Soil/Water/Vapor Concentration Equilibria - Samples With Total VOCs or SVOCs Greater than 10 mg/kg
Modified Feenstra et al. (1991)/Mariner et al. (1997) Model
Casmalia Hazardous Waste Management Facility
Casmalia, California

SAMPLE INFORMATION - SAMPLE SSS00180

Location	RISSBC-05
Start Depth	0 (ft)
End Depth	0.5 (ft)
Sample Date	10/29/2004
Analytical Methods:	8260B/GCMS-SIM

ASSUMED SOIL PROPERTIES

Dry Bulk Density (ρb)	1.86 kg/L
Total Porosity (φt)	0.45
Water Filled Porosity (φw)	0.45
Air Filled Porosity (φa)	0
Fraction Organic Content (foc)	0.00472

Chemical	Input Parameters			Chemical Parameters		Results		
VOCs/SVOCs Detected in Selected Type 7 Co-Located Samples	Solubility (S) (mg/L)	Organic Carbon Partition Coefficient (Koc) (L/kg)	Henry's Law Constant (H) (atm-L/mol)	Dimensionless Henry's Law Constant (Hc) (-)	Distribution Coefficient (Kd) (L/kg)	Known Total Soil Concentration (Ct) (mg/kg)	Estimated Pore Water Concentration (Cw) (mg/L)	Fraction of Solubility
Detected VOCs								
1,1,1-Trichloroethane	1.31E+03	1.52E+02	1.67E+01	6.83E-01	7.17E-01	**0.064**	6.67E-02	5.09E-05
1,1,2,2-Tetrachloroethane	3.06E+03	1.18E+02	4.59E-01	1.88E-02	5.57E-01	<0.00079	--	--
1,1,2-Trichloroethane	3.97E+03	5.60E+01	1.08E+00	4.42E-02	2.64E-01	<0.0010	--	--
1,1-Dichloroethane	5.30E+03	3.00E+01	5.43E+00	2.22E-01	1.42E-01	**0.35**	9.13E-01	1.72E-04
1,1-Dichloroethylene	3.02E+03	6.50E+01	2.55E+01	1.04E+00	3.07E-01	**0.017**	3.10E-02	1.03E-05
1,2,3-Trichlorobenzene	1.20E+01	7.40E+03	4.23E+00	1.73E-01	3.49E+01	<0.0019	--	--
1,2,3-Trichloropropane	1.90E+03	6.87E+01	3.43E-01	1.40E-02	3.24E-01	<0.00091	--	--
1,2,4-Trimethylbenzene	5.76E+01	1.48E+03	5.57E+00	2.28E-01	6.98E+00	**0.0046**	6.37E-04	1.11E-05
1,2-Dibromo-3-chloropropane	6.01E-03	1.23E+03		6.01E-03		<0.0017	--	--
1,2-Dibromoethane (EDB)	2.73E-02	3.91E+03		2.92E-02		<0.00066	--	--
1,2-Dichloroethane	7.13E+03	1.40E+01	1.50E+00	6.13E-02	6.61E-02	<0.00060	--	--
1,2-Dichloropropane	2.97E+03	5.10E+01	2.62E+00	1.07E-01	2.41E-01	<0.00075	--	--
1,3,5-Trimethylbenzene	4.82E+01	1.66E+03	8.77E+00	3.59E-01	7.83E+00	<0.0016	--	--
2-Butanol	1.50E+04	2.20E+01	1.02E-02	4.17E-04	1.04E-01	<0.18	--	--
2-Chlorotoluene	4.70E+02	1.60E+02	3.50E+00	1.43E-01	7.55E-01	<0.0014	--	--
2-Hexanone	1.40E+04	2.29E+01	2.82E-02	1.15E-03	1.08E-01	**0.038**	1.09E-01	7.76E-06
3,3,5-Trimethylcyclohexanone	1.20E+04	2.49E+01	5.88E-03	2.41E-04	1.18E-01	**0.054**	1.50E-01	1.25E-05
Benzene	1.75E+03	8.30E+01	5.59E+00	2.29E-01	3.92E-01	<0.0010	--	--
Bromobenzene	4.72E+02	2.24E+02	3.70E+00	1.51E-01	1.06E+00	<0.0010	--	--
Bromochloromethane	5.97E-02	1.67E+04		1.33E-01		<0.00081	--	--
Bromoform	3.10E+03	8.71E+01		2.19E-02		<0.00075	--	--
