Air (Particulates and VOCs)	Arsenic	--	4.8E-09	--	--	4.8E-09	--	--	--	--	--
			Chemical Total	--	4.8E-09	--	--	4.8E-09		--	--	--	0.0E+00
		Exposure Point Total						4.8E-09					0.0E+00
	Exposure Medium Total							4.8E-09					0.0E+00
Medium Total								1.5E-05					1.0E-01
Groundwater	Groundwater	Indoor Air (Vapor Intrusion)	Benzene	--	2.0E-06	--	--	2.0E-06	Blood	--	2.5E-02	--	2.5E-02
			Vinyl Chloride	--	1.3E-04	--	--	1.3E-04	Liver	--	4.4E-01	--	4.4E-01
			Chemical Total	--	1.3E-04	--	--	1.3E-04		--	4.6E-01	--	4.6E-01
		Exposure Point Total						1.3E-04					4.6E-01
	Exposure Medium Total							1.3E-04					4.6E-01
	Groundwater	Tap Water (oral/dermal)	1,1-Dichloroethane	--	--	--	--	--	No observed effect	5.6E-03	--	1.9E-04	5.8E-03
			1,2-Dichloroethane	5.1E-07	--	1.1E-06	--	5.2E-07	Kidney, Death	5.5E-04	--	1.2E-05	5.6E-04
			1,2-Dichloroethene (Total)	--	--	--	--	--	Blood	1.2E+00	--	4.8E-02	1.2E+00
			1,2-Dichloropropane	1.3E-06	--	5.2E-06	--	1.3E-06	Nasal	5.0E-02	--	2.0E-03	5.2E-02
			1,2,3-Trichloropropane	5.6E-06	--	2.2E-07	--	5.9E-06	Blood	1.4E-03	--	5.3E-05	1.4E-03
			1,3-Dichloropropane	5.7E-07	--	2.3E-08	--	6.0E-07	Nasal	2.2E-02	--	9.1E-04	2.3E-02
			2,2'-Oxybis(1-chloropropane)	--	--	--	--	--	Blood	4.8E-04	--	1.9E-05	5.0E-04
			2-Methylnaphthalene	--	--	--	--	--	Lung	2.8E+00	--	6.9E-01	3.5E+00
			4-Methylphenol	--	--	--	--	--	CNS, Respiratory, Whole Body	6.6E+00	--	2.6E-01	6.8E+00
			Antimony	--	--	--	--	--	Longevity, Blood, Cholesterol	7.2E-01	--	3.6E-03	7.2E-01
			Arsenic	5.2E-04	--	2.7E-06	--	5.2E-04	Skin	3.4E+00	--	1.8E-02	3.4E+00
			Benzene	1.0E-06	--	1.1E-07	--	1.1E-06	Blood	1.4E-02	--	1.5E-03	1.5E-02
			Benz(a)anthracene	6.9E-06	--	1.7E-05	--	2.4E-05	--	--	--	--	--
			Benzo(a)pyrene	1.4E-04	--	5.0E-04	--	6.4E-04	--	--	--	--	--
			Benzo(b)fluoranthene	1.4E-05	--	5.0E-05	--	6.4E-05	--	--	--	--	--
			Benzo(k)fluoranthene	5.5E-07	--	6.3E-07	--	1.2E-06	--	--	--	--	--
			Chloroethane	1.4E-07	--	4.3E-09	--	1.4E-07	No observed effect	3.4E-04	--	1.1E-05	3.5E-04

TABLE H-9.1.6.RME
EPA RAGS PART D TABLE 9
SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCS
FUTURE REDEVELOPED ADULT RESIDENT
SITE 09, ALAMEDA POINT, ALAMEDA, CALIFORNIA

Scenario Timeframe:	Future-Redeveloped
Receptor Population:	Resident
Receptor Age:	Adult

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk					Non-Carcinogenic Hazard Quotient				
				Ingestion	Inhalation	Dermal	External (Radiation)	Exposure Routes Total	Primary Target Organ(s)	Ingestion	Inhalation	Dermal	Exposure Routes Total
			Chrysene	6.9E-08	--	1.7E-07	--	2.4E-07	--	--	--	--	--
			Ethylbenzene	7.6E-07	--	2.0E-07	--	9.6E-07	Kidney, Liver	5.8E-03	--	1.5E-03	7.3E-03
			Indeno(1,2,3-cd)pyrene	6.9E-06	--	3.6E-05	--	4.3E-05	--	--	--	--	--
			Lead	--	--	--	--	--	--	--	--	--	--
			Manganese	--	--	--	--	--	CNS	2.6E+00	--	1.3E-02	2.6E+00
			Methyl-t-butyl ether	3.5E-07	--	3.9E-09	--	3.5E-07	Liver, Kidney, Eyes	3.6E-04	--	4.0E-06	3.6E-04
			Naphthalene	--	--	--	--	--	Body Weight	4.5E+00	--	1.1E+00	5.7E+00
			Pentachlorophenol	2.3E-06	--	4.6E-06	--	6.8E-06	--	1.8E-03	--	3.7E-03	5.5E-03
			Tetrachloroethene	1.5E-06	--	2.5E-07	--	1.7E-06	Liver	8.2E-03	--	1.4E-03	9.6E-03
			Trichloroethene	4.8E-05	--	3.0E-06	--	5.2E-05	Liver, Kidney, Fetus	1.2E+00	--	7.4E-02	1.3E+00
			Vinyl chloride	4.3E-04	--	1.3E-05	--	4.4E-04	Liver	2.8E-01	--	8.1E-03	2.9E-01
			Xylene (Total)	--	--	--	--	--	Death, Body Weight	2.8E-02	--	7.8E-03	3.6E-02
		Exposure Point Total		1.2E-03	--	6.3E-04	--	1.8E-03		2.3E+01	--	2.2E+00	2.6E+01
		Tap Water (Inhalation)	1,1-Dichloroethane	--	--	--	--	--	Kidney	--	4.8E-04	--	4.8E-04
			1,2-Dichloroethane	--	6.2E-06	--	--	6.2E-06	GI, Liver	--	1.4E-03	--	1.4E-03
			1,2-Dichloroethene (Total)	--	--	--	--	--	Blood	--	1.4E-01	--	1.4E-01
			1,2-Dichloropropane	--	1.5E-07	--	--	1.5E-07	Nasal	--	6.0E-03	--	6.0E-03
			1,2,3-Trichloropropane	--	6.8E-07	--	--	6.8E-07	Blood	--	7.1E-04	--	7.1E-04
			1,3-Dichloropropane	--	6.9E-06	--	--	6.9E-06	Nasal	--	2.7E-03	--	2.7E-03
			2,2'-Oxybis(1-chloropropane)	--	--	--	--	--	Blood	--	5.8E-05	--	5.8E-05
			2-Methylnaphthalene	--	--	--	--	--	Nasal	--	3.6E+00	--	3.6E+00
			Benzene	--	6.1E-06	--	--	6.1E-06	Blood	--	7.7E-04	--	7.7E-04
			Chloroethane	--	1.6E-06	--	--	1.6E-06	Fetus	--	5.7E-06	--	5.7E-06
			Ethylbenzene	--	9.2E-06	--	--	9.2E-06	Developmental	--	2.4E-04	--	2.4E-04
			Methyl-t-butyl ether	--	4.5E-09	--	--	4.5E-09	Liver, Kidney, Eyes	--	4.3E-05	--	4.3E-05
			Naphthalene	--	--	--	--	--	Nasal	--	1.3E+01	--	1.3E+01
			Tetrachloroethene	--	3.4E-06	--	--	3.4E-06	Liver, Kidney	--	5.8E-05	--	5.8E-05
			Trichloroethene	--	5.8E-06	--	--	5.8E-06	CNS, Liver, Endocrine	--	4.3E-03	--	4.3E-03
			Vinyl chloride	--	1.1E-06	--	--	1.1E-06	Liver	--	3.5E-03	--	3.5E-03
			Xylene (Total)	--	--	--	--	--	CNS	--	2.3E-02	--	2.3E-02
		Exposure Point Total		--	8.1E-06	--	--	8.1E-06		--	1.6E+01	--	1.6E+01
	Exposure Medium Total							1.8E-03					4.2E+01
Medium Total								1.9E-03					4.3E+01
Receptor Total							Receptor Risk Total	2.0E-03				Receptor HI Total	4.3E+01

TABLE H-9.1.6.RME
EPA RAGS PART D TABLE 9
SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCS
FUTURE REDEVELOPED ADULT RESIDENT
SITE 09, ALAMEDA POINT, ALAMEDA, CALIFORNIA

Scenario Timeframe:	Future-Redeveloped
Receptor Population:	Resident
Receptor Age:	Adult

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk					Non-Carcinogenic Hazard Quotient				
				Ingestion	Inhalation	Dermal	External (Radiation)	Exposure Routes Total	Primary Target Organ(s)	Ingestion	Inhalation	Dermal	Exposure Routes Total

Notes:

--	Not Applicable or Not Available
CNS	Central nervous system
HI	Hazard Index
RME	Reasonable maximum exposure
VOC	Volatile organic compound

Total Organ 1 (No Observed Effect) HI Across All Media =	6.1E-03
Total Organ 2 (Nasal) HI Across All Media =	1.6E+01
Total Organ 3 (Nervous System) HI Across All Media =	9.4E+00
Total Organ 4 (Respiratory) HI Across All Media =	6.8E+00
Total Organ 5 (Whole Body) HI Across All Media =	6.8E+00
Total Organ 6 (Kidney) HI Across All Media =	1.3E+00
Total Organ 7 (Body Weight) HI Across All Media =	5.7E+00
Total Organ 8 (Blood) HI Across All Media =	2.1E+00
Total Organ 9 (Lung) HI Across All Media =	3.5E+00
Total Organ 10 (Skin) HI Across All Media =	3.5E+00
Total Organ 11 (Liver) HI Across All Media =	2.0E+00
Total Organ 12 (Gastrointestinal System) HI Across All Media =	1.4E-03
Total Organ 13 (Fetus) HI Across All Media =	1.3E+00
Total Organ 14 (Cholesterol) HI Across All Media =	7.2E-01
Total Organ 15 (Longevity) HI Across All Media =	7.2E-01
Total Organ 16 (Death) HI Across All Media =	3.7E-02
Total Organ 17 (Unknown Systems) HI Across All Media =	5.5E-03
Total Organ 18 (Endocrine system) HI Across All Media =	4.3E-03
Total Organ 19 (Eyes) HI Across All Media =	4.1E-04
Total Organ 20 (Developmental) HI Across All Media =	2.4E-04

TABLE H-9.1.7.RME
EPA RAGS PART D TABLE 9
SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCS
FUTURE REDEVELOPED CHILD RESIDENT
SITE 09, ALAMEDA POINT, ALAMEDA, CALIFORNIA

Scenario Timeframe:	Future-Redeveloped
Receptor Population:	Resident
Receptor Age:	Child

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk					Non-Carcinogenic Hazard Quotient				
				Ingestion	Inhalation	Dermal	External (Radiation)	Exposure Routes Total	Primary Target Organ(s)	Ingestion	Inhalation	Dermal	Exposure Routes Total
Soil (0-8)	Soil	Site Soil	Arsenic	7.4E-06	--	6.2E-07	--	8.1E-06	Skin	1.9E-01	--	1.8E-02	2.1E-01
			Chemical Total	7.4E-06	--	6.2E-07	--	8.1E-06		1.9E-01	--	1.8E-02	2.1E-01
		Exposure Point Total						8.1E-06					2.1E-01
	Exposure Medium Total							8.1E-06					2.1E-01
	Homegrown Produce	Homegrown Produce	Arsenic	2.9E-06	--	--	--	2.9E-06	Skin	7.6E-02	--	--	7.6E-02
			Chemical Total	2.9E-06	--	--	--	2.9E-06		7.6E-02	--	--	7.6E-02
		Exposure Point Total						2.9E-06					7.6E-02
	Exposure Medium Total							2.9E-06					7.6E-02
	Air	Outdoor Air (Particulates and VOCs)	Arsenic	--	2.8E-09	--	--	2.8E-09	--	--	--	--	--
			Chemical Total	--	2.8E-09	--	--	2.8E-09		--	--	--	0.0E+00
		Exposure Point Total						2.8E-09					0.0E+00
	Exposure Medium Total							2.8E-09					0.0E+00
Medium Total								1.1E-05					2.9E-01
Groundwater	Groundwater	Indoor Air (Vapor Intrusion)	Benzene	--	1.2E-06	--	--	1.2E-06	Blood	--	5.9E-02	--	5.9E-02
			Vinyl Chloride	--	7.8E-05	--	--	7.8E-05	Liver	--	1.0E+00	--	1.0E+00
			Chemical Total	--	8.0E-05	--	--	8.0E-05		--	1.1E+00	--	1.1E+00
		Exposure Point Total						8.0E-05					1.1E+00
	Exposure Medium Total							8.0E-05					1.1E+00
	Groundwater	Tap Water (oral/dermal)	1,1-Dichloroethane	--	--	--	--	--	No observed effect	1.3E-02	--	5.7E-04	1.4E-02
			1,2-Dichloroethane	3.0E-07	--	8.3E-09	--	3.1E-07	Kidney, Death	1.3E-03	--	3.5E-05	1.3E-03
			1,2-Dichloroethene (Total)	--	--	--	--	--	Blood	2.8E+00	--	1.4E-01	2.9E+00
			1,2-Dichloropropane	7.5E-07	--	3.8E-08	--	7.8E-07	Nasal	1.2E-01	--	6.0E-03	1.2E-01
			1,2,3-Trichloropropane	3.3E-06	--	1.6E-07	--	3.4E-06	Blood	3.2E-03	--	1.6E-04	3.4E-03
			1,3-Dichloropropane	3.4E-07	--	1.7E-08	--	3.5E-07	Nasal	5.2E-02	--	2.7E-03	5.5E-02
			2,2'-Oxybis(1-chloropropane)	--	--	--	--	--	Blood	1.1E-03	--	5.6E-05	1.2E-03
			2-Methylnaphthalene	--	--	--	--	--	Lung	6.6E+00	--	2.0E+00	8.6E+00
			4-Methylphenol	--	--	--	--	--	CNS, Respiratory, Whole Body	1.5E+01	--	7.6E-01	1.6E+01
			Antimony	--	--	--	--	--	Longevity, Blood, Cholesterol	1.7E+00	--	1.1E-02	1.7E+00
			Arsenic	3.0E-04	--	2.0E-06	--	3.1E-04	Skin	7.9E+00	--	5.2E-02	7.9E+00
			Benzene	6.0E-07	--	8.4E-08	--	6.9E-07	Blood	3.2E-02	--	4.4E-03	3.6E-02
			Benz(a)anthracene	4.0E-06	--	1.2E-05	--	1.6E-05	--	--	--	--	--
			Benzo(a)pyrene	8.0E-05	--	3.7E-04	--	4.5E-04	--	--	--	--	--
			Benzo(b)fluoranthene	8.0E-06	--	3.7E-05	--	4.5E-05	--	--	--	--	--
			Benzo(k)fluoranthene	3.2E-07	--	4.6E-07	--	7.8E-07	--	--	--	--	--
			Chloroethane	7.9E-08	--	3.2E-09	--	8.3E-08	No observed effect	8.0E-04	--	3.2E-05	8.3E-04

TABLE H-9.1.7.RME
EPA RAGS PART D TABLE 9
SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCS
FUTURE REDEVELOPED CHILD RESIDENT
SITE 09, ALAMEDA POINT, ALAMEDA, CALIFORNIA

Scenario Timeframe:	Future-Redeveloped
Receptor Population:	Resident
Receptor Age:	Child

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk					Non-Carcinogenic Hazard Quotient				
				Ingestion	Inhalation	Dermal	External (Radiation)	Exposure Routes Total	Primary Target Organ(s)	Ingestion	Inhalation	Dermal	Exposure Routes Total
			Chrysene	4.0E-08	--	1.2E-07	--	1.6E-07	--	--	--	--	--
			Ethylbenzene	4.5E-07	--	1.4E-07	--	5.9E-07	Kidney, Liver	1.3E-02	--	4.4E-03	1.8E-02
			Indeno(1,2,3-cd)pyrene	4.0E-08	--	2.6E-05	--	3.0E-05	--	--	--	--	--
			Lead	--	--	--	--	--	--	--	--	--	--
			Manganese	--	--	--	--	--	CNS	6.0E+00	--	4.0E-02	6.0E+00
			Methyl-t-butyl ether	2.0E-07	--	2.9E-09	--	2.1E-07	Liver, Kidney, Eyes	8.4E-04	--	1.2E-05	8.5E-04
			Naphthalene	--	--	--	--	--	Body Weight	1.1E+01	--	3.3E+00	1.4E+01
			Pentachlorophenol	1.3E-06	--	3.4E-06	--	4.7E-06	--	4.3E-03	--	1.1E-02	1.5E-02
			Tetrachloroethene	8.5E-07	--	1.9E-07	--	1.0E-06	Liver	1.9E-02	--	4.2E-03	2.3E-02
			Trichloroethene	2.8E-05	--	2.2E-06	--	3.1E-05	Liver, Kidney, Fetus	2.7E+00	--	2.2E-01	3.0E+00
			Vinyl chloride	2.5E-04	--	9.2E-06	--	2.6E-04	Liver	6.5E-01	--	2.4E-02	6.7E-01
			Xylene (Total)	--	--	--	--	--	Death, Body Weight	6.6E-02	--	2.3E-02	8.9E-02
		Exposure Point Total		6.9E-04	--	4.6E-04	--	1.2E-03		5.5E+01	--	6.6E+00	6.1E+01
		Tap Water (Inhalation)	1,1-Dichloroethane	--	--	--	--	--	Kidney	--	1.9E-03	--	1.9E-03
			1,2-Dichloroethane	--	6.3E-06	--	--	6.3E-06	GI, Liver	--	5.8E-03	--	5.8E-03
			1,2-Dichloroethene (Total)	--	--	--	--	--	Blood	--	5.8E-01	--	5.8E-01
			1,2-Dichloropropane	--	1.6E-07	--	--	1.6E-07	Nasal	--	2.4E-02	--	2.4E-02
			1,2,3-Trichloropropane	--	6.9E-07	--	--	6.9E-07	Blood	--	2.9E-03	--	2.9E-03
			1,3-Dichloropropane	--	7.0E-06	--	--	7.0E-06	Nasal	--	1.1E-02	--	1.1E-02
			2,2'-Oxybis(1-chloropropane)	--	--	--	--	--	Blood	--	2.3E-04	--	2.3E-04
			2-Methylnaphthalene	--	--	--	--	--	Nasal	--	1.4E+01	--	1.4E+01
			Benzene	--	6.2E-06	--	--	6.2E-06	Blood	--	3.1E-03	--	3.1E-03
			Chloroethane	--	1.7E-06	--	--	1.7E-06	Fetus	--	2.3E-05	--	2.3E-05
			Ethylbenzene	--	9.3E-06	--	--	9.3E-06	Developmental	--	9.8E-04	--	9.8E-04
			Methyl-t-butyl ether	--	4.6E-09	--	--	4.6E-09	Liver, Kidney, Eyes	--	1.8E-04	--	1.8E-04
			Naphthalene	--	--	--	--	--	Nasal	--	5.2E+01	--	5.2E+01
			Tetrachloroethene	--	3.5E-06	--	--	3.5E-06	Liver, Kidney	--	2.4E-04	--	2.4E-04
			Trichloroethene	--	5.9E-06	--	--	5.9E-06	CNS, Liver, Endocrine	--	1.7E-02	--	1.7E-02
			Vinyl chloride	--	1.1E-06	--	--	1.1E-06	Liver	--	1.4E-02	--	1.4E-02
			Xylene (Total)	--	--	--	--	--	CNS	--	9.5E-02	--	9.5E-02
		Exposure Point Total		--	8.2E-06	--	--	8.2E-06		--	6.7E+01	--	6.7E+01
	Exposure Medium Total							1.2E-03					1.3E+02
Medium Total								1.2E-03					1.3E+02
Receptor Total							Receptor Risk Total	1.2E-03				Receptor HI Total	1.3E+02

TABLE H-9.1.7.RME
EPA RAGS PART D TABLE 9
SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCS
FUTURE REDEVELOPED CHILD RESIDENT
SITE 09, ALAMEDA POINT, ALAMEDA, CALIFORNIA

Scenario Timeframe:	Future-Redeveloped
Receptor Population:	Resident
Receptor Age:	Child

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk					Non-Carcinogenic Hazard Quotient				
				Ingestion	Inhalation	Dermal	External (Radiation)	Exposure Routes Total	Primary Target Organ(s)	Ingestion	Inhalation	Dermal	Exposure Routes Total

Notes:

--	Not Applicable or Not Available
CNS	Central nervous system
HI	Hazard index
RME	Reasonable maximum exposure
VOC	Volatile organic compound

Total Organ 1 (No Observed Effect) HI Across All Media =	1.4E-02
Total Organ 2 (Nasal) HI Across All Media =	6.7E+01
Total Organ 3 (Kidney) HI Across All Media =	3.0E+00
Total Organ 4 (Nervous System) HI Across All Media =	2.2E+01
Total Organ 5 (Respiratory) HI Across All Media =	1.6E+01
Total Organ 6 (Whole Body) HI Across All Media =	1.6E+01
Total Organ 7 (Body Weight) HI Across All Media =	1.4E+01
Total Organ 8 (Blood) HI Across All Media =	5.3E+00
Total Organ 9 (Lung) HI Across All Media =	8.6E+00
Total Organ 10 (Skin) HI Across All Media =	8.2E+00
Total Organ 11 (Liver) HI Across All Media =	4.8E+00
Total Organ 12 (Gastrointestinal System) HI Across All Media =	5.8E-03
Total Organ 13 (Fetus) HI Across All Media =	3.0E+00
Total Organ 14 (Cholesterol) HI Across All Media =	1.7E+00
Total Organ 15 (Longevity) HI Across All Media =	1.7E+00
Total Organ 16 (Death) HI Across All Media =	9.0E-02
Total Organ 17 (Endocrine system) HI Across All Media =	1.7E-02
Total Organ 18 (Unknown Systems) HI Across All Media =	1.5E-02
Total Organ 19 (Eyes) HI Across All Media =	1.0E-03
Total Organ 20 (Developmental) HI Across All Media =	9.8E-04

HHRA RISK TABLES

Reasonable Maximum Exposure
Site 13
Alameda Point, Alameda, California

TABLE H-9.2.1.RME
EPA RAGS PART D TABLE 9
SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCS
CURRENT INDUSTRIAL WORKER
SITE 13, ALAMEDA POINT, ALAMEDA, CALIFORNIA

Scenario Timeframe:	Future
Receptor Population:	Industrial Worker
Receptor Age:	Adult

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk					Non-Carcinogenic Hazard Quotient				
				Ingestion	Inhalation	Dermal	External (Radiation)	Exposure Routes Total	Primary Target Organ(s)	Ingestion	Inhalation	Dermal	Exposure Routes Total
Soil (0-2)	Soil	Site Soil	Arsenic	5.0E-06	–	1.0E-06	–	6.0E-06	Skin	3.1E-02	–	6.2E-03	3.8E-02
			Benz(a)anthracene	3.7E-08	–	3.2E-08	–	6.9E-08	–	–	–	–	–
			Benzo(a)pyrene	3.4E-07	–	2.9E-07	–	6.3E-07	–	–	–	–	–
			Benzo(b)fluoranthene	3.3E-08	–	2.8E-08	–	6.1E-08	–	–	–	–	–
			Benzo(k)fluoranthene	2.0E-09	–	1.7E-09	–	3.8E-09	–	–	–	–	–
			Chromium	–	–	–	–	–	No observed effect	2.7E-05	–	1.8E-06	2.9E-05
			Dibenz(a,h)anthracene	1.0E-07	–	8.9E-08	–	1.9E-07	–	–	–	–	–
			Indeno(1,2,3-cd)pyrene	2.1E-08	–	1.8E-08	–	3.9E-08	–	–	–	–	–
			Lead	–	–	–	–	–	–	–	–	–	–
			Chemical Total	5.6E-06	–	1.5E-06	–	7.0E-06		3.1E-02	–	6.2E-03	3.8E-02
		Exposure Point Total						7.0E-06					3.8E-02
	Exposure Medium Total							7.0E-06					3.8E-02
	Air	Outdoor Air (Particulates and VOCs)	Arsenic	–	7.8E-09	–	–	7.8E-09	–	–	–	–	–
			Benz(a)anthracene	–	5.6E-12	–	–	5.6E-12	–	–	–	–	–
			Benzo(a)pyrene	–	5.1E-11	–	–	5.1E-11	–	–	–	–	–
			Benzo(b)fluoranthene	–	5.0E-12	–	–	5.0E-12	–	–	–	–	–
			Benzo(k)fluoranthene	–	3.1E-13	–	–	3.1E-13	–	–	–	–	–
			Chromium	–	–	–	–	–	–	–	–	–	–
			Dibenz(a,h)anthracene	–	1.6E-11	–	–	1.6E-11	–	–	–	–	–
			Indeno(1,2,3-cd)pyrene	–	3.2E-12	–	–	3.2E-12	–	–	–	–	–
			Lead	–	–	–	–	–	–	–	–	–	–
			Chemical Total	–	7.7E-09	–	–	7.7E-09		–	–	–	0.0E+00
		Exposure Point Total						7.7E-09					0.0E+00
	Exposure Medium Total							7.7E-09					0.0E+00
Medium Total								7.0E-06					3.8E-02
Receptor Total							Receptor Risk Total	7.0E-06				Receptor HI Total	3.8E-02

Notes:

–	Not Applicable or Not Available
GI	Gastrointestinal
HI	Hazard Index
RME	Reasonable maximum exposure

TABLE H-9.2.2.RME
EPA RAGS PART D TABLE 9
SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCS
CURRENT CONSTRUCTION WORKER
SITE 13, ALAMEDA POINT, ALAMEDA, CALIFORNIA

Scenario Timeframe:	Future
Receptor Population:	Construction Worker
Receptor Age:	Adult

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk					Non-Carcinogenic Hazard Quotient				
				Ingestion	Inhalation	Dermal	External (Radiation)	Exposure Routes Total	Primary Target Organ(s)	Ingestion	Inhalation	Dermal	Exposure Routes Total
Soil (0-2)	Soil	Site Soil	Arsenic	6.7E-07	–	6.0E-08	–	7.3E-07	Skin	1.0E-01	–	9.3E-03	1.1E-01
			Benz(a)anthracene	4.9E-09	–	1.9E-09	–	6.8E-09	–	–	–	–	–
			Benzo(a)pyrene	4.4E-08	–	1.7E-08	–	6.2E-08	–	–	–	–	–
			Benzo(b)fluoranthene	4.3E-09	–	1.7E-09	–	6.0E-09	–	–	–	–	–
			Benzo(k)fluoranthene	2.7E-10	–	1.0E-10	–	3.7E-10	–	–	–	–	–
			Chromium	–	–	–	–	–	No observed effect	9.1E-05	–	2.7E-06	9.3E-05
			Dibenz(a,h)anthracene	1.4E-08	–	5.3E-09	–	1.9E-08	–	–	–	–	–
			Indeno(1,2,3-cd)pyrene	2.8E-09	–	1.1E-09	–	3.9E-09	–	–	–	–	–
			Lead	–	–	–	–	–	–	–	–	–	–
			Chemical Total	7.4E-07	–	8.7E-08	–	8.2E-07		1.0E-01	–	9.3E-03	1.1E-01
		Exposure Point Total						8.2E-07					1.1E-01
	Exposure Medium Total							8.2E-07					1.1E-01
	Air	Outdoor Air (Particulates and VOCs)	Arsenic	–	3.1E-10	–	–	3.1E-10	–	–	–	–	–
			Benz(a)anthracene	–	2.3E-13	–	–	2.3E-13	–	–	–	–	–
			Benzo(a)pyrene	–	2.0E-12	–	–	2.0E-12	–	–	–	–	–
			Benzo(b)fluoranthene	–	2.0E-13	–	–	2.0E-13	–	–	–	–	–
			Benzo(k)fluoranthene	–	1.2E-14	–	–	1.2E-14	–	–	–	–	–
			Chromium	–	–	–	–	–	–	–	–	–	–
			Dibenz(a,h)anthracene	–	6.3E-13	–	–	6.3E-13	–	–	–	–	–
			Indeno(1,2,3-cd)pyrene	–	1.3E-13	–	–	1.3E-13	–	–	–	–	–
			Lead	–	–	–	–	–	–	–	–	–	–
			Chemical Total	–	3.1E-10	–	–	3.1E-10		–	–	–	0.0E+00
		Exposure Point Total						3.1E-10					0.0E+00
	Exposure Medium Total							3.1E-10					0.0E+00
Medium Total								8.2E-07					1.1E-01
Receptor Total							Receptor Risk Total	8.2E-07				Receptor HI Total	1.1E-01

Notes:

–	Not Applicable or Not Available
GI	Gastrointestinal
HI	Hazard Index
RME	Reasonable maximum exposure

TABLE H-9.2.3.RME
EPA RAGS PART D TABLE 9
SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCS
CURRENT ADULT RESIDENT
SITE 13, ALAMEDA POINT, ALAMEDA, CALIFORNIA

Scenario Timeframe:	Future
Receptor Population:	Resident
Receptor Age:	Adult

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk					Non-Carcinogenic Hazard Quotient				
				Ingestion	Inhalation	Dermal	External (Radiation)	Exposure Routes Total	Primary Target Organ(s)	Ingestion	Inhalation	Dermal	Exposure Routes Total
Soil (0-2)	Soil	Site Soil	Arsenic	6.8E-06	–	8.1E-07	–	7.6E-06	Skin	4.4E-02	–	5.3E-03	4.9E-02
			Benz(a)anthracene	5.0E-08	–	2.6E-08	–	7.6E-08	–	–	–	–	–
			Benzo(a)pyrene	4.5E-07	–	2.3E-07	–	6.9E-07	–	–	–	–	–
			Benzo(b)fluoranthene	4.4E-08	–	2.3E-08	–	6.7E-08	–	–	–	–	–
			Benzo(k)fluoranthene	2.7E-09	–	1.4E-09	–	4.1E-09	–	–	–	–	–
			Chromium	–	–	–	–	–	No observed effect	3.8E-05	–	1.5E-06	4.0E-05
			Dibenz(a,h)anthracene	1.4E-07	–	7.2E-08	–	2.1E-07	–	–	–	–	–
			Indeno(1,2,3-cd)pyrene	2.8E-08	–	1.5E-08	–	4.3E-08	–	–	–	–	–
			Lead	–	–	–	–	–	–	–	–	–	–
			Chemical Total	7.5E-06	–	1.2E-06	–	8.7E-06		4.4E-02	–	5.3E-03	4.9E-02
		Exposure Point Total						8.7E-06					4.9E-02
	Exposure Medium Total							8.7E-06					4.9E-02
	Homegrown Produce	Homegrown Produce	Arsenic	2.5E-05	–	–	–	2.5E-05	Skin	1.6E-01	–	–	1.6E-01
			Benz(a)anthracene	1.7E-07	–	–	–	1.7E-07	–	–	–	–	–
			Benzo(a)pyrene	1.2E-06	–	–	–	1.2E-06	–	–	–	–	–
			Benzo(b)fluoranthene	1.0E-07	–	–	–	1.0E-07	–	–	–	–	–
			Benzo(k)fluoranthene	6.4E-09	–	–	–	6.4E-09	–	–	–	–	–
			Chromium	–	–	–	–	–	–	–	–	–	–
			Dibenz(a,h)anthracene	5.4E-07	–	–	–	5.4E-07	–	–	–	–	–
			Indeno(1,2,3-cd)pyrene	5.3E-08	–	–	–	5.3E-08	–	–	–	–	–
			Lead	–	–	–	–	–	–	–	–	–	–
			Chemical Total	2.7E-05	–	–	–	2.7E-05		1.6E-01	–	–	1.6E-01
		Exposure Point Total						2.7E-05					1.6E-01
	Exposure Medium Total							2.7E-05					1.6E-01
	Air	Outdoor Air (Particulates and VOCs)	Arsenic	–	1.0E-08	–	–	1.0E-08	–	–	–	–	–
			Benz(a)anthracene	–	7.6E-12	–	–	7.6E-12	–	–	–	–	–
			Benzo(a)pyrene	–	6.8E-11	–	–	6.8E-11	–	–	–	–	–
			Benzo(b)fluoranthene	–	6.7E-12	–	–	6.7E-12	–	–	–	–	–
			Benzo(k)fluoranthene	–	4.1E-13	–	–	4.1E-13	–	–	–	–	–
			Chromium	–	–	–	–	–	–	–	–	–	–
			Dibenz(a,h)anthracene	–	2.1E-11	–	–	2.1E-11	–	–	–	–	–
			Indeno(1,2,3-cd)pyrene	–	4.3E-12	–	–	4.3E-12	–	–	–	–	–
			Lead	–	–	–	–	–	–	–	–	–	–
			Chemical Total	–	1.0E-08	–	–	1.0E-08		–	–	–	0.0E+00
		Exposure Point Total						1.0E-08					0.0E+00
	Exposure Medium Total							1.0E-08					0.0E+00

TABLE H-9.2.3.RME
EPA RAGS PART D TABLE 9
SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCS
CURRENT ADULT RESIDENT
SITE 13, ALAMEDA POINT, ALAMEDA, CALIFORNIA

Scenario Timeframe:	Future
Receptor Population:	Resident
Receptor Age:	Adult

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk					Non-Carcinogenic Hazard Quotient				
				Ingestion	Inhalation	Dermal	External (Radiation)	Exposure Routes Total	Primary Target Organ(s)	Ingestion	Inhalation	Dermal	Exposure Routes Total
Medium Total								3.6E-05					2.1E-01
Groundwater	Groundwater	Tap Water (oral/dermal)	1,2-Dichloroethane	3.4E-07	--	7.5E-09	--	3.5E-07	Kidney, Death	3.7E-04	--	8.0E-06	3.8E-04
			2-Methylnaphthalene	--	--	--	--	--	Lung	3.5E-02	--	8.7E-03	4.4E-02
			Arsenic	4.0E-04	--	2.1E-06	--	4.1E-04	Skin	2.6E+00	--	1.4E-02	2.6E+00
			Benzene	2.4E-06	--	2.6E-07	--	2.6E-06	Blood	3.2E-02	--	3.5E-03	3.5E-02
			Ethylbenzene	3.7E-06	--	9.4E-09	--	4.6E-06	Kidney, Liver	2.8E-04	--	7.1E-05	3.5E-04
			Manganese	--	--	--	--	--	CNS	8.9E+00	--	4.6E-02	9.0E+00
			Naphthalene	--	--	--	--	--	Body Weight	4.8E-02	--	1.2E-02	5.9E-02
			Pentachlorophenol	7.9E-06	--	1.6E-05	--	2.4E-05	--	6.4E-03	--	1.3E-02	1.9E-02
			Thallium	--	--	--	--	--	Liver, Blood	1.1E+00	--	5.7E-03	1.1E+00
			Trichloroethene	3.4E-06	--	2.1E-07	--	3.6E-06	Liver, Kidney, Fetus	8.3E-02	--	5.2E-03	8.8E-02
		Exposure Point Total		4.2E-04	--	1.9E-05	--	4.4E-04		1.3E+01	--	1.1E-01	1.3E+01
		Tap Water (inhalation)	1,2-Dichloroethane	--	4.1E-06	--	--	4.1E-06	GI, Liver	--	9.5E-04	--	9.5E-04
			2-Methylnaphthalene	--	--	--	--	--	Nasal	--	4.4E-02	--	4.4E-02
			Benzene	--	1.4E-07	--	--	1.4E-07	Blood	--	1.8E-03	--	1.8E-03
			Ethylbenzene	--	4.4E-09	--	--	4.4E-09	Developmental	--	1.2E-05	--	1.2E-05
			Naphthalene	--	--	--	--	--	Nasal	--	1.3E-01	--	1.3E-01
			Trichloroethene	--	4.1E-07	--	--	4.1E-07	CNS, Liver, Endocrine	--	3.0E-04	--	3.0E-04
		Exposure Point Total		--	6.0E-07	--	--	6.0E-07		--	1.8E-01	--	1.8E-01
	Exposure Medium Total							4.4E-04					1.3E+01
Medium Total								4.4E-04					1.3E+01
Receptor Total							Receptor Risk Total	4.7E-04				Receptor HI Total	1.3E+01

Notes:

--	Not Applicable or Not Available
CNS	Central nervous system
HI	Hazard index
RME	Reasonable maximum exposure
VOC	Volatile organic compound

Total Organ 1 (Skin) HI Across All Media =	2.6E+00
Total Organ 2 (Nervous System) HI Across All Media =	9.0E+00
Total Organ 3 (Blood) HI Across All Media =	1.1E+00
Total Organ 4 (Gastrointestinal System) HI Across All Media =	9.5E-04
Total Organ 5 (Liver) HI Across All Media =	1.2E+00
Total Organ 6 (Nasal) HI Across All Media =	1.8E-01
Total Organ 7 (Kidney) HI Across All Media =	8.9E-02
Total Organ 8 (Fetus) HI Across All Media =	8.8E-02
Total Organ 9 (Body Weight) HI Across All Media =	5.9E-02
Total Organ 10 (Lung) HI Across All Media =	4.4E-02
Total Organ 11 (Unknown Systems) HI Across All Media =	1.9E-02
Total Organ 12 (Death) HI Across All Media =	3.6E-04
Total Organ 13 (Endocrine System) HI Across All Media =	3.0E-04

TABLE H-9.2.3.RME
EPA RAGS PART D TABLE 9
SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCS
CURRENT ADULT RESIDENT
SITE 13, ALAMEDA POINT, ALAMEDA, CALIFORNIA

Scenario Timeframe:	Future
Receptor Population:	Resident
Receptor Age:	Adult

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk					Non-Carcinogenic Hazard Quotient				
				Ingestion	Inhalation	Dermal	External (Radiation)	Exposure Routes Total	Primary Target Organ(s)	Ingestion	Inhalation	Dermal	Exposure Routes Total
												Total Organ 14 (No Observed Effect) HI Across All Media =	4.0E-05
												Total Organ 15 (Developmental) HI Across All Media =	1.2E-05

TABLE H-9.2.4.RME
EPA RAGS PART D TABLE 9
SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCS
CURRENT CHILD RESIDENT
SITE 13, ALAMEDA POINT, ALAMEDA, CALIFORNIA

Scenario Timeframe:	Future
Receptor Population:	Resident
Receptor Age:	Child

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk					Non-Carcinogenic Hazard Quotient				
				Ingestion	Inhalation	Dermal	External (Radiation)	Exposure Routes Total	Primary Target Organ(s)	Ingestion	Inhalation	Dermal	Exposure Routes Total
Soil (0-2)	Soil	Site Soil	Arsenic	1.6E-05	–	1.3E-06	–	1.7E-05	Skin	4.1E-01	–	3.4E-02	4.4E-01
			Benz(a)anthracene	1.2E-07	–	4.3E-08	–	1.6E-07	–	–	–	–	–
			Benzo(a)pyrene	1.1E-06	–	3.8E-07	–	1.4E-06	–	–	–	–	–
			Benzo(b)fluoranthene	1.0E-07	–	3.8E-08	–	1.4E-07	–	–	–	–	–
			Benzo(k)fluoranthene	6.4E-09	–	2.3E-09	–	8.7E-09	–	–	–	–	–
			Chromium	–	–	–	–	–	*No observed effect*	3.6E-04	–	1.0E-05	3.7E-04
			Dibenz(a,h)anthracene	3.2E-07	–	1.2E-07	–	4.4E-07	–	–	–	–	–
			Indeno(1,2,3-cd)pyrene	6.6E-08	–	2.4E-08	–	9.1E-08	–	–	–	–	–
			Lead	–	–	–	–	–	–	–	–	–	–
			Chemical Total	1.7E-05	–	1.9E-06	–	1.9E-05		4.1E-01	–	3.4E-02	4.4E-01
		Exposure Point Total						1.9E-05					4.4E-01
	Exposure Medium Total							1.9E-05					4.4E-01
	Homegrown Produce	Homegrown Produce	Arsenic	6.3E-06	–	–	–	6.3E-06	Skin	1.6E-01	–	–	1.6E-01
			Benz(a)anthracene	4.2E-08	–	–	–	4.2E-08	–	–	–	–	–
			Benzo(a)pyrene	2.9E-07	–	–	–	2.9E-07	–	–	–	–	–
			Benzo(b)fluoranthene	2.6E-08	–	–	–	2.6E-08	–	–	–	–	–
			Benzo(k)fluoranthene	1.6E-09	–	–	–	1.6E-09	–	–	–	–	–
			Chromium	–	–	–	–	–	–	–	–	–	–
			Dibenz(a,h)anthracene	1.3E-07	–	–	–	1.3E-07	–	–	–	–	–
			Indeno(1,2,3-cd)pyrene	1.3E-08	–	–	–	1.3E-08	–	–	–	–	–
			Lead	–	–	–	–	–	–	–	–	–	–
			Chemical Total	6.8E-06	–	–	–	6.8E-06		1.6E-01	–	–	1.6E-01
		Exposure Point Total						6.8E-06					1.6E-01
	Exposure Medium Total							6.8E-06					1.6E-01
	Air	Outdoor Air (Particulates and VOCs)	Arsenic	–	6.0E-09	–	–	6.0E-09	–	–	–	–	–
			Benz(a)anthracene	–	4.5E-12	–	–	4.5E-12	–	–	–	–	–
			Benzo(a)pyrene	–	4.0E-11	–	–	4.0E-11	–	–	–	–	–
			Benzo(b)fluoranthene	–	3.9E-12	–	–	3.9E-12	–	–	–	–	–
			Benzo(k)fluoranthene	–	2.4E-13	–	–	2.4E-13	–	–	–	–	–
			Chromium	–	–	–	–	–	–	–	–	–	–
			Dibenz(a,h)anthracene	–	1.2E-11	–	–	1.2E-11	–	–	–	–	–
			Indeno(1,2,3-cd)pyrene	–	2.5E-12	–	–	2.5E-12	–	–	–	–	–
			Lead	–	–	–	–	–	–	–	–	–	–
			Chemical Total	–	6.1E-09	–	–	6.1E-09		–	–	–	0.0E+00
		Exposure Point Total						6.1E-09					0.0E+00
	Exposure Medium Total							6.1E-09					0.0E+00

TABLE H-9.2.4.RME
EPA RAGS PART D TABLE 9
SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCS
CURRENT CHILD RESIDENT
SITE 13, ALAMEDA POINT, ALAMEDA, CALIFORNIA

Scenario Timeframe:	Future
Receptor Population:	Resident
Receptor Age:	Child

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk					Non-Carcinogenic Hazard Quotient				
				Ingestion	Inhalation	Dermal	External (Radiation)	Exposure Routes Total	Primary Target Organ(s)	Ingestion	Inhalation	Dermal	Exposure Routes Total
Medium Total								2.6E-05					6.1E-01
Groundwater	Groundwater	Tap Water (oral/dermal)	1,2-Dichloroethane	2.0E-07	--	5.6E-09	--	2.1E-07	Kidney, Death	6.6E-04	--	2.4E-05	6.8E-04
			2-Methylnaphthalene	--	--	--	--	--	Lung	8.2E-02	--	2.6E-02	1.1E-01
			Arsenic	2.4E-04	--	1.6E-06	--	2.4E-04	Skin	6.1E+00	--	4.0E-02	6.1E+00
			Benzene	1.4E-06	--	1.9E-07	--	1.6E-06	Blood	7.4E-02	--	1.0E-02	8.4E-02
			Ethylbenzene	2.2E-08	--	7.0E-09	--	2.8E-08	Kidney, Liver	6.5E-04	--	2.1E-04	8.6E-04
			Manganese	--	--	--	--	--	CNS	2.1E+01	--	1.4E-01	2.1E+01
			Naphthalene	--	--	--	--	--	Body Weight	1.1E-01	--	3.5E-02	1.5E-01
			Pentachlorophenol	4.6E-06	--	1.2E-05	--	1.6E-05	--	1.5E-02	--	3.8E-02	5.3E-02
			Thallium	--	--	--	--	--	Liver, Blood	2.5E+00	--	1.7E-02	2.6E+00
			Trichloroethene	2.0E-06	--	1.6E-07	--	2.1E-06	Liver, Kidney, Fetus	1.9E-01	--	1.5E-02	2.1E-01
		Exposure Point Total		2.4E-04	--	1.4E-05	--	2.6E-04		3.0E+01	--	3.2E-01	3.0E+01
		Tap Water (inhalation)	1,2-Dichloroethane	--	4.2E-08	--	--	4.2E-08	GI, Liver	--	3.9E-03	--	3.9E-03
			2-Methylnaphthalene	--	--	--	--	--	Nasal	--	1.8E-01	--	1.8E-01
			Benzene	--	1.4E-07	--	--	1.4E-07	Blood	--	7.2E-03	--	7.2E-03
			Ethylbenzene	--	4.5E-09	--	--	4.5E-09	Developmental	--	4.7E-05	--	4.7E-05
			Naphthalene	--	--	--	--	--	Nasal	--	5.4E-01	--	5.4E-01
			Trichloroethene	--	4.2E-07	--	--	4.2E-07	CNS, Liver, Endocrine	--	1.2E-03	--	1.2E-03
		Exposure Point Total		--	6.1E-07	--	--	6.1E-07		--	7.4E-01	--	7.4E-01
	Exposure Medium Total							2.6E-04					3.1E+01
Medium Total								2.6E-04					3.1E+01
Receptor Total							Receptor Risk Total	2.6E-04				Receptor HI Total	3.2E+01

Notes:

--	Not Applicable or Not Available
CNS	Central nervous system
HI	Hazard Index
RME	Reasonable maximum exposure
VOC	Volatile organic compound

Total Organ 1 (Skin) HI Across All Media =	6.7E+00
Total Organ 2 (Nervous System) HI Across All Media =	2.1E+01
Total Organ 3 (Blood) HI Across All Media =	2.6E+00
Total Organ 4 (Gastrointestinal System) HI Across All Media =	3.9E-03
Total Organ 5 (Liver) HI Across All Media =	2.8E+00
Total Organ 6 (Nasal) HI Across All Media =	7.2E-01
Total Organ 7 (Kidney) HI Across All Media =	2.1E-01
Total Organ 8 (Fetus) HI Across All Media =	2.1E-01
Total Organ 9 (Body Weight) HI Across All Media =	1.5E-01
Total Organ 10 (Lung) HI Across All Media =	1.1E-01
Total Organ 11 (Unknown Systems) HI Across All Media =	5.3E-02
Total Organ 12 (Endocrine System) HI Across All Media =	1.2E-03
Total Organ 13 (Death) HI Across All Media =	6.8E-04

TABLE H-9.2.4.RME
EPA RAGS PART D TABLE 9
SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCS
CURRENT CHILD RESIDENT
SITE 13, ALAMEDA POINT, ALAMEDA, CALIFORNIA

Scenario Timeframe:	Future
Receptor Population:	Resident
Receptor Age:	Child

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk					Non-Carcinogenic Hazard Quotient				
				Ingestion	Inhalation	Dermal	External (Radiation)	Exposure Routes Total	Primary Target Organ(s)	Ingestion	Inhalation	Dermal	Exposure Routes Total
												Total Organ 14 (No Observed Effect) HI Across All Media =	3.7E-04
												Total Organ 15 (Developmental) HI Across All Media =	4.7E-05

TABLE H-9.2.5.RME
EPA RAGS PART D TABLE 9
SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCS
FUTURE DEVELOPED CONSTRUCTION WORKER
SITE 13, ALAMEDA POINT, ALAMEDA, CALIFORNIA

Scenario Timeframe:	Future-Developed
Receptor Population:	Construction Worker
Receptor Age:	Adult

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk					Non-Carcinogenic Hazard Quotient				
				Ingestion	Inhalation	Dermal	External (Radiation)	Exposure Routes Total	Primary Target Organ(s)	Ingestion	Inhalation	Dermal	Exposure Routes Total
Soil (0-8)	Soil	Site Soil	2-Methylnaphthalene	–	–	–	–	–	Lung	4.1E-03	–	–	4.1E-03
			Arsenic	4.3E-07	–	3.8E-08	–	4.6E-07	Skin	6.6E-02	–	6.0E-03	7.2E-02
			Benzene	2.3E-10	–	–	–	2.3E-10	Blood	7.2E-05	–	–	7.2E-05
			Benz(a)anthracene	5.5E-09	–	2.1E-09	–	7.6E-09	–	–	–	–	–
			Benzo(a)pyrene	4.7E-08	–	1.8E-08	–	6.5E-08	–	–	–	–	–
			Benzo(b)fluoranthene	4.4E-09	–	1.7E-09	–	6.1E-09	–	–	–	–	–
			Benzo(k)fluoranthene	3.2E-10	–	1.3E-10	–	4.5E-10	–	–	–	–	–
			Chromium	–	–	–	–	–	No observed effect	7.9E-05	–	2.4E-06	8.2E-05
			Chrysene	9.4E-11	–	3.7E-11	–	1.3E-10	–	–	–	–	–
			Dibenz(a,h)anthracene	1.6E-08	–	6.3E-09	–	2.3E-08	–	–	–	–	–
			Indeno(1,2,3-cd)pyrene	3.1E-09	–	1.2E-09	–	4.3E-09	–	–	–	–	–
			Lead	–	–	–	–	–	–	–	–	–	–
			Vanadium	–	–	–	–	–	No observed effect	1.4E-02	–	4.1E-04	1.4E-02
			Chemical Total	5.0E-07	–	6.8E-08	–	5.7E-07		8.4E-02	–	6.0E-03	9.1E-02
		Exposure Point Total						5.7E-07					9.1E-02
	Exposure Medium Total							5.7E-07					9.1E-02
	Air	Outdoor Air (Particulates and VOCs)	2-Methylnaphthalene	–	–	–	–	–	Nasal	–	6.0E-02	–	6.0E-02
			Arsenic	–	2.0E-10	–	–	2.0E-10	–	–	–	–	–
			Benzene	–	2.5E-09	–	–	2.5E-09	Blood	–	7.6E-04	–	7.6E-04
			Benz(a)anthracene	–	2.5E-13	–	–	2.5E-13	–	–	–	–	–
			Benzo(a)pyrene	–	2.1E-12	–	–	2.1E-12	–	–	–	–	–
			Benzo(b)fluoranthene	–	2.0E-13	–	–	2.0E-13	–	–	–	–	–
			Benzo(k)fluoranthene	–	1.5E-14	–	–	1.5E-14	–	–	–	–	–
			Chromium	–	–	–	–	–	–	–	–	–	–
			Chrysene	–	4.3E-15	–	–	4.3E-15	–	–	–	–	–
			Dibenz(a,h)anthracene	–	7.5E-13	–	–	7.5E-13	–	–	–	–	–
			Indeno(1,2,3-cd)pyrene	–	1.4E-13	–	–	1.4E-13	–	–	–	–	–
			Lead	–	–	–	–	–	–	–	–	–	–
			Vanadium	–	–	–	–	–	–	–	–	–	–
			Chemical Total	–	2.7E-09	–	–	2.7E-09		–	6.1E-02	–	6.1E-02
		Exposure Point Total						2.7E-09					6.1E-02
	Exposure Medium Total							2.7E-09					6.1E-02

TABLE H-9.2.5.RME
EPA RAGS PART D TABLE 9
SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCS
FUTURE DEVELOPED CONSTRUCTION WORKER
SITE 13, ALAMEDA POINT, ALAMEDA, CALIFORNIA

Scenario Timeframe:	Future-Developed
Receptor Population:	Construction Worker
Receptor Age:	Adult

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk					Non-Carcinogenic Hazard Quotient				
				Ingestion	Inhalation	Dermal	External (Radiation)	Exposure Routes Total	Primary Target Organ(s)	Ingestion	Inhalation	Dermal	Exposure Routes Total
Medium Total								5.7E-07					1.5E-01
Receptor Total							Receptor Risk Total	5.7E-07				Receptor HI Total	1.5E-01

Notes:

–	Not Applicable or Not Available
HI	Hazard Index
RME	Reasonable maximum exposure
VOC	Volatile organic compound

TABLE H-9.2.6.RME
EPA RAGS PART D TABLE 9
SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCS
FUTURE REDEVELOPED ADULT RESIDENT
SITE 13, ALAMEDA POINT, ALAMEDA, CALIFORNIA

Scenario Timeframe:	Future-Redeveloped
Receptor Population:	Resident
Receptor Age:	Adult

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk					Non-Carcinogenic Hazard Quotient				
				Ingestion	Inhalation	Dermal	External (Radiation)	Exposure Routes Total	Primary Target Organ(s)	Ingestion	Inhalation	Dermal	Exposure Routes Total
Soil (0-8)	Soil	Site Soil	2-Methylnaphthalene	--	--	--	--	--	Lung	1.7E-03	--	--	1.7E-03
			Arsenic	4.3E-06	--	5.2E-07	--	4.9E-06	Skin	2.8E-02	--	3.4E-03	3.1E-02
			Benzene	2.3E-09	--	--	--	2.3E-09	Blood	3.1E-05	--	--	3.1E-05
			Benz(a)anthracene	5.6E-08	--	2.9E-08	--	8.4E-08	--	--	--	--	--
			Benzo(a)pyrene	4.8E-07	--	2.5E-07	--	7.2E-07	--	--	--	--	--
			Benzo(b)fluoranthene	4.5E-08	--	2.3E-08	--	6.8E-08	--	--	--	--	--
			Benzo(k)fluoranthene	3.3E-09	--	1.7E-09	--	5.0E-09	--	--	--	--	--
			Chromium	--	--	--	--	--	No observed effect	3.4E-05	--	1.3E-06	3.5E-05
			Chrysene	9.6E-10	--	5.0E-10	--	1.5E-09	--	--	--	--	--
			Dibenz(a,h)anthracene	1.7E-07	--	8.8E-08	--	2.5E-07	--	--	--	--	--
			Indeno(1,2,3-cd)pyrene	3.2E-08	--	1.7E-08	--	4.8E-08	--	--	--	--	--
			Lead	--	--	--	--	--	--	--	--	--	--
			Vanadium	--	--	--	--	--	No observed effect	5.6E-03	--	2.3E-04	6.1E-03
			Chemical Total	5.1E-06	--	9.2E-07	--	6.0E-06		3.6E-02	--	3.6E-03	3.9E-02
		Exposure Point Total						6.0E-06					3.9E-02
	Exposure Medium Total							6.0E-06					3.9E-02
	Homegrown Produce	Homegrown Produce	2-Methylnaphthalene	--	--	--	--	--	--	--	--	--	--
			Arsenic	1.6E-05	--	--	--	1.6E-05	Skin	1.0E-01	--	--	1.0E-01
			Benzene	--	--	--	--	--	--	--	--	--	--
			Benz(a)anthracene	1.9E-07	--	--	--	1.9E-07	--	--	--	--	--
			Benzo(a)pyrene	1.2E-06	--	--	--	1.2E-06	--	--	--	--	--
			Benzo(b)fluoranthene	1.1E-07	--	--	--	1.1E-07	--	--	--	--	--
			Benzo(k)fluoranthene	7.7E-09	--	--	--	7.7E-09	--	--	--	--	--
			Chromium	--	--	--	--	--	--	--	--	--	--
			Chrysene	2.9E-09	--	--	--	2.9E-09	--	--	--	--	--
			Dibenz(a,h)anthracene	6.4E-07	--	--	--	6.4E-07	--	--	--	--	--
			Indeno(1,2,3-cd)pyrene	5.9E-08	--	--	--	5.9E-08	--	--	--	--	--
			Lead	--	--	--	--	--	--	--	--	--	--
			Vanadium	--	--	--	--	--	--	--	--	--	--
			Chemical Total	1.8E-05	--	--	--	1.8E-05		1.0E-01	--	--	1.0E-01
		Exposure Point Total						1.8E-05					1.0E-01
	Exposure Medium Total							1.8E-05					1.0E-01
	Air	Outdoor Air (Particulates and VOCs)	2-Methylnaphthalene	--	--	--	--	--	Nasal	--	8.4E-02	--	8.4E-02
			Arsenic	--	6.5E-09	--	--	6.5E-09	--	--	--	--	--
			Benzene	--	8.4E-08	--	--	8.4E-08	Blood	--	1.1E-03	--	1.1E-03
			Benz(a)anthracene	--	8.4E-12	--	--	8.4E-12	--	--	--	--	--
			Benzo(a)pyrene	--	7.2E-11	--	--	7.2E-11	--	--	--	--	--
			Benzo(b)fluoranthene	--	6.8E-12	--	--	6.8E-12	--	--	--	--	--
			Benzo(k)fluoranthene	--	5.0E-13	--	--	5.0E-13	--	--	--	--	--

TABLE H-9.2.6.RME
EPA RAGS PART D TABLE 9
SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCS
FUTURE REDEVELOPED ADULT RESIDENT
SITE 13, ALAMEDA POINT, ALAMEDA, CALIFORNIA

Scenario Timeframe:	Future-Redeveloped
Receptor Population:	Resident
Receptor Age:	Adult

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk					Non-Carcinogenic Hazard Quotient				
				Ingestion	Inhalation	Dermal	External (Radiation)	Exposure Routes Total	Primary Target Organ(s)	Ingestion	Inhalation	Dermal	Exposure Routes Total
			Chromium	--	--	--	--	--	--	--	--	--	--
			Chrysene	--	1.4E-13	--	--	1.4E-13	--	--	--	--	--
			Dibenz(a,h)anthracene	--	2.5E-11	--	--	2.5E-11	--	--	--	--	--
			Indeno(1,2,3-cd)pyrene	--	4.8E-12	--	--	4.8E-12	--	--	--	--	--
			Lead	--	--	--	--	--	--	--	--	--	--
			Vanadium	--	--	--	--	--	--	--	--	--	--
			Chemical Total	--	9.1E-08	--	--	9.1E-08		--	8.5E-02	--	8.5E-02
		Exposure Point Total						9.1E-08					8.5E-02
	Exposure Medium Total							9.1E-08					8.5E-02
Medium Total								2.4E-05					2.3E-01
Groundwater	Groundwater	Tap Water (oral/dermal)	1,2-Dichloroethane	3.4E-07	--	7.5E-09	--	3.5E-07	Kidney, Death	3.7E-04	--	8.0E-06	3.8E-04
			2-Methylnaphthalene	--	--	--	--	--	Lung	3.5E-02	--	8.7E-03	4.4E-02
			Arsenic	4.0E-04	--	2.1E-06	--	4.1E-04	Skin	2.6E+00	--	1.4E-02	2.6E+00
			Benzene	2.4E-06	--	2.6E-07	--	2.6E-06	Blood	3.2E-02	--	3.5E-03	3.5E-02
			Ethylbenzene	3.7E-08	--	9.4E-09	--	4.6E-08	Kidney, Liver	2.8E-04	--	7.1E-05	3.5E-04
			Manganese	--	--	--	--	--	CNS	8.9E+00	--	4.6E-02	9.0E+00
			Naphthalene	--	--	--	--	--	Body Weight	4.6E-02	--	1.2E-02	5.9E-02
			Pentachlorophenol	7.9E-06	--	1.6E-05	--	2.4E-05	--	6.4E-03	--	1.3E-02	1.9E-02
			Thallium	--	--	--	--	--	Liver, Blood	1.1E+00	--	5.7E-03	1.1E+00
			Trichloroethene	3.4E-06	--	2.1E-07	--	3.6E-06	Liver, Kidney, Fetus	8.3E-02	--	5.2E-03	8.8E-02
		Exposure Point Total		4.2E-04	--	1.9E-05	--	4.4E-04		1.3E+01	--	1.1E-01	1.3E+01
		Tap Water (inhalation)	1,2-Dichloroethane	--	4.1E-06	--	--	4.1E-06	GI, Liver	--	9.5E-04	--	9.5E-04
			2-Methylnaphthalene	--	--	--	--	--	Nasal	--	4.4E-02	--	4.4E-02
			Benzene	--	1.4E-07	--	--	1.4E-07	Blood	--	1.8E-03	--	1.8E-03
			Ethylbenzene	--	4.4E-09	--	--	4.4E-09	Developmental	--	1.2E-05	--	1.2E-05
			Naphthalene	--	--	--	--	--	Nasal	--	1.3E-01	--	1.3E-01
			Trichloroethene	--	4.1E-07	--	--	4.1E-07	CNS, Liver, Endocrine	--	3.0E-04	--	3.0E-04
		Exposure Point Total		--	6.0E-07	--	--	6.0E-07		--	1.8E-01	--	1.8E-01
	Exposure Medium Total							4.4E-04					1.3E+01
Medium Total								4.4E-04					1.3E+01
Receptor Total							Receptor Risk Total	4.6E-04				Receptor HI Total	1.3E+01

Notes:

--	Not Applicable or Not Available
CNS	Central nervous system
HI	Hazard Index
RME	Reasonable maximum exposure
VOC	Volatile organic compound

Total Organ 1 (Skin) HI Across All Media =	2.6E+00
Total Organ 2 (Nervous System) HI Across All Media =	9.0E+00
Total Organ 3 (Blood) HI Across All Media =	1.1E+00
Total Organ 4 (Gastrointestinal System) HI Across All Media =	9.5E-04
Total Organ 5 (Liver) HI Across All Media =	1.2E+00
Total Organ 6 (Nasal) HI Across All Media =	2.6E-01

TABLE H-9.2.6.RME
EPA RAGS PART D TABLE 9
SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCS
FUTURE REDEVELOPED ADULT RESIDENT
SITE 13, ALAMEDA POINT, ALAMEDA, CALIFORNIA

Scenario Timeframe:	Future-Redeveloped
Receptor Population:	Resident
Receptor Age:	Adult

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk					Non-Carcinogenic Hazard Quotient				
				Ingestion	Inhalation	Dermal	External (Radiation)	Exposure Routes Total	Primary Target Organ(s)	Ingestion	Inhalation	Dermal	Exposure Routes Total
									Total Organ 7 (Kidney) HI Across All Media =				8.9E-02
									Total Organ 8 (Fetus) HI Across All Media =				8.8E-02
									Total Organ 9 (Body Weight) HI Across All Media =				5.9E-02
									Total Organ 10 (Lung) HI Across All Media =				4.6E-02
									Total Organ 11 (No Observed Effect) HI Across All Media =				1.9E-02
									Total Organ 12 (Unknown Systems) HI Across All Media =				6.1E-03
									Total Organ 13 (Death) HI Across All Media =				3.8E-04
									Total Organ 14 (Endocrine System) HI Across All Media =				3.0E-04
									Total Organ 15 (Developmental) HI Across All Media =				1.2E-05

TABLE H-9.2.7.RME
EPA RAGS PART D TABLE 9
SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCS
FUTURE REDEVELOPED CHILD RESIDENT
SITE 13, ALAMEDA POINT, ALAMEDA, CALIFORNIA

Scenario Timeframe:	Future-Redeveloped
Receptor Population:	Resident
Receptor Age:	Child

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk					Non-Carcinogenic Hazard Quotient				
				Ingestion	Inhalation	Dermal	External (Radiation)	Exposure Routes Total	Primary Target Organ(s)	Ingestion	Inhalation	Dermal	Exposure Routes Total
Soil (0-8)	Soil	Site Soil	2-Methylnaphthalene	--	--	--	--	--	Lung	1.6E-02	--	--	1.6E-02
			Arsenic	1.0E-05	--	8.5E-07	--	1.1E-05	Skin	2.6E-01	--	2.2E-02	2.8E-01
			Benzene	5.4E-09	--	--	--	5.4E-09	Blood	2.9E-04	--	--	2.9E-04
			Benz(a)anthracene	1.3E-07	--	4.7E-08	--	1.8E-07	--	--	--	--	--
			Benzo(a)pyrene	1.1E-06	--	4.0E-07	--	1.5E-06	--	--	--	--	--
			Benzo(b)fluoranthene	1.0E-07	--	3.6E-08	--	1.4E-07	--	--	--	--	--
			Benzo(k)fluoranthene	7.7E-09	--	2.8E-09	--	1.0E-08	--	--	--	--	--
			Chromium	--,	--	--	--	--	No observed effect	3.1E-04	--	8.8E-06	3.2E-04
			Chrysene	2.2E-09	--	8.1E-10	--	3.0E-09	--	--	--	--	--
			Dibenz(a,h)anthracene	3.9E-07	--	1.4E-07	--	5.3E-07	--	--	--	--	--
			Indeno(1,2,3-cd)pyrene	7.4E-08	--	2.7E-08	--	1.0E-07	--	--	--	--	--
			Lead	--	--	--	--	--	--	--	--	--	--
			Vanadium	--	--	--	--	--	No observed effect	5.4E-02	--	1.5E-03	5.6E-02
			Chemical Total	1.2E-05	--	1.5E-06	--	1.3E-05		3.3E-01	--	2.4E-02	3.6E-01
		Exposure Point Total						1.3E-05					3.6E-01
	Exposure Medium Total							1.3E-05					3.6E-01
	Homegrown Produce	Homegrown Produce	2-Methylnaphthalene	--	--	--	--	--	--	--	--	--	--
			Arsenic	4.0E-06	--	--	--	4.0E-06	Skin	1.0E-01	--	--	1.0E-01
			Benzene	--	--	--	--	--	--	--	--	--	--
			Benz(a)anthracene	4.6E-08	--	--	--	4.6E-08	--	--	--	--	--
			Benzo(a)pyrene	3.0E-07	--	--	--	3.0E-07	--	--	--	--	--
			Benzo(b)fluoranthene	2.6E-08	--	--	--	2.6E-08	--	--	--	--	--
			Benzo(k)fluoranthene	1.9E-09	--	--	--	1.9E-09	--	--	--	--	--
			Chromium	--	--	--	--	--	--	--	--	--	--
			Chrysene	7.2E-10	--	--	--	7.2E-10	--	--	--	--	--
			Dibenz(a,h)anthracene	1.6E-07	--	--	--	1.6E-07	--	--	--	--	--
			Indeno(1,2,3-cd)pyrene	1.5E-08	--	--	--	1.5E-08	--	--	--	--	--
			Lead	--	--	--	--	--	--	--	--	--	--
			Vanadium	--	--	--	--	--	--	--	--	--	--
			Chemical Total	4.6E-06	--	--	--	4.6E-06		1.0E-01	--	--	1.0E-01
		Exposure Point Total						4.6E-06					1.0E-01
	Exposure Medium Total							4.6E-06					1.0E-01
	Air	Outdoor Air (Particulates and VOCs)	2-Methylnaphthalene	--	--	--	--	--	Nasal	--	2.0E-01	--	2.0E-01
			Arsenic	--	3.9E-09	--	--	3.9E-09	--	--	--	--	--
			Benzene	--	5.0E-08	--	--	5.0E-08	Blood	--	2.5E-03	--	2.5E-03
			Benz(a)anthracene	--	4.9E-12	--	--	4.9E-12	--	--	--	--	--
			Benzo(a)pyrene	--	4.2E-11	--	--	4.2E-11	--	--	--	--	--
			Benzo(b)fluoranthene	--	4.0E-12	--	--	4.0E-12	--	--	--	--	--
			Benzo(k)fluoranthene	--	2.9E-13	--	--	2.9E-13	--	--	--	--	--

TABLE H-9.2.7.RME
EPA RAGS PART D TABLE 9
SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCS
FUTURE REDEVELOPED CHILD RESIDENT
SITE 13, ALAMEDA POINT, ALAMEDA, CALIFORNIA

Scenario Timeframe:	Future-Redeveloped
Receptor Population:	Resident
Receptor Age:	Child

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk					Non-Carcinogenic Hazard Quotient				
				Ingestion	Inhalation	Dermal	External (Radiation)	Exposure Routes Total	Primary Target Organ(s)	Ingestion	Inhalation	Dermal	Exposure Routes Total
			Chromium	--	--	--	--	--	--	--	--	--	--
			Chrysene	--	8.5E-14	--	--	8.5E-14	--	--	--	--	--
			Dibenz(a,h)anthracene	--	1.5E-11	--	--	1.5E-11	--	--	--	--	--
			Indeno(1,2,3-cd)pyrene	--	2.6E-12	--	--	2.6E-12	--	--	--	--	--
			Lead	--	--	--	--	--	--	--	--	--	--
			Vanadium	--	--	--	--	--	--	--	--	--	--
			Chemical Total	--	5.3E-08	--	--	5.3E-08		--	2.0E-01	--	2.0E-01
		Exposure Point Total						5.3E-08					2.0E-01
	Exposure Medium Total							5.3E-08					2.0E-01
Medium Total								1.6E-05					6.6E-01
Groundwater	Groundwater	Tap Water (oral/dermal)	1,2-Dichloroethane	2.0E-07	--	5.6E-09	--	2.1E-07	Kidney, Death	8.6E-04	--	2.4E-05	8.8E-04
			2-Methylnaphthalene	--	--	--	--	--	Lung	8.2E-02	--	2.6E-02	1.1E-01
			Arsenic	2.4E-04	--	1.6E-06	--	2.4E-04	Skin	6.1E+00	--	4.0E-02	6.1E+00
			Benzene	1.4E-06	--	1.9E-07	--	1.6E-06	Blood	7.4E-02	--	1.0E-02	8.4E-02
			Ethylbenzene	2.2E-08	--	7.0E-09	--	2.8E-08	Kidney, Liver	6.5E-04	--	2.1E-04	8.6E-04
			Manganese	--	--	--	--	--	CNS	2.1E+01	--	1.4E-01	2.1E+01
			Naphthalene	--	--	--	--	--	Body Weight	1.1E-01	--	3.5E-02	1.5E-01
			Pentachlorophenol	4.6E-06	--	1.2E-05	--	1.6E-05	--	1.5E-02	--	3.8E-02	5.3E-02
			Thallium	--	--	--	--	--	Liver, Blood	2.5E+00	--	1.7E-02	2.6E+00
			Trichloroethene	2.0E-06	--	1.6E-07	--	2.1E-06	Liver, Kidney, Fetus	1.0E-01	--	1.5E-02	2.1E-01
		Exposure Point Total		2.4E-04	--	1.4E-05	--	2.6E-04		3.0E+01	--	3.2E-01	3.0E+01
		Tap Water (inhalation)	1,2-Dichloroethane	--	4.2E-06	--	--	4.2E-06	GI, Liver	--	3.9E-03	--	3.9E-03
			2-Methylnaphthalene	--	--	--	--	--	Nasal	--	1.8E-01	--	1.8E-01
			Benzene	--	1.4E-07	--	--	1.4E-07	Blood	--	7.2E-03	--	7.2E-03
			Ethylbenzene	--	4.5E-09	--	--	4.5E-09	Developmental	--	4.7E-05	--	4.7E-05
			Naphthalene	--	--	--	--	--	Nasal	--	5.4E-01	--	5.4E-01
			Trichloroethene	--	4.2E-07	--	--	4.2E-07	CNS, Liver, Endocrine	--	1.2E-03	--	1.2E-03
		Exposure Point Total		--	6.1E-07	--	--	6.1E-07		--	7.4E-01	--	7.4E-01
	Exposure Medium Total							2.6E-04					3.1E+01
Medium Total								2.6E-04					3.1E+01
Receptor Total							Receptor Risk Total	2.6E-04				Receptor HI Total	3.2E+01

Notes:

--	Not Applicable or Not Available
CNS	Central nervous system
HI	Hazard Index
RME	Reasonable maximum exposure
VOC	Volatile organic compound

Total Organ 1 (Nervous System) HI Across All Media =	2.1E+01
Total Organ 2 (Blood) HI Across All Media =	2.6E+00
Total Organ 3 (Gastrointestinal System) HI Across All Media =	3.9E-03
Total Organ 4 (Skin) HI Across All Media =	6.5E+00
Total Organ 5 (Liver) HI Across All Media =	2.8E+00
Total Organ 6 (Nasal) HI Across All Media =	9.2E-01

TABLE H-9.2.7.RME
EPA RAGS PART D TABLE 9
SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCS
FUTURE REDEVELOPED CHILD RESIDENT
SITE 13, ALAMEDA POINT, ALAMEDA, CALIFORNIA

Scenario Timeframe:	Future-Redeveloped
Receptor Population:	Resident
Receptor Age:	Child

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk					Non-Carcinogenic Hazard Quotient				
				Ingestion	Inhalation	Dermal	External (Radiation)	Exposure Routes Total	Primary Target Organ(s)	Ingestion	Inhalation	Dermal	Exposure Routes Total
									Total Organ 7 (Kidney) HI Across All Media =				2.1E-01
									Total Organ 8 (Fetus) HI Across All Media =				2.1E-01
									Total Organ 9 (Body Weight) HI Across All Media =				1.5E-01
									Total Organ 10 (Lung) HI Across All Media =				1.2E-01
									Total Organ 11 (No Observed Effect) HI Across All Media =				5.6E-02
									Total Organ 12 (Unknown Systems) HI Across All Media =				5.3E-02
									Total Organ 13 (Endocrine System) HI Across All Media =				1.2E-03
									Total Organ 14 (Death) HI Across All Media =				8.8E-04
									Total Organ 15 (Developmental) HI Across All Media =				4.7E-05

HHRA RISK TABLES

Reasonable Maximum Exposure
Site 19
Alameda Point, Alameda, California

TABLE H-9.3.1.RME
EPA RAGS PART D TABLE 9
SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCS
CURRENT INDUSTRIAL WORKER
SITE 19, ALAMEDA POINT, ALAMEDA, CALIFORNIA

Scenario Timeframe:	*Current/Future*
Receptor Population:	Industrial Worker
Receptor Age:	Adult

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk					Non-Carcinogenic Hazard Quotient				
				Ingestion	Inhalation	Dermal	External (Radiation)	Exposure Routes Total	Primary Target Organ(s)	Ingestion	Inhalation	Dermal	Exposure Routes Total
Soil (0-2)	Soil	Site Soil	Arsenic	4.7E-06	–	9.2E-07	–	5.6E-06	Skin	2.9E-02	–	5.7E-03	3.5E-02
			Benzo(a)pyrene	2.1E-07	–	1.8E-07	–	3.8E-07	–	–	–	–	–
			Chemical Total	4.9E-06	–	1.1E-06	–	6.0E-06		2.9E-02	–	5.7E-03	3.5E-02
		Exposure Point Total						6.0E-06					3.5E-02
	Exposure Medium Total							6.0E-06					3.5E-02
	Air	Outdoor Air (Particulates and VOCs)	Arsenic	–	7.1E-09	–	–	7.1E-09	–	–	–	–	–
			Benzo(a)pyrene	–	3.1E-11	–	–	3.1E-11	–	–	–	–	–
			Chemical Total	–	7.1E-09	–	–	7.1E-09		–	–	–	0.0E+00
		Exposure Point Total						7.1E-09					0.0E+00
	Exposure Medium Total							7.1E-09					0.0E+00
Medium Total								6.0E-06					3.5E-02
Receptor Total							Receptor Risk Total	6.0E-06				Receptor HI Total	3.5E-02

Notes:

GI Gastrointestinal
HI Hazard Index
RME Reasonable maximum exposure

TABLE H-9.3.2.RME
EPA RAGS PART D TABLE 9
SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCS
CURRENT CONSTRUCTION WORKER
SITE 19, ALAMEDA POINT, ALAMEDA, CALIFORNIA

Scenario Timeframe:	Current/Future
Receptor Population:	Construction Worker
Receptor Age:	Adult

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk					Non-Carcinogenic Hazard Quotient				
				Ingestion	Inhalation	Dermal	External (Radiation)	Exposure Routes Total	Primary Target Organ(s)	Ingestion	Inhalation	Dermal	Exposure Routes Total
Soil (0-2)	Soil	Site Soil	Arsenic	6.2E-07	–	5.5E-08	–	6.7E-07	Skin	9.6E-02	–	8.6E-03	1.0E-01
			Benzo(a)pyrene	2.7E-08	–	1.1E-08	–	3.8E-08	–	–	–	–	–
			Chemical Total	6.4E-07	–	6.6E-08	–	7.1E-07		9.6E-02	–	8.6E-03	1.0E-01
		Exposure Point Total						7.1E-07					1.0E-01
	Exposure Medium Total							7.1E-07					1.0E-01
	Air	Outdoor Air (Particulates and VOCs)	Arsenic	–	2.8E-10	–	–	2.8E-10	–	–	–	–	–
			Benzo(a)pyrene	–	1.2E-12	–	–	1.2E-12	–	–	–	–	–
			Chemical Total	–	2.8E-10	–	–	2.8E-10		–	–	–	0.0E+00
		Exposure Point Total						2.8E-10					0.0E+00
	Exposure Medium Total							2.8E-10					0.0E+00
Medium Total								7.1E-07					1.0E-01
Receptor Total							Receptor Risk Total	7.1E-07				Receptor HI Total	1.0E-01

Notes:

GI	*Gastrointestinal*
HI	Hazard Index
RME	Reasonable maximum exposure
VOC	Volatile organic compound
–	Not Applicable or Not Available

TABLE H-9.3.3.RME
EPA RAGS PART D TABLE 9
SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCS
CURRENT ADULT RESIDENT
SITE 19, ALAMEDA POINT, ALAMEDA, CALIFORNIA