Carbon disulfide	1.19E+03	4.57E+01	3.03E+01	1.24E+00	2.16E-01	**0.021**	4.59E-02	3.86E-05
Carbon tetrachloride	7.40E+02	4.39E+02	2.98E+01	1.22E+00	2.07E+00	<0.0011	--	--
Chlorobenzene	4.45E+02	3.30E+02	3.90E+00	1.59E-01	1.56E+00	<0.0010	--	--
Chloroethane	4.54E-01	6.71E+03		5.92E-01		<0.0028	--	--
Chloroform	8.51E+03	4.40E+01	3.58E+00	1.46E-01	2.08E-01	**0.013**	2.89E-02	3.40E-06
Chlorotrifluoroethene	1.16E+04	1.90E+02	3.10E+02	1.27E+01	8.97E-01	<0.0056	--	--
Dichlorodifluoromethane	1.40E+01	2.80E+02		1.64E+01		<0.0012	--	--
Diisopropyl ether	1.20E+04	2.49E+01	2.57E-03	1.05E-04	1.18E-01	<0.00050	--	--
Ethylbenzene	1.52E+02	1.10E+03	6.43E+00	2.63E-01	5.19E+00	<0.0016	--	--
Freon 112	1.20E+02			4.09E+00		<0.0051	--	--
Freon 113	1.10E+03	1.60E+02	5.21E+02	2.13E+01	7.55E-01	**0.24**	2.41E-01	2.19E-04
Isopropylbenzene	6.13E+01	1.45E+03	1.15E+01	4.70E-01	6.82E+00	<0.0015	--	--
m-Dichlorobenzene	1.34E+02	1.70E+03	3.25E+00	1.33E-01	8.02E+00	<0.0015	--	--
Methyl acetate	1.00E+06	2.20E+00	2.06E-02	8.42E-04	1.04E-02	<0.0019	--	--
Methyl chloride	8.20E+03	3.50E+01	2.40E+01	9.81E-01	1.65E-01	<0.00064	--	--
Methyl tert-butyl ether (MTBE)	1.50E+05	6.00E+00	5.87E-01	2.40E-02	2.83E-02	<0.00035	--	--
Methylcyclopentane	4.30E+01	5.52E+02	3.62E-01	1.48E-02	2.60E+00	**0.01**	3.51E-03	8.17E-05
Methylene chloride	2.19E+04	8.80E+00	2.12E+00	8.67E-02	4.15E-02	<0.00039	--	--
n-Butylbenzene	1.38E+01	2.83E+03	1.31E+01	5.36E-01	1.34E+01	<0.0023	--	--
n-Propylbenzene	1.38E+01	2.83E+03	1.31E+01	5.36E-01	1.34E+01	<0.0019	--	--
o-Dichlorobenzene	1.36E+02	1.70E+03	1.98E+00	8.10E-02	8.02E+00	<0.0014	--	--
o-Xylene	1.75E+02	8.30E+02	5.10E+00	2.09E-01	3.92E+00	<0.0016	--	--
p-Dichlorobenzene	7.38E+01	6.17E+02	2.43E+00	9.94E-02	2.91E+00	<0.0012	--	--
p-Isopropyltoluene	2.34E+01	2.57E+03	1.10E+01	4.50E-01	1.21E+01	<0.0026	--	--
Propanal	3.06E+05	4.20E+00	7.69E-02	3.15E-03	1.98E-02	**0.18**	6.88E-01	2.25E-06
sec-Butylbenzene	1.70E+01	2.15E+03	1.87E+01	7.65E-01	1.01E+01	<0.0022	--	--
Styrene	3.10E+02	7.76E+02		1.13E-01		<0.0015	--	--
Tetrachloroethylene	2.37E+02	3.64E+02	1.74E+01	7.12E-01	1.72E+00	**0.33**	1.68E-01	7.11E-04
Tetrahydrofuran	1.00E+06	9.50E-01	7.00E-02	2.86E-03	4.48E-03	<0.0014	--	--
Toluene	5.35E+02	3.00E+02	6.37E+00	2.60E-01	1.42E+00	<0.0014	--	--
trans-1,2-Dichloroethylene	4.39E+03	5.90E+01	9.16E+00	3.75E-01	2.78E-01	**0.013**	2.50E-02	5.69E-06
Trichloroethylene	1.38E+03	1.26E+02	9.37E+00	3.83E-01	5.95E-01	**24**	2.87E+01	2.07E-02
Trichlorofluoromethane	1.62E+03	1.59E+02	8.88E+01	3.63E+00	7.50E-01	<0.00060	--	--
Vinyl chloride	2.76E+03	1.86E+01	2.70E+01	1.10E+00	8.78E-02	<0.0015	--	--
Xylene (total)	1.61E+02	4.07E+02	7.34E+00	3.00E-01	1.92E+00	<0.0031	--	--