Scenario Timeframe:	Current/Future
Receptor Population:	Resident
Receptor Age:	Adult

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk					Non-Carcinogenic Hazard Quotient				
				Ingestion	Inhalation	Dermal	External (Radiation)	Exposure Routes Total	Primary Target Organ(s)	Ingestion	Inhalation	Dermal	Exposure Routes Total
Soil (0-2)	Soil	Site Soil	Arsenic	6.3E-06	--	7.5E-07	--	7.0E-06	Skin	4.1E-02	--	4.9E-03	4.5E-02
			Benzo(a)pyrene	2.8E-07	--	1.4E-07	--	4.2E-07	--	--	--	--	--
			Chemical Total	6.5E-06	--	8.9E-07	--	7.4E-06		4.1E-02	--	4.9E-03	4.5E-02
		Exposure Point Total						7.4E-06					4.5E-02
	Exposure Medium Total							7.4E-06					4.5E-02
	Homegrown Produce	Homegrown Produce	Arsenic	2.3E-05	--	--	--	2.3E-05	Skin	1.5E-01	--	--	1.5E-01
			Benzo(a)pyrene	7.0E-07	--	--	--	7.0E-07	--	--	--	--	--
			Chemical Total	2.4E-05	--	--	--	2.4E-05		1.5E-01	--	--	1.5E-01
		Exposure Point Total						2.4E-05					1.5E-01
	Exposure Medium Total							2.4E-05					1.5E-01
	Air	Outdoor Air (Particulates and VOCs)	Arsenic	--	9.5E-09	--	--	9.5E-09	--	--	--	--	--
			Benzo(a)pyrene	--	4.2E-11	--	--	4.2E-11	--	--	--	--	--
			Chemical Total	--	9.5E-09	--	--	9.5E-09		--	--	--	0.0E+00
		Exposure Point Total						9.5E-09					0.0E+00
	Exposure Medium Total							9.5E-09					0.0E+00
Medium Total								3.1E-05					2.0E-01
Groundwater	Groundwater	Tap Water (oral/dermal)	1,1-Dichloroethane	--	--	--	--	--	No observed effect	6.8E-03	--	2.4E-04	7.1E-03
			1,2-Dichloroethane	3.8E-07	--	8.3E-09	--	3.9E-07	Kidney, Death	4.1E-04	--	8.9E-06	4.2E-04
			1,2-Dichloropropane	7.1E-07	--	2.9E-08	--	7.4E-07	Nasal	2.8E-02	--	1.1E-03	2.9E-02
			Arsenic	1.4E-04	--	7.1E-07	--	1.4E-04	Skin	8.8E-01	--	4.6E-03	8.8E-01
			Benzene	3.1E-07	--	3.4E-08	--	3.5E-07	Blood	4.1E-03	--	4.5E-04	4.6E-03
			Manganese	--	--	--	--	--	CNS	5.9E+00	--	3.1E-02	5.9E+00
			Tetrachloroethene	4.6E-06	--	7.9E-07	--	5.4E-06	Liver	2.8E-02	--	4.4E-03	3.0E-02
			Trichloroethene	8.8E-06	--	5.5E-07	--	9.3E-06	Liver, Kidney, Fetus	2.1E-01	--	1.3E-02	2.3E-01
		Exposure Point Total		1.5E-04	--	2.1E-06	--	1.5E-04		7.1E+00	--	5.5E-02	7.1E+00
		Tap Water (inhalation)	1,1-Dichloroethane	--	--	--	--	--	Kidney	--	5.9E-04	--	5.9E-04
			1,2-Dichloroethane	--	4.6E-06	--	--	4.6E-06	GI, Liver	--	1.0E-03	--	1.0E-03
			1,2-Dichloropropane	--	8.5E-06	--	--	8.5E-06	Nasal	--	3.3E-03	--	3.3E-03
			Benzene	--	1.8E-08	--	--	1.8E-08	Blood	--	2.3E-04	--	2.3E-04
			Tetrachloroethene	--	1.1E-07	--	--	1.1E-07	Liver, Kidney	--	1.8E-04	--	1.8E-04
			Trichloroethene	--	1.1E-06	--	--	1.1E-06	CNS, Liver, Endocrine	--	7.7E-04	--	7.7E-04
		Exposure Point Total		--	1.3E-06	--	--	1.3E-06		--	6.1E-03	--	6.1E-03
	Exposure Medium Total							1.5E-04					7.1E+00
Medium Total								1.5E-04					7.1E+00

TABLE H-9.3.3.RME
EPA RAGS PART D TABLE 9
SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCS
CURRENT ADULT RESIDENT
SITE 19, ALAMEDA POINT, ALAMEDA, CALIFORNIA

Scenario Timeframe:	Current/Future
Receptor Population:	Resident
Receptor Age:	Adult

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk					Non-Carcinogenic Hazard Quotient				
				Ingestion	Inhalation	Dermal	External (Radiation)	Exposure Routes Total	Primary Target Organ(s)	Ingestion	Inhalation	Dermal	Exposure Routes Total
Receptor Total							Receptor Risk Total	1.9E-04				Receptor HI Total	7.3E+00

Notes:

CNS	Central nervous system
GI	Gastrointestinal
HI	Hazard Index
RME	Reasonable maximum exposure
VOC	Volatile organic compound
–	Not Applicable or Not Available

Total Organ 1 (Nervous System) HI Across All Media =	5.9E+00
Total Organ 2 (Liver) HI Across All Media =	2.6E-01
Total Organ 3 (Kidney) HI Across All Media =	2.3E-01
Total Organ 4 (Fetus) HI Across All Media =	2.3E-01
Total Organ 5 (Skin) HI Across All Media =	2.0E-01
Total Organ 6 (Nasal) HI Across All Media =	3.2E-02
Total Organ 7 (No Observed Effect) HI Across All Media =	7.1E-03
Total Organ 8 (Blood) HI Across All Media =	4.8E-03
Total Organ 9 (Gastrointestinal System) HI Across All Media =	1.0E-03
Total Organ 10 (Endocrine system) HI Across All Media =	7.7E-04
Total Organ 11 (Death) HI Across All Media =	4.2E-04

TABLE H-9.3.4.RME
EPA RAGS PART D TABLE 9
SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCS
CURRENT CHILD RESIDENT
SITE 19, ALAMEDA POINT, ALAMEDA, CALIFORNIA

Scenario Timeframe:	Current/Future
Receptor Population:	Resident
Receptor Age:	Child

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk					Non-Carcinogenic Hazard Quotient				
				Ingestion	Inhalation	Dermal	External (Radiation)	Exposure Routes Total	Primary Target Organ(s)	Ingestion	Inhalation	Dermal	Exposure Routes Total
Soil (0-2)	Soil	Site Soil	Arsenic	1.5E-05	--	1.2E-06	--	1.6E-05	Skin	3.8E-01	--	3.2E-02	4.1E-01
			Benzo(a)pyrene	6.4E-07	--	2.3E-07	--	8.8E-07	--	--	--	--	--
			Chemical Total	1.5E-05	--	1.5E-06	--	1.7E-05		3.8E-01	--	3.2E-02	4.1E-01
		Exposure Point Total						1.7E-05					4.1E-01
	Exposure Medium Total							1.7E-05					4.1E-01
	Homegrown Produce	Homegrown Produce	Arsenic	5.8E-06	--	--	--	5.8E-06	Skin	1.5E-01	--	--	1.5E-01
			Benzo(a)pyrene	1.8E-07	--	--	--	1.8E-07	--	--	--	--	--
			Chemical Total	6.0E-06	--	--	--	6.0E-06		1.5E-01	--	--	1.5E-01
		Exposure Point Total						6.0E-06					1.5E-01
	Exposure Medium Total							6.0E-06					1.5E-01
	Air	Outdoor Air (Particulates and VOCs)	Arsenic	--	5.6E-09	--	--	5.6E-09	--	--	--	--	--
			Benzo(a)pyrene	--	2.5E-11	--	--	2.5E-11	--	--	--	--	--
			Chemical Total	--	5.6E-09	--	--	5.6E-09		--	--	--	0.0E+00
		Exposure Point Total						5.6E-09					0.0E+00
	Exposure Medium Total							5.6E-09					0.0E+00
Medium Total								2.3E-05					5.6E-01
Groundwater	Groundwater	Tap Water (oral/dermal)	1,1-Dichloroethane	--	--	--	--	--	No observed effect	1.6E-02	--	7.0E-04	1.7E-02
			1,2-Dichloroethane	2.2E-07	--	6.2E-09	--	2.3E-07	Kidney, Death	9.5E-04	--	2.6E-05	9.7E-04
			1,2-Dichloropropane	4.1E-07	--	2.1E-08	--	4.3E-07	Nasal	6.5E-02	--	3.3E-03	6.8E-02
			Arsenic	7.9E-05	--	5.2E-07	--	8.0E-05	Skin	2.1E+00	--	1.4E-02	2.1E+00
			Benzene	1.8E-07	--	2.5E-08	--	2.1E-07	Blood	9.7E-03	--	1.3E-03	1.1E-02
			Manganese	--	--	--	--	--	CNS	1.4E+01	--	9.1E-02	1.4E+01
			Tetrachloroethene	2.7E-08	--	5.8E-07	--	3.2E-06	Liver	6.0E-02	--	1.3E-02	7.3E-02
			Trichloroethene	5.1E-06	--	4.1E-07	--	5.5E-06	Liver, Kidney, Fetus	5.0E-01	--	3.9E-02	5.4E-01
		Exposure Point Total		8.8E-05	--	1.6E-06	--	8.9E-05		1.6E+01	--	1.6E-01	1.7E+01
		Tap Water (Inhalation)	1,1-Dichloroethane	--	--	--	--	--	Kidney	--	2.4E-03	--	2.4E-03
			1,2-Dichloroethane	--	4.7E-08	--	--	4.7E-08	GI, Liver	--	4.3E-03	--	4.3E-03
			1,2-Dichloropropane	--	8.7E-08	--	--	8.7E-08	Nasal	--	1.4E-02	--	1.4E-02
			Benzene	--	1.9E-08	--	--	1.9E-08	Blood	--	9.4E-04	--	9.4E-04
			Tetrachloroethene	--	1.1E-07	--	--	1.1E-07	Liver, Kidney	--	7.4E-04	--	7.4E-04
			Trichloroethene	--	1.1E-06	--	--	1.1E-06	CNS, Liver, Endocrine	--	3.1E-03	--	3.1E-03
		Exposure Point Total		--	1.3E-06	--	--	1.3E-06		--	2.5E-02	--	2.5E-02
	Exposure Medium Total							9.1E-05					1.7E+01
Medium Total								9.1E-05					1.7E+01

TABLE H-9.3.4.RME
EPA RAGS PART D TABLE 9
SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCS
CURRENT CHILD RESIDENT
SITE 19, ALAMEDA POINT, ALAMEDA, CALIFORNIA

Scenario Timeframe:	Current/Future
Receptor Population:	Resident
Receptor Age:	Child

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk					Non-Carcinogenic Hazard Quotient				
				Ingestion	Inhalation	Dermal	External (Radiation)	Exposure Routes Total	Primary Target Organ(s)	Ingestion	Inhalation	Dermal	Exposure Routes Total
Receptor Total							Receptor Risk Total	1.1E-04				Receptor HI Total	1.7E+01

Notes:

CNS	Central nervous system
HI	Hazard Index
RME	Reasonable maximum exposure
VOC	Volatile organic compound
--	Not Applicable or Not Available

Total Organ 1 (Nervous System) HI Across All Media =	1.4E+01
Total Organ 2 (Liver) HI Across All Media =	6.2E-01
Total Organ 3 (Kidney) HI Across All Media =	5.4E-01
Total Organ 4 (Fetus) HI Across All Media =	5.4E-01
Total Organ 5 (Skin) HI Across All Media =	5.6E-01
Total Organ 6 (Nasal) HI Across All Media =	8.1E-02
Total Organ 7 (No Observed Effect) HI Across All Media =	1.7E-02
Total Organ 8 (Blood) HI Across All Media =	1.2E-02
Total Organ 9 (Gastrointestinal System) HI Across All Media =	4.3E-03
Total Organ 10 (Endocrine system) HI Across All Media =	3.1E-03
Total Organ 11 (Death) HI Across All Media =	9.7E-04

TABLE H-9.3.5.RME
EPA RAGS PART D TABLE 9
SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCS
FUTURE DEVELOPED CONSTRUCTION WORKER
SITE 19, ALAMEDA POINT, ALAMEDA, CALIFORNIA

Scenario Timeframe:	Future-Developed
Receptor Population:	Construction Worker
Receptor Age:	Adult

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk					Non-Carcinogenic Hazard Quotient				
				Ingestion	Inhalation	Dermal	External (Radiation)	Exposure Routes Total	Primary Target Organ(s)	Ingestion	Inhalation	Dermal	Exposure Routes Total
Soil (0-8)	Soil	Site Soil	Arsenic	5.4E-07	–	4.8E-08	–	5.8E-07	Skin	8.3E-02	–	7.5E-03	9.1E-02
			Benzo(a)pyrene	1.9E-08	–	7.2E-09	–	2.6E-08	–	–	–	–	–
			Lead	–	–	–	–	–	–	–	–	–	–
			Chemical Total	5.5E-07	–	5.5E-08	–	6.1E-07		8.3E-02	–	7.5E-03	9.1E-02
		Exposure Point Total						6.1E-07					9.1E-02
	Exposure Medium Total							6.1E-07					9.1E-02
	Air	Outdoor Air (Particulates and VOCs)	Arsenic	–	2.5E-10	–	–	2.5E-10	–	–	–	–	–
			Benzo(a)pyrene	–	8.5E-13	–	–	8.5E-13	–	–	–	–	–
			Lead	–	–	–	–	–	–	–	–	–	–
			Chemical Total	–	2.5E-10	–	–	2.5E-10		–	–	–	0.0E+00
		Exposure Point Total						2.5E-10					0.0E+00
	Exposure Medium Total							2.5E-10					0.0E+00
Medium Total								6.1E-07					9.1E-02
Receptor Total							Receptor Risk Total	6.1E-07				Receptor HI Total	9.1E-02

Notes:

HI	Hazard Index
RME	Reasonable maximum exposure
VOC	Volatile organic compound
–	Not Applicable or Not Available

TABLE H-9.3.6.RME
EPA RAGS PART D TABLE 9
SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCS
FUTURE REDEVELOPED ADULT RESIDENT
SITE 19, ALAMEDA POINT, ALAMEDA, CALIFORNIA

Scenario Timeframe:	Future-Redeveloped
Receptor Population:	Resident
Receptor Age:	Adult

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk					Non-Carcinogenic Hazard Quotient				
				Ingestion	Inhalation	Dermal	External (Radiation)	Exposure Routes Total	Primary Target Organ(s)	Ingestion	Inhalation	Dermal	Exposure Routes Total
Soil (0-8)	Soil	Site Soil	Arsenic	5.5E-06	--	6.5E-07	--	6.1E-06	Skin	3.5E-02	--	4.2E-03	4.0E-02
			Benzo(a)pyrene	1.9E-07	--	9.8E-08	--	2.9E-07	--	--	--	--	--
			Lead	--	--	--	--	--	--	--	--	--	--
			Chemical Total	5.6E-06	--	7.5E-07	--	6.4E-06		3.5E-02	--	4.2E-03	4.0E-02
		Exposure Point Total						6.4E-06					4.0E-02
	Exposure Medium Total							6.4E-06					4.0E-02
	Homegrown Produce	Homegrown Produce	Arsenic	2.0E-05	--	--	--	2.0E-05	Skin	1.3E-01	--	--	1.3E-01
			Benzo(a)pyrene	4.8E-07	--	--	--	4.8E-07	--	--	--	--	--
			Lead	--	--	--	--	--	--	--	--	--	--
			Chemical Total	2.1E-05	--	--	--	2.1E-05		1.3E-01	--	--	1.3E-01
		Exposure Point Total						2.1E-05					1.3E-01
	Exposure Medium Total							2.1E-05					1.3E-01
	Air	Outdoor Air (Particulates and VOCs)	Arsenic	--	8.2E-09	--	--	8.2E-09	--	--	--	--	--
			Benzo(a)pyrene	--	2.9E-11	--	--	2.9E-11	--	--	--	--	--
			Lead	--	--	--	--	--	--	--	--	--	--
			Chemical Total	--	8.3E-09	--	--	8.3E-09		--	--	--	0.0E+00
		Exposure Point Total						8.3E-09					0.0E+00
	Exposure Medium Total							8.3E-09					0.0E+00
Medium Total								2.7E-05					1.7E-01
Groundwater	Groundwater	Tap Water (oral/dermal)	1,1-Dichloroethane	--	--	--	--	--	No observed effect	6.8E-03	--	2.4E-04	7.1E-03
			1,2-Dichloroethane	3.8E-07	--	8.3E-09	--	3.9E-07	Kidney, Death	4.1E-04	--	8.9E-06	4.2E-04
			1,2-Dichloropropane	7.1E-07	--	2.9E-08	--	7.4E-07	Nasal	2.8E-02	--	1.1E-03	2.9E-02
			Arsenic	1.4E-04	--	7.1E-07	--	1.4E-04	Skin	8.8E-01	--	4.6E-03	8.8E-01
			Benzene	3.1E-07	--	3.4E-08	--	3.5E-07	Blood	4.1E-03	--	4.5E-04	4.6E-03
			Manganese	--	--	--	--	--	CNS	5.9E+00	--	3.1E-02	5.9E+00
			Tetrachloroethene	4.6E-06	--	7.9E-07	--	5.4E-06	Liver	2.6E-02	--	4.4E-03	3.0E-02
			Trichloroethene	8.8E-06	--	5.5E-07	--	9.3E-06	Liver, Kidney, Fetus	2.1E-01	--	1.3E-02	2.3E-01
		Exposure Point Total		1.5E-04	--	2.1E-06	--	1.5E-04		7.1E+00	--	5.5E-02	7.1E+00
		Tap Water (Inhalation)	1,1-Dichloroethane	--	--	--	--	--	Kidney	--	5.9E-04	--	5.9E-04
			1,2-Dichloroethane	--	4.6E-06	--	--	4.6E-06	GI, Liver	--	1.0E-03	--	1.0E-03
			1,2-Dichloropropene	--	8.5E-06	--	--	8.5E-06	Nasal	--	3.3E-03	--	3.3E-03
			Benzene	--	1.8E-06	--	--	1.8E-06	Blood	--	2.3E-04	--	2.3E-04
			Tetrachloroethene	--	1.1E-07	--	--	1.1E-07	Liver, Kidney	--	1.8E-04	--	1.8E-04
			Trichloroethene	--	1.1E-06	--	--	1.1E-06	CNS, Liver, Endocrine	--	7.7E-04	--	7.7E-04

TABLE H-9.3.6.RME
EPA RAGS PART D TABLE 9
SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCS
FUTURE REDEVELOPED ADULT RESIDENT
SITE 19, ALAMEDA POINT, ALAMEDA, CALIFORNIA

Scenario Timeframe:	Future-Redeveloped
Receptor Population:	Resident
Receptor Age:	Adult

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk					Non-Carcinogenic Hazard Quotient				
				Ingestion	Inhalation	Dermal	External (Radiation)	Exposure Routes Total	Primary Target Organ(s)	Ingestion	Inhalation	Dermal	Exposure Routes Total
		Exposure Point Total		--	1.3E-06	--	--	1.3E-06		--	6.1E-03	--	6.1E-03
	Exposure Medium Total							1.5E-04					7.1E+00
Medium Total								1.5E-04					7.1E+00
Receptor Total							Receptor Risk Total	1.8E-04				Receptor HI Total	7.3E+00

Notes:

CNS	Central nervous system
HI	Hazard Index
RME	Reasonable maximum exposure
VOC	Volatile organic compound
--	Not Applicable or Not Available

Total Organ 1 (Nervous System) HI Across All Media =	5.9E+00
Total Organ 2 (Liver) HI Across All Media =	2.6E-01
Total Organ 3 (Kidney) HI Across All Media =	2.3E-01
Total Organ 4 (Fetus) HI Across All Media =	2.3E-01
Total Organ 5 (Skin) HI Across All Media =	1.7E-01
Total Organ 6 (Nasal) HI Across All Media =	3.2E-02
Total Organ 7 (No Observed Effect) HI Across All Media =	7.1E-03
Total Organ 8 (Blood) HI Across All Media =	4.8E-03
Total Organ 9 (Gastrointestinal System) HI Across All Media =	1.0E-03
Total Organ 10 (Endocrine system) HI Across All Media =	7.7E-04
Total Organ 11 (Death) HI Across All Media =	4.2E-04

TABLE H-9.3.7.RME
EPA RAGS PART D TABLE 9
SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCS
FUTURE REDEVELOPED CHILD RESIDENT
SITE 19, ALAMEDA POINT, ALAMEDA, CALIFORNIA

Scenario Timeframe:	Future-Redeveloped
Receptor Population:	Resident
Receptor Age:	Child

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk					Non-Carcinogenic Hazard Quotient				
				Ingestion	Inhalation	Dermal	External (Radiation)	Exposure Routes Total	Primary Target Organ(s)	Ingestion	Inhalation	Dermal	Exposure Routes Total
Soil (0-8)	Soil	Site Soil	Arsenic	1.3E-05	--	1.1E-06	--	1.4E-05	Skin	3.3E-01	--	2.8E-02	3.6E-01
			Benzo(a)pyrene	4.4E-07	--	1.6E-07	--	6.0E-07	--	--	--	--	--
			Lead	--	--	--	--	--	--	--	--	--	--
			Chemical Total	1.3E-05	--	1.2E-06	--	1.4E-05		3.3E-01	--	2.8E-02	3.6E-01
		Exposure Point Total						1.4E-05					3.6E-01
	Exposure Medium Total							1.4E-05					3.6E-01
	Homegrown Produce	Homegrown Produce	Arsenic	5.1E-06	--	--	--	5.1E-06	Skin	1.3E-01	--	--	1.3E-01
			Benzo(a)pyrene	1.2E-07	--	--	--	1.2E-07	--	--	--	--	--
			Lead	--	--	--	--	--	--	--	--	--	--
			Chemical Total	5.2E-06	--	--	--	5.2E-06		1.3E-01	--	--	1.3E-01
		Exposure Point Total						5.2E-06					1.3E-01
	Exposure Medium Total							5.2E-06					1.3E-01
	Air	Outdoor Air (Particulates and VOCs)	Arsenic	--	4.9E-09	--	--	4.9E-09	--	--	--	--	--
			Benzo(a)pyrene	--	1.7E-11	--	--	1.7E-11	--	--	--	--	--
			Lead	--	--	--	--	--	--	--	--	--	--
			Chemical Total	--	4.9E-09	--	--	4.9E-09		--	--	--	0.0E+00
		Exposure Point Total						4.9E-09					0.0E+00
	Exposure Medium Total							4.9E-09					0.0E+00
Medium Total								2.0E-05					4.9E-01
Groundwater	Groundwater	Tap Water (oral/dermal)	1,1-Dichloroethane	--	--	--	--	--	No observed effect	1.6E-02	--	7.0E-04	1.7E-02
			1,2-Dichloroethane	2.2E-07	--	6.2E-09	--	2.3E-07	Kidney, Death	9.5E-04	--	2.6E-05	9.7E-04
			1,2-Dichloropropane	4.1E-07	--	2.1E-08	--	4.3E-07	Nasal	6.5E-02	--	3.3E-03	6.8E-02
			Arsenic	7.9E-05	--	5.2E-07	--	8.0E-05	Skin	2.1E+00	--	1.4E-02	2.1E+00
			Benzene	1.8E-07	--	2.5E-08	--	2.1E-07	Blood	9.7E-03	--	1.3E-03	1.1E-02
			Manganese	--	--	--	--	--	CNS	1.4E+01	--	9.1E-02	1.4E+01
			Tetrachloroethene	2.7E-06	--	5.8E-07	--	3.2E-06	Liver	6.0E-02	--	1.3E-02	7.3E-02
			Trichloroethene	5.1E-06	--	4.1E-07	--	5.5E-06	Liver, Kidney, Fetus	5.0E-01	--	3.9E-02	5.4E-01
		Exposure Point Total		8.8E-05	--	1.6E-06	--	8.9E-05		1.6E+01	--	1.6E-01	1.7E+01
		Tap Water (Inhalation)	1,1-Dichloroethane	--	--	--	--	--	Kidney	--	2.4E-03	--	2.4E-03
			1,2-Dichloroethane	--	4.7E-06	--	--	4.7E-06	GI, Liver	--	4.3E-03	--	4.3E-03
			1,2-Dichloropropane	--	8.7E-06	--	--	8.7E-06	Nasal	--	1.4E-02	--	1.4E-02
			Benzene	--	1.9E-06	--	--	1.9E-06	Blood	--	9.4E-04	--	9.4E-04
			Tetrachloroethene	--	1.1E-07	--	--	1.1E-07	Liver, Kidney	--	7.4E-04	--	7.4E-04
			Trichloroethene	--	1.1E-06	--	--	1.1E-06	CNS, Liver, Endocrine	--	3.1E-03	--	3.1E-03

TABLE H-9.3.7.RME
EPA RAGS PART D TABLE 9
SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCS
FUTURE REDEVELOPED CHILD RESIDENT
SITE 19, ALAMEDA POINT, ALAMEDA, CALIFORNIA

Scenario Timeframe:	Future-Redeveloped
Receptor Population:	Resident
Receptor Age:	Child

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk					Non-Carcinogenic Hazard Quotient				
				Ingestion	Inhalation	Dermal	External (Radiation)	Exposure Routes Total	Primary Target Organ(s)	Ingestion	Inhalation	Dermal	Exposure Routes Total
		Exposure Point Total		--	1.3E-06	--	--	1.3E-06		--	2.5E-02	--	2.5E-02
	Exposure Medium Total							9.1E-05					1.7E+01
Medium Total								9.1E-05					1.7E+01
Receptor Total							Receptor Risk Total	1.1E-04				Receptor HI Total	1.7E+01

Notes:

CNS	Central nervous system
HI	Hazard Index
RME	Reasonable maximum exposure
VOC	Volatile organic compound
--	Not Applicable or Not Available

Total Organ 1 (Nervous System) HI Across All Media =	1.4E+01
Total Organ 2 (Skin) HI Across All Media =	2.6E+00
Total Organ 3 (Liver) HI Across All Media =	6.2E-01
Total Organ 4 (Kidney) HI Across All Media =	5.4E-01
Total Organ 5 (Fetus) HI Across All Media =	5.4E-01
Total Organ 6 (Nasal) HI Across All Media =	8.1E-02
Total Organ 7 (No Observed Effect) HI Across All Media =	1.7E-02
Total Organ 8 (Blood) HI Across All Media =	1.2E-02
Total Organ 9 (Gastrointestinal System) HI Across All Media =	4.3E-03
Total Organ 10 (Endocrine system) HI Across All Media =	3.1E-03
Total Organ 11 (Death) HI Across All Media =	9.7E-04

HHRA RISK TABLES

Reasonable Maximum Exposure
Site 22
Alameda Point, Alameda, California

TABLE H-9.4.1.RME
EPA RAGS PART D TABLE 9
SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCS
CURRENT INDUSTRIAL WORKER
SITE 22, ALAMEDA POINT, ALAMEDA, CALIFORNIA

Scenario Timeframe:	Current
Receptor Population:	Industrial Worker
Receptor Age:	Adult

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk					Non-Carcinogenic Hazard Quotient				
				Ingestion	Inhalation	Dermal	External (Radiation)	Exposure Routes Total	Primary Target Organ(s)	Ingestion	Inhalation	Dermal	Exposure Routes Total
Soil (0-2)	Soil	Site Soil	2-Methylnaphthalene	–	–	–	–	–	Lung	5.0E-05	–	–	5.0E-05
			Arsenic	5.5E-06	–	1.1E-06	–	6.5E-06	Skin	3.4E-02	–	6.7E-03	4.1E-02
			Benzo(a)pyrene	1.3E-07	–	1.1E-07	–	2.4E-07	–	–	–	–	–
			Lead	–	–	–	–	–	–	–	–	–	–
			Chemical Total	5.6E-06	–	1.2E-06	–	6.8E-06		3.4E-02	–	6.7E-03	4.1E-02
		Exposure Point Total						6.8E-06					4.1E-02
	Exposure Medium Total							6.8E-06					4.1E-02
	Air	Outdoor Air (Particulates and VOCs)	2-Methylnaphthalene	–	–	–	–	–	Nasal	–	7.9E-08	–	7.9E-08
			Arsenic	–	8.3E-09	–	–	8.3E-09	–	–	–	–	–
			Benzo(a)pyrene	–	2.0E-11	–	–	2.0E-11	–	–	–	–	–
			Lead	–	–	–	–	–	–	–	–	–	–
			Chemical Total	–	8.3E-09	–	–	8.3E-09		–	7.9E-08	–	7.9E-08
		Exposure Point Total						8.3E-09					7.9E-08
	Exposure Medium Total							8.3E-09					7.9E-08
Medium Total								6.8E-06					4.1E-02
Groundwater	Groundwater	Indoor Air (Vapor Intrusion)	Benzene	–	2.6E-06	–	–	2.6E-06	Blood	–	3.2E-02	–	3.2E-02
			Ethylbenzene	–	3.0E-07	–	–	3.0E-07	Developmental	–	7.4E-04	–	7.4E-04
			o-Xylene	–	–	–	–	–	CNS	–	1.8E-02	–	1.8E-02
			m-Xylene	–	–	–	–	–	CNS	–	3.2E-03	–	3.2E-03
			Toluene	–	–	–	–	–	CNS	–	5.2E-03	–	5.2E-03
			Chemical Total	–	2.9E-06	–	–	2.9E-06		–	5.8E-02	–	5.8E-02
		Exposure Point Total						2.9E-06					5.8E-02
	Exposure Medium Total							2.9E-06					5.8E-02
Medium Total								2.9E-06					5.8E-02
Receptor Total							Receptor Risk Total	9.7E-06				Receptor HI Total	9.9E-02

Notes:

HI	Hazard Index
RME	Reasonable maximum exposure
VOC	Volatile organic compound
–	Not Applicable or Not Available

TABLE H-9.4.2.RME
EPA RAGS PART D TABLE 9
SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCS
CURRENT CONSTRUCTION WORKER
SITE 22, ALAMEDA POINT, ALAMEDA, CALIFORNIA

Scenario Timeframe:	Current
Receptor Population:	Construction Worker
Receptor Age:	Adult

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk					Non-Carcinogenic Hazard Quotient				
				Ingestion	Inhalation	Dermal	External (Radiation)	Exposure Routes Total	Primary Target Organ(s)	Ingestion	Inhalation	Dermal	Exposure Routes Total
Soil (0-2)	Soil	Site Soil	2-Methylnaphthalene	–	–	–	–	–	Lung	1.7E-04	–	–	1.7E-04
			Arsenic	7.2E-07	–	6.5E-08	–	7.8E-07	Skin	1.1E-01	–	1.0E-02	1.2E-01
			Benzo(a)pyrene	1.7E-08	–	6.7E-09	–	2.4E-08	–	–	–	–	–
			Lead	–	–	–	–	–	–	–	–	–	–
			Chemical Total	7.4E-07	–	7.2E-08	–	8.1E-07		1.1E-01	–	1.0E-02	1.2E-01
		Exposure Point Total						8.1E-07					1.2E-01
	Exposure Medium Total							8.1E-07					1.2E-01
	Air	Outdoor Air (Particulates and VOCs)	2-Methylnaphthalene	–	–	–	–	–	Nasal	–	7.9E-08	–	7.9E-08
			Arsenic	–	3.3E-10	–	–	3.3E-10	–	–	–	–	–
			Benzo(a)pyrene	–	7.9E-13	–	–	7.9E-13	–	–	–	–	–
			Lead	–	–	–	–	–	–	–	–	–	–
			Chemical Total	–	3.3E-10	–	–	3.3E-10		–	7.9E-08	–	7.9E-08
		Exposure Point Total						3.3E-10					7.9E-08
	Exposure Medium Total							3.3E-10					7.9E-08
Medium Total								8.1E-07					1.2E-01
Receptor Total							Receptor Risk Total	8.1E-07				Receptor HI Total	1.2E-01

Notes:

HI	Hazard Index
RME	Reasonable maximum exposure
VOC	Volatile organic compound
–	Not Applicable or Not Available

TABLE H-9.4.3.RME
EPA RAGS PART D TABLE 9
SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCS
CURRENT ADULT RESIDENT
SITE 22, ALAMEDA POINT, ALAMEDA, CALIFORNIA

Scenario Timeframe:	Future
Receptor Population:	Resident
Receptor Age:	Adult

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk					Non-Carcinogenic Hazard Quotient				
				Ingestion	Inhalation	Dermal	External (Radiation)	Exposure Routes Total	Primary Target Organ(s)	Ingestion	Inhalation	Dermal	Exposure Routes Total
Soil (0-2)	Soil	Site Soil	2-Methylnaphthalene	--	--	--	--	--	Lung	7.0E-05	--	--	7.0E-05
			Arsenic	7.3E-06	--	6.8E-07	--	8.2E-06	Skin	4.8E-02	--	5.7E-03	5.3E-02
			Benzo(a)pyrene	1.8E-07	--	9.1E-08	--	2.7E-07	--	--	--	--	--
			Lead	--	--	--	--	--	--	--	--	--	--
			Chemical Total	7.5E-06	--	9.7E-07	--	8.5E-06		4.8E-02	--	5.7E-03	5.3E-02
		Exposure Point Total						8.5E-06					5.3E-02
	Exposure Medium Total							8.5E-06					5.3E-02
	Homegrown Produce	Homegrown Produce	2-Methylnaphthalene	--	--	--	--	--	--	--	--	--	--
			Arsenic	2.7E-05	--	--	--	2.7E-05	Skin	1.8E-01	--	--	1.8E-01
			Benzo(a)pyrene	4.5E-07	--	--	--	4.5E-07	--	--	--	--	--
			Lead	--	--	--	--	--	--	--	--	--	--
			Chemical Total	2.8E-05	--	--	--	2.8E-05		1.8E-01	--	--	1.8E-01
		Exposure Point Total						2.8E-05					1.8E-01
	Exposure Medium Total							2.8E-05					1.8E-01
	Air	Outdoor Air (Particulates and VOCs)	2-Methylnaphthalene	--	--	--	--	--	Nasal	--	1.1E-07	--	1.1E-07
			Arsenic	--	1.1E-08	--	--	1.1E-08	--	--	--	--	--
			Benzo(a)pyrene	--	2.6E-11	--	--	2.6E-11	--	--	--	--	--
			Lead	--	--	--	--	--	--	--	--	--	--
			Chemical Total	--	1.1E-08	--	--	1.1E-08		--	1.1E-07	--	1.1E-07
		Exposure Point Total						1.1E-08					1.1E-07
	Exposure Medium Total							1.1E-08					1.1E-07
Medium Total								3.6E-05					2.3E-01
Groundwater	Groundwater	Indoor Air (Vapor Intrusion)	Benzene	--	3.5E-05	--	--	3.5E-05	Blood	--	4.4E-01	--	4.4E-01
			Ethylbenzene	--	4.0E-06	--	--	4.0E-06	Developmental	--	1.0E-02	--	1.0E-02
			o-Xylene	--	--	--	--	--	CNS	--	2.4E-01	--	2.4E-01
			m-Xylene	--	--	--	--	--	CNS	--	4.4E-02	--	4.4E-02
			Toluene	--	--	--	--	--	CNS	--	7.2E-02	--	7.2E-02
			Chemical Total	--	3.9E-05	--	--	3.9E-05		--	8.2E-01	--	8.2E-01
		Exposure Point Total						3.9E-05					8.2E-01
	Exposure Medium Total							3.9E-05					8.2E-01
	Groundwater	Tap Water (oral/dermal)	1,2-Dichloroethane	5.9E-06	--	1.3E-07	--	6.1E-06	Kidney, Death	6.3E-03	--	1.4E-04	6.5E-03
			2-Methylnaphthalene	--	--	--	--	--	Lung	8.6E-02	--	2.1E-02	1.1E-01
			Arsenic	5.8E-04	--	3.0E-06	--	5.8E-04	Skin	3.7E+00	--	2.0E-02	3.8E+00
			Benzene	7.7E-04	--	8.4E-05	--	8.5E-04	Blood	1.0E+01	--	1.1E+00	1.1E+01
			Chloroform	--	--	--	--	--	Liver	3.3E-02	--	1.2E-03	3.4E-02

TABLE H-9.4.3.RME
EPA RAGS PART D TABLE 9
SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCS
CURRENT ADULT RESIDENT
SITE 22, ALAMEDA POINT, ALAMEDA, CALIFORNIA

Scenario Timeframe:	Future
Receptor Population:	Resident
Receptor Age:	Adult

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk					Non-Carcinogenic Hazard Quotient				
				Ingestion	Inhalation	Dermal	External (Radiation)	Exposure Routes Total	Primary Target Organ(s)	Ingestion	Inhalation	Dermal	Exposure Routes Total
			Ethylbenzene	1.6E-05	--	4.1E-06	--	2.0E-05	Kidney, Liver	1.2E-01	--	3.1E-02	1.5E-01
			Manganese	--	--	--	--	--	CNS	1.3E+01	--	6.6E-02	1.3E+01
			Naphthalene	--	--	--	--	--	Body Weight	2.9E-01	--	7.2E-02	3.7E-01
			n-Propylbenzene	--	--	--	--	--	--	1.6E-01	--	7.5E-02	2.3E-01
			Tetrachloroethene	1.3E-06	--	2.2E-07	--	1.5E-06	Liver	7.1E-03	--	1.2E-03	8.4E-03
			Thallium	--	--	--	--	--	Liver, Blood	1.6E+00	--	8.1E-03	1.6E+00
			Toluene	--	--	--	--	--	Kidney, Liver	2.1E-01	--	3.3E-02	2.4E-01
			Trichloroethene	4.5E-05	--	2.8E-06	--	4.8E-05	Liver, Kidney, Fetus	1.1E+00	--	6.9E-02	1.2E+00
			Xylene (Total)	--	--	--	--	--	Death, Body Weight	2.7E-01	--	7.4E-02	3.4E-01
		Exposure Point Total		1.4E-03	--	9.5E-05	--	1.5E-03		3.0E+01	--	1.6E+00	3.2E+01
		Tap Water (Inhalation)	1,2-Dichloroethane	--	7.1E-07	--	--	7.1E-07	GI, Liver	--	1.6E-02	--	1.6E-02
			2-Methylnaphthalene	--	--	--	--	--	Nasal	--	1.1E-01	--	1.1E-01
			Benzene	--	4.5E-05	--	--	4.5E-05	Blood	--	5.7E-01	--	5.7E-01
			Chloroform	--	1.1E-06	--	--	1.1E-06	--	--	4.6E-02	--	4.6E-02
			Ethylbenzene	--	1.9E-06	--	--	1.9E-06	Developmental	--	5.1E-03	--	5.1E-03
			Naphthalene	--	--	--	--	--	Nasal	--	8.2E-01	--	8.2E-01
			n-Propylbenzene	--	--	--	--	--	--	--	1.9E-02	--	1.9E-02
			Tetrachloroethene	--	2.9E-06	--	--	2.9E-06	Liver, Kidney	--	5.0E-05	--	5.0E-05
			Toluene	--	--	--	--	--	CNS	--	4.5E-02	--	4.5E-02
			Trichloroethene	--	5.4E-06	--	--	5.4E-06	CNS, Liver, Endocrine	--	4.0E-03	--	4.0E-03
			Xylene (Total)	--	--	--	--	--	CNS	--	2.2E-01	--	2.2E-01
		Exposure Point Total		--	5.5E-05	--	--	5.5E-05		--	1.9E+00	--	1.9E+00
	Exposure Medium Total							1.6E-03					3.4E+01
Medium Total								1.6E-03					3.5E+01
Receptor Total							Receptor Risk Total	1.6E-03				Receptor HI Total	3.5E+01

Notes:

CNS	Central nervous system
GI	Gastrointestinal
HI	Hazard index
RME	Reasonable maximum exposure
VOC	Volatile organic compound
--	Not Applicable or Not Available

Total Organ 1 (Blood) HI Across All Media =	1.4E+01
Total Organ 2 (Nervous System) HI Across All Media =	1.3E+01
Total Organ 3 (Skin) HI Across All Media =	4.0E+00
Total Organ 4 (Liver) HI Across All Media =	3.2E+00
Total Organ 5 (Kidney) HI Across All Media =	1.6E+00
Total Organ 6 (Fetus) HI Across All Media =	1.2E+00
Total Organ 7 (Nasal) HI Across All Media =	9.3E-01
Total Organ 8 (Gastrointestinal System) HI Across All Media =	1.6E-02
Total Organ 9 (Body Weight) HI Across All Media =	7.1E-01
Total Organ 10 (Death) HI Across All Media =	3.5E-01
Total Organ 11 (Unknown Systems) HI Across All Media =	3.0E-01

TABLE H-9.4.3.RME
EPA RAGS PART D TABLE 9
SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCS
CURRENT ADULT RESIDENT
SITE 22, ALAMEDA POINT, ALAMEDA, CALIFORNIA

Scenario Timeframe:	Future
Receptor Population:	Resident
Receptor Age:	Adult

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk					Non-Carcinogenic Hazard Quotient				
				Ingestion	Inhalation	Dermal	External (Radiation)	Exposure Routes Total	Primary Target Organ(s)	Ingestion	Inhalation	Dermal	Exposure Routes Total
									Total Organ 12 (Lung) HI Across All Media =				1.1E-01
									Total Organ 13 (Developmental) HI Across All Media =				1.5E-02
									Total Organ 14 (Endocrine system) HI Across All Media =				4.0E-03

TABLE H-9.4.4.RME
EPA RAGS PART D TABLE 9
SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCS
CURRENT CHILD RESIDENT
SITE 22, ALAMEDA POINT, ALAMEDA, CALIFORNIA

Scenario Timeframe:	Future
Receptor Population:	Resident
Receptor Age:	Child

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk					Non-Carcinogenic Hazard Quotient				
				Ingestion	Inhalation	Dermal	External (Radiation)	Exposure Routes Total	Primary Target Organ(s)	Ingestion	Inhalation	Dermal	Exposure Routes Total
Soil (0-2)	Soil	Site Soil	2-Methylnaphthalene	--	--	--	--	--	Lung	6.5E-04	--	--	6.5E-04
			Arsenic	1.7E-05	--	1.4E-06	--	1.9E-05	Skin	4.4E-01	--	3.7E-02	4.8E-01
			Benzo(a)pyrene	4.1E-07	--	1.5E-07	--	5.6E-07	--	--	--	--	--
			Lead	--	--	--	--	--	--	--	--	--	--
			Chemical Total	1.8E-05	--	1.6E-06	--	1.9E-05		4.4E-01	--	3.7E-02	4.8E-01
		Exposure Point Total						1.9E-05					4.8E-01
	Exposure Medium Total							1.9E-05					4.8E-01
	Homegrown Produce	Homegrown Produce	2-Methylnaphthalene	--	--	--	--	--	--	--	--	--	--
			Arsenic	6.8E-06	--	--	--	6.8E-06	Skin	1.8E-01	--	--	1.8E-01
			Benzo(a)pyrene	1.1E-07	--	--	--	1.1E-07	--	--	--	--	--
			Lead	--	--	--	--	--	--	--	--	--	--
			Chemical Total	6.9E-06	--	--	--	6.9E-06		1.8E-01	--	--	1.8E-01
		Exposure Point Total						6.9E-06					1.8E-01
	Exposure Medium Total							6.9E-06					1.8E-01
	Air	Outdoor Air (Particulates and VOCs)	2-Methylnaphthalene	--	--	--	--	--	Nasal	--	2.6E-07	--	2.6E-07
			Arsenic	--	6.5E-09	--	--	6.5E-09	--	--	--	--	--
			Benzo(a)pyrene	--	1.6E-11	--	--	1.6E-11	--	--	--	--	--
			Lead	--	--	--	--	--	--	--	--	--	--
			Chemical Total	--	6.5E-09	--	--	6.5E-09		--	2.6E-07	--	2.6E-07
		Exposure Point Total						6.5E-09					2.6E-07
	Exposure Medium Total							6.5E-09					2.6E-07
Medium Total								2.6E-05					6.6E-01
Groundwater	Groundwater	Indoor Air (Vapor Intrusion)	Benzene	--	2.1E-05	--	--	2.1E-05	Blood	--	1.0E+00	--	1.0E+00
			Ethylbenzene	--	2.3E-06	--	--	2.3E-06	Developmental	--	2.4E-02	--	2.4E-02
			o-Xylene	--	--	--	--	--	CNS	--	5.8E-01	--	5.8E-01
			m-Xylene	--	--	--	--	--	CNS	--	1.0E-01	--	1.0E-01
			Toluene	--	--	--	--	--	CNS	--	1.7E-01	--	1.7E-01
			Chemical Total	--	2.3E-05	--	--	2.3E-05		--	1.9E+00	--	1.9E+00
		Exposure Point Total						2.3E-05					1.9E+00
	Exposure Medium Total							2.3E-05					1.9E+00
	Groundwater	Tap Water (oral/dermal)	1,2-Dichloroethane	3.5E-06	--	9.6E-06	--	3.6E-06	Kidney, Death	1.5E-02	--	4.1E-04	1.5E-02
			2-Methylnaphthalene	--	--	--	--	--	Lung	2.0E-01	--	6.3E-02	2.6E-01
			Arsenic	3.4E-04	--	2.2E-06	--	3.4E-04	Skin	6.7E+00	--	5.8E-02	6.8E+00
			Benzene	4.5E-04	--	6.2E-05	--	5.1E-04	Blood	2.4E+01	--	3.3E+00	2.7E+01
			Chloroform	--	--	--	--	--	Liver	7.7E-02	--	3.4E-03	8.0E-02

TABLE H-9.4.4.RME
EPA RAGS PART D TABLE 9
SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCS
CURRENT CHILD RESIDENT
SITE 22, ALAMEDA POINT, ALAMEDA, CALIFORNIA

Scenario Timeframe:	Future
Receptor Population:	Resident
Receptor Age:	Child

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk					Non-Carcinogenic Hazard Quotient				
				Ingestion	Inhalation	Dermal	External (Radiation)	Exposure Routes Total	Primary Target Organ(s)	Ingestion	Inhalation	Dermal	Exposure Routes Total
			Ethylbenzene	9.5E-06	--	3.1E-06	--	1.3E-05	Kidney, Liver	2.9E-01	--	9.3E-02	3.8E-01
			Manganese	--	--	--	--	--	CNS	2.9E+01	--	1.9E-01	2.9E+01
			Naphthalene	--	--	--	--	--	Body Weight	6.8E-01	--	2.1E-01	9.0E-01
			n-Propylbenzene	--	--	--	--	--	--	3.7E-01	--	2.2E-01	5.9E-01
			Tetrachloroethene	7.4E-07	--	1.6E-07	--	9.0E-07	Liver	1.7E-02	--	3.6E-03	2.0E-02
			Thallium	--	--	--	--	--	Liver, Blood	3.6E+00	--	2.4E-02	3.6E+00
			Toluene	--	--	--	--	--	Kidney, Liver	4.8E-01	--	9.9E-02	5.8E-01
			Trichloroethene	2.8E-05	--	2.1E-06	--	2.8E-05	Liver, Kidney, Fetus	2.8E+00	--	2.0E-01	2.8E+00
			Xylene (Total)	--	--	--	--	--	Death, Body Weight	6.3E-01	--	2.2E-01	8.5E-01
		Exposure Point Total		8.3E-04	--	7.0E-05	--	9.0E-04		7.1E+01	--	4.7E+00	7.5E+01
		Tap Water (Inhalation)	1,2-Dichloroethane	--	7.3E-07	--	--	7.3E-07	GI, Liver	--	6.7E-02	--	6.7E-02
			2-Methylnaphthalene	--	--	--	--	--	Nasal	--	4.4E-01	--	4.4E-01
			Benzene	--	4.6E-05	--	--	4.6E-05	Blood	--	2.3E+00	--	2.3E+00
			Chloroform	--	1.1E-06	--	--	1.1E-06	--	--	1.9E-01	--	1.9E-01
			Ethylbenzene	--	2.0E-06	--	--	2.0E-06	Developmental	--	2.1E-02	--	2.1E-02
			Naphthalene	--	--	--	--	--	Nasal	--	3.3E+00	--	3.3E+00
			n-Propylbenzene	--	--	--	--	--	--	--	7.7E-02	--	7.7E-02
			Tetrachloroethene	--	3.0E-06	--	--	3.0E-06	Liver, Kidney	--	2.1E-04	--	2.1E-04
			Toluene	--	--	--	--	--	CNS	--	1.8E-01	--	1.8E-01
			Trichloroethene	--	5.5E-06	--	--	5.5E-06	CNS, Liver, Endocrine	--	1.6E-02	--	1.6E-02
			Xylene (Total)	--	--	--	--	--	CNS	--	9.1E-01	--	9.1E-01
		Exposure Point Total		--	5.6E-05	--	--	5.6E-05		--	7.6E+00	--	7.6E+00
	Exposure Medium Total							9.5E-04					8.3E+01
Medium Total								9.7E-04					8.5E+01
Receptor Total							Receptor Risk Total	1.0E-03				Receptor HI Total	8.6E+01

Notes:

CNS	Central nervous system
GI	Gastrointestinal
HI	Hazard Index
RME	Reasonable maximum exposure
VOC	Volatile organic compound
--	Not Applicable or Not Available

Total Organ 1 (Blood) HI Across All Media =	3.4E+01
Total Organ 2 (Nervous System) HI Across All Media =	3.1E+01
Total Organ 3 (Skin) HI Across All Media =	9.5E+00
Total Organ 4 (Liver) HI Across All Media =	7.5E+00
Total Organ 5 (Nasal) HI Across All Media =	3.8E+00
Total Organ 6 (Kidney) HI Across All Media =	3.7E+00
Total Organ 7 (Fetus) HI Across All Media =	2.8E+00
Total Organ 8 (Gastrointestinal System) HI Across All Media =	6.7E-02
Total Organ 9 (Body Weight) HI Across All Media =	1.7E+00
Total Organ 10 (Death) HI Across All Media =	8.6E-01
Total Organ 11 (Unknown Systems) HI Across All Media =	8.5E-01

TABLE H-9.4.4.RME
EPA RAGS PART D TABLE 9
SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCS
CURRENT CHILD RESIDENT
SITE 22, ALAMEDA POINT, ALAMEDA, CALIFORNIA

Scenario Timeframe:	Future
Receptor Population:	Resident
Receptor Age:	Child

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk					Non-Carcinogenic Hazard Quotient				
				Ingestion	Inhalation	Dermal	External (Radiation)	Exposure Routes Total	Primary Target Organ(s)	Ingestion	Inhalation	Dermal	Exposure Routes Total
												Total Organ 12 (Lung) HI Across All Media =	2.6E-01
												Total Organ 13 (Developmental) HI Across All Media =	4.5E-02
												Total Organ 14 (Endocrine system) HI Across All Media =	1.6E-02

TABLE H-9.4.5.RME
EPA RAGS PART D TABLE 9
SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCS
FUTURE DEVELOPED CONSTRUCTION WORKER
SITE 22, ALAMEDA POINT, ALAMEDA, CALIFORNIA

Scenario Timeframe:	Future-Developed
Receptor Population:	Construction Worker
Receptor Age:	Adult

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk					Non-Carcinogenic Hazard Quotient				
				Ingestion	Inhalation	Dermal	External (Radiation)	Exposure Routes Total	Primary Target Organ(s)	Ingestion	Inhalation	Dermal	Exposure Routes Total
Soil (0-8)	Soil	Site Soil	2-Methylnaphthalene	–	–	–	–	–	Lung	5.1E-03	–	–	5.1E-03
			Arsenic	5.1E-07	–	4.6E-08	–	5.6E-07	Skin	7.9E-02	–	7.1E-03	8.6E-02
			Benzene	8.4E-09	–	–	–	8.4E-09	Blood	2.7E-03	–	–	2.7E-03
			Benzo(a)pyrene	2.3E-08	–	8.8E-09	–	3.1E-08	–	–	–	–	–
			Ethylbenzene	2.0E-08	–	–	–	2.0E-08	Kidney, Liver	3.6E-03	–	–	3.6E-03
			Lead	–	–	–	–	–	–	–	–	–	–
			Toluene	–	–	–	–	–	Kidney, Liver	2.3E-03	–	–	2.3E-03
			Xylene (Total)	–	–	–	–	–	Death, Body Weight	8.2E-03	–	–	8.2E-03
			Chemical Total	5.6E-07	–	5.5E-08	–	6.1E-07		1.0E-01	–	7.1E-03	1.1E-01
		Exposure Point Total						6.1E-07					1.1E-01
	Exposure Medium Total							6.1E-07					1.1E-01
	Air	Outdoor Air (Particulates and VOCs)	2-Methylnaphthalene	–	–	–	–	–	Nasal	–	7.5E-02	–	7.5E-02
			Arsenic	–	2.3E-10	–	–	2.3E-10	–	–	–	–	–
			Benzene	–	9.2E-08	–	–	9.2E-08	Blood	–	2.8E-02	–	2.8E-02
			Benzo(a)pyrene	–	1.0E-12	–	–	1.0E-12	–	–	–	–	–
			Ethylbenzene	–	2.2E-07	–	–	2.2E-07	Developmental	–	1.4E-02	–	1.4E-02
			Lead	–	–	–	–	–	–	–	–	–	–
			Toluene	–	–	–	–	–	CNS	–	6.4E-02	–	6.4E-02
			Xylene (Total)	–	–	–	–	–	CNS	–	5.6E-01	–	5.6E-01
			Chemical Total	–	3.2E-07	–	–	3.2E-07		–	7.4E-01	–	7.4E-01
		Exposure Point Total						3.2E-07					7.4E-01
	Exposure Medium Total							3.2E-07					7.4E-01
Medium Total								9.3E-07					8.5E-01
Receptor Total							Receptor Risk Total	9.3E-07				Receptor HI Total	8.5E-01

Notes:

CNS	Central nervous system
HI	Hazard Index
RME	Reasonable maximum exposure
VOC	Volatile organic compound
–	Not Applicable or Not Available

TABLE H-9.4.6.RME
EPA RAGS PART D TABLE 9
SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCS
FUTURE REDEVELOPED ADULT RESIDENT
SITE 22, ALAMEDA POINT, ALAMEDA, CALIFORNIA

Scenario Timeframe:	Future-Redeveloped
Receptor Population:	Resident
Receptor Age:	Adult

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk					Non-Carcinogenic Hazard Quotient				
				Ingestion	Inhalation	Dermal	External (Radiation)	Exposure Routes Total	Primary Target Organ(s)	Ingestion	Inhalation	Dermal	Exposure Routes Total
Soil (0-8)	Soil	Site Soil	2-Methylnaphthalene	--	--	--	--	--	Lung	2.2E-03	--	--	2.2E-03
			Arsenic	5.2E-06	--	6.2E-07	--	5.8E-06	Skin	3.4E-02	--	4.0E-03	3.8E-02
			Benzene	8.5E-08	--	--	--	8.5E-08	Blood	1.1E-03	--	--	1.1E-03
			Benzo(a)pyrene	2.3E-07	--	1.2E-07	--	3.5E-07	--	--	--	--	--
			Ethylbenzene	2.0E-07	--	--	--	2.0E-07	Kidney, Liver	1.5E-03	--	--	1.5E-03
			Lead	--	--	--	--	--	--	--	--	--	--
			Toluene	--	--	--	--	--	Kidney, Liver	9.9E-04	--	--	9.9E-04
			Xylene (Total)	--	--	--	--	--	Death, Body Weight	3.5E-03	--	--	3.5E-03
			Chemical Total	5.7E-06	--	7.4E-07	--	6.4E-06		4.3E-02	--	4.0E-03	4.7E-02
		Exposure Point Total						6.4E-06					4.7E-02
	Exposure Medium Total							6.4E-06					4.7E-02
	Homegrown Produce	Homegrown Produce	2-Methylnaphthalene	--	--	--	--	--	--	--	--	--	--
			Arsenic	1.9E-05	--	--	--	1.9E-05	Skin	1.2E-01	--	--	1.2E-01
			Benzene	--	--	--	--	--	--	--	--	--	--
			Benzo(a)pyrene	5.9E-07	--	--	--	5.9E-07	--	--	--	--	--
			Ethylbenzene	--	--	--	--	--	--	--	--	--	--
			Lead	--	--	--	--	--	--	--	--	--	--
			Toluene	--	--	--	--	--	--	--	--	--	--
			Xylene (Total)	--	--	--	--	--	--	--	--	--	--
			Chemical Total	2.0E-05	--	--	--	2.0E-05		1.2E-01	--	--	1.2E-01
		Exposure Point Total						2.0E-05					1.2E-01
	Exposure Medium Total							2.0E-05					1.2E-01
	Air	Outdoor Air (Particulates and VOCs)	2-Methylnaphthalene	--	--	--	--	--	Nasal	--	1.0E-01	--	1.0E-01
			Arsenic	--	7.8E-09	--	--	7.8E-09	--	--	--	--	--
			Benzene	--	3.1E-06	--	--	3.1E-06	Blood	--	3.9E-02	--	3.9E-02
			Benzo(a)pyrene	--	3.5E-11	--	--	3.5E-11	--	--	--	--	--
			Ethylbenzene	--	7.5E-06	--	--	7.5E-06	Developmental	--	2.0E-02	--	2.0E-02
			Lead	--	--	--	--	--	--	--	--	--	--
			Toluene	--	--	--	--	--	CNS	--	8.9E-02	--	8.9E-02
			Xylene (Total)	--	--	--	--	--	CNS	--	7.8E-01	--	7.8E-01
			Chemical Total	--	1.1E-05	--	--	1.1E-05		--	1.0E+00	--	1.0E+00
		Exposure Point Total						1.1E-05					1.0E+00
	Exposure Medium Total							1.1E-05					1.0E+00
Medium Total								3.7E-05					1.2E+00
Groundwater	Groundwater	Indoor Air (Vapor Intrusion)	Benzene	--	3.5E-05	--	--	3.5E-05	Blood	--	4.4E-01	--	4.4E-01
			Ethylbenzene	--	4.0E-06	--	--	4.0E-06	Developmental	--	1.0E-02	--	1.0E-02

TABLE H-9.4.6.RME
EPA RAGS PART D TABLE 9
SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCS
FUTURE REDEVELOPED ADULT RESIDENT
SITE 22, ALAMEDA POINT, ALAMEDA, CALIFORNIA

Scenario Timeframe:	Future-Redeveloped
Receptor Population:	Resident
Receptor Age:	Adult

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk					Non-Carcinogenic Hazard Quotient				
				Ingestion	Inhalation	Dermal	External (Radiation)	Exposure Routes Total	Primary Target Organ(s)	Ingestion	Inhalation	Dermal	Exposure Routes Total
			o-Xylene	--	--	--	--	--	CNS	--	2.4E-01	--	2.4E-01
			m-Xylene	--	--	--	--	--	CNS	--	4.4E-02	--	4.4E-02
			Toluene	--	--	--	--	--	CNS	--	7.2E-02	--	7.2E-02
			Chemical Total	--	3.9E-05	--	--	3.9E-05		--	8.2E-01	--	8.2E-01
		Exposure Point Total						3.9E-05					8.2E-01
	Exposure Medium Total							3.9E-05					8.2E-01
	Groundwater	Tap Water (oral/dermal)	1,2-Dichloroethane	5.9E-06	--	1.3E-07	--	6.1E-06	Kidney, Death	6.3E-03	--	1.4E-04	6.5E-03
			2-Methylnaphthalene	--	--	--	--	--	Lung	8.6E-02	--	2.1E-02	1.1E-01
			Arsenic	5.8E-04	--	3.0E-06	--	5.8E-04	Skin	3.7E+00	--	2.0E-02	3.8E+00
			Benzene	7.7E-04	--	8.4E-05	--	8.5E-04	Blood	1.0E+01	--	1.1E+00	1.1E+01
			Chloroform	--	--	--	--	--	Liver	3.3E-02	--	1.2E-03	3.4E-02
			Ethylbenzene	1.6E-05	--	4.1E-06	--	2.0E-05	Kidney, Liver	1.2E-01	--	3.1E-02	1.5E-01
			Manganese	--	--	--	--	--	CNS	1.3E+01	--	6.6E-02	1.3E+01
			Naphthalene	--	--	--	--	--	Body Weight	2.9E-01	--	7.2E-02	3.7E-01
			n-Propylbenzene	--	--	--	--	--	--	1.6E-01	--	7.5E-02	2.3E-01
			Tetrachloroethene	1.3E-06	--	2.2E-07	--	1.5E-06	Liver	7.1E-03	--	1.2E-03	8.4E-03
			Thallium	--	--	--	--	--	Liver, Blood	1.6E+00	--	8.1E-03	1.6E+00
			Toluene	--	--	--	--	--	Kidney, Liver	2.1E-01	--	3.3E-02	2.4E-01
			Trichloroethene	4.5E-05	--	2.8E-06	--	4.8E-05	Liver, Kidney, Fetus	1.1E+00	--	6.9E-02	1.2E+00
			Xylene (Total)	--	--	--	--	--	Death, Body Weight	2.7E-01	--	7.4E-02	3.4E-01
		Exposure Point Total		1.4E-03	--	9.5E-05	--	1.5E-03		3.0E+01	--	1.6E+00	3.2E+01
		Tap Water (inhalation)	1,2-Dichloroethane	--	7.1E-07	--	--	7.1E-07	GI, Liver	--	1.6E-02	--	1.6E-02
			2-Methylnaphthalene	--	--	--	--	--	Nasal	--	1.1E-01	--	1.1E-01
			Benzene	--	4.5E-05	--	--	4.5E-05	Blood	--	5.7E-01	--	5.7E-01
			Chloroform	--	1.1E-06	--	--	1.1E-06	--	--	4.6E-02	--	4.6E-02
			Ethylbenzene	--	1.9E-06	--	--	1.9E-06	Developmental	--	5.1E-03	--	5.1E-03
			Naphthalene	--	--	--	--	--	Nasal	--	8.2E-01	--	8.2E-01
			n-Propylbenzene	--	--	--	--	--	--	--	1.9E-02	--	1.9E-02
			Tetrachloroethene	--	2.9E-08	--	--	2.9E-08	Liver, Kidney	--	5.0E-05	--	5.0E-05
			Toluene	--	--	--	--	--	CNS	--	4.5E-02	--	4.5E-02
			Trichloroethene	--	5.4E-06	--	--	5.4E-06	CNS, Liver, Endocrine	--	4.0E-03	--	4.0E-03
			Xylene (Total)	--	--	--	--	--	CNS	--	2.2E-01	--	2.2E-01
		Exposure Point Total		--	5.5E-05	--	--	5.5E-05		--	1.9E+00	--	1.9E+00
	Exposure Medium Total							1.6E-03					3.4E+01
Medium Total								1.6E-03					3.5E+01
Receptor Total							Receptor Risk Total	1.6E-03				Receptor HI Total	3.6E+01

TABLE H-9.4.6.RME
EPA RAGS PART D TABLE 9
SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCS
FUTURE REDEVELOPED ADULT RESIDENT
SITE 22, ALAMEDA POINT, ALAMEDA, CALIFORNIA

Scenario Timeframe:	Future-Redeveloped
Receptor Population:	Resident
Receptor Age:	Adult

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk					Non-Carcinogenic Hazard Quotient				
				Ingestion	Inhalation	Dermal	External (Radiation)	Exposure Routes Total	Primary Target Organ(s)	Ingestion	Inhalation	Dermal	Exposure Routes Total

Notes:

CNS	Central nervous system
GI	Gastrointestinal
HI	Hazard index
RME	Reasonable maximum exposure
VOC	Volatile organic compound
--	Not Applicable or Not Available

Total Organ 1 (Blood) HI Across All Media =	1.4E+01
Total Organ 2 (Nervous System) HI Across All Media =	1.4E+01
Total Organ 3 (Skin) HI Across All Media =	3.9E+00
Total Organ 4 (Liver) HI Across All Media =	3.2E+00
Total Organ 5 (Kidney) HI Across All Media =	1.6E+00
Total Organ 6 (Fetus) HI Across All Media =	1.2E+00
Total Organ 7 (Nasal) HI Across All Media =	1.0E+00
Total Organ 8 (Gastrointestinal System) HI Across All Media =	1.6E-02
Total Organ 9 (Body Weight) HI Across All Media =	7.1E-01
Total Organ 10 (Death) HI Across All Media =	3.5E-01
Total Organ 11 (Unknown Systems) HI Across All Media =	3.0E-01
Total Organ 12 (Lung) HI Across All Media =	1.1E-01
Total Organ 13 (Developmental) HI Across All Media =	3.5E-02
Total Organ 14 (Endocrine system) HI Across All Media =	4.0E-03

TABLE H-9.4.7.RME
EPA RAGS PART D TABLE 9
SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCS
FUTURE REDEVELOPED CHILD RESIDENT
SITE 22, ALAMEDA POINT, ALAMEDA, CALIFORNIA

Scenario Timeframe:	Future-Redeveloped
Receptor Population:	Resident
Receptor Age:	Child

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk					Non-Carcinogenic Hazard Quotient				
				Ingestion	Inhalation	Dermal	External (Radiation)	Exposure Routes Total	Primary Target Organ(s)	Ingestion	Inhalation	Dermal	Exposure Routes Total
Soil (0-8)	Soil	Site Soil	2-Methylnaphthalene	--	--	--	--	--	Lung	2.0E-02	--	--	2.0E-02
			Arsenic	1.2E-05	--	1.0E-06	--	1.3E-05	Skin	3.1E-01	--	2.6E-02	3.4E-01
			Benzene	2.0E-07	--	--	--	2.0E-07	Blood	1.1E-02	--	--	1.1E-02
			Benzo(a)pyrene	5.4E-07	--	2.0E-07	--	7.3E-07	--	--	--	--	--
			Ethylbenzene	4.7E-07	--	--	--	4.7E-07	Kidney, Liver	1.4E-02	--	--	1.4E-02
			Lead	--	--	--	--	--	--	--	--	--	--
			Toluene	--	--	--	--	--	Kidney, Liver	9.2E-03	--	--	9.2E-03
			Xylene (Total)	--	--	--	--	--	Death, Body Weight	3.2E-02	--	--	3.2E-02
			Chemical Total	1.3E-05	--	1.2E-06	--	1.5E-05		4.0E-01	--	2.6E-02	4.3E-01
		Exposure Point Total						1.5E-05					4.3E-01
	Exposure Medium Total							1.5E-05					4.3E-01
	Homegrown Produce	Homegrown Produce	2-Methylnaphthalene	--	--	--	--	--	Lung	--	--	--	--
			Arsenic	4.6E-08	--	--	--	4.6E-08	Skin	1.2E-01	--	--	1.2E-01
			Benzene	--	--	--	--	--	Blood	--	--	--	--
			Benzo(a)pyrene	1.5E-07	--	--	--	1.5E-07	--	--	--	--	--
			Ethylbenzene	--	--	--	--	--	Kidney, Liver	--	--	--	--
			Lead	--	--	--	--	--	--	--	--	--	--
			Toluene	--	--	--	--	--	Kidney, Liver	--	--	--	--
			Xylene (Total)	--	--	--	--	--	Death, Body Weight	--	--	--	--
			Chemical Total	4.9E-06	--	--	--	4.9E-06		1.2E-01	--	--	1.2E-01
		Exposure Point Total						4.9E-06					1.2E-01
	Exposure Medium Total							4.9E-06					1.2E-01
	Air	Outdoor Air (Particulates and VOCs)	2-Methylnaphthalene	--	--	--	--	--	Nasal	--	2.5E-01	--	2.5E-01
			Arsenic	--	4.6E-09	--	--	4.6E-09	--	--	--	--	--
			Benzene	--	1.8E-06	--	--	1.8E-06	Blood	--	9.2E-02	--	9.2E-02
			Benzo(a)pyrene	--	2.0E-11	--	--	2.0E-11	--	--	--	--	--
			Ethylbenzene	--	4.4E-06	--	--	4.4E-06	Developmental	--	4.6E-02	--	4.6E-02
			Lead	--	--	--	--	--	--	--	--	--	--
			Toluene	--	--	--	--	--	CNS	--	2.1E-01	--	2.1E-01
			Xylene (Total)	--	--	--	--	--	CNS	--	1.8E+00	--	1.8E+00
			Chemical Total	--	6.2E-06	--	--	6.2E-06		--	2.4E+00	--	2.4E+00
		Exposure Point Total						6.2E-06					2.4E+00
	Exposure Medium Total							6.2E-06					2.4E+00
Medium Total								2.6E-05					3.0E+00
Groundwater	Groundwater	Indoor Air (Vapor Intrusion)	Benzene	--	2.1E-05	--	--	2.1E-05	Blood	--	1.0E+00	--	1.0E+00
			Ethylbenzene	--	2.3E-06	--	--	2.3E-06	Developmental	--	2.4E-02	--	2.4E-02

TABLE H-9.4.7.RME
EPA RAGS PART D TABLE 9
SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCS
FUTURE REDEVELOPED CHILD RESIDENT
SITE 22, ALAMEDA POINT, ALAMEDA, CALIFORNIA

Scenario Timeframe:	Future-Redeveloped
Receptor Population:	Resident
Receptor Age:	Child

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk					Non-Carcinogenic Hazard Quotient				
				Ingestion	Inhalation	Dermal	External (Radiation)	Exposure Routes Total	Primary Target Organ(s)	Ingestion	Inhalation	Dermal	Exposure Routes Total
			o-Xylene	--	--	--	--	--	CNS	--	5.8E-01	--	5.8E-01
			m-Xylene	--	--	--	--	--	CNS	--	1.0E-01	--	1.0E-01
			Toluene	--	--	--	--	--	CNS	--	1.7E-01	--	1.7E-01
			Chemical Total	--	2.3E-05	--	--	2.3E-05		--	1.9E+00	--	1.9E+00
		Exposure Point Total						2.3E-05					1.9E+00
	Exposure Medium Total							2.3E-05					1.9E+00
	Groundwater	Tap Water (oral/dermal)	1,2-Dichloroethane	3.5E-06	--	9.6E-08	--	3.6E-06	Kidney, Death	1.5E-02	--	4.1E-04	1.5E-02
			2-Methylnaphthalene	--	--	--	--	--	Lung	2.0E-01	--	6.3E-02	2.6E-01
			Arsenic	3.4E-04	--	2.2E-06	--	3.4E-04	Skin	6.7E+00	--	5.8E-02	6.6E+00
			Benzene	4.5E-04	--	6.2E-05	--	5.1E-04	Blood	2.4E+01	--	3.3E+00	2.7E+01
			Chloroform	--	--	--	--	--	Liver	7.7E-02	--	3.4E-03	8.0E-02
			Ethylbenzene	9.5E-06	--	3.1E-06	--	1.3E-05	Kidney, Liver	2.9E-01	--	9.3E-02	3.8E-01
			Manganese	--	--	--	--	--	CNS	2.9E+01	--	1.9E-01	2.9E+01
			Naphthalene	--	--	--	--	--	Body Weight	6.8E-01	--	2.1E-01	9.0E-01
			n-Propylbenzene	--	--	--	--	--	--	3.7E-01	--	2.2E-01	5.9E-01
			Tetrachloroethene	7.4E-07	--	1.6E-07	--	9.0E-07	Liver	1.7E-02	--	3.6E-03	2.0E-02
			Thallium	--	--	--	--	--	Liver, Blood	3.6E+00	--	2.4E-02	3.6E+00
			Toluene	--	--	--	--	--	Kidney, Liver	4.8E-01	--	9.9E-02	5.8E-01
			Trichloroethene	2.6E-05	--	2.1E-06	--	2.8E-05	Liver, Kidney, Fetus	2.6E+00	--	2.0E-01	2.8E+00
			Xylene (Total)	--	--	--	--	--	Death, Body Weight	6.3E-01	--	2.2E-01	8.5E-01
		Exposure Point Total		8.3E-04	--	7.0E-05	--	9.0E-04		7.1E+01	--	4.7E+00	7.5E+01
		Tap Water (Inhalation)	1,2-Dichloroethane	--	7.3E-07	--	--	7.3E-07	GI, Liver	--	6.7E-02	--	6.7E-02
			2-Methylnaphthalene	--	--	--	--	--	Nasal	--	4.4E-01	--	4.4E-01
			Benzene	--	4.6E-05	--	--	4.6E-05	Blood	--	2.3E+00	--	2.3E+00
			Chloroform	--	1.1E-06	--	--	1.1E-06	--	--	1.9E-01	--	1.9E-01
			Ethylbenzene	--	2.0E-06	--	--	2.0E-06	Developmental	--	2.1E-02	--	2.1E-02
			Naphthalene	--	--	--	--	--	Nasal	--	3.3E+00	--	3.3E+00
			n-Propylbenzene	--	--	--	--	--	--	--	7.7E-02	--	7.7E-02
			Tetrachloroethene	--	3.0E-08	--	--	3.0E-08	Liver, Kidney	--	2.1E-04	--	2.1E-04
			Toluene	--	--	--	--	--	CNS	--	1.8E-01	--	1.8E-01
			Trichloroethene	--	5.5E-06	--	--	5.5E-06	CNS, Liver, Endocrine	--	1.6E-02	--	1.6E-02
			Xylene (Total)	--	--	--	--	--	CNS	--	9.1E-01	--	9.1E-01
		Exposure Point Total		--	5.6E-05	--	--	5.6E-05		--	7.6E+00	--	7.6E+00
	Exposure Medium Total							9.5E-04					8.3E+01
Medium Total								9.7E-04					8.5E+01
Receptor Total							Receptor Risk Total	1.0E-03				Receptor HI Total	8.8E+01

TABLE H-9.4.7.RME
EPA RAGS PART D TABLE 9
SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCS
FUTURE REDEVELOPED CHILD RESIDENT
SITE 22, ALAMEDA POINT, ALAMEDA, CALIFORNIA

Scenario Timeframe:	Future-Redeveloped
Receptor Population:	Resident
Receptor Age:	Child

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk					Non-Carcinogenic Hazard Quotient				
				Ingestion	Inhalation	Dermal	External (Radiation)	Exposure Routes Total	Primary Target Organ(s)	Ingestion	Inhalation	Dermal	Exposure Routes Total

Notes:

CNS	Central nervous system
GI	Gastrointestinal
HI	Hazard Index
RME	Reasonable maximum exposure
VOC	Volatile organic compound
--	Not Applicable or Not Available

Total Organ 1 (Blood) HI Across All Media =	3.4E+01
Total Organ 2 (Nervous System) HI Across All Media =	3.4E+01
Total Organ 3 (Skin) HI Across All Media =	9.3E+00
Total Organ 4 (Liver) HI Across All Media =	7.6E+00
Total Organ 5 (Nasal) HI Across All Media =	4.0E+00
Total Organ 6 (Kidney) HI Across All Media =	3.8E+00
Total Organ 7 (Fetus) HI Across All Media =	2.8E+00
Total Organ 8 (Body Weight) HI Across All Media =	1.8E+00
Total Organ 9 (Gastrointestinal System) HI Across All Media =	6.7E-02
Total Organ 10 (Death) HI Across All Media =	8.9E-01
Total Organ 11 (Unknown Systems) HI Across All Media =	8.5E-01
Total Organ 12 (Lung) HI Across All Media =	2.8E-01
Total Organ 13 (Developmental) HI Across All Media =	9.1E-02
Total Organ 14 (Endocrine system) HI Across All Media =	1.6E-02

HHRA RISK TABLES

Reasonable Maximum Exposure
Site 23
Alameda Point, Alameda, California

TABLE H-9.5.1.RME
EPA RAGS PART D TABLE 9
SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCS
CURRENT INDUSTRIAL WORKER
SITE 23, ALAMEDA POINT, ALAMEDA, CALIFORNIA

Scenario Timeframe:	Future
Receptor Population:	Industrial Worker
Receptor Age:	Adult

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk					Non-Carcinogenic Hazard Quotient				
				Ingestion	Inhalation	Dermal	External (Radiation)	Exposure Routes Total	Primary Target Organ(s)	Ingestion	Inhalation	Dermal	Exposure Routes Total
Soil (0-2)	Soil	Site Soil	Arsenic	2.2E-06	–	4.4E-07	–	2.6E-06	Skin	1.4E-02	–	2.7E-03	1.6E-02
			Benz(a)anthracene	3.4E-08	–	2.9E-08	–	6.4E-08	–	–	–	–	–
			Benzo(a)pyrene	3.7E-07	–	3.2E-07	–	6.8E-07	–	–	–	–	–
			Benzo(b)fluoranthene	3.9E-08	–	3.3E-08	–	7.2E-08	–	–	–	–	–
			Benzo(k)fluoranthene	2.6E-09	–	2.3E-09	–	4.9E-09	–	–	–	–	–
			Dibenz(a,h)anthracene	1.2E-07	–	1.0E-07	–	2.2E-07	–	–	–	–	–
			Indeno(1,2,3-cd)pyrene	3.1E-08	–	2.6E-08	–	5.7E-08	–	–	–	–	–
			Chemical Total	2.8E-06	–	9.5E-07	–	3.7E-06		1.4E-02	–	2.7E-03	1.6E-02
		Exposure Point Total						3.7E-06					1.6E-02
	Exposure Medium Total							3.7E-06					1.6E-02
	Air	Outdoor Air (Particulates and VOCs)	Arsenic	–	3.3E-09	–	–	3.3E-09	–	–	–	–	–
			Benz(a)anthracene	–	5.2E-12	–	–	5.2E-12	–	–	–	–	–
			Benzo(a)pyrene	–	5.6E-11	–	–	5.6E-11	–	–	–	–	–
			Benzo(b)fluoranthene	–	5.8E-12	–	–	5.8E-12	–	–	–	–	–
			Benzo(k)fluoranthene	–	4.0E-13	–	–	4.0E-13	–	–	–	–	–
			Dibenz(a,h)anthracene	–	1.8E-11	–	–	1.8E-11	–	–	–	–	–
			Indeno(1,2,3-cd)pyrene	–	4.7E-12	–	–	4.7E-12	–	–	–	–	–
			Chemical Total	–	3.4E-09	–	–	3.4E-09		–	–	–	0.0E+00
		Exposure Point Total						3.4E-09					0.0E+00
	Exposure Medium Total							3.4E-09					0.0E+00
Medium Total								3.7E-06					1.6E-02
Receptor Total							Receptor Risk Total	3.7E-06				Receptor HI Total	1.6E-02

Notes:

HI	Hazard index
RME	Reasonable maximum exposure
VOC	*Volatile organic compound*
–	Not Applicable or Not Available

TABLE H-9.5.2.RME
EPA RAGS PART D TABLE 9
SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCS
CURRENT CONSTRUCTION WORKER
SITE 23, ALAMEDA POINT, ALAMEDA, CALIFORNIA

Scenario Timeframe:	Future
Receptor Population:	Construction Worker
Receptor Age:	Adult

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk					Non-Carcinogenic Hazard Quotient				
				Ingestion	Inhalation	Dermal	External (Radiation)	Exposure Routes Total	Primary Target Organ(s)	Ingestion	Inhalation	Dermal	Exposure Routes Total
Soil (0-2)	Soil	Site Soil	Arsenic	2.9E-07	–	2.6E-08	–	3.2E-07	Skin	4.5E-02	–	4.1E-03	4.9E-02
			Benz(a)anthracene	4.5E-09	–	1.8E-09	–	6.3E-09	–	–	–	–	–
			Benzo(a)pyrene	4.8E-08	–	1.9E-08	–	6.7E-08	–	–	–	–	–
			Benzo(b)fluoranthene	5.1E-09	–	2.0E-09	–	7.1E-09	–	–	–	–	–
			Benzo(k)fluoranthene	3.5E-10	–	1.4E-10	–	4.8E-10	–	–	–	–	–
			Dibenz(a,h)anthracene	1.6E-08	–	6.2E-09	–	2.2E-08	–	–	–	–	–
			Indeno(1,2,3-cd)pyrene	4.1E-09	–	1.6E-09	–	5.7E-09	–	–	–	–	–
			Chemical Total	3.7E-07	–	5.7E-08	–	4.3E-07		4.5E-02	–	4.1E-03	4.9E-02
		Exposure Point Total						4.3E-07					4.9E-02
	Exposure Medium Total							4.3E-07					4.9E-02
	Air	Outdoor Air (Particulates and VOCs)	Arsenic	–	1.3E-10	–	–	1.3E-10	–	–	–	–	–
			Benz(a)anthracene	–	2.1E-13	–	–	2.1E-13	–	–	–	–	–
			Benzo(a)pyrene	–	2.2E-12	–	–	2.2E-12	–	–	–	–	–
			Benzo(b)fluoranthene	–	2.3E-13	–	–	2.3E-13	–	–	–	–	–
			Benzo(k)fluoranthene	–	1.6E-14	–	–	1.6E-14	–	–	–	–	–
			Dibenz(a,h)anthracene	–	7.3E-13	–	–	7.3E-13	–	–	–	–	–
			Indeno(1,2,3-cd)pyrene	–	1.9E-13	–	–	1.9E-13	–	–	–	–	–
			Chemical Total	–	1.4E-10	–	–	1.4E-10		–	–	–	0.0E+00
		Exposure Point Total						1.4E-10					0.0E+00
	Exposure Medium Total							1.4E-10					0.0E+00
Medium Total								4.3E-07					4.9E-02
Receptor Total							Receptor Risk Total	4.3E-07				Receptor HI Total	4.9E-02

Notes:

HI	Hazard index
RME	Reasonable maximum exposure
VOC	Volatile organic compound
–	Not Applicable or Not Available

TABLE H-9.5.3.RME
EPA RAGS PART D TABLE 9
SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCS
CURRENT ADULT RESIDENT
SITE 23, ALAMEDA POINT, ALAMEDA, CALIFORNIA

Scenario Timeframe:	*Future*
Receptor Population:	Resident
Receptor Age:	Adult

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk					Non-Carcinogenic Hazard Quotient				
				Ingestion	Inhalation	Dermal	External (Radiation)	Exposure Routes Total	Primary Target Organ(s)	Ingestion	Inhalation	Dermal	Exposure Routes Total
Soil (0-2)	Soil	Site Soil	Arsenic	3.0E-06	–	3.5E-07	–	3.3E-06	Skin	1.9E-02	–	2.3E-03	2.1E-02
			Benz(a)anthracene	4.6E-08	–	2.4E-08	–	7.0E-08	–	–	–	–	–
			Benzo(a)pyrene	4.9E-07	–	2.6E-07	–	7.5E-07	–	–	–	–	–
			Benzo(b)fluoranthene	5.2E-08	–	2.7E-08	–	7.9E-08	–	–	–	–	–
			Benzo(k)fluoranthene	3.5E-09	–	1.8E-09	–	5.4E-09	–	–	–	–	–
			Dibenz(a,h)anthracene	1.6E-07	–	8.4E-08	–	2.5E-07	–	–	–	–	–
			Indeno(1,2,3-cd)pyrene	4.1E-08	–	2.2E-08	–	6.3E-08	–	–	–	–	–
			Chemical Total	3.8E-06	–	7.7E-07	–	4.5E-06		1.9E-02	–	2.3E-03	2.1E-02
		Exposure Point Total						4.5E-06					2.1E-02
	Exposure Medium Total							4.5E-06					2.1E-02
	Homegrown Produce	Homegrown Produce	Arsenic	1.1E-05	–	–	–	1.1E-05	Skin	7.1E-02	–	–	7.1E-02
			Benz(a)anthracene	1.5E-07	–	–	–	1.5E-07	–	–	–	–	–
			Benzo(a)pyrene	1.3E-06	–	–	–	1.3E-06	–	–	–	–	–
			Benzo(b)fluoranthene	1.2E-07	–	–	–	1.2E-07	–	–	–	–	–
			Benzo(k)fluoranthene	8.3E-09	–	–	–	8.3E-09	–	–	–	–	–
			Dibenz(a,h)anthracene	6.3E-07	–	–	–	6.3E-07	–	–	–	–	–
			Indeno(1,2,3-cd)pyrene	7.7E-08	–	–	–	7.7E-08	–	–	–	–	–
			Chemical Total	1.3E-05	–	–	–	1.3E-05		7.1E-02	–	–	7.1E-02
		Exposure Point Total						1.3E-05					7.1E-02
	Exposure Medium Total							1.3E-05					7.1E-02
	Air	Outdoor Air (Particulates and VOCs)	Arsenic	–	4.5E-09	–	–	4.5E-09	–	–	–	–	–
			Benz(a)anthracene	–	6.9E-12	–	–	6.9E-12	–	–	–	–	–
			Benzo(a)pyrene	–	7.5E-11	–	–	7.5E-11	–	–	–	–	–
			Benzo(b)fluoranthene	–	7.8E-12	–	–	7.8E-12	–	–	–	–	–
			Benzo(k)fluoranthene	–	5.3E-13	–	–	5.3E-13	–	–	–	–	–
			Dibenz(a,h)anthracene	–	2.4E-11	–	–	2.4E-11	–	–	–	–	–
			Indeno(1,2,3-cd)pyrene	–	6.3E-12	–	–	6.3E-12	–	–	–	–	–
			Chemical Total	–	4.6E-09	–	–	4.6E-09		–	–	–	0.0E+00
		Exposure Point Total						4.6E-09					0.0E+00
	Exposure Medium Total							4.6E-09					0.0E+00
Medium Total								1.8E-05					9.2E-02
Groundwater	Groundwater	Tap Water (oral/dermal)	1,2,4-Trimethylbenzene	–	–	–	–	–	No observed effect	1.8E-01	–	8.0E-02	2.6E-01
			2-Butanone	–	–	–	–	–	Fetus	5.2E-02	–	2.6E-04	5.2E-02

TABLE H-9.5.3.RME
EPA RAGS PART D TABLE 9
SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCS
CURRENT ADULT RESIDENT
SITE 23, ALAMEDA POINT, ALAMEDA, CALIFORNIA

Scenario Timeframe:	Future
Receptor Population:	Resident
Receptor Age:	Adult

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk					Non-Carcinogenic Hazard Quotient				
				Ingestion	Inhalation	Dermal	External (Radiation)	Exposure Routes Total	Primary Target Organ(s)	Ingestion	Inhalation	Dermal	Exposure Routes Total
			2-Methylnaphthalene	–	–	–	–	–	Lung	5.8E-02	–	1.4E-02	7.2E-02
			Arsenic	1.6E-04	–	8.5E-07	–	1.6E-04	Skin	1.1E+00	–	5.5E-03	1.1E+00
			Benzene	5.2E-07	–	5.7E-08	–	5.7E-07	Blood	6.8E-03	–	7.5E-04	7.6E-03
			Benzo(a)pyrene	4.1E-05	–	1.5E-04	–	1.9E-04	–	–	–	–	–
			Benzo(b)fluoranthene	5.5E-06	–	2.0E-05	–	2.6E-05	–	–	–	–	–
			Chrysene	6.2E-08	–	1.5E-07	–	2.1E-07	–	–	–	–	–
			Ethylbenzene	5.4E-07	–	1.4E-07	–	6.8E-07	Kidney, Liver	4.1E-03	–	1.1E-03	5.2E-03
			Isopropylbenzene	–	–	–	–	–	Kidney	1.1E-01	–	4.9E-02	1.6E-01
			Naphthalene	–	–	–	–	–	Body Weight	2.5E-01	–	6.1E-02	3.1E-01
			sec-Butylbenzene	–	–	–	–	–	–	2.7E-01	–	2.5E-01	5.1E-01
			Thallium	–	–	–	–	–	Liver, Blood	1.2E+00	–	6.1E-03	1.2E+00
			Xylene (Total)	–	–	–	–	–	Death, Body Weight	1.9E-02	–	5.3E-03	2.5E-02
		Exposure Point Total		2.1E-04	–	1.7E-04	–	3.8E-04		3.2E+00	–	4.7E-01	3.6E+00
		Tap Water (Inhalation)	1,2,4-Trimethylbenzene	–	–	–	–	–	CNS	–	6.5E-01	–	6.5E-01
			2-Butanone	–	–	–	–	–	Fetus	–	1.3E-02	–	1.3E-02
			2-Methylnaphthalene	–	–	–	–	–	Nasal	–	7.2E-02	–	7.2E-02
			Benzene	–	3.1E-08	–	–	3.1E-08	Blood	–	3.8E-04	–	3.8E-04
			Ethylbenzene	–	6.5E-08	–	–	6.5E-08	Developmental	–	1.7E-04	–	1.7E-04
			Isopropylbenzene	–	–	–	–	–	Kidney	–	1.2E-02	–	1.2E-02
			Naphthalene	–	–	–	–	–	Nasal	–	6.9E-01	–	6.9E-01
			sec-Butylbenzene	–	–	–	–	–	–	–	3.2E-02	–	3.2E-02
			Xylene (Total)	–	–	–	–	–	CNS	–	1.6E-02	–	1.6E-02
		Exposure Point Total		–	9.6E-08	–	–	9.6E-08		–	1.5E+00	–	1.5E+00
	Exposure Medium Total							3.8E-04					5.1E+00
Medium Total								3.8E-04					5.1E+00
Receptor Total							Receptor Risk Total	4.0E-04				Receptor HI Total	5.2E+00

Notes:

HI	Hazard Index
CTE	Central tendency exposure
VOC	Volatile organic compound
–	Not Applicable or Not Available

Total Organ 1 (Nasal) HI Across All Media =	7.7E-01
Total Organ 2 (Nervous System) HI Across All Media =	8.7E-01
Total Organ 3 (Blood) HI Across All Media =	1.2E+00
Total Organ 4 (Liver) HI Across All Media =	1.2E+00
Total Organ 5 (Skin) HI Across All Media =	1.1E+00
Total Organ 6 (Unknown Systems) HI Across All Media =	5.4E-01
Total Organ 7 (Body Weight) HI Across All Media =	3.3E-01

TABLE H-9.5.3.RME
EPA RAGS PART D TABLE 9
SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCS
CURRENT ADULT RESIDENT
SITE 23, ALAMEDA POINT, ALAMEDA, CALIFORNIA

Scenario Timeframe:	Future
Receptor Population:	Resident
Receptor Age:	Adult

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk					Non-Carcinogenic Hazard Quotient				
				Ingestion	Inhalation	Dermal	External (Radiation)	Exposure Routes Total	Primary Target Organ(s)	Ingestion	Inhalation	Dermal	Exposure Routes Total
												Total Organ 8 (Kidney) HI Across All Media =	1.7E-01
												Total Organ 9 (No Observed Effect) HI Across All Media =	2.6E-01
												Total Organ 10 (Fetus) HI Across All Media =	6.5E-02
												Total Organ 11 (Lung) HI Across All Media =	7.2E-02
												Total Organ 12 (Death) HI Across All Media =	2.5E-02
												Total Organ 13 (Developmental) HI Across All Media =	1.7E-04

TABLE H-9.5.4.RME
EPA RAGS PART D TABLE 9
SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCS
CURRENT CHILD RESIDENT
SITE 23, ALAMEDA POINT, ALAMEDA, CALIFORNIA

Scenario Timeframe:	Future
Receptor Population:	Resident
Receptor Age:	Child

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk					Non-Carcinogenic Hazard Quotient				
				Ingestion	Inhalation	Dermal	External (Radiation)	Exposure Routes Total	Primary Target Organ(s)	Ingestion	Inhalation	Dermal	Exposure Routes Total
Soil (0-2)	Soil	Site Soil	Arsenic	6.9E-06	–	5.8E-07	–	7.5E-06	Skin	1.8E-01	–	1.5E-02	1.9E-01
			Benz(a)anthracene	1.1E-07	–	3.9E-08	–	1.5E-07	–	–	–	–	–
			Benzo(a)pyrene	1.2E-06	–	4.2E-07	–	1.6E-06	–	–	–	–	–
			Benzo(b)fluoranthene	1.2E-07	–	4.4E-08	–	1.6E-07	–	–	–	–	–
			Benzo(k)fluoranthene	8.2E-09	–	3.0E-09	–	1.1E-08	–	–	–	–	–
			Dibenz(a,h)anthracene	3.8E-07	–	1.4E-07	–	5.2E-07	–	–	–	–	–
			Indeno(1,2,3-cd)pyrene	9.7E-08	–	3.5E-08	–	1.3E-07	–	–	–	–	–
			Chemical Total	8.8E-06	–	1.3E-06	–	1.0E-05		1.8E-01	–	1.5E-02	1.9E-01
		Exposure Point Total						1.0E-05					1.9E-01
	Exposure Medium Total							1.0E-05					1.9E-01
	Homegrown Produce	Homegrown Produce	Arsenic	2.7E-06	–	–	–	2.7E-06	Skin	7.1E-02	–	–	7.1E-02
			Benz(a)anthracene	3.8E-08	–	–	–	3.8E-08	–	–	–	–	–
			Benzo(a)pyrene	3.1E-07	–	–	–	3.1E-07	–	–	–	–	–
			Benzo(b)fluoranthene	3.0E-08	–	–	–	3.0E-08	–	–	–	–	–
			Benzo(k)fluoranthene	2.1E-09	–	–	–	2.1E-09	–	–	–	–	–
			Dibenz(a,h)anthracene	1.6E-07	–	–	–	1.6E-07	–	–	–	–	–
			Indeno(1,2,3-cd)pyrene	1.9E-08	–	–	–	1.9E-08	–	–	–	–	–
			Chemical Total	3.3E-06	–	–	–	3.3E-06		7.1E-02	–	–	7.1E-02
		Exposure Point Total						3.3E-06					7.1E-02
	Exposure Medium Total							3.3E-06					7.1E-02
	Air	Outdoor Air (Particulates and VOCs)	Arsenic	–	2.6E-09	–	–	2.6E-09	–	–	–	–	–
			Benz(a)anthracene	–	4.1E-12	–	–	4.1E-12	–	–	–	–	–
			Benzo(a)pyrene	–	4.4E-11	–	–	4.4E-11	–	–	–	–	–
			Benzo(b)fluoranthene	–	4.6E-12	–	–	4.6E-12	–	–	–	–	–
			Benzo(k)fluoranthene	–	3.1E-13	–	–	3.1E-13	–	–	–	–	–
			Dibenz(a,h)anthracene	–	1.4E-11	–	–	1.4E-11	–	–	–	–	–
			Indeno(1,2,3-cd)pyrene	–	3.7E-12	–	–	3.7E-12	–	–	–	–	–
			Chemical Total	–	2.7E-09	–	–	2.7E-09		–	–	–	0.0E+00
		Exposure Point Total						2.7E-09					0.0E+00
	Exposure Medium Total							2.7E-09					0.0E+00
Medium Total								1.3E-05					2.7E-01
Groundwater	Groundwater	Tap Water (oral/dermal)	1,2,4-Trimethylbenzene	–	–	–	–	–	No observed effect	4.3E-01	–	2.4E-01	6.6E-01
			2-Butanone	–	–	–	–	–	Fetus	1.2E-01	–	7.6E-04	1.2E-01

TABLE H-9.5.4.RME
EPA RAGS PART D TABLE 9
SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCS
CURRENT CHILD RESIDENT
SITE 23, ALAMEDA POINT, ALAMEDA, CALIFORNIA

Scenario Timeframe:	Future
Receptor Population:	Resident
Receptor Age:	Child

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk					Non-Carcinogenic Hazard Quotient				
				Ingestion	Inhalation	Dermal	External (Radiation)	Exposure Routes Total	Primary Target Organ(s)	Ingestion	Inhalation	Dermal	Exposure Routes Total
			2-Methylnaphthalene	–	–	–	–	–	Lung	1.3E-01	–	4.2E-02	1.8E-01
			Arsenic	9.5E-05	–	6.2E-07	–	9.5E-05	Skin	2.5E+00	–	1.6E-02	2.5E+00
			Benzene	3.0E-07	–	4.2E-08	–	3.4E-07	Blood	1.6E-02	–	2.2E-03	1.8E-02
			Benzo(a)pyrene	2.4E-05	–	1.1E-04	–	1.3E-04	–	–	–	–	–
			Benzo(b)fluoranthene	3.2E-06	–	1.5E-05	–	1.8E-05	–	–	–	–	–
			Chrysene	3.6E-08	–	1.1E-07	–	1.5E-07	–	–	–	–	–
			Ethylbenzene	3.2E-07	–	1.0E-07	–	4.2E-07	Kidney, Liver	9.6E-03	–	3.1E-03	1.3E-02
			Isopropylbenzene	–	–	–	–	–	Kidney	2.5E-01	–	1.4E-01	3.9E-01
			Naphthalene	–	–	–	–	–	Body Weight	5.8E-01	–	1.8E-01	7.6E-01
			sec-Butylbenzene	–	–	–	–	–	–	6.2E-01	–	7.2E-01	1.3E+00
			Thallium	–	–	–	–	–	Liver, Blood	2.7E+00	–	1.8E-02	2.7E+00
			Xylene (Total)	–	–	–	–	–	Death, Body Weight	4.5E-02	–	1.6E-02	6.1E-02
		Exposure Point Total		1.2E-04	–	1.3E-04	–	2.5E-04		7.4E+00	–	1.4E+00	8.8E+00
		Tap Water (Inhalation)	1,2,4-Trimethylbenzene	–	–	–	–	–	CNS	–	2.6E+00	–	2.6E+00
			2-Butanone	–	–	–	–	–	Fetus	–	5.2E-02	–	5.2E-02
			2-Methylnaphthalene	–	–	–	–	–	Nasal	–	3.0E-01	–	3.0E-01
			Benzene	–	3.1E-08	–	–	3.1E-08	Blood	–	1.6E-03	–	1.6E-03
			Ethylbenzene	–	6.6E-08	–	–	6.6E-08	Developmental	–	6.9E-04	–	6.9E-04
			Isopropylbenzene	–	–	–	–	–	Kidney	–	4.7E-02	–	4.7E-02
			Naphthalene	–	–	–	–	–	Nasal	–	2.8E+00	–	2.8E+00
			sec-Butylbenzene	–	–	–	–	–	–	–	1.3E-01	–	1.3E-01
			Xylene (Total)	–	–	–	–	–	CNS	–	6.5E-02	–	6.5E-02
		Exposure Point Total		–	9.8E-08	–	–	9.8E-08		–	6.1E+00	–	6.1E+00
	Exposure Medium Total							2.5E-04					1.5E+01
Medium Total								2.5E-04					1.5E+01
Receptor Total							Receptor Risk Total	2.6E-04				Receptor HI Total	1.5E+01

Notes:

HI	Hazard Index
CTE	Central tendency exposure
VOC	Volatile organic compound
–	Not Applicable or Not Available

Total Organ 1 (Nasal) HI Across All Media =	3.1E+00
Total Organ 2 (Nervous System) HI Across All Media =	2.7E+00
Total Organ 3 (Blood) HI Across All Media =	2.8E+00
Total Organ 4 (Liver) HI Across All Media =	2.8E+00
Total Organ 5 (Skin) HI Across All Media =	2.7E+00
Total Organ 6 (Unknown Systems) HI Across All Media =	1.5E+00
Total Organ 7 (Body Weight) HI Across All Media =	8.2E-01

TABLE H-9.5.4.RME
EPA RAGS PART D TABLE 9
SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCS
CURRENT CHILD RESIDENT
SITE 23, ALAMEDA POINT, ALAMEDA, CALIFORNIA

Scenario Timeframe:	Future
Receptor Population:	Resident
Receptor Age:	Child

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk					Non-Carcinogenic Hazard Quotient				
				Ingestion	Inhalation	Dermal	External (Radiation)	Exposure Routes Total	Primary Target Organ(s)	Ingestion	Inhalation	Dermal	Exposure Routes Total
									Total Organ 8 (No Observed Effect) HI Across All Media =				6.6E-01
									Total Organ 9 (Kidney) HI Across All Media =				4.5E-01
									Total Organ 10 (Fetus) HI Across All Media =				1.7E-01
									Total Organ 11 (Lung) HI Across All Media =				1.8E-01
									Total Organ 12 (Death) HI Across All Media =				6.1E-02
									Total Organ 13 (Developmental) HI Across All Media =				6.9E-04

TABLE H-9.5.5.RME
EPA RAGS PART D TABLE 9
SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCS
FUTURE DEVELOPED CONSTRUCTION WORKER
SITE 23, ALAMEDA POINT, ALAMEDA, CALIFORNIA

Scenario Timeframe:	Future-Developed
Receptor Population:	Construction Worker
Receptor Age:	Adult

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk					Non-Carcinogenic Hazard Quotient				
				Ingestion	Inhalation	Dermal	External (Radiation)	Exposure Routes Total	Primary Target Organ(s)	Ingestion	Inhalation	Dermal	Exposure Routes Total
Soil (0-8)	Soil	Site Soil	2-Methylnaphthalene	–	–	–	–	–	Lung	9.6E-05	–	–	9.6E-05
			Arsenic	3.0E-07	–	2.7E-08	–	3.2E-07	Skin	4.6E-02	–	4.2E-03	5.0E-02
			Benz(a)anthracene	2.5E-09	–	9.8E-10	–	3.5E-09	–	–	–	–	–
			Benzo(a)pyrene	2.9E-08	–	1.1E-08	–	4.0E-08	–	–	–	–	–
			Benzo(b)fluoranthene	4.1E-10	–	1.6E-10	–	5.7E-10	–	–	–	–	–
			Benzo(k)fluoranthene	2.5E-10	–	9.6E-11	–	3.4E-10	–	–	–	–	–
			Dibenz(a,h)anthracene	1.0E-08	–	4.1E-09	–	1.4E-08	–	–	–	–	–
			Indeno(1,2,3-cd)pyrene	2.2E-09	–	8.4E-10	–	3.0E-09	–	–	–	–	–
			Chemical Total	3.4E-07	–	4.4E-08	–	3.9E-07		4.6E-02	–	4.2E-03	5.1E-02
		Exposure Point Total						3.9E-07					5.1E-02
	Exposure Medium Total							3.9E-07					5.1E-02
	Air	Outdoor Air (Particulates and VOCs)	2-Methylnaphthalene	–	–	–	–	–	Nasal	–	1.4E-03	–	1.4E-03
			Arsenic	–	1.4E-10	–	–	1.4E-10	–	–	–	–	–
			Benz(a)anthracene	–	1.2E-13	–	–	1.2E-13	–	–	–	–	–
			Benzo(a)pyrene	–	1.3E-12	–	–	1.3E-12	–	–	–	–	–
			Benzo(b)fluoranthene	–	1.9E-14	–	–	1.9E-14	–	–	–	–	–
			Benzo(k)fluoranthene	–	1.1E-14	–	–	1.1E-14	–	–	–	–	–
			Dibenz(a,h)anthracene	–	4.8E-13	–	–	4.8E-13	–	–	–	–	–
			Indeno(1,2,3-cd)pyrene	–	9.9E-14	–	–	9.9E-14	–	–	–	–	–
			Chemical Total	–	1.4E-10	–	–	1.4E-10		–	1.4E-03	–	1.4E-03
		Exposure Point Total						1.4E-10					1.4E-03
	Exposure Medium Total							1.4E-10					1.4E-03
Medium Total								3.9E-07					5.2E-02
Receptor Total							Receptor Risk Total	3.9E-07				Receptor HI Total	5.2E-02

Notes:

HI	Hazard Index
RME	Reasonable maximum exposure
VOC	Volatile organic compound
–	Not Applicable or Not Available

TABLE H-9.5.6.RME
EPA RAGS PART D TABLE 9
SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCS
FUTURE REDEVELOPED ADULT RESIDENT
SITE 23, ALAMEDA POINT, ALAMEDA, CALIFORNIA

Scenario Timeframe:	Future-Redeveloped
Receptor Population:	Resident
Receptor Age:	Adult

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk					Non-Carcinogenic Hazard Quotient				
				Ingestion	Inhalation	Dermal	External (Radiation)	Exposure Routes Total	Primary Target Organ(s)	Ingestion	Inhalation	Dermal	Exposure Routes Total
Soil (0-8)	Soil	Site Soil	2-Methylnaphthalene	–	–	–	–	–	Lung	4.1E-05	–	–	4.1E-05
			Arsenic	3.0E-06	–	3.6E-07	–	3.4E-06	Skin	2.0E-02	–	2.4E-03	2.2E-02
			Benz(a)anthracene	2.6E-08	–	1.3E-08	–	3.9E-08	–	–	–	–	–
			Benzo(a)pyrene	2.9E-07	–	1.5E-07	–	4.4E-07	–	–	–	–	–
			Benzo(b)fluoranthene	4.2E-09	–	2.2E-09	–	6.3E-09	–	–	–	–	–
			Benzo(k)fluoranthene	2.5E-09	–	1.3E-09	–	3.8E-09	–	–	–	–	–
			Dibenz(a,h)anthracene	1.1E-07	–	5.5E-08	–	1.6E-07	–	–	–	–	–
			Indeno(1,2,3-cd)pyrene	2.2E-08	–	1.1E-08	–	3.3E-08	–	–	–	–	–
			Chemical Total	3.5E-06	–	6.0E-07	–	4.1E-06		2.0E-02	–	2.4E-03	2.2E-02
		Exposure Point Total						4.1E-06					2.2E-02
	Exposure Medium Total							4.1E-06					2.2E-02
	Homegrown Produce	Homegrown Produce	2-Methylnaphthalene	–	–	–	–	–	–	–	–	–	–
			Arsenic	1.1E-05	–	–	–	1.1E-05	Skin	7.3E-02	–	–	7.3E-02
			Benz(a)anthracene	8.5E-08	–	–	–	8.5E-08	–	–	–	–	–
			Benzo(a)pyrene	7.4E-07	–	–	–	7.4E-07	–	–	–	–	–
			Benzo(b)fluoranthene	9.8E-09	–	–	–	9.8E-09	–	–	–	–	–
			Benzo(k)fluoranthene	5.9E-09	–	–	–	5.9E-09	–	–	–	–	–
			Dibenz(a,h)anthracene	4.1E-07	–	–	–	4.1E-07	–	–	–	–	–
			Indeno(1,2,3-cd)pyrene	4.1E-08	–	–	–	4.1E-08	–	–	–	–	–
			Chemical Total	1.3E-05	–	–	–	1.3E-05		7.3E-02	–	–	7.3E-02
		Exposure Point Total						1.3E-05					7.3E-02
	Exposure Medium Total							1.3E-05					7.3E-02
	Air	Outdoor Air (Particulates and VOCs)	2-Methylnaphthalene	–	–	–	–	–	Nasal	–	6.4E-08	–	6.4E-08
			Arsenic	–	4.6E-09	–	–	4.6E-09	–	–	–	–	–
			Benz(a)anthracene	–	3.8E-12	–	–	3.8E-12	–	–	–	–	–
			Benzo(a)pyrene	–	4.4E-11	–	–	4.4E-11	–	–	–	–	–
			Benzo(b)fluoranthene	–	6.3E-13	–	–	6.3E-13	–	–	–	–	–
			Benzo(k)fluoranthene	–	3.8E-13	–	–	3.8E-13	–	–	–	–	–
			Dibenz(a,h)anthracene	–	1.6E-11	–	–	1.6E-11	–	–	–	–	–
			Indeno(1,2,3-cd)pyrene	–	3.3E-12	–	–	3.3E-12	–	–	–	–	–
			Chemical Total	–	4.6E-09	–	–	4.6E-09		–	6.4E-08	–	6.4E-08
		Exposure Point Total						4.6E-09					6.4E-08
	Exposure Medium Total							4.6E-09					6.4E-08

TABLE H-9.5.6.RME
EPA RAGS PART D TABLE 9
SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCS
FUTURE REDEVELOPED ADULT RESIDENT
SITE 23, ALAMEDA POINT, ALAMEDA, CALIFORNIA

Scenario Timeframe:	Future-Redeveloped
Receptor Population:	Resident
Receptor Age:	Adult

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk					Non-Carcinogenic Hazard Quotient				
				Ingestion	Inhalation	Dermal	External (Radiation)	Exposure Routes Total	Primary Target Organ(s)	Ingestion	Inhalation	Dermal	Exposure Routes Total
Medium Total								1.7E-05					9.5E-02
Groundwater	Groundwater	Tap Water (oral/dermal)	1,2,4-Trimethylbenzene	–	–	–	–	–	No observed effect	1.8E-01	–	8.0E-02	2.6E-01
			2-Butanone	–	–	–	–	–	Fetus	5.2E-02	–	2.6E-04	5.2E-02
			2-Methylnaphthalene	–	–	–	–	–	Lung	5.8E-02	–	1.4E-02	7.2E-02
			Arsenic	1.6E-04	–	8.5E-07	–	1.6E-04	Skin	1.1E+00	–	5.5E-03	1.1E+00
			Benzene	5.2E-07	–	5.7E-08	–	5.7E-07	Blood	6.8E-03	–	7.5E-04	7.6E-03
			Benzo(a)pyrene	4.1E-05	–	1.5E-04	–	1.9E-04	–	–	–	–	–
			Benzo(b)fluoranthene	5.5E-06	–	2.0E-05	–	2.6E-05	–	–	–	–	–
			Chrysene	6.2E-08	–	1.5E-07	–	2.1E-07	–	–	–	–	–
			Ethylbenzene	5.4E-07	–	1.4E-07	–	6.8E-07	Kidney, Liver	4.1E-03	–	1.1E-03	5.2E-03
			Isopropylbenzene	–	–	–	–	–	Kidney	1.1E-01	–	4.9E-02	1.6E-01
			Naphthalene	–	–	–	–	–	Body Weight	2.5E-01	–	6.1E-02	3.1E-01
			sec-Butylbenzene	–	–	–	–	–	–	2.7E-01	–	2.5E-01	5.1E-01
			Thallium	–	–	–	–	–	Liver, Blood	1.2E+00	–	6.1E-03	1.2E+00
			Xylene (Total)	–	–	–	–	–	Death, Body Weight	1.9E-02	–	5.3E-03	2.5E-02
		Exposure Point Total		2.1E-04	–	1.7E-04	–	3.8E-04		3.2E+00	–	4.7E-01	3.6E+00
		Tap Water (inhalation)	1,2,4-Trimethylbenzene	–	–	–	–	–	CNS	–	6.5E-01	–	6.5E-01
			2-Butanone	–	–	–	–	–	Fetus	–	1.3E-02	–	1.3E-02
			2-Methylnaphthalene	–	–	–	–	–	Nasal	–	7.2E-02	–	7.2E-02
			Benzene	–	3.1E-08	–	–	3.1E-08	Blood	–	3.8E-04	–	3.8E-04
			Ethylbenzene	–	6.5E-08	–	–	6.5E-08	Developmental	–	1.7E-04	–	1.7E-04
			Isopropylbenzene	–	–	–	–	–	Kidney	–	1.2E-02	–	1.2E-02
			Naphthalene	–	–	–	–	–	Nasal	–	6.9E-01	–	6.9E-01
			sec-Butylbenzene	–	–	–	–	–	–	–	3.2E-02	–	3.2E-02
			Xylene (Total)	–	–	–	–	–	CNS	–	1.6E-02	–	1.6E-02
		Exposure Point Total		–	9.6E-08	–	–	9.6E-08		–	1.5E+00	–	1.5E+00
	Exposure Medium Total							3.8E-04					5.1E+00
Medium Total								3.8E-04					5.1E+00
Receptor Total				Receptor Risk Total				4.0E-04	Receptor HI Total				5.2E+00

Total Organ 1 (Liver) HI Across All Media =	1.2E+00
Total Organ 2 (Blood) HI Across All Media =	1.2E+00
Total Organ 3 (Nasal) HI Across All Media =	7.7E-01
Total Organ 4 (Skin) HI Across All Media =	1.2E+00

Notes:

HI Hazard Index
CTE Central tendency exposure
VOC Volatile organic compound

TABLE H-9.5.6.RME
EPA RAGS PART D TABLE 9
SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCS
FUTURE REDEVELOPED ADULT RESIDENT
SITE 23, ALAMEDA POINT, ALAMEDA, CALIFORNIA

Scenario Timeframe:	Future-Redeveloped
Receptor Population:	Resident
Receptor Age:	Adult

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk					Non-Carcinogenic Hazard Quotient				
				Ingestion	Inhalation	Dermal	External (Radiation)	Exposure Routes Total	Primary Target Organ(s)	Ingestion	Inhalation	Dermal	Exposure Routes Total

– Not Applicable or Not Available

Total Organ 5 (Nervous System) HI Across All Media =	6.7E-01
Total Organ 6 (Unknown Systems) HI Across All Media =	5.4E-01
Total Organ 7 (Body Weight) HI Across All Media =	3.3E-01
Total Organ 8 (No Observed Effect) HI Across All Media =	2.6E-01
Total Organ 9 (Kidney) HI Across All Media =	1.7E-01
Total Organ 10 (Fetus) HI Across All Media =	6.5E-02
Total Organ 11 (Lung) HI Across All Media =	7.2E-02
Total Organ 12 (Death) HI Across All Media =	2.5E-02
Total Organ 13 (Developmental) HI Across All Media =	1.7E-04

TABLE H-9.5.7.RME
EPA RAGS PART D TABLE 9
SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCS
FUTURE REDEVELOPED CHILD RESIDENT
SITE 23, ALAMEDA POINT, ALAMEDA, CALIFORNIA

Scenario Timeframe:	Future-Redeveloped
Receptor Population:	Resident
Receptor Age:	Child

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk					Non-Carcinogenic Hazard Quotient				
				Ingestion	Inhalation	Dermal	External (Radiation)	Exposure Routes Total	Primary Target Organ(s)	Ingestion	Inhalation	Dermal	Exposure Routes Total
Soil (0-8)	Soil	Site Soil	2-Methylnaphthalene	–	–	–	–	–	Lung	3.8E-04	–	–	3.8E-04
			Arsenic	7.1E-06	–	5.9E-07	–	7.7E-06	Skin	1.8E-01	–	1.5E-02	2.0E-01
			Benz(a)anthracene	6.0E-08	–	2.2E-08	–	8.1E-08	–	–	–	–	–
			Benzo(a)pyrene	6.8E-07	–	2.5E-07	–	9.3E-07	–	–	–	–	–
			Benzo(b)fluoranthene	9.7E-09	–	3.5E-09	–	1.3E-08	–	–	–	–	–
			Benzo(k)fluoranthene	5.9E-09	–	2.1E-09	–	8.0E-09	–	–	–	–	–
			Dibenz(a,h)anthracene	2.5E-07	–	9.0E-08	–	3.4E-07	–	–	–	–	–
			Indeno(1,2,3-cd)pyrene	5.1E-08	–	1.9E-08	–	7.0E-08	–	–	–	–	–
			Chemical Total	8.1E-06	–	9.8E-07	–	9.1E-06		1.8E-01	–	1.5E-02	2.0E-01
		Exposure Point Total						9.1E-06					2.0E-01
	Exposure Medium Total							9.1E-06					2.0E-01
	Homegrown Produce	Homegrown Produce	2-Methylnaphthalene	–	–	–	–	–	–	–	–	–	–
			Arsenic	2.8E-06	–	–	–	2.8E-06	Skin	7.3E-02	–	–	7.3E-02
			Benz(a)anthracene	2.1E-08	–	–	–	2.1E-08	–	–	–	–	–
			Benzo(a)pyrene	1.9E-07	–	–	–	1.9E-07	–	–	–	–	–
			Benzo(b)fluoranthene	2.5E-09	–	–	–	2.5E-09	–	–	–	–	–
			Benzo(k)fluoranthene	1.5E-09	–	–	–	1.5E-09	–	–	–	–	–
			Dibenz(a,h)anthracene	1.0E-07	–	–	–	1.0E-07	–	–	–	–	–
			Indeno(1,2,3-cd)pyrene	1.0E-08	–	–	–	1.0E-08	–	–	–	–	–
			Chemical Total	3.1E-06	–	–	–	3.1E-06		7.3E-02	–	–	7.3E-02
		Exposure Point Total						3.1E-06					7.3E-02
	Exposure Medium Total							3.1E-06					7.3E-02
	Air	Outdoor Air	2-Methylnaphthalene	–	–	–	–	–	Nasal	–	1.5E-07	–	1.5E-07
			Arsenic	–	2.7E-09	–	–	2.7E-09	–	–	–	–	–
			Benz(a)anthracene	–	2.3E-12	–	–	2.3E-12	–	–	–	–	–
			Benzo(a)pyrene	–	2.6E-11	–	–	2.6E-11	–	–	–	–	–
			Benzo(b)fluoranthene	–	3.7E-13	–	–	3.7E-13	–	–	–	–	–
			Benzo(k)fluoranthene	–	2.2E-13	–	–	2.2E-13	–	–	–	–	–
			Dibenz(a,h)anthracene	–	9.4E-12	–	–	9.4E-12	–	–	–	–	–
			Indeno(1,2,3-cd)pyrene	–	2.0E-12	–	–	2.0E-12	–	–	–	–	–
		(Particulates and VOCs)											
			Chemical Total	–	2.7E-09	–	–	2.7E-09		–	1.5E-07	–	1.5E-07
		Exposure Point Total						2.7E-09					1.5E-07
	Exposure Medium Total							2.7E-09					1.5E-07

TABLE H-9.5.7.RME
EPA RAGS PART D TABLE 9
SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCS
FUTURE REDEVELOPED CHILD RESIDENT
SITE 23, ALAMEDA POINT, ALAMEDA, CALIFORNIA

Scenario Timeframe:	Future-Redeveloped
Receptor Population:	Resident
Receptor Age:	Child

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk					Non-Carcinogenic Hazard Quotient				
				Ingestion	Inhalation	Dermal	External (Radiation)	Exposure Routes Total	Primary Target Organ(s)	Ingestion	Inhalation	Dermal	Exposure Routes Total
Medium Total								1.2E-05					2.7E-01
Groundwater	Groundwater	Tap Water (oral/dermal)	1,2,4-Trimethylbenzene	–	–	–	–	–	No observed effect	4.3E-01	–	2.4E-01	6.6E-01
			2-Butanone	–	–	–	–	–	Fetus	1.2E-01	–	7.6E-04	1.2E-01
			2-Methylnaphthalene	–	–	–	–	–	Lung	1.3E-01	–	4.2E-02	1.8E-01
			Arsenic	9.5E-05	–	6.2E-07	–	9.5E-05	Skin	2.5E+00	–	1.6E-02	2.5E+00
			Benzene	3.0E-07	–	4.2E-08	–	3.4E-07	Blood	1.6E-02	–	2.2E-03	1.8E-02
			Benzo(a)pyrene	2.4E-05	–	1.1E-04	–	1.3E-04	–	–	–	–	–
			Benzo(b)fluoranthene	3.2E-06	–	1.5E-05	–	1.8E-05	–	–	–	–	–
			Chrysene	3.6E-08	–	1.1E-07	–	1.5E-07	–	–	–	–	–
			Ethylbenzene	3.2E-07	–	1.0E-07	–	4.2E-07	Kidney, Liver	9.6E-03	–	3.1E-03	1.3E-02
			Isopropylbenzene	–	–	–	–	–	Kidney	2.5E-01	–	1.4E-01	3.9E-01
			Naphthalene	–	–	–	–	–	Body Weight	5.8E-01	–	1.8E-01	7.6E-01
			sec-Butylbenzene	–	–	–	–	–	–	6.2E-01	–	7.2E-01	1.3E+00
			Thallium	–	–	–	–	–	Liver, Blood	2.7E+00	–	1.8E-02	2.7E+00
			Xylene (Total)	–	–	–	–	–	Death, Body Weight	4.5E-02	–	1.6E-02	6.1E-02
		Exposure Point Total		1.2E-04	–	1.3E-04	–	2.5E-04		7.4E+00	–	1.4E+00	8.8E+00
		Tap Water (inhalation)	1,2,4-Trimethylbenzene	–	–	–	–	–	CNS	–	2.6E+00	–	2.6E+00
			2-Butanone	–	–	–	–	–	Fetus	–	5.2E-02	–	5.2E-02
			2-Methylnaphthalene	–	–	–	–	–	Nasal	–	3.0E-01	–	3.0E-01
			Benzene	–	3.1E-08	–	–	3.1E-08	Blood	–	1.6E-03	–	1.6E-03
			Ethylbenzene	–	6.6E-08	–	–	6.6E-08	Developmental	–	6.9E-04	–	6.9E-04
			Isopropylbenzene	–	–	–	–	–	Kidney	–	4.7E-02	–	4.7E-02
			Naphthalene	–	–	–	–	–	Nasal	–	2.8E+00	–	2.8E+00
			sec-Butylbenzene	–	–	–	–	–	–	–	1.3E-01	–	1.3E-01
			Xylene (Total)	–	–	–	–	–	CNS	–	6.5E-02	–	6.5E-02
		Exposure Point Total		–	9.8E-08	–	–	9.8E-08		–	6.1E+00	–	6.1E+00
	Exposure Medium Total							2.5E-04					1.5E+01
Medium Total								2.5E-04					1.5E+01
Receptor Total							Receptor Risk Total	2.6E-04				Receptor HI Total	1.5E+01

Notes:

HI Hazard index

CTE Central tendency exposure

VOC Volatile organic compound

Total Organ 1 (Skin) HI Across All Media =	2.7E+00
Total Organ 2 (Blood) HI Across All Media =	2.8E+00
Total Organ 3 (Liver) HI Across All Media =	2.8E+00
Total Organ 4 (Unknown Systems) HI Across All Media =	1.5E+00

TABLE H-9.5.7.RME
EPA RAGS PART D TABLE 9
SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCS
FUTURE REDEVELOPED CHILD RESIDENT
SITE 23, ALAMEDA POINT, ALAMEDA, CALIFORNIA

Scenario Timeframe:	Future-Redeveloped
Receptor Population:	Resident
Receptor Age:	Child

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk					Non-Carcinogenic Hazard Quotient				
				Ingestion	Inhalation	Dermal	External (Radiation)	Exposure Routes Total	Primary Target Organ(s)	Ingestion	Inhalation	Dermal	Exposure Routes Total
-	Not Applicable or Not Available												
									Total Organ 5 (Body Weight) HI Across All Media =				8.2E-01
									Total Organ 6 (Nasal) HI Across All Media =				3.1E+00
									Total Organ 7 (Nervous System) HI Across All Media =				2.7E+00
									Total Organ 8 (No Observed Effect) HI Across All Media =				6.6E-01
									Total Organ 9 (Kidney) HI Across All Media =				4.5E-01
									Total Organ 10 (Lung) HI Across All Media =				1.8E-01
									Total Organ 11 (Fetus) HI Across All Media =				1.7E-01
									Total Organ 12 (Death) HI Across All Media =				6.1E-02
									Total Organ 13 (Developmental) HI Across All Media =				6.9E-04

HHRA RISK TABLES

Reasonable Maximum Exposure
Site 09
Alameda Point, Alameda, California

TABLE H-10.1.1.RME
EPA RAGS PART D TABLE 10
RISK SUMMARY
CURRENT INDUSTRIAL WORKER
SITE 09, ALAMEDA POINT, ALAMEDA, CALIFORNIA

Scenario Timeframe:	Future
Receptor Population:	Industrial Worker
Receptor Age:	Adult

Medium	Exposure Medium	Exposure Point	Chemical	Carcinogenic Risk					Non-Carcinogenic Hazard Quotient				
				Ingestion	Inhalation	Dermal	External (Radiation)	Exposure Routes Total	Primary Target Organ(s)	Ingestion	Inhalation	Dermal	Exposure Routes Total
Soil (0-2)	Soil	Site Soil	Arsenic	3.1E-06	–	6.1E-07	–	3.7E-06	–	–	–	–	–
			Chemical Total	3.1E-06	–	6.1E-07	–	3.7E-06		–	–	–	0.0E+00
		Exposure Point Total						3.7E-06					0.0E+00
	Exposure Medium Total							3.7E-06					0.0E+00
	Air	Outdoor Air (Particulates and VOCs)	–	–	–	–	–	–	–	–	–	–	–
			Chemical Total	–	–	–	–	0.0E+00		–	–	–	0.0E+00
		Exposure Point Total						0.0E+00					0.0E+00
	Exposure Medium Total							0.0E+00					0.0E+00
Medium Total								3.7E-06					0.0E+00
Groundwater	Groundwater	Indoor Air (Vapor Intrusion)	Vinyl Chloride	–	5.1E-06	–	–	5.1E-06	–	–	–	–	–
			Chemical Total	–	5.1E-06	–	–	5.1E-06		–	–	–	0.0E+00
		Exposure Point Total						5.1E-06					0.0E+00
	Exposure Medium Total							5.1E-06					0.0E+00
Medium Total								5.1E-06					0.0E+00
Receptor Total							Receptor Risk Total	8.8E-06				Receptor HI Total	0.0E+00

Notes:

–	Not Applicable or Not Available
HI	Hazard Index
RME	Reasonable maximum exposure
VOC	Volatile organic compound

TABLE H-10.1.2.RME
EPA RAGS PART D TABLE 10
RISK SUMMARY
CURRENT CONSTRUCTION WORKER
SITE 09, ALAMEDA POINT, ALAMEDA, CALIFORNIA

Scenario Timeframe:	Future
Receptor Population:	Construction Worker
Receptor Age:	Adult

Medium	Exposure Medium	Exposure Point	Chemical	Carcinogenic Risk					Non-Carcinogenic Hazard Quotient				
				Ingestion	Inhalation	Dermal	External (Radiation)	Exposure Routes Total	Primary Target Organ(s)	Ingestion	Inhalation	Dermal	Exposure Routes Total
Soil (0-2)	Soil	Site Soil	–	–	–	–	–	–	–	–	–	–	–
			Chemical Total	–	–	–	–	0.0E+00		–	–	–	0.0E+00
		Exposure Point Total						0.0E+00					0.0E+00
	Exposure Medium Total							0.0E+00					0.0E+00
	Air	Outdoor Air (Particulates and VOCs)	–	–	–	–	–	–	–	–	–	–	–
			Chemical Total	–	–	–	–	0.0E+00		–	–	–	0.0E+00
		Exposure Point Total						0.0E+00					0.0E+00
	Exposure Medium Total							0.0E+00					0.0E+00
Medium Total								0.0E+00					0.0E+00
Receptor Total							Receptor Risk Total	0.0E+00				Receptor HI Total	0.0E+00

Notes:

–	Not Applicable or Not Available
HI	Hazard Index
RME	Reasonable maximum exposure
VOC	Volatile organic compound

TABLE H-10.1.3.RME
EPA RAGS PART D TABLE 10
RISK SUMMARY
CURRENT ADULT RESIDENT
SITE 09, ALAMEDA POINT, ALAMEDA, CALIFORNIA

Scenario Timeframe:	Future
Receptor Population:	Resident
Receptor Age:	Adult

Medium	Exposure Medium	Exposure Point	Chemical	Carcinogenic Risk					Non-Carcinogenic Hazard Quotient				
				Ingestion	Inhalation	Dermal	External (Radiation)	Exposure Routes Total	Primary Target Organ(s)	Ingestion	Inhalation	Dermal	Exposure Routes Total
Soil (0-2)	Soil	Site Soil	Arsenic	4.2E-06	–	5.0E-07	–	4.7E-06	–	–	–	–	–
			Chemical Total	4.2E-06	–	5.0E-07	–	4.7E-06		–	–	–	0.0E+00
		Exposure Point Total						4.7E-06					0.0E+00
	Exposure Medium Total							4.7E-06					0.0E+00
	Homegrown Produce	Homegrown Produce	Arsenic	1.5E-05	–	–	–	1.5E-05	–	–	–	–	–
			Chemical Total	1.5E-05	–	–	–	1.5E-05		–	–	–	0.0E+00
		Exposure Point Total						1.5E-05					0.0E+00
	Exposure Medium Total							1.5E-05					0.0E+00
	Air	Outdoor Air (Particulates and VOCs)	–	–	–	–	–	–	–	–	–	–	–
			Chemical Total	–	–	–	–	0.0E+00		–	–	–	0.0E+00
		Exposure Point Total						0.0E+00					0.0E+00
	Exposure Medium Total							0.0E+00					0.0E+00
Medium Total								2.0E-05					0.0E+00
Groundwater	Groundwater	Indoor Air (Vapor Intrusion)	Benzene	–	2.0E-06	–	–	2.0E-06	–	–	–	–	–
			Vinyl Chloride	–	1.3E-04	–	–	1.3E-04	–	–	–	–	–
			Chemical Total	–	1.3E-04	–	–	1.3E-04		–	–	–	0.0E+00
		Exposure Point Total						1.3E-04					0.0E+00
	Exposure Medium Total							1.3E-04					0.0E+00
	Groundwater	Tap Water (oral/dermal)	1,2-Dichloroethene (Total)	–	–	–	–	–	Blood	1.2E+00	–	4.6E-02	1.2E+00
			1,2-Dichloropropane	1.3E-06	–	5.2E-06	–	1.3E-06	–	–	–	–	–
			1,2,3-Trichloropropane	5.6E-06	–	2.2E-07	–	5.9E-06	–	–	–	–	–
			2-Methylnaphthalene	–	–	–	–	–	Lung	2.8E+00	–	6.9E-01	3.5E+00
			4-Methylphenol	–	–	–	–	–	CNS, Respiratory, Whole Body	6.6E+00	–	2.6E-01	6.8E+00
			Arsenic	5.2E-04	–	2.7E-06	–	5.2E-04	Skin	3.4E+00	–	1.8E-02	3.4E+00
			Benzene	1.0E-06	–	1.1E-07	–	1.1E-06	–	–	–	–	–
			Benz(a)anthracene	6.9E-06	–	1.7E-05	–	2.4E-05	–	–	–	–	–
			Benzo(a)pyrene	1.4E-04	–	5.0E-04	–	6.4E-04	–	–	–	–	–
			Benzo(b)fluoranthene	1.4E-05	–	5.0E-05	–	6.4E-05	–	–	–	–	–
			Benzo(k)fluoranthene	5.5E-07	–	6.3E-07	–	1.2E-06	–	–	–	–	–
			Indeno(1,2,3-cd)pyrene	6.9E-06	–	3.6E-05	–	4.3E-05	–	–	–	–	–
			Manganese	–	–	–	–	–	CNS	2.6E+00	–	1.3E-02	2.6E+00

TABLE H-10.1.3.RME
EPA RAGS PART D TABLE 10
RISK SUMMARY
CURRENT ADULT RESIDENT
SITE 09, ALAMEDA POINT, ALAMEDA, CALIFORNIA

Scenario Timeframe:	*Future*
Receptor Population:	Resident
Receptor Age:	Adult

Medium	Exposure Medium	Exposure Point	Chemical	Carcinogenic Risk					Non-Carcinogenic Hazard Quotient				
				Ingestion	Inhalation	Dermal	External (Radiation)	Exposure Routes Total	Primary Target Organ(s)	Ingestion	Inhalation	Dermal	Exposure Routes Total
			Naphthalene	–	–	–	–	–	Body Weight	4.5E+00	–	1.1E+00	5.7E+00
			Pentachlorophenol	2.3E-06	–	4.6E-06	–	6.8E-06	–	–	–	–	–
			Tetrachloroethene	1.5E-06	–	2.5E-07	–	1.7E-06	–	–	–	–	–
			Trichloroethene	4.8E-05	–	3.0E-06	–	5.2E-05	Liver, Kidney, Fetus	1.2E+00	–	7.4E-02	1.3E+00
			Vinyl chloride	4.3E-04	–	1.3E-05	–	4.4E-04	–	–	–	–	–
		Exposure Point Total		1.2E-03	–	6.3E-04	–	1.8E-03		2.2E+01	–	2.2E+00	2.4E+01
		Tap Water (Inhalation)	2-Methylnaphthalene	–	–	–	–	–	Nasal	–	3.6E+00	–	3.6E+00
			Naphthalene	–	–	–	–	–	Nasal	–	1.3E+01	–	1.3E+01
			Trichloroethene	–	5.8E-06	–	–	5.8E-06	–	–	–	–	–
			Vinyl chloride	–	1.1E-06	–	–	1.1E-06	–	–	–	–	–
		Exposure Point Total		–	6.9E-06	–	–	6.9E-06		–	1.6E+01	–	1.6E+01
	Exposure Medium Total							1.8E-03					4.1E+01
Medium Total								1.9E-03					4.1E+01
Receptor Total							Receptor Risk Total	2.0E-03				Receptor HI Total	4.1E+01

Notes:

–	Not Applicable or Not Available
CNS	Central nervous system
HI	Hazard index
RME	Reasonable maximum exposure
VOC	Volatile organic compound

TABLE H-10.1.4.RME
EPA RAGS PART D TABLE 10
RISK SUMMARY
CURRENT CHILD RESIDENT
SITE 09, ALAMEDA POINT, ALAMEDA, CALIFORNIA

Scenario Timeframe:	Future
Receptor Population:	Resident
Receptor Age:	Child

Medium	Exposure Medium	Exposure Point	Chemical	Carcinogenic Risk					Non-Carcinogenic Hazard Quotient				
				Ingestion	Inhalation	Dermal	External (Radiation)	Exposure Routes Total	Primary Target Organ(s)	Ingestion	Inhalation	Dermal	Exposure Routes Total
Soil (0-2)	Soil	Site Soil	Arsenic	9.7E-06	–	8.1E-07	–	1.1E-05	–	–	–	–	–
			Chemical Total	9.7E-06	–	8.1E-07	–	1.1E-05		–	–	–	0.0E+00
		Exposure Point Total						1.1E-05					0.0E+00
	Exposure Medium Total							1.1E-05					0.0E+00
	Homegrown Produce	Homegrown Produce	Arsenic	3.8E-06	–	–	–	3.8E-06	–	–	–	–	–
			Chemical Total	3.8E-06	–	–	–	3.8E-06		–	–	–	0.0E+00
		Exposure Point Total						3.8E-06					0.0E+00
	Exposure Medium Total							3.8E-06					0.0E+00
	Air	Outdoor Air (Particulates and VOCs)	–	–	–	–	–	–	–	–	–	–	–
			Chemical Total	–	–	–	–	0.0E+00		–	–	–	0.0E+00
		Exposure Point Total						0.0E+00					0.0E+00
	Exposure Medium Total							0.0E+00					0.0E+00
Medium Total								1.4E-05					0.0E+00
Groundwater	Groundwater	Indoor Air (Vapor Intrusion)	Benzene	–	1.2E-06	–	–	1.2E-06	–	–	–	–	–
			Vinyl Chloride	–	7.8E-05	–	–	7.8E-05	Liver	–	1.0E+00	–	1.0E+00
			Chemical Total	–	8.0E-05	–	–	8.0E-05		–	1.0E+00	–	1.0E+00
		Exposure Point Total						8.0E-05					1.0E+00
	Exposure Medium Total							8.0E-05					1.0E+00
	Groundwater	Tap Water (oral/dermal)	1,2-Dichloroethene (Total)	–	–	–	–	–	Blood	2.8E+00	–	1.4E-01	2.9E+00
			1,2,3-Trichloropropane	3.3E-06	–	1.6E-07	–	3.4E-06	–	–	–	–	–
			2-Methylnaphthalene	–	–	–	–	–	Lung	6.6E+00	–	2.0E+00	8.6E+00
			4-Methylphenol	–	–	–	–	–	CNS, Respiratory, Whole Body	1.5E+01	–	7.6E-01	1.6E+01
			Antimony	–	–	–	–	–	Longevity, Blood, Cholesterol	1.7E+00	–	1.1E-02	1.7E+00
			Arsenic	3.0E-04	–	2.0E-06	–	3.1E-04	Skin	7.9E+00	–	5.2E-02	7.9E+00
			Benz(a)anthracene	4.0E-06	–	1.2E-05	–	1.6E-05	–	–	–	–	–
			Benzo(a)pyrene	8.0E-05	–	3.7E-04	–	4.5E-04	–	–	–	–	–
			Benzo(b)fluoranthene	8.0E-06	–	3.7E-05	–	4.5E-05	–	–	–	–	–
			Indeno(1,2,3-cd)pyrene	4.0E-06	–	2.6E-05	–	3.0E-05	–	–	–	–	–
			Manganese	–	–	–	–	–	CNS	6.0E+00	–	4.0E-02	6.0E+00
			Naphthalene	–	–	–	–	–	Body Weight	1.1E+01	–	3.3E+00	1.4E+01
			Pentachlorophenol	1.3E-06	–	3.4E-06	–	4.7E-06	–	–	–	–	–
			Tetrachloroethene	8.5E-07	–	1.9E-07	–	1.0E-06	–	–	–	–	–

TABLE H-10.1.4.RME
EPA RAGS PART D TABLE 10
RISK SUMMARY
CURRENT CHILD RESIDENT
SITE 09, ALAMEDA POINT, ALAMEDA, CALIFORNIA

Scenario Timeframe:	Future
Receptor Population:	Resident
Receptor Age:	Child

Medium	Exposure Medium	Exposure Point	Chemical	Carcinogenic Risk					Non-Carcinogenic Hazard Quotient				
				Ingestion	Inhalation	Dermal	External (Radiation)	Exposure Routes Total	Primary Target Organ(s)	Ingestion	Inhalation	Dermal	Exposure Routes Total
			Trichloroethene	2.8E-05	–	2.2E-06	–	3.1E-05	Liver, Kidney, Fetus	2.7E+00	–	2.2E-01	3.0E+00
			Vinyl chloride	2.5E-04	–	9.2E-06	–	2.8E-04	–	–	–	–	–
		Exposure Point Total		6.8E-04	–	4.6E-04	–	1.1E-03		5.4E+01	–	6.6E+00	6.0E+01
		Tap Water (Inhalation)	2-Methylnaphthalene	–	–	–	–	–	Nasal	–	1.4E+01	–	1.4E+01
			Naphthalene	–	–	–	–	–	Nasal	–	5.2E+01	–	5.2E+01
			Trichloroethene	–	5.9E-06	–	–	5.9E-06	–	–	–	–	–
			Vinyl chloride	–	1.1E-06	–	–	1.1E-06	–	–	–	–	–
		Exposure Point Total		–	7.0E-06	–	–	7.0E-06		–	6.6E+01	–	6.6E+01
	Exposure Medium Total							1.2E-03					1.3E+02
Medium Total								1.2E-03					1.3E+02
Receptor Total							Receptor Risk Total	1.2E-03				Receptor HI Total	1.3E+02

Notes:

–	Not Applicable or Not Available
CNS	Central nervous system
HI	Hazard Index
RME	Reasonable maximum exposure
VOC	Volatile organic compound

TABLE H-10.1.5.RME
EPA RAGS PART D TABLE 10
RISK SUMMARY
FUTURE DEVELOPED CONSTRUCTION WORKER
SITE 09, ALAMEDA POINT, ALAMEDA, CALIFORNIA

Scenario Timeframe:	Future-Developed
Receptor Population:	Construction Worker
Receptor Age:	Adult

Medium	Exposure Medium	Exposure Point	Chemical	Carcinogenic Risk					Non-Carcinogenic Hazard Quotient				
				Ingestion	Inhalation	Dermal	External (Radiation)	Exposure Routes Total	Primary Target Organ(s)	Ingestion	Inhalation	Dermal	Exposure Routes Total
Soil (0-8)	Soil	Site Soil	–	–	–	–	–	–	–	–	–	–	–
			Chemical Total	–	–	–	–	0.0E+00		–	–	–	0.0E+00
		Exposure Point Total						0.0E+00					0.0E+00
	Exposure Medium Total							0.0E+00					0.0E+00
	Air	Outdoor Air (Particulates and VOCs)	–	–	–	–	–	–	–	–	–	–	–
			Chemical Total	–	–	–	–	0.0E+00		–	–	–	0.0E+00
		Exposure Point Total						0.0E+00					0.0E+00
	Exposure Medium Total							0.0E+00					0.0E+00
Medium Total								0.0E+00					0.0E+00
Receptor Total							Receptor Risk Total	0.0E+00				Receptor HI Total	0.0E+00

Notes:

–	*Not Applicable or Not Available*
HI	Hazard Index
RME	Reasonable maximum exposure
VOC	Volatile organic compound

TABLE H-10.1.6.RME
EPA RAGS PART D TABLE 10
RISK SUMMARY
FUTURE REDEVELOPED ADULT RESIDENT
SITE 09, ALAMEDA POINT, ALAMEDA, CALIFORNIA

Scenario Timeframe:	Future-Redeveloped
Receptor Population:	Resident
Receptor Age:	Adult

Medium	Exposure Medium	Exposure Point	Chemical	Carcinogenic Risk					Non-Carcinogenic Hazard Quotient				
				Ingestion	Inhalation	Dermal	External (Radiation)	Exposure Routes Total	Primary Target Organ(s)	Ingestion	Inhalation	Dermal	Exposure Routes Total
Soil (0-8)	Soil	Site Soil	Arsenic	3.2E-06	–	3.8E-07	–	3.6E-06	–	–	–	–	–
			Chemical Total	3.2E-06	–	3.8E-07	–	3.6E-06		–	–	–	0.0E+00
		Exposure Point Total						3.6E-06					0.0E+00
	Exposure Medium Total							3.6E-06					0.0E+00
	Homegrown Produce	Homegrown Produce	Arsenic	1.2E-05	–	–	–	1.2E-05	–	–	–	–	–
			Chemical Total	1.2E-05	–	–	–	1.2E-05		–	–	–	0.0E+00
		Exposure Point Total						1.2E-05					0.0E+00
	Exposure Medium Total							1.2E-05					0.0E+00
	Air	Outdoor Air (Particulates and VOCs)	–	–	–	–	–	–	–	–	–	–	–
			Chemical Total	–	–	–	–	0.0E+00		–	–	–	0.0E+00
		Exposure Point Total						0.0E+00					0.0E+00
	Exposure Medium Total							0.0E+00					0.0E+00
Medium Total								1.5E-05					0.0E+00
Groundwater	Groundwater	Indoor Air (Vapor Intrusion)	Benzene	–	2.0E-06	–	–	2.0E-06	–	–	–	–	–
			Vinyl Chloride	–	1.3E-04	–	–	1.3E-04	–	–	–	–	–
			Chemical Total	–	1.3E-04	–	–	1.3E-04		–	–	–	0.0E+00
		Exposure Point Total						1.3E-04					0.0E+00
	Exposure Medium Total							1.3E-04					0.0E+00
	Groundwater	Tap Water (oral/dermal)	1,2-Dichloroethene (Total)	–	–	–	–	–	Blood	1.2E+00	–	4.8E-02	1.2E+00
			1,2-Dichloropropane	1.3E-06	–	5.2E-08	–	1.3E-06	–	–	–	–	–
			1,2,3-Trichloropropane	5.6E-06	–	2.2E-07	–	5.9E-06	–	–	–	–	–
			2-Methylnaphthalene	–	–	–	–	–	Lung	2.8E+00	–	6.9E-01	3.5E+00
			4-Methylphenol	–	–	–	–	–	CNS, Respiratory, Whole Body	6.6E+00	–	2.6E-01	6.8E+00
			Arsenic	5.2E-04	–	2.7E-06	–	5.2E-04	Skin	3.4E+00	–	1.8E-02	3.4E+00
			Benzene	1.0E-06	–	1.1E-07	–	1.1E-06	–	–	–	–	–
			Benz(a)anthracene	6.9E-06	–	1.7E-05	–	2.4E-05	–	–	–	–	–
			Benzo(a)pyrene	1.4E-04	–	5.0E-04	–	6.4E-04	–	–	–	–	–
			Benzo(b)fluoranthene	1.4E-05	–	5.0E-05	–	6.4E-05	–	–	–	–	–
			Benzo(k)fluoranthene	5.5E-07	–	6.3E-07	–	1.2E-06	–	–	–	–	–
			Indeno(1,2,3-cd)pyrene	8.9E-06	–	3.6E-05	–	4.3E-05	–	–	–	–	–
			Manganese	–	–	–	–	–	CNS	2.6E+00	–	1.3E-02	2.6E+00

TABLE H-10.1.6.RME
EPA RAGS PART D TABLE 10
RISK SUMMARY
FUTURE REDEVELOPED ADULT RESIDENT
SITE 09, ALAMEDA POINT, ALAMEDA, CALIFORNIA

Scenario Timeframe:	Future-Redeveloped
Receptor Population:	Resident
Receptor Age:	Adult

Medium	Exposure Medium	Exposure Point	Chemical	Carcinogenic Risk					Non-Carcinogenic Hazard Quotient				
				Ingestion	Inhalation	Dermal	External (Radiation)	Exposure Routes Total	Primary Target Organ(s)	Ingestion	Inhalation	Dermal	Exposure Routes Total
			Naphthalene	–	–	–	–	–	Body Weight	4.5E+00	–	1.1E+00	5.7E+00
			Pentachlorophenol	2.3E-06	–	4.6E-06	–	6.8E-06	–	–	–	–	–
			Tetrachloroethene	1.5E-06	–	2.5E-07	–	1.7E-06	–	–	–	–	–
			Trichloroethene	4.8E-05	–	3.0E-06	–	5.2E-05	Liver, Kidney, Fetus	1.2E+00	–	7.4E-02	1.3E+00
			Vinyl chloride	4.3E-04	–	1.3E-05	–	4.4E-04	–	–	–	–	–
		Exposure Point Total		1.2E-03	–	6.3E-04	–	1.8E-03		2.2E+01	–	2.2E+00	2.4E+01
		Tap Water (Inhalation)	2-Methylnaphthalene	–	–	–	–	–	Nasal	–	3.6E+00	–	3.6E+00
			Naphthalene	–	–	–	–	–	Nasal	–	1.3E+01	–	1.3E+01
			Trichloroethene	–	5.8E-06	–	–	5.8E-06	–	–	–	–	–
			Vinyl chloride	–	1.1E-06	–	–	1.1E-06	–	–	–	–	–
		Exposure Point Total		–	6.9E-06	–	–	6.9E-06		–	1.6E+01	–	1.6E+01
	Exposure Medium Total							1.8E-03					4.1E+01
Medium Total								1.9E-03					4.1E+01
Receptor Total							Receptor Risk Total	2.0E-03				Receptor HI Total	4.1E+01

Notes:

–	Not Applicable or Not Available
CNS	Central nervous system
HI	Hazard Index
RME	Reasonable maximum exposure
VOC	Volatile organic compound

TABLE H-10.1.7.RME
EPA RAGS PART D TABLE 10
RISK SUMMARY
FUTURE REDEVELOPED CHILD RESIDENT
SITE 09, ALAMEDA POINT, ALAMEDA, CALIFORNIA

Scenario Timeframe:	Future-Redeveloped
Receptor Population:	Resident
Receptor Age:	Child

Medium	Exposure Medium	Exposure Point	Chemical	Carcinogenic Risk					Non-Carcinogenic Hazard Quotient				
				Ingestion	Inhalation	Dermal	External (Radiation)	Exposure Routes Total	Primary Target Organ(s)	Ingestion	Inhalation	Dermal	Exposure Routes Total
Soil (0-8)	Soil	Site Soil	Arsenic	7.4E-06	–	6.2E-07	–	8.1E-06	–	–	–	–	–
			Chemical Total	7.4E-06	–	6.2E-07	–	8.1E-06		–	–	–	0.0E+00
		Exposure Point Total						8.1E-06					0.0E+00
	Exposure Medium Total							8.1E-06					0.0E+00
	Homegrown Produce	Homegrown Produce	Arsenic	2.9E-06	–	–	–	2.9E-06	–	–	–	–	–
			Chemical Total	2.9E-06	–	–	–	2.9E-06		–	–	–	0.0E+00
		Exposure Point Total						2.9E-06					0.0E+00
	Exposure Medium Total							2.9E-06					0.0E+00
	Air	Outdoor Air (Particulates and VOCs)	–	–	–	–	–	–	–	–	–	–	–
			Chemical Total	–	–	–	–	0.0E+00		–	–	–	0.0E+00
		Exposure Point Total						0.0E+00					0.0E+00
	Exposure Medium Total							0.0E+00					0.0E+00
Medium Total								1.1E-05					0.0E+00
Groundwater	Groundwater	Indoor Air (Vapor Intrusion)	Benzene	–	1.2E-06	–	–	1.2E-06	–	–	–	–	–
			Vinyl Chloride	–	7.8E-05	–	–	7.8E-05	Liver	–	1.0E+00	–	1.0E+00
			Chemical Total	–	8.0E-05	–	–	8.0E-05		–	1.0E+00	–	1.0E+00
		Exposure Point Total						8.0E-05					1.0E+00
	Exposure Medium Total							8.0E-05					1.0E+00
	Groundwater	Tap Water (oral/dermal)	1,2-Dichloroethene (Total)	–	–	–	–	–	Blood	2.8E+00	–	1.4E-01	2.9E+00
			1,2,3-Trichloropropane	3.3E-06	–	1.6E-07	–	3.4E-06	–	–	–	–	–
			2-Methylnaphthalene	–	–	–	–	–	Lung	6.6E+00	–	2.0E+00	8.6E+00
			4-Methylphenol	–	–	–	–	–	CNS, Respiratory, Whole Body	1.5E+01	–	7.6E-01	1.6E+01
			Antimony	–	–	–	–	–	Longevity, Blood, Cholesterol	1.7E+00	–	1.1E-02	1.7E+00
			Arsenic	3.0E-04	–	2.0E-06	–	3.1E-04	Skin	7.9E+00	–	5.2E-02	7.9E+00
			Benz(a)anthracene	4.0E-06	–	1.2E-05	–	1.6E-05	–	–	–	–	–
			Benzo(a)pyrene	8.0E-05	–	3.7E-04	–	4.5E-04	–	–	–	–	–
			Benzo(b)fluoranthene	8.0E-06	–	3.7E-05	–	4.5E-05	–	–	–	–	–
			Indeno(1,2,3-cd)pyrene	4.0E-06	–	2.6E-05	–	3.0E-05	–	–	–	–	–
			Manganese	–	–	–	–	–	CNS	6.0E+00	–	4.0E-02	6.0E+00
			Naphthalene	–	–	–	–	–	Body Weight	1.1E+01	–	3.3E+00	1.4E+01
			Pentachlorophenol	1.3E-06	–	3.4E-06	–	4.7E-06	–	–	–	–	–
			Tetrachloroethene	8.5E-07	–	1.9E-07	–	1.0E-06	–	–	–	–	–

TABLE H-10.1.7.RME
EPA RAGS PART D TABLE 10
RISK SUMMARY
FUTURE REDEVELOPED CHILD RESIDENT
SITE 09, ALAMEDA POINT, ALAMEDA, CALIFORNIA

Scenario Timeframe:	Future-Redeveloped
Receptor Population:	Resident
Receptor Age:	Child

Medium	Exposure Medium	Exposure Point	Chemical	Carcinogenic Risk					Non-Carcinogenic Hazard Quotient				
				Ingestion	Inhalation	Dermal	External (Radiation)	Exposure Routes Total	Primary Target Organ(s)	Ingestion	Inhalation	Dermal	Exposure Routes Total
			Trichloroethene	2.8E-05	–	2.2E-06	–	3.1E-05	Liver, Kidney, Fetus	2.7E+00	–	2.2E-01	3.0E+00
			Vinyl chloride	2.5E-04	–	9.2E-06	–	2.6E-04	–	–	–	–	–
		Exposure Point Total		6.8E-04	–	4.6E-04	–	1.1E-03		5.4E+01	–	6.6E+00	6.0E+01
		Tap Water (Inhalation)	2-Methylnaphthalene	–	–	–	–	–	Nasal	–	1.4E+01	–	1.4E+01
			Naphthalene	–	–	–	–	–	Nasal	–	5.2E+01	–	5.2E+01
			Trichloroethene	–	5.9E-06	–	–	5.9E-06	–	–	–	–	–
			Vinyl chloride	–	1.1E-06	–	–	1.1E-06	–	–	–	–	–
		Exposure Point Total		–	7.0E-06	–	–	7.0E-06		–	6.6E+01	–	6.6E+01
	Exposure Medium Total							1.2E-03					1.3E+02
Medium Total								1.2E-03					1.3E+02
Receptor Total							Receptor Risk Total	1.2E-03				Receptor HI Total	1.3E+02

Notes:

–	Not Applicable or Not Available
CNS	Central nervous system
HI	Hazard index
RME	*Reasonable maximum exposure*
VOC	Volatile organic compound

HHRA RISK TABLES

Reasonable Maximum Exposure
Site 13
Alameda Point, Alameda, California

TABLE H-10.2.1.RME
EPA RAGS PART D TABLE 10
RISK SUMMARY
CURRENT INDUSTRIAL WORKER
SITE 13, ALAMEDA POINT, ALAMEDA, CALIFORNIA

Scenario Timeframe:	*Future*
Receptor Population:	Industrial Worker
Receptor Age:	Adult

Medium	Exposure Medium	Exposure Point	Chemical	Carcinogenic Risk					Non-Carcinogenic Hazard Quotient				
				Ingestion	Inhalation	Dermal	External (Radiation)	Exposure Routes Total	Primary Target Organ(s)	Ingestion	Inhalation	Dermal	Exposure Routes Total
Soil (0-2)	Soil	Site Soil	Arsenic	5.0E-06	–	1.0E-06	–	6.0E-06	–	–	–	–	–
			Chemical Total	5.0E-06	–	1.0E-06	–	6.0E-06		–	–	–	0.0E+00
		Exposure Point Total						6.0E-06					0.0E+00
	Exposure Medium Total							6.0E-06					0.0E+00
	Air	Outdoor Air (Particulates and VOCs)	–	–	–	–	–	–	–	–	–	–	–
			Chemical Total	–	–	–	–	0.0E+00		–	–	–	0.0E+00
		Exposure Point Total						0.0E+00					0.0E+00
	Exposure Medium Total							0.0E+00					0.0E+00
Medium Total								6.0E-06					0.0E+00
Receptor Total							Receptor Risk Total	6.0E-06				Receptor HI Total	0.0E+00

Notes:

–	Not Applicable or Not Available
HI	Hazard Index
RME	Reasonable maximum exposure
VOC	Volatile organic compound