Sum of VOC detections (mg/kg) 2.53E+01

Detected SVOCs								
1,2,4,5-Tetrachlorobenzene	6.06E-01	5.75E+03	1.20E-03	4.92E-05	2.71E+01	<5.2	--	--
1,2,4-Trichlorobenzene	3.00E+02	1.78E+03	1.42E+00	5.81E-02	8.40E+00	<4.3	--	--
2,3,4,6-Tetrachlorophenol	7.00E+00	9.80E+01	1.30E-03	5.32E-05	4.63E-01	<7.7	--	--
2,4-Dichlorophenol	4.60E+03	3.80E+02	2.75E-03	1.12E-04	1.79E+00	<3.1	--	--
2,4-Dimethylphenol	4.20E+03	2.22E+02	2.38E-03	9.73E-05	1.05E+00	<2.9	--	--
2,6-Dinitrotoluene	3.05E-05	3.52E+02		3.02E-05		<1.9	--	--
2-Methylnaphthalene	2.54E+01	8.50E+03	5.18E-01	2.12E-02	4.01E+01	<3.7	--	--
3-Methylcholanthrene	1.00E+01	1.00E+07		2.72E-01		<5.8	--	--

Soil/Water/Vapor Concentration Equilibria - Samples With Total VOCs or SVOCs Greater than 10 mg/kg
Modified Feenstra et al. (1991)/Mariner et al. (1997) Model
Casmalia Hazardous Waste Management Facility
Casmalia, California

SAMPLE INFORMATION - SAMPLE SSS00180

Location	RISSBC-05
Start Depth	0 (ft)
End Depth	0.5 (ft)
Sample Date	10/29/2004
Analytical Methods:	8260B/GCMS-SIM

ASSUMED SOIL PROPERTIES

Dry Bulk Density (ρb)	1.86 kg/L
Total Porosity (φt)	0.45
Water Filled Porosity (φw)	0.45
Air Filled Porosity (φa)	0
Fraction Organic Content (foc)	0.00472