TABLE H-10.2.2.RME
EPA RAGS PART D TABLE 10
RISK SUMMARY
CURRENT CONSTRUCTION WORKER
SITE 13, ALAMEDA POINT, ALAMEDA, CALIFORNIA

Scenario Timeframe:	*Future*
Receptor Population:	Construction Worker
Receptor Age:	Adult

Medium	Exposure Medium	Exposure Point	Chemical	Carcinogenic Risk					Non-Carcinogenic Hazard Quotient				
				Ingestion	Inhalation	Dermal	External (Radiation)	Exposure Routes Total	Primary Target Organ(s)	Ingestion	Inhalation	Dermal	Exposure Routes Total
Soil (0-2)	Soil	Site Soil	–	–	–	–	–	–	–	–	–	–	–
			Chemical Total	–	–	–	–	0.0E+00		–	–	–	0.0E+00
		Exposure Point Total						0.0E+00					0.0E+00
	Exposure Medium Total							0.0E+00					0.0E+00
	Air	Outdoor Air (Particulates and VOCs)	–	–	–	–	–	–	–	–	–	–	–
			Chemical Total	–	–	–	–	0.0E+00		–	–	–	0.0E+00
		Exposure Point Total						0.0E+00					0.0E+00
	Exposure Medium Total							0.0E+00					0.0E+00
Medium Total								0.0E+00					0.0E+00
Receptor Total							Receptor Risk Total	0.0E+00				Receptor HI Total	0.0E+00

Notes:

–	Not Applicable or Not Available
HI	Hazard Index
RME	Reasonable maximum exposure
VOC	Volatile organic compound

TABLE H-10.2.3.RME
EPA RAGS PART D TABLE 10
RISK SUMMARY
CURRENT ADULT RESIDENT
SITE 13, ALAMEDA POINT, ALAMEDA, CALIFORNIA

Scenario Timeframe:	Future
Receptor Population:	Resident
Receptor Age:	Adult

Medium	Exposure Medium	Exposure Point	Chemical	Carcinogenic Risk					Non-Carcinogenic Hazard Quotient				
				Ingestion	Inhalation	Dermal	External (Radiation)	Exposure Routes Total	Primary Target Organ(s)	Ingestion	Inhalation	Dermal	Exposure Routes Total
Soil (0-2)	Soil	Site Soil	Arsenic	6.8E-06	--	8.1E-07	--	7.6E-06	--	--	--	--	--
			Chemical Total	6.8E-06	--	8.1E-07	--	7.6E-06		--	--	--	0.0E+00
		Exposure Point Total						7.6E-06					0.0E+00
	Exposure Medium Total							7.6E-06					0.0E+00
	Homegrown Produce	Homegrown Produce	Arsenic	2.5E-05	--	--	--	2.5E-05	--	--	--	--	--
			Benzo(a)pyrene	1.2E-06	--	--	--	1.2E-06	--	--	--	--	--
			Chemical Total	2.6E-05	--	--	--	2.6E-05		--	--	--	0.0E+00
		Exposure Point Total						2.6E-05					0.0E+00
	Exposure Medium Total							2.6E-05					0.0E+00
	Air	Outdoor Air (Particulates and VOCs)	--	--	--	--	--	--	--	--	--	--	--
			Chemical Total	--	--	--	--	0.0E+00		--	--	--	0.0E+00
		Exposure Point Total						0.0E+00					0.0E+00
	Exposure Medium Total							0.0E+00					0.0E+00
Medium Total								3.4E-05					0.0E+00
Groundwater	Groundwater	Tap Water (oral/dermal)	Arsenic	4.0E-04	--	2.1E-06	--	4.1E-04	Skin	2.6E+00	--	1.4E-02	2.6E+00
			Benzene	2.4E-06	--	2.6E-07	--	2.6E-06	--	--	--	--	--
			Manganese	--	--	--	--	--	CNS	8.9E+00	--	4.6E-02	9.0E+00
			Pentachlorophenol	7.9E-06	--	1.6E-05	--	2.4E-05	--	--	--	--	--
			Thallium	--	--	--	--	--	Liver, Blood	1.1E+00	--	5.7E-03	1.1E+00
			Trichloroethene	3.4E-06	--	2.1E-07	--	3.6E-06	--	--	--	--	--
		Exposure Point Total		4.2E-04	--	1.9E-05	--	4.4E-04		1.3E+01	--	6.6E-02	1.3E+01
		Tap Water (inhalation)	--	--	--	--	--	--	--	--	--	--	--
		Exposure Point Total		--	--	--	--	0.0E+00		--	--	--	0.0E+00
	Exposure Medium Total							4.4E-04					1.3E+01
Medium Total								4.4E-04					1.3E+01
Receptor Total							Receptor Risk Total	4.7E-04				Receptor HI Total	1.3E+01

Notes:

--	Not Applicable or Not Available
CNS	Central nervous system
HI	Hazard Index
RME	Reasonable maximum exposure
VOC	Volatile organic compound

TABLE H-10.2.4.RME
EPA RAGS PART D TABLE 10
RISK SUMMARY
CURRENT CHILD RESIDENT
SITE 13, ALAMEDA POINT, ALAMEDA, CALIFORNIA

Scenario Timeframe:	Future
Receptor Population:	Resident
Receptor Age:	Child

Medium	Exposure Medium	Exposure Point	Chemical	Carcinogenic Risk					Non-Carcinogenic Hazard Quotient				
				Ingestion	Inhalation	Dermal	External (Radiation)	Exposure Routes Total	Primary Target Organ(s)	Ingestion	Inhalation	Dermal	Exposure Routes Total
Soil (0-2)	Soil	Site Soil	Arsenic	1.6E-05	--	1.3E-06	--	1.7E-05	--	--	--	--	--
			Benzo(a)pyrene	1.1E-06	--	3.8E-07	--	1.4E-06	--	--	--	--	--
			Chemical Total	1.7E-05	--	1.7E-06	--	1.9E-05		--	--	--	0.0E+00
		Exposure Point Total						1.9E-05					0.0E+00
	Exposure Medium Total							1.9E-05					0.0E+00
	Homegrown Produce	Homegrown Produce	Arsenic	6.3E-06	--	--	--	6.3E-06	--	--	--	--	--
			Chemical Total	6.3E-06	--	--	--	6.3E-06		--	--	--	0.0E+00
		Exposure Point Total						6.3E-06					0.0E+00
	Exposure Medium Total							6.3E-06					0.0E+00
	Air	Outdoor Air (Particulates and VOCs)	--	--	--	--	--	--	--	--	--	--	--
			Chemical Total	--	--	--	--	0.0E+00		--	--	--	0.0E+00
		Exposure Point Total						0.0E+00					0.0E+00
	Exposure Medium Total							0.0E+00					0.0E+00
Medium Total								2.5E-05					0.0E+00
Groundwater	*Groundwater*	Tap Water (oral/dermal)	Arsenic	2.4E-04	--	1.6E-06	--	2.4E-04	Skin	6.1E+00	--	4.0E-02	6.1E+00
			Benzene	1.4E-06	--	1.9E-07	--	1.6E-06	--	--	--	--	--
			Manganese	--	--	--	--	--	CNS	2.1E+01	--	1.4E-01	2.1E+01
			Pentachlorophenol	4.6E-06	--	1.2E-05	--	1.6E-05	--	--	--	--	--
			Thallium	--	--	--	--	--	Liver, Blood	2.5E+00	--	1.7E-02	2.6E+00
			Trichloroethene	2.0E-06	--	1.6E-07	--	2.1E-06	--	--	--	--	--
		Exposure Point Total		2.4E-04	--	1.4E-05	--	2.6E-04		2.9E+01	--	1.9E-01	3.0E+01
		Tap Water (Inhalation)	--	--	--	--	--	--	--	--	--	--	--
		Exposure Point Total		--	--	--	--	0.0E+00		--	--	--	0.0E+00
	Exposure Medium Total							2.6E-04					3.0E+01
Medium Total								2.6E-04					3.0E+01
Receptor Total							Receptor Risk Total	2.8E-04				Receptor HI Total	3.0E+01

Notes:

--	Not Applicable or Not Available
CNS	Central nervous system
HI	Hazard Index
RME	Reasonable maximum exposure
VOC	*Volatile organic compound*

TABLE H-10.2.5.RME
EPA RAGS PART D TABLE 10
RISK SUMMARY
FUTURE DEVELOPED CONSTRUCTION WORKER
SITE 13, ALAMEDA POINT, ALAMEDA, CALIFORNIA

Scenario Timeframe:	Future-Developed
Receptor Population:	Construction Worker
Receptor Age:	Adult

Medium	Exposure Medium	Exposure Point	Chemical	Carcinogenic Risk					Non-Carcinogenic Hazard Quotient				
				Ingestion	Inhalation	Dermal	External (Radiation)	Exposure Routes Total	Primary Target Organ(s)	Ingestion	Inhalation	Dermal	Exposure Routes Total
Soil (0-8)	Soil	Site Soil	–	–	–	–	–	–	–	–	–	–	–
			Chemical Total	–	–	–	–	0.0E+00		–	–	–	0.0E+00
		Exposure Point Total						0.0E+00					0.0E+00
	Exposure Medium Total							0.0E+00					0.0E+00
	Air	Outdoor Air (Particulates and VOCs)	–	–	–	–	–	–	–	–	–	–	–
			Chemical Total	–	–	–	–	0.0E+00		–	–	–	0.0E+00
		Exposure Point Total						0.0E+00					0.0E+00
	Exposure Medium Total							0.0E+00					0.0E+00
Medium Total								0.0E+00					0.0E+00
Receptor Total							Receptor Risk Total	0.0E+00				Receptor HI Total	0.0E+00

Notes:

–	Not Applicable or Not Available
HI	Hazard Index
RME	Reasonable maximum exposure
VOC	Volatile organic compound

TABLE H-10.2.6.RME
EPA RAGS PART D TABLE 10
RISK SUMMARY
FUTURE REDEVELOPED ADULT RESIDENT
SITE 13, ALAMEDA POINT, ALAMEDA, CALIFORNIA

Scenario Timeframe:	Future-Redeveloped
Receptor Population:	Resident
Receptor Age:	Adult

Medium	Exposure Medium	Exposure Point	Chemical	Carcinogenic Risk					Non-Carcinogenic Hazard Quotient				
				Ingestion	Inhalation	Dermal	External (Radiation)	Exposure Routes Total	Primary Target Organ(s)	Ingestion	Inhalation	Dermal	Exposure Routes Total
Soil (0-8)	Soil	Site Soil	Arsenic	4.3E-06	--	5.2E-07	--	4.9E-06	--	--	--	--	--
			Chemical Total	4.3E-06	--	5.2E-07	--	4.9E-06		--	--	--	0.0E+00
		Exposure Point Total						4.9E-06					0.0E+00
	Exposure Medium Total							4.9E-06					0.0E+00
	Homegrown Produce	Homegrown Produce	Arsenic	1.6E-05	--	--	--	1.6E-05	--	--	--	--	--
			Benzo(a)pyrene	1.2E-06	--	--	--	1.2E-06	--	--	--	--	--
			Chemical Total	1.7E-05	--	--	--	1.7E-05		--	--	--	0.0E+00
		Exposure Point Total						1.7E-05					0.0E+00
	Exposure Medium Total							1.7E-05					0.0E+00
	Air	Outdoor Air (Particulates and VOCs)	--	--	--	--	--	--	--	--	--	--	--
			Chemical Total	--	--	--	--	0.0E+00		--	--	--	0.0E+00
		Exposure Point Total						0.0E+00					0.0E+00
	Exposure Medium Total							0.0E+00					0.0E+00
Medium Total								2.2E-05					0.0E+00
Groundwater	Groundwater	Tap Water (oral/dermal)	Arsenic	4.0E-04	--	2.1E-06	--	4.1E-04	Skin	2.6E+00	--	1.4E-02	2.6E+00
			Benzene	2.4E-06	--	2.6E-07	--	2.6E-06	--	--	--	--	--
			Manganese	--	--	--	--	--	CNS	8.9E+00	--	4.6E-02	9.0E+00
			Pentachlorophenol	7.9E-06	--	1.6E-05	--	2.4E-05	--	--	--	--	--
			Thallium	--	--	--	--	--	Liver, Blood	1.1E+00	--	5.7E-03	1.1E+00
			Trichloroethene	3.4E-06	--	2.1E-07	--	3.6E-06	--	--	--	--	--
		Exposure Point Total		4.2E-04	--	1.9E-05	--	4.4E-04		1.3E+01	--	6.6E-02	1.3E+01
		Tap Water (Inhalation)	--	--	--	--	--	--	--	--	--	--	--
		Exposure Point Total		--	--	--	--	0.0E+00		--	--	--	0.0E+00
	Exposure Medium Total							4.4E-04					1.3E+01
Medium Total								4.4E-04					1.3E+01
Receptor Total							Receptor Risk Total	4.6E-04				Receptor HI Total	1.3E+01

Notes:

--	Not Applicable or Not Available
CNS	Central nervous system
HI	Hazard Index
RME	Reasonable maximum exposure
VOC	Volatile organic compound

TABLE H-10.2.7.RME
EPA RAGS PART D TABLE 10
RISK SUMMARY
FUTURE REDEVELOPED CHILD RESIDENT
SITE 13, ALAMEDA POINT, ALAMEDA, CALIFORNIA

Scenario Timeframe:	Future-Redeveloped
Receptor Population:	Resident
Receptor Age:	Child

Medium	Exposure Medium	Exposure Point	Chemical	Carcinogenic Risk					Non-Carcinogenic Hazard Quotient				
				Ingestion	Inhalation	Dermal	External (Radiation)	Exposure Routes Total	Primary Target Organ(s)	Ingestion	Inhalation	Dermal	Exposure Routes Total
Soil (0-8)	Soil	Site Soil	Arsenic	1.0E-05	--	8.5E-07	--	1.1E-05	--	--	--	--	--
			Benzo(a)pyrene	1.1E-06	--	4.0E-07	--	1.5E-06	--	--	--	--	--
			Chemical Total	1.1E-05	--	1.3E-06	--	1.2E-05		--	--	--	0.0E+00
		Exposure Point Total						1.2E-05					0.0E+00
	Exposure Medium Total							1.2E-05					0.0E+00
	Homegrown Produce	Homegrown Produce	Arsenic	4.0E-06	--	--	--	4.0E-06	--	--	--	--	--
			Chemical Total	4.0E-06	--	--	--	4.0E-06		--	--	--	0.0E+00
		Exposure Point Total						4.0E-06					0.0E+00
	Exposure Medium Total							4.0E-06					0.0E+00
	Air	Outdoor Air (Particulates and VOCs)	--	--	--	--	--	--	--	--	--	--	--
			Chemical Total	--	--	--	--	0.0E+00		--	--	--	0.0E+00
		Exposure Point Total						0.0E+00					0.0E+00
	Exposure Medium Total							0.0E+00					0.0E+00
Medium Total								1.7E-05					0.0E+00
Groundwater	Groundwater	Tap Water (oral/dermal)	Arsenic	2.4E-04	--	1.6E-06	--	2.4E-04	Skin	6.1E+00	--	4.0E-02	6.1E+00
			Benzene	1.4E-06	--	1.9E-07	--	1.6E-06	--	--	--	--	--
			Manganese	--	--	--	--	--	CNS	2.1E+01	--	1.4E-01	2.1E+01
			Pentachlorophenol	4.6E-06	--	1.2E-05	--	1.6E-05	--	--	--	--	--
			Thallium	--	--	--	--	--	Liver, Blood	2.5E+00	--	1.7E-02	2.6E+00
			Trichloroethene	2.0E-06	--	1.6E-07	--	2.1E-06	--	--	--	--	--
		Exposure Point Total		2.4E-04	--	1.4E-05	--	2.6E-04		2.9E+01	--	1.9E-01	3.0E+01
		Tap Water (Inhalation)	--	--	--	--	--	--	--	--	--	--	--
		Exposure Point Total		--	--	--	--	0.0E+00		--	--	--	0.0E+00
	Exposure Medium Total							2.6E-04					3.0E+01
Medium Total								2.6E-04					3.0E+01
Receptor Total							Receptor Risk Total	2.7E-04				Receptor HI Total	3.0E+01

Notes:

--	Not Applicable or Not Available
CNS	Central nervous system
HI	Hazard index
RME	Reasonable maximum exposure
VOC	Volatile organic compound

HHRA RISK TABLES

Reasonable Maximum Exposure
Site 19
Alameda Point, Alameda, California

TABLE H-10.3.1.RME
EPA RAGS PART D TABLE 10
RISK SUMMARY
CURRENT INDUSTRIAL WORKER
SITE 19, ALAMEDA POINT, ALAMEDA, CALIFORNIA

Scenario Timeframe:	Current/Future
Receptor Population:	Industrial Worker
Receptor Age:	Adult

Medium	Exposure Medium	Exposure Point	Chemical	Carcinogenic Risk					Non-Carcinogenic Hazard Quotient				
				Ingestion	Inhalation	Dermal	External (Radiation)	Exposure Routes Total	Primary Target Organ(s)	Ingestion	Inhalation	Dermal	Exposure Routes Total
Soil (0-2)	Soil	Site Soil	Arsenic	4.7E-06	–	9.2E-07	–	5.6E-06	–	–	–	–	–
			Chemical Total	4.7E-06	–	9.2E-07	–	5.6E-06		–	–	–	0.0E+00
		Exposure Point Total						5.6E-06					0.0E+00
	Exposure Medium Total							5.6E-06					0.0E+00
	Air	Outdoor Air (Particulates and VOCs)	–	–	–	–	–	–	–	–	–	–	–
			Chemical Total	–	–	–	–	0.0E+00		–	–	–	0.0E+00
		Exposure Point Total						0.0E+00					0.0E+00
	Exposure Medium Total							0.0E+00					0.0E+00
Medium Total								5.6E-06					0.0E+00
Receptor Total							Receptor Risk Total	5.6E-06				Receptor HI Total	0.0E+00

Notes:

HI	Hazard index
RME	Reasonable maximum exposure
VOC	Volatile organic compound
–	Not Applicable or Not Available

TABLE H-10.3.2.RME
EPA RAGS PART D TABLE 10
RISK SUMMARY
CURRENT CONSTRUCTION WORKER
SITE 19, ALAMEDA POINT, ALAMEDA, CALIFORNIA

Scenario Timeframe:	Current/Future
Receptor Population:	Construction Worker
Receptor Age:	Adult

Medium	Exposure Medium	Exposure Point	Chemical	Carcinogenic Risk					Non-Carcinogenic Hazard Quotient				
				Ingestion	Inhalation	Dermal	External (Radiation)	Exposure Routes Total	Primary Target Organ(s)	Ingestion	Inhalation	Dermal	Exposure Routes Total
Soil (0-2)	Soil	Site Soil	–	–	–	–	–	–	–	–	–	–	–
			Chemical Total	–	–	–	–	0.0E+00		–	–	–	0.0E+00
		Exposure Point Total						0.0E+00					0.0E+00
	Exposure Medium Total							0.0E+00					0.0E+00
	Air	Outdoor Air (Particulates and VOCs)	–	–	–	–	–	–	–	–	–	–	–
			Chemical Total	–	–	–	–	0.0E+00		–	–	–	0.0E+00
		Exposure Point Total						0.0E+00					0.0E+00
	Exposure Medium Total							0.0E+00					0.0E+00
Medium Total								0.0E+00					0.0E+00
Receptor Total							Receptor Risk Total	0.0E+00				Receptor HI Total	0.0E+00

Notes:

HI	Hazard index
RME	Reasonable maximum exposure
VOC	Volatile organic compound
–	Not Applicable or Not Available

TABLE H-10.3.3.RME
EPA RAGS PART D TABLE 10
RISK SUMMARY
CURRENT ADULT RESIDENT
SITE 19, ALAMEDA POINT, ALAMEDA, CALIFORNIA

Scenario Timeframe:	Current/Future
Receptor Population:	Resident
Receptor Age:	Adult

Medium	Exposure Medium	Exposure Point	Chemical	Carcinogenic Risk					Non-Carcinogenic Hazard Quotient				
				Ingestion	Inhalation	Dermal	External (Radiation)	Exposure Routes Total	Primary Target Organ(s)	Ingestion	Inhalation	Dermal	Exposure Routes Total
Soil (0-2)	Soil	Site Soil	Arsenic	6.3E-06	–	7.5E-07	–	7.0E-06	–	–	–	–	–
			Chemical Total	6.3E-06	–	7.5E-07	–	7.0E-06		–	–	–	0.0E+00
		Exposure Point Total						7.0E-06					0.0E+00
	Exposure Medium Total							7.0E-06					0.0E+00
	Homegrown Produce	Homegrown Produce	Arsenic	2.3E-05	–	–	–	2.3E-05	–	–	–	–	–
			Chemical Total	2.3E-05	–	–	–	2.3E-05		–	–	–	0.0E+00
		Exposure Point Total						2.3E-05					0.0E+00
	Exposure Medium Total							2.3E-05					0.0E+00
	Air	Outdoor Air (Particulates and VOCs)	–	–	–	–	–	–	–	–	–	–	–
			Chemical Total	–	–	–	–	0.0E+00		–	–	–	0.0E+00
		Exposure Point Total						0.0E+00					0.0E+00
	Exposure Medium Total							0.0E+00					0.0E+00
Medium Total								3.0E-05					0.0E+00
Groundwater	Groundwater	Tap Water (oral/dermal)	Arsenic	1.4E-04	–	7.1E-07	–	1.4E-04	–	–	–	–	–
			Manganese	–	–	–	–	–	CNS	5.9E+00	–	3.1E-02	5.9E+00
			Tetrachloroethene	4.6E-06	–	7.9E-07	–	5.4E-06	–	–	–	–	–
			Trichloroethene	8.8E-06	–	5.5E-07	–	9.3E-06	–	–	–	–	–
		Exposure Point Total		1.5E-04	–	2.0E-06	–	1.5E-04		5.9E+00	–	3.1E-02	5.9E+00
		Tap Water (Inhalation)	Trichloroethene	–	1.1E-06	–	–	1.1E-06	–	–	–	–	–
		Exposure Point Total		–	1.1E-06	–	–	1.1E-06		–	–	–	0.0E+00
	Exposure Medium Total							1.5E-04					5.9E+00
Medium Total								1.5E-04					5.9E+00
Receptor Total							Receptor Risk Total	1.8E-04				Receptor HI Total	5.9E+00

Notes:

CNS	Central nervous system
GI	Gastrointestinal
HI	Hazard index
RME	Reasonable maximum exposure
VOC	Volatile organic compound
–	Not Applicable or Not Available

TABLE H-10.3.4.RME
EPA RAGS PART D TABLE 10
RISK SUMMARY
CURRENT CHILD RESIDENT
SITE 19, ALAMEDA POINT, ALAMEDA, CALIFORNIA

Scenario Timeframe:	Current/Future
Receptor Population:	Resident
Receptor Age:	Child

Medium	Exposure Medium	Exposure Point	Chemical	Carcinogenic Risk					Non-Carcinogenic Hazard Quotient				
				Ingestion	Inhalation	Dermal	External (Radiation)	Exposure Routes Total	Primary Target Organ(s)	Ingestion	Inhalation	Dermal	Exposure Routes Total
Soil (0-2)	Soil	Site Soil	Arsenic	1.5E-05	–	1.2E-06	–	1.6E-05	–	–	–	–	–
			Chemical Total	1.5E-05	–	1.2E-06	–	1.6E-05		–	–	–	0.0E+00
		Exposure Point Total						1.6E-05					0.0E+00
	Exposure Medium Total							1.6E-05					0.0E+00
	Homegrown Produce	Homegrown Produce	Arsenic	5.8E-06	–	–	–	5.8E-06	–	–	–	–	–
			Chemical Total	5.8E-06	–	–	–	5.8E-06		–	–	–	0.0E+00
		Exposure Point Total						5.8E-06					0.0E+00
	Exposure Medium Total							5.8E-06					0.0E+00
	Air	Outdoor Air (Particulates and VOCs)	–	–	–	–	–	–	–	–	–	–	–
			Chemical Total	–	–	–	–	0.0E+00		–	–	–	0.0E+00
		Exposure Point Total						0.0E+00					0.0E+00
	Exposure Medium Total							0.0E+00					0.0E+00
Medium Total								2.2E-05					0.0E+00
Groundwater	Groundwater	Tap Water (oral/dermal)	Arsenic	7.9E-05	–	5.2E-07	–	8.0E-05	Skin	2.1E+00	–	1.4E-02	2.1E+00
			Manganese	–	–	–	–	–	CNS	1.4E+01	–	9.1E-02	1.4E+01
			Tetrachloroethene	2.7E-06	–	5.8E-07	–	3.2E-06	–	–	–	–	–
			Trichloroethene	5.1E-06	–	4.1E-07	–	5.5E-06	–	–	–	–	–
		Exposure Point Total		8.7E-05	–	1.5E-06	–	8.9E-05		1.6E+01	–	1.0E-01	1.6E+01
		Tap Water (inhalation)	Trichloroethene	–	1.1E-06	–	–	1.1E-06	–	–	–	–	–
		Exposure Point Total		–	1.1E-06	–	–	1.1E-06		–	–	–	0.0E+00
	Exposure Medium Total							9.0E-05					1.6E+01
Medium Total								9.0E-05					1.6E+01
Receptor Total							Receptor Risk Total	1.1E-04				Receptor HI Total	1.6E+01

Notes:

CNS	Central nervous system
HI	Hazard index
RME	*Reasonable maximum exposure*
VOC	Volatile organic compound
–	Not Applicable or Not Available

TABLE H-10.3.5.RME
EPA RAGS PART D TABLE 10
RISK SUMMARY
FUTURE DEVELOPED CONSTRUCTION WORKER
SITE 19, ALAMEDA POINT, ALAMEDA, CALIFORNIA

Scenario Timeframe:	*Future-Developed*
Receptor Population:	Construction Worker
Receptor Age:	Adult

Medium	Exposure Medium	Exposure Point	Chemical	Carcinogenic Risk					Non-Carcinogenic Hazard Quotient				
				Ingestion	Inhalation	Dermal	External (Radiation)	Exposure Routes Total	Primary Target Organ(s)	Ingestion	Inhalation	Dermal	Exposure Routes Total
Soil (0-8)	Soil	Site Soil	–	–	–	–	–	–	–	–	–	–	–
			Chemical Total	–	–	–	–	0.0E+00		–	–	–	0.0E+00
		Exposure Point Total						0.0E+00					0.0E+00
	Exposure Medium Total							0.0E+00					0.0E+00
	Air	Outdoor Air (Particulates and VOCs)	–	–	–	–	–	–	–	–	–	–	–
			Chemical Total	–	–	–	–	0.0E+00		–	–	–	0.0E+00
		Exposure Point Total						0.0E+00					0.0E+00
	Exposure Medium Total							0.0E+00					0.0E+00
Medium Total								0.0E+00					0.0E+00
Receptor Total							Receptor Risk Total	0.0E+00				Receptor HI Total	0.0E+00

Notes:

HI	Hazard Index
RME	Reasonable maximum exposure
VOC	Volatile organic compound
–	Not Applicable or Not Available

TABLE H-10.3.6.RME
EPA RAGS PART D TABLE 10
RISK SUMMARY
FUTURE REDEVELOPED ADULT RESIDENT
SITE 19, ALAMEDA POINT, ALAMEDA, CALIFORNIA

Scenario Timeframe:	Future-Redeveloped
Receptor Population:	Resident
Receptor Age:	Adult

Medium	Exposure Medium	Exposure Point	Chemical	Carcinogenic Risk					Non-Carcinogenic Hazard Quotient				
				Ingestion	Inhalation	Dermal	External (Radiation)	Exposure Routes Total	Primary Target Organ(s)	Ingestion	Inhalation	Dermal	Exposure Routes Total
Soil (0-8)	Soil	Site Soil	Arsenic	5.5E-06	–	6.5E-07	–	6.1E-06	–	–	–	–	–
			Chemical Total	5.5E-06	–	6.5E-07	–	6.1E-06		–	–	–	0.0E+00
		Exposure Point Total						6.1E-06					0.0E+00
	Exposure Medium Total							6.1E-06					0.0E+00
	Homegrown Produce	Homegrown Produce	Arsenic	2.0E-05	–	–	–	2.0E-05	–	–	–	–	–
			Chemical Total	2.0E-05	–	–	–	2.0E-05		–	–	–	0.0E+00
		Exposure Point Total						2.0E-05					0.0E+00
	Exposure Medium Total							2.0E-05					0.0E+00
	Air	Outdoor Air (Particulates and VOCs)	–	–	–	–	–	–	–	–	–	–	–
			Chemical Total	–	–	–	–	0.0E+00		–	–	–	0.0E+00
		Exposure Point Total						0.0E+00					0.0E+00
	Exposure Medium Total							0.0E+00					0.0E+00
Medium Total								2.6E-05					0.0E+00
Groundwater	Groundwater	Tap Water (oral/dermal)	Arsenic	1.4E-04	–	7.1E-07	–	1.4E-04	–	–	–	–	–
			Manganese	–	–	–	–	–	CNS	5.9E+00	–	3.1E-02	5.9E+00
			Tetrachloroethene	4.6E-06	–	7.9E-07	–	5.4E-06	–	–	–	–	–
			Trichloroethene	8.8E-06	–	5.5E-07	–	9.3E-06	–	–	–	–	–
		Exposure Point Total		1.5E-04	–	2.0E-06	–	1.5E-04		5.9E+00	–	3.1E-02	5.9E+00
		Tap Water (inhalation)	Trichloroethene	–	1.1E-06	–	–	1.1E-06	–	–	–	–	–
		Exposure Point Total		–	1.1E-06	–	–	1.1E-06		–	–	–	0.0E+00
	Exposure Medium Total							1.5E-04					5.9E+00
Medium Total								1.5E-04					5.9E+00
Receptor Total							Receptor Risk Total	1.8E-04				Receptor HI Total	5.9E+00

Notes:

CNS	Central nervous system
HI	Hazard index
RME	Reasonable maximum exposure
VOC	Volatile organic compound
–	Not Applicable or Not Available

TABLE H-10.3.7.RME
EPA RAGS PART D TABLE 10
RISK SUMMARY
FUTURE REDEVELOPED CHILD RESIDENT
SITE 19, ALAMEDA POINT, ALAMEDA, CALIFORNIA

Scenario Timeframe:	Future-Redeveloped
Receptor Population:	Resident
Receptor Age:	Child

Medium	Exposure Medium	Exposure Point	Chemical	Carcinogenic Risk					Non-Carcinogenic Hazard Quotient				
				Ingestion	Inhalation	Dermal	External (Radiation)	Exposure Routes Total	Primary Target Organ(s)	Ingestion	Inhalation	Dermal	Exposure Routes Total
Soil (0-8)	Soil	Site Soil	Arsenic	1.3E-05	–	1.1E-06	–	1.4E-05	–	–	–	–	–
			Chemical Total	1.3E-05	–	1.1E-06	–	1.4E-05		–	–	–	0.0E+00
		Exposure Point Total						1.4E-05					0.0E+00
	Exposure Medium Total							1.4E-05					0.0E+00
	Homegrown Produce	Homegrown Produce	Arsenic	5.1E-06	–	–	–	5.1E-06	–	–	–	–	–
			Chemical Total	5.1E-06	–	–	–	5.1E-06		–	–	–	0.0E+00
		Exposure Point Total						5.1E-06					0.0E+00
	Exposure Medium Total							5.1E-06					0.0E+00
	Air	Outdoor Air	–	–	–	–	–	–	–	–	–	–	–
			Chemical Total	–	–	–	–	0.0E+00		–	–	–	0.0E+00
		Exposure Point Total						0.0E+00					0.0E+00
	Exposure Medium Total							0.0E+00					0.0E+00
Medium Total								1.9E-05					0.0E+00
Groundwater	Groundwater	Tap Water (oral/dermal)	Arsenic	7.9E-05	–	5.2E-07	–	8.0E-05	Skin	2.1E+00	–	1.4E-02	2.1E+00
			Manganese	–	–	–	–	–	CNS	1.4E+01	–	9.1E-02	1.4E+01
			Tetrachloroethene	2.7E-06	–	5.8E-07	–	3.2E-06	–	–	–	–	–
			Trichloroethene	5.1E-06	–	4.1E-07	–	5.5E-06	–	–	–	–	–
		Exposure Point Total		8.7E-05	–	1.5E-06	–	8.9E-05		1.6E+01	–	1.0E-01	1.6E+01
		Tap Water (inhalation)	Trichloroethene	–	1.1E-06	–	–	1.1E-06	–	–	–	–	–
		Exposure Point Total		–	1.1E-06	–	–	1.1E-06		–	–	–	0.0E+00
	Exposure Medium Total							9.0E-05					1.6E+01
Medium Total								9.0E-05					1.6E+01
Receptor Total							Receptor Risk Total	1.1E-04				Receptor HI Total	1.6E+01

Notes:

CNS	Central nervous system
HI	Hazard Index
RME	*Reasonable maximum exposure*
VOC	Volatile organic compound
–	Not Applicable or Not Available

HHRA RISK TABLES

Reasonable Maximum Exposure
Site 22
Alameda Point, Alameda, California

TABLE H-10.4.1.RME
EPA RAGS PART D TABLE 10
RISK SUMMARY
CURRENT INDUSTRIAL WORKER
SITE 22, ALAMEDA POINT, ALAMEDA, CALIFORNIA

Scenario Timeframe:	Current
Receptor Population:	Industrial Worker
Receptor Age:	Adult

Medium	Exposure Medium	Exposure Point	Chemical	Carcinogenic Risk					Non-Carcinogenic Hazard Quotient				
				Ingestion	Inhalation	Dermal	External (Radiation)	Exposure Routes Total	Primary Target Organ(s)	Ingestion	Inhalation	Dermal	Exposure Routes Total
Soil (0-2)	Soil	Site Soil	Arsenic	5.5E-06	–	1.1E-06	–	6.5E-06	–	–	–	–	–
			Chemical Total	5.5E-06	–	1.1E-06	–	6.5E-06		–	–	–	0.0E+00
		Exposure Point Total						6.5E-06					0.0E+00
	Exposure Medium Total							6.5E-06					0.0E+00
	Air	Outdoor Air (Particulates and VOCs)	–	–	–	–	–	–	–	–	–	–	–
			Chemical Total	–	–	–	–	0.0E+00		–	–	–	0.0E+00
		Exposure Point Total						0.0E+00					0.0E+00
	Exposure Medium Total							0.0E+00					0.0E+00
Medium Total								6.5E-06					0.0E+00
Groundwater	Groundwater	Indoor Air (Vapor Intrusion)	Benzene	–	2.6E-06	–	–	2.6E-06	–	–	–	–	–
			Chemical Total	–	2.6E-06	–	–	2.6E-06		–	–	–	0.0E+00
		Exposure Point Total						2.6E-06					0.0E+00
	Exposure Medium Total							2.6E-06					0.0E+00
Medium Total								2.6E-06					0.0E+00
Receptor Total							Receptor Risk Total	9.2E-06				Receptor HI Total	0.0E+00

Notes:

HI	Hazard Index
RME	Reasonable maximum exposure
VOC	Volatile organic compound
–	Not Applicable or Not Available

TABLE H-10.4.2.RME
EPA RAGS PART D TABLE 10
RISK SUMMARY
CURRENT CONSTRUCTION WORKER
SITE 22, ALAMEDA POINT, ALAMEDA, CALIFORNIA

Scenario Timeframe:	*Current*
Receptor Population:	Construction Worker
Receptor Age:	Adult

Medium	Exposure Medium	Exposure Point	Chemical	Carcinogenic Risk					Non-Carcinogenic Hazard Quotient				
				Ingestion	Inhalation	Dermal	External (Radiation)	Exposure Routes Total	Primary Target Organ(s)	Ingestion	Inhalation	Dermal	Exposure Routes Total
Soil (0-2)	Soil	Site Soil	–	–	–	–	–	–	–	–	–	–	–
			Chemical Total	–	–	–	–	0.0E+00		–	–	–	0.0E+00
		Exposure Point Total						0.0E+00					0.0E+00
	Exposure Medium Total							0.0E+00					0.0E+00
	Air	Outdoor Air (Particulates and VOCs)	–	–	–	–	–	–	–	–	–	–	–
			Chemical Total	–	–	–	–	0.0E+00		–	–	–	0.0E+00
		Exposure Point Total						0.0E+00					0.0E+00
	Exposure Medium Total							0.0E+00					0.0E+00
Medium Total								0.0E+00					0.0E+00
Receptor Total							Receptor Risk Total	0.0E+00				Receptor HI Total	0.0E+00

Notes:

HI	Hazard Index
RME	Reasonable maximum exposure
VOC	Volatile organic compound
–	Not Applicable or Not Available

TABLE H-10.4.3.RME
EPA RAGS PART D TABLE 10
RISK SUMMARY
CURRENT ADULT RESIDENT
SITE 22, ALAMEDA POINT, ALAMEDA, CALIFORNIA

Scenario Timeframe:	*Future*
Receptor Population:	Resident
Receptor Age:	Adult

Medium	Exposure Medium	Exposure Point	Chemical	Carcinogenic Risk					Non-Carcinogenic Hazard Quotient				
				Ingestion	Inhalation	Dermal	External (Radiation)	Exposure Routes Total	Primary Target Organ(s)	Ingestion	Inhalation	Dermal	Exposure Routes Total
Soil (0-2)	Soil	Site Soil	Arsenic	7.3E-06	–	8.8E-07	–	8.2E-06	–	–	–	–	–
			Chemical Total	7.3E-06	–	8.8E-07	–	8.2E-06		–	–	–	0.0E+00
		Exposure Point Total						8.2E-06					0.0E+00
	Exposure Medium Total							8.2E-06					0.0E+00
	Homegrown Produce	Homegrown Produce	Arsenic	2.7E-05	–	–	–	2.7E-05	–	–	–	–	–
			Chemical Total	2.7E-05	–	–	–	2.7E-05		–	–	–	0.0E+00
		Exposure Point Total						2.7E-05					0.0E+00
	Exposure Medium Total							2.7E-05					0.0E+00
	Air	Outdoor Air (Particulates and VOCs)	–	–	–	–	–	–	–	–	–	–	–
			Chemical Total	–	–	–	–	0.0E+00		–	–	–	0.0E+00
		Exposure Point Total						0.0E+00					0.0E+00
	Exposure Medium Total							0.0E+00					0.0E+00
Medium Total								3.5E-05					0.0E+00
Groundwater	Groundwater	Indoor Air (Vapor Intrusion)	Benzene	–	3.5E-05	–	–	3.5E-05	–	–	–	–	–
			Ethylbenzene	–	4.0E-06	–	–	4.0E-06	–	–	–	–	–
			Chemical Total	–	3.9E-05	–	–	3.9E-05		–	–	–	0.0E+00
		Exposure Point Total						3.9E-05					0.0E+00
	Exposure Medium Total							3.9E-05					0.0E+00
	Groundwater	Tap Water (oral/dermal)	1,2-Dichloroethane	5.9E-06	–	1.3E-07	–	6.1E-06	–	–	–	–	–
			Arsenic	5.8E-04	–	3.0E-06	–	5.8E-04	Skin	3.7E+00	–	2.0E-02	3.8E+00
			Benzene	7.7E-04	–	8.4E-05	–	8.5E-04	Blood	1.0E+01	–	1.1E+00	1.1E+01
			Ethylbenzene	1.6E-05	–	4.1E-06	–	2.0E-05	–	–	–	–	–
			Manganese	–	–	–	–	–	CNS	1.3E+01	–	6.6E-02	1.3E+01
			Tetrachloroethene	1.3E-06	–	2.2E-07	–	1.5E-06	–	–	–	–	–
			Thallium	–	–	–	–	–	Liver, Blood	1.6E+00	–	8.1E-03	1.6E+00
			Trichloroethene	4.5E-05	–	2.8E-06	–	4.8E-05	Liver, Kidney, Fetus	1.1E+00	–	6.9E-02	1.2E+00
		Exposure Point Total		1.4E-03	–	9.5E-05	–	1.5E-03		2.9E+01	–	1.3E+00	3.0E+01
		Tap Water (inhalation)	1,2-Dichloroethane	–	7.1E-07	–	–	7.1E-07	–	–	–	–	–
			Benzene	–	4.5E-05	–	–	4.5E-05	–	–	–	–	–
			Chloroform	–	1.1E-06	–	–	1.1E-06	–	–	–	–	–
			Ethylbenzene	–	1.9E-06	–	–	1.9E-06	–	–	–	–	–

TABLE H-10.4.3.RME
EPA RAGS PART D TABLE 10
RISK SUMMARY
CURRENT ADULT RESIDENT
SITE 22, ALAMEDA POINT, ALAMEDA, CALIFORNIA

Scenario Timeframe:	Future
Receptor Population:	Resident
Receptor Age:	Adult

Medium	Exposure Medium	Exposure Point	Chemical	Carcinogenic Risk					Non-Carcinogenic Hazard Quotient				
				Ingestion	Inhalation	Dermal	External (Radiation)	Exposure Routes Total	Primary Target Organ(s)	Ingestion	Inhalation	Dermal	Exposure Routes Total
			Trichloroethene	–	5.4E-06	–	–	5.4E-06	–	–	–	–	–
		Exposure Point Total		–	5.5E-05	–	–	5.5E-05		–	–	–	0.0E+00
	Exposure Medium Total							1.6E-03					3.0E+01
Medium Total								1.6E-03					3.0E+01
Receptor Total							Receptor Risk Total	1.6E-03				Receptor HI Total	3.0E+01

Notes:

HI	Hazard Index
RME	Reasonable maximum exposure
VOC	Volatile organic compound
–	Not Applicable or Not Available

TABLE H-10.4.4.RME
EPA RAGS PART D TABLE 10
RISK SUMMARY
CURRENT CHILD RESIDENT
SITE 22, ALAMEDA POINT, ALAMEDA, CALIFORNIA

Scenario Timeframe:	Future
Receptor Population:	Resident
Receptor Age:	Child

Medium	Exposure Medium	Exposure Point	Chemical	Carcinogenic Risk					Non-Carcinogenic Hazard Quotient				
				Ingestion	Inhalation	Dermal	External (Radiation)	Exposure Routes Total	Primary Target Organ(s)	Ingestion	Inhalation	Dermal	Exposure Routes Total
Soil (0-2)	Soil	Site Soil	Arsenic	1.7E-05	–	1.4E-06	–	1.9E-05	–	–	–	–	–
			Chemical Total	1.7E-05	–	1.4E-06	–	1.9E-05		–	–	–	0.0E+00
		Exposure Point Total						1.9E-05					0.0E+00
	Exposure Medium Total							1.9E-05					0.0E+00
	Homegrown Produce	Homegrown Produce	Arsenic	6.8E-06	–	–	–	6.8E-06	–	–	–	–	–
			Chemical Total	6.8E-06	–	–	–	6.8E-06		–	–	–	0.0E+00
		Exposure Point Total						6.8E-06					0.0E+00
	Exposure Medium Total							6.8E-06					0.0E+00
	Air	Outdoor Air (Particulates and VOCs)	–	–	–	–	–	–	–	–	–	–	–
			Chemical Total	–	–	–	–	0.0E+00		–	–	–	0.0E+00
		Exposure Point Total						0.0E+00					0.0E+00
	Exposure Medium Total							0.0E+00					0.0E+00
Medium Total								2.5E-05					0.0E+00
Groundwater	Groundwater	Indoor Air (Vapor Intrusion)	Benzene	–	2.1E-05	–	–	2.1E-05	Blood	–	1.0E+00	–	1.0E+00
			Ethylbenzene	–	2.3E-06	–	–	2.3E-06	–	–	–	–	–
			Chemical Total	–	2.3E-05	–	–	2.3E-05		–	1.0E+00	–	1.0E+00
		Exposure Point Total						2.3E-05					1.0E+00
	Exposure Medium Total							2.3E-05					1.0E+00
	Groundwater	Tap Water (oral/dermal)	1,2-Dichloroethane	3.5E-06	–	9.6E-06	–	3.6E-06	–	–	–	–	–
			Arsenic	3.4E-04	–	2.2E-06	–	3.4E-04	Skin	8.7E+00	–	5.8E-02	8.8E+00
			Benzene	4.5E-04	–	6.2E-05	–	5.1E-04	Blood	2.4E+01	–	3.3E+00	2.7E+01
			Ethylbenzene	9.5E-06	–	3.1E-06	–	1.3E-05	–	–	–	–	–
			Manganese	–	–	–	–	–	CNS	2.9E+01	–	1.9E-01	2.9E+01
			Thallium	–	–	–	–	–	Liver, Blood	3.6E+00	–	2.4E-02	3.6E+00
			Trichloroethene	2.8E-05	–	2.1E-06	–	2.8E-05	Liver, Kidney, Fetus	2.6E+00	–	2.0E-01	2.8E+00
		Exposure Point Total		8.3E-04	–	7.0E-05	–	8.9E-04		6.8E+01	–	3.8E+00	7.2E+01
		Tap Water (Inhalation)	Benzene	–	4.6E-05	–	–	4.6E-05	Blood	–	2.3E+00	–	2.3E+00
			Chloroform	–	1.1E-06	–	–	1.1E-06	–	–	–	–	–
			Ethylbenzene	–	2.0E-06	–	–	2.0E-06	–	–	–	–	–
			Naphthalene	–	–	–	–	–	Blood	–	3.3E+00	–	3.3E+00

TABLE H-10.4.4.RME
EPA RAGS PART D TABLE 10
RISK SUMMARY
CURRENT CHILD RESIDENT
SITE 22, ALAMEDA POINT, ALAMEDA, CALIFORNIA

Scenario Timeframe:	Future
Receptor Population:	Resident
Receptor Age:	Child

Medium	Exposure Medium	Exposure Point	Chemical	Carcinogenic Risk					Non-Carcinogenic Hazard Quotient				
				Ingestion	Inhalation	Dermal	External (Radiation)	Exposure Routes Total	Primary Target Organ(s)	Ingestion	Inhalation	Dermal	Exposure Routes Total
			Trichloroethene	–	5.5E-06	–	–	5.5E-06	–	–	–	–	–
		Exposure Point Total		–	5.5E-05	–	–	5.5E-05		–	5.7E+00	–	5.7E+00
	Exposure Medium Total							9.5E-04					7.7E+01
Medium Total								9.7E-04					7.9E+01
Receptor Total							Receptor Risk Total	1.0E-03				Receptor HI Total	7.9E+01

Notes:

CNS	Central nervous system
HI	Hazard index
RME	Reasonable maximum exposure
VOC	Volatile organic compound
–	Not Applicable or Not Available

TABLE H-10.4.5.RME
EPA RAGS PART D TABLE 10
RISK SUMMARY
FUTURE DEVELOPED CONSTRUCTION WORKER
SITE 22, ALAMEDA POINT, ALAMEDA, CALIFORNIA

Scenario Timeframe:	Future-Developed
Receptor Population:	Construction Worker
Receptor Age:	Adult

Medium	Exposure Medium	Exposure Point	Chemical	Carcinogenic Risk					Non-Carcinogenic Hazard Quotient				
				Ingestion	Inhalation	Dermal	External (Radiation)	Exposure Routes Total	Primary Target Organ(s)	Ingestion	Inhalation	Dermal	Exposure Routes Total
Soil (0-8)	Soil	Site Soil	–	–	–	–	–	–	–	–	–	–	–
			Chemical Total	–	–	–	–	0.0E+00		–	–	–	0.0E+00
		Exposure Point Total						0.0E+00					0.0E+00
	Exposure Medium Total							0.0E+00					0.0E+00
	Air	Outdoor Air (Particulates and VOCs)	–	–	–	–	–	–	–	–	–	–	–
			Chemical Total	–	–	–	–	0.0E+00		–	–	–	0.0E+00
		Exposure Point Total						0.0E+00					0.0E+00
	Exposure Medium Total							0.0E+00					0.0E+00
Medium Total								0.0E+00					0.0E+00
Receptor Total							Receptor Risk Total	0.0E+00				Receptor HI Total	0.0E+00

Notes:

HI	Hazard index
RME	Reasonable maximum exposure
VOC	Volatile organic compound
–	Not Applicable or Not Available

TABLE H-10.4.6.RME
EPA RAGS PART D TABLE 10
RISK SUMMARY
FUTURE REDEVELOPED ADULT RESIDENT
SITE 22, ALAMEDA POINT, ALAMEDA, CALIFORNIA

Scenario Timeframe:	Future-Redeveloped
Receptor Population:	Resident
Receptor Age:	Adult

Medium	Exposure Medium	Exposure Point	Chemical	Carcinogenic Risk					Non-Carcinogenic Hazard Quotient				
				Ingestion	Inhalation	Dermal	External (Radiation)	Exposure Routes Total	Primary Target Organ(s)	Ingestion	Inhalation	Dermal	Exposure Routes Total
Soil (0-8)	Soil	Site Soil	Arsenic	5.2E-06	–	6.2E-07	–	5.8E-06	–	–	–	–	–
			Chemical Total	5.2E-06	–	6.2E-07	–	5.8E-06		–	–	–	0.0E+00
		Exposure Point Total						5.8E-06					0.0E+00
	Exposure Medium Total							5.8E-06					0.0E+00
	Homegrown Produce	Homegrown Produce	Arsenic	1.9E-05	–	–	–	1.9E-05	–	–	–	–	–
			Chemical Total	1.9E-05	–	–	–	1.9E-05		–	–	–	0.0E+00
		Exposure Point Total						1.9E-05					0.0E+00
	Exposure Medium Total							1.9E-05					0.0E+00
	Air	Outdoor Air (Particulates and VOCs)	Benzene	–	3.1E-06	–	–	3.1E-06	–	–	–	–	–
			Ethylbenzene	–	7.5E-06	–	–	7.5E-06	–	–	–	–	–
			Chemical Total	–	1.1E-05	–	–	1.1E-05		–	–	–	0.0E+00
		Exposure Point Total						1.1E-05					0.0E+00
	Exposure Medium Total							1.1E-05					0.0E+00
Medium Total								3.6E-05					0.0E+00
Groundwater	Groundwater	Indoor Air (Vapor Intrusion)	Benzene	–	3.5E-05	–	–	3.5E-05	–	–	–	–	–
			Ethylbenzene	–	4.0E-06	–	–	4.0E-06	–	–	–	–	–
			m-Xylene	–	–	–	–	–	–	–	–	–	–
			Chemical Total	–	3.9E-05	–	–	3.9E-05		–	–	–	0.0E+00
		Exposure Point Total						3.9E-05					0.0E+00
	Exposure Medium Total							3.9E-05					0.0E+00
	Groundwater	Tap Water (oral/dermal)	1,2-Dichloroethane	5.9E-06	–	1.3E-07	–	6.1E-06	–	–	–	–	–
			Arsenic	5.8E-04	–	3.0E-06	–	5.8E-04	Skin	3.7E+00	–	2.0E-02	3.8E+00
			Benzene	7.7E-04	–	8.4E-05	–	8.5E-04	Blood	1.0E+01	–	1.1E+00	1.1E+01
			Ethylbenzene	1.6E-05	–	4.1E-06	–	2.0E-05	–	–	–	–	–
			Manganese	–	–	–	–	–	CNS	1.3E+01	–	6.6E-02	1.3E+01
			Tetrachloroethene	1.3E-06	–	2.2E-07	–	1.5E-06	–	–	–	–	–
			Thallium	–	–	–	–	–	Liver, Blood	1.6E+00	–	8.1E-03	1.6E+00
			Trichloroethene	4.5E-05	–	2.8E-06	–	4.8E-05	Liver, Kidney, Fetus	1.1E+00	–	6.9E-02	1.2E+00
		Exposure Point Total		1.4E-03	–	9.5E-05	–	1.5E-03		2.9E+01	–	1.3E+00	3.0E+01
		Tap Water (Inhalation)	Benzene	–	4.5E-05	–	–	4.5E-05	–	–	–	–	–
			Chloroform	–	1.1E-06	–	–	1.1E-06	–	–	–	–	–

TABLE H-10.4.6.RME
EPA RAGS PART D TABLE 10
RISK SUMMARY
FUTURE REDEVELOPED ADULT RESIDENT
SITE 22, ALAMEDA POINT, ALAMEDA, CALIFORNIA

Scenario Timeframe:	Future-Redeveloped
Receptor Population:	Resident
Receptor Age:	Adult

Medium	Exposure Medium	Exposure Point	Chemical	Carcinogenic Risk					Non-Carcinogenic Hazard Quotient				
				Ingestion	Inhalation	Dermal	External (Radiation)	Exposure Routes Total	Primary Target Organ(s)	Ingestion	Inhalation	Dermal	Exposure Routes Total
			Ethylbenzene	–	1.9E-06	–	–	1.9E-06	–	–	–	–	–
			Trichloroethene	–	5.4E-06	–	–	5.4E-06	–	–	–	–	–
		Exposure Point Total		–	5.4E-05	–	–	5.4E-05		–	–	–	0.0E+00
	Exposure Medium Total							1.6E-03					3.0E+01
Medium Total								1.6E-03					3.0E+01
Receptor Total							Receptor Risk Total	1.6E-03				Receptor HI Total	3.0E+01

Notes:

CNS	Central nervous system
HI	Hazard index
RME	Reasonable maximum exposure
VOC	Volatile organic compound
–	*Not Applicable or Not Available*

TABLE H-10.4.7.RME
EPA RAGS PART D TABLE 10
RISK SUMMARY
FUTURE REDEVELOPED CHILD RESIDENT
SITE 22, ALAMEDA POINT, ALAMEDA, CALIFORNIA

Scenario Timeframe:	Future-Redeveloped
Receptor Population:	Resident
Receptor Age:	Child

Medium	Exposure Medium	Exposure Point	Chemical	Carcinogenic Risk					Non-Carcinogenic Hazard Quotient				
				Ingestion	Inhalation	Dermal	External (Radiation)	Exposure Routes Total	Primary Target Organ(s)	Ingestion	Inhalation	Dermal	Exposure Routes Total
Soil (0-8)	Soil	Site Soil	Arsenic	1.2E-05	–	1.0E-06	–	1.3E-05	–	–	–	–	–
			Chemical Total	1.2E-05	–	1.0E-06	–	1.3E-05		–	–	–	0.0E+00
		Exposure Point Total						1.3E-05					0.0E+00
	Exposure Medium Total							1.3E-05					0.0E+00
	Homegrown Produce	Homegrown Produce	Arsenic	4.8E-06	–	–	–	4.8E-06	–	–	–	–	–
			Chemical Total	4.8E-06	–	–	–	4.8E-06		–	–	–	0.0E+00
		Exposure Point Total						4.8E-06					0.0E+00
	Exposure Medium Total							4.8E-06					0.0E+00
	Air	Outdoor Air (Particulates and VOCs)	Benzene	–	1.8E-06	–	–	1.8E-06	–	–	–	–	–
			Ethylbenzene	–	4.4E-06	–	–	4.4E-06	–	–	–	–	–
			Xylene (Total)	–	–	–	–	–	CNS	–	1.8E+00	–	1.8E+00
			Chemical Total	–	6.2E-06	–	–	6.2E-06		–	1.8E+00	–	1.8E+00
		Exposure Point Total						6.2E-06					1.8E+00
	Exposure Medium Total							6.2E-06					1.8E+00
Medium Total								2.4E-05					1.8E+00
Groundwater	Groundwater	Indoor Air (Vapor Intrusion)	Benzene	–	2.1E-05	–	–	2.1E-05	Blood	–	1.0E+00	–	1.0E+00
			Ethylbenzene	–	2.3E-06	–	–	2.3E-06	–	–	–	–	–
			Chemical Total	–	2.3E-05	–	–	2.3E-05		–	1.0E+00	–	1.0E+00
		Exposure Point Total						2.3E-05					1.0E+00
	Exposure Medium Total							2.3E-05					1.0E+00
	Groundwater	Tap Water (oral/dermal)	1,2-Dichloroethane	3.5E-06	–	9.6E-06	–	3.6E-06	–	–	–	–	–
			Arsenic	3.4E-04	–	2.2E-06	–	3.4E-04	Skin	8.7E+00	–	5.8E-02	8.8E+00
			Benzene	4.5E-04	–	6.2E-05	–	5.1E-04	Blood	2.4E+01	–	3.3E+00	2.7E+01
			Ethylbenzene	9.5E-06	–	3.1E-06	–	1.3E-05	–	–	–	–	–
			Manganese	–	–	–	–	–	CNS	2.9E+01	–	1.9E-01	2.9E+01
			Thallium	–	–	–	–	–	Liver, Blood	3.6E+00	–	2.4E-02	3.6E+00
			Trichloroethene	2.6E-05	–	2.1E-06	–	2.8E-05	Liver, Kidney, Fetus	2.6E+00	–	2.0E-01	2.8E+00
		Exposure Point Total		8.3E-04	–	7.0E-05	–	8.9E-04		6.8E+01	–	3.8E+00	7.2E+01
		Tap Water (Inhalation)	Benzene	–	4.6E-05	–	–	4.6E-05	Blood	–	2.3E+00	–	2.3E+00
			Chloroform	–	1.1E-06	–	–	1.1E-06	–	–	–	–	–

TABLE H-10.4.7.RME
EPA RAGS PART D TABLE 10
RISK SUMMARY
FUTURE REDEVELOPED CHILD RESIDENT
SITE 22, ALAMEDA POINT, ALAMEDA, CALIFORNIA

Scenario Timeframe:	Future-Redeveloped
Receptor Population:	Resident
Receptor Age:	Child

Medium	Exposure Medium	Exposure Point	Chemical	Carcinogenic Risk					Non-Carcinogenic Hazard Quotient				
				Ingestion	Inhalation	Dermal	External (Radiation)	Exposure Routes Total	Primary Target Organ(s)	Ingestion	Inhalation	Dermal	Exposure Routes Total
			Ethylbenzene	–	2.0E-06	–	–	2.0E-06	–	–	–	–	–
			Naphthalene	–	–	–	–	–	Nasal	–	3.3E+00	–	3.3E+00
			Trichloroethene	–	5.5E-06	–	–	5.5E-06	–	–	–	–	–
		Exposure Point Total		–	5.5E-05	–	–	5.5E-05		–	5.7E+00	–	5.7E+00
	Exposure Medium Total							9.5E-04					7.7E+01
Medium Total								9.7E-04					7.9E+01
Receptor Total							Receptor Risk Total	1.0E-03				Receptor HI Total	8.0E+01

Notes:

CNS	Central nervous system
HI	Hazard Index
RME	Reasonable maximum exposure
VOC	*Volatile organic compound*
–	Not Applicable or Not Available

HHRA RISK TABLES

Reasonable Maximum Exposure
Site 23
Alameda Point, Alameda, California

TABLE H-10.5.1.RME
EPA RAGS PART D TABLE 10
RISK SUMMARY
CURRENT INDUSTRIAL WORKER
SITE 23, ALAMEDA POINT, ALAMEDA, CALIFORNIA

Scenario Timeframe:	Future
Receptor Population:	Industrial Worker
Receptor Age:	Adult

Medium	Exposure Medium	Exposure Point	Chemical	Carcinogenic Risk					Non-Carcinogenic Hazard Quotient				
				Ingestion	Inhalation	Dermal	External (Radiation)	Exposure Routes Total	Primary Target Organ(s)	Ingestion	Inhalation	Dermal	Exposure Routes Total
Soil (0-2)	Soil	Site Soil	Arsenic	2.2E-06	–	4.4E-07	–	2.6E-06	–	–	–	–	–
			Chemical Total	2.2E-06	–	4.4E-07	–	2.6E-06		–	–	–	0.0E+00
		Exposure Point Total						2.6E-06					0.0E+00
	Exposure Medium Total							2.6E-06					0.0E+00
	Air	Outdoor Air (Particulates and VOCs)	–	–	–	–	–	–	–	–	–	–	–
			Chemical Total	–	–	–	–	0.0E+00		–	–	–	0.0E+00
		Exposure Point Total						0.0E+00					0.0E+00
	Exposure Medium Total							0.0E+00					0.0E+00
Medium Total								2.6E-06					0.0E+00
Receptor Total							Receptor Risk Total	2.6E-06				Receptor HI Total	0.0E+00

Notes:

HI	Hazard Index
RME	Reasonable maximum exposure
VOC	Volatile organic compound
–	Not Applicable or Not Available

TABLE H-10.5.2.RME
EPA RAGS PART D TABLE 10
RISK SUMMARY
CURRENT CONSTRUCTION WORKER
SITE 23, ALAMEDA POINT, ALAMEDA, CALIFORNIA

Scenario Timeframe:	Future
Receptor Population:	Construction Worker
Receptor Age:	Adult

Medium	Exposure Medium	Exposure Point	Chemical	Carcinogenic Risk					Non-Carcinogenic Hazard Quotient				
				Ingestion	Inhalation	Dermal	External (Radiation)	Exposure Routes Total	Primary Target Organ(s)	Ingestion	Inhalation	Dermal	Exposure Routes Total
Soil (0-2)	Soil	Site Soil	--	--	--	--	--	--	--	--	--	--	--
			Chemical Total	--	--	--	--	0.0E+00		--	--	--	0.0E+00
		Exposure Point Total						0.0E+00					0.0E+00
	Exposure Medium Total							0.0E+00					0.0E+00
	Air	Outdoor Air (Particulates and VOCs)	--	--	--	--	--	--	--	--	--	--	--
			Chemical Total	--	--	--	--	0.0E+00		--	--	--	0.0E+00
		Exposure Point Total						0.0E+00					0.0E+00
	Exposure Medium Total							0.0E+00					0.0E+00
Medium Total								0.0E+00					0.0E+00
Receptor Total							Receptor Risk Total	0.0E+00				Receptor HI Total	0.0E+00

Notes:

HI	Hazard Index
RME	Reasonable maximum exposure
VOC	Volatile organic compound
--	Not Applicable or Not Available

TABLE H-10.5.3.RME
EPA RAGS PART D TABLE 10
RISK SUMMARY
CURRENT ADULT RESIDENT
SITE 23, ALAMEDA POINT, ALAMEDA, CALIFORNIA

Scenario Timeframe:	Future
Receptor Population:	Resident
Receptor Age:	Adult

Medium	Exposure Medium	Exposure Point	Chemical	Carcinogenic Risk					Non-Carcinogenic Hazard Quotient				
				Ingestion	Inhalation	Dermal	External (Radiation)	Exposure Routes Total	Primary Target Organ(s)	Ingestion	Inhalation	Dermal	Exposure Routes Total
Soil (0-2)	Soil	Site Soil	Arsenic	3.0E-06	–	3.5E-07	–	3.3E-06	–	–	–	–	–
			Chemical Total	3.0E-06	–	3.5E-07	–	3.3E-06		–	–	–	0.0E+00
		Exposure Point Total						3.3E-06					0.0E+00
	Exposure Medium Total							3.3E-06					0.0E+00
	Homegrown Produce	Homegrown Produce	Arsenic	1.1E-05	–	–	–	1.1E-05	–	–	–	–	–
			Benzo(a)pyrene	1.3E-06	–	–	–	1.3E-06	–	–	–	–	–
			Chemical Total	1.2E-05	–	–	–	1.2E-05		–	–	–	0.0E+00
		Exposure Point Total						1.2E-05					0.0E+00
	Exposure Medium Total							1.2E-05					0.0E+00
	Air	Outdoor Air (Particulates and VOCs)	–	–	–	–	–	–	–	–	–	–	–
			Chemical Total	–	–	–	–	0.0E+00		–	–	–	0.0E+00
		Exposure Point Total						0.0E+00					0.0E+00
	Exposure Medium Total							0.0E+00					0.0E+00
Medium Total								1.6E-05					0.0E+00
Groundwater	Groundwater	Tap Water (oral/dermal)	Arsenic	1.6E-04	–	8.5E-07	–	1.6E-04	Skin	1.1E+00	–	5.5E-03	1.1E+00
			Benzo(a)pyrene	4.1E-05	–	1.5E-04	–	1.9E-04	–	–	–	–	–
			Benzo(b)fluoranthene	5.5E-06	–	2.0E-05	–	2.6E-05	–	–	–	–	–
			Thallium	–	–	–	–	–	Liver, Blood	1.2E+00	–	6.1E-03	1.2E+00
		Exposure Point Total		2.1E-04	–	1.7E-04	–	3.8E-04		2.2E+00	–	1.2E-02	2.2E+00
		Tap Water (inhalation)	–	–	–	–	–	–	–	–	–	–	–
		Exposure Point Total		–	–	–	–	0.0E+00		–	–	–	0.0E+00
	Exposure Medium Total							3.8E-04					2.2E+00
Medium Total								3.8E-04					2.2E+00
Receptor Total							Receptor Risk Total	4.0E-04				Receptor HI Total	2.2E+00

Notes:

HI	Hazard index
RME	*Reasonable maximum exposure*
VOC	Volatile organic compound
–	Not Applicable or Not Available

TABLE H-10.5.4.RME
EPA RAGS PART D TABLE 10
RISK SUMMARY
CURRENT CHILD RESIDENT
SITE 23, ALAMEDA POINT, ALAMEDA, CALIFORNIA

Scenario Timeframe:	Future
Receptor Population:	Resident
Receptor Age:	Child

Medium	Exposure Medium	Exposure Point	Chemical	Carcinogenic Risk					Non-Carcinogenic Hazard Quotient				
				Ingestion	Inhalation	Dermal	External (Radiation)	Exposure Routes Total	Primary Target Organ(s)	Ingestion	Inhalation	Dermal	Exposure Routes Total
Soil (0-2)	Soil	Site Soil	Arsenic	6.9E-06	--	5.8E-07	--	7.5E-06	--	--	--	--	--
			Benzo(a)pyrene	1.2E-06	--	4.2E-07	--	1.6E-06	--	--	--	--	--
			Chemical Total	8.1E-06	--	1.0E-06	--	9.1E-06		--	--	--	0.0E+00
		Exposure Point Total						9.1E-06					0.0E+00
	Exposure Medium Total							9.1E-06					0.0E+00
	Homegrown Produce	Homegrown Produce	Arsenic	2.7E-06	--	--	--	2.7E-06	--	--	--	--	--
			Chemical Total	2.7E-06	--	--	--	2.7E-06		--	--	--	0.0E+00
		Exposure Point Total						2.7E-06					0.0E+00
	Exposure Medium Total							2.7E-06					0.0E+00
	Air	Outdoor Air (Particulates and VOCs)	--	--	--	--	--	--	--	--	--	--	--
			Chemical Total	--	--	--	--	0.0E+00		--	--	--	0.0E+00
		Exposure Point Total						0.0E+00					0.0E+00
	Exposure Medium Total							0.0E+00					0.0E+00
Medium Total								1.2E-05					0.0E+00
Groundwater	Groundwater	Tap Water (oral/dermal)	Arsenic	9.5E-05	--	6.2E-07	--	9.5E-05	Skin	2.5E+00	--	1.6E-02	2.5E+00
			Benzo(a)pyrene	2.4E-05	--	1.1E-04	--	1.3E-04	--	--	--	--	--
			Benzo(b)fluoranthene	3.2E-06	--	1.5E-05	--	1.8E-05	--	--	--	--	--
			sec-Butylbenzene	--	--	--	--	--	--	6.2E-01	--	7.2E-01	1.3E+00
			Thallium	--	--	--	--	--	Liver, Blood	2.7E+00	--	1.8E-02	2.7E+00
		Exposure Point Total		1.2E-04	--	1.3E-04	--	2.5E-04		5.8E+00	--	7.6E-01	6.6E+00
		Tap Water (inhalation)	1,2,4-Trimethylbenzene	--	--	--	--	--	CNS	--	2.6E+00	--	2.6E+00
			Naphthalene	--	--	--	--	--	Nasal	--	2.8E+00	--	2.8E+00
		Exposure Point Total		--	--	--	--	0.0E+00		--	5.5E+00	--	5.5E+00
	Exposure Medium Total							2.5E-04					1.2E+01
Medium Total								2.5E-04					1.2E+01
Receptor Total							Receptor Risk Total	2.6E-04				Receptor HI Total	1.2E+01

Notes:

HI	Hazard Index
RME	Reasonable maximum exposure
VOC	Volatile organic compound
--	Not Applicable or Not Available

TABLE H-10.5.5.RME
EPA RAGS PART D TABLE 10
RISK SUMMARY
FUTURE DEVELOPED CONSTRUCTION WORKER
SITE 23, ALAMEDA POINT, ALAMEDA, CALIFORNIA

Scenario Timeframe:	Future-Developed
Receptor Population:	Construction Worker
Receptor Age:	Adult

Medium	Exposure Medium	Exposure Point	Chemical	Carcinogenic Risk					Non-Carcinogenic Hazard Quotient				
				Ingestion	Inhalation	Dermal	External (Radiation)	Exposure Routes Total	Primary Target Organ(s)	Ingestion	Inhalation	Dermal	Exposure Routes Total
Soil (0-8)	Soil	Site Soil	–	–	–	–	–	–	–	–	–	–	–
			Chemical Total	–	–	–	–	0.0E+00		–	–	–	0.0E+00
		Exposure Point Total						0.0E+00					0.0E+00
	Exposure Medium Total							0.0E+00					0.0E+00
	Air	Outdoor Air (Particulates and VOCs)	–	–	–	–	–	–	–	–	–	–	–
			Chemical Total	–	–	–	–	0.0E+00		–	–	–	0.0E+00
		Exposure Point Total						0.0E+00					0.0E+00
	Exposure Medium Total							0.0E+00					0.0E+00
Medium Total								0.0E+00					0.0E+00
Receptor Total							Receptor Risk Total	0.0E+00				Receptor HI Total	0.0E+00

Notes:

HI	Hazard index
RME	Reasonable maximum exposure
VOC	Volatile organic compound
–	Not Applicable or Not Available

TABLE H-10.5.6.RME
EPA RAGS PART D TABLE 10
RISK SUMMARY
FUTURE REDEVELOPED ADULT RESIDENT
SITE 23, ALAMEDA POINT, ALAMEDA, CALIFORNIA

Scenario Timeframe:	Future-Redeveloped
Receptor Population:	Resident
Receptor Age:	Adult

Medium	Exposure Medium	Exposure Point	Chemical	Carcinogenic Risk					Non-Carcinogenic Hazard Quotient				
				Ingestion	Inhalation	Dermal	External (Radiation)	Exposure Routes Total	Primary Target Organ(s)	Ingestion	Inhalation	Dermal	Exposure Routes Total
Soil (0-8)	Soil	Site Soil	Arsenic	3.0E-06	–	3.6E-07	–	3.4E-06	–	–	–	–	–
			Chemical Total	3.0E-06	–	3.6E-07	–	3.4E-06		–	–	–	0.0E+00
		Exposure Point Total						3.4E-06					0.0E+00
	Exposure Medium Total							3.4E-06					0.0E+00
	Homegrown Produce	Homegrown Produce	Arsenic	1.1E-05	–	–	–	1.1E-05	–	–	–	–	–
			Chemical Total	1.1E-05	–	–	–	1.1E-05		–	–	–	0.0E+00
		Exposure Point Total						1.1E-05					0.0E+00
	Exposure Medium Total							1.1E-05					0.0E+00
	Air	Outdoor Air (Particulates and VOCs)	–	–	–	–	–	–	–	–	–	–	–
			Chemical Total	–	–	–	–	0.0E+00		–	–	–	0.0E+00
		Exposure Point Total						0.0E+00					0.0E+00
	Exposure Medium Total							0.0E+00					0.0E+00
Medium Total								1.5E-05					0.0E+00
Groundwater	Groundwater	Tap Water (oral/dermal)	Arsenic	1.6E-04	–	6.5E-07	–	1.6E-04	Skin	1.1E+00	–	5.5E-03	1.1E+00
			Benzo(a)pyrene	4.1E-05	–	1.5E-04	–	1.9E-04	–	–	–	–	–
			Benzo(b)fluoranthene	5.5E-06	–	2.0E-05	–	2.6E-05	–	–	–	–	–
			Thallium	–	–	–	–	–	Liver, Blood	1.2E+00	–	6.1E-03	1.2E+00
		Exposure Point Total		2.1E-04	–	1.7E-04	–	3.8E-04		2.2E+00	–	1.2E-02	2.2E+00
		Tap Water (inhalation)	–	–	–	–	–	–	–	–	–	–	–
		Exposure Point Total		–	–	–	–	0.0E+00		–	–	–	0.0E+00
	Exposure Medium Total							3.8E-04					2.2E+00
Medium Total								3.8E-04					2.2E+00
Receptor Total							Receptor Risk Total	3.9E-04				Receptor HI Total	2.2E+00

Notes:

HI	Hazard Index
RME	Reasonable maximum exposure
VOC	Volatile organic compound
–	Not Applicable or Not Available

TABLE H-10.5.7.RME
EPA RAGS PART D TABLE 10
RISK SUMMARY
FUTURE REDEVELOPED CHILD RESIDENT
SITE 23, ALAMEDA POINT, ALAMEDA, CALIFORNIA

Scenario Timeframe:	Future-Redeveloped
Receptor Population:	Resident
Receptor Age:	Child

Medium	Exposure Medium	Exposure Point	Chemical	Carcinogenic Risk					Non-Carcinogenic Hazard Quotient				
				Ingestion	Inhalation	Dermal	External (Radiation)	Exposure Routes Total	Primary Target Organ(s)	Ingestion	Inhalation	Dermal	Exposure Routes Total
Soil (0-8)	Soil	Site Soil	Arsenic	7.1E-06	–	5.9E-07	–	7.7E-06	–	–	–	–	–
			Chemical Total	7.1E-06	–	5.9E-07	–	7.7E-06		–	–	–	0.0E+00
		Exposure Point Total						7.7E-06					0.0E+00
	Exposure Medium Total							7.7E-06					0.0E+00
	Homegrown Produce	Homegrown Produce	Arsenic	2.8E-06	–	–	–	2.8E-06	–	–	–	–	–
			Chemical Total	2.8E-06	–	–	–	2.8E-06		–	–	–	0.0E+00
		Exposure Point Total						2.8E-06					0.0E+00
	Exposure Medium Total							2.8E-06					0.0E+00
	Air	Outdoor Air (Particulates and VOCs)	–	–	–	–	–	–	–	–	–	–	–
			Chemical Total	–	–	–	–	0.0E+00		–	–	–	0.0E+00
		Exposure Point Total						0.0E+00					0.0E+00
	Exposure Medium Total							0.0E+00					0.0E+00
Medium Total								1.0E-05					0.0E+00
Groundwater	Groundwater	Tap Water (oral/dermal)	Arsenic	9.5E-05	–	6.2E-07	–	9.5E-05	Skin	2.5E+00	–	1.6E-02	2.5E+00
			Benzo(a)pyrene	2.4E-05	–	1.1E-04	–	1.3E-04	–	–	–	–	–
			Benzo(b)fluoranthene	3.2E-06	–	1.5E-05	–	1.8E-05	–	–	–	–	–
			sec-Butylbenzene	–	–	–	–	–	–	6.2E-01	–	7.2E-01	1.3E+00
			Thallium	–	–	–	–	–	Liver, Blood	2.7E+00	–	1.8E-02	2.7E+00
		Exposure Point Total		1.2E-04	–	1.3E-04	–	2.5E-04		5.8E+00	–	7.6E-01	6.6E+00
		Tap Water (Inhalation)	1,2,4-Trimethylbenzene	–	–	–	–	–	CNS	–	2.6E+00	–	2.6E+00
			Naphthalene	–	–	–	–	–	Nasal	–	2.8E+00	–	2.8E+00
		Exposure Point Total		–	–	–	–	0.0E+00		–	5.5E+00	–	5.5E+00
	Exposure Medium Total							2.5E-04					1.2E+01
Medium Total								2.5E-04					1.2E+01
Receptor Total							Receptor Risk Total	2.6E-04				Receptor HI Total	1.2E+01

Notes:

HI	Hazard Index
RME	*Reasonable maximum exposure*
VOC	Volatile organic compound
–	Not Applicable or Not Available

ATTACHMENT H1
VAPOR PATHWAY SCREENING AND JOHNSON AND ETTINGER MODEL OUTPUT

Attachment H1
Subsurface Vapor Fate and Transport Modeling

H1.1 Introduction

The following attachment presents the methodology for estimating the infinite indoor air concentrations for chemicals of potential concern (COPC) from impacted subsurface media via vapor intrusion. A full discussion of COPCs for vapor intrusion is provided in Section 4 of Appendix H (see Tables H1-1 through H1-5).

Volatile contamination in a source medium (e.g. groundwater) can migrate to other environmental media by volatilization, diffusion, or advection. For example, volatile organic chemicals (VOC) in groundwater and/or soil gas migrate into indoor air (via cracks in a building's foundation) through soil vapor migration. In order to evaluate this pathway at Alameda Point, the Environmental Protection Agency's (EPA's) 2003 vapor intrusion model based upon Johnson and Ettinger (1991) was used to estimate infinite indoor air concentrations from concentrations of volatile COPCs in groundwater and soil gas.

The vapor intrusion model is a one-dimensional model that estimates convective and diffusive transport of chemical vapors emanating from groundwater and soil gas into indoor spaces located directly above or near the source of contamination. A detailed description of the vapor intrusion model is provided in EPA's *Guidance for Evaluating the Vapor Intrusion to Indoor Air Pathway from Groundwater and Soils* (Subsurface Vapor Intrusion Guidance) (EPA 2002).

H1.1.1 Indoor Air Migration Pathway and Modeling Analyses

The approach to the indoor air migration pathway analysis followed the Subsurface Vapor Intrusion Guidance (EPA 2002). To evaluate this pathway, the EPA's 2003 vapor intrusion model (Version 3.0 dated 03-14-03) was used to estimate the infinite indoor air concentrations ($C_{building}$) from concentrations of volatile COPCs in groundwater and soil gas. The model assumes that the constituent concentration in the source (e.g., in groundwater) is not decreased by transport of the constituent to the surface and the depth to the pollutant source remains constant. The model also ignores attenuating factors, such as biological degradation, and assumes an infinite source over the exposure duration (e.g., 25 years). For this reason, it is a conservative screening tool to identify maximum indoor air concentrations and risks.

For the purpose of this investigation, VOCs are defined as chemicals with a molecular weight of less than 200 grams per mole and a Henry's Law Constant greater than 1E-05 atmospheres per cubic meter per mole (EPA 2002).

H1.2 Vapor Intrusion Model

Volatilization of contaminants located in groundwater and/or soil gas, and the subsequent mass transport of these vapors into indoor spaces constitutes a potential inhalation exposure pathway evaluated through risk assessment. Johnson and Ettinger (1991) introduced a screening-level model that incorporates both convective and diffusive mechanisms for estimating the transport of contaminant vapors emanating from groundwater into indoor spaces located directly above or in close proximity to the source of contamination. In their article, Johnson and Ettinger reported that the results of the model were in qualitative agreement with published experimental case histories and in good qualitative and quantitative agreement with detailed three-dimensional numerical modeling of radon transport into houses (Loureiro and others 1990).

The vapor intrusion model provides an estimated attenuation coefficient that relates the vapor concentration in the indoor space to the vapor concentration at the source of contamination. The model is constructed as both a steady-state solution to vapor transport (infinite or nondiminishing source) and as a quasi-steady-state solution (finite or diminishing source). Inputs to the model include chemical properties of the contaminant, saturated and unsaturated zone soil properties, structural properties of the building, and appropriate exposure assumptions for those receptors that are being evaluated (EPA 1997, 2000, and 2002).

Air emissions and transport of volatile COPCs from groundwater to indoor air are based upon properties of the contaminant, properties of the saturated and vadose zone soil, and properties of the overlying buildings or residential structures (EPA 1997, 2000, and 2002). Input parameters are discussed in the following subsections (refer to Attachment Table H1-6).

H1.2.1 Groundwater COPCs and Analytical Data

Groundwater COPCs for the vapor intrusion pathway are detailed in Section 4 of Appendix H. Only detected analytical data were included in the evaluation so that the infinite indoor air concentration ($C_{building}$) represents exposure to an individual in a building directly over the impacted groundwater or soil gas plume. The groundwater and soil gas datasets are detailed in Attachment Table H1-7. Exposure point concentrations (EPCs) in groundwater and soil gas were determined according to the protocol established in Section 4 of Appendix H. The EPCs for volatile COPCs detected in groundwater and soil gas were used as the constituent concentration for the vapor intrusion model (EPA 1997, 2000, and 2002). From there, the model was applied, resulting in modeled air EPCs, which were the infinite indoor air concentrations themselves (see Table H1-8).

H1.2.2 Soil Characteristics

Site-specific soil and hydrogeologic data were used for the vapor intrusion evaluation. For the purposes of this evaluation, the soil stratigraphy is

assumed to be homogeneous from soil surface to groundwater. Soil properties, in addition to relevant hydrogeologic properties, are presented in Attachment Table H1-6.

Migration of constituents through soil depends on the ability of constituents to diffuse from the source into the vapor space and through the soil thereafter. Vapor space is a function of the total porosity of the soil and the volume of water displacing the air within the pore volume. For this analysis, the soil type, total soil porosity (P_T), water-filled soil porosity (P_w), and air-filled soil porosity (P_a) were calculated using geotechnical data from a representative location of the site (see Attachment Table H1-6).

H1.2.3 Building Parameters

To ensure a conservative exposure scenario, default building parameters, based upon a typical building scenario, were used in this evaluation in case future buildings were constructed at the site (see Attachment Table H1-6). The parameters used for the residential exposure scenario are conservatively based upon values established in the *Update to Draft, Interim Soil Gas Screening Levels for Evaluation of Potential Indoor-Air Impacts* (RWQCB 2003). Commercial/industrial parameters are very conservative and are likely to be more representative of a large residential structure than a typical commercial/industrial exposure scenario. Generally speaking, larger buildings have smaller associated risks and hazards because the air volume is increased and air exchange rates tend to be higher.

The foundation thickness (L_{crack}) for each building was assumed to be 15 cm (6 inches). The vapor intrusion model assumes that the contaminant source is infinite (with respect to modeling time of interest) and vapor infiltration is through cracks in the foundation and below-grade walls, if any (EPA 1997, 2000, and 2002). The area of cracks through which vapors can pass (A_{crack}) was assumed to be equal to a 0.1 cm wide crack. The distance from the constituent source to the soil/foundation interface (L_T) was calculated for each structure based on depths to groundwater at adjacent monitoring wells (see Attachment Table H1-1).

The building ventilation rate ($Q_{building}$) is another characteristic used in the vapor intrusion model. Default parameters from RWQCB (2003) were used for the air exchange rate (see Attachment Table H1-1).

Buildings can develop negative pressures relative to ambient pressure as a result of temperature gradients and wind effects. These pressure differences (dPs) affect contaminant flux into buildings and are taken into account in the vapor intrusion model. Typical dP values are 10 to 100 g/cm/sec^2. Since flux is directly proportional to pressure difference, the recommended value from the *Subsurface Vapor Intrusion Guidance* (EPA 2002) of 40 g/cm/sec^2 was used for dP.

H1.3 Indoor Air Concentration Model Results

The infinite indoor air concentrations ($C_{building}$) from the vapor intrusion model are summarized in Attachment Table H1-6. These concentrations were used as the indoor air EPC for the human health risk assessment shown in Tables H-3.31 through 3.34 of Appendix H.

H1.4 Uncertainty Analysis

The sources of uncertainty associated with calculating infinite indoor air concentrations ($C_{building}$) and uncertainties associated with the vapor intrusion model are presented and discussed below. All of the uncertainties presented below result in an overestimation of indoor air concentrations, so the vapor intrusion model should be conservative in estimating risks to human health.

The assumption of steady-state exposure concentrations over long-term exposure durations (e.g., 25 years for workers) results in uncertainty in risk assessment. To be conservative, EPCs are assumed to be constant for the duration of exposure and thereby do not consider the natural physical, chemical, or biological processes which reduce chemical concentrations over time.

Over time, concentrations can decrease, as chemicals move from one medium to another and from location to location within a particular medium. In addition, the overall available mass of a chemical may decrease as the chemical is lost through transformation or degradation processes, such as hydrolysis, photolysis, and biodegradation. Thus, the EPCs to which the receptors would be exposed also decrease over time. Using only the measured concentration of the chemical in a particular medium to calculate potential risks is highly conservative. Evans and others (1995) determined that the use of steady-state methods may over-predict risk by as much as two orders of magnitude.

The assumption that buildings are continuously under-pressurized neglects significant periods where neutral or positive pressurized conditions exist, thereby overestimating advective transport of contaminated vapors to indoor air, and yields higher indoor air concentrations.

The assumption of vapor transport under a single (vertical) dimension ignores the potential for vapor migration in multiple directions away from the source area, resulting in an overestimation of vapor emissions and higher indoor concentrations.

Using a small commercial/industrial building and default hypothetical residential parameters usually tends to a overestimate vapor emissions and higher indoor concentrations because associated parameters tend to be conservative in order to ensure protection of all exposure scenarios. Also, this evaluation assumed that a hypothetical building was situated over the most impacted groundwater, which may be unlikely due to the migration of contaminants over time.

The applicability of the Johnson & Ettinger model is found suitable, with the following caveats:

- The shallowest water table occurrence at OU-2A ranges seasonally to 5.2 feet bgs. The typical water depth at OU-2A is 8 ft bgs. This is therefore deeper than the minimum 5 feet cited in the draft EPA guidance as the shallowest depth for which the model should be applied (EPA 2002).

- NAPL is present at three sites (Sites 13, 22, and 23) on OU-2A. However, these product plumes are being actively remediated under the corrective action program. Samples containing NAPL were not included in the HHRA; thus, risks based on the maximum "fringe" concentrations were included.

The vapor intrusion modeling is considered reasonable for HHRA purposes, particularly since the locations without NAPL were modeled for vapor intrusion.

H1.5 References

American Society for Testing and Materials (ASTM), 1995. *Emergency Standard Guide for Risk-Based Corrective Action Applied at Petroleum Release Sites*, ASTM Designation: ES 38 – 94.

California Regional Water Quality Control Board (RWQCB). 2001. Application of Risk-Based Screening Levels and Decision Making to Sites with Impacted Soil and Groundwater Volume I: Summary Tier 1 Lookup Tables. California Regional Water Quality Control Board - San Francisco Bay Region. Interim Final. December.

RWQCB. 2003. Update to Draft, Interim Soil Gas Screening Levels for Evaluation of Potential Indoor-Air Impacts. California Regional Water Quality Control Board - San Francisco Bay Region. File No. 1210.40 (RDB). March 31.

Evans, K.L. and Bedient, P.B., 1995. A Transient Methodology for Assessing Risk: Development and Comparison with the Conventional Approach, IN: *The Proceedings of the 1995 Petroleum Hydrocarbons and Organic Chemicals in Groundwater: Prevention, Detection, and Remediation, Conference and Exposition*, Houston, Texas, pages 111 through 125.

Johnson, Paul C. and Robert A. Ettinger, 1991. "Heuristic Model for Predicting the Intrusion Rate of Contaminant Vapors into Buildings" *Environmental Science Technology.* Volume 25, pages1445 through 1452.

Loureiro, C.O., L.M. Abriola, J.E. Martin, and R.G. Sextro, 1990. *Environmental Science Technology.* Volume 24, pages 1338 through1348.

EPA 1989. *Risk Assessment Guidance for Superfund, Volume I, Human Health Evaluation Manual (Part A).* Washington D.C., Office of Emergency and Remedial Response, Washington, D.C. EPA/540/1-89/002. December .

EPA 1992. *Assessing Potential Indoor Air Impacts for Superfund Sites*, EPA-451/R-92-002. September.

EPA 1997. *User's Guide for the Johnson and Ettinger (1991) Model for Subsurface Vapor Intrusion into Buildings.* Office of Emergency and Remedial Response, Toxics Integration Branch. September.

EPA 2000. *User's Guide for the Johnson and Ettinger (1991) Model for Subsurface Vapor Intrusion into Buildings.* Washington D.C., Office of Emergency and Remedial Response, Toxics Integration Branch (5202G). December .

EPA 2002. "Guidance for Evaluating the Vapor Intrusion to Indoor Air Pathway from Groundwater and Soils (Subsurface Vapor Intrusion Guidance)." Draft Federal Register. November 29. Volume 67, Number 230. Pages 71169-71172. On-Line Address: http://www.epa.gov/correctiveaction/eis/vapor.htm

EPA 2003. Groundwater Advanced (GW-ADV) Model. Version 3.0. March. http://www.epa.gov/superfund/programs/risk/airmodel/johnson_ettinger.htm

TABLE H1-1: ADVANCED TIER 1 EVALUATION OF THE VAPOR INTRUSION TO INDOOR AIR PATHWAY AT SITE 9

Appendix H, HHRA for CERCLA Sites 9, 13, 19, 22, and 23, Alameda Point, Alameda, California

CAS Number	Chemical	Maximum Concentration (Qualifier)	Units	Maximum Concentration Location	Maximum Concentration Date	Range of Detection Limits	Detection Frequency	Maximum Concentration (Last 8 Quarters - since June 2001)	Maximum Concentration (Last 4 Quarters - since June 2002)	(1) Subsurface Vapor Intrusion Guidance Values (N/C)		(5) CRWQB Values (Tier 1 Values)	(5) CRWQB Values Source	(5) Adjusted CRWQB Values (Adjusted Tier 1 Values)	No Further Evaluation	Advanced Tier 1 Evaluation (10)
Groundwater COPCs (ug/L)																
540-59-0	1,2-DICHLOROETHENE (TOTAL)	2400	UG/L	SHP-S09-10	9/6/1994	1 - 100	9 / 31	21	--	180	N (6)	9800	CRWQCB, 2001 (6)	2500	(7) (8) (9)	
91-57-6	2-METHYLNAPHTHALENE	6500 J	UG/L	SHP-S09-10	9/6/1994	10 - 8000	4 / 38	ND (50 U)	--	3300	N	26000 > sol	CRWQCB, 2001	26000 > sol	(7) (8) (9)	
71-43-2	BENZENE	2	UG/L	S09-DGS-DP05	8/3/2001	0.5 - 100	9 / 44	2	1.4	1.4	C (2)	84	CRWQCB, 2001	79	(8) (9)	
100-41-4	ETHYLBENZENE	120	UG/L	SHP-S09-10	9/6/1994	0.5 - 100	12 / 44	9.6	9.6	6.9	C (2)	170000 > sol	CRWQCB, 2001	48000	(8) (9)	
91-20-3	NAPHTHALENE	29000	UG/L	SHP-S09-10	9/6/1994	2 - 8000	11 / 47	85	1.5	150	N	9200	CRWQCB, 2001	2310		(3)
127-18-4	TETRACHLOROETHENE	3	UG/L	MW410-3	6/26/2001	0.5 - 100	2 / 44	3	ND (0.5 U)	1.1	C (2)	170	CRWQCB, 2001	81	(8) (9)	
79-01-6	TRICHLOROETHENE	22	UG/L	SHP-S09-09	9/8/1994	0.5 - 100	3 / 44	0.8 J	0.1 J	0.053	C (2)	750	CRWQCB, 2001	3.4		(3)
75-01-4	VINYL CHLORIDE	220	UG/L	DHP-S09-06	9/8/1994	0.5 - 50	7 / 44	20	20	0.25	C (2)	4.9	CRWQCB, 2001	11		(3)
Soil Gas COPCs (ug/m3)																
79-00-5	1,1,2-TRICHLOROETHANE	593 Q	UG/M^3	385-S09-040	7/26/2001	69.86 - 69.86	1 / 2	--	--	1.5	C	150	CRWQCB, 2003	NA		(11)
71-43-2	BENZENE	1,202	UG/M^3	385-S09-040	7/26/2001	--	2 / 2	--	--	3.1	C	84	CRWQCB, 2003	NA		(11)
100-41-4	ETHYLBENZENE	5,892	UG/M^3	385-S09-040	7/26/2001	--	2 / 2	--	--	22	C	210000	CRWQCB, 2003	NA	(4)	
108-88-3	TOLUENE	8,786	UG/M^3	385-S09-040	7/26/2001	--	2 / 2	--	--	4000	N	83000	CRWQCB, 2003	NA	(4)	

Notes:

UG/L Micrograms per Liter
UG/M^3 Microgram per cubic meter
J Estimated value
U The material was not analyzed for, but not detected.
Q No analytical data - data not usable

(1) Subsurface Vapor Intrusion Guidance Values are the risk-based screening values used in the COPC screen. Values were adopted from Table 2c of EPA (2002c) draft vapor intrusion of residential exposure with a carcinogenic risk level of $1x10^{-6}$ and a hazard index of 1.
(2) Subsurface Vapor Intrusion Guidance Values in EPA 2002c, were listed as the Maximum Contaminant Levels (MCLs). However, risk based values, which were lower than the MCLs, were used in the COPC screen so that the analytes could be evaluated for risk-based exposure.
(3) The maximum concentration does exceed the Adjusted Tier 1 Value (1 story residential home); therefore the vapor intrusion pathway for this analyte warrents further evalution.
(4) Soil gas values are not greater than Tier 1 Values; therefore the vapor intrusion pathway for this analyte is not of potential concern.
(5) CRWQB Values (Tier 1 Values) were developed by the CRWQB as an initial screen of the vapor intrusion pathway for residential exposure (CRWQB 2001). The Tier 1 soil gas values were updated by the CRWCB in March, 2003 to account for a smaller residential structure (1 story building) with a lower air exchange rate (1 per hour) (CRWQB 2003). Adjusted CRWQB Values (Adjusted Tier 1 Values) were subsequently calculated by the Navy to incorpoate the changes in the size of the building and lower air exchange rate established in CRWQB 2003. Also, the Adjusted Tier 1 Values incorporate the latest toxicity values.
(6) Values for 1,2-DICHLOROETHENE (TOTAL) were adpoted from trans 1,2-DICHLOROETHENE, which has the lowest screening toxicity value of the cis and trans forms.
(7) The maximum concentration since June 2001 and/or June 2002 does not exceed the Subsurface Vapor Intrusion Guidance Value. Also, current conditions indicate that concentrations are follwing a decreasing trend and the vapor intrusion pathway for this analyte is not of potential concern.
(8) The maximum concentration does not exceed the Tier 1 Value (2 story residential home); therefore the vapor intrusion pathway for this analyte is not of potential concern.
(9) The maximum concentration does not exceed the Adjusted Tier 1 Value (1 story residential home); therefore the vapor intrusion pathway for this analyte is not of potential concern.
(10) The Tier 1 evaluation includes evaluating the most rescent data (since June 2001) for current exposure. An Advanced Tier 1 evaluation will be conducted if necessary.
(11) Soil gas values are greater than Tier 1 Values; therefore, this analyte warrants an additional evaluation.
(12) The maximum soil gas concentrations was detected at 3.5-feet below ground surface, while soil gas data collected from 1.5-feet below ground surface is non-detect (see Range of Detection Limits). Because shallow soil gas samples are below Tier 1 Values (due to attenuation) the vapor intrusion pathway for this analyte is not of potential concern.

Definitions:

COPC = Contaminant of potential concern
EPA = U.S. Environmental Protection Agency
J = Estimated value
C = Carcinogen
N = Noncancer
UG/L = Microgram per liter
> sol = Value was truncated to the solublity limit
UG/M3 = Microgram per cubic meter
-- = Not available
NA = Not Applicable

Reference:

CRWQCB 2001. Application of Risk-Based Screening Levels and Decision Making to Sites with Impacted Soil and Groundwater Volume I: Summary Tier 1 Lookup Tables. California Regional Water Quality Control Board - San Francisco Bay Region. Interim Final. December.

CRWQCB 2003. Update to Draft, Interim Soil Gas Screening Levels for Evaluation of Potential Indoor-Air Impacts. California Regional Water Quality Control Board - San Francisco Bay Region. File No. 1210.40 (RDB). March 31.

EPA 2002c. Draft Vapor Intrusion Guidance. November. Available on-line at http://www.epa.gov/correctiveaction/eis/vapor.htm

TABLE H1-2: ADVANCED TIER 1 EVALUATION OF THE VAPOR INTRUSION TO INDOOR AIR PATHWAY AT SITE 13

Appendix H, HHRA for CERCLA Sites 9, 13, 19, 22, and 23, Alameda Point, Alameda, California

CAS Number	Chemical	Maximum Concentration (Qualifier)	Units	Maximum Concentration Location	Maximum Concentration Date	Range of Detection Limits	Detection Frequency	Maximum Concentration (Last 8 Quarters - since June 2001)	Maximum Concentration (Last 4 Quarters - since June 2002)	Subsurface Vapor Intrusion Guidance Values (N/C) (1)		CRWQB Values (Tier 1 Values (4)	CRWQB Values Source (4)	Adjusted CRWQB Values (Adjusted Tier 1 Values) (4)	No Further Evaluation	Advanced Tier 1 Evaluation (3)
Groundwater COPCs (ug/L)																
71-43-2	BENZENE	44	UG/L	M13-07	8/16/1995	0.5 - 1	3 / 65	ND (1 U)	ND (1 U)	1.4	C (2)	84	CRWQCB, 2001	79	(5) (6) (7)	
86-73-7	NAPHTHALENE	210	UG/L	M13-07	6/18/2002	1.6 - 10	8 / 57	210	210	150	N	9200	CRWQCB, 2001	2310	(6) (7)	
79-01-6	TRICHLOROETHENE	1	UG/L	M07C-09	6/19/2002	0.5 - 4	4 / 65	1	1	0.053	C (2)	750	CRWQCB, 2001	3.4	(6) (7)	
Soil Gas COPCs (ug/m3)																
630-20-6	1,1,2,2-TETRACHLOROETHANE	70.8 J	UG/M^3	385-S13-021	7/26/2001	22.33 - 22.33	1 / 2	--	--	0.42	C	42	CRWQCB, 2003	NA	(9)	
79-00-5	1,1,2-TRICHLOROETHANE	222 J	UG/M^3	385-S13-021	7/26/2001	17.75 - 17.75	1 / 2	--	--	1.5	C	150	CRWQCB, 2003	NA	(9)	
107-06-2	1,2-DICHLOROETHANE	27.6 J	UG/M^3	385-S13-021	7/26/2001	13.16 - 13.16	1 / 2	--	--	0.94	C	110	CRWQCB, 2003	NA	(9)	
71-43-2	BENZENE	52 J	UG/M^3	385-S13-021	7/26/2001	NA	2 / 2	--	--	3.1	C	84	CRWQCB, 2003	NA	(8)	
100-41-4	ETHYLBENZENE	48.3 J	UG/M^3	385-S13-021	7/26/2001	NA	2 / 2	--	--	22	C	210000	CRWQCB, 2003	NA	(8)	
127-18-4	TETRACHLOROETHENE	33.9 J	UG/M^3	385-S13-021	7/26/2001	NA	2 / 2	--	--	8.1	C	410	CRWQCB, 2003	NA	(8)	

Notes:

UG/L Micrograms per Liter
UG/M^3 Microgram per cubic meter
J Estimated value
U The material was not analyzed for, but not detected.

(1) Subsurface Vapor Intrusion Guidance Values are the risk-based screening values used in the COPC screen. Values were adopted from Table 2c of EPA (2002c) draft vapor intrusion of residential exposure with a carcinogenic risk level of $1x10^{-6}$ and a hazard index of 1.

(2) Subsurface Vapor Intrusion Guidance Values in EPA 2002c, were listed as the Maximum Contaminant Levels (MCLs). However, risk based values, which were lower than the MCLs, were used in the COPC screen so that the analytes could be evaluated for risk-based exposure.

(3) The Tier 1 evaluation includes evaluating the most rescent data (since June 2001) for current exposure. An Advanced Tier 1 evaluation will be conducted if necessary.

(4) CRWQB Values (Tier 1 Values) were developed by the CRWQB as an initial screen of the vapor intrusion pathway for residential exposure (CRWQB 2001). The Tier 1 soil gas values were updated by the CRWCB in March, 2003 to account for a smaller residential structure (1 story building) with a lower air exchange rate (1 per hour) (CRWQB 2003). Adjusted CRWQB Values (Adjusted Tier 1 Values) were subsequently calculated by the Navy to incorpoate the changes in the size of the building and lower air exchange rate established in CRWQB 2003. Also, the Adjusted Tier 1 Values incorporate the latest toxicity values.

(5) The maximum concentration since June 2001 and/or June 2002 does not exceed the Subsurface Vapor Intrusion Guidance Value. Also, current conditions indicate that concentrations are follwing a decreasing trend and the vapor intrusion pathway for this analyte is not of potential concern.

(6) The maximum concentration does not exceed the Tier 1 Value (2 story residential home); therefore the vapor intrusion pathway for this analyte is not of potential concern.

(7) The maximum concentration does not exceed the Adjusted Tier 1 Value (1 story residential home); therefore the vapor intrusion pathway for this analyte is not of potential concern.

(8) Soil gas values are not greater than Tier 1 Values; therefore the vapor intrusion pathway for this analyte is not of potential concern.

(9) The maximum soil gas concentrations was detected at 3.5-feet below ground surface, while soil gas data collected from 1.5-feet below ground surface is non-detect (see Range of Detection Limits). Because shallow soil gas samples are below Tier 1 Values (due to attenuation) the vapor intrusion pathway for this analyte is not of potential concern.

Definitions:

COPC = Contaminant of potential concern
EPA = U.S. Environmental Protection Agency
J = Estimated value
C = Carcinogen
N = Noncancer
UG/L = Microgram per liter
UG/M3 = Microgram per cubic meter
-- = Not available
NA = Not Applicable
> sol = Value was truncated to the solublity limit

Reference:

CRWQCB 2001. Application of Risk-Based Screening Levels and Decision Making to Sites with Impacted Soil and Groundwater Volume I: Summary Tier 1 Lookup Tables. California Regional Water Quality Control Board - San Francisco Bay Region. Interim Final. December.

CRWQCB 2003. Update to Draft, Interim Soil Gas Screening Levels for Evaluation of Potential Indoor-Air Impacts. California Regional Water Quality Control Board - San Francisco Bay Region. File No. 1210.40 (RDB). March 31.

EPA 2002c. Draft Vapor Intrusion Guidance. November. Available on-line at http://www.epa.gov/correctiveaction/eis/vapor.htm

EPA 2003. Maximum Contaminant Levels. National Primary Drinking Water Regulations. June.

TABLE H1-3: ADVANCED TIER 1 EVALUATION OF THE VAPOR INTRUSION TO INDOOR AIR PATHWAY AT SITE 19

Appendix H, HHRA for CERCLA Sites 9, 13, 19, 22, and 23, Alameda Point, Alameda, California

CAS Number	Chemical	Maximum Concentration (Qualifier)	Units	Maximum Concentration Location	Maximum Concentration Date	Range of Detection Limits	Detection Frequency	Maximum Concentration (Last 8 Quarters - since June 2001)	Maximum Concentration (Last 4 Quarters - since June 2002)	Subsurface Vapor Intrusion Guidance Values (N/C) (1)		CRWQB Values Tier 1 Values (4)	CRWQB Values Source (4)	Adjusted CRWQB Values (Adjusted Tier 1 Values) (4)	No Further Evaluation	Advanced Tier 1 Evaluation (3)
Groundwater COPCs (ug/L)																
127-18-4	TETRACHLOROETHENE	22	UG/L	MWD13-4	9/5/2002	0.5 - 2	10 / 28	22	22	1.1	C (2)	170	CRWQCB, 2001	81	(6) (7)	
79-01-6	TRICHLOROETHENE	4.2	UG/L	MWD13-4	9/5/2002	0.5 - 2	10 / 28	4.2	4.2	0.053	C (2)	750	CRWQCB, 2001	3.4		(5)
Soil Gas - No Soil Gas Samples Were Collected at Site 19																

Notes:

UG/L Micrograms per Liter

(1) Subsurface Vapor Intrusion Guidance Values are the risk-based screening values used in the COPC screen. Values were adopted from Table 2c of EPA (2002c) draft vapor intrusion of residential exposure with a carcinogenic risk level of $1x10^{-6}$ and a hazard index of 1.

(2) Subsurface Vapor Intrusion Guidance Values in EPA 2002c, were listed as the Maximum Contaminant Levels (MCLs). However, risk based values, which were lower than the MCLs, were used in the COPC screen so that the analytes could be evaluated for risk-based exposure.

(3) The Tier 1 evaluation includes evaluating the most rescent data (since June 2001) for current exposure. An Advanced Tier 1 evaluation will be conducted if necessary.

(4) CRWQB Values (Tier 1 Values) were developed by the CRWQB as an initial screen of the vapor intrusion pathway for residential exposure (CRWQB 2001). The Tier 1 soil gas values were updated by the CRWCB in March, 2003 to account for a smaller residential structure (1 story building) with a lower air exchange rate (1 per hour) (CRWQB 2003). Adjusted CRWQB Values (Adjusted Tier 1 Values) were subsequently calculated by the Navy to incorpoate the changes in the size of the building and lower air exchange rate established in CRWQB 2003. Also, the Adjusted Tier 1 Values incorporate the latest toxicity values.

(5) The maximum concentration does exceed the Adjusted Tier 1 Value (1 story residential home); therefore the vapor intrusion pathway for this analyte warrents further evalution.

(6) The maximum concentration does not exceed the Tier 1 Value (2 story residential home); therefore the vapor intrusion pathway for this analyte is not of potential concern.

(7) The maximum concentration does not exceed the Adjusted Tier 1 Value (1 story residential home); therefore the vapor intrusion pathway for this analyte is not of potential concern.

Definitions:

COPC = Contaminant of potential concern
EPA = U.S. Environmental Protection Agency
J = Estimated value
C = Carcinogen
N = Noncancer
UG/L = Microgram per liter
UG/M3 = Microgram per cubic meter
– = Not available
NA = Not Applicable

Reference:

CRWQCB 2001. Application of Risk-Based Screening Levels and Decision Making to Sites with Impacted Soil and Groundwater Volume I: Summary Tier 1 Lookup Tables. California Regional Water Quality Control Board - San Francisco Bay Region. Interim Final. December.

CRWQCB 2003. Update to Draft, Interim Soil Gas Screening Levels for Evaluation of Potential Indoor-Air Impacts. California Regional Water Quality Control Board - San Francisco Bay Region. File No. 1210.40 (RDB). March 31.

EPA 2002c. Draft Vapor Intrusion Guidance. November. Available on-line at http://www.epa.gov/correctiveaction/eis/vapor.htm

TABLE H1-. ADVANCED TIER 1 EVALUATION OF THE VAPOR INTRUSION TO INDOOR AI.. PATHWAY AT SITE 2

Appendix H, HHRA for CERCLA Sites 9, 13, 19, 22, and 23, Alameda Point, Alameda, California

CAS Number	Chemical	Maximum Concentration (Qualifier)	Units	Maximum Concentration Location	Maximum Concentration Date	Range of Detection Limits	Detection Frequency	Maximum Concentration (Last 8 Quarters - since June 2001)	Maximum Concentration (Last 4 Quarters - since June 2002)	Subsurface Vapor Intrusion Guidance Values (N/C) (1)		CRWQB Values Tier 1 Values (4)	CRWQB Values Source (4)	Adjusted CRWQB Values (Adjusted Tier 1 Values) (4)	No Further Evaluation	Advanced Tier 1 Evaluation (3)
Groundwater COPCs (ug/L)																
107-06-2	1,2-DICHLOROETHANE	38	UG/L	CAA4C-DGS-DP05	4/18/2002	0.5 - 25	4 / 48	38	38	2.3	C (2)	500	CRWQCB, 2001	--	(6)	
71-43-2	BENZENE	8300	UG/L	CAA4C-DGS-DP03	4/17/2002	0.5 - 100	22 / 55	8300	8300	1.4	C (2)	84	CRWQCB, 2001	79		(8)
67-66-3	CHLOROFORM	19	UG/L	MW 547-3	4/10/2003	0.5 - 100	1 / 48	19	19	0.7	C (2)	590	CRWQCB, 2001	34	(6) (7)	
100-41-4	ETHYLBENZENE	3830	UG/L	CAA4C-DGS-DP06	5/8/2002	0.5 - 400	20 / 55	3830	38	6.9	C (2)	170000 > sol	CRWQCB, 2001	48000	(6) (7)	
98-82-8	ISOPROPYLBENZENE	120	UG/L	MW547-3	6/20/2002	0.5 - 8.3	4 / 8	NA	120	8.4	N	--	--	127 (11)	(7)	
91-20-3	NAPHTHALENE	380	UG/L	MW547-3	12/17/2002	2 - 33	8 / 23	380	380	150	N	9200	CRWQCB, 2001	2310	(6) (7)	
108-88-3	TOLUENE	15300	UG/L	CAA4C-DGS-DP06	5/8/2002	0.5 - 400	13 / 55	15300	1.3	1500	N	760000	CRWQCB, 2001	19000	(6) (7)	
127-18-4	TETRACHLOROETHENE	2.6 J	UG/L	MW 547-3	4/10/2003	0.5 - 100	1 / 48	2.6	2.6	1.1	C (2)	170	CRWQCB, 2001	81	(6) (7)	
79-01-6	TRICHLOROETHENE	20 J	UG/L	M07C-08	11/7/1997	0.5 - 100	2 / 48	1.9	1.9	0.053	C (2)	750	CRWQCB, 2001	3.4		(8)
1330-20-7	XYLENE (TOTAL)	17000	UG/L	CAA4C-DGS-DP06	5/8/2002	1 - 400	12 / 47	17000	--	2200	N (15)	150000	CRWQCB, 2001	38300 (12)	(6) (7)	
Soil Gas COPCs (ug/m3)																
71-43-2	BENZENE	106,688.8 J	UG/M^3	385-S22-014	7/26/2001	10.06 - 10.06	3 / 4	--	--	3.1	C	84	CRWQCB, 2003	NA		(9)
74-87-3	CHLOROMETHANE	1,672 J	UG/M^3	385-S22-014	7/26/2001	6.5 - 6.77	2 / 4	--	--	24	C	1400	CRWQCB, 2003	NA		(9)
100-41-4	ETHYLBENZENE	146,015 J	UG/M^3	385-S22-014	7/26/2001	13.67 - 14.24	2 / 4	--	--	22	C	210000	CRWQCB, 2003	NA	(10)	
108-38-3	M-XYLENE	389,523 J	UG/M^3	385-S22-014	7/26/2001	NA	4 / 4	--	--	70000	N (5)	150000	CRWQCB, 2003	NA		(9)
95-47-6	O-XYLENE	75,145 J	UG/M^3	385-S22-014	7/26/2001	13.67 - 14.24	2 / 4	--	--	70000	N (5)	150000	CRWQCB, 2003	NA	(10)	
108-88-3	TOLUENE	247,283 J	UG/M^3	385-S22-014	7/26/2001	NA	4 / 4	--	--	4000	N	83000	CRWQCB, 2003	NA		(9)

Notes:

UG/L Micrograms per Liter
UG/M^3 Microgram per cubic meter
J Estimated value

(1) Subsurface Vapor Intrusion Guidance Values are the risk-based screening values used in the COPC screen. Values were adopted from Table 2c of EPA (2002c) draft vapor intrusion of residential exposure with a carcinogenic risk level of $1x10^{-6}$ and a hazard index of 1.
(2) Subsurface Vapor Intrusion Guidance Values in EPA 2002c, were listed as the Maximum Contaminant Levels (MCLs). However, risk based values, which were lower than the MCLs, were used in the COPC screen so that the analytes could be evaluated for risk-based exposure.
(3) The Tier 1 evaluation includes evaluating the most rescent data (since June 2001) for current exposure. An Advanced Tier 1 evaluation will be conducted if necessary.
(4) CRWQB Values (Tier 1 Values) were developed by the CRWQB as an initial screen of the vapor intrusion pathway for residential exposure (CRWQB 2001). The Tier 1 soil gas values were updated by the CRWCB in March, 2003 to account for a smaller residential structure (1 story building) with a lower air exchange rate (1 per hour) (CRWQB 2003). Adjusted CRWQB Values (Adjusted Tier 1 Values) were subsequently calculated by the Navy to incorpoate the changes in the size of the building and lower air exchange rate established in CRWQB 2003. Also, the Adjusted Tier 1 Values incorporate the latest toxicity values.
(5) Value is based upon total-xylenes.
(6) The maximum concentration does not exceed the Tier 1 Value (2 story residential home); therefore the vapor intrusion pathway for this analyte is not of potential concern.
(7) The maximum concentration does not exceed the Adjusted Tier 1 Value (1 story residential home); therefore the vapor intrusion pathway for this analyte is not of potential concern.
(8) The maximum concentration does exceed the Adjusted Tier 1 Value (1 story residential home); therefore the vapor intrusion pathway for this analyte warrents further evalution.
(9) Soil gas values are greater than Tier 1 Values; therefore, this analyte warrants an additional evaluation.
(10) Soil gas values are not greater than Tier 1 Values; therefore the vapor intrusion pathway for this analyte is not of potential concern.
(11) Adjusted Tier 1 Screening Values were calculated using EPA's 2003 vapor intrusion model, using the protocol established in CRWQCB 2001.
(12) Value is based upon m-xylenes.

Definitions:

COPC = Contaminant of potential concern
EPA = U.S. Environmental Protection Agency
J = Estimated value
C = Carcinogen
N = Noncancer
UG/L = Microgram per liter
UG/M3 = Microgram per cubic meter
> sol = Value was truncated to the solublity limit
-- = Not available
NA = Not Applicable

Reference:

CRWQCB 2001. Application of Risk-Based Screening Levels and Decision Making to Sites with Impacted Soil and Groundwater Volume I: Summary Tier 1 Lookup Tables. California Regional Water Quality Control Board - San Francisco Bay Region. Interim Final. December.

CRWQCB 2003. Update to Draft, Interim Soil Gas Screening Levels for Evaluation of Potential Indoor-Air Impacts. California Regional Water Quality Control Board - San Francisco Bay Region. File No. 1210.40 (RDB). March 31.

EPA 2002c. Draft Vapor Intrusion Guidance. November. Available on-line at http://www.epa.gov/correctiveaction/eis/vapor.htm

EPA 2003. Maximum Contaminant Levels. National Primary Drinking Water Regulations. June.

TABLE H1-5: ADVANCED TIER 1 EVALUATION OF THE VAPOR INTRUSION TO INDOOR AIR PATHWAY AT SITE 23

Appendix H, HHRA for CERCLA Sites 9, 13, 19, 22, and 23, Alameda Point, Alameda, California

CAS Number	Chemical	Maximum Concentration (Qualifier)	Units	Maximum Concentration Location	Maximum Concentration Date	Range of Detection Limits	Detection Frequency	Maximum Concentration (Last 8 Quarters - since June 2001)	Maximum Concentration (Last 4 Quarters - since June 2002)	Subsurface Vapor Intrusion Guidance Values (N/C) (1)		CRWQB Values Tier 1 Values (4)	CRWQB Values Source (4)	Adjusted CRWQB Values (Adjusted Tier 1 Values) (4)	No Further Evaluation	Advanced Tier 1 Evaluation (3)
Groundwater COPCs (ug/L)																
95-63-6	1,2,4-TRIMETHYLBENZENE	860 J	UG/L	530-MJ-MW-1	7/9/2001	0.5 - 1300	1 / 14	860 J	ND (0.5 U)	24	N	–	–	350 (11)		(8)
100-41-4	ETHYLBENZENE	15	UG/L	MW530-1	8/9/1995	0.5 - 1300	4 / 41	3 J	ND (0.5 U)	6.9	C (2)	170000 > sol	CRWQCB, 2001	48000	(5) (6) (7)	
98-82-8	ISOPROPYLBENZENE	1000 J	UG/L	530-MJ-MW-1	7/9/2001	0.5 - 1300	1 / 14	1000 J	ND (0.5 U)	8.4	N	–	–	127 (11)		(8)
91-20-3	NAPHTHALENE	1100	UG/L	530-MJ-MW-1	7/9/2001	1.8 - 1300	3 / 34	1100	ND (2 U)	150	N	9200	CRWQCB, 2001	2310	(6) (7)	
135-98-8	SEC-BUTYLBENZENE	1000	UG/L	530-MJ-MW-1	7/9/2001	0.5 - 1300	2 / 14	1000	0.2	250	N	–	–	3940 > sol (11)	(7)	
Soil Gas COPCs (ug/m3)																
71-43-2	BENZENE	104	UG/M^3	385-S23-019	7/27/2001	0.002 - 0.002	2 / 5	--	--	3.1	C	84	CRWQCB, 2003	NA		(10)
100-41-4	ETHYLBENZENE	540.14	UG/M^3	385-S23-955	7/27/2001	0.002 - 0.002	2 / 5	--	--	22	C	210000	CRWQCB, 2003	NA	(9)	
127-18-4	TETRACHLOROETHENE	103.18	UG/M^3	385-S23-955	7/27/2001	0.002 - 42.98	1 / 5	--	--	8.1	C	410	CRWQCB, 2003	NA	(9)	

Notes:

UG/L Micrograms per Liter
UG/M^3 Microgram per cubic meter
J Estimated value
U The material was not analyzed for, but not detected.

(1) Subsurface Vapor Intrusion Guidance Values are the risk-based screening values used in the COPC screen. Values were adopted from Table 2c of EPA (2002c) draft vapor intrusion of residential exposure with a carcinogenic risk level of $1x10^{-6}$ and a hazard index of 1.
(2) Subsurface Vapor Intrusion Guidance Values in EPA 2002c, were listed as the Maximum Contaminant Levels (MCLs). However, risk based values, which were lower than the MCLs, were used in the COPC screen so that the analytes could be evaluated for risk-based exposure.
(3) The Tier 1 evaluation includes evaluating the most rescent data (since June 2001) for current exposure. An Advanced Tier 1 evaluation will be conducted if necessary.
(4) CRWQB Values (Tier 1 Values) were developed by the CRWQB as an initial screen of the vapor intrusion pathway for residential exposure (CRWQB 2001). The Tier 1 soil gas values were updated by the CRWCB in March, 2003 to account for a smaller residential structure (1 story building) with a lower air exchange rate (1 per hour) (CRWQB 2003). Adjusted CRWQB Values (Adjusted Tier 1 Values) were subsequently calculated by the Navy to incorpoate the changes in the size of the building and lower air exchange rate established in CRWQB 2003. Also, the Adjusted Tier 1 Values incorporate the latest toxicity values.
(5) The maximum concentration since June 2001 and/or June 2002 does not exceed the Subsurface Vapor Intrusion Guidance Value. Also, current conditions indicate that concentrations are follwing a decreasing trend and the vapor intrusion pathway for this analyte is not of potential concern.
(6) The maximum concentration does not exceed the Tier 1 Value (2 story residential home); therefore the vapor intrusion pathway for this analyte is not of potential concern.
(7) The maximum concentration does not exceed the Adjusted Tier 1 Value (1 story residential home); therefore the vapor intrusion pathway for this analyte is not of potential concern.
(8) The maximum concentration does exceed the Adjusted Tier 1 Value (1 story residential home); therefore the vapor intrusion pathway for this analyte warrents further evalution.
(9) Soil gas values are not greater than Tier 1 Values; therefore the vapor intrusion pathway for this analyte is not of potential concern.
(10) Soil gas values are greater than Tier 1 Values; therefore, this analyte warrants an additional evaluation.
(11) Adjusted Tier 1 Screening Values were calculated using EPA's 2003 vapor intrusion model, using the protocol established in CRWQCB 2001.

Definitions:

COPC = Contaminant of potential concern
EPA = U.S. Environmental Protection Agency
J = Estimated value
C = Carcinogen
N = Noncancer
UG/L = Microgram per liter
UG/M3 = Microgram per cubic meter
-- = Not available
NA = Not Applicable
> sol = Value was truncated to the solublity limit

Reference:

CRWQCB 2001. Application of Risk-Based Screening Levels and Decision Making to Sites with Impacted Soil and Groundwater Volume I: Summary Tier 1 Lookup Tables. California Regional Water Quality Control Board - San Francisco Bay Region. Interim Final. December.

CRWQCB 2003. Update to Draft, Interim Soil Gas Screening Levels for Evaluation of Potential Indoor-Air Impacts. California Regional Water Quality Control Board - San Francisco Bay Region. File No. 1210.40 (RDB). March 31.

EPA 2002c. Draft Vapor Intrusion Guidance. November. Available on-line at http://www.epa.gov/correctiveaction/eis/vapor.htm

Table H1-6: Summary of Site-Specific Input Parameters for the Vapor Intrusion Pathway

Appendix H, HHRA for CERCLA Sites 9, 13, 19, 22, and 23, Alameda Point, Alameda, California

Site	Depth below grade to bottom of enclosed space floor	Water-Filled Porosity (a)	Air-Filled Porosity = n - Tw	Soil Bulk Density (b)	Soil Porosity = 1 Bd/Ps (a)	Average Depth to Groundwater	Soil Gas Sampling Depth Below Grade	Vadose Zone Soil Type	Average Soil/GW Temp.	Average Soil/GW Temp.	Thickness of Soil Stratum	Soil Stratum Directly Above Water Table	Enclosed Space Floor Thickness	Soil-Bldg. Pressure Different.	Enclosed Space Floor Length [c]	Enclosed Space Floor Width [c]	Enclosed Space Height [c]	Floor- Wall Seam Crack Width	Indoor Air Exchange Rate
Source	(default value)	(calculated)	(site-specific)	(site-specific)	(site-specific)	(site-specific)	(site-specific)	(site-specific)	(site-specific)	(calculated)	(site-specific)		(default value)	(default value	(default value)	(default value)	(default value)	(default value)	(default value)
Units	cm	Unitless	Unitless	g/cm^3	Unitless	(cm)	(cm)	Unitless	degree F	degree C	cm	(A, B, or C)	cm	$g/cm\text{-}s^2$	cm	cm	cm	cm	1/hr
Site 9 - Hypothetical Future Resident	15 (4)	0.163	0.235 (2)	1.62 (2)	0.398 (2)	178.5 (1)	45.7 (8)	S (2)	57 (3)	13.89	178.5 (1)	A	15 (4)	40 (4)	961 (4)	961 (4)	244 (5)	0.1 (4)	1 (5)
Site 9 - Current/Future Commercial/Industrial Building (Typical Size)	15 (4)	0.163	0.235 (2)	1.62 (2)	0.398 (2)	178.5 (1)	45.7 (8)	S (2)	57 (3)	13.89	178.5 (1)	A	15 (4)	40 (4)	961 (4)	961 (4)	488 (4)	0.1 (4)	5 (4)
Site 22 - Hypothetical Future Resident	15 (4)	0.086	0.333 (6)	1.56 (6)	0.419 (6)	139.0 (7)	45.7 (8)	S (6)	57 (3)	13.89	139.0 (7)	A	15 (4)	40 (4)	961 (4)	961 (4)	244 (5)	0.1 (4)	1 (5)
Site 22 - Current/Future Commercial/Industrial Building (Typical Size)	15 (4)	0.086	0.333 (6)	1.56 (6)	0.419 (6)	139.0 (7)	45.7 (8)	S (6)	57 (3)	13.89	139.0 (7)	A	15 (4)	40 (4)	961 (4)	961 (4)	488 (4)	0.1 (4)	5 (4)

Notes

(1) The average depth to groundwater (i.e. thickness of the soil stratum) was determined from the June 2002 groundwater montoring of wells MW410-1 and MW410-2 (average depth).

(2) Properties were adopted from S09-DGS-SG01 and S09-DGS-SG02 samples collected for evaluation of soil gas samples (average values).

(3) Average soil and groundwater temperature were determined from Figure 8 of EPA, 2000.

(4) Default value established in CRWQCB 2001 and its subsequent update (CRWQCB 2003).

(5) Default values that were established in CRWQCB 2001 were updated to a more conservative (1-story resident) in the 2003 update document (CRWQCB 2003).

(6) Properties were adopted from S22-DGS-SG01 and S22-DGS-SG02 samples collected for evaluation of soil gas samples (average values).

(7) The average depth to groundwater (i.e. thickness of the soil stratum) was determined from the June 2002 groundwater montoring of wells MW547-3 and M07C-08 (average depth).

(8) Soil gas depth below grade based upon the shallowest soil gas sample at the site (1.5-feet below ground surface).

S = sand

References

CRWQCB 2001. Application of Risk-Based Screening Levels and Decision Making to Sites with Impacted Soil and Groundwater Volume I: Summary Tier 1 Lookup Tables. California Regional Water Quality Control Board - San Francisco Bay Region. Interim Final. December.

CRWQCB 2003. Update to Draft, Interim Soil Gas Screening Levels for Evaluation of Potential Indoor-Air Impacts. California Regional Water Quality Control Board - San Francisco Bay Region. File No. 1210.40 (RDB). March 31.

Johnson, Paul C. and Robert A. Ettinger. Heuristic Model for Predicting the Intrusion Rate of Contaminant Vapors into Buildings. *Environ. Sci. Technol* . 1991. 25, 1445-1452.

USEPA, 2000 = U.S. Environmental Protection Agency. User's Guide for the Johnson and Ettinger (1991) Model for Subsurface Vapor Intrusion into Buildings. Office of Emergency and Remedial Response, Toxics Integration Branch (5202G), Washington, D.C. December.

Table H1-7: Exposure Point Concentration Data for the Vapor Intrusion to Indoor Air Pathway
Appendix H, HHRA for CERCLA Sites 9, 13, 19, 22, and 23, Alameda Point, Alameda, California

Site Number	Site ID	Sample ID	Sample Date	Sample Start Depth	Analyte	Detected Concentration	Sample Qualifier
Groundwater Data (ug/L)							
Site 9 (a)	MW410-2	MW410-2-A1150	6/18/2002		VINYL CHLORIDE	9.9	
	MW410-2	385-S09-026	6/25/2001		VINYL CHLORIDE	10	
	MW410-2	MW410-2-A1344	9/5/2002		VINYL CHLORIDE	9.6	
	MW410-2	MW410-2-A1651	12/16/2002		VINYL CHLORIDE	12	
	MW410-2	MW410-2-A1997	4/9/2003		VINYL CHLORIDE	20	
	DHP-S09-06	280-S09-059	9/8/1994		VINYL CHLORIDE	220	
	SHP-S09-07	280-S09-061	9/7/1994		VINYL CHLORIDE	18	
Soil Gas Data (ug/m^3)							
Site 9	S09-DGS-SG03	385-S09-040	7/26/2001	1.5	BENZENE	1202	
	S09-DGS-SG03	385-S09-041	7/26/2001	4	BENZENE	123	
Site 22	S22-DGS-SG03	385-S22-013	7/26/2001	1.5	BENZENE	12235	J
	S22-DGS-SG03	385-S22-014	7/26/2001	4	BENZENE	106689	J
	S22-DGS-SG03	385-S22-013	7/26/2001	1.5	ETHYLBENZENE	10074	J
	S22-DGS-SG03	385-S22-014	7/26/2001	4	ETHYLBENZENE	146016	J
	S22-DGS-SG03	385-S22-013	7/26/2001	1.5	O-XYLENE	4141	J
	S22-DGS-SG03	385-S22-014	7/26/2001	4	O-XYLENE	75145	J
	S22-DGS-SG03	385-S22-013	7/26/2001	1.5	M-XYLENE	23898	J
	S22-DGS-SG03	385-S22-014	7/26/2001	4	M-XYLENE	389524	J
	S22-DGS-SG03	385-S22-013	7/26/2001	1.5	TOLUENE	25183	J
	S22-DGS-SG03	385-S22-014	7/26/2001	4	TOLUENE	247284	J

Definitions:

(a) The 95% UCL for vinyl chloride was 226 ug/L, based upon an assumed lognormal distribution using the H-UCL statistic. The maximum detected concentration (lower of the maximum and 95% UCL) was used as the exposure point concentration for the Reasonable Maximum Exposure Scenario. The mean concentration was 42.8 ug/L, which was used for the Central Tendency Evaluation.

ug/L	Microgram per liter
ug/m^3	Microgram per cubic meter
J	Estimated value
95% UCL	One-sided 95 percent upper confidence limit of the mean

Table H1-8: Summary of Infinite Indoor Air Concentrations for the Vapor Intrusion Pathway
Appendix H, HHRA for CERCLA Sites 9, 13, 19, 22, and 23, Alameda Point, Alameda, California

Site	Receptor	Groundwater			Soil Gas		
		Groundwater Volatile Organic Compound (VOC) Contaminants of Potential Concern (COPCs)	Groundwater Modeled Concentration	Indoor Air Concentration (a)	Soil Gas Volatile Organic Compound (VOC) Contaminants of Potential Concern (COPCs)	Soil Gas Modeled Concentration (ug/m^3) (c)	Indoor Air Concentration (a)
	Units	NA	ug/L	(ug/m^3)	NA	(ug/m^3)	(ug/m^3)
Reasonable Maximum Exposure (RME) Exposure Scenario - using the maximum detected concentration							
Site 9	Hypothetical Future Resident	VINYL CHLORIDE	220	46	NA	NA	NA
	Current/Future Commercial/Industrial Building			4.6			
Central Tendency Exposure (CTE) Scenario - using the mean concentration							
Site 9	Hypothetical Future Resident	VINYL CHLORIDE	42.8	8.9	NA	NA	NA
	Current/Future Commercial/Industrial Building			0.89			
Reasonable Maximum Exposure (RME) Exposure Scenario and Central Tendency Exposure (CTE) Scenario (b)							
Site 9	Hypothetical Future Resident	NA	NA	NA	BENZENE	1,202	0.79
	Current/Future Commercial/Industrial Building						0.079
Site 22	Hypothetical Future Resident	NA	NA	NA	BENZENE	12,235	14
	Current/Future Commercial/Industrial Building						1.4
	Hypothetical Future Resident	NA	NA	NA	ETHYLBENZENE	10,074	11
	Current/Future Commercial/Industrial Building						1.1
	Hypothetical Future Resident	NA	NA	NA	O-XYLENE	4,141	4.7
	Current/Future Commercial/Industrial Building						0.47
	Hypothetical Future Resident	NA	NA	NA	M-XYLENE	23,898	26
	Current/Future Commercial/Industrial Building						2.6
	Hypothetical Future Resident	NA	NA	NA	TOLUENE	25,183	29
	Current/Future Commercial/Industrial Building						2.9

Notes
(a) Indoor air concentration was calculated using the Johnson and Ettinger Model for Subsurface Vapor Intrusion Into Buildings (USEPA, 2003).
(b) The small number of samples precludes the establishment of an estimated mean concentration for the Central Tendency Exposure (CTE) Scenario.
(c) The shallowest soil gas value was used to model vapor intrusion to indoor air.

References
USEPA, 2003 = U.S. Environmental Protection Agency. User's Guide for the Johnson and Ettinger (1991) Model for Subsurface Vapor Intrusion into Buildings. Office of Emergency and Remedial Response, Toxics Integration Branch (5202G), Washington, D.C. December.

ATTACHMENT H2
CENTRAL TENDENCY ESTIMATES

TABLES

IR Site 9 Chemical Noncancer Hazards

H2-7.1.1.CTE	EPA RAGS Part D Table 7b, Calculation of CTE Chemical Noncancer Hazards, IR Site 9, Current/Future Industrial Worker
H2-7.1.2.CTE	EPA RAGS Part D Table 7b, Calculation of CTE Chemical Noncancer Hazards, IR Site 9, Hypothetical Future Construction Worker
H2-7.1.3.CTE	EPA RAGS Part D Table 7b, Calculation of CTE Chemical Noncancer Hazards, IR Site 9, Hypothetical Future Adult Resident
H2-7.1.4.CTE	EPA RAGS Part D Table 7b, Calculation of CTE Chemical Noncancer Hazards, IR Site 9, Hypothetical Future Child Resident
H2-7.1.5.CTE	EPA RAGS Part D Table 7b, Calculation of CTE Chemical Noncancer Hazards, IR Site 9, Hypothetical Future Developed Construction Worker
H2-7.1.6.CTE	EPA RAGS Part D Table 7b, Calculation of CTE Chemical Noncancer Hazards, IR Site 9, Hypothetical Future Redeveloped Adult Resident
H2-7.1.7.CTE	EPA RAGS Part D Table 7b, Calculation of CTE Chemical Noncancer Hazards, IR Site 9, Hypothetical Future Redeveloped Child Resident

IR Site 13 Chemical Noncancer Hazards

H2-7.2.1.CTE	EPA RAGS Part D Table 7b, Calculation of CTE Chemical Noncancer Hazards, IR Site 13, Current/Future Industrial Worker
H2-7.2.2.CTE	EPA RAGS Part D Table 7b, Calculation of CTE Chemical Noncancer Hazards, IR Site 13, Hypothetical Future Construction Worker
H2-7.2.3.CTE	EPA RAGS Part D Table 7b, Calculation of CTE Chemical Noncancer Hazards, IR Site 13, Hypothetical Future Adult Resident
H2-7.2.4.CTE	EPA RAGS Part D Table 7b, Calculation of CTE Chemical Noncancer Hazards, IR Site 13, Hypothetical Future Child Resident
H2-7.2.5.CTE	EPA RAGS Part D Table 7b, Calculation of CTE Chemical Noncancer Hazards, IR Site 13, Hypothetical Future Developed Construction Worker
H2-7.2.6.CTE	EPA RAGS Part D Table 7b, Calculation of CTE Chemical Noncancer Hazards, IR Site 13, Hypothetical Future Redeveloped Adult Resident

H2-7.2.7.CTE EPA RAGS Part D Table 7b, Calculation of CTE Chemical Noncancer Hazards, IR Site 9, Hypothetical Future Redeveloped Child Resident

IR Site 19 Chemical Noncancer Hazards

H2-7.3.1.CTE EPA RAGS Part D Table 7b, Calculation of CTE Chemical Noncancer Hazards, IR Site 19, Current/Future Industrial Worker

H2-7.3.2.CTE EPA RAGS Part D Table 7b, Calculation of CTE Chemical Noncancer Hazards, IR Site 19, Hypothetical Future Construction Worker

H2-7.3.3.CTE EPA RAGS Part D Table 7b, Calculation of CTE Chemical Noncancer Hazards, IR Site 19, Hypothetical Future Adult Resident

H2-7.3.4.CTE EPA RAGS Part D Table 7b, Calculation of CTE Chemical Noncancer Hazards, IR Site 19, Hypothetical Future Child Resident

H2-7.3.5.CTE EPA RAGS Part D Table 7b, Calculation of CTE Chemical Noncancer Hazards, IR Site 19, Hypothetical Future Developed Construction Worker

H2-7.3.6.CTE EPA RAGS Part D Table 7b, Calculation of CTE Chemical Noncancer Hazards, IR Site 19, Hypothetical Future Redeveloped Adult Resident

H2-7.3.7.CTE EPA RAGS Part D Table 7b, Calculation of CTE Chemical Noncancer Hazards, IR Site 19, Hypothetical Future Redeveloped Child Resident

IR Site 22 Chemical Noncancer Hazards

H2-7.4.1.CTE EPA RAGS Part D Table 7b, Calculation of CTE Chemical Noncancer Hazards, IR Site 22, Current/Future Industrial Worker

H2-7.4.2.CTE EPA RAGS Part D Table 7b, Calculation of CTE Chemical Noncancer Hazards, IR Site 22, Hypothetical Future Construction Worker

H2-7.4.3.CTE EPA RAGS Part D Table 7b, Calculation of CTE Chemical Noncancer Hazards, IR Site 22, Hypothetical Future Adult Resident

H2-7.4.4.CTE EPA RAGS Part D Table 7b, Calculation of CTE Chemical Noncancer Hazards, IR Site 22, Hypothetical Future Child Resident

H2-7.4.5.CTE EPA RAGS Part D Table 7b, Calculation of CTE Chemical Noncancer Hazards, IR Site 22, Hypothetical Future Developed Construction Worker

H2-7.4.6.CTE EPA RAGS Part D Table 7b, Calculation of CTE Chemical Noncancer Hazards, IR Site 22, Hypothetical Future Redeveloped Adult Resident

H2-7.4.7.CTE EPA RAGS Part D Table 7b, Calculation of CTE Chemical Noncancer Hazards, IR Site 22, Hypothetical Future Redeveloped Child Resident

IR Site 23 Chemical Noncancer Hazards

H2-7.5.1.CTE EPA RAGS Part D Table 7b, Calculation of CTE Chemical Noncancer Hazards, IR Site 23, Current/Future Industrial Worker

H2-7.5.2.CTE EPA RAGS Part D Table 7b, Calculation of CTE Chemical Noncancer Hazards, IR Site 23, Hypothetical Future Construction Worker

H2-7.5.3.CTE EPA RAGS Part D Table 7b, Calculation of CTE Chemical Noncancer Hazards, IR Site 23, Hypothetical Future Adult Resident

H2-7.5.4.CTE EPA RAGS Part D Table 7b, Calculation of CTE Chemical Noncancer Hazards, IR Site 23, Hypothetical Future Child Resident

H2-7.5.5.CTE EPA RAGS Part D Table 7b, Calculation of CTE Chemical Noncancer Hazards, IR Site 23, Hypothetical Future Developed Construction Worker

H2-7.5.6.CTE EPA RAGS Part D Table 7b, Calculation of CTE Chemical Noncancer Hazards, IR Site 23, Hypothetical Future Redeveloped Adult Resident

H2-7.5.7.CTE EPA RAGS Part D Table 7b, Calculation of CTE Chemical Noncancer Hazards, IR Site 23, Hypothetical Future Redeveloped Child Resident

IR Site 9 Chemical Cancer Risks

H2-8.1.1.CTE EPA RAGS Part D Table 7a, Calculation of CTE Chemical Cancer Risks, IR Site 9, Current/Future Industrial Worker

H2-8.1.2.CTE EPA RAGS Part D Table 7a, Calculation of CTE Chemical Cancer Risks, IR Site 9, Hypothetical Future Construction Worker

H2-8.1.3.CTE EPA RAGS Part D Table 7a, Calculation of CTE Chemical Cancer Risks, IR Site 9, Hypothetical Future Adult Resident

H2-8.1.4.CTE EPA RAGS Part D Table 7a, Calculation of CTE Chemical Cancer Risks, IR Site 9, Hypothetical Future Child Resident

H2-8.1.5.CTE EPA RAGS Part D Table 7a, Calculation of CTE Chemical Cancer Risks, IR Site 9, Hypothetical Future Developed Construction Worker

H2-8.1.6.CTE EPA RAGS Part D Table 7a, Calculation of CTE Chemical Cancer Risks, IR Site 9, Hypothetical Future Redeveloped Adult Resident

H2-8.1.7.CTE EPA RAGS Part D Table 7a, Calculation of CTE Chemical Cancer Risks, IR Site 9, Hypothetical Future Redeveloped Child Resident

IR Site 13 Chemical Cancer Risks

H2-8.2.1.CTE EPA RAGS Part D Table 7a, Calculation of CTE Chemical Cancer Risks, IR Site 13, Current/Future Industrial Worker

H2-8.2.2.CTE EPA RAGS Part D Table 7a, Calculation of CTE Chemical Cancer Risks, IR Site 13, Hypothetical Future Construction Worker

H2-8.2.3.CTE EPA RAGS Part D Table 7a, Calculation of CTE Chemical Cancer Risks, IR Site 13, Hypothetical Future Adult Resident

H2-8.2.4.CTE EPA RAGS Part D Table 7a, Calculation of CTE Chemical Cancer Risks, IR Site 13, Hypothetical Future Child Resident

H2-8.2.5.CTE EPA RAGS Part D Table 7a, Calculation of CTE Chemical Cancer Risks, IR Site 13, Hypothetical Future Developed Construction Worker

H2-8.2.6.CTE EPA RAGS Part D Table 7a, Calculation of CTE Chemical Cancer Risks, IR Site 13, Hypothetical Future Redeveloped Adult Resident

H2-8.2.7.CTE EPA RAGS Part D Table 7a, Calculation of CTE Chemical Cancer Risks, IR Site 13, Hypothetical Future Redeveloped Child Resident

IR Site 19 Chemical Cancer Risks

H2-8.3.1.CTE EPA RAGS Part D Table 7a, Calculation of CTE Chemical Cancer Risks, IR Site 19, Current/Future Industrial Worker

H2-8.3.2.CTE EPA RAGS Part D Table 7a, Calculation of CTE Chemical Cancer Risks, IR Site 19, Hypothetical Future Construction Worker

H2-8.3.3.CTE EPA RAGS Part D Table 7a, Calculation of CTE Chemical Cancer Risks, IR Site 19, Hypothetical Future Adult Resident

H2-8.3.4.CTE EPA RAGS Part D Table 7a, Calculation of CTE Chemical Cancer Risks, IR Site 19, Hypothetical Future Child Resident

H2-8.3.5.CTE EPA RAGS Part D Table 7a, Calculation of CTE Chemical Cancer Risks, IR Site 19, Hypothetical Future Developed Construction Worker

H2-8.3.6.CTE EPA RAGS Part D Table 7a, Calculation of CTE Chemical Cancer Risks, IR Site 19, Hypothetical Future Redeveloped Adult Resident

H2-8.3.7.CTE EPA RAGS Part D Table 7a, Calculation of CTE Chemical Cancer Risks, IR Site 19, Hypothetical Future Redeveloped Child Resident

IR Site 22 Chemical Cancer Risks

H2-8.4.1.CTE EPA RAGS Part D Table 7a. Calculation of CTE Chemical Cancer Risks. IR Site 22. Current/Future Industrial Worker

H2-8.4.2.CTE EPA RAGS Part D Table 7a. Calculation of CTE Chemical Cancer Risks. IR Site 22, Hypothetical Future Construction Worker

H2-8.4.3.CTE EPA RAGS Part D Table 7a. Calculation of CTE Chemical Cancer Risks. IR Site 22. Hypothetical Future Adult Resident

H2-8.4.4.CTE EPA RAGS Part D Table 7a. Calculation of CTE Chemical Cancer Risks. IR Site 22, Hypothetical Future Child Resident

H2-8.4.5.CTE EPA RAGS Part D Table 7a. Calculation of CTE Chemical Cancer Risks. IR Site 22. Hypothetical Future Developed Construction Worker

H2-8.4.6.CTE EPA RAGS Part D Table 7a. Calculation of CTE Chemical Cancer Risks. IR Site 22, Hypothetical Future Redeveloped Adult Resident

H2-8.4.7.CTE EPA RAGS Part D Table 7a. Calculation of CTE Chemical Cancer Risks. IR Site 22. Hypothetical Future Redeveloped Child Resident

IR Site 23 Chemical Cancer Risks

H2-8.5.1.CTE EPA RAGS Part D Table 7a. Calculation of CTE Chemical Cancer Risks. IR Site 23. Current/Future Industrial Worker

H2-8.5.2.CTE EPA RAGS Part D Table 7a. Calculation of CTE Chemical Cancer Risks. IR Site 23. Hypothetical Future Construction Worker

H2-8.5.3.CTE EPA RAGS Part D Table 7a. Calculation of CTE Chemical Cancer Risks. IR Site 23. Hypothetical Future Adult Resident

H2-8.5.4.CTE EPA RAGS Part D Table 7a. Calculation of CTE Chemical Cancer Risks. IR Site 23. Hypothetical Future Child Resident

H2-8.5.5.CTE EPA RAGS Part D Table 7a. Calculation of CTE Chemical Cancer Risks. IR Site 23. Hypothetical Future Developed Construction Worker

H2-8.5.6.CTE EPA RAGS Part D Table 7a. Calculation of CTE Chemical Cancer Risks. IR Site 23, Hypothetical Future Redeveloped Adult Resident

H2-8.5.7.CTE EPA RAGS Part D Table 7a. Calculation of CTE Chemical Cancer Risks. IR Site 23. Hypothetical Future Redeveloped Child Resident

IR Site 9 Summaries of Receptor Risks and Hazards for COPCs

H2-9.1.1.CTE EPA RAGS Part D Table 9. Summary of Receptor Risks and Hazards for COPCs. IR Site 9. Current/Future Industrial Worker

H2-9.1.2.CTE	EPA RAGS Part D Table 9, Summary of Receptor Risks and Hazards for COPCs, IR Site 9, Hypothetical Future Construction Worker
H2-9.1.3.CTE	EPA RAGS Part D Table 9, Summary of Receptor Risks and Hazards for COPCs, IR Site 9, Hypothetical Future Adult Resident
H2-9.1.4.CTE	EPA RAGS Part D Table 9, Summary of Receptor Risks and Hazards for COPCs, IR Site 9, Hypothetical Future Child Resident
H2-9.1.5.CTE	EPA RAGS Part D Table 9, Summary of Receptor Risks and Hazards for COPCs, IR Site 9, Hypothetical Future Developed Construction Worker
H2-9.1.6.CTE	EPA RAGS Part D Table 9, Summary of Receptor Risks and Hazards for COPCs, IR Site 9, Hypothetical Future Redeveloped Adult Resident
H2-9.1.7.CTE	EPA RAGS Part D Table 9, Summary of Receptor Risks and Hazards for COPCs, IR Site 9, Hypothetical Future Redeveloped Child Resident

IR Site 13 Summaries of Receptor Risks and Hazards for COPCs

H2-9.2.1.CTE	EPA RAGS Part D Table 9, Summary of Receptor Risks and Hazards for COPCs, IR Site 13, Current/Future Industrial Worker
H2-9.2.2.CTE	EPA RAGS Part D Table 9, Summary of Receptor Risks and Hazards for COPCs, IR Site 13, Hypothetical Future Construction Worker
H2-9.2.3.CTE	EPA RAGS Part D Table 9, Summary of Receptor Risks and Hazards for COPCs, IR Site 13, Hypothetical Future Adult Resident
H2-9.2.4.CTE	EPA RAGS Part D Table 9, Summary of Receptor Risks and Hazards for COPCs, IR Site 13, Hypothetical Future Child Resident
H2-9.2.5.CTE	EPA RAGS Part D Table 9, Summary of Receptor Risks and Hazards for COPCs, IR Site 13, Hypothetical Future Developed Construction Worker
H2-9.2.6.CTE	EPA RAGS Part D Table 9, Summary of Receptor Risks and Hazards for COPCs, IR Site 13, Hypothetical Future Redeveloped Adult Resident
H2-9.2.7.CTE	EPA RAGS Part D Table 9, Summary of Receptor Risks and Hazards for COPCs, IR Site 13, Hypothetical Future Redeveloped Child Resident

IR Site 19 Summaries of Receptor Risks and Hazards for COPCs

H2-9.3.1.CTE	EPA RAGS Part D Table 9, Summary of Receptor Risks and Hazards for COPCs, IR Site 19, Current/Future Industrial Worker

H2-9.3.2.CTE	EPA RAGS Part D Table 9, Summary of Receptor Risks and Hazards for COPCs, IR Site 19, Hypothetical Future Construction Worker
H2-9.3.3.CTE	EPA RAGS Part D Table 9, Summary of Receptor Risks and Hazards for COPCs, IR Site 19, Hypothetical Future Adult Resident
H2-9.3.4.CTE	EPA RAGS Part D Table 9, Summary of Receptor Risks and Hazards for COPCs, IR Site 19, Hypothetical Future Child Resident
H2-9.3.5.CTE	EPA RAGS Part D Table 9, Summary of Receptor Risks and Hazards for COPCs, IR Site 19, Hypothetical Future Developed Construction Worker
H2-9.3.6.CTE	EPA RAGS Part D Table 9, Summary of Receptor Risks and Hazards for COPCs, IR Site 19, Hypothetical Future Redeveloped Adult Resident
H2-9.3.7.CTE	EPA RAGS Part D Table 9, Summary of Receptor Risks and Hazards for COPCs, IR Site 19, Hypothetical Future Redeveloped Child Resident

IR Site 22 Summaries of Receptor Risks and Hazards for COPCs

H2-9.4.1.CTE	EPA RAGS Part D Table 9, Summary of Receptor Risks and Hazards for COPCs, IR Site 22, Current/Future Industrial Worker
H2-9.4.2.CTE	EPA RAGS Part D Table 9, Summary of Receptor Risks and Hazards for COPCs, IR Site 22, Hypothetical Future Construction Worker
H2-9.4.3.CTE	EPA RAGS Part D Table 9, Summary of Receptor Risks and Hazards for COPCs, IR Site 22, Hypothetical Future Adult Resident
H2-9.4.4.CTE	EPA RAGS Part D Table 9, Summary of Receptor Risks and Hazards for COPCs, IR Site 22, Hypothetical Future Child Resident
H2-9.4.5.CTE	EPA RAGS Part D Table 9, Summary of Receptor Risks and Hazards for COPCs, IR Site 22, Hypothetical Future Developed Construction Worker
H2-9.4.6.CTE	EPA RAGS Part D Table 9, Summary of Receptor Risks and Hazards for COPCs, IR Site 22, Hypothetical Future Redeveloped Adult Resident
H2-9.4.7.CTE	EPA RAGS Part D Table 9, Summary of Receptor Risks and Hazards for COPCs, IR Site 22, Hypothetical Future Redeveloped Child Resident

IR Site 23 Summaries of Receptor Risks and Hazards for COPCs

H2-9.5.1.CTE EPA RAGS Part D Table 9, Summary of Receptor Risks and Hazards for COPCs, IR Site 23, Current/Future Industrial Worker

H2-9.5.2.CTE EPA RAGS Part D Table 9, Summary of Receptor Risks and Hazards for COPCs, IR Site 23, Hypothetical Future Construction Worker

H2-9.5.3.CTE EPA RAGS Part D Table 9, Summary of Receptor Risks and Hazards for COPCs, IR Site 23, Hypothetical Future Adult Resident

H2-9.5.4.CTE EPA RAGS Part D Table 9, Summary of Receptor Risks and Hazards for COPCs, IR Site 23, Hypothetical Future Child Resident

H2-9.5.5.CTE EPA RAGS Part D Table 9, Summary of Receptor Risks and Hazards for COPCs, IR Site 23, Hypothetical Future Developed Construction Worker

H2-9.5.6.CTE EPA RAGS Part D Table 9, Summary of Receptor Risks and Hazards for COPCs, IR Site 23, Hypothetical Future Redeveloped Adult Resident

H2-9.5.7.CTE EPA RAGS Part D Table 9, Summary of Receptor Risks and Hazards for COPCs, IR Site 23, Hypothetical Future Redeveloped Child Resident

IR Site 9 Risk Summaries

H2-10.1.1.CTE EPA RAGS Part D Table 10, Risk Summary, IR Site 9, Current/Future Industrial Worker

H2-10.1.2.CTE EPA RAGS Part D Table 10, Risk Summary, IR Site 9, Hypothetical Future Construction Worker

H2-10.1.3.CTE EPA RAGS Part D Table 10, Risk Summary, IR Site 9, Hypothetical Future Adult Resident

H2-10.1.4.CTE EPA RAGS Part D Table 10, Risk Summary, IR Site 9, Hypothetical Future Child Resident

H2-10.1.5.CTE EPA RAGS Part D Table 10, Risk Summary, IR Site 9, Hypothetical Future Developed Construction Worker

H2-10.1.6.CTE EPA RAGS Part D Table 10, Risk Summary, IR Site 9, Hypothetical Future Redeveloped Adult Resident

H2-10.1.7.CTE EPA RAGS Part D Table 10, Risk Summary, IR Site 9, Hypothetical Future Redeveloped Child Resident

IR Site 13 Risk Summaries

H2-10.2.1.CTE EPA RAGS Part D Table 10, Risk Summary, IR Site 13, Current/Future Industrial Worker

H2-10.2.2.CTE	EPA RAGS Part D Table 10, Risk Summary, IR Site 13, Hypothetical Future Construction Worker
H2-10.2.3.CTE	EPA RAGS Part D Table 10, Risk Summary, IR Site 13, Hypothetical Future Adult Resident
H2-10.2.4.CTE	EPA RAGS Part D Table 10, Risk Summary, IR Site 13, Hypothetical Future Child Resident
H2-10.2.5.CTE	EPA RAGS Part D Table 10, Risk Summary, IR Site 13, Hypothetical Future Developed Construction Worker
H2-10.2.6.CTE	EPA RAGS Part D Table 10, Risk Summary, IR Site 13, Hypothetical Future Redeveloped Adult Resident
H2-10.2.7.CTE	EPA RAGS Part D Table 10, Risk Summary, IR Site 13, Hypothetical Future Redeveloped Child Resident

IR Site 19 Risk Summaries

H2-10.3.1.CTE	EPA RAGS Part D Table 10, Risk Summary, IR Site 19, Current/Future Industrial Worker
H2-10.3.2.CTE	EPA RAGS Part D Table 10, Risk Summary, IR Site 19, Hypothetical Future Construction Worker
H2-10.3.3.CTE	EPA RAGS Part D Table 10, Risk Summary, IR Site 19, Hypothetical Future Adult Resident
H2-10.3.4.CTE	EPA RAGS Part D Table 10, Risk Summary, IR Site 19, Hypothetical Future Child Resident
H2-10.3.5.CTE	EPA RAGS Part D Table 10, Risk Summary, IR Site 19, Hypothetical Future Developed Construction Worker
H2-10.3.6.CTE	EPA RAGS Part D Table 10, Risk Summary, IR Site 19, Hypothetical Future Redeveloped Adult Resident
H2-10.3.7.CTE	EPA RAGS Part D Table 10, Risk Summary, IR Site 19, Hypothetical Future Redeveloped Child Resident

IR Site 22 Risk Summaries

H2-10.4.1.CTE	EPA RAGS Part D Table 10, Risk Summary, IR Site 22, Current/Future Industrial Worker
H2-10.4.2.CTE	EPA RAGS Part D Table 10, Risk Summary, IR Site 22, Hypothetical Future Construction Worker
H2-10.4.3.CTE	EPA RAGS Part D Table 10, Risk Summary, IR Site 22, Hypothetical Future Adult Resident
H2-10.4.4.CTE	EPA RAGS Part D Table 10, Risk Summary, IR Site 22, Hypothetical Future Child Resident
H2-10.4.5.CTE	EPA RAGS Part D Table 10, Risk Summary, IR Site 22, Hypothetical Future Developed Construction Worker

H2-10.4.6.CTE EPA RAGS Part D Table 10, Risk Summary, IR Site 22, Hypothetical Future Redeveloped Adult Resident

H2-10.4.7.CTE EPA RAGS Part D Table 10, Risk Summary, IR Site 22, Hypothetical Future Redeveloped Child Resident

IR Site 23 Risk Summaries

H2-10.5.1.CTE EPA RAGS Part D Table 10, Risk Summary, IR Site 23, Current/Future Industrial Worker

H2-10.5.2.CTE EPA RAGS Part D Table 10, Risk Summary, IR Site 23, Hypothetical Future Construction Worker

H2-10.5.3.CTE EPA RAGS Part D Table 10, Risk Summary, IR Site 23, Hypothetical Future Adult Resident

H2-10.5.4.CTE EPA RAGS Part D Table 10, Risk Summary, IR Site 23, Hypothetical Future Child Resident

H2-10.5.5.CTE EPA RAGS Part D Table 10, Risk Summary, IR Site 23, Hypothetical Future Developed Construction Worker

H2-10.5.6.CTE EPA RAGS Part D Table 10, Risk Summary, IR Site 23, Hypothetical Future Redeveloped Adult Resident

H2-10.5.7.CTE EPA RAGS Part D Table 10, Risk Summary, IR Site 23, Hypothetical Future Redeveloped Child Resident

HHRA RISK TABLES

Central Tendency Exposure
Site 09
Alameda Point, Alameda, California

TABLE H2-7.1.1.CTE
EPA RAGS PART D TABLE 7b
CALCULATION OF CTE CHEMICAL NONCANCER HAZARDS
CURRENT INDUSTRIAL WORKER
SITE 09, ALAMEDA POINT, ALAMEDA, CALIFORNIA

Scenario Timeframe:	Future
Receptor Population:	Industrial Worker
Receptor Age:	Adult

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Non-Cancer Hazard Calculations				
							Intake/Exposure Concentration		RfD/RfC		Hazard Quotient
					Value	Units	Value	Units	Value	Units	
Soil (0-2)	Soil	Site Soil	Ingestion	Arsenic	2.45E+00	mg/kg	1.0E-06	mg/kg-day	3.0E-04	mg/kg-day	3.5E-03
			Exp. Route Total								3.5E-03
			Dermal	Arsenic	2.45E+00	mg/kg	4.2E-08	mg/kg-day	3.0E-04	mg/kg-day	1.4E-04
			Exp. Route Total								1.4E-04
		Exposure Point Total									3.6E-03
	Exposure Medium Total										3.6E-03
	Air	Outdoor Air	Inhalation (particulates)	Arsenic	2.45E+00	mg/kg	4.0E-11	mg/kg-day	--	--	--
			Exp. Route Total								0.0E+00
		Exposure Point Total									0.0E+00
	Exposure Medium Total										0.0E+00
Medium Total											3.6E-03
Groundwater	Groundwater	Indoor Air (Vapor Intrusion)	Inhalation	Benzene	7.90E-02	(a) ug/m^3	1.7E-06	mg/kg-day	8.6E-03	mg/kg-day	2.0E-04
				Vinyl chloride	8.90E-01	(a) ug/m^3	1.9E-05	mg/kg-day	2.9E-02	mg/kg-day	6.7E-04
			Exp. Route Total								8.6E-04
		Exposure Point Total									8.6E-04
	Exposure Medium Total										8.6E-04
Medium Total											8.6E-04
										Total of Receptor Hazards Across All Media	4.5E-03

Notes:

--	Not Applicable or Not Available
EPC	Exposure point concentration
mg/kg	Milligram per kilogram
mg/kg-day	Milligram per kilogram per day
RfD	Reference dose
RfC	Reference concentration
CTE	Central tendency exposure

(a) See the Vapor Intrusion to Indoor Air Evaluation for determination of the modeled indoor air concentration.

TABLE H2-7.1.2.CTE
EPA RAGS PART D TABLE 7b
CALCULATION OF CTE CHEMICAL NONCANCER HAZARDS
CURRENT CONSTRUCTION WORKER
SITE 09, ALAMEDA POINT, ALAMEDA, CALIFORNIA

Scenario Timeframe:	Future
Receptor Population:	Construction Worker
Receptor Age:	Adult

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Non-Cancer Hazard Calculations				
					Value	Units	Intake/Exposure Concentration		RfD/RfC		Hazard Quotient
							Value	Units	Value	Units	
Soil (0-2)	Soil	Site Soil	Ingestion	Arsenic	2.45E+00	mg/kg	5.7E-07	mg/kg-day	3.0E-04	mg/kg-day	1.9E-03
			Exp. Route Total								1.9E-03
			Dermal	Arsenic	2.45E+00	mg/kg	5.7E-08	mg/kg-day	3.0E-04	mg/kg-day	1.9E-04
			Exp. Route Total								1.9E-04
		Exposure Point Total									2.1E-03
	Exposure Medium Total										2.1E-03
	Air	Outdoor Air	Inhalation (particulates)	Arsenic	2.45E+00	mg/kg	8.7E-11	mg/kg-day	--	--	--
			Exp. Route Total								0.0E+00
		Exposure Point Total									0.0E+00
	Exposure Medium Total										0.0E+00
Medium Total											2.1E-03
										Total of Receptor Hazards Across All Media	2.1E-03

Notes:

--	Not Applicable or Not Available
EPC	Exposure point concentration
mg/kg	Milligram per kilogram
mg/kg-day	Milligram per kilogram per day
RfD	Reference dose
RfC	Reference concentration
CTE	Central tendency exposure

TABLE H2-7.1.3.CTE
EPA RAGS PART D TABLE 7b
CALCULATION OF CTE CHEMICAL NONCANCER HAZARDS
CURRENT ADULT RESIDENT
SITE 09, ALAMEDA POINT, ALAMEDA, CALIFORNIA

Scenario Timeframe:	Future
Receptor Population:	Resident
Receptor Age:	Adult

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Non-Cancer Hazard Calculations				
					Value	Units	Intake/Exposure Concentration		RfD/RfC		Hazard Quotient
							Value	Units	Value	Units	
Soil (0-2)	Soil	Site Soil	Ingestion	Arsenic	2.45E+00	mg/kg	1.7E-06	mg/kg-day	3.0E-04	mg/kg-day	5.6E-03
			Exp. Route Total								5.6E-03
			Dermal	Arsenic	2.45E+00	mg/kg	5.7E-08	mg/kg-day	3.0E-04	mg/kg-day	1.9E-04
			Exp. Route Total								1.9E-04
		Exposure Point Total									5.8E-03
	Exposure Medium Total										5.8E-03
	Homegrown Produce	Homegrown Produce	Ingestion	Arsenic	2.45E+00	mg/kg	2.3E-06	mg/kg-day	3.0E-04	mg/kg-day	7.6E-03
			Exp. Route Total								7.6E-03
		Exposure Point Total									7.6E-03
	Exposure Medium Total										7.6E-03
	Air	Outdoor Air	Inhalation (particulates)	Arsenic	2.45E+00	mg/kg	2.1E-11	mg/kg-day	--	--	--
			Exp. Route Total								0.0E+00
		Exposure Point Total									0.0E+00
	Exposure Medium Total										0.0E+00
Medium Total											1.3E-02
Groundwater	Groundwater	Indoor Air (Vapor Intrusion)	Inhalation	Benzene	7.90E-01	(a) ug/m^3	9.0E-06	mg/kg-day	8.6E-03	mg/kg-day	1.0E-03
				Vinyl chloride	8.90E+00	(a) ug/m^3	1.0E-04	mg/kg-day	2.9E-02	mg/kg-day	3.5E-03
			Exp. Route Total								4.6E-03
		Exposure Point Total									4.6E-03
		Tap	Ingestion	1,1-Dichloroethane	5.06E-03	mg/L	9.7E-05	mg/kg-day	1.0E-01	mg/kg-day	9.7E-04
				1,2-Dichloroethane	6.00E-04	mg/L	1.2E-05	mg/kg-day	3.0E-02	mg/kg-day	3.8E-04
				1,2-Dichloroethene (Total)	9.47E-02	mg/L	1.8E-03	mg/kg-day	1.0E-02	mg/kg-day	1.8E-01
				1,2-Dichloropropane	2.00E-03	mg/L	3.8E-05	mg/kg-day	1.1E-03	mg/kg-day	3.5E-02
				1,2,3-Trichloropropane	3.00E-04	mg/L	5.8E-06	mg/kg-day	6.0E-03	mg/kg-day	9.6E-04
				1,3-Dichloropropane	6.72E-04	mg/L	1.3E-05	mg/kg-day	1.1E-03	mg/kg-day	1.2E-02
				2,2'-Oxybis(1-chloropropane)	7.00E-04	mg/L	1.3E-05	mg/kg-day	4.0E-02	mg/kg-day	3.4E-04
				2-Methylnaphthalene	1.80E-01	mg/L	3.5E-03	mg/kg-day	9.0E-03	mg/kg-day	3.8E-01
				4-Methylphenol	2.38E-01	mg/L	4.6E-03	mg/kg-day	5.0E-03	mg/kg-day	9.1E-01
				Antimony	4.17E-03	mg/L	8.0E-05	mg/kg-day	4.0E-04	mg/kg-day	2.0E-01
				Arsenic	1.32E-02	mg/L	2.5E-04	mg/kg-day	3.0E-04	mg/kg-day	8.4E-01
				Benzene	1.89E-03	mg/L	3.6E-05	mg/kg-day	4.0E-03	mg/kg-day	9.1E-03
				Benz(a)anthracene	1.00E-03	mg/L	1.9E-05	mg/kg-day	--	--	--

TABLE H2-7.1.3.CTE
EPA RAGS PART D TABLE 7b
CALCULATION OF CTE CHEMICAL NONCANCER HAZARDS
CURRENT ADULT RESIDENT
SITE 09, ALAMEDA POINT, ALAMEDA, CALIFORNIA

Scenario Timeframe:	Future
Receptor Population:	Resident
Receptor Age:	Adult

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Non-Cancer Hazard Calculations				
					Value	Units	Intake/Exposure Concentration		RfD/RfC		Hazard Quotient
							Value	Units	Value	Units	
				Benzo(a)pyrene	2.00E-03	mg/L	3.8E-05	mg/kg-day	--	--	--
				Benzo(b)fluoranthene	2.00E-03	mg/L	3.8E-05	mg/kg-day	--	--	--
				Benzo(k)fluoranthene	8.00E-04	mg/L	1.5E-05	mg/kg-day	--	--	--
				Chloroethane	3.70E-03	mg/L	7.1E-05	mg/kg-day	4.0E-01	mg/kg-day	1.8E-04
				Chrysene	1.00E-03	mg/L	1.9E-05	mg/kg-day	--	--	--
				Ethylbenzene	6.57E-03	mg/L	1.3E-04	mg/kg-day	1.0E-01	mg/kg-day	1.3E-03
				Indeno(1,2,3-cd)pyrene	1.00E-03	mg/L	1.9E-05	mg/kg-day	--	--	--
				Lead	1.67E-03	mg/L	3.2E-05	mg/kg-day	--	--	--
				Manganese	1.23E+00	mg/L	2.4E-02	mg/kg-day	2.4E-02	mg/kg-day	9.8E-01
				Methyl-t-butyl ether	4.76E-03	mg/L	9.1E-05	mg/kg-day	8.6E-01	mg/kg-day	1.1E-04
				Naphthalene	6.32E-01	mg/L	1.2E-02	mg/kg-day	2.0E-02	mg/kg-day	6.1E-01
				Pentachlorophenol	2.00E-03	mg/L	3.8E-05	mg/kg-day	3.0E-02	mg/kg-day	1.3E-03
				Tetrachloroethene	1.98E-03	mg/L	3.8E-05	mg/kg-day	1.0E-02	mg/kg-day	3.8E-03
				Trichloroethene	2.37E-03	mg/L	4.5E-05	mg/kg-day	3.0E-04	mg/kg-day	1.5E-01
				Vinyl chloride	7.74E-03	mg/L	1.5E-04	mg/kg-day	3.0E-03	mg/kg-day	4.9E-02
				Xylene (Total)	5.18E-02	mg/L	9.9E-04	mg/kg-day	2.0E-01	mg/kg-day	5.0E-03
			Exp. Route Total								**4.4E+00**
			Dermal (bathing/ showering)	1,1-Dichloroethane	5.06E-03	mg/L	2.1E-06	mg/kg-day	1.0E-01	mg/kg-day	2.1E-05
				1,2-Dichloroethane	6.00E-04	mg/L	1.6E-07	mg/kg-day	3.0E-02	mg/kg-day	5.2E-06
				1,2-Dichloroethene (Total)	9.47E-02	mg/L	4.5E-05	mg/kg-day	1.0E-02	mg/kg-day	4.5E-03
				1,2-Dichloropropane	2.00E-03	mg/L	9.6E-07	mg/kg-day	1.1E-03	mg/kg-day	8.7E-04
				1,2,3-Trichloropropane	3.00E-04	mg/L	1.4E-07	mg/kg-day	6.0E-03	mg/kg-day	2.3E-05
				1,3-Dichloropropane	6.72E-04	mg/L	3.2E-07	mg/kg-day	1.1E-03	mg/kg-day	2.9E-04
				2,2'-Oxybis(1-chloropropane)	7.00E-04	mg/L	3.3E-07	mg/kg-day	4.0E-02	mg/kg-day	8.2E-06
				2-Methylnaphthalene	1.80E-01	mg/L	5.2E-04	mg/kg-day	9.0E-03	mg/kg-day	5.8E-02
				4-Methylphenol	2.38E-01	mg/L	1.1E-04	mg/kg-day	5.0E-03	mg/kg-day	2.2E-02
				Antimony	4.17E-03	mg/L	2.6E-07	mg/kg-day	4.0E-04	mg/kg-day	6.4E-04
				Arsenic	1.32E-02	mg/L	8.1E-07	mg/kg-day	3.0E-04	mg/kg-day	2.7E-03
				Benzene	1.89E-03	mg/L	2.4E-06	mg/kg-day	4.0E-03	mg/kg-day	6.1E-04
				Benz(a)anthracene	1.00E-03	mg/L	2.9E-05	mg/kg-day	--	--	--
				Benzo(a)pyrene	2.00E-03	mg/L	8.6E-05	mg/kg-day	--	--	--
				Benzo(b)fluoranthene	2.00E-03	mg/L	8.6E-05	mg/kg-day	--	--	--
				Benzo(k)fluoranthene	8.00E-04	mg/L	1.1E-05	mg/kg-day	--	--	--
				Chloroethane	3.70E-03	mg/L	1.4E-06	mg/kg-day	4.0E-01	mg/kg-day	3.5E-06

TABLE H2-7.1.3.CTE
EPA RAGS PART D TABLE 7b
CALCULATION OF CTE CHEMICAL NONCANCER HAZARDS
CURRENT ADULT RESIDENT
SITE 09, ALAMEDA POINT, ALAMEDA, CALIFORNIA

Scenario Timeframe:	Future
Receptor Population:	Resident
Receptor Age:	Adult

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Non-Cancer Hazard Calculations				
					Value	Units	Intake/Exposure Concentration		RfD/RfC		Hazard Quotient
							Value	Units	Value	Units	
				Chrysene	1.00E-03	mg/L	2.9E-05	mg/kg-day	--	--	--
				Ethylbenzene	6.57E-03	mg/L	2.0E-05	mg/kg-day	1.0E-01	mg/kg-day	2.0E-04
				Indeno(1,2,3-cd)pyrene	1.00E-03	mg/L	6.2E-05	mg/kg-day	--	--	--
				Lead	1.67E-03	mg/L	1.0E-07	mg/kg-day	--	--	--
				Manganese	1.23E+00	mg/L	7.6E-05	mg/kg-day	2.4E-02	mg/kg-day	3.2E-03
				Methyl-t-butyl ether	4.76E-03	mg/L	6.2E-07	mg/kg-day	8.6E-01	mg/kg-day	7.2E-07
				Naphthalene	6.32E-01	mg/L	1.8E-03	mg/kg-day	2.0E-02	mg/kg-day	9.2E-02
				Pentachlorophenol	2.00E-03	mg/L	4.8E-05	mg/kg-day	3.0E-02	mg/kg-day	1.6E-03
				Tetrachloroethene	1.98E-03	mg/L	4.0E-06	mg/kg-day	1.0E-02	mg/kg-day	4.0E-04
				Trichloroethene	2.37E-03	mg/L	1.8E-06	mg/kg-day	3.0E-04	mg/kg-day	5.8E-03
				Vinyl chloride	7.74E-03	mg/L	2.7E-06	mg/kg-day	3.0E-03	mg/kg-day	8.9E-04
				Xylene (Total)	5.18E-02	mg/L	1.7E-04	mg/kg-day	2.0E-01	mg/kg-day	8.5E-04
			Exp. Route Total								1.9E-01
			Inhalation (bathing/ showering)	1,1-Dichloroethane	5.06E-03	mg/L	3.0E-07	mg/kg-day	1.4E-01	mg/kg-day	2.1E-06
				1,2-Dichloroethane	6.00E-04	mg/L	3.6E-08	mg/kg-day	1.4E-03	mg/kg-day	2.5E-05
				1,2-Dichloroethene (Total)	9.47E-02	mg/L	5.6E-06	mg/kg-day	1.0E-02	mg/kg-day	5.6E-04
				1,2-Dichloropropane	2.00E-03	mg/L	1.2E-07	mg/kg-day	1.1E-03	mg/kg-day	1.1E-04
				1,2,3-Trichloropropane	3.00E-04	mg/L	1.8E-08	mg/kg-day	1.4E-03	mg/kg-day	1.3E-05
				1,3-Dichloropropane	6.72E-04	mg/L	4.0E-08	mg/kg-day	1.1E-03	mg/kg-day	3.6E-05
				2,2'-Oxybis(1-chloropropane)	7.00E-04	mg/L	4.1E-08	mg/kg-day	4.0E-02	mg/kg-day	1.0E-06
				2-Methylnaphthalene	1.80E-01	mg/L	1.1E-05	mg/kg-day	8.6E-04	mg/kg-day	1.2E-02
				Benzene	1.89E-03	mg/L	1.1E-07	mg/kg-day	8.6E-03	mg/kg-day	1.3E-05
				Chloroethane	3.70E-03	mg/L	2.2E-07	mg/kg-day	2.9E+00	mg/kg-day	7.6E-08
				Ethylbenzene	6.57E-03	mg/L	3.9E-07	mg/kg-day	2.9E-01	mg/kg-day	1.3E-06
				Methyl-t-butyl ether	4.76E-03	mg/L	2.8E-07	mg/kg-day	8.6E-01	mg/kg-day	3.3E-07
				Naphthalene	6.32E-01	mg/L	3.7E-05	mg/kg-day	8.6E-04	mg/kg-day	4.4E-02
				Tetrachloroethene	1.98E-03	mg/L	1.2E-07	mg/kg-day	1.7E-01	mg/kg-day	6.9E-07
				Trichloroethene	2.37E-03	mg/L	1.4E-07	mg/kg-day	1.0E-02	mg/kg-day	1.4E-05
				Vinyl chloride	7.74E-03	mg/L	4.6E-07	mg/kg-day	2.9E-02	mg/kg-day	1.6E-05
				Xylene (Total)	5.18E-02	mg/L	3.1E-06	mg/kg-day	2.9E-02	mg/kg-day	1.1E-04
			Exp. Route Total								5.7E-02
		Exposure Point Total									4.6E+00
	Exposure Medium Total										4.6E+00

TABLE H2-7.1.3.CTE
EPA RAGS PART D TABLE 7b
CALCULATION OF CTE CHEMICAL NONCANCER HAZARDS
CURRENT ADULT RESIDENT
SITE 09, ALAMEDA POINT, ALAMEDA, CALIFORNIA

Scenario Timeframe:	Future
Receptor Population:	Resident
Receptor Age:	Adult

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Non-Cancer Hazard Calculations				
					Value	Units	Intake/Exposure Concentration		RfD/RfC		Hazard Quotient
							Value	Units	Value	Units	
Medium Total											4.6E+00
									Total of Receptor Hazards Across All Media		4.7E+00

Notes:

–	Not Applicable or Not Available
EPC	Exposure point concentration
mg/kg	Milligram per kilogram
mg/kg-day	Milligram per kilogram per day
RfD	Reference dose
RfC	Reference concentration
CTE	Central tendency exposure

(a) See the Vapor Intrusion to Indoor Air Evaluation for determination of the modeled indoor air concentration.

TABLE H2-7.1.4.CTE
EPA RAGS PART D TABLE 7b
CALCULATION OF CTE CHEMICAL NONCANCER HAZARDS
CURRENT CHILD RESIDENT
SITE 09, ALAMEDA POINT, ALAMEDA, CALIFORNIA

Scenario Timeframe:	Future
Receptor Population:	Resident
Receptor Age:	Child

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Non-Cancer Hazard Calculations				
					Value	Units	Intake/Exposure Concentration		RfD/RfC		Hazard Quotient
							Value	Units	Value	Units	
Soil (0-2)	Soil	Site Soil	Ingestion	Arsenic	2.45E+00	mg/kg	1.6E-05	mg/kg-day	3.0E-04	mg/kg-day	5.2E-02
			Exp. Route Total								5.2E-02
			Dermal	Arsenic	2.45E+00	mg/kg	5.3E-07	mg/kg-day	3.0E-04	mg/kg-day	1.8E-03
			Exp. Route Total								1.8E-03
		Exposure Point Total									5.4E-02
	Exposure Medium Total										5.4E-02
	Homegrown Produce	Homegrown Produce	Ingestion	Arsenic	2.45E+00	mg/kg	2.3E-06	mg/kg-day	3.0E-04	mg/kg-day	7.6E-03
			Exp. Route Total								7.6E-03
		Exposure Point Total									7.6E-03
	Exposure Medium Total										7.6E-03
	Air	Outdoor Air	Inhalation (particulates)	Arsenic	2.45E+00	mg/kg	5.0E-11	mg/kg-day	--	--	--
			Exp. Route Total								0.0E+00
		Exposure Point Total									0.0E+00
	Exposure Medium Total										0.0E+00
Medium Total											6.2E-02
Groundwater	Groundwater	Indoor Air (Vapor Intrusion)	Inhalation	Benzene	7.90E-01	(a) ug/m^3	2.1E-05	mg/kg-day	8.6E-03	mg/kg-day	2.5E-03
				Vinyl chloride	8.90E+00	(a) ug/m^3	2.4E-04	mg/kg-day	2.9E-02	mg/kg-day	8.4E-03
			Exp. Route Total								1.1E-02
		Exposure Point Total									1.1E-02
		Tap	Ingestion	1,1-Dichloroethane	5.06E-03	mg/L	3.2E-04	mg/kg-day	1.0E-01	mg/kg-day	3.2E-03
				1,2-Dichloroethane	6.00E-04	mg/L	3.8E-05	mg/kg-day	3.0E-02	mg/kg-day	1.3E-03
				1,2-Dichloroethene (Total)	9.47E-02	mg/L	6.1E-03	mg/kg-day	1.0E-02	mg/kg-day	6.1E-01
				1,2-Dichloropropane	2.00E-03	mg/L	1.3E-04	mg/kg-day	1.1E-03	mg/kg-day	1.2E-01
				1,2,3-Trichloropropane	3.00E-04	mg/L	1.9E-05	mg/kg-day	6.0E-03	mg/kg-day	3.2E-03
				1,3-Dichloropropane	6.72E-04	mg/L	4.3E-05	mg/kg-day	1.1E-03	mg/kg-day	3.9E-02
				2,2'-Oxybis(1-chloropropane)	7.00E-04	mg/L	4.5E-05	mg/kg-day	4.0E-02	mg/kg-day	1.1E-03
				2-Methylnaphthalene	1.80E-01	mg/L	1.2E-02	mg/kg-day	9.0E-03	mg/kg-day	1.3E+00
				4-Methylphenol	2.38E-01	mg/L	1.5E-02	mg/kg-day	5.0E-03	mg/kg-day	3.0E+00
				Antimony	4.17E-03	mg/L	2.7E-04	mg/kg-day	4.0E-04	mg/kg-day	6.7E-01
				Arsenic	1.32E-02	mg/L	8.4E-04	mg/kg-day	3.0E-04	mg/kg-day	2.8E+00
				Benzene	1.89E-03	mg/L	1.2E-04	mg/kg-day	4.0E-03	mg/kg-day	3.0E-02
				Benz(a)anthracene	1.00E-03	mg/L	6.4E-05	mg/kg-day	--	--	--

TABLE H2-7.1.4.CTE
EPA RAGS PART D TABLE 7b
CALCULATION OF CTE CHEMICAL NONCANCER HAZARDS
CURRENT CHILD RESIDENT
SITE 09, ALAMEDA POINT, ALAMEDA, CALIFORNIA

Scenario Timeframe:	Future
Receptor Population:	Resident
Receptor Age:	Child

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Non-Cancer Hazard Calculations				
					Value	Units	Intake/Exposure Concentration		RfD/RfC		Hazard Quotient
							Value	Units	Value	Units	
				Benzo(a)pyrene	2.00E-03	mg/L	1.3E-04	mg/kg-day	--	--	--
				Benzo(b)fluoranthene	2.00E-03	mg/L	1.3E-04	mg/kg-day	--	--	--
				Benzo(k)fluoranthene	8.00E-04	mg/L	5.1E-05	mg/kg-day	--	--	--
				Chloroethane	3.70E-03	mg/L	2.4E-04	mg/kg-day	4.0E-01	mg/kg-day	5.9E-04
				Chrysene	1.00E-03	mg/L	6.4E-05	mg/kg-day	--	--	--
				Ethylbenzene	6.57E-03	mg/L	4.2E-04	mg/kg-day	1.0E-01	mg/kg-day	4.2E-03
				Indeno(1,2,3-cd)pyrene	1.00E-03	mg/L	6.4E-05	mg/kg-day	--	--	--
				Lead	1.67E-03	mg/L	1.1E-04	mg/kg-day	--	--	--
				Manganese	1.23E+00	mg/L	7.9E-02	mg/kg-day	2.4E-02	mg/kg-day	3.3E+00
				Methyl-t-butyl ether	4.76E-03	mg/L	3.0E-04	mg/kg-day	8.6E-01	mg/kg-day	3.5E-04
				Naphthalene	6.32E-01	mg/L	4.0E-02	mg/kg-day	2.0E-02	mg/kg-day	2.0E+00
				Pentachlorophenol	2.00E-03	mg/L	1.3E-04	mg/kg-day	3.0E-02	mg/kg-day	4.3E-03
				Tetrachloroethene	1.98E-03	mg/L	1.3E-04	mg/kg-day	1.0E-02	mg/kg-day	1.3E-02
				Trichloroethene	2.37E-03	mg/L	1.5E-04	mg/kg-day	3.0E-04	mg/kg-day	5.1E-01
				Vinyl chloride	7.74E-03	mg/L	4.9E-04	mg/kg-day	3.0E-03	mg/kg-day	1.6E-01
				Xylene (Total)	5.18E-02	mg/L	3.3E-03	mg/kg-day	2.0E-01	mg/kg-day	1.7E-02
			Exp. Route Total								1.5E+01
			Dermal (bathing/ showering)	1,1-Dichloroethane	5.06E-03	mg/L	4.7E-06	mg/kg-day	1.0E-01	mg/kg-day	4.7E-05
				1,2-Dichloroethane	6.00E-04	mg/L	3.5E-07	mg/kg-day	3.0E-02	mg/kg-day	1.2E-05
				1,2-Dichloroethene (Total)	9.47E-02	mg/L	1.0E-04	mg/kg-day	1.0E-02	mg/kg-day	1.0E-02
				1,2-Dichloropropane	2.00E-03	mg/L	2.2E-06	mg/kg-day	1.1E-03	mg/kg-day	2.0E-03
				1,2,3-Trichloropropane	3.00E-04	mg/L	3.1E-07	mg/kg-day	6.0E-03	mg/kg-day	5.2E-05
				1,3-Dichloropropane	6.72E-04	mg/L	7.3E-07	mg/kg-day	1.1E-03	mg/kg-day	6.6E-04
				2,2'-Oxybis(1-chloropropane)	7.00E-04	mg/L	7.4E-07	mg/kg-day	4.0E-02	mg/kg-day	1.8E-05
				2-Methylnaphthalene	1.80E-01	mg/L	1.2E-03	mg/kg-day	9.0E-03	mg/kg-day	1.3E-01
				4-Methylphenol	2.38E-01	mg/L	2.5E-04	mg/kg-day	5.0E-03	mg/kg-day	5.0E-02
				Antimony	4.17E-03	mg/L	5.8E-07	mg/kg-day	4.0E-04	mg/kg-day	1.5E-03
				Arsenic	1.32E-02	mg/L	1.8E-06	mg/kg-day	3.0E-04	mg/kg-day	6.1E-03
				Benzene	1.89E-03	mg/L	5.5E-06	mg/kg-day	4.0E-03	mg/kg-day	1.4E-03
				Benz(a)anthracene	1.00E-03	mg/L	6.5E-05	mg/kg-day	--	--	--
				Benzo(a)pyrene	2.00E-03	mg/L	1.9E-04	mg/kg-day	--	--	--
				Benzo(b)fluoranthene	2.00E-03	mg/L	1.9E-04	mg/kg-day	--	--	--
				Benzo(k)fluoranthene	8.00E-04	mg/L	2.5E-05	mg/kg-day	--	--	--
				Chloroethane	3.70E-03	mg/L	3.1E-06	mg/kg-day	4.0E-01	mg/kg-day	7.9E-06

TABLE H2-7.1.4.CTE
EPA RAGS PART D TABLE 7b
CALCULATION OF CTE CHEMICAL NONCANCER HAZARDS
CURRENT CHILD RESIDENT
SITE 09, ALAMEDA POINT, ALAMEDA, CALIFORNIA

Scenario Timeframe:	Future
Receptor Population:	Resident
Receptor Age:	Child

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Non-Cancer Hazard Calculations				
					Value	Units	Intake/Exposure Concentration		RfD/RfC		Hazard Quotient
							Value	Units	Value	Units	
				Chrysene	1.00E-03	mg/L	6.5E-05	mg/kg-day	--	--	--
				Ethylbenzene	6.57E-03	mg/L	4.5E-05	mg/kg-day	1.0E-01	mg/kg-day	4.5E-04
				Indeno(1,2,3-cd)pyrene	1.00E-03	mg/L	1.4E-04	mg/kg-day	--	--	--
				Lead	1.67E-03	mg/L	2.3E-07	mg/kg-day	--	--	--
				Manganese	1.23E+00	mg/L	1.7E-04	mg/kg-day	2.4E-02	mg/kg-day	7.1E-03
				Methyl-t-butyl ether	4.76E-03	mg/L	1.4E-06	mg/kg-day	8.6E-01	mg/kg-day	1.6E-06
				Naphthalene	6.32E-01	mg/L	4.1E-03	mg/kg-day	2.0E-02	mg/kg-day	2.1E-01
				Pentachlorophenol	2.00E-03	mg/L	1.1E-04	mg/kg-day	3.0E-02	mg/kg-day	3.6E-03
				Tetrachloroethene	1.98E-03	mg/L	9.1E-06	mg/kg-day	1.0E-02	mg/kg-day	9.1E-04
				Trichloroethene	2.37E-03	mg/L	4.0E-06	mg/kg-day	3.0E-04	mg/kg-day	1.3E-02
				Vinyl chloride	7.74E-03	mg/L	6.0E-06	mg/kg-day	3.0E-03	mg/kg-day	2.0E-03
				Xylene (Total)	5.18E-02	mg/L	3.8E-04	mg/kg-day	2.0E-01	mg/kg-day	1.9E-03
			Exp. Route Total								4.4E-01
			Inhalation (bathing/ showering)	1,1-Dichloroethane	5.06E-03	mg/L	9.3E-07	mg/kg-day	1.4E-01	mg/kg-day	6.7E-06
				1,2-Dichloroethane	6.00E-04	mg/L	1.1E-07	mg/kg-day	1.4E-03	mg/kg-day	7.9E-05
				1,2-Dichloroethene (Total)	9.47E-02	mg/L	1.7E-05	mg/kg-day	1.0E-02	mg/kg-day	1.7E-03
				1,2-Dichloropropane	2.00E-03	mg/L	3.7E-07	mg/kg-day	1.1E-03	mg/kg-day	3.4E-04
				1,2,3-Trichloropropane	3.00E-04	mg/L	5.5E-08	mg/kg-day	1.4E-03	mg/kg-day	4.0E-05
				1,3-Dichloropropane	6.72E-04	mg/L	1.2E-07	mg/kg-day	1.1E-03	mg/kg-day	1.1E-04
				2,2'-Oxybis(1-chloropropane)	7.00E-04	mg/L	1.3E-07	mg/kg-day	4.0E-02	mg/kg-day	3.2E-06
				2-Methylnaphthalene	1.80E-01	mg/L	3.3E-05	mg/kg-day	8.6E-04	mg/kg-day	3.9E-02
				Benzene	1.89E-03	mg/L	3.5E-07	mg/kg-day	8.6E-03	mg/kg-day	4.1E-05
				Chloroethane	3.70E-03	mg/L	6.8E-07	mg/kg-day	2.9E+00	mg/kg-day	2.4E-07
				Ethylbenzene	6.57E-03	mg/L	1.2E-06	mg/kg-day	2.9E-01	mg/kg-day	4.2E-06
				Methyl-t-butyl ether	4.76E-03	mg/L	8.8E-07	mg/kg-day	8.6E-01	mg/kg-day	1.0E-06
				Naphthalene	6.32E-01	mg/L	1.2E-04	mg/kg-day	8.6E-04	mg/kg-day	1.4E-01
				Tetrachloroethene	1.98E-03	mg/L	3.7E-07	mg/kg-day	1.7E-01	mg/kg-day	2.1E-06
				Trichloroethene	2.37E-03	mg/L	4.4E-07	mg/kg-day	1.0E-02	mg/kg-day	4.4E-05
				Vinyl chloride	7.74E-03	mg/L	1.4E-06	mg/kg-day	2.9E-02	mg/kg-day	5.0E-05
				Xylene (Total)	5.18E-02	mg/L	9.6E-06	mg/kg-day	2.9E-02	mg/kg-day	3.3E-04
			Exp. Route Total								1.8E-01
		Exposure Point Total									1.5E+01
	Exposure Medium Total										1.5E+01

TABLE H2-7.1.4.CTE
EPA RAGS PART D TABLE 7b
CALCULATION OF CTE CHEMICAL NONCANCER HAZARDS
CURRENT CHILD RESIDENT
SITE 09, ALAMEDA POINT, ALAMEDA, CALIFORNIA

Scenario Timeframe:	Future
Receptor Population:	Resident
Receptor Age:	Child

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Non-Cancer Hazard Calculations				
					Value	Units	Intake/Exposure Concentration		RfD/RfC		Hazard Quotient
							Value	Units	Value	Units	
Medium Total											1.5E+01
										Total of Receptor Hazards Across All Media	1.5E+01

Notes:

--	Not Applicable or Not Available
EPC	Exposure point concentration
mg/kg	Milligram per kilogram
mg/kg-day	Milligram per kilogram per day
RfD	Reference dose
RfC	Reference concentration
CTE	Central tendency exposure

(a) See the Vapor Intrusion to Indoor Air Evaluation for determination of the modeled indoor air concentration.

TABLE H2-7.1.5.CTE
EPA RAGS PART D TABLE 7b
CALCULATION OF CTE CHEMICAL NONCANCER HAZARDS
FUTURE DEVELOPED CONSTRUCTION WORKER
SITE 09, ALAMEDA POINT, ALAMEDA, CALIFORNIA

Scenario Timeframe:	Future-Developed
Receptor Population:	Construction Worker
Receptor Age:	Adult

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Non-Cancer Hazard Calculations				
					Value	Units	Intake/Exposure Concentration		RfD/RfC		Hazard Quotient
							Value	Units	Value	Units	
Soil (0-8)	Soil	Site Soil	Ingestion	Arsenic	2.78E+00	mg/kg	6.5E-07	mg/kg-day	3.0E-04	mg/kg-day	2.2E-03
			Exp. Route Total								2.2E-03
			Dermal	Arsenic	2.78E+00	mg/kg	6.5E-08	mg/kg-day	3.0E-04	mg/kg-day	2.2E-04
			Exp. Route Total								2.2E-04
		Exposure Point Total									2.4E-03
	Exposure Medium Total										2.4E-03
	Air	Outdoor Air	Inhalation (particulates)	Arsenic	2.78E+00	mg/kg	9.9E-11	mg/kg-day	--	--	--
			Exp. Route Total								0.0E+00
		Exposure Point Total									0.0E+00
	Exposure Medium Total										0.0E+00
Medium Total											2.4E-03
										Total of Receptor Hazards Across All Media	2.4E-03

Notes:

--	Not Applicable or Not Available
EPC	Exposure point concentration
mg/kg	Milligram per kilogram
mg/kg-day	Milligram per kilogram per day
RfD	Reference dose
RfC	Reference concentration
CTE	Central tendency exposure

TABLE H2-7.1.6.CTE
EPA RAGS PART D TABLE 7b
CALCULATION OF CTE CHEMICAL NONCANCER HAZARDS
FUTURE REDEVELOPED ADULT RESIDENT
SITE 09, ALAMEDA POINT, ALAMEDA, CALIFORNIA

Scenario Timeframe:	Future-Redeveloped
Receptor Population:	Resident
Receptor Age:	Adult

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Non-Cancer Hazard Calculations				
					Value	Units	Intake/Exposure Concentration		RfD/RfC		Hazard Quotient
							Value	Units	Value	Units	
Soil (0-8)	Soil	Site Soil	Ingestion	Arsenic	2.78E+00	mg/kg	1.9E-06	mg/kg-day	3.0E-04	mg/kg-day	6.3E-03
			Exp. Route Total								6.3E-03
			Dermal	Arsenic	2.78E+00	mg/kg	6.5E-08	mg/kg-day	3.0E-04	mg/kg-day	2.2E-04
			Exp. Route Total								2.2E-04
		Exposure Point Total									6.6E-03
	Exposure Medium Total										6.6E-03
	Homegrown Produce	Homegrown Produce	Ingestion	Arsenic	2.78E+00	mg/kg	2.6E-06	mg/kg-day	3.0E-04	mg/kg-day	8.7E-03
			Exp. Route Total								8.7E-03
		Exposure Point Total									8.7E-03
	Exposure Medium Total										8.7E-03
	Air	Outdoor Air	Inhalation (particulates)	Arsenic	2.78E+00	mg/kg	2.4E-11	mg/kg-day	--	--	--
			Exp. Route Total								0.0E+00
		Exposure Point Total									0.0E+00
	Exposure Medium Total										0.0E+00
Medium Total											1.5E-02
Groundwater	Groundwater	Indoor Air (Vapor Intrusion)	Inhalation	Benzene	7.90E-01	(a) ug/m^3	9.0E-06	mg/kg-day	8.6E-03	mg/kg-day	1.0E-03
				Vinyl chloride	8.90E+00	(a) ug/m^3	1.0E-04	mg/kg-day	2.9E-02	mg/kg-day	3.5E-03
			Exp. Route Total								4.6E-03
		Exposure Point Total									4.6E-03
		Tap	Ingestion	1,1-Dichloroethane	5.06E-03	mg/L	9.7E-05	mg/kg-day	1.0E-01	mg/kg-day	9.7E-04
				1,2-Dichloroethane	6.00E-04	mg/L	1.2E-05	mg/kg-day	3.0E-02	mg/kg-day	3.8E-04
				1,2-Dichloroethene (Total)	9.47E-02	mg/L	1.8E-03	mg/kg-day	1.0E-02	mg/kg-day	1.8E-01
				1,2-Dichloropropane	2.00E-03	mg/L	3.8E-05	mg/kg-day	1.1E-03	mg/kg-day	3.5E-02
				1,2,3-Trichloropropane	3.00E-04	mg/L	5.8E-06	mg/kg-day	6.0E-03	mg/kg-day	9.6E-04
				1,3-Dichloropropane	6.72E-04	mg/L	1.3E-05	mg/kg-day	1.1E-03	mg/kg-day	1.2E-02
				2,2'-Oxybis(1-chloropropane)	7.00E-04	mg/L	1.3E-05	mg/kg-day	4.0E-02	mg/kg-day	3.4E-04
				2-Methylnaphthalene	1.80E-01	mg/L	3.5E-03	mg/kg-day	9.0E-03	mg/kg-day	3.8E-01
				4-Methylphenol	2.38E-01	mg/L	4.6E-03	mg/kg-day	5.0E-03	mg/kg-day	9.1E-01
				Antimony	4.17E-03	mg/L	8.0E-05	mg/kg-day	4.0E-04	mg/kg-day	2.0E-01
				Arsenic	1.32E-02	mg/L	2.5E-04	mg/kg-day	3.0E-04	mg/kg-day	8.4E-01
				Benzene	1.89E-03	mg/L	3.6E-05	mg/kg-day	4.0E-03	mg/kg-day	9.1E-03
				Benz(a)anthracene	1.00E-03	mg/L	1.9E-05	mg/kg-day	--	--	--

TABLE H2-7.1.6.CTE
EPA RAGS PART D TABLE 7b
CALCULATION OF CTE CHEMICAL NONCANCER HAZARDS
FUTURE REDEVELOPED ADULT RESIDENT
SITE 09, ALAMEDA POINT, ALAMEDA, CALIFORNIA

Scenario Timeframe:	Future-Redeveloped
Receptor Population:	Resident
Receptor Age:	Adult

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Non-Cancer Hazard Calculations				
					Value	Units	Intake/Exposure Concentration		RfD/RfC		Hazard Quotient
							Value	Units	Value	Units	
				Benzo(a)pyrene	2.00E-03	mg/L	3.8E-05	mg/kg-day	--	--	--
				Benzo(b)fluoranthene	2.00E-03	mg/L	3.8E-05	mg/kg-day	--	--	--
				Benzo(k)fluoranthene	8.00E-04	mg/L	1.5E-05	mg/kg-day	--	--	--
				Chloroethane	3.70E-03	mg/L	7.1E-05	mg/kg-day	4.0E-01	mg/kg-day	1.8E-04
				Chrysene	1.00E-03	mg/L	1.9E-05	mg/kg-day	--	--	--
				Ethylbenzene	6.57E-03	mg/L	1.3E-04	mg/kg-day	1.0E-01	mg/kg-day	1.3E-03
				Indeno(1,2,3-cd)pyrene	1.00E-03	mg/L	1.9E-05	mg/kg-day	--	--	--
				Lead	1.67E-03	mg/L	3.2E-05	mg/kg-day	--	--	--
				Manganese	1.23E+00	mg/L	2.4E-02	mg/kg-day	2.4E-02	mg/kg-day	9.8E-01
				Methyl-t-butyl ether	4.76E-03	mg/L	9.1E-05	mg/kg-day	8.6E-01	mg/kg-day	1.1E-04
				Naphthalene	6.32E-01	mg/L	1.2E-02	mg/kg-day	2.0E-02	mg/kg-day	6.1E-01
				Pentachlorophenol	2.00E-03	mg/L	3.8E-05	mg/kg-day	3.0E-02	mg/kg-day	1.3E-03
				Tetrachloroethene	1.98E-03	mg/L	3.8E-05	mg/kg-day	1.0E-02	mg/kg-day	3.8E-03
				Trichloroethene	2.37E-03	mg/L	4.5E-05	mg/kg-day	3.0E-04	mg/kg-day	1.5E-01
				Vinyl chloride	7.74E-03	mg/L	1.5E-04	mg/kg-day	3.0E-03	mg/kg-day	4.9E-02
				Xylene (Total)	5.18E-02	mg/L	9.9E-04	mg/kg-day	2.0E-01	mg/kg-day	5.0E-03
			Exp. Route Total								4.4E+00
			Dermal (bathing/ showering)	1,1-Dichloroethane	5.06E-03	mg/L	2.1E-06	mg/kg-day	1.0E-01	mg/kg-day	2.1E-05
				1,2-Dichloroethane	6.00E-04	mg/L	1.6E-07	mg/kg-day	3.0E-02	mg/kg-day	5.2E-06
				1,2-Dichloroethene (Total)	9.47E-02	mg/L	4.5E-05	mg/kg-day	1.0E-02	mg/kg-day	4.5E-03
				1,2-Dichloropropane	2.00E-03	mg/L	9.6E-07	mg/kg-day	1.1E-03	mg/kg-day	8.7E-04
				1,2,3-Trichloropropane	3.00E-04	mg/L	1.4E-07	mg/kg-day	6.0E-03	mg/kg-day	2.3E-05
				1,3-Dichloropropane	6.72E-04	mg/L	3.2E-07	mg/kg-day	1.1E-03	mg/kg-day	2.9E-04
				2,2'-Oxybis(1-chloropropane)	7.00E-04	mg/L	3.3E-07	mg/kg-day	4.0E-02	mg/kg-day	8.2E-06
				2-Methylnaphthalene	1.80E-01	mg/L	5.2E-04	mg/kg-day	9.0E-03	mg/kg-day	5.8E-02
				4-Methylphenol	2.38E-01	mg/L	1.1E-04	mg/kg-day	5.0E-03	mg/kg-day	2.2E-02
				Antimony	4.17E-03	mg/L	2.6E-07	mg/kg-day	4.0E-04	mg/kg-day	6.4E-04
				Arsenic	1.32E-02	mg/L	8.1E-07	mg/kg-day	3.0E-04	mg/kg-day	2.7E-03
				Benzene	1.89E-03	mg/L	2.4E-06	mg/kg-day	4.0E-03	mg/kg-day	6.1E-04
				Benz(a)anthracene	1.00E-03	mg/L	2.9E-05	mg/kg-day	--	--	--
				Benzo(a)pyrene	2.00E-03	mg/L	8.6E-05	mg/kg-day	--	--	--
				Benzo(b)fluoranthene	2.00E-03	mg/L	8.6E-05	mg/kg-day	--	--	--
				Benzo(k)fluoranthene	8.00E-04	mg/L	1.1E-05	mg/kg-day	--	--	--
				Chloroethane	3.70E-03	mg/L	1.4E-06	mg/kg-day	4.0E-01	mg/kg-day	3.5E-06

TABLE H2-7.1.6.CTE
EPA RAGS PART D TABLE 7b
CALCULATION OF CTE CHEMICAL NONCANCER HAZARDS
FUTURE REDEVELOPED ADULT RESIDENT
SITE 09, ALAMEDA POINT, ALAMEDA, CALIFORNIA

Scenario Timeframe:	Future-Redeveloped
Receptor Population:	Resident
Receptor Age:	Adult

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Non-Cancer Hazard Calculations				
					Value	Units	Intake/Exposure Concentration		RfD/RfC		Hazard Quotient
							Value	Units	Value	Units	
				Chrysene	1.00E-03	mg/L	2.9E-05	mg/kg-day	--	--	--
				Ethylbenzene	6.57E-03	mg/L	2.0E-05	mg/kg-day	1.0E-01	mg/kg-day	2.0E-04
				Indeno(1,2,3-cd)pyrene	1.00E-03	mg/L	6.2E-05	mg/kg-day	--	--	--
				Lead	1.67E-03	mg/L	1.0E-07	mg/kg-day	--	--	--
				Manganese	1.23E+00	mg/L	7.6E-05	mg/kg-day	2.4E-02	mg/kg-day	3.2E-03
				Methyl-t-butyl ether	4.76E-03	mg/L	6.2E-07	mg/kg-day	8.6E-01	mg/kg-day	7.2E-07
				Naphthalene	6.32E-01	mg/L	1.8E-03	mg/kg-day	2.0E-02	mg/kg-day	9.2E-02
				Pentachlorophenol	2.00E-03	mg/L	4.8E-05	mg/kg-day	3.0E-02	mg/kg-day	1.6E-03
				Tetrachloroethene	1.98E-03	mg/L	4.0E-06	mg/kg-day	1.0E-02	mg/kg-day	4.0E-04
				Trichloroethene	2.37E-03	mg/L	1.8E-06	mg/kg-day	3.0E-04	mg/kg-day	5.8E-03
				Vinyl chloride	7.74E-03	mg/L	2.7E-06	mg/kg-day	3.0E-03	mg/kg-day	8.9E-04
				Xylene (Total)	5.18E-02	mg/L	1.7E-04	mg/kg-day	2.0E-01	mg/kg-day	8.5E-04
			Exp. Route Total								1.9E-01
			Inhalation (bathing/ showering)	1,1-Dichloroethane	5.06E-03	mg/L	3.0E-07	mg/kg-day	1.4E-01	mg/kg-day	2.1E-06
				1,2-Dichloroethane	6.00E-04	mg/L	3.6E-08	mg/kg-day	1.4E-03	mg/kg-day	2.5E-05
				1,2-Dichloroethene (Total)	9.47E-02	mg/L	5.6E-06	mg/kg-day	1.0E-02	mg/kg-day	5.6E-04
				1,2-Dichloropropane	2.00E-03	mg/L	1.2E-07	mg/kg-day	1.1E-03	mg/kg-day	1.1E-04
				1,2,3-Trichloropropane	3.00E-04	mg/L	1.8E-08	mg/kg-day	1.4E-03	mg/kg-day	1.3E-05
				1,3-Dichloropropane	6.72E-04	mg/L	4.0E-08	mg/kg-day	1.1E-03	mg/kg-day	3.6E-05
				2,2'-Oxybis(1-chloropropane)	7.00E-04	mg/L	4.1E-08	mg/kg-day	4.0E-02	mg/kg-day	1.0E-06
				2-Methylnaphthalene	1.80E-01	mg/L	1.1E-05	mg/kg-day	8.6E-04	mg/kg-day	1.2E-02
				Benzene	1.89E-03	mg/L	1.1E-07	mg/kg-day	8.6E-03	mg/kg-day	1.3E-05
				Chloroethane	3.70E-03	mg/L	2.2E-07	mg/kg-day	2.9E+00	mg/kg-day	7.6E-08
				Ethylbenzene	6.57E-03	mg/L	3.9E-07	mg/kg-day	2.9E-01	mg/kg-day	1.3E-06
				Methyl-t-butyl ether	4.76E-03	mg/L	2.8E-07	mg/kg-day	8.6E-01	mg/kg-day	3.3E-07
				Naphthalene	6.32E-01	mg/L	3.7E-05	mg/kg-day	8.6E-04	mg/kg-day	4.4E-02
				Tetrachloroethene	1.98E-03	mg/L	1.2E-07	mg/kg-day	1.7E-01	mg/kg-day	6.9E-07
				Trichloroethene	2.37E-03	mg/L	1.4E-07	mg/kg-day	1.0E-02	mg/kg-day	1.4E-05
				Vinyl chloride	7.74E-03	mg/L	4.6E-07	mg/kg-day	2.9E-02	mg/kg-day	1.6E-05
				Xylene (Total)	5.18E-02	mg/L	3.1E-06	mg/kg-day	2.9E-02	mg/kg-day	1.1E-04
			Exp. Route Total								5.7E-02
		Exposure Point Total									4.6E+00
	Exposure Medium Total										4.6E+00

TABLE H2-7.1.6.CTE
EPA RAGS PART D TABLE 7b
CALCULATION OF CTE CHEMICAL NONCANCER HAZARDS
FUTURE REDEVELOPED ADULT RESIDENT
SITE 09, ALAMEDA POINT, ALAMEDA, CALIFORNIA

Scenario Timeframe:	Future-Redeveloped
Receptor Population:	Resident
Receptor Age:	Adult

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Non-Cancer Hazard Calculations				
					Value	Units	Intake/Exposure Concentration		RfD/RfC		Hazard Quotient
							Value	Units	Value	Units	
Medium Total											4.6E+00
										Total of Receptor Hazards Across All Media	4.7E+00

Notes:

--	Not Applicable or Not Available
EPC	Exposure point concentration
mg/kg	Milligram per kilogram
mg/kg-day	Milligram per kilogram per day
RfD	Reference dose
RfC	Reference concentration
CTE	Central tendency exposure

(a) See the Vapor Intrusion to Indoor Air Evaluation for determination of the modeled indoor air concentration.

TABLE H2-7.1.7.CTE
EPA RAGS PART D TABLE 7b
CALCULATION OF CTE CHEMICAL NONCANCER HAZARDS
FUTURE REDEVELOPED CHILD RESIDENT
SITE 09, ALAMEDA POINT, ALAMEDA, CALIFORNIA

Scenario Timeframe:	Future-Redeveloped
Receptor Population:	Resident
Receptor Age:	Child

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Non-Cancer Hazard Calculations				
					Value	Units	Intake/Exposure Concentration		RfD/RfC		Hazard Quotient
							Value	Units	Value	Units	
Soil (0-8)	Soil	Site Soil	Ingestion	Arsenic	2.78E+00	mg/kg	1.8E-05	mg/kg-day	3.0E-04	mg/kg-day	5.9E-02
			Exp. Route Total								5.9E-02
			Dermal	Arsenic	2.78E+00	mg/kg	6.0E-07	mg/kg-day	3.0E-04	mg/kg-day	2.0E-03
			Exp. Route Total								2.0E-03
		Exposure Point Total									6.1E-02
	Exposure Medium Total										6.1E-02
	Homegrown Produce	Homegrown Produce	Ingestion	Arsenic	2.78E+00	mg/kg	2.6E-06	mg/kg-day	3.0E-04	mg/kg-day	8.6E-03
			Exp. Route Total								8.6E-03
		Exposure Point Total									8.6E-03
	Exposure Medium Total										8.6E-03
	Air	Outdoor Air	Inhalation (particulates)	Arsenic	2.78E+00	mg/kg	5.7E-11	mg/kg-day	--	--	--
			Exp. Route Total								0.0E+00
		Exposure Point Total									0.0E+00
	Exposure Medium Total										0.0E+00
Medium Total											7.0E-02
Groundwater	Groundwater	Indoor Air (Vapor Intrusion)	Inhalation	Benzene	7.90E-01	(a) ug/m^3	2.1E-05	mg/kg-day	8.6E-03	mg/kg-day	2.5E-03
				Vinyl chloride	8.90E+00	(a) ug/m^3	2.4E-04	mg/kg-day	2.9E-02	mg/kg-day	8.4E-03
			Exp. Route Total								1.1E-02
		Exposure Point Total									1.1E-02
		Tap	Ingestion	1,1-Dichloroethane	5.06E-03	mg/L	3.2E-04	mg/kg-day	1.0E-01	mg/kg-day	3.2E-03
				1,2-Dichloroethane	6.00E-04	mg/L	3.8E-05	mg/kg-day	3.0E-02	mg/kg-day	1.3E-03
				1,2-Dichloroethene (Total)	9.47E-02	mg/L	6.1E-03	mg/kg-day	1.0E-02	mg/kg-day	6.1E-01
				1,2-Dichloropropane	2.00E-03	mg/L	1.3E-04	mg/kg-day	1.1E-03	mg/kg-day	1.2E-01
				1,2,3-Trichloropropane	3.00E-04	mg/L	1.9E-05	mg/kg-day	6.0E-03	mg/kg-day	3.2E-03
				1,3-Dichloropropane	6.72E-04	mg/L	4.3E-05	mg/kg-day	1.1E-03	mg/kg-day	3.9E-02
				2,2'-Oxybis(1-chloropropane)	7.00E-04	mg/L	4.5E-05	mg/kg-day	4.0E-02	mg/kg-day	1.1E-03
				2-Methylnaphthalene	1.80E-01	mg/L	1.2E-02	mg/kg-day	9.0E-03	mg/kg-day	1.3E+00
				4-Methylphenol	2.38E-01	mg/L	1.5E-02	mg/kg-day	5.0E-03	mg/kg-day	3.0E+00
				Antimony	4.17E-03	mg/L	2.7E-04	mg/kg-day	4.0E-04	mg/kg-day	6.7E-01
				Arsenic	1.32E-02	mg/L	8.4E-04	mg/kg-day	3.0E-04	mg/kg-day	2.8E+00
				Benzene	1.89E-03	mg/L	1.2E-04	mg/kg-day	4.0E-03	mg/kg-day	3.0E-02
				Benz(a)anthracene	1.00E-03	mg/L	6.4E-05	mg/kg-day	--	--	--

TABLE H2-7.1.7.CTE
EPA RAGS PART D TABLE 7b
CALCULATION OF CTE CHEMICAL NONCANCER HAZARDS
FUTURE REDEVELOPED CHILD RESIDENT
SITE 09, ALAMEDA POINT, ALAMEDA, CALIFORNIA

Scenario Timeframe:	Future-Redeveloped
Receptor Population:	Resident
Receptor Age:	Child

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Non-Cancer Hazard Calculations				
					Value	Units	Intake/Exposure Concentration		RfD/RfC		Hazard Quotient
							Value	Units	Value	Units	
				Benzo(a)pyrene	2.00E-03	mg/L	1.3E-04	mg/kg-day	--	--	--
				Benzo(b)fluoranthene	2.00E-03	mg/L	1.3E-04	mg/kg-day	--	--	--
				Benzo(k)fluoranthene	8.00E-04	mg/L	5.1E-05	mg/kg-day	--	--	--
				Chloroethane	3.70E-03	mg/L	2.4E-04	mg/kg-day	4.0E-01	mg/kg-day	5.9E-04
				Chrysene	1.00E-03	mg/L	6.4E-05	mg/kg-day	--	--	--
				Ethylbenzene	6.57E-03	mg/L	4.2E-04	mg/kg-day	1.0E-01	mg/kg-day	4.2E-03
				Indeno(1,2,3-cd)pyrene	1.00E-03	mg/L	6.4E-05	mg/kg-day	--	--	--
				Lead	1.67E-03	mg/L	1.1E-04	mg/kg-day	--	--	--
				Manganese	1.23E+00	mg/L	7.9E-02	mg/kg-day	2.4E-02	mg/kg-day	3.3E+00
				Methyl-t-butyl ether	4.76E-03	mg/L	3.0E-04	mg/kg-day	8.6E-01	mg/kg-day	3.5E-04
				Naphthalene	6.32E-01	mg/L	4.0E-02	mg/kg-day	2.0E-02	mg/kg-day	2.0E+00
				Pentachlorophenol	2.00E-03	mg/L	1.3E-04	mg/kg-day	3.0E-02	mg/kg-day	4.3E-03
				Tetrachloroethene	1.98E-03	mg/L	1.3E-04	mg/kg-day	1.0E-02	mg/kg-day	1.3E-02
				Trichloroethene	2.37E-03	mg/L	1.5E-04	mg/kg-day	3.0E-04	mg/kg-day	5.1E-01
				Vinyl chloride	7.74E-03	mg/L	4.9E-04	mg/kg-day	3.0E-03	mg/kg-day	1.6E-01
				Xylene (Total)	5.18E-02	mg/L	3.3E-03	mg/kg-day	2.0E-01	mg/kg-day	1.7E-02
			Exp. Route Total								1.5E+01
			Dermal (bathing/ showering)	1,1-Dichloroethane	5.06E-03	mg/L	4.7E-06	mg/kg-day	1.0E-01	mg/kg-day	4.7E-05
				1,2-Dichloroethane	6.00E-04	mg/L	3.5E-07	mg/kg-day	3.0E-02	mg/kg-day	1.2E-05
				1,2-Dichloroethene (Total)	9.47E-02	mg/L	1.0E-04	mg/kg-day	1.0E-02	mg/kg-day	1.0E-02
				1,2-Dichloropropane	2.00E-03	mg/L	2.2E-06	mg/kg-day	1.1E-03	mg/kg-day	2.0E-03
				1,2,3-Trichloropropane	3.00E-04	mg/L	3.1E-07	mg/kg-day	6.0E-03	mg/kg-day	5.2E-05
				1,3-Dichloropropane	6.72E-04	mg/L	7.3E-07	mg/kg-day	1.1E-03	mg/kg-day	6.6E-04
				2,2'-Oxybis(1-chloropropane)	7.00E-04	mg/L	7.4E-07	mg/kg-day	4.0E-02	mg/kg-day	1.8E-05
				2-Methylnaphthalene	1.80E-01	mg/L	1.2E-03	mg/kg-day	9.0E-03	mg/kg-day	1.3E-01
				4-Methylphenol	2.38E-01	mg/L	2.5E-04	mg/kg-day	5.0E-03	mg/kg-day	5.0E-02
				Antimony	4.17E-03	mg/L	5.8E-07	mg/kg-day	4.0E-04	mg/kg-day	1.5E-03
				Arsenic	1.32E-02	mg/L	1.8E-06	mg/kg-day	3.0E-04	mg/kg-day	6.1E-03
				Benzene	1.89E-03	mg/L	5.5E-06	mg/kg-day	4.0E-03	mg/kg-day	1.4E-03
				Benz(a)anthracene	1.00E-03	mg/L	6.5E-05	mg/kg-day	--	--	--
				Benzo(a)pyrene	2.00E-03	mg/L	1.9E-04	mg/kg-day	--	--	--
				Benzo(b)fluoranthene	2.00E-03	mg/L	1.9E-04	mg/kg-day	--	--	--
				Benzo(k)fluoranthene	8.00E-04	mg/L	2.5E-05	mg/kg-day	--	--	--
				Chloroethane	3.70E-03	mg/L	3.1E-06	mg/kg-day	4.0E-01	mg/kg-day	7.9E-06

TABLE H2-7.1.7.CTE
EPA RAGS PART D TABLE 7b
CALCULATION OF CTE CHEMICAL NONCANCER HAZARDS
FUTURE REDEVELOPED CHILD RESIDENT
SITE 09, ALAMEDA POINT, ALAMEDA, CALIFORNIA

Scenario Timeframe:	Future-Redeveloped
Receptor Population:	Resident
Receptor Age:	Child

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Non-Cancer Hazard Calculations				
					Value	Units	Intake/Exposure Concentration		RfD/RfC		Hazard Quotient
							Value	Units	Value	Units	
				Chrysene	1.00E-03	mg/L	6.5E-05	mg/kg-day	--	--	--
				Ethylbenzene	6.57E-03	mg/L	4.5E-05	mg/kg-day	1.0E-01	mg/kg-day	4.5E-04
				Indeno(1,2,3-cd)pyrene	1.00E-03	mg/L	1.4E-04	mg/kg-day	--	--	--
				Lead	1.67E-03	mg/L	2.3E-07	mg/kg-day	--	--	--
				Manganese	1.23E+00	mg/L	1.7E-04	mg/kg-day	2.4E-02	mg/kg-day	7.1E-03
				Methyl-t-butyl ether	4.76E-03	mg/L	1.4E-06	mg/kg-day	8.6E-01	mg/kg-day	1.6E-06
				Naphthalene	6.32E-01	mg/L	4.1E-03	mg/kg-day	2.0E-02	mg/kg-day	2.1E-01
				Pentachlorophenol	2.00E-03	mg/L	1.1E-04	mg/kg-day	3.0E-02	mg/kg-day	3.6E-03
				Tetrachloroethene	1.98E-03	mg/L	9.1E-06	mg/kg-day	1.0E-02	mg/kg-day	9.1E-04
				Trichloroethene	2.37E-03	mg/L	4.0E-06	mg/kg-day	3.0E-04	mg/kg-day	1.3E-02
				Vinyl chloride	7.74E-03	mg/L	6.0E-06	mg/kg-day	3.0E-03	mg/kg-day	2.0E-03
				Xylene (Total)	5.18E-02	mg/L	3.8E-04	mg/kg-day	2.0E-01	mg/kg-day	1.9E-03
			Exp. Route Total								4.4E-01
			Inhalation (bathing/ showering)	1,1-Dichloroethane	5.06E-03	mg/L	9.3E-07	mg/kg-day	1.4E-01	mg/kg-day	6.7E-06
				1,2-Dichloroethane	6.00E-04	mg/L	1.1E-07	mg/kg-day	1.4E-03	mg/kg-day	7.9E-05
				1,2-Dichloroethene (Total)	9.47E-02	mg/L	1.7E-05	mg/kg-day	1.0E-02	mg/kg-day	1.7E-03
				1,2-Dichloropropane	2.00E-03	mg/L	3.7E-07	mg/kg-day	1.1E-03	mg/kg-day	3.4E-04
				1,2,3-Trichloropropane	3.00E-04	mg/L	5.5E-08	mg/kg-day	1.4E-03	mg/kg-day	4.0E-05
				1,3-Dichloropropane	6.72E-04	mg/L	1.2E-07	mg/kg-day	1.1E-03	mg/kg-day	1.1E-04
				2,2'-Oxybis(1-chloropropane)	7.00E-04	mg/L	1.3E-07	mg/kg-day	4.0E-02	mg/kg-day	3.2E-06
				2-Methylnaphthalene	1.80E-01	mg/L	3.3E-05	mg/kg-day	8.6E-04	mg/kg-day	3.9E-02
				Benzene	1.89E-03	mg/L	3.5E-07	mg/kg-day	8.6E-03	mg/kg-day	4.1E-05
				Chloroethane	3.70E-03	mg/L	6.8E-07	mg/kg-day	2.9E+00	mg/kg-day	2.4E-07
				Ethylbenzene	6.57E-03	mg/L	1.2E-06	mg/kg-day	2.9E-01	mg/kg-day	4.2E-06
				Methyl-t-butyl ether	4.76E-03	mg/L	8.8E-07	mg/kg-day	8.6E-01	mg/kg-day	1.0E-06
				Naphthalene	6.32E-01	mg/L	1.2E-04	mg/kg-day	8.6E-04	mg/kg-day	1.4E-01
				Tetrachloroethene	1.98E-03	mg/L	3.7E-07	mg/kg-day	1.7E-01	mg/kg-day	2.1E-06
				Trichloroethene	2.37E-03	mg/L	4.4E-07	mg/kg-day	1.0E-02	mg/kg-day	4.4E-05
				Vinyl chloride	7.74E-03	mg/L	1.4E-06	mg/kg-day	2.9E-02	mg/kg-day	5.0E-05
				Xylene (Total)	5.18E-02	mg/L	9.6E-06	mg/kg-day	2.9E-02	mg/kg-day	3.3E-04
			Exp. Route Total								1.8E-01
		Exposure Point Total									1.5E+01
	Exposure Medium Total										1.5E+01

TABLE H2-7.1.7.CTE
EPA RAGS PART D TABLE 7b
CALCULATION OF CTE CHEMICAL NONCANCER HAZARDS
FUTURE REDEVELOPED CHILD RESIDENT
SITE 09, ALAMEDA POINT, ALAMEDA, CALIFORNIA

Scenario Timeframe:	Future-Redeveloped
Receptor Population:	Resident
Receptor Age:	Child

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Non-Cancer Hazard Calculations				
					Value	Units	Intake/Exposure Concentration		RfD/RfC		Hazard Quotient
							Value	Units	Value	Units	
Medium Total											1.5E+01
									Total of Receptor Hazards Across All Media		1.5E+01

Notes:

--	Not Applicable or Not Available
EPC	Exposure point concentration
mg/kg	Milligram per kilogram
mg/kg-day	Milligram per kilogram per day
RfD	Reference dose
RfC	Reference concentration
CTE	Central tendency exposure

(a) See the Vapor Intrusion to Indoor Air Evaluation for determination of the modeled indoor air concentration.

HHRA RISK TABLES

Central Tendency Exposure
Site 13
Alameda Point, Alameda, California

TABLE H2-7.2.1.CTE
EPA RAGS PART D TABLE 7b
CALCULATION OF CTE CHEMICAL NONCANCER HAZARDS
CURRENT INDUSTRIAL WORKER
SITE 13, ALAMEDA POINT, ALAMEDA, CALIFORNIA

Scenario Timeframe:	Future
Receptor Population:	Industrial Worker
Receptor Age:	Adult

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Non-Cancer Hazard Calculations				
					Value	Units	Intake/Exposure Concentration		RfD/RfC		Hazard Quotient
							Value	Units	Value	Units	
Soil (0-2)	Soil	Site Soil	Ingestion	Arsenic	5.40E+00	mg/kg	2.3E-06	mg/kg-day	3.0E-04	mg/kg-day	7.7E-03
				Benz(a)anthracene	4.57E-02	mg/kg	2.0E-08	mg/kg-day	--	--	--
				Benzo(a)pyrene	4.23E-02	mg/kg	1.8E-08	mg/kg-day	--	--	--
				Benzo(b)fluoranthene	4.24E-02	mg/kg	1.8E-08	mg/kg-day	--	--	--
				Benzo(k)fluoranthene	3.30E-02	mg/kg	1.4E-08	mg/kg-day	--	--	--
				Chromium	3.47E+01	mg/kg	1.5E-05	mg/kg-day	1.5E+00	mg/kg-day	9.9E-06
				Dibenz(a,h)anthracene	2.04E-02	mg/kg	8.7E-09	mg/kg-day	--	--	--
				Indeno(1,2,3-cd)pyrene	3.43E-02	mg/kg	1.5E-08	mg/kg-day	--	--	--
				Lead	5.39E+01	mg/kg	2.3E-05	mg/kg-day	--	--	--
			Exp. Route Total								7.7E-03
			Dermal	Arsenic	5.40E+00	mg/kg	9.2E-08	mg/kg-day	3.0E-04	mg/kg-day	3.1E-04
				Benz(a)anthracene	4.57E-02	mg/kg	3.4E-09	mg/kg-day	--	--	--
				Benzo(a)pyrene	4.23E-02	mg/kg	3.1E-09	mg/kg-day	--	--	--
				Benzo(b)fluoranthene	4.24E-02	mg/kg	3.1E-09	mg/kg-day	--	--	--
				Benzo(k)fluoranthene	3.30E-02	mg/kg	2.4E-09	mg/kg-day	--	--	--
				Chromium	3.47E+01	mg/kg	2.0E-07	mg/kg-day	1.5E+00	mg/kg-day	1.3E-07
				Dibenz(a,h)anthracene	2.04E-02	mg/kg	1.5E-09	mg/kg-day	--	--	--
				Indeno(1,2,3-cd)pyrene	3.43E-02	mg/kg	2.5E-09	mg/kg-day	--	--	--
				Lead	5.39E+01	mg/kg	3.0E-07	mg/kg-day	--	--	--
			Exp. Route Total								3.1E-04
		Exposure Point Total									8.0E-03
	Exposure Medium Total										8.0E-03
	Air	Outdoor Air	Inhalation (particulates)	Arsenic	5.40E+00	mg/kg	8.8E-11	mg/kg-day	--	--	--
				Benz(a)anthracene	4.57E-02	mg/kg	7.4E-13	mg/kg-day	--	--	--
				Benzo(a)pyrene	4.23E-02	mg/kg	6.9E-13	mg/kg-day	--	--	--
				Benzo(b)fluoranthene	4.24E-02	mg/kg	6.9E-13	mg/kg-day	--	--	--
				Benzo(k)fluoranthene	3.30E-02	mg/kg	5.4E-13	mg/kg-day	--	--	--
				Chromium	3.47E+01	mg/kg	5.6E-10	mg/kg-day	--	--	--
				Dibenz(a,h)anthracene	2.04E-02	mg/kg	3.3E-13	mg/kg-day	--	--	--
				Indeno(1,2,3-cd)pyrene	3.43E-02	mg/kg	5.6E-13	mg/kg-day	--	--	--
				Lead	5.39E+01	mg/kg	8.7E-10	mg/kg-day	--	--	--
			Exp. Route Total								0.0E+00
		Exposure Point Total									0.0E+00
	Exposure Medium Total										0.0E+00

TABLE H2-7.2.1.CTE
EPA RAGS PART D TABLE 7b
CALCULATION OF CTE CHEMICAL NONCANCER HAZARDS
CURRENT INDUSTRIAL WORKER
SITE 13, ALAMEDA POINT, ALAMEDA, CALIFORNIA

Scenario Timeframe:	Future
Receptor Population:	Industrial Worker
Receptor Age:	Adult

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Non-Cancer Hazard Calculations				
					Value	Units	Intake/Exposure Concentration		RfD/RfC		Hazard Quotient
							Value	Units	Value	Units	
Medium Total											8.0E-03
										Total of Receptor Hazards Across All Media	8.0E-03

Notes:

--	Not Applicable or Not Available
EPC	Exposure point concentration
mg/kg	Milligram per kilogram
mg/kg-day	Milligram per kilogram per day
RfD	Reference dose
RfC	Reference concentration
CTE	Central tendency exposure

TABLE H2-7.2.2.CTE
EPA RAGS PART D TABLE 7b
CALCULATION OF CTE CHEMICAL NONCANCER HAZARDS
CURRENT CONSTRUCTION WORKER
SITE 13, ALAMEDA POINT, ALAMEDA, CALIFORNIA

Scenario Timeframe:	Future
Receptor Population:	Construction Worker
Receptor Age:	Adult

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Non-Cancer Hazard Calculations				
					Value	Units	Intake/Exposure Concentration		RfD/RfC		Hazard Quotient
							Value	Units	Value	Units	
Soil (0-2)	Soil	Site Soil	Ingestion	Arsenic	5.40E+00	mg/kg	1.3E-06	mg/kg-day	3.0E-04	mg/kg-day	4.2E-03
				Benz(a)anthracene	4.57E-02	mg/kg	1.1E-08	mg/kg-day	--	--	--
				Benzo(a)pyrene	4.23E-02	mg/kg	9.9E-09	mg/kg-day	--	--	--
				Benzo(b)fluoranthene	4.24E-02	mg/kg	1.0E-08	mg/kg-day	--	--	--
				Benzo(k)fluoranthene	3.30E-02	mg/kg	7.7E-09	mg/kg-day	--	--	--
				Chromium	3.47E+01	mg/kg	8.1E-06	mg/kg-day	1.5E+00	mg/kg-day	5.4E-06
				Dibenz(a,h)anthracene	2.04E-02	mg/kg	4.8E-09	mg/kg-day	--	--	--
				Indeno(1,2,3-cd)pyrene	3.43E-02	mg/kg	8.1E-09	mg/kg-day	--	--	--
				Lead	5.39E+01	mg/kg	1.3E-05	mg/kg-day	--	--	--
			Exp. Route Total								4.2E-03
			Dermal	Arsenic	5.40E+00	mg/kg	1.3E-07	mg/kg-day	3.0E-04	mg/kg-day	4.2E-04
				Benz(a)anthracene	4.57E-02	mg/kg	4.6E-09	mg/kg-day	--	--	--
				Benzo(a)pyrene	4.23E-02	mg/kg	4.3E-09	mg/kg-day	--	--	--
				Benzo(b)fluoranthene	4.24E-02	mg/kg	4.3E-09	mg/kg-day	--	--	--
				Benzo(k)fluoranthene	3.30E-02	mg/kg	3.3E-09	mg/kg-day	--	--	--
				Chromium	3.47E+01	mg/kg	2.7E-07	mg/kg-day	1.5E+00	mg/kg-day	1.8E-07
				Dibenz(a,h)anthracene	2.04E-02	mg/kg	2.1E-09	mg/kg-day	--	--	--
				Indeno(1,2,3-cd)pyrene	3.43E-02	mg/kg	3.5E-09	mg/kg-day	--	--	--
				Lead	5.39E+01	mg/kg	4.2E-07	mg/kg-day	--	--	--
			Exp. Route Total								4.2E-04
		Exposure Point Total									4.7E-03
	Exposure Medium Total										4.7E-03
	Air	Outdoor Air	Inhalation (particulates)	Arsenic	5.40E+00	mg/kg	1.9E-10	mg/kg-day	--	--	--
				Benz(a)anthracene	4.57E-02	mg/kg	1.6E-12	mg/kg-day	--	--	--
				Benzo(a)pyrene	4.23E-02	mg/kg	1.5E-12	mg/kg-day	--	--	--
				Benzo(b)fluoranthene	4.24E-02	mg/kg	1.5E-12	mg/kg-day	--	--	--
				Benzo(k)fluoranthene	3.30E-02	mg/kg	1.2E-12	mg/kg-day	--	--	--
				Chromium	3.47E+01	mg/kg	1.2E-09	mg/kg-day	--	--	--
				Dibenz(a,h)anthracene	2.04E-02	mg/kg	7.3E-13	mg/kg-day	--	--	--
				Indeno(1,2,3-cd)pyrene	3.43E-02	mg/kg	1.2E-12	mg/kg-day	--	--	--
				Lead	5.39E+01	mg/kg	1.9E-09	mg/kg-day	--	--	--
			Exp. Route Total								0.0E+00
		Exposure Point Total									0.0E+00
	Exposure Medium Total										0.0E+00

TABLE H2-7.2.2.CTE
EPA RAGS PART D TABLE 7b
CALCULATION OF CTE CHEMICAL NONCANCER HAZARDS
CURRENT CONSTRUCTION WORKER
SITE 13, ALAMEDA POINT, ALAMEDA, CALIFORNIA

Scenario Timeframe:	Future
Receptor Population:	*Construction Worker*
Receptor Age:	Adult

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Non-Cancer Hazard Calculations				
					Value	Units	Intake/Exposure Concentration		RfD/RfC		Hazard Quotient
							Value	Units	Value	Units	
Medium Total											4.7E-03
										Total of Receptor Hazards Across All Media	4.7E-03

Notes:

--	Not Applicable or Not Available
EPC	*Exposure point concentration*
mg/kg	Milligram per kilogram
mg/kg-day	Milligram per kilogram per day
RfD	Reference dose
RfC	Reference concentration
CTE	Central tendency exposure

TABLE H2-7.2.3.CTE
EPA RAGS PART D TABLE 7b
CALCULATION OF CTE CHEMICAL NONCANCER HAZARDS
CURRENT ADULT RESIDENT
SITE 13, ALAMEDA POINT, ALAMEDA, CALIFORNIA

Scenario Timeframe:	Future
Receptor Population:	Resident
Receptor Age:	Adult

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Non-Cancer Hazard Calculations				
					Value	Units	Intake/Exposure Concentration		RfD/RfC		Hazard Quotient
							Value	Units	Value	Units	
Soil (0-2)	Soil	Site Soil	Ingestion	Arsenic	5.40E+00	mg/kg	3.7E-06	mg/kg-day	3.0E-04	mg/kg-day	1.2E-02
				Benz(a)anthracene	4.57E-02	mg/kg	3.1E-08	mg/kg-day	--	--	--
				Benzo(a)pyrene	4.23E-02	mg/kg	2.9E-08	mg/kg-day	--	--	--
				Benzo(b)fluoranthene	4.24E-02	mg/kg	2.9E-08	mg/kg-day	--	--	--
				Benzo(k)fluoranthene	3.30E-02	mg/kg	2.3E-08	mg/kg-day	--	--	--
				Chromium	3.47E+01	mg/kg	2.4E-05	mg/kg-day	1.5E+00	mg/kg-day	1.6E-05
				Dibenz(a,h)anthracene	2.04E-02	mg/kg	1.4E-08	mg/kg-day	--	--	--
				Indeno(1,2,3-cd)pyrene	3.43E-02	mg/kg	2.3E-08	mg/kg-day	--	--	--
				Lead	5.39E+01	mg/kg	3.7E-05	mg/kg-day	--	--	--
			Exp. Route Total								1.2E-02
			Dermal	Arsenic	5.40E+00	mg/kg	1.3E-07	mg/kg-day	3.0E-04	mg/kg-day	4.2E-04
				Benz(a)anthracene	4.57E-02	mg/kg	4.6E-09	mg/kg-day	--	--	--
				Benzo(a)pyrene	4.23E-02	mg/kg	4.3E-09	mg/kg-day	--	--	--
				Benzo(b)fluoranthene	4.24E-02	mg/kg	4.3E-09	mg/kg-day	--	--	--
				Benzo(k)fluoranthene	3.30E-02	mg/kg	3.3E-09	mg/kg-day	--	--	--
				Chromium	3.47E+01	mg/kg	2.7E-07	mg/kg-day	1.5E+00	mg/kg-day	1.8E-07
				Dibenz(a,h)anthracene	2.04E-02	mg/kg	2.1E-09	mg/kg-day	--	--	--
				Indeno(1,2,3-cd)pyrene	3.43E-02	mg/kg	3.5E-09	mg/kg-day	--	--	--
				Lead	5.39E+01	mg/kg	4.2E-07	mg/kg-day	--	--	--
			Exp. Route Total								4.2E-04
		Exposure Point Total									1.3E-02
	Exposure Medium Total										1.3E-02
	Homegrown Produce	Homegrown Produce	Ingestion	Arsenic	5.40E+00	mg/kg	5.1E-06	mg/kg-day	3.0E-04	mg/kg-day	1.7E-02
				Benz(a)anthracene	4.57E-02	mg/kg	3.9E-08	mg/kg-day	--	--	--
				Benzo(a)pyrene	4.23E-02	mg/kg	2.7E-08	mg/kg-day	--	--	--
				Benzo(b)fluoranthene	4.24E-02	mg/kg	2.5E-08	mg/kg-day	--	--	--
				Benzo(k)fluoranthene	3.30E-02	mg/kg	2.0E-08	mg/kg-day	--	--	--
				Chromium	3.47E+01	mg/kg	--	mg/kg-day	1.5E+00	mg/kg-day	--
				Dibenz(a,h)anthracene	2.04E-02	mg/kg	2.0E-08	mg/kg-day	--	--	--
				Indeno(1,2,3-cd)pyrene	3.43E-02	mg/kg	1.6E-08	mg/kg-day	--	--	--
				Lead	5.39E+01	mg/kg	--	mg/kg-day	--	--	--
			Exp. Route Total								1.7E-02
		Exposure Point Total									1.7E-02
	Exposure Medium Total										1.7E-02

TABLE H2-7.2.3.CTE
EPA RAGS PART D TABLE 7b
CALCULATION OF CTE CHEMICAL NONCANCER HAZARDS
CURRENT ADULT RESIDENT
SITE 13, ALAMEDA POINT, ALAMEDA, CALIFORNIA

Scenario Timeframe:	Future
Receptor Population:	Resident
Receptor Age:	Adult

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Non-Cancer Hazard Calculations				
					Value	Units	Intake/Exposure Concentration		RfD/RfC		Hazard Quotient
							Value	Units	Value	Units	
	Air	Outdoor Air	Inhalation (particulates)	Arsenic	5.40E+00	mg/kg	4.7E-11	mg/kg-day	--	--	--
				Benz(a)anthracene	4.57E-02	mg/kg	3.9E-13	mg/kg-day	--	--	--
				Benzo(a)pyrene	4.23E-02	mg/kg	3.6E-13	mg/kg-day	--	--	--
				Benzo(b)fluoranthene	4.24E-02	mg/kg	3.7E-13	mg/kg-day	--	--	--
				Benzo(k)fluoranthene	3.30E-02	mg/kg	2.8E-13	mg/kg-day	--	--	--
				Chromium	3.47E+01	mg/kg	3.0E-10	mg/kg-day	--	--	--
				Dibenz(a,h)anthracene	2.04E-02	mg/kg	1.8E-13	mg/kg-day	--	--	--
				Indeno(1,2,3-cd)pyrene	3.43E-02	mg/kg	3.0E-13	mg/kg-day	--	--	--
				Lead	5.39E+01	mg/kg	4.6E-10	mg/kg-day	--	--	--
			Exp. Route Total								0.0E+00
		Exposure Point Total									0.0E+00
	Exposure Medium Total										0.0E+00
Medium Total											3.0E-02
Groundwater	Groundwater	Tap	Ingestion	1,2-Dichloroethane	2.74E-04	mg/L	5.3E-06	mg/kg-day	3.0E-02	mg/kg-day	1.8E-04
				2-Methylnaphthalene	5.97E-03	mg/L	1.1E-04	mg/kg-day	9.0E-03	mg/kg-day	1.3E-02
				Arsenic	7.72E-03	mg/L	1.5E-04	mg/kg-day	3.0E-04	mg/kg-day	4.9E-01
				Benzene	1.30E-03	mg/L	2.5E-05	mg/kg-day	4.0E-03	mg/kg-day	6.2E-03
				Ethylbenzene	6.00E-04	mg/L	1.2E-05	mg/kg-day	1.0E-01	mg/kg-day	1.2E-04
				Manganese	7.80E+00	mg/L	1.5E-01	mg/kg-day	2.4E-02	mg/kg-day	6.2E+00
				Naphthalene	1.24E-02	mg/L	2.4E-04	mg/kg-day	2.0E-02	mg/kg-day	1.2E-02
				Pentachlorophenol	7.00E-03	mg/L	1.3E-04	mg/kg-day	3.0E-02	mg/kg-day	4.5E-03
				Thallium	1.25E-03	mg/L	2.4E-05	mg/kg-day	6.6E-05	mg/kg-day	3.6E-01
				Trichloroethene	5.36E-04	mg/L	1.0E-05	mg/kg-day	3.0E-04	mg/kg-day	3.4E-02
			Exp. Route Total								7.2E+00
			Dermal (bathing/ showering)	1,2-Dichloroethane	2.74E-04	mg/L	7.1E-08	mg/kg-day	3.0E-02	mg/kg-day	2.4E-06
				2-Methylnaphthalene	5.97E-03	mg/L	1.7E-05	mg/kg-day	9.0E-03	mg/kg-day	1.9E-03
				Arsenic	7.72E-03	mg/L	4.8E-07	mg/kg-day	3.0E-04	mg/kg-day	1.6E-03
				Benzene	1.30E-03	mg/L	1.7E-06	mg/kg-day	4.0E-03	mg/kg-day	4.2E-04
				Ethylbenzene	6.00E-04	mg/L	1.8E-06	mg/kg-day	1.0E-01	mg/kg-day	1.8E-05
				Manganese	7.80E+00	mg/L	4.8E-04	mg/kg-day	2.4E-02	mg/kg-day	2.0E-02
				Naphthalene	1.24E-02	mg/L	3.6E-05	mg/kg-day	2.0E-02	mg/kg-day	1.8E-03
				Pentachlorophenol	7.00E-03	mg/L	1.7E-04	mg/kg-day	3.0E-02	mg/kg-day	5.6E-03

TABLE H2-7.2.3.CTE
EPA RAGS PART D TABLE 7b
CALCULATION OF CTE CHEMICAL NONCANCER HAZARDS
CURRENT ADULT RESIDENT
SITE 13, ALAMEDA POINT, ALAMEDA, CALIFORNIA

Scenario Timeframe:	Future
Receptor Population:	Resident
Receptor Age:	Adult

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Non-Cancer Hazard Calculations				
					Value	Units	Intake/Exposure Concentration		RfD/RfC		Hazard Quotient
							Value	Units	Value	Units	
				Thallium	1.25E-03	mg/L	7.7E-08	mg/kg-day	6.6E-05	mg/kg-day	1.2E-03
				Trichloroethene	5.36E-04	mg/L	4.0E-07	mg/kg-day	3.0E-04	mg/kg-day	1.3E-03
			Exp. Route Total								3.4E-02
			Inhalation (bathing/ showering)	1,2-Dichloroethane	2.74E-04	mg/L	1.6E-08	mg/kg-day	1.4E-03	mg/kg-day	1.2E-05
				2-Methylnaphthalene	5.97E-03	mg/L	3.5E-07	mg/kg-day	8.6E-04	mg/kg-day	4.1E-04
				Benzene	1.30E-03	mg/L	7.7E-08	mg/kg-day	8.6E-03	mg/kg-day	9.0E-06
				Ethylbenzene	6.00E-04	mg/L	3.6E-08	mg/kg-day	2.9E-01	mg/kg-day	1.2E-07
				Naphthalene	1.24E-02	mg/L	7.3E-07	mg/kg-day	8.6E-04	mg/kg-day	8.5E-04
				Trichloroethene	5.36E-04	mg/L	3.2E-08	mg/kg-day	1.0E-02	mg/kg-day	3.2E-06
			Exp. Route Total								1.3E-03
		Exposure Point Total									7.2E+00
	Exposure Medium Total										7.2E+00
Medium Total											7.2E+00
										Total of Receptor Hazards Across All Media	7.2E+00

Notes:

--	Not Applicable or Not Available
EPC	Exposure point concentration
mg/kg	Milligram per kilogram
mg/kg-day	Milligram per kilogram per day
RfD	Reference dose
RfC	Reference concentration
CTE	Central tendency exposure

TABLE H2-7.2.4.CTE
EPA RAGS PART D TABLE 7b
CALCULATION OF CTE CHEMICAL NONCANCER HAZARDS
CURRENT CHILD RESIDENT
SITE 13, ALAMEDA POINT, ALAMEDA, CALIFORNIA

Scenario Timeframe:	Future
Receptor Population:	Resident
Receptor Age:	Child

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Non-Cancer Hazard Calculations				
					Value	Units	Intake/Exposure Concentration		RfD/RfC		Hazard Quotient
							Value	Units	Value	Units	
Soil (0-2)	Soil	Site Soil	Ingestion	Arsenic	5.40E+00	mg/kg	3.5E-05	mg/kg-day	3.0E-04	mg/kg-day	1.2E-01
				Benz(a)anthracene	4.57E-02	mg/kg	2.9E-07	mg/kg-day	--	--	--
				Benzo(a)pyrene	4.23E-02	mg/kg	2.7E-07	mg/kg-day	--	--	--
				Benzo(b)fluoranthene	4.24E-02	mg/kg	2.7E-07	mg/kg-day	--	--	--
				Benzo(k)fluoranthene	3.30E-02	mg/kg	2.1E-07	mg/kg-day	--	--	--
				Chromium	3.47E+01	mg/kg	2.2E-04	mg/kg-day	1.5E+00	mg/kg-day	1.5E-04
				Dibenz(a,h)anthracene	2.04E-02	mg/kg	1.3E-07	mg/kg-day	--	--	--
				Indeno(1,2,3-cd)pyrene	3.43E-02	mg/kg	2.2E-07	mg/kg-day	--	--	--
				Lead	5.39E+01	mg/kg	3.4E-04	mg/kg-day	--	--	--
			Exp. Route Total								1.2E-01
			Dermal	Arsenic	5.40E+00	mg/kg	1.2E-06	mg/kg-day	3.0E-04	mg/kg-day	3.9E-03
				Benz(a)anthracene	4.57E-02	mg/kg	4.3E-08	mg/kg-day	--	--	--
				Benzo(a)pyrene	4.23E-02	mg/kg	3.9E-08	mg/kg-day	--	--	--
				Benzo(b)fluoranthene	4.24E-02	mg/kg	3.9E-08	mg/kg-day	--	--	--
				Benzo(k)fluoranthene	3.30E-02	mg/kg	3.1E-08	mg/kg-day	--	--	--
				Chromium	3.47E+01	mg/kg	2.5E-06	mg/kg-day	1.5E+00	mg/kg-day	1.7E-06
				Dibenz(a,h)anthracene	2.04E-02	mg/kg	1.9E-08	mg/kg-day	--	--	--
				Indeno(1,2,3-cd)pyrene	3.43E-02	mg/kg	3.2E-08	mg/kg-day	--	--	--
				Lead	5.39E+01	mg/kg	3.9E-06	mg/kg-day	--	--	--
			Exp. Route Total								3.9E-03
		Exposure Point Total									1.2E-01
	Exposure Medium Total										1.2E-01
	Homegrown Produce	Homegrown Produce	Ingestion	Arsenic	5.40E+00	mg/kg	5.0E-06	mg/kg-day	3.0E-04	mg/kg-day	1.7E-02
				Benz(a)anthracene	4.57E-02	mg/kg	3.9E-08	mg/kg-day	--	--	--
				Benzo(a)pyrene	4.23E-02	mg/kg	2.7E-08	mg/kg-day	--	--	--
				Benzo(b)fluoranthene	4.24E-02	mg/kg	2.5E-08	mg/kg-day	--	--	--
				Benzo(k)fluoranthene	3.30E-02	mg/kg	2.0E-08	mg/kg-day	--	--	--
				Chromium	3.47E+01	mg/kg	--	mg/kg-day	1.5E+00	mg/kg-day	--
				Dibenz(a,h)anthracene	2.04E-02	mg/kg	2.0E-08	mg/kg-day	--	--	--
				Indeno(1,2,3-cd)pyrene	3.43E-02	mg/kg	1.6E-08	mg/kg-day	--	--	--
				Lead	5.39E+01	mg/kg	--	mg/kg-day	--	--	--
			Exp. Route Total								1.7E-02
		Exposure Point Total									1.7E-02
	Exposure Medium Total										1.7E-02

TABLE H2-7.2.4.CTE
EPA RAGS PART D TABLE 7b
CALCULATION OF CTE CHEMICAL NONCANCER HAZARDS
CURRENT CHILD RESIDENT
SITE 13, ALAMEDA POINT, ALAMEDA, CALIFORNIA

Scenario Timeframe:	Future
Receptor Population:	Resident
Receptor Age:	Child

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Non-Cancer Hazard Calculations				
					Value	Units	Intake/Exposure Concentration		RfD/RfC		Hazard Quotient
							Value	Units	Value	Units	
	Air	Outdoor Air	Inhalation (particulates)	Arsenic	5.40E+00	mg/kg	1.1E-10	mg/kg-day	--	--	--
				Benz(a)anthracene	4.57E-02	mg/kg	9.3E-13	mg/kg-day	--	--	--
				Benzo(a)pyrene	4.23E-02	mg/kg	8.6E-13	mg/kg-day	--	--	--
				Benzo(b)fluoranthene	4.24E-02	mg/kg	8.6E-13	mg/kg-day	--	--	--
				Benzo(k)fluoranthene	3.30E-02	mg/kg	6.7E-13	mg/kg-day	--	--	--
				Chromium	3.47E+01	mg/kg	7.1E-10	mg/kg-day	--	--	--
				Dibenz(a,h)anthracene	2.04E-02	mg/kg	4.1E-13	mg/kg-day	--	--	--
				Indeno(1,2,3-cd)pyrene	3.43E-02	mg/kg	7.0E-13	mg/kg-day	--	--	--
				Lead	5.39E+01	mg/kg	1.1E-09	mg/kg-day	--	--	--
			Exp. Route Total								0.0E+00
		Exposure Point Total									0.0E+00
	Exposure Medium Total										0.0E+00
Medium Total											1.4E-01
Groundwater	Groundwater	Tap	Ingestion	1,2-Dichloroethane	2.74E-04	mg/L	1.8E-05	mg/kg-day	3.0E-02	mg/kg-day	5.8E-04
				2-Methylnaphthalene	5.97E-03	mg/L	3.8E-04	mg/kg-day	9.0E-03	mg/kg-day	4.2E-02
				Arsenic	7.72E-03	mg/L	4.9E-04	mg/kg-day	3.0E-04	mg/kg-day	1.6E+00
				Benzene	1.30E-03	mg/L	8.3E-05	mg/kg-day	4.0E-03	mg/kg-day	2.1E-02
				Ethylbenzene	6.00E-04	mg/L	3.8E-05	mg/kg-day	1.0E-01	mg/kg-day	3.8E-04
				Manganese	7.80E+00	mg/L	5.0E-01	mg/kg-day	2.4E-02	mg/kg-day	2.1E+01
				Naphthalene	1.24E-02	mg/L	7.9E-04	mg/kg-day	2.0E-02	mg/kg-day	4.0E-02
				Pentachlorophenol	7.00E-03	mg/L	4.5E-04	mg/kg-day	3.0E-02	mg/kg-day	1.5E-02
				Thallium	1.25E-03	mg/L	8.0E-05	mg/kg-day	6.6E-05	mg/kg-day	1.2E+00
				Trichloroethene	5.36E-04	mg/L	3.4E-05	mg/kg-day	3.0E-04	mg/kg-day	1.1E-01
			Exp. Route Total								2.4E+01
			Dermal (bathing/ showering)	1,2-Dichloroethane	2.74E-04	mg/L	1.6E-07	mg/kg-day	3.0E-02	mg/kg-day	5.3E-06
				2-Methylnaphthalene	5.97E-03	mg/L	3.9E-05	mg/kg-day	9.0E-03	mg/kg-day	4.3E-03
				Arsenic	7.72E-03	mg/L	1.1E-06	mg/kg-day	3.0E-04	mg/kg-day	3.6E-03
				Benzene	1.30E-03	mg/L	3.8E-06	mg/kg-day	4.0E-03	mg/kg-day	9.5E-04
				Ethylbenzene	6.00E-04	mg/L	4.1E-06	mg/kg-day	1.0E-01	mg/kg-day	4.1E-05
				Manganese	7.80E+00	mg/L	1.1E-03	mg/kg-day	2.4E-02	mg/kg-day	4.5E-02
				Naphthalene	1.24E-02	mg/L	8.1E-05	mg/kg-day	2.0E-02	mg/kg-day	4.1E-03
				Pentachlorophenol	7.00E-03	mg/L	3.8E-04	mg/kg-day	3.0E-02	mg/kg-day	1.3E-02

TABLE H2-7.2.4.CTE
EPA RAGS PART D TABLE 7b
CALCULATION OF CTE CHEMICAL NONCANCER HAZARDS
CURRENT CHILD RESIDENT
SITE 13, ALAMEDA POINT, ALAMEDA, CALIFORNIA

Scenario Timeframe:	Future
Receptor Population:	Resident
Receptor Age:	Child

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Non-Cancer Hazard Calculations				
					Value	Units	Intake/Exposure Concentration		RfD/RfC		Hazard Quotient
							Value	Units	Value	Units	
				Thallium	1.25E-03	mg/L	1.7E-07	mg/kg-day	6.6E-05	mg/kg-day	2.6E-03
				Trichloroethene	5.36E-04	mg/L	9.0E-07	mg/kg-day	3.0E-04	mg/kg-day	3.0E-03
			Exp. Route Total								7.7E-02
			Inhalation (bathing/ showering)	1,2-Dichloroethane	2.74E-04	mg/L	5.1E-08	mg/kg-day	1.4E-03	mg/kg-day	3.6E-05
				2-Methylnaphthalene	5.97E-03	mg/L	1.1E-06	mg/kg-day	8.6E-04	mg/kg-day	1.3E-03
				Benzene	1.30E-03	mg/L	2.4E-07	mg/kg-day	8.6E-03	mg/kg-day	2.8E-05
				Ethylbenzene	6.00E-04	mg/L	1.1E-07	mg/kg-day	2.9E-01	mg/kg-day	3.8E-07
				Naphthalene	1.24E-02	mg/L	2.3E-06	mg/kg-day	8.6E-04	mg/kg-day	2.7E-03
				Trichloroethene	5.36E-04	mg/L	9.9E-08	mg/kg-day	1.0E-02	mg/kg-day	9.9E-06
			Exp. Route Total								4.0E-03
		Exposure Point Total									2.4E+01
	Exposure Medium Total										2.4E+01
Medium Total											2.4E+01
										Total of Receptor Hazards Across All Media	2.4E+01

Notes:

--	Not Applicable or Not Available
EPC	Exposure point concentration
mg/kg	Milligram per kilogram
mg/kg-day	Milligram per kilogram per day
RfD	Reference dose
RfC	Reference concentration
CTE	*Central tendency exposure*

TABLE H2-7.2.5.CTE
EPA RAGS PART D TABLE 7b
CALCULATION OF CTE CHEMICAL NONCANCER HAZARDS
FUTURE DEVELOPED CONSTRUCTION WORKER
SITE 13, ALAMEDA POINT, ALAMEDA, CALIFORNIA

Scenario Timeframe:	*Future-Developed*
Receptor Population:	Construction Worker
Receptor Age:	Adult

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Non-Cancer Hazard Calculations				
					Value	Units	Intake/Exposure Concentration		RfD/RfC		Hazard Quotient
							Value	Units	Value	Units	
Soil (0-8)	Soil	Site Soil	Ingestion	2-Methylnaphthalene	8.62E-01	mg/kg	2.0E-07	mg/kg-day	9.0E-03	mg/kg-day	2.2E-05
				Arsenic	4.45E+00	mg/kg	1.0E-06	mg/kg-day	3.0E-04	mg/kg-day	3.5E-03
				Benzene	2.10E-02	mg/kg	4.9E-09	mg/kg-day	4.0E-03	mg/kg-day	1.2E-06
				Benz(a)anthracene	5.34E-02	mg/kg	1.3E-08	mg/kg-day	--	--	--
				Benzo(a)pyrene	4.88E-02	mg/kg	1.1E-08	mg/kg-day	--	--	--
				Benzo(b)fluoranthene	4.63E-02	mg/kg	1.1E-08	mg/kg-day	--	--	--
				Benzo(k)fluoranthene	4.08E-02	mg/kg	9.6E-09	mg/kg-day	--	--	--
				Chromium	3.37E+01	mg/kg	7.9E-06	mg/kg-day	1.5E+00	mg/kg-day	5.3E-06
				Chrysene	8.48E-02	mg/kg	2.0E-08	mg/kg-day	--	--	--
				Dibenz(a,h)anthracene	2.41E-02	mg/kg	5.7E-09	mg/kg-day	--	--	--
				Indeno(1,2,3-cd)pyrene	4.06E-02	mg/kg	9.5E-09	mg/kg-day	--	--	--
				Lead	2.49E+01	mg/kg	5.8E-06	mg/kg-day	--	--	--
				Vanadium	2.66E+01	mg/kg	6.3E-06	mg/kg-day	7.0E-03	mg/kg-day	8.9E-04
			Exp. Route Total								4.4E-03
			Dermal	2-Methylnaphthalene	8.62E-01	mg/kg	--	mg/kg-day	9.0E-03	mg/kg-day	--
				Arsenic	4.45E+00	mg/kg	1.0E-07	mg/kg-day	3.0E-04	mg/kg-day	3.5E-04
				Benzene	2.10E-02	mg/kg	--	mg/kg-day	4.0E-03	mg/kg-day	--
				Benz(a)anthracene	5.34E-02	mg/kg	5.4E-09	mg/kg-day	--	--	--
				Benzo(a)pyrene	4.88E-02	mg/kg	4.9E-09	mg/kg-day	--	--	--
				Benzo(b)fluoranthene	4.63E-02	mg/kg	4.7E-09	mg/kg-day	--	--	--
				Benzo(k)fluoranthene	4.08E-02	mg/kg	4.1E-09	mg/kg-day	--	--	--
				Chromium	3.37E+01	mg/kg	2.6E-07	mg/kg-day	1.5E+00	mg/kg-day	1.7E-07
				Chrysene	8.48E-02	mg/kg	8.5E-09	mg/kg-day	--	--	--
				Dibenz(a,h)anthracene	2.41E-02	mg/kg	2.4E-09	mg/kg-day	--	--	--
				Indeno(1,2,3-cd)pyrene	4.06E-02	mg/kg	4.1E-09	mg/kg-day	--	--	--
				Lead	2.49E+01	mg/kg	1.9E-07	mg/kg-day	--	--	--
				Vanadium	2.66E+01	mg/kg	2.1E-07	mg/kg-day	7.0E-03	mg/kg-day	2.9E-05
			Exp. Route Total								3.7E-04
		Exposure Point Total									4.8E-03
	Exposure Medium Total										4.8E-03
	Air	Outdoor Air	Inhalation (particulates)	2-Methylnaphthalene	8.62E-01	mg/kg	3.1E-11	mg/kg-day	8.6E-04	mg/kg-day	3.6E-08
				Arsenic	4.45E+00	mg/kg	1.6E-10	mg/kg-day	--	--	--
				Benzene	2.10E-02	mg/kg	7.5E-13	mg/kg-day	8.6E-03	mg/kg-day	8.7E-11
				Benz(a)anthracene	5.34E-02	mg/kg	1.9E-12	mg/kg-day	--	--	--
				Benzo(a)pyrene	4.88E-02	mg/kg	1.7E-12	mg/kg-day	--	--	--

TABLE H2-7.2.5.CTE
EPA RAGS PART D TABLE 7b
CALCULATION OF CTE CHEMICAL NONCANCER HAZARDS
FUTURE DEVELOPED CONSTRUCTION WORKER
SITE 13, ALAMEDA POINT, ALAMEDA, CALIFORNIA

Scenario Timeframe:	Future-Developed
Receptor Population:	Construction Worker
Receptor Age:	Adult

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Non-Cancer Hazard Calculations				
					Value	Units	Intake/Exposure Concentration		RfD/RfC		Hazard Quotient
							Value	Units	Value	Units	
				Benzo(b)fluoranthene	4.63E-02	mg/kg	1.6E-12	mg/kg-day	--	--	--
				Benzo(k)fluoranthene	4.08E-02	mg/kg	1.5E-12	mg/kg-day	--	--	--
				Chromium	3.37E+01	mg/kg	1.2E-09	mg/kg-day	--	--	--
				Chrysene	8.48E-02	mg/kg	3.0E-12	mg/kg-day	--	--	--
				Dibenz(a,h)anthracene	2.41E-02	mg/kg	8.6E-13	mg/kg-day	--	--	--
				Indeno(1,2,3-cd)pyrene	4.06E-02	mg/kg	1.4E-12	mg/kg-day	--	--	--
				Lead	2.49E+01	mg/kg	8.9E-10	mg/kg-day	--	--	--
				Vanadium	2.66E+01	mg/kg	9.5E-10	mg/kg-day	--	--	--
			Exp. Route Total								3.6E-08
			Inhalation (VOCs)	2-Methylnaphthalene	8.62E-01	mg/kg	9.4E-07	mg/kg-day	8.6E-04	mg/kg-day	1.1E-03
				Benzene	2.10E-02	mg/kg	3.6E-07	mg/kg-day	8.6E-03	mg/kg-day	4.2E-05
			Exp. Route Total								1.1E-03
		Exposure Point Total									1.1E-03
	Exposure Medium Total										1.1E-03
Medium Total											5.9E-03
										Total of Receptor Hazards Across All Media	5.9E-03

Notes:

--	Not Applicable or Not Available
EPC	Exposure point concentration
mg/kg	Milligram per kilogram
mg/kg-day	Milligram per kilogram per day
RfD	Reference dose
RfC	Reference concentration
CTE	Central tendency exposure
VOC	Volatile organic compound

TABLE H2-7.2.6.CTE
EPA RAGS PART D TABLE 7b
CALCULATION OF CTE CHEMICAL NONCANCER HAZARDS
FUTURE REDEVELOPED ADULT RESIDENT
SITE 13, ALAMEDA POINT, ALAMEDA, CALIFORNIA

Scenario Timeframe:	*Future-Redeveloped*
Receptor Population:	Resident
Receptor Age:	Adult

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Non-Cancer Hazard Calculations				
					Value	Units	Intake/Exposure Concentration		RfD/RfC		Hazard Quotient
							Value	Units	Value	Units	
Soil (0-8)	Soil	Site Soil	Ingestion	2-Methylnaphthalene	8.62E-01	mg/kg	5.9E-07	mg/kg-day	9.0E-03	mg/kg-day	6.6E-05
				Arsenic	4.45E+00	mg/kg	3.0E-06	mg/kg-day	3.0E-04	mg/kg-day	1.0E-02
				Benzene	2.10E-02	mg/kg	1.4E-08	mg/kg-day	4.0E-03	mg/kg-day	3.6E-06
				Benz(a)anthracene	5.34E-02	mg/kg	3.7E-08	mg/kg-day	--	--	--
				Benzo(a)pyrene	4.88E-02	mg/kg	3.3E-08	mg/kg-day	--	--	--
				Benzo(b)fluoranthene	4.63E-02	mg/kg	3.2E-08	mg/kg-day	--	--	--
				Benzo(k)fluoranthene	4.08E-02	mg/kg	2.8E-08	mg/kg-day	--	--	--
				Chromium	3.37E+01	mg/kg	2.3E-05	mg/kg-day	1.5E+00	mg/kg-day	1.5E-05
				Chrysene	8.48E-02	mg/kg	5.8E-08	mg/kg-day	--	--	--
				Dibenz(a,h)anthracene	2.41E-02	mg/kg	1.7E-08	mg/kg-day	--	--	--
				Indeno(1,2,3-cd)pyrene	4.06E-02	mg/kg	2.8E-08	mg/kg-day	--	--	--
				Lead	2.49E+01	mg/kg	1.7E-05	mg/kg-day	--	--	--
				Vanadium	2.66E+01	mg/kg	1.8E-05	mg/kg-day	7.0E-03	mg/kg-day	2.6E-03
			Exp. Route Total								1.0E-02
			Dermal	2-Methylnaphthalene	8.62E-01	mg/kg	--	mg/kg-day	9.0E-03	mg/kg-day	--
				Arsenic	4.45E+00	mg/kg	1.0E-07	mg/kg-day	3.0E-04	mg/kg-day	3.5E-04
				Benzene	2.10E-02	mg/kg	--	mg/kg-day	4.0E-03	mg/kg-day	--
				Benz(a)anthracene	5.34E-02	mg/kg	5.4E-09	mg/kg-day	--	--	--
				Benzo(a)pyrene	4.88E-02	mg/kg	5.0E-09	mg/kg-day	--	--	--
				Benzo(b)fluoranthene	4.63E-02	mg/kg	4.7E-09	mg/kg-day	--	--	--
				Benzo(k)fluoranthene	4.08E-02	mg/kg	4.1E-09	mg/kg-day	--	--	--
				Chromium	3.37E+01	mg/kg	2.6E-07	mg/kg-day	1.5E+00	mg/kg-day	1.8E-07
				Chrysene	8.48E-02	mg/kg	8.6E-09	mg/kg-day	--	--	--
				Dibenz(a,h)anthracene	2.41E-02	mg/kg	2.4E-09	mg/kg-day	--	--	--
				Indeno(1,2,3-cd)pyrene	4.06E-02	mg/kg	4.1E-09	mg/kg-day	--	--	--
				Lead	2.49E+01	mg/kg	1.9E-07	mg/kg-day	--	--	--
				Vanadium	2.66E+01	mg/kg	2.1E-07	mg/kg-day	7.0E-03	mg/kg-day	3.0E-05
			Exp. Route Total								3.5E-04
		Exposure Point Total									1.1E-02
	Exposure Medium Total										1.1E-02
	Homegrown Produce	Homegrown Produce	Ingestion	2-Methylnaphthalene	8.62E-01	mg/kg	--	mg/kg-day	9.0E-03	mg/kg-day	--
				Arsenic	4.45E+00	mg/kg	4.2E-06	mg/kg-day	3.0E-04	mg/kg-day	1.4E-02
				Benzene	2.10E-02	mg/kg	--	mg/kg-day	4.0E-03	mg/kg-day	--
				Benz(a)anthracene	5.34E-02	mg/kg	4.5E-08	mg/kg-day	--	--	--

TABLE H2-7.2.6.CTE
EPA RAGS PART D TABLE 7b
CALCULATION OF CTE CHEMICAL NONCANCER HAZARDS
FUTURE REDEVELOPED ADULT RESIDENT
SITE 13, ALAMEDA POINT, ALAMEDA, CALIFORNIA

Scenario Timeframe:	Future-Redeveloped
Receptor Population:	Resident
Receptor Age:	Adult

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Non-Cancer Hazard Calculations				
					Value	Units	Intake/Exposure Concentration		RfD/RfC		Hazard Quotient
							Value	Units	Value	Units	
				Benzo(a)pyrene	4.88E-02	mg/kg	3.1E-08	mg/kg-day	--	--	--
				Benzo(b)fluoranthene	4.63E-02	mg/kg	2.8E-08	mg/kg-day	--	--	--
				Benzo(k)fluoranthene	4.08E-02	mg/kg	2.4E-08	mg/kg-day	--	--	--
				Chromium	3.37E+01	mg/kg	--	mg/kg-day	1.5E+00	mg/kg-day	--
				Chrysene	8.48E-02	mg/kg	6.4E-08	mg/kg-day	--	--	--
				Dibenz(a,h)anthracene	2.41E-02	mg/kg	2.4E-08	mg/kg-day	--	--	--
				Indeno(1,2,3-cd)pyrene	4.06E-02	mg/kg	1.9E-08	mg/kg-day	--	--	--
				Lead	2.49E+01	mg/kg	--	mg/kg-day	--	--	--
				Vanadium	2.66E+01	mg/kg	--	mg/kg-day	7.0E-03	mg/kg-day	--
			Exp. Route Total								1.4E-02
		Exposure Point Total									1.4E-02
	Exposure Medium Total										1.4E-02
	Air	Outdoor Air	Inhalation (particulates)	2-Methylnaphthalene	8.62E-01	mg/kg	7.4E-12	mg/kg-day	8.6E-04	mg/kg-day	8.6E-09
				Arsenic	4.45E+00	mg/kg	3.8E-11	mg/kg-day	--	--	--
				Benzene	2.10E-02	mg/kg	1.8E-13	mg/kg-day	8.6E-03	mg/kg-day	2.1E-11
				Benz(a)anthracene	5.34E-02	mg/kg	4.6E-13	mg/kg-day	--	--	--
				Benzo(a)pyrene	4.88E-02	mg/kg	4.2E-13	mg/kg-day	--	--	--
				Benzo(b)fluoranthene	4.63E-02	mg/kg	4.0E-13	mg/kg-day	--	--	--
				Benzo(k)fluoranthene	4.08E-02	mg/kg	3.5E-13	mg/kg-day	--	--	--
				Chromium	3.37E+01	mg/kg	2.9E-10	mg/kg-day	--	--	--
				Chrysene	8.48E-02	mg/kg	7.3E-13	mg/kg-day	--	--	--
				Dibenz(a,h)anthracene	2.41E-02	mg/kg	2.1E-13	mg/kg-day	--	--	--
				Indeno(1,2,3-cd)pyrene	4.06E-02	mg/kg	3.5E-13	mg/kg-day	--	--	--
				Lead	2.49E+01	mg/kg	2.1E-10	mg/kg-day	--	--	--
				Vanadium	2.66E+01	mg/kg	2.3E-10	mg/kg-day	--	--	--
			Exp. Route Total								8.7E-09
			Inhalation (VOCs)	2-Methylnaphthalene	8.62E-01	mg/kg	2.3E-07	mg/kg-day	8.6E-04	mg/kg-day	2.6E-04
				Benzene	2.10E-02	mg/kg	8.8E-08	mg/kg-day	8.6E-03	mg/kg-day	1.0E-05
			Exp. Route Total								2.8E-04
		Exposure Point Total									2.8E-04
	Exposure Medium Total										2.8E-04
Medium Total											2.5E-02

TABLE H2-7.2.6.CTE
EPA RAGS PART D TABLE 7b
CALCULATION OF CTE CHEMICAL NONCANCER HAZARDS
FUTURE REDEVELOPED ADULT RESIDENT
SITE 13, ALAMEDA POINT, ALAMEDA, CALIFORNIA

Scenario Timeframe:	Future-Redeveloped
Receptor Population:	Resident
Receptor Age:	Adult

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Non-Cancer Hazard Calculations				
					Value	Units	Intake/Exposure Concentration		RfD/RfC		Hazard Quotient
							Value	Units	Value	Units	
Groundwater	Groundwater	Tap	Ingestion	1,2-Dichloroethane	2.74E-04	mg/L	5.3E-06	mg/kg-day	3.0E-02	mg/kg-day	1.8E-04
				2-Methylnaphthalene	5.97E-03	mg/L	1.1E-04	mg/kg-day	9.0E-03	mg/kg-day	1.3E-02
				Arsenic	7.72E-03	mg/L	1.5E-04	mg/kg-day	3.0E-04	mg/kg-day	4.9E-01
				Benzene	1.30E-03	mg/L	2.5E-05	mg/kg-day	4.0E-03	mg/kg-day	6.2E-03
				Ethylbenzene	6.00E-04	mg/L	1.2E-05	mg/kg-day	1.0E-01	mg/kg-day	1.2E-04
				Manganese	7.80E+00	mg/L	1.5E-01	mg/kg-day	2.4E-02	mg/kg-day	6.2E+00
				Naphthalene	1.24E-02	mg/L	2.4E-04	mg/kg-day	2.0E-02	mg/kg-day	1.2E-02
				Pentachlorophenol	7.00E-03	mg/L	1.3E-04	mg/kg-day	3.0E-02	mg/kg-day	4.5E-03
				Thallium	1.25E-03	mg/L	2.4E-05	mg/kg-day	6.6E-05	mg/kg-day	3.6E-01
				Trichloroethene	5.36E-04	mg/L	1.0E-05	mg/kg-day	3.0E-04	mg/kg-day	3.4E-02
			Exp. Route Total								7.2E+00
			Dermal (bathing/ showering)	1,2-Dichloroethane	2.74E-04	mg/L	7.1E-08	mg/kg-day	3.0E-02	mg/kg-day	2.4E-06
				2-Methylnaphthalene	5.97E-03	mg/L	1.7E-05	mg/kg-day	9.0E-03	mg/kg-day	1.9E-03
				Arsenic	7.72E-03	mg/L	4.8E-07	mg/kg-day	3.0E-04	mg/kg-day	1.6E-03
				Benzene	1.30E-03	mg/L	1.7E-06	mg/kg-day	4.0E-03	mg/kg-day	4.2E-04
				Ethylbenzene	6.00E-04	mg/L	1.8E-06	mg/kg-day	1.0E-01	mg/kg-day	1.8E-05
				Manganese	7.80E+00	mg/L	4.8E-04	mg/kg-day	2.4E-02	mg/kg-day	2.0E-02
				Naphthalene	1.24E-02	mg/L	3.6E-05	mg/kg-day	2.0E-02	mg/kg-day	1.8E-03
				Pentachlorophenol	7.00E-03	mg/L	1.7E-04	mg/kg-day	3.0E-02	mg/kg-day	5.6E-03
				Thallium	1.25E-03	mg/L	7.7E-08	mg/kg-day	6.6E-05	mg/kg-day	1.2E-03
				Trichloroethene	5.36E-04	mg/L	4.0E-07	mg/kg-day	3.0E-04	mg/kg-day	1.3E-03
			Exp. Route Total								3.4E-02
			Inhalation (bathing/ showering)	1,2-Dichloroethane	2.74E-04	mg/L	1.6E-08	mg/kg-day	1.4E-03	mg/kg-day	1.2E-05
				2-Methylnaphthalene	5.97E-03	mg/L	3.5E-07	mg/kg-day	8.6E-04	mg/kg-day	4.1E-04
				Benzene	1.30E-03	mg/L	7.7E-08	mg/kg-day	8.6E-03	mg/kg-day	9.0E-06
				Ethylbenzene	6.00E-04	mg/L	3.6E-08	mg/kg-day	2.9E-01	mg/kg-day	1.2E-07
				Naphthalene	1.24E-02	mg/L	7.3E-07	mg/kg-day	8.6E-04	mg/kg-day	8.5E-04
				Trichloroethene	5.36E-04	mg/L	3.2E-08	mg/kg-day	1.0E-02	mg/kg-day	3.2E-06
			Exp. Route Total								1.3E-03
		Exposure Point Total									7.2E+00
	Exposure Medium Total										7.2E+00

TABLE H2-7.2.6.CTE
EPA RAGS PART D TABLE 7b
CALCULATION OF CTE CHEMICAL NONCANCER HAZARDS
FUTURE REDEVELOPED ADULT RESIDENT
SITE 13, ALAMEDA POINT, ALAMEDA, CALIFORNIA

Scenario Timeframe:	Future-Redeveloped
Receptor Population:	Resident
Receptor Age:	Adult

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Non-Cancer Hazard Calculations				
					Value	Units	Intake/Exposure Concentration		RfD/RfC		Hazard Quotient
							Value	Units	Value	Units	
Medium Total											7.2E+00
										Total of Receptor Hazards Across All Media	7.2E+00

Notes:

--	Not Applicable or Not Available
EPC	Exposure point concentration
mg/kg	Milligram per kilogram
mg/kg-day	Milligram per kilogram per day
RfD	Reference dose
RfC	Reference concentration
CTE	Central tendency exposure
VOC	Volatile organic compound

TABLE H2-7.2.7.CTE
EPA RAGS PART D TABLE 7b
CALCULATION OF CTE CHEMICAL NONCANCER HAZARDS
FUTURE REDEVELOPED CHILD RESIDENT
SITE 13, ALAMEDA POINT, ALAMEDA, CALIFORNIA

Scenario Timeframe:	Future-Redeveloped
Receptor Population:	Resident
Receptor Age:	Child

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Non-Cancer Hazard Calculations				
					Value	Units	Intake/Exposure Concentration		RfD/RfC		Hazard Quotient
							Value	Units	Value	Units	
Soil (0-8)	Soil	Site Soil	Ingestion	2-Methylnaphthalene	8.62E-01	mg/kg	5.5E-06	mg/kg-day	9.0E-03	mg/kg-day	6.1E-04
				Arsenic	4.45E+00	mg/kg	2.8E-05	mg/kg-day	3.0E-04	mg/kg-day	9.5E-02
				Benzene	2.10E-02	mg/kg	1.3E-07	mg/kg-day	4.0E-03	mg/kg-day	3.4E-05
				Benz(a)anthracene	5.34E-02	mg/kg	3.4E-07	mg/kg-day	--	--	--
				Benzo(a)pyrene	4.88E-02	mg/kg	3.1E-07	mg/kg-day	--	--	--
				Benzo(b)fluoranthene	4.63E-02	mg/kg	3.0E-07	mg/kg-day	--	--	--
				Benzo(k)fluoranthene	4.08E-02	mg/kg	2.6E-07	mg/kg-day	--	--	--
				Chromium	3.37E+01	mg/kg	2.2E-04	mg/kg-day	1.5E+00	mg/kg-day	1.4E-04
				Chrysene	8.48E-02	mg/kg	5.4E-07	mg/kg-day	--	--	--
				Dibenz(a,h)anthracene	2.41E-02	mg/kg	1.5E-07	mg/kg-day	--	--	--
				Indeno(1,2,3-cd)pyrene	4.06E-02	mg/kg	2.6E-07	mg/kg-day	--	--	--
				Lead	2.49E+01	mg/kg	1.6E-04	mg/kg-day	--	--	--
				Vanadium	2.66E+01	mg/kg	1.7E-04	mg/kg-day	7.0E-03	mg/kg-day	2.4E-02
			Exp. Route Total								1.2E-01
			Dermal	2-Methylnaphthalene	8.62E-01	mg/kg	--	mg/kg-day	9.0E-03	mg/kg-day	--
				Arsenic	4.45E+00	mg/kg	9.6E-07	mg/kg-day	3.0E-04	mg/kg-day	3.2E-03
				Benzene	2.10E-02	mg/kg	--	mg/kg-day	4.0E-03	mg/kg-day	--
				Benz(a)anthracene	5.34E-02	mg/kg	5.0E-08	mg/kg-day	--	--	--
				Benzo(a)pyrene	4.88E-02	mg/kg	4.5E-08	mg/kg-day	--	--	--
				Benzo(b)fluoranthene	4.63E-02	mg/kg	4.3E-08	mg/kg-day	--	--	--
				Benzo(k)fluoranthene	4.08E-02	mg/kg	3.8E-08	mg/kg-day	--	--	--
				Chromium	3.37E+01	mg/kg	2.4E-06	mg/kg-day	1.5E+00	mg/kg-day	1.6E-06
				Chrysene	8.48E-02	mg/kg	7.9E-08	mg/kg-day	--	--	--
				Dibenz(a,h)anthracene	2.41E-02	mg/kg	2.2E-08	mg/kg-day	--	--	--
				Indeno(1,2,3-cd)pyrene	4.06E-02	mg/kg	3.8E-08	mg/kg-day	--	--	--
				Lead	2.49E+01	mg/kg	1.8E-06	mg/kg-day	--	--	--
				Vanadium	2.66E+01	mg/kg	1.9E-06	mg/kg-day	7.0E-03	mg/kg-day	2.7E-04
			Exp. Route Total								3.5E-03
		Exposure Point Total									1.2E-01
	Exposure Medium Total										1.2E-01
	Homegrown Produce	Homegrown Produce	Ingestion	2-Methylnaphthalene	8.62E-01	mg/kg	--	mg/kg-day	9.0E-03	mg/kg-day	--
				Arsenic	4.45E+00	mg/kg	4.2E-06	mg/kg-day	3.0E-04	mg/kg-day	1.4E-02
				Benzene	2.10E-02	mg/kg	--	mg/kg-day	4.0E-03	mg/kg-day	--
				Benz(a)anthracene	5.34E-02	mg/kg	4.5E-08	mg/kg-day	--	--	--

TABLE H2-7.2.7.CTE
EPA RAGS PART D TABLE 7b
CALCULATION OF CTE CHEMICAL NONCANCER HAZARDS
FUTURE REDEVELOPED CHILD RESIDENT
SITE 13, ALAMEDA POINT, ALAMEDA, CALIFORNIA

Scenario Timeframe:	Future-Redeveloped
Receptor Population:	Resident
Receptor Age:	Child

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Non-Cancer Hazard Calculations				
					Value	Units	Intake/Exposure Concentration		RfD/RfC		Hazard Quotient
							Value	Units	Value	Units	
				Benzo(a)pyrene	4.88E-02	mg/kg	3.1E-08	mg/kg-day	--	--	--
				Benzo(b)fluoranthene	4.63E-02	mg/kg	2.7E-08	mg/kg-day	--	--	--
				Benzo(k)fluoranthene	4.08E-02	mg/kg	2.4E-08	mg/kg-day	--	--	--
				Chromium	3.37E+01	mg/kg	--	mg/kg-day	1.5E+00	mg/kg-day	--
				Chrysene	8.48E-02	mg/kg	6.4E-08	mg/kg-day	--	--	--
				Dibenz(a,h)anthracene	2.41E-02	mg/kg	2.3E-08	mg/kg-day	--	--	--
				Indeno(1,2,3-cd)pyrene	4.06E-02	mg/kg	1.9E-08	mg/kg-day	--	--	--
				Lead	2.49E+01	mg/kg	--	mg/kg-day	--	--	--
				Vanadium	2.66E+01	mg/kg	--	mg/kg-day	7.0E-03	mg/kg-day	--
			Exp. Route Total								1.4E-02
		Exposure Point Total									1.4E-02
	Exposure Medium Total										1.4E-02
	Air	Outdoor Air	Inhalation (particulates)	2-Methylnaphthalene	8.62E-01	mg/kg	1.8E-11	mg/kg-day	8.6E-04	mg/kg-day	2.0E-08
				Arsenic	4.45E+00	mg/kg	9.1E-11	mg/kg-day	--	--	--
				Benzene	2.10E-02	mg/kg	4.3E-13	mg/kg-day	8.6E-03	mg/kg-day	5.0E-11
				Benz(a)anthracene	5.34E-02	mg/kg	1.1E-12	mg/kg-day	--	--	--
				Benzo(a)pyrene	4.88E-02	mg/kg	9.9E-13	mg/kg-day	--	--	--
				Benzo(b)fluoranthene	4.63E-02	mg/kg	9.4E-13	mg/kg-day	--	--	--
				Benzo(k)fluoranthene	4.08E-02	mg/kg	8.3E-13	mg/kg-day	--	--	--
				Chromium	3.37E+01	mg/kg	6.9E-10	mg/kg-day	--	--	--
				Chrysene	8.48E-02	mg/kg	1.7E-12	mg/kg-day	--	--	--
				Dibenz(a,h)anthracene	2.41E-02	mg/kg	4.9E-13	mg/kg-day	--	--	--
				Indeno(1,2,3-cd)pyrene	4.06E-02	mg/kg	8.3E-13	mg/kg-day	--	--	--
				Lead	2.49E+01	mg/kg	5.1E-10	mg/kg-day	--	--	--
				Vanadium	2.66E+01	mg/kg	5.4E-10	mg/kg-day	--	--	--
			Exp. Route Total								2.0E-08
			Inhalation (VOCs)	2-Methylnaphthalene	8.62E-01	mg/kg	5.4E-07	mg/kg-day	8.6E-04	mg/kg-day	6.3E-04
				Benzene	2.10E-02	mg/kg	2.1E-07	mg/kg-day	8.6E-03	mg/kg-day	2.4E-05
			Exp. Route Total								6.5E-04
		Exposure Point Total									6.5E-04
	Exposure Medium Total										6.5E-04
Medium Total											1.4E-01

TABLE H2-7.2.7.CTE
EPA RAGS PART D TABLE 7b
CALCULATION OF CTE CHEMICAL NONCANCER HAZARDS
FUTURE REDEVELOPED CHILD RESIDENT
SITE 13, ALAMEDA POINT, ALAMEDA, CALIFORNIA

Scenario Timeframe:	Future-Redeveloped
Receptor Population:	Resident
Receptor Age:	Child

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Non-Cancer Hazard Calculations				
					Value	Units	Intake/Exposure Concentration		RfD/RfC		Hazard Quotient
							Value	Units	Value	Units	
Groundwater	Groundwater	Tap	Ingestion	1,2-Dichloroethane	2.74E-04	mg/L	1.8E-05	mg/kg-day	3.0E-02	mg/kg-day	5.8E-04
				2-Methylnaphthalene	5.97E-03	mg/L	3.8E-04	mg/kg-day	9.0E-03	mg/kg-day	4.2E-02
				Arsenic	7.72E-03	mg/L	4.9E-04	mg/kg-day	3.0E-04	mg/kg-day	1.6E+00
				Benzene	1.30E-03	mg/L	8.3E-05	mg/kg-day	4.0E-03	mg/kg-day	2.1E-02
				Ethylbenzene	6.00E-04	mg/L	3.8E-05	mg/kg-day	1.0E-01	mg/kg-day	3.8E-04
				Manganese	7.80E+00	mg/L	5.0E-01	mg/kg-day	2.4E-02	mg/kg-day	2.1E+01
				Naphthalene	1.24E-02	mg/L	7.9E-04	mg/kg-day	2.0E-02	mg/kg-day	4.0E-02
				Pentachlorophenol	7.00E-03	mg/L	4.5E-04	mg/kg-day	3.0E-02	mg/kg-day	1.5E-02
				Thallium	1.25E-03	mg/L	8.0E-05	mg/kg-day	6.6E-05	mg/kg-day	1.2E+00
				Trichloroethene	5.36E-04	mg/L	3.4E-05	mg/kg-day	3.0E-04	mg/kg-day	1.1E-01
			Exp. Route Total								2.4E+01
			Dermal (bathing/ showering)	1,2-Dichloroethane	2.74E-04	mg/L	1.6E-07	mg/kg-day	3.0E-02	mg/kg-day	5.3E-06
				2-Methylnaphthalene	5.97E-03	mg/L	3.9E-05	mg/kg-day	9.0E-03	mg/kg-day	4.3E-03
				Arsenic	7.72E-03	mg/L	1.1E-06	mg/kg-day	3.0E-04	mg/kg-day	3.6E-03
				Benzene	1.30E-03	mg/L	3.8E-06	mg/kg-day	4.0E-03	mg/kg-day	9.5E-04
				Ethylbenzene	6.00E-04	mg/L	4.1E-06	mg/kg-day	1.0E-01	mg/kg-day	4.1E-05
				Manganese	7.80E+00	mg/L	1.1E-03	mg/kg-day	2.4E-02	mg/kg-day	4.5E-02
				Naphthalene	1.24E-02	mg/L	8.1E-05	mg/kg-day	2.0E-02	mg/kg-day	4.1E-03
				Pentachlorophenol	7.00E-03	mg/L	3.8E-04	mg/kg-day	3.0E-02	mg/kg-day	1.3E-02
				Thallium	1.25E-03	mg/L	1.7E-07	mg/kg-day	6.6E-05	mg/kg-day	2.6E-03
				Trichloroethene	5.36E-04	mg/L	9.0E-07	mg/kg-day	3.0E-04	mg/kg-day	3.0E-03
			Exp. Route Total								7.7E-02
			Inhalation (bathing/ showering)	1,2-Dichloroethane	2.74E-04	mg/L	5.1E-08	mg/kg-day	1.4E-03	mg/kg-day	3.6E-05
				2-Methylnaphthalene	5.97E-03	mg/L	1.1E-06	mg/kg-day	8.6E-04	mg/kg-day	1.3E-03
				Benzene	1.30E-03	mg/L	2.4E-07	mg/kg-day	8.6E-03	mg/kg-day	2.8E-05
				Ethylbenzene	6.00E-04	mg/L	1.1E-07	mg/kg-day	2.9E-01	mg/kg-day	3.8E-07
				Naphthalene	1.24E-02	mg/L	2.3E-06	mg/kg-day	8.6E-04	mg/kg-day	2.7E-03
				Trichloroethene	5.36E-04	mg/L	9.9E-08	mg/kg-day	1.0E-02	mg/kg-day	9.9E-06
			Exp. Route Total								4.0E-03
		Exposure Point Total									2.4E+01
	Exposure Medium Total										2.4E+01
Medium Total											2.4E+01
										Total of Receptor Hazards Across All Media	2.4E+01

TABLE H2-7.2.7.CTE
EPA RAGS PART D TABLE 7b
CALCULATION OF CTE CHEMICAL NONCANCER HAZARDS
FUTURE REDEVELOPED CHILD RESIDENT
SITE 13, ALAMEDA POINT, ALAMEDA, CALIFORNIA

Scenario Timeframe:	Future-Redeveloped
Receptor Population:	Resident
Receptor Age:	Child

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Non-Cancer Hazard Calculations				
					Value	Units	Intake/Exposure Concentration		RfD/RfC		Hazard Quotient
							Value	Units	Value	Units	

Notes:

--	Not Applicable or Not Available
EPC	Exposure point concentration
mg/kg	Milligram per kilogram
mg/kg-day	Milligram per kilogram per day
RfD	Reference dose
RfC	Reference concentration
CTE	Central tendency exposure
VOC	Volatile organic compound

HHRA RISK TABLES

Central Tendency Exposure
Site 19
Alameda Point, Alameda, California

TABLE H2-7.3.1.CTE
EPA RAGS PART D TABLE 7b
CALCULATION OF CTE CHEMICAL NONCANCER HAZARDS
CURRENT INDUSTRIAL WORKER
SITE 19, ALAMEDA POINT, ALAMEDA, CALIFORNIA

Scenario Timeframe:	Current/Future
Receptor Population:	Industrial Worker
Receptor Age:	Adult

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Non-Cancer Hazard Calculations				
					Value	Units	Intake/Exposure Concentration		RfD/RfC		Hazard Quotient
							Value	Units	Value	Units	
Soil (0-2)	Soil	Site Soil	Ingestion	Arsenic	4.33E+00	mg/kg	1.9E-06	mg/kg-day	3.0E-04	mg/kg-day	6.2E-03
				Benzo(a)pyrene	2.00E-02	mg/kg	8.6E-09	mg/kg-day	--	--	--
			Exp. Route Total								6.2E-03
			Dermal	Arsenic	4.33E+00	mg/kg	7.3E-08	mg/kg-day	3.0E-04	mg/kg-day	2.4E-04
				Benzo(a)pyrene	2.00E-02	mg/kg	1.5E-09	mg/kg-day	--	--	--
			Exp. Route Total								2.4E-04
		Exposure Point Total									6.4E-03
	Exposure Medium Total										6.4E-03
	Air	Outdoor Air	Inhalation (particulates)	Arsenic	4.33E+00	mg/kg	7.0E-11	mg/kg-day	--	--	--
				Benzo(a)pyrene	2.00E-02	mg/kg	3.2E-13	mg/kg-day	--	--	--
			Exp. Route Total								0.0E+00
		Exposure Point Total									0.0E+00
	Exposure Medium Total										0.0E+00
Medium Total											6.4E-03
										Total of Receptor Hazards Across All Media	6.4E-03

Notes:

EPC	Exposure point concentration
mg/kg	Milligram per kilogram
mg/kg-day	Milligram per kilogram per day
RfD	Reference dose
RfC	*Reference concentration*
CTE	Central tendency exposure
--	Not Applicable or Not Available

TABLE H2-7.3.2.CTE
EPA RAGS PART D TABLE 7b
CALCULATION OF CTE CHEMICAL NONCANCER HAZARDS
CURRENT CONSTRUCTION WORKER
SITE 19, ALAMEDA POINT, ALAMEDA, CALIFORNIA

Scenario Timeframe:	Current/Future
Receptor Population:	Construction Worker
Receptor Age:	Adult

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Non-Cancer Hazard Calculations				
					Value	Units	Intake/Exposure Concentration		RfD/RfC		Hazard Quotient
							Value	Units	Value	Units	
Soil (0-2)	Soil	Site Soil	Ingestion	Arsenic	4.33E+00	mg/kg	1.0E-06	mg/kg-day	3.0E-04	mg/kg-day	3.4E-03
				Benzo(a)pyrene	2.00E-02	mg/kg	4.7E-09	mg/kg-day	--	--	--
			Exp. Route Total								3.4E-03
			Dermal	Arsenic	4.33E+00	mg/kg	1.0E-07	mg/kg-day	3.0E-04	mg/kg-day	3.4E-04
				Benzo(a)pyrene	2.00E-02	mg/kg	2.0E-09	mg/kg-day	--	--	--
			Exp. Route Total								3.4E-04
		Exposure Point Total									3.7E-03
	Exposure Medium Total										3.7E-03
	Air	Outdoor Air	Inhalation (particulates)	Arsenic	4.33E+00	mg/kg	1.5E-10	mg/kg-day	--	--	--
				Benzo(a)pyrene	2.00E-02	mg/kg	7.1E-13	mg/kg-day	--	--	--
			Exp. Route Total								0.0E+00
		Exposure Point Total									0.0E+00
	Exposure Medium Total										0.0E+00
Medium Total											3.7E-03
										Total of Receptor Hazards Across All Media	3.7E-03

Notes:

EPC	Exposure point concentration
mg/kg	Milligram per kilogram
mg/kg-day	Milligram per kilogram per day
RfD	Reference dose
RfC	Reference concentration
CTE	Central tendency exposure
--	Not Applicable or Not Available

TABLE H2-7.3.3.CTE
EPA RAGS PART D TABLE 7b
CALCULATION OF CTE CHEMICAL NONCANCER HAZARDS
CURRENT ADULT RESIDENT
SITE 19, ALAMEDA POINT, ALAMEDA, CALIFORNIA

Scenario Timeframe:	Current/Future
Receptor Population:	Resident
Receptor Age:	Adult

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Non-Cancer Hazard Calculations				
					Value	Units	Intake/Exposure Concentration		RfD/RfC		Hazard Quotient
							Value	Units	Value	Units	
Soil (0-2)	Soil	Site Soil	Ingestion	Arsenic	4.33E+00	mg/kg	3.0E-06	mg/kg-day	3.0E-04	mg/kg-day	9.9E-03
				Benzo(a)pyrene	2.00E-02	mg/kg	1.4E-08	mg/kg-day	--	--	--
			Exp. Route Total								9.9E-03
			Dermal	Arsenic	4.33E+00	mg/kg	1.0E-07	mg/kg-day	3.0E-04	mg/kg-day	3.4E-04
				Benzo(a)pyrene	2.00E-02	mg/kg	2.0E-09	mg/kg-day	--	--	--
			Exp. Route Total								3.4E-04
		Exposure Point Total									1.0E-02
	Exposure Medium Total										1.0E-02
	Homegrown Produce	Homegrown Produce	Ingestion	Arsenic	4.33E+00	mg/kg	4.1E-06	mg/kg-day	3.0E-04	mg/kg-day	1.4E-02
				Benzo(a)pyrene	2.00E-02	mg/kg	1.3E-08	mg/kg-day	--	--	--
			Exp. Route Total								1.4E-02
		Exposure Point Total									1.4E-02
	Exposure Medium Total										1.4E-02
	Air	Outdoor Air	Inhalation (particulates)	Arsenic	4.33E+00	mg/kg	3.7E-11	mg/kg-day	--	--	--
				Benzo(a)pyrene	2.00E-02	mg/kg	1.7E-13	mg/kg-day	--	--	--
			Exp. Route Total								0.0E+00
		Exposure Point Total									0.0E+00
	Exposure Medium Total										0.0E+00
Medium Total											2.4E-02
Groundwater	Groundwater	Tap	Ingestion	1,1-Dichloroethane	5.90E-03	mg/L	1.1E-04	mg/kg-day	1.0E-01	mg/kg-day	1.1E-03
				1,2-Dichloroethane	2.66E-04	mg/L	5.1E-06	mg/kg-day	3.0E-02	mg/kg-day	1.7E-04
				1,2-Dichloropropane	5.70E-04	mg/L	1.1E-05	mg/kg-day	1.1E-03	mg/kg-day	9.9E-03
				Arsenic	3.31E-03	mg/L	6.3E-05	mg/kg-day	3.0E-04	mg/kg-day	2.1E-01
				Benzene	3.33E-04	mg/L	6.4E-06	mg/kg-day	4.0E-03	mg/kg-day	1.6E-03
				Manganese	5.17E+00	mg/L	9.9E-02	mg/kg-day	2.4E-02	mg/kg-day	4.1E+00
				Tetrachloroethene	4.07E-03	mg/L	7.8E-05	mg/kg-day	1.0E-02	mg/kg-day	7.8E-03
				Trichloroethene	1.26E-03	mg/L	2.4E-05	mg/kg-day	3.0E-04	mg/kg-day	8.1E-02
			Exp. Route Total								4.4E+00
			Dermal (bathing/ showering)	1,1-Dichloroethane	5.90E-03	mg/L	2.4E-06	mg/kg-day	1.0E-01	mg/kg-day	2.4E-05
				1,2-Dichloroethane	2.66E-04	mg/L	6.9E-08	mg/kg-day	3.0E-02	mg/kg-day	2.3E-06
				1,2-Dichloropropane	5.70E-04	mg/L	2.7E-07	mg/kg-day	1.1E-03	mg/kg-day	2.5E-04
				Arsenic	3.31E-03	mg/L	2.0E-07	mg/kg-day	3.0E-04	mg/kg-day	6.8E-04

TABLE H2-7.3.3.CTE
EPA RAGS PART D TABLE 7b
CALCULATION OF CTE CHEMICAL NONCANCER HAZARDS
CURRENT ADULT RESIDENT
SITE 19, ALAMEDA POINT, ALAMEDA, CALIFORNIA

Scenario Timeframe:	Current/Future
Receptor Population:	Resident
Receptor Age:	Adult

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Non-Cancer Hazard Calculations				
					Value	Units	Intake/Exposure Concentration		RfD/RfC		Hazard Quotient
							Value	Units	Value	Units	
				Benzene	3.33E-04	mg/L	4.3E-07	mg/kg-day	4.0E-03	mg/kg-day	1.1E-04
				Manganese	5.17E+00	mg/L	3.2E-04	mg/kg-day	2.4E-02	mg/kg-day	1.3E-02
				Tetrachloroethene	4.07E-03	mg/L	8.3E-06	mg/kg-day	1.0E-02	mg/kg-day	8.3E-04
				Trichloroethene	1.26E-03	mg/L	9.3E-07	mg/kg-day	3.0E-04	mg/kg-day	3.1E-03
			Exp. Route Total								1.8E-02
			Inhalation (bathing/ showering)	1,1-Dichloroethane	5.90E-03	mg/L	3.5E-07	mg/kg-day	1.4E-01	mg/kg-day	2.5E-06
				1,2-Dichloroethane	2.66E-04	mg/L	1.6E-08	mg/kg-day	1.4E-03	mg/kg-day	1.1E-05
				1,2-Dichloropropane	5.70E-04	mg/L	3.4E-08	mg/kg-day	1.1E-03	mg/kg-day	3.1E-05
				Benzene	3.33E-04	mg/L	2.0E-08	mg/kg-day	8.6E-03	mg/kg-day	2.3E-06
				Tetrachloroethene	4.07E-03	mg/L	2.4E-07	mg/kg-day	1.7E-01	mg/kg-day	1.4E-06
				Trichloroethene	1.26E-03	mg/L	7.5E-08	mg/kg-day	1.0E-02	mg/kg-day	7.5E-06
			Exp. Route Total								5.6E-05
		Exposure Point Total									4.5E+00
	Exposure Medium Total										4.5E+00
Medium Total											4.5E+00
										Total of Receptor Hazards Across All Media	4.5E+00

Notes:

EPC	Exposure point concentration
mg/kg	Milligram per kilogram
mg/kg-day	Milligram per kilogram per day
RfD	Reference dose
RfC	Reference concentration
CTE	Central tendency exposure
--	Not Applicable or Not Available

TABLE H2-7.3.4.CTE
EPA RAGS PART D TABLE 7b
CALCULATION OF CTE CHEMICAL NONCANCER HAZARDS
CURRENT CHILD RESIDENT
SITE 19, ALAMEDA POINT, ALAMEDA, CALIFORNIA

Scenario Timeframe:	Current/Future
Receptor Population:	Resident
Receptor Age:	Child

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Non-Cancer Hazard Calculations				
					Value	Units	Intake/Exposure Concentration		RfD/RfC		Hazard Quotient
							Value	Units	Value	Units	
Soil (0-2)	Soil	Site Soil	Ingestion	Arsenic	4.33E+00	mg/kg	2.8E-05	mg/kg-day	3.0E-04	mg/kg-day	9.2E-02
				Benzo(a)pyrene	2.00E-02	mg/kg	1.3E-07	mg/kg-day	--	--	--
			Exp. Route Total								9.2E-02
			Dermal	Arsenic	4.33E+00	mg/kg	9.3E-07	mg/kg-day	3.0E-04	mg/kg-day	3.1E-03
				Benzo(a)pyrene	2.00E-02	mg/kg	1.9E-08	mg/kg-day	--	--	--
			Exp. Route Total								3.1E-03
		Exposure Point Total									9.5E-02
	Exposure Medium Total										9.5E-02
	Homegrown Produce	Homegrown Produce	Ingestion	Arsenic	4.33E+00	mg/kg	4.0E-06	mg/kg-day	3.0E-04	mg/kg-day	1.3E-02
				Benzo(a)pyrene	2.00E-02	mg/kg	1.3E-08	mg/kg-day	--	--	--
			Exp. Route Total								1.3E-02
		Exposure Point Total									1.3E-02
	Exposure Medium Total										1.3E-02
	Air	Outdoor Air	Inhalation (particulates)	Arsenic	4.33E+00	mg/kg	8.8E-11	mg/kg-day	--	--	--
				Benzo(a)pyrene	2.00E-02	mg/kg	4.1E-13	mg/kg-day	--	--	--
			Exp. Route Total								0.0E+00
		Exposure Point Total									0.0E+00
	Exposure Medium Total										0.0E+00
Medium Total											1.1E-01
Groundwater	Groundwater	Tap	Ingestion	1,1-Dichloroethane	5.90E-03	mg/L	3.8E-04	mg/kg-day	1.0E-01	mg/kg-day	3.8E-03
				1,2-Dichloroethane	2.66E-04	mg/L	1.7E-05	mg/kg-day	3.0E-02	mg/kg-day	5.7E-04
				1,2-Dichloropropane	5.70E-04	mg/L	3.6E-05	mg/kg-day	1.1E-03	mg/kg-day	3.3E-02
				Arsenic	3.31E-03	mg/L	2.1E-04	mg/kg-day	3.0E-04	mg/kg-day	7.1E-01
				Benzene	3.33E-04	mg/L	2.1E-05	mg/kg-day	4.0E-03	mg/kg-day	5.3E-03
				Manganese	5.17E+00	mg/L	3.3E-01	mg/kg-day	2.4E-02	mg/kg-day	1.4E+01
				Tetrachloroethene	4.07E-03	mg/L	2.6E-04	mg/kg-day	1.0E-02	mg/kg-day	2.6E-02
				Trichloroethene	1.26E-03	mg/L	8.1E-05	mg/kg-day	3.0E-04	mg/kg-day	2.7E-01
			Exp. Route Total								1.5E+01
			Dermal (bathing/ showering)	1,1-Dichloroethane	5.90E-03	mg/L	5.5E-06	mg/kg-day	1.0E-01	mg/kg-day	5.5E-05
				1,2-Dichloroethane	2.66E-04	mg/L	1.6E-07	mg/kg-day	3.0E-02	mg/kg-day	5.2E-06
				1,2-Dichloropropane	5.70E-04	mg/L	6.2E-07	mg/kg-day	1.1E-03	mg/kg-day	5.6E-04
				Arsenic	3.31E-03	mg/L	4.6E-07	mg/kg-day	3.0E-04	mg/kg-day	1.5E-03

TABLE H2-7.3.4.CTE
EPA RAGS PART D TABLE 7b
CALCULATION OF CTE CHEMICAL NONCANCER HAZARDS
CURRENT CHILD RESIDENT
SITE 19, ALAMEDA POINT, ALAMEDA, CALIFORNIA

Scenario Timeframe:	Current/Future
Receptor Population:	*Resident*
Receptor Age:	Child

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Non-Cancer Hazard Calculations				
					Value	Units	Intake/Exposure Concentration		RfD/RfC		Hazard Quotient
							Value	Units	Value	Units	
				Benzene	3.33E-04	mg/L	9.7E-07	mg/kg-day	4.0E-03	mg/kg-day	2.4E-04
				Manganese	5.17E+00	mg/L	7.2E-04	mg/kg-day	2.4E-02	mg/kg-day	3.0E-02
				Tetrachloroethene	4.07E-03	mg/L	1.9E-05	mg/kg-day	1.0E-02	mg/kg-day	1.9E-03
				Trichloroethene	1.26E-03	mg/L	2.1E-06	mg/kg-day	3.0E-04	mg/kg-day	7.0E-03
			Exp. Route Total								4.1E-02
			Inhalation (bathing/ showering)	1,1-Dichloroethane	5.90E-03	mg/L	1.1E-06	mg/kg-day	1.4E-01	mg/kg-day	7.8E-06
				1,2-Dichloroethane	2.66E-04	mg/L	4.9E-08	mg/kg-day	1.4E-03	mg/kg-day	3.5E-05
				1,2-Dichloropropane	5.70E-04	mg/L	1.1E-07	mg/kg-day	1.1E-03	mg/kg-day	9.6E-05
				Benzene	3.33E-04	mg/L	6.1E-08	mg/kg-day	8.6E-03	mg/kg-day	7.1E-06
				Tetrachloroethene	4.07E-03	mg/L	7.5E-07	mg/kg-day	1.7E-01	mg/kg-day	4.4E-06
				Trichloroethene	1.26E-03	mg/L	2.3E-07	mg/kg-day	1.0E-02	mg/kg-day	2.3E-05
			Exp. Route Total								1.7E-04
		Exposure Point Total									1.5E+01
	Exposure Medium Total										1.5E+01
Medium Total											1.5E+01
										Total of Receptor Hazards Across All Media	1.5E+01

Notes:

EPC	Exposure point concentration
mg/kg	Milligram per kilogram
mg/kg-day	Milligram per kilogram per day
RfD	Reference dose
RfC	Reference concentration
CTE	Central tendency exposure
--	Not Applicable or Not Available

TABLE H2-7.3.5.CTE
EPA RAGS PART D TABLE 7b
CALCULATION OF CTE CHEMICAL NONCANCER HAZARDS
FUTURE DEVELOPED CONSTRUCTION WORKER
SITE 19, ALAMEDA POINT, ALAMEDA, CALIFORNIA

Scenario Timeframe:	Future-Developed
Receptor Population:	Construction Worker
Receptor Age:	Adult

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Non-Cancer Hazard Calculations				
					Value	Units	Intake/Exposure Concentration		RfD/RfC		Hazard Quotient
							Value	Units	Value	Units	
Soil (0-8)	Soil	Site Soil	Ingestion	Arsenic	5.25E+00	mg/kg	1.2E-06	mg/kg-day	3.0E-04	mg/kg-day	4.1E-03
				Benzo(a)pyrene	1.87E-02	mg/kg	4.4E-09	mg/kg-day	--	--	--
				Lead	9.17E+00	mg/kg	2.2E-06	mg/kg-day	--	--	--
			Exp. Route Total								4.1E-03
			Dermal	Arsenic	5.25E+00	mg/kg	1.2E-07	mg/kg-day	3.0E-04	mg/kg-day	4.1E-04
				Benzo(a)pyrene	1.87E-02	mg/kg	1.9E-09	mg/kg-day	--	--	--
				Lead	9.17E+00	mg/kg	7.1E-08	mg/kg-day	--	--	--
			Exp. Route Total								4.1E-04
		Exposure Point Total									4.5E-03
	Exposure Medium Total										4.5E-03
	Air	Outdoor Air	Inhalation (particulates)	Arsenic	5.25E+00	mg/kg	1.9E-10	mg/kg-day	--	--	--
				Benzo(a)pyrene	1.87E-02	mg/kg	6.7E-13	mg/kg-day	--	--	--
				Lead	9.17E+00	mg/kg	3.3E-10	mg/kg-day	--	--	--
			Exp. Route Total								0.0E+00
		Exposure Point Total									0.0E+00
	Exposure Medium Total										0.0E+00
Medium Total											4.5E-03
										Total of Receptor Hazards Across All Media	4.5E-03

Notes:

EPC	Exposure point concentration
mg/kg	Milligram per kilogram
mg/kg-day	Milligram per kilogram per day
RfD	Reference dose
RfC	Reference concentration
CTE	Central tendency exposure
--	Not Applicable or Not Available

TABLE H2-7.3.6.CTE
EPA RAGS PART D TABLE 7b
CALCULATION OF CTE CHEMICAL NONCANCER HAZARDS
FUTURE REDEVELOPED ADULT RESIDENT
SITE 19, ALAMEDA POINT, ALAMEDA, CALIFORNIA

Scenario Timeframe:	*Future-Redeveloped*
Receptor Population:	Resident
Receptor Age:	Adult

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Non-Cancer Hazard Calculations				
					Value	Units	Intake/Exposure Concentration		RfD/RfC		Hazard Quotient
							Value	Units	Value	Units	
Soil (0-8)	Soil	Site Soil	Ingestion	Arsenic	5.25E+00	mg/kg	3.6E-06	mg/kg-day	3.0E-04	mg/kg-day	1.2E-02
				Benzo(a)pyrene	1.87E-02	mg/kg	1.3E-08	mg/kg-day	--	--	--
				Lead	9.17E+00	mg/kg	6.3E-06	mg/kg-day	--	--	--
			Exp. Route Total								1.2E-02
			Dermal	Arsenic	5.25E+00	mg/kg	1.2E-07	mg/kg-day	3.0E-04	mg/kg-day	4.1E-04
				Benzo(a)pyrene	1.87E-02	mg/kg	1.9E-09	mg/kg-day	--	--	--
				Lead	9.17E+00	mg/kg	7.2E-08	mg/kg-day	--	--	--
			Exp. Route Total								4.1E-04
		Exposure Point Total									1.2E-02
	Exposure Medium Total										1.2E-02
	Homegrown Produce	Homegrown Produce	Ingestion	Arsenic	5.25E+00	mg/kg	4.9E-06	mg/kg-day	3.0E-04	mg/kg-day	1.6E-02
				Benzo(a)pyrene	1.87E-02	mg/kg	1.2E-08	mg/kg-day	--	--	--
				Lead	9.17E+00	mg/kg	--	mg/kg-day	--	--	--
			Exp. Route Total								1.6E-02
		Exposure Point Total									1.6E-02
	Exposure Medium Total										1.6E-02
	Air	Outdoor Air	Inhalation (particulates)	Arsenic	5.25E+00	mg/kg	4.5E-11	mg/kg-day	--	--	--
				Benzo(a)pyrene	1.87E-02	mg/kg	1.6E-13	mg/kg-day	--	--	--
				Lead	9.17E+00	mg/kg	7.9E-11	mg/kg-day	--	--	--
			Exp. Route Total								0.0E+00
		Exposure Point Total									0.0E+00
	Exposure Medium Total										0.0E+00
Medium Total											2.9E-02
Groundwater	Groundwater	Tap	Ingestion	1,1-Dichloroethane	5.90E-03	mg/L	1.1E-04	mg/kg-day	1.0E-01	mg/kg-day	1.1E-03
				1,2-Dichloroethane	2.66E-04	mg/L	5.1E-06	mg/kg-day	3.0E-02	mg/kg-day	1.7E-04
				1,2-Dichloropropane	5.70E-04	mg/L	1.1E-05	mg/kg-day	1.1E-03	mg/kg-day	9.9E-03
				Arsenic	3.31E-03	mg/L	6.3E-05	mg/kg-day	3.0E-04	mg/kg-day	2.1E-01
				Benzene	3.33E-04	mg/L	6.4E-06	mg/kg-day	4.0E-03	mg/kg-day	1.6E-03
				Manganese	5.17E+00	mg/L	9.9E-02	mg/kg-day	2.4E-02	mg/kg-day	4.1E+00
				Tetrachloroethene	4.07E-03	mg/L	7.8E-05	mg/kg-day	1.0E-02	mg/kg-day	7.8E-03
				Trichloroethene	1.26E-03	mg/L	2.4E-05	mg/kg-day	3.0E-04	mg/kg-day	8.1E-02
			Exp. Route Total								4.4E+00

TABLE H2-7.3.6.CTE
EPA RAGS PART D TABLE 7b
CALCULATION OF CTE CHEMICAL NONCANCER HAZARDS
FUTURE REDEVELOPED ADULT RESIDENT
SITE 19, ALAMEDA POINT, ALAMEDA, CALIFORNIA

Scenario Timeframe:	Future-Redeveloped
Receptor Population:	Resident
Receptor Age:	Adult

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Non-Cancer Hazard Calculations				
					Value	Units	Intake/Exposure Concentration		RfD/RfC		Hazard Quotient
							Value	Units	Value	Units	
			Dermal (bathing/ showering)	1,1-Dichloroethane	5.90E-03	mg/L	2.4E-06	mg/kg-day	1.0E-01	mg/kg-day	2.4E-05
				1,2-Dichloroethane	2.66E-04	mg/L	6.9E-08	mg/kg-day	3.0E-02	mg/kg-day	2.3E-06
				1,2-Dichloropropane	5.70E-04	mg/L	2.7E-07	mg/kg-day	1.1E-03	mg/kg-day	2.5E-04
				Arsenic	3.31E-03	mg/L	2.0E-07	mg/kg-day	3.0E-04	mg/kg-day	6.8E-04
				Benzene	3.33E-04	mg/L	4.3E-07	mg/kg-day	4.0E-03	mg/kg-day	1.1E-04
				Manganese	5.17E+00	mg/L	3.2E-04	mg/kg-day	2.4E-02	mg/kg-day	1.3E-02
				Tetrachloroethene	4.07E-03	mg/L	8.3E-06	mg/kg-day	1.0E-02	mg/kg-day	8.3E-04
				Trichloroethene	1.26E-03	mg/L	9.3E-07	mg/kg-day	3.0E-04	mg/kg-day	3.1E-03
			Exp. Route Total								1.8E-02
			Inhalation (bathing/ showering)	1,1-Dichloroethane	5.90E-03	mg/L	3.5E-07	mg/kg-day	1.4E-01	mg/kg-day	2.5E-06
				1,2-Dichloroethane	2.66E-04	mg/L	1.6E-08	mg/kg-day	1.4E-03	mg/kg-day	1.1E-05
				1,2-Dichloropropane	5.70E-04	mg/L	3.4E-08	mg/kg-day	1.1E-03	mg/kg-day	3.1E-05
				Benzene	3.33E-04	mg/L	2.0E-08	mg/kg-day	8.6E-03	mg/kg-day	2.3E-06
				Tetrachloroethene	4.07E-03	mg/L	2.4E-07	mg/kg-day	1.7E-01	mg/kg-day	1.4E-06
				Trichloroethene	1.26E-03	mg/L	7.5E-08	mg/kg-day	1.0E-02	mg/kg-day	7.5E-06
			Exp. Route Total								5.6E-05
		Exposure Point Total									4.5E+00
	Exposure Medium Total										4.5E+00
Medium Total											4.5E+00
										Total of Receptor Hazards Across All Media	4.5E+00

Notes:

EPC	Exposure point concentration
mg/kg	Milligram per kilogram
mg/kg-day	Milligram per kilogram per day
RfD	Reference dose
RfC	Reference concentration
CTE	Central tendency exposure
--	Not Applicable or Not Available

TABLE H2-7.3.7.CTE
EPA RAGS PART D TABLE 7b
CALCULATION OF CTE CHEMICAL NONCANCER HAZARDS
FUTURE REDEVELOPED CHILD RESIDENT
SITE 19, ALAMEDA POINT, ALAMEDA, CALIFORNIA

Scenario Timeframe:	Future-Redeveloped
Receptor Population:	Resident
Receptor Age:	Child

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Non-Cancer Hazard Calculations				
					Value	Units	Intake/Exposure Concentration		RfD/RfC		Hazard Quotient
							Value	Units	Value	Units	
Soil (0-8)	Soil	Site Soil	Ingestion	Arsenic	5.25E+00	mg/kg	3.4E-05	mg/kg-day	3.0E-04	mg/kg-day	1.1E-01
				Benzo(a)pyrene	1.87E-02	mg/kg	1.2E-07	mg/kg-day	--	--	--
				Lead	9.17E+00	mg/kg	5.9E-05	mg/kg-day	--	--	--
			Exp. Route Total								1.1E-01
			Dermal	Arsenic	5.25E+00	mg/kg	1.1E-06	mg/kg-day	3.0E-04	mg/kg-day	3.8E-03
				Benzo(a)pyrene	1.87E-02	mg/kg	1.7E-08	mg/kg-day	--	--	--
				Lead	9.17E+00	mg/kg	6.6E-07	mg/kg-day	--	--	--
			Exp. Route Total								3.8E-03
		Exposure Point Total									1.2E-01
	Exposure Medium Total										1.2E-01
	Homegrown Produce	Homegrown Produce	Ingestion	Arsenic	5.25E+00	mg/kg	4.9E-06	mg/kg-day	3.0E-04	mg/kg-day	1.6E-02
				Benzo(a)pyrene	1.87E-02	mg/kg	1.2E-08	mg/kg-day	--	--	--
				Lead	9.17E+00	mg/kg	--	mg/kg-day	--	--	--
			Exp. Route Total								1.6E-02
		Exposure Point Total									1.6E-02
	Exposure Medium Total										1.6E-02
	Air	Outdoor Air	Inhalation (particulates)	Arsenic	5.25E+00	mg/kg	1.1E-10	mg/kg-day	--	--	--
				Benzo(a)pyrene	1.87E-02	mg/kg	3.8E-13	mg/kg-day	--	--	--
				Lead	9.17E+00	mg/kg	1.9E-10	mg/kg-day	--	--	--
			Exp. Route Total								0.0E+00
		Exposure Point Total									0.0E+00
	Exposure Medium Total										0.0E+00
Medium Total											1.3E-01
Groundwater	Groundwater	Tap	Ingestion	1,1-Dichloroethane	5.90E-03	mg/L	3.8E-04	mg/kg-day	1.0E-01	mg/kg-day	3.8E-03
				1,2-Dichloroethane	2.66E-04	mg/L	1.7E-05	mg/kg-day	3.0E-02	mg/kg-day	5.7E-04
				1,2-Dichloropropane	5.70E-04	mg/L	3.6E-05	mg/kg-day	1.1E-03	mg/kg-day	3.3E-02
				Arsenic	3.31E-03	mg/L	2.1E-04	mg/kg-day	3.0E-04	mg/kg-day	7.1E-01
				Benzene	3.33E-04	mg/L	2.1E-05	mg/kg-day	4.0E-03	mg/kg-day	5.3E-03
				Manganese	5.17E+00	mg/L	3.3E-01	mg/kg-day	2.4E-02	mg/kg-day	1.4E+01
				Tetrachloroethene	4.07E-03	mg/L	2.6E-04	mg/kg-day	1.0E-02	mg/kg-day	2.6E-02
				Trichloroethene	1.26E-03	mg/L	8.1E-05	mg/kg-day	3.0E-04	mg/kg-day	2.7E-01
			Exp. Route Total								1.5E+01

TABLE H2-7.3.7.CTE
EPA RAGS PART D TABLE 7b
CALCULATION OF CTE CHEMICAL NONCANCER HAZARDS
FUTURE REDEVELOPED CHILD RESIDENT
SITE 19, ALAMEDA POINT, ALAMEDA, CALIFORNIA

Scenario Timeframe:	Future-Redeveloped
Receptor Population:	Resident
Receptor Age:	Child

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Non-Cancer Hazard Calculations				
					Value	Units	Intake/Exposure Concentration		RfD/RfC		Hazard Quotient
							Value	Units	Value	Units	
			Dermal (bathing/ showering)	1,1-Dichloroethane	5.90E-03	mg/L	5.5E-06	mg/kg-day	1.0E-01	mg/kg-day	5.5E-05
				1,2-Dichloroethane	2.66E-04	mg/L	1.6E-07	mg/kg-day	3.0E-02	mg/kg-day	5.2E-06
				1,2-Dichloropropane	5.70E-04	mg/L	6.2E-07	mg/kg-day	1.1E-03	mg/kg-day	5.6E-04
				Arsenic	3.31E-03	mg/L	4.6E-07	mg/kg-day	3.0E-04	mg/kg-day	1.5E-03
				Benzene	3.33E-04	mg/L	9.7E-07	mg/kg-day	4.0E-03	mg/kg-day	2.4E-04
				Manganese	5.17E+00	mg/L	7.2E-04	mg/kg-day	2.4E-02	mg/kg-day	3.0E-02
				Tetrachloroethene	4.07E-03	mg/L	1.9E-05	mg/kg-day	1.0E-02	mg/kg-day	1.9E-03
				Trichloroethene	1.26E-03	mg/L	2.1E-06	mg/kg-day	3.0E-04	mg/kg-day	7.0E-03
			Exp. Route Total								4.1E-02
			Inhalation (bathing/ showering)	1,1-Dichloroethane	5.90E-03	mg/L	1.1E-06	mg/kg-day	1.4E-01	mg/kg-day	7.8E-06
				1,2-Dichloroethane	2.66E-04	mg/L	4.9E-08	mg/kg-day	1.4E-03	mg/kg-day	3.5E-05
				1,2-Dichloropropane	5.70E-04	mg/L	1.1E-07	mg/kg-day	1.1E-03	mg/kg-day	9.6E-05
				Benzene	3.33E-04	mg/L	6.1E-08	mg/kg-day	8.6E-03	mg/kg-day	7.1E-06
				Tetrachloroethene	4.07E-03	mg/L	7.5E-07	mg/kg-day	1.7E-01	mg/kg-day	4.4E-06
				Trichloroethene	1.26E-03	mg/L	2.3E-07	mg/kg-day	1.0E-02	mg/kg-day	2.3E-05
			Exp. Route Total								1.7E-04
		Exposure Point Total									1.5E+01
	Exposure Medium Total										1.5E+01
Medium Total											1.5E+01
										Total of Receptor Hazards Across All Media	1.5E+01

Notes:

EPC	Exposure point concentration
mg/kg	Milligram per kilogram
mg/kg-day	Milligram per kilogram per day
RfD	Reference dose
RfC	Reference concentration
CTE	Central tendency exposure
--	Not Applicable or Not Available

HHRA RISK TABLES

Central Tendency Exposure
Site 22
Alameda Point, Alameda, California

TABLE H2-7.4.1.CTE
EPA RAGS PART D TABLE 7b
CALCULATION OF CTE CHEMICAL NONCANCER HAZARDS
CURRENT INDUSTRIAL WORKER
SITE 22, ALAMEDA POINT, ALAMEDA, CALIFORNIA

Scenario Timeframe:	Current
Receptor Population:	Industrial Worker
Receptor Age:	Adult

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Non-Cancer Hazard Calculations				
					Value	Units	Intake/Exposure Concentration		RfD/RfC		Hazard Quotient
							Value	Units	Value	Units	
Soil (0-2)	Soil	Site Soil	Ingestion	2-Methylnaphthalene	9.76E-02	mg/kg	4.2E-08	mg/kg-day	9.0E-03	mg/kg-day	4.6E-06
				Arsenic	4.58E+00	mg/kg	2.0E-06	mg/kg-day	3.0E-04	mg/kg-day	6.5E-03
				Benzo(a)pyrene	2.73E-02	mg/kg	1.2E-08	mg/kg-day	--	--	--
				Lead	1.18E+02	mg/kg	5.0E-05	mg/kg-day	--	--	--
			Exp. Route Total								6.6E-03
			Dermal	2-Methylnaphthalene	9.76E-02	mg/kg	--	mg/kg-day	9.0E-03	mg/kg-day	--
				Arsenic	4.58E+00	mg/kg	7.8E-08	mg/kg-day	3.0E-04	mg/kg-day	2.6E-04
				Benzo(a)pyrene	2.73E-02	mg/kg	2.0E-09	mg/kg-day	--	--	--
				Lead	1.18E+02	mg/kg	6.7E-07	mg/kg-day	--	--	--
			Exp. Route Total								2.6E-04
		Exposure Point Total									6.8E-03
	Exposure Medium Total										6.8E-03
	Air	Outdoor Air	Inhalation (particulates)	2-Methylnaphthalene	9.76E-02	mg/kg	1.6E-12	mg/kg-day	8.6E-04	mg/kg-day	1.8E-09
				Arsenic	4.58E+00	mg/kg	7.4E-11	mg/kg-day	--	--	--
				Benzo(a)pyrene	2.73E-02	mg/kg	4.4E-13	mg/kg-day	--	--	--
				Lead	1.18E+02	mg/kg	1.9E-09	mg/kg-day	--	--	--
			Exp. Route Total								1.8E-09
		Exposure Point Total									1.8E-09
	Exposure Medium Total										1.8E-09
Medium Total											6.8E-03
Groundwater	Groundwater	Indoor Air (Vapor Intrusion)	Inhalation	Benzene	1.40E+00	(a) ug/m3	3.0E-05	mg/kg-day	8.6E-03	mg/kg-day	3.5E-03
				Ethylbenzene	1.10E+00	(a) ug/m3	2.4E-05	mg/kg-day	2.9E-01	mg/kg-day	8.1E-05
				o-Xylene	2.60E+00	(a) ug/m3	5.6E-05	mg/kg-day	2.9E-02	mg/kg-day	1.9E-03
				m-Xylene	4.70E-01	(a) ug/m3	1.0E-05	mg/kg-day	2.9E-02	mg/kg-day	3.5E-04
				Toluene	2.90E+00	(a) ug/m3	6.2E-05	mg/kg-day	1.1E-01	mg/kg-day	5.6E-04
			Exp. Route Total								6.4E-03
		Exposure Point Total									6.4E-03
	Exposure Medium Total										6.4E-03
Medium Total											6.4E-03
										Total of Receptor Hazards Across All Media	1.3E-02

Notes:

EPC Exposure point concentration

TABLE H2-7.4.1.CTE
EPA RAGS PART D TABLE 7b
CALCULATION OF CTE CHEMICAL NONCANCER HAZARDS
CURRENT INDUSTRIAL WORKER
SITE 22, ALAMEDA POINT, ALAMEDA, CALIFORNIA

Scenario Timeframe:	Current
Receptor Population:	*Industrial Worker*
Receptor Age:	Adult

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Non-Cancer Hazard Calculations				
					Value	Units	Intake/Exposure Concentration		RfD/RfC		Hazard Quotient
							Value	Units	Value	Units	

mg/kg	Milligram per kilogram
mg/kg-day	Milligram per kilogram per day
RfD	Reference dose
RfC	Reference concentration
CTE	Central tendency exposure
--	Not Applicable or Not Available

TABLE H2-7.4.2.CTE
EPA RAGS PART D TABLE 7b
CALCULATION OF CTE CHEMICAL NONCANCER HAZARDS
CURRENT CONSTRUCTION WORKER
SITE 22, ALAMEDA POINT, ALAMEDA, CALIFORNIA

Scenario Timeframe:	Current
Receptor Population:	Construction Worker
Receptor Age:	Adult

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Non-Cancer Hazard Calculations				
					Value	Units	Intake/Exposure Concentration		RfD/RfC		Hazard Quotient
							Value	Units	Value	Units	
Soil (0-2)	Soil	Site Soil	Ingestion	2-Methylnaphthalene	9.76E-02	mg/kg	2.3E-08	mg/kg-day	9.0E-03	mg/kg-day	2.5E-06
				Arsenic	4.58E+00	mg/kg	1.1E-06	mg/kg-day	3.0E-04	mg/kg-day	3.6E-03
				Benzo(a)pyrene	2.73E-02	mg/kg	6.4E-09	mg/kg-day	--	--	--
				Lead	1.18E+02	mg/kg	2.8E-05	mg/kg-day	--	--	--
			Exp. Route Total								3.6E-03
			Dermal	2-Methylnaphthalene	9.76E-02	mg/kg	--	mg/kg-day	9.0E-03	mg/kg-day	--
				Arsenic	4.58E+00	mg/kg	1.1E-07	mg/kg-day	3.0E-04	mg/kg-day	3.6E-04
				Benzo(a)pyrene	2.73E-02	mg/kg	2.8E-09	mg/kg-day	--	--	--
				Lead	1.18E+02	mg/kg	9.1E-07	mg/kg-day	--	--	--
			Exp. Route Total								3.6E-04
		Exposure Point Total									3.9E-03
	Exposure Medium Total										3.9E-03
	Air	Outdoor Air	Inhalation (particulates)	2-Methylnaphthalene	9.76E-02	mg/kg	3.5E-12	mg/kg-day	8.6E-04	mg/kg-day	4.0E-09
				Arsenic	4.58E+00	mg/kg	1.6E-10	mg/kg-day	--	--	--
				Benzo(a)pyrene	2.73E-02	mg/kg	9.7E-13	mg/kg-day	--	--	--
				Lead	1.18E+02	mg/kg	4.2E-09	mg/kg-day	--	--	--
			Exp. Route Total								4.0E-09
		Exposure Point Total									4.0E-09
	Exposure Medium Total										4.0E-09
Medium Total											3.9E-03
										Total of Receptor Hazards Across All Media	3.9E-03

Notes:

EPC	Exposure point concentration
mg/kg	Milligram per kilogram
mg/kg-day	Milligram per kilogram per day
RfD	Reference dose
RfC	Reference concentration
CTE	Central tendency exposure
--	Not Applicable or Not Available

TABLE H2-7.4.3.CTE
EPA RAGS PART D TABLE 7b
CALCULATION OF CTE CHEMICAL NONCANCER HAZARDS
CURRENT ADULT RESIDENT
SITE 22, ALAMEDA POINT, ALAMEDA, CALIFORNIA

Scenario Timeframe:	Future
Receptor Population:	Resident
Receptor Age:	Adult

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Non-Cancer Hazard Calculations				
					Value	Units	Intake/Exposure Concentration		RfD/RfC		Hazard Quotient
							Value	Units	Value	Units	
Soil (0-2)	Soil	Site Soil	Ingestion	2-Methylnaphthalene	9.76E-02	mg/kg	6.7E-08	mg/kg-day	9.0E-03	mg/kg-day	7.4E-06
				Arsenic	4.58E+00	mg/kg	3.1E-06	mg/kg-day	3.0E-04	mg/kg-day	1.0E-02
				Benzo(a)pyrene	2.73E-02	mg/kg	1.9E-08	mg/kg-day	--	--	--
				Lead	1.18E+02	mg/kg	8.1E-05	mg/kg-day	--	--	--
			Exp. Route Total								1.0E-02
			Dermal	2-Methylnaphthalene	9.76E-02	mg/kg	--	mg/kg-day	9.0E-03	mg/kg-day	--
				Arsenic	4.58E+00	mg/kg	1.1E-07	mg/kg-day	3.0E-04	mg/kg-day	3.6E-04
				Benzo(a)pyrene	2.73E-02	mg/kg	2.8E-09	mg/kg-day	--	--	--
				Lead	1.18E+02	mg/kg	9.2E-07	mg/kg-day	--	--	--
			Exp. Route Total								3.6E-04
		Exposure Point Total									1.1E-02
	Exposure Medium Total										1.1E-02
	Homegrown Produce	Homegrown Produce	Ingestion	2-Methylnaphthalene	9.76E-02	mg/kg	--	mg/kg-day	9.0E-03	mg/kg-day	--
				Arsenic	4.58E+00	mg/kg	4.3E-06	mg/kg-day	3.0E-04	mg/kg-day	1.4E-02
				Benzo(a)pyrene	2.73E-02	mg/kg	1.8E-08	mg/kg-day	--	--	--
				Lead	1.18E+02	mg/kg	--	mg/kg-day	--	--	--
			Exp. Route Total								1.4E-02
		Exposure Point Total									1.4E-02
	Exposure Medium Total										1.4E-02
	Air	Outdoor Air	Inhalation (particulates)	2-Methylnaphthalene	9.76E-02	mg/kg	8.4E-13	mg/kg-day	8.6E-04	mg/kg-day	9.8E-10
				Arsenic	4.58E+00	mg/kg	3.9E-11	mg/kg-day	--	--	--
				Benzo(a)pyrene	2.73E-02	mg/kg	2.4E-13	mg/kg-day	--	--	--
				Lead	1.18E+02	mg/kg	1.0E-09	mg/kg-day	--	--	--
			Exp. Route Total								9.8E-10
		Exposure Point Total									9.8E-10
	Exposure Medium Total										9.8E-10
Medium Total											2.5E-02
Groundwater	Groundwater	Indoor Air (Vapor Intrusion)	Inhalation	Benzene	1.40E+01	(a) ug/m3	1.6E-04	mg/kg-day	8.6E-03	mg/kg-day	1.9E-02
				Ethylbenzene	1.10E+01	(a) ug/m3	1.3E-04	mg/kg-day	2.9E-01	mg/kg-day	4.3E-04
				o-Xylene	2.60E+01	(a) ug/m3	3.0E-04	mg/kg-day	2.9E-02	mg/kg-day	1.0E-02
				m-Xylene	4.70E+00	(a) ug/m3	5.3E-05	mg/kg-day	2.9E-02	mg/kg-day	1.8E-03
				Toluene	2.90E+01	(a) ug/m3	3.3E-04	mg/kg-day	1.1E-01	mg/kg-day	3.0E-03

TABLE H2-7.4.3.CTE
EPA RAGS PART D TABLE 7b
CALCULATION OF CTE CHEMICAL NONCANCER HAZARDS
CURRENT ADULT RESIDENT
SITE 22, ALAMEDA POINT, ALAMEDA, CALIFORNIA

Scenario Timeframe:	Future
Receptor Population:	Resident
Receptor Age:	Adult

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Non-Cancer Hazard Calculations				
					Value	Units	Intake/Exposure Concentration		RfD/RfC		Hazard Quotient
							Value	Units	Value	Units	
			Exp. Route Total								3.4E-02
		Exposure Point Total									3.4E-02
		Tap	Ingestion	1,2-Dichloroethane	2.05E-03	mg/L	3.9E-05	mg/kg-day	3.0E-02	mg/kg-day	1.3E-03
				2-Methylnaphthalene	1.02E-02	mg/L	2.0E-04	mg/kg-day	9.0E-03	mg/kg-day	2.2E-02
				Arsenic	1.24E-02	mg/L	2.4E-04	mg/kg-day	3.0E-04	mg/kg-day	7.9E-01
				Benzene	5.39E-01	mg/L	1.0E-02	mg/kg-day	4.0E-03	mg/kg-day	2.6E+00
				Chloroform	2.24E-03	mg/L	4.3E-05	mg/kg-day	1.0E-02	mg/kg-day	4.3E-03
				Ethylbenzene	1.21E-01	mg/L	2.3E-03	mg/kg-day	1.0E-01	mg/kg-day	2.3E-02
				Manganese	5.09E+00	mg/L	9.8E-02	mg/kg-day	2.4E-02	mg/kg-day	4.1E+00
				Naphthalene	8.42E-02	mg/L	1.6E-03	mg/kg-day	2.0E-02	mg/kg-day	8.1E-02
				n-Propylbenzene	1.34E-01	mg/L	2.6E-03	mg/kg-day	4.0E-02	mg/kg-day	6.4E-02
				Tetrachloroethene	1.92E-03	mg/L	3.7E-05	mg/kg-day	1.0E-02	mg/kg-day	3.7E-03
				Thallium	1.83E-03	mg/L	3.5E-05	mg/kg-day	6.6E-05	mg/kg-day	5.3E-01
				Toluene	2.95E-01	mg/L	5.7E-03	mg/kg-day	2.0E-01	mg/kg-day	2.8E-02
				Trichloroethene	2.37E-03	mg/L	4.5E-05	mg/kg-day	3.0E-04	mg/kg-day	1.5E-01
				Xylene (Total)	3.87E-01	mg/L	7.4E-03	mg/kg-day	2.0E-01	mg/kg-day	3.7E-02
			Exp. Route Total								8.4E+00
			Dermal (bathing/ showering)	1,2-Dichloroethane	2.05E-03	mg/L	5.3E-07	mg/kg-day	3.0E-02	mg/kg-day	1.8E-05
				2-Methylnaphthalene	1.02E-02	mg/L	3.0E-05	mg/kg-day	9.0E-03	mg/kg-day	3.3E-03
				Arsenic	1.24E-02	mg/L	7.6E-07	mg/kg-day	3.0E-04	mg/kg-day	2.5E-03
				Benzene	5.39E-01	mg/L	7.0E-04	mg/kg-day	4.0E-03	mg/kg-day	1.7E-01
				Chloroform	2.24E-03	mg/L	9.4E-07	mg/kg-day	1.0E-02	mg/kg-day	9.4E-05
				Ethylbenzene	1.21E-01	mg/L	3.7E-04	mg/kg-day	1.0E-01	mg/kg-day	3.7E-03
				Manganese	5.09E+00	mg/L	3.1E-04	mg/kg-day	2.4E-02	mg/kg-day	1.3E-02
				Naphthalene	8.42E-02	mg/L	2.4E-04	mg/kg-day	2.0E-02	mg/kg-day	1.2E-02
				n-Propylbenzene	1.34E-01	mg/L	7.6E-04	mg/kg-day	4.0E-02	mg/kg-day	1.9E-02
				Tetrachloroethene	1.92E-03	mg/L	3.9E-06	mg/kg-day	1.0E-02	mg/kg-day	3.9E-04
				Thallium	1.83E-03	mg/L	1.1E-07	mg/kg-day	6.6E-05	mg/kg-day	1.7E-03
				Toluene	2.95E-01	mg/L	5.6E-04	mg/kg-day	2.0E-01	mg/kg-day	2.8E-03
				Trichloroethene	2.37E-03	mg/L	1.8E-06	mg/kg-day	3.0E-04	mg/kg-day	5.8E-03
				Xylene (Total)	3.87E-01	mg/L	1.3E-03	mg/kg-day	2.0E-01	mg/kg-day	6.3E-03
			Exp. Route Total								2.5E-01

TABLE H2-7.4.3.CTE
EPA RAGS PART D TABLE 7b
CALCULATION OF CTE CHEMICAL NONCANCER HAZARDS
CURRENT ADULT RESIDENT
SITE 22, ALAMEDA POINT, ALAMEDA, CALIFORNIA

Scenario Timeframe:	*Future*
Receptor Population:	Resident
Receptor Age:	Adult

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Non-Cancer Hazard Calculations				
					Value	Units	Intake/Exposure Concentration		RfD/RfC		Hazard Quotient
							Value	Units	Value	Units	
			Inhalation (bathing/ showering)	1,2-Dichloroethane	2.05E-03	mg/L	1.2E-07	mg/kg-day	1.4E-03	mg/kg-day	8.7E-05
				2-Methylnaphthalene	1.02E-02	mg/L	6.0E-07	mg/kg-day	8.6E-04	mg/kg-day	7.0E-04
				Benzene	5.39E-01	mg/L	3.2E-05	mg/kg-day	8.6E-03	mg/kg-day	3.7E-03
				Chloroform	2.24E-03	mg/L	1.3E-07	mg/kg-day	8.6E-04	mg/kg-day	1.5E-04
				Ethylbenzene	1.21E-01	mg/L	7.2E-06	mg/kg-day	2.9E-01	mg/kg-day	2.5E-05
				Naphthalene	8.42E-02	mg/L	5.0E-06	mg/kg-day	8.6E-04	mg/kg-day	5.8E-03
				n-Propylbenzene	1.34E-01	mg/L	7.9E-06	mg/kg-day	4.0E-02	mg/kg-day	2.0E-04
				Tetrachloroethene	1.92E-03	mg/L	1.1E-07	mg/kg-day	1.7E-01	mg/kg-day	6.7E-07
				Toluene	2.95E-01	mg/L	1.7E-05	mg/kg-day	1.1E-01	mg/kg-day	1.6E-04
				Trichloroethene	2.37E-03	mg/L	1.4E-07	mg/kg-day	1.0E-02	mg/kg-day	1.4E-05
				Xylene (Total)	3.87E-01	mg/L	2.3E-05	mg/kg-day	2.9E-02	mg/kg-day	7.9E-04
			Exp. Route Total								1.2E-02
		Exposure Point Total									8.6E+00
	Exposure Medium Total										8.7E+00
Medium Total											8.7E+00
										Total of Receptor Hazards Across All Media	**8.7E+00**

Notes:

EPC	Exposure point concentration
mg/kg	Milligram per kilogram
mg/kg-day	Milligram per kilogram per day
RfD	Reference dose
RfC	Reference concentration
CTE	*Central tendency exposure*
--	Not Applicable or Not Available

(a) See the Vapor Intrusion to Indoor Air Evaluation for determination of the modeled indoor air concentration.

TABLE H2-7.4.4.CTE
EPA RAGS PART D TABLE 7b
CALCULATION OF CTE CHEMICAL NONCANCER HAZARDS
CURRENT CHILD RESIDENT
SITE 22, ALAMEDA POINT, ALAMEDA, CALIFORNIA

Scenario Timeframe:	Future
Receptor Population:	Resident
Receptor Age:	Child

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Non-Cancer Hazard Calculations				
					Value	Units	Intake/Exposure Concentration		RfD/RfC		Hazard Quotient
							Value	Units	Value	Units	
Soil (0-2)	Soil	Site Soil	Ingestion	2-Methylnaphthalene	9.76E-02	mg/kg	6.2E-07	mg/kg-day	9.0E-03	mg/kg-day	6.9E-05
				Arsenic	4.58E+00	mg/kg	2.9E-05	mg/kg-day	3.0E-04	mg/kg-day	9.8E-02
				Benzo(a)pyrene	2.73E-02	mg/kg	1.7E-07	mg/kg-day	--	--	--
				Lead	1.18E+02	mg/kg	7.5E-04	mg/kg-day	--	--	--
			Exp. Route Total								**9.8E-02**
			Dermal	2-Methylnaphthalene	9.76E-02	mg/kg	--	mg/kg-day	9.0E-03	mg/kg-day	--
				Arsenic	4.58E+00	mg/kg	9.8E-07	mg/kg-day	3.0E-04	mg/kg-day	3.3E-03
				Benzo(a)pyrene	2.73E-02	mg/kg	2.5E-08	mg/kg-day	--	--	--
				Lead	1.18E+02	mg/kg	8.4E-06	mg/kg-day	--	--	--
			Exp. Route Total								**3.3E-03**
		Exposure Point Total									**1.0E-01**
	Exposure Medium Total										**1.0E-01**
	Homegrown Produce	Homegrown Produce	Ingestion	2-Methylnaphthalene	9.76E-02	mg/kg	--	mg/kg-day	9.0E-03	mg/kg-day	--
				Arsenic	4.58E+00	mg/kg	4.3E-06	mg/kg-day	3.0E-04	mg/kg-day	1.4E-02
				Benzo(a)pyrene	2.73E-02	mg/kg	1.8E-08	mg/kg-day	--	--	--
				Lead	1.18E+02	mg/kg	--	mg/kg-day	--	--	--
			Exp. Route Total								**1.4E-02**
		Exposure Point Total									**1.4E-02**
	Exposure Medium Total										**1.4E-02**
	Air	Outdoor Air	Inhalation (particulates)	2-Methylnaphthalene	9.76E-02	mg/kg	2.0E-12	mg/kg-day	8.6E-04	mg/kg-day	2.3E-09
				Arsenic	4.58E+00	mg/kg	9.3E-11	mg/kg-day	--	--	--
				Benzo(a)pyrene	2.73E-02	mg/kg	5.6E-13	mg/kg-day	--	--	--
				Lead	1.18E+02	mg/kg	2.4E-09	mg/kg-day	--	--	--
			Exp. Route Total								**2.3E-09**
		Exposure Point Total									**2.3E-09**
	Exposure Medium Total										**2.3E-09**
Medium Total											**1.2E-01**
Groundwater	Groundwater	Indoor Air (Vapor Intrusion)	Inhalation	Benzene	1.40E+01	(a) ug/m3	3.8E-04	mg/kg-day	8.6E-03	mg/kg-day	4.4E-02
				Ethylbenzene	1.10E+01	(a) ug/m3	3.0E-04	mg/kg-day	2.9E-01	mg/kg-day	1.0E-03
				o-Xylene	2.60E+01	(a) ug/m3	7.0E-04	mg/kg-day	2.9E-02	mg/kg-day	2.4E-02
				m-Xylene	4.70E+00	(a) ug/m3	1.3E-04	mg/kg-day	2.9E-02	mg/kg-day	4.4E-03
				Toluene	2.90E+01	(a) ug/m3	7.8E-04	mg/kg-day	1.1E-01	mg/kg-day	7.1E-03

TABLE H2-7.4.4.CTE
EPA RAGS PART D TABLE 7b
CALCULATION OF CTE CHEMICAL NONCANCER HAZARDS
CURRENT CHILD RESIDENT
SITE 22, ALAMEDA POINT, ALAMEDA, CALIFORNIA

Scenario Timeframe:	Future
Receptor Population:	Resident
Receptor Age:	Child

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Non-Cancer Hazard Calculations				
					Value	Units	Intake/Exposure Concentration		RfD/RfC		Hazard Quotient
							Value	Units	Value	Units	
			Exp. Route Total								8.0E-02
		Exposure Point Total									8.0E-02
		Tap	Ingestion	1,2-Dichloroethane	2.05E-03	mg/L	1.3E-04	mg/kg-day	3.0E-02	mg/kg-day	4.4E-03
				2-Methylnaphthalene	1.02E-02	mg/L	6.5E-04	mg/kg-day	9.0E-03	mg/kg-day	7.2E-02
				Arsenic	1.24E-02	mg/L	7.9E-04	mg/kg-day	3.0E-04	mg/kg-day	2.6E+00
				Benzene	5.39E-01	mg/L	3.4E-02	mg/kg-day	4.0E-03	mg/kg-day	8.6E+00
				Chloroform	2.24E-03	mg/L	1.4E-04	mg/kg-day	1.0E-02	mg/kg-day	1.4E-02
				Ethylbenzene	1.21E-01	mg/L	7.7E-03	mg/kg-day	1.0E-01	mg/kg-day	7.7E-02
				Manganese	5.09E+00	mg/L	3.3E-01	mg/kg-day	2.4E-02	mg/kg-day	1.4E+01
				Naphthalene	8.42E-02	mg/L	5.4E-03	mg/kg-day	2.0E-02	mg/kg-day	2.7E-01
				n-Propylbenzene	1.34E-01	mg/L	8.6E-03	mg/kg-day	4.0E-02	mg/kg-day	2.1E-01
				Tetrachloroethene	1.92E-03	mg/L	1.2E-04	mg/kg-day	1.0E-02	mg/kg-day	1.2E-02
				Thallium	1.83E-03	mg/L	1.2E-04	mg/kg-day	6.6E-05	mg/kg-day	1.8E+00
				Toluene	2.95E-01	mg/L	1.9E-02	mg/kg-day	2.0E-01	mg/kg-day	9.4E-02
				Trichloroethene	2.37E-03	mg/L	1.5E-04	mg/kg-day	3.0E-04	mg/kg-day	5.1E-01
				Xylene (Total)	3.87E-01	mg/L	2.5E-02	mg/kg-day	2.0E-01	mg/kg-day	1.2E-01
			Exp. Route Total								2.8E+01
			Dermal (bathing/ showering)	1,2-Dichloroethane	2.05E-03	mg/L	1.2E-06	mg/kg-day	3.0E-02	mg/kg-day	4.0E-05
				2-Methylnaphthalene	1.02E-02	mg/L	6.7E-05	mg/kg-day	9.0E-03	mg/kg-day	7.4E-03
				Arsenic	1.24E-02	mg/L	1.7E-06	mg/kg-day	3.0E-04	mg/kg-day	5.8E-03
				Benzene	5.39E-01	mg/L	1.6E-03	mg/kg-day	4.0E-03	mg/kg-day	3.9E-01
				Chloroform	2.24E-03	mg/L	2.1E-06	mg/kg-day	1.0E-02	mg/kg-day	2.1E-04
				Ethylbenzene	1.21E-01	mg/L	8.3E-04	mg/kg-day	1.0E-01	mg/kg-day	8.3E-03
				Manganese	5.09E+00	mg/L	7.1E-04	mg/kg-day	2.4E-02	mg/kg-day	3.0E-02
				Naphthalene	8.42E-02	mg/L	5.5E-04	mg/kg-day	2.0E-02	mg/kg-day	2.8E-02
				n-Propylbenzene	1.34E-01	mg/L	1.7E-03	mg/kg-day	4.0E-02	mg/kg-day	4.3E-02
				Tetrachloroethene	1.92E-03	mg/L	8.8E-06	mg/kg-day	1.0E-02	mg/kg-day	8.8E-04
				Thallium	1.83E-03	mg/L	2.5E-07	mg/kg-day	6.6E-05	mg/kg-day	3.9E-03
				Toluene	2.95E-01	mg/L	1.3E-03	mg/kg-day	2.0E-01	mg/kg-day	6.4E-03
				Trichloroethene	2.37E-03	mg/L	4.0E-06	mg/kg-day	3.0E-04	mg/kg-day	1.3E-02
				Xylene (Total)	3.87E-01	mg/L	2.9E-03	mg/kg-day	2.0E-01	mg/kg-day	1.4E-02
			Exp. Route Total								5.5E-01

TABLE H2-7.4.4.CTE
EPA RAGS PART D TABLE 7b
CALCULATION OF CTE CHEMICAL NONCANCER HAZARDS
CURRENT CHILD RESIDENT
SITE 22, ALAMEDA POINT, ALAMEDA, CALIFORNIA

Scenario Timeframe:	Future
Receptor Population:	Resident
Receptor Age:	Child

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Non-Cancer Hazard Calculations				
					Value	Units	Intake/Exposure Concentration		RfD/RfC		Hazard Quotient
							Value	Units	Value	Units	
			Inhalation (bathing/ showering)	1,2-Dichloroethane	2.05E-03	mg/L	3.8E-07	mg/kg-day	1.4E-03	mg/kg-day	2.7E-04
				2-Methylnaphthalene	1.02E-02	mg/L	1.9E-06	mg/kg-day	8.6E-04	mg/kg-day	2.2E-03
				Benzene	5.39E-01	mg/L	9.9E-05	mg/kg-day	8.6E-03	mg/kg-day	1.2E-02
				Chloroform	2.24E-03	mg/L	4.1E-07	mg/kg-day	8.6E-04	mg/kg-day	4.8E-04
				Ethylbenzene	1.21E-01	mg/L	2.2E-05	mg/kg-day	2.9E-01	mg/kg-day	7.7E-05
				Naphthalene	8.42E-02	mg/L	1.6E-05	mg/kg-day	8.6E-04	mg/kg-day	1.8E-02
				n-Propylbenzene	1.34E-01	mg/L	2.5E-05	mg/kg-day	4.0E-02	mg/kg-day	6.2E-04
				Tetrachloroethene	1.92E-03	mg/L	3.5E-07	mg/kg-day	1.7E-01	mg/kg-day	2.1E-06
				Toluene	2.95E-01	mg/L	5.4E-05	mg/kg-day	1.1E-01	mg/kg-day	5.0E-04
				Trichloroethene	2.37E-03	mg/L	4.4E-07	mg/kg-day	1.0E-02	mg/kg-day	4.4E-05
				Xylene (Total)	3.87E-01	mg/L	7.1E-05	mg/kg-day	2.9E-02	mg/kg-day	2.5E-03
			Exp. Route Total								3.6E-02
		Exposure Point Total									2.9E+01
	Exposure Medium Total										2.9E+01
Medium Total											2.9E+01
										Total of Receptor Hazards Across All Media	2.9E+01

Notes:

EPC	Exposure point concentration
mg/kg	Milligram per kilogram
mg/kg-day	Milligram per kilogram per day
RfD	Reference dose
RfC	Reference concentration
CTE	Central tendency exposure
--	Not Applicable or Not Available

(a) See the Vapor Intrusion to Indoor Air Evaluation for determination of the modeled indoor air concentration.

TABLE H2-7.4.5.CTE
EPA RAGS PART D TABLE 7b
CALCULATION OF CTE CHEMICAL NONCANCER HAZARDS
FUTURE DEVELOPED CONSTRUCTION WORKER
SITE 22, ALAMEDA POINT, ALAMEDA, CALIFORNIA

Scenario Timeframe:	Future-Developed
Receptor Population:	Construction Worker
Receptor Age:	Adult

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Non-Cancer Hazard Calculations				
					Value	Units	Intake/Exposure Concentration		RfD/RfC		Hazard Quotient
							Value	Units	Value	Units	
Soil (0-8)	Soil	Site Soil	Ingestion	2-Methylnaphthalene	1.84E+00	mg/kg	4.3E-07	mg/kg-day	9.0E-03	mg/kg-day	4.8E-05
				Arsenic	4.31E+00	mg/kg	1.0E-06	mg/kg-day	3.0E-04	mg/kg-day	3.4E-03
				Benzene	5.81E-01	mg/kg	1.4E-07	mg/kg-day	4.0E-03	mg/kg-day	3.4E-05
				Benzo(a)pyrene	3.56E-02	mg/kg	8.4E-09	mg/kg-day	--	--	--
				Ethylbenzene	5.40E+00	mg/kg	1.3E-06	mg/kg-day	1.0E-01	mg/kg-day	1.3E-05
				Lead	2.99E+01	mg/kg	7.0E-06	mg/kg-day	--	--	--
				Toluene	6.41E+00	mg/kg	1.5E-06	mg/kg-day	2.0E-01	mg/kg-day	7.5E-06
				Xylene (Total)	3.49E+01	mg/kg	8.2E-06	mg/kg-day	2.0E-01	mg/kg-day	4.1E-05
			Exp. Route Total								**3.5E-03**
			Dermal	2-Methylnaphthalene	1.84E+00	mg/kg	--	mg/kg-day	9.0E-03	mg/kg-day	--
				Arsenic	4.31E+00	mg/kg	1.0E-07	mg/kg-day	3.0E-04	mg/kg-day	3.3E-04
				Benzene	5.81E-01	mg/kg	--	mg/kg-day	4.0E-03	mg/kg-day	--
				Benzo(a)pyrene	3.56E-02	mg/kg	3.6E-09	mg/kg-day	--	--	--
				Ethylbenzene	5.40E+00	mg/kg	--	mg/kg-day	1.0E-01	mg/kg-day	--
				Lead	2.99E+01	mg/kg	2.3E-07	mg/kg-day	--	--	--
				Toluene	6.41E+00	mg/kg	--	mg/kg-day	2.0E-01	mg/kg-day	--
				Xylene (Total)	3.49E+01	mg/kg	--	mg/kg-day	2.0E-01	mg/kg-day	--
			Exp. Route Total								**3.3E-04**
		Exposure Point Total									**3.8E-03**
	Exposure Medium Total										**3.8E-03**
	Air	Outdoor Air	Inhalation (particulates)	2-Methylnaphthalene	1.84E+00	mg/kg	6.5E-11	mg/kg-day	8.6E-04	mg/kg-day	7.6E-08
				Arsenic	4.31E+00	mg/kg	1.5E-10	mg/kg-day	--	--	--
				Benzene	5.81E-01	mg/kg	2.1E-11	mg/kg-day	8.6E-03	mg/kg-day	2.4E-09
				Benzo(a)pyrene	5.40E+00	mg/kg	1.9E-10	mg/kg-day	--	--	--
				Ethylbenzene	2.99E+01	mg/kg	1.1E-09	mg/kg-day	2.9E-01	mg/kg-day	3.7E-09
				Lead	1.54E+00	mg/kg	5.5E-11	mg/kg-day	--	--	--
				Toluene	6.41E+00	mg/kg	2.3E-10	mg/kg-day	1.1E-01	mg/kg-day	2.1E-09
				Xylene (Total)	6.41E+00	mg/kg	2.3E-10	mg/kg-day	2.9E-02	mg/kg-day	7.9E-09
			Exp. Route Total								**9.2E-08**

TABLE H2-7.4.5.CTE
EPA RAGS PART D TABLE 7b
CALCULATION OF CTE CHEMICAL NONCANCER HAZARDS
FUTURE DEVELOPED CONSTRUCTION WORKER
SITE 22, ALAMEDA POINT, ALAMEDA, CALIFORNIA

Scenario Timeframe:	Future-Developed
Receptor Population:	Construction Worker
Receptor Age:	Adult

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Non-Cancer Hazard Calculations				
					Value	Units	Intake/Exposure Concentration		RfD/RfC		Hazard Quotient
							Value	Units	Value	Units	
			Inhalation	2-Methylnaphthalene	1.84E+00	mg/kg	2.0E-06	mg/kg-day	8.6E-04	mg/kg-day	2.3E-03
			(VOCs)	Benzene	5.81E-01	mg/kg	1.0E-05	mg/kg-day	8.6E-03	mg/kg-day	1.2E-03
				Ethylbenzene	5.40E+00	mg/kg	4.7E-05	mg/kg-day	2.9E-01	mg/kg-day	1.6E-04
				Toluene	6.41E+00	mg/kg	7.5E-05	mg/kg-day	1.1E-01	mg/kg-day	6.8E-04
				Xylene (Total)	3.49E+01	mg/kg	2.7E-04	mg/kg-day	2.9E-02	mg/kg-day	9.3E-03
			Exp. Route Total								1.4E-02
		Exposure Point Total									1.4E-02
	Exposure Medium Total										1.4E-02
Medium Total											1.7E-02
										Total of Receptor Hazards Across All Media	1.7E-02

Notes:

EPC	Exposure point concentration
mg/kg	Milligram per kilogram
mg/kg-day	Milligram per kilogram per day
RfD	Reference dose
RfC	Reference concentration
CTE	Central tendency exposure
VOC	Volatile organic compound
--	Not Applicable or Not Available

TABLE H2-7.4.6.CTE
EPA RAGS PART D TABLE 7b
CALCULATION OF CTE CHEMICAL NONCANCER HAZARDS
FUTURE REDEVELOPED ADULT RESIDENT
SITE 22, ALAMEDA POINT, ALAMEDA, CALIFORNIA

Scenario Timeframe:	Future-Redeveloped
Receptor Population:	Resident
Receptor Age:	Adult

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Non-Cancer Hazard Calculations				
					Value	Units	Intake/Exposure Concentration		RfD/RfC		Hazard Quotient
							Value	Units	Value	Units	
Soil (0-8)	Soil	Site Soil	Ingestion	2-Methylnaphthalene	1.84E+00	mg/kg	1.3E-06	mg/kg-day	9.0E-03	mg/kg-day	1.4E-04
				Arsenic	4.31E+00	mg/kg	2.9E-06	mg/kg-day	3.0E-04	mg/kg-day	9.8E-03
				Benzene	5.81E-01	mg/kg	4.0E-07	mg/kg-day	4.0E-03	mg/kg-day	9.9E-05
				Benzo(a)pyrene	3.56E-02	mg/kg	2.4E-08	mg/kg-day	--	--	--
				Ethylbenzene	5.40E+00	mg/kg	3.7E-06	mg/kg-day	1.0E-01	mg/kg-day	3.7E-05
				Lead	2.99E+01	mg/kg	2.0E-05	mg/kg-day	--	--	--
				Toluene	6.41E+00	mg/kg	4.4E-06	mg/kg-day	2.0E-01	mg/kg-day	2.2E-05
				Xylene (Total)	3.49E+01	mg/kg	2.4E-05	mg/kg-day	2.0E-01	mg/kg-day	1.2E-04
			Exp. Route Total								1.0E-02
			Dermal	2-Methylnaphthalene	1.84E+00	mg/kg	--	mg/kg-day	9.0E-03	mg/kg-day	--
				Arsenic	4.31E+00	mg/kg	1.0E-07	mg/kg-day	3.0E-04	mg/kg-day	3.4E-04
				Benzene	5.81E-01	mg/kg	--	mg/kg-day	4.0E-03	mg/kg-day	--
				Benzo(a)pyrene	3.56E-02	mg/kg	3.6E-09	mg/kg-day	--	--	--
				Ethylbenzene	5.40E+00	mg/kg	--	mg/kg-day	1.0E-01	mg/kg-day	--
				Lead	2.99E+01	mg/kg	2.3E-07	mg/kg-day	--	--	--
				Toluene	6.41E+00	mg/kg	--	mg/kg-day	2.0E-01	mg/kg-day	--
				Xylene (Total)	3.49E+01	mg/kg	--	mg/kg-day	2.0E-01	mg/kg-day	--
			Exp. Route Total								3.4E-04
		Exposure Point Total									1.0E-02
	Exposure Medium Total										1.0E-02
	Homegrown Produce	Homegrown Produce	Ingestion	2-Methylnaphthalene	1.84E+00	mg/kg	--	mg/kg-day	9.0E-03	mg/kg-day	--
				Arsenic	4.31E+00	mg/kg	4.0E-06	mg/kg-day	3.0E-04	mg/kg-day	1.3E-02
				Benzene	5.81E-01	mg/kg	--	mg/kg-day	4.0E-03	mg/kg-day	--
				Benzo(a)pyrene	3.56E-02	mg/kg	2.3E-08	mg/kg-day	--	--	--
				Ethylbenzene	5.40E+00	mg/kg	--	mg/kg-day	1.0E-01	mg/kg-day	--
				Lead	2.99E+01	mg/kg	--	mg/kg-day	--	--	--
				Toluene	6.41E+00	mg/kg	--	mg/kg-day	2.0E-01	mg/kg-day	--
				Xylene (Total)	3.49E+01	mg/kg	--	mg/kg-day	2.0E-01	mg/kg-day	--
			Exp. Route Total								1.3E-02
		Exposure Point Total									1.3E-02
	Exposure Medium Total										1.3E-02
	Air	Outdoor Air	Inhalation (particulates)	2-Methylnaphthalene	1.84E+00	mg/kg	1.6E-11	mg/kg-day	8.6E-04	mg/kg-day	1.8E-08
				Arsenic	4.31E+00	mg/kg	3.7E-11	mg/kg-day	--	--	--
				Benzene	5.81E-01	mg/kg	5.0E-12	mg/kg-day	8.6E-03	mg/kg-day	5.8E-10

TABLE H2-7.4.6.CTE
EPA RAGS PART D TABLE 7b
CALCULATION OF CTE CHEMICAL NONCANCER HAZARDS
FUTURE REDEVELOPED ADULT RESIDENT
SITE 22, ALAMEDA POINT, ALAMEDA, CALIFORNIA

Scenario Timeframe:	Future-Redeveloped
Receptor Population:	Resident
Receptor Age:	Adult

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Non-Cancer Hazard Calculations				
					Value	Units	Intake/Exposure Concentration		RfD/RfC		Hazard Quotient
							Value	Units	Value	Units	
				Benzo(a)pyrene	5.40E+00	mg/kg	4.7E-11	mg/kg-day	--	--	--
				Ethylbenzene	2.99E+01	mg/kg	2.6E-10	mg/kg-day	2.9E-01	mg/kg-day	8.9E-10
				Lead	1.54E+00	mg/kg	1.3E-11	mg/kg-day	--	--	--
				Toluene	6.41E+00	mg/kg	5.5E-11	mg/kg-day	1.1E-01	mg/kg-day	5.0E-10
				Xylene (Total)	6.41E+00	mg/kg	5.5E-11	mg/kg-day	2.9E-02	mg/kg-day	1.9E-09
			Exp. Route Total								2.2E-08
			Inhalation (VOCs)	2-Methylnaphthalene	1.84E+00	mg/kg	4.9E-07	mg/kg-day	8.6E-04	mg/kg-day	5.7E-04
				Benzene	5.81E-01	mg/kg	2.4E-06	mg/kg-day	8.6E-03	mg/kg-day	2.8E-04
				Ethylbenzene	5.40E+00	mg/kg	1.1E-05	mg/kg-day	2.9E-01	mg/kg-day	3.9E-05
				Toluene	6.41E+00	mg/kg	1.8E-05	mg/kg-day	1.1E-01	mg/kg-day	1.7E-04
				Xylene (Total)	3.49E+01	mg/kg	6.5E-05	mg/kg-day	2.9E-02	mg/kg-day	2.2E-03
			Exp. Route Total								3.3E-03
		Exposure Point Total									3.3E-03
	Exposure Medium Total										3.3E-03
Medium Total											2.7E-02
Groundwater	Groundwater	Indoor Air (Vapor Intrusion)	Inhalation	Benzene	1.40E+01	(a) ug/m3	1.6E-04	mg/kg-day	8.6E-03	mg/kg-day	1.9E-02
				Ethylbenzene	1.10E+01	(a) ug/m3	1.3E-04	mg/kg-day	2.9E-01	mg/kg-day	4.3E-04
				o-Xylene	2.60E+01	(a) ug/m3	3.0E-04	mg/kg-day	2.9E-02	mg/kg-day	1.0E-02
				m-Xylene	4.70E+00	(a) ug/m3	5.3E-05	mg/kg-day	2.9E-02	mg/kg-day	1.8E-03
				Toluene	2.90E+01	(a) ug/m3	3.3E-04	mg/kg-day	1.1E-01	mg/kg-day	3.0E-03
			Exp. Route Total								3.4E-02
		Exposure Point Total									3.4E-02
		Tap	Ingestion	1,2-Dichloroethane	2.05E-03	mg/L	3.9E-05	mg/kg-day	3.0E-02	mg/kg-day	1.3E-03
				2-Methylnaphthalene	1.02E-02	mg/L	2.0E-04	mg/kg-day	9.0E-03	mg/kg-day	2.2E-02
				Arsenic	1.24E-02	mg/L	2.4E-04	mg/kg-day	3.0E-04	mg/kg-day	7.9E-01
				Benzene	5.39E-01	mg/L	1.0E-02	mg/kg-day	4.0E-03	mg/kg-day	2.6E+00
				Chloroform	2.24E-03	mg/L	4.3E-05	mg/kg-day	1.0E-02	mg/kg-day	4.3E-03
				Ethylbenzene	1.21E-01	mg/L	2.3E-03	mg/kg-day	1.0E-01	mg/kg-day	2.3E-02
				Manganese	5.09E+00	mg/L	9.8E-02	mg/kg-day	2.4E-02	mg/kg-day	4.1E+00
				Naphthalene	8.42E-02	mg/L	1.6E-03	mg/kg-day	2.0E-02	mg/kg-day	8.1E-02
				n-Propylbenzene	1.34E-01	mg/L	2.6E-03	mg/kg-day	4.0E-02	mg/kg-day	6.4E-02
				Tetrachloroethene	1.92E-03	mg/L	3.7E-05	mg/kg-day	1.0E-02	mg/kg-day	3.7E-03

TABLE H2-7.4.6.CTE
EPA RAGS PART D TABLE 7b
CALCULATION OF CTE CHEMICAL NONCANCER HAZARDS
FUTURE REDEVELOPED ADULT RESIDENT
SITE 22, ALAMEDA POINT, ALAMEDA, CALIFORNIA

Scenario Timeframe:	Future-Redeveloped
Receptor Population:	Resident
Receptor Age:	Adult

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Non-Cancer Hazard Calculations				
					Value	Units	Intake/Exposure Concentration		RfD/RfC		Hazard Quotient
							Value	Units	Value	Units	
				Thallium	1.83E-03	mg/L	3.5E-05	mg/kg-day	6.6E-05	mg/kg-day	5.3E-01
				Toluene	2.95E-01	mg/L	5.7E-03	mg/kg-day	2.0E-01	mg/kg-day	2.8E-02
				Trichloroethene	2.37E-03	mg/L	4.5E-05	mg/kg-day	3.0E-04	mg/kg-day	1.5E-01
				Xylene (Total)	3.87E-01	mg/L	7.4E-03	mg/kg-day	2.0E-01	mg/kg-day	3.7E-02
			Exp. Route Total								8.4E+00
			Dermal (bathing/ showering)	1,2-Dichloroethane	2.05E-03	mg/L	5.3E-07	mg/kg-day	3.0E-02	mg/kg-day	1.8E-05
				2-Methylnaphthalene	1.02E-02	mg/L	3.0E-05	mg/kg-day	9.0E-03	mg/kg-day	3.3E-03
				Arsenic	1.24E-02	mg/L	7.6E-07	mg/kg-day	3.0E-04	mg/kg-day	2.5E-03
				Benzene	5.39E-01	mg/L	7.0E-04	mg/kg-day	4.0E-03	mg/kg-day	1.7E-01
				Chloroform	2.24E-03	mg/L	9.4E-07	mg/kg-day	1.0E-02	mg/kg-day	9.4E-05
				Ethylbenzene	1.21E-01	mg/L	3.7E-04	mg/kg-day	1.0E-01	mg/kg-day	3.7E-03
				Manganese	5.09E+00	mg/L	3.1E-04	mg/kg-day	2.4E-02	mg/kg-day	1.3E-02
				Naphthalene	8.42E-02	mg/L	2.4E-04	mg/kg-day	2.0E-02	mg/kg-day	1.2E-02
				n-Propylbenzene	1.34E-01	mg/L	7.6E-04	mg/kg-day	4.0E-02	mg/kg-day	1.9E-02
				Tetrachloroethene	1.92E-03	mg/L	3.9E-06	mg/kg-day	1.0E-02	mg/kg-day	3.9E-04
				Thallium	1.83E-03	mg/L	1.1E-07	mg/kg-day	6.6E-05	mg/kg-day	1.7E-03
				Toluene	2.95E-01	mg/L	5.6E-04	mg/kg-day	2.0E-01	mg/kg-day	2.8E-03
				Trichloroethene	2.37E-03	mg/L	1.8E-06	mg/kg-day	3.0E-04	mg/kg-day	5.8E-03
				Xylene (Total)	3.87E-01	mg/L	1.3E-03	mg/kg-day	2.0E-01	mg/kg-day	6.3E-03
			Exp. Route Total								2.5E-01
			Inhalation (bathing/ showering)	1,2-Dichloroethane	2.05E-03	mg/L	1.2E-07	mg/kg-day	1.4E-03	mg/kg-day	8.7E-05
				2-Methylnaphthalene	1.02E-02	mg/L	6.0E-07	mg/kg-day	8.6E-04	mg/kg-day	7.0E-04
				Benzene	5.39E-01	mg/L	3.2E-05	mg/kg-day	8.6E-03	mg/kg-day	3.7E-03
				Chloroform	2.24E-03	mg/L	1.3E-07	mg/kg-day	8.6E-04	mg/kg-day	1.5E-04
				Ethylbenzene	1.21E-01	mg/L	7.2E-06	mg/kg-day	2.9E-01	mg/kg-day	2.5E-05
				Naphthalene	8.42E-02	mg/L	5.0E-06	mg/kg-day	8.6E-04	mg/kg-day	5.8E-03
				n-Propylbenzene	1.34E-01	mg/L	7.9E-06	mg/kg-day	4.0E-02	mg/kg-day	2.0E-04
				Tetrachloroethene	1.92E-03	mg/L	1.1E-07	mg/kg-day	1.7E-01	mg/kg-day	6.7E-07
				Toluene	2.95E-01	mg/L	1.7E-05	mg/kg-day	1.1E-01	mg/kg-day	1.6E-04
				Trichloroethene	2.37E-03	mg/L	1.4E-07	mg/kg-day	1.0E-02	mg/kg-day	1.4E-05
				Xylene (Total)	3.87E-01	mg/L	2.3E-05	mg/kg-day	2.9E-02	mg/kg-day	7.9E-04
			Exp. Route Total								1.2E-02

TABLE H2-7.4.6.CTE
EPA RAGS PART D TABLE 7b
CALCULATION OF CTE CHEMICAL NONCANCER HAZARDS
FUTURE REDEVELOPED ADULT RESIDENT
SITE 22, ALAMEDA POINT, ALAMEDA, CALIFORNIA

Scenario Timeframe:	Future-Redeveloped
Receptor Population:	Resident
Receptor Age:	Adult

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Non-Cancer Hazard Calculations				Hazard Quotient
					Value	Units	Intake/Exposure Concentration		RfD/RfC		
							Value	Units	Value	Units	
		Exposure Point Total									8.6E+00
	Exposure Medium Total										8.7E+00
Medium Total											8.7E+00
										Total of Receptor Hazards Across All Media	8.7E+00

Notes:

EPC	Exposure point concentration
mg/kg	Milligram per kilogram
mg/kg-day	Milligram per kilogram per day
RfD	Reference dose
RfC	Reference concentration
CTE	Central tendency exposure
VOC	Volatile organic compound
--	Not Applicable or Not Available

(a) See the Vapor Intrusion to Indoor Air Evaluation for determination of the modeled indoor air concentration.

TABLE H2-7.4.7.CTE
EPA RAGS PART D TABLE 7b
CALCULATION OF CTE CHEMICAL NONCANCER HAZARDS
FUTURE REDEVELOPED CHILD RESIDENT
SITE 22, ALAMEDA POINT, ALAMEDA, CALIFORNIA

Scenario Timeframe:	Future-Redeveloped
Receptor Population:	Resident
Receptor Age:	Child

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Non-Cancer Hazard Calculations				
					Value	Units	Intake/Exposure Concentration		RfD/RfC		Hazard Quotient
							Value	Units	Value	Units	
Soil (0-8)	Soil	Site Soil	Ingestion	2-Methylnaphthalene	1.84E+00	mg/kg	1.2E-05	mg/kg-day	9.0E-03	mg/kg-day	1.3E-03
				Arsenic	4.31E+00	mg/kg	2.8E-05	mg/kg-day	3.0E-04	mg/kg-day	9.2E-02
				Benzene	5.81E-01	mg/kg	3.7E-06	mg/kg-day	4.0E-03	mg/kg-day	9.3E-04
				Benzo(a)pyrene	3.56E-02	mg/kg	2.3E-07	mg/kg-day	--	--	--
				Ethylbenzene	5.40E+00	mg/kg	3.5E-05	mg/kg-day	1.0E-01	mg/kg-day	3.5E-04
				Lead	2.99E+01	mg/kg	1.9E-04	mg/kg-day	--	--	--
				Toluene	6.41E+00	mg/kg	4.1E-05	mg/kg-day	2.0E-01	mg/kg-day	2.0E-04
				Xylene (Total)	3.49E+01	mg/kg	2.2E-04	mg/kg-day	2.0E-01	mg/kg-day	1.1E-03
			Exp. Route Total								9.6E-02
			Dermal	2-Methylnaphthalene	1.84E+00	mg/kg	--	mg/kg-day	9.0E-03	mg/kg-day	--
				Arsenic	4.31E+00	mg/kg	9.3E-07	mg/kg-day	3.0E-04	mg/kg-day	3.1E-03
				Benzene	5.81E-01	mg/kg	--	mg/kg-day	4.0E-03	mg/kg-day	--
				Benzo(a)pyrene	3.56E-02	mg/kg	3.3E-08	mg/kg-day	--	--	--
				Ethylbenzene	5.40E+00	mg/kg	--	mg/kg-day	1.0E-01	mg/kg-day	--
				Lead	2.99E+01	mg/kg	2.1E-06	mg/kg-day	--	--	--
				Toluene	6.41E+00	mg/kg	--	mg/kg-day	2.0E-01	mg/kg-day	--
				Xylene (Total)	3.49E+01	mg/kg	--	mg/kg-day	2.0E-01	mg/kg-day	--
			Exp. Route Total								3.1E-03
		Exposure Point Total									9.9E-02
	Exposure Medium Total										9.9E-02
	Homegrown Produce	Homegrown Produce	Ingestion	2-Methylnaphthalene	1.84E+00	mg/kg	--	mg/kg-day	9.0E-03	mg/kg-day	--
				Arsenic	4.31E+00	mg/kg	4.0E-06	mg/kg-day	3.0E-04	mg/kg-day	1.3E-02
				Benzene	5.81E-01	mg/kg	--	mg/kg-day	4.0E-03	mg/kg-day	--
				Benzo(a)pyrene	3.56E-02	mg/kg	2.3E-08	mg/kg-day	--	--	--
				Ethylbenzene	5.40E+00	mg/kg	--	mg/kg-day	1.0E-01	mg/kg-day	--
				Lead	2.99E+01	mg/kg	--	mg/kg-day	--	--	--
				Toluene	6.41E+00	mg/kg	--	mg/kg-day	2.0E-01	mg/kg-day	--
				Xylene (Total)	3.49E+01	mg/kg	--	mg/kg-day	2.0E-01	mg/kg-day	--
			Exp. Route Total								1.3E-02
		Exposure Point Total									1.3E-02
	Exposure Medium Total										1.3E-02
	Air	Outdoor Air	Inhalation (particulates)	2-Methylnaphthalene	1.84E+00	mg/kg	3.7E-11	mg/kg-day	8.6E-04	mg/kg-day	4.4E-08
				Arsenic	4.31E+00	mg/kg	8.8E-11	mg/kg-day	--	--	--
				Benzene	5.81E-01	mg/kg	1.2E-11	mg/kg-day	8.6E-03	mg/kg-day	1.4E-09

TABLE H2-7.4.7.CTE
EPA RAGS PART D TABLE 7b
CALCULATION OF CTE CHEMICAL NONCANCER HAZARDS
FUTURE REDEVELOPED CHILD RESIDENT
SITE 22, ALAMEDA POINT, ALAMEDA, CALIFORNIA

Scenario Timeframe:	Future-Redeveloped
Receptor Population:	Resident
Receptor Age:	Child

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Non-Cancer Hazard Calculations				
					Value	Units	Intake/Exposure Concentration		RfD/RfC		Hazard Quotient
							Value	Units	Value	Units	
				Benzo(a)pyrene	3.56E-02	mg/kg	7.2E-13	mg/kg-day	--	--	--
				Ethylbenzene	5.40E+00	mg/kg	1.1E-10	mg/kg-day	2.9E-01	mg/kg-day	3.8E-10
				Lead	2.99E+01	mg/kg	6.1E-10	mg/kg-day	--	--	--
				Toluene	6.41E+00	mg/kg	1.3E-10	mg/kg-day	1.1E-01	mg/kg-day	1.2E-09
				Xylene (Total)	3.49E+01	mg/kg	7.1E-10	mg/kg-day	2.9E-02	mg/kg-day	2.5E-08
			Exp. Route Total								7.1E-08
			Inhalation (VOCs)	2-Methylnaphthalene	1.84E+00	mg/kg	1.1E-06	mg/kg-day	8.6E-04	mg/kg-day	1.3E-03
				Benzene	5.81E-01	mg/kg	5.8E-06	mg/kg-day	8.6E-03	mg/kg-day	6.7E-04
				Ethylbenzene	5.40E+00	mg/kg	2.7E-05	mg/kg-day	2.9E-01	mg/kg-day	9.3E-05
				Toluene	6.41E+00	mg/kg	4.3E-05	mg/kg-day	1.1E-01	mg/kg-day	3.9E-04
				Xylene (Total)	3.49E+01	mg/kg	1.5E-04	mg/kg-day	2.9E-02	mg/kg-day	5.3E-03
			Exp. Route Total								7.8E-03
		Exposure Point Total									7.8E-03
	Exposure Medium Total										7.8E-03
Medium Total											1.2E-01
Groundwater	Groundwater	Indoor Air (Vapor Intrusion)	Inhalation	Benzene	1.40E+01	(a) ug/m3	3.8E-04	mg/kg-day	8.6E-03	mg/kg-day	4.4E-02
				Ethylbenzene	1.10E+01	(a) ug/m3	3.0E-04	mg/kg-day	2.9E-01	mg/kg-day	1.0E-03
				o-Xylene	2.60E+01	(a) ug/m3	7.0E-04	mg/kg-day	2.9E-02	mg/kg-day	2.4E-02
				m-Xylene	4.70E+00	(a) ug/m3	1.3E-04	mg/kg-day	2.9E-02	mg/kg-day	4.4E-03
				Toluene	2.90E+01	(a) ug/m3	7.8E-04	mg/kg-day	1.1E-01	mg/kg-day	7.1E-03
			Exp. Route Total								8.0E-02
		Exposure Point Total									8.0E-02
		Tap	Ingestion	1,2-Dichloroethane	2.05E-03	mg/L	1.3E-04	mg/kg-day	3.0E-02	mg/kg-day	4.4E-03
				2-Methylnaphthalene	1.02E-02	mg/L	6.5E-04	mg/kg-day	9.0E-03	mg/kg-day	7.2E-02
				Arsenic	1.24E-02	mg/L	7.9E-04	mg/kg-day	3.0E-04	mg/kg-day	2.6E+00
				Benzene	5.39E-01	mg/L	3.4E-02	mg/kg-day	4.0E-03	mg/kg-day	8.6E+00
				Chloroform	2.24E-03	mg/L	1.4E-04	mg/kg-day	1.0E-02	mg/kg-day	1.4E-02
				Ethylbenzene	1.21E-01	mg/L	7.7E-03	mg/kg-day	1.0E-01	mg/kg-day	7.7E-02
				Manganese	5.09E+00	mg/L	3.3E-01	mg/kg-day	2.4E-02	mg/kg-day	1.4E+01
				Naphthalene	8.42E-02	mg/L	5.4E-03	mg/kg-day	2.0E-02	mg/kg-day	2.7E-01
				n-Propylbenzene	1.34E-01	mg/L	8.6E-03	mg/kg-day	4.0E-02	mg/kg-day	2.1E-01
				Tetrachloroethene	1.92E-03	mg/L	1.2E-04	mg/kg-day	1.0E-02	mg/kg-day	1.2E-02

TABLE H2-7.4.7.CTE
EPA RAGS PART D TABLE 7b
CALCULATION OF CTE CHEMICAL NONCANCER HAZARDS
FUTURE REDEVELOPED CHILD RESIDENT
SITE 22, ALAMEDA POINT, ALAMEDA, CALIFORNIA

Scenario Timeframe:	Future-Redeveloped
Receptor Population:	Resident
Receptor Age:	Child

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Non-Cancer Hazard Calculations				
					Value	Units	Intake/Exposure Concentration		RfD/RfC		Hazard Quotient
							Value	Units	Value	Units	
				Thallium	1.83E-03	mg/L	1.2E-04	mg/kg-day	6.6E-05	mg/kg-day	1.8E+00
				Toluene	2.95E-01	mg/L	1.9E-02	mg/kg-day	2.0E-01	mg/kg-day	9.4E-02
				Trichloroethene	2.37E-03	mg/L	1.5E-04	mg/kg-day	3.0E-04	mg/kg-day	5.1E-01
				Xylene (Total)	3.87E-01	mg/L	2.5E-02	mg/kg-day	2.0E-01	mg/kg-day	1.2E-01
			Exp. Route Total								2.8E+01
			Dermal (bathing/ showering)	1,2-Dichloroethane	2.05E-03	mg/L	1.2E-06	mg/kg-day	3.0E-02	mg/kg-day	4.0E-05
				2-Methylnaphthalene	1.02E-02	mg/L	6.7E-05	mg/kg-day	9.0E-03	mg/kg-day	7.4E-03
				Arsenic	1.24E-02	mg/L	1.7E-06	mg/kg-day	3.0E-04	mg/kg-day	5.8E-03
				Benzene	5.39E-01	mg/L	1.6E-03	mg/kg-day	4.0E-03	mg/kg-day	3.9E-01
				Chloroform	2.24E-03	mg/L	2.1E-06	mg/kg-day	1.0E-02	mg/kg-day	2.1E-04
				Ethylbenzene	1.21E-01	mg/L	8.3E-04	mg/kg-day	1.0E-01	mg/kg-day	8.3E-03
				Manganese	5.09E+00	mg/L	7.1E-04	mg/kg-day	2.4E-02	mg/kg-day	3.0E-02
				Naphthalene	8.42E-02	mg/L	5.5E-04	mg/kg-day	2.0E-02	mg/kg-day	2.8E-02
				n-Propylbenzene	1.34E-01	mg/L	1.7E-03	mg/kg-day	4.0E-02	mg/kg-day	4.3E-02
				Tetrachloroethene	1.92E-03	mg/L	8.8E-06	mg/kg-day	1.0E-02	mg/kg-day	8.8E-04
				Thallium	1.83E-03	mg/L	2.5E-07	mg/kg-day	6.6E-05	mg/kg-day	3.9E-03
				Toluene	2.95E-01	mg/L	1.3E-03	mg/kg-day	2.0E-01	mg/kg-day	6.4E-03
				Trichloroethene	2.37E-03	mg/L	4.0E-06	mg/kg-day	3.0E-04	mg/kg-day	1.3E-02
				Xylene (Total)	3.87E-01	mg/L	2.9E-03	mg/kg-day	2.0E-01	mg/kg-day	1.4E-02
			Exp. Route Total								5.5E-01
			Inhalation (bathing/ showering)	1,2-Dichloroethane	2.05E-03	mg/L	3.8E-07	mg/kg-day	1.4E-03	mg/kg-day	2.7E-04
				2-Methylnaphthalene	1.02E-02	mg/L	1.9E-06	mg/kg-day	8.6E-04	mg/kg-day	2.2E-03
				Benzene	5.39E-01	mg/L	9.9E-05	mg/kg-day	8.6E-03	mg/kg-day	1.2E-02
				Chloroform	2.24E-03	mg/L	4.1E-07	mg/kg-day	8.6E-04	mg/kg-day	4.8E-04
				Ethylbenzene	1.21E-01	mg/L	2.2E-05	mg/kg-day	2.9E-01	mg/kg-day	7.7E-05
				Naphthalene	8.42E-02	mg/L	1.6E-05	mg/kg-day	8.6E-04	mg/kg-day	1.8E-02
				n-Propylbenzene	1.34E-01	mg/L	2.5E-05	mg/kg-day	4.0E-02	mg/kg-day	6.2E-04
				Tetrachloroethene	1.92E-03	mg/L	3.5E-07	mg/kg-day	1.7E-01	mg/kg-day	2.1E-06
				Toluene	2.95E-01	mg/L	5.4E-05	mg/kg-day	1.1E-01	mg/kg-day	5.0E-04
				Trichloroethene	2.37E-03	mg/L	4.4E-07	mg/kg-day	1.0E-02	mg/kg-day	4.4E-05
				Xylene (Total)	3.87E-01	mg/L	7.1E-05	mg/kg-day	2.9E-02	mg/kg-day	2.5E-03
			Exp. Route Total								3.6E-02

Continue

TABLE H2-7.4.7.CTE
EPA RAGS PART D TABLE 7b
CALCULATION OF CTE CHEMICAL NONCANCER HAZARDS
FUTURE REDEVELOPED CHILD RESIDENT
SITE 22, ALAMEDA POINT, ALAMEDA, CALIFORNIA

Scenario Timeframe:	*Future-Redeveloped*
Receptor Population:	Resident
Receptor Age:	Child

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Non-Cancer Hazard Calculations				
					Value	Units	Intake/Exposure Concentration		RfD/RfC		Hazard Quotient
							Value	Units	Value	Units	
		Exposure Point Total									2.9E+01
	Exposure Medium Total										2.9E+01
Medium Total											2.9E+01
										Total of Receptor Hazards Across All Media	2.9E+01

Notes:

EPC	Exposure point concentration
mg/kg	Milligram per kilogram
mg/kg-day	Milligram per kilogram per day
RfD	Reference dose
RfC	Reference concentration
CTE	Central tendency exposure
VOC	Volatile organic compound
--	Not Applicable or Not Available

(a) See the Vapor Intrusion to Indoor Air Evaluation for determination of the modeled indoor air concentration.