Chemical	Input Parameters			Chemical Parameters		Results		
VOCs/SVOCs Detected in Selected Type 7 Co-Located Samples	Solubility (S) (mg/L)	Organic Carbon Partition Coefficient (Koc) (L/kg)	Henry's Law Constant (H) (atm-L/mol)	Dimensionless Henry's Law Constant (Hc) (-)	Distribution Coefficient (Kd) (L/kg)	Known Total Soil Concentration (Ct) (mg/kg)	Estimated Pore Water Concentration (Cw) (mg/L)	Fraction of Solubility
Detected SVOCs								
Acetophenone	5.50E+03	3.83E+01	9.09E-03	3.72E-04	1.81E-01	<5.6	--	--
Aramite	1.00E-01	1.55E+04	4.40E-05	1.80E-06	7.31E+01	<9.2	--	--
Benzoic acid	2.70E+03	5.66E+01	7.14E-05	2.92E-06	2.67E-01	<0.86	--	--
Benzyl alcohol	1.82E+02	6.92E+01		3.06E-05		<11	--	--
Bis(2-ethylhexyl) phthalate	2.85E-01	5.90E+03	3.61E-04	1.48E-05	2.78E+01	<1.6	--	--
Butyl benzyl phthalate	4.22E+01	5.57E+02	4.78E-03	1.95E-04	2.63E+00	<1.5	--	--
Dibenzofuran	4.30E+00	4.16E+03	1.40E-01	5.73E-03	1.96E+01	<1.9	--	--
Diethyl phthalate	1.08E+03	2.88E+02		1.85E-05		<3.9	--	--
Dimethyl phthalate	4.29E-06	4.00E+03		1.36E-05		<1.8	--	--
Di-n-butyl phthalate	1.30E+01	3.39E+04	9.39E-07	3.85E-08	1.60E+07	<1.9	--	--
Hexachlorobutadiene	3.20E+00	2.30E+03	2.50E+01	1.02E+00	1.09E+01	<4.8	--	--
Isophorone	1.20E+04	2.49E+01	5.88E-03	2.41E-04	1.18E-01	<3.1	--	--
m-Cresol	2.51E+04	1.66E+01	1.59E-03	6.49E-05	7.84E-02	<3.9	--	--
o-Cresol	3.08E+04	1.48E+01	1.20E-03	4.93E-05	7.00E-02	<3.9	--	--
p-Cresol	2.26E+04	1.76E+01	7.69E-04	3.15E-05	8.30E-02	<2.9	--	--
Pentachlorobenzene	2.87E-02	8.31E-01		2.92E-02		<5.8	--	--
Pentachlorophenol	1.40E+01	5.30E+04	2.75E-03	1.12E-04	2.50E+02	<1.9	--	--
Phenanthrene	1.00E+00	1.40E+04	1.59E-01	6.50E-03	6.61E+01	<1.8	--	--
Phenol	9.30E+04	1.42E+01	5.26E-04	2.15E-05	6.70E-02	<3.7	--	--
p-Nitrophenol	1.60E+04	2.13E+01	1.01E-03	4.13E-05	1.00E-01	<2.9	--	--

Sum of SVOC detections (mg/kg) <10

Total Fraction of Solubility 2.20E-02

Soil/Water/Vapor Concentration Equilibria - Samples With Total VOCs or SVOCs Greater than 10 mg/kg
Modified Feenstra et al. (1991)/Mariner et al. (1997) Model
Casmalia Hazardous Waste Management Facility
Casmalia, California

SAMPLE INFORMATION - SAMPLE SSS00181

Location	RISSBC-05
Start Depth	5 (ft)
End Depth	7.5 (ft)
Sample Date	10/29/2004
Analytical Methods:	8260B/GCMS-SIM

ASSUMED SOIL PROPERTIES

Dry Bulk Density (ρb)	1.86 kg/L
Total Porosity (φt)	0.45
Water Filled Porosity (φw)	0.45
Air Filled Porosity (φa)	0
Fraction Organic Content (foc)	0.00472

Chemical	Input Parameters			Chemical Parameters		Results		
VOCs/SVOCs Detected in Selected Type 7 Co-Located Samples	Solubility (S) (mg/L)	Organic Carbon Partition Coefficient (Koc) (L/kg)	Henry's Law Constant (H) (atm-L/mol)	Dimensionless Henry's Law Constant (Hc) (-)	Distribution Coefficient (Kd) (L/kg)	Known Total Soil Concentration (Ct) (mg/kg)	Estimated Pore Water Concentration (Cw) (mg/L)	Fraction of Solubility
Detected VOCs								
1,1,1-Trichloroethane	1.31E+03	1.52E+02	1.67E+01	6.83E-01	7.17E-01	**0.002**	2.08E-03	1.59E-06
1,1,2,2-Tetrachloroethane	3.06E+03	1.18E+02	4.59E-01	1.88E-02	5.57E-01	<0.00056	--	--
1,1,2-Trichloroethane	3.97E+03	5.60E+01	1.08E+00	4.42E-02	2.64E-01	<0.00073	--	--
1,1-Dichloroethane	5.30E+03	3.00E+01	5.43E+00	2.22E-01	1.42E-01	**4.3**	1.12E+01	2.11E-03
1,1-Dichloroethylene	3.02E+03	6.50E+01	2.55E+01	1.04E+00	3.07E-01	**0.034**	6.20E-02	2.05E-05
1,2,3-Trichlorobenzene	1.20E+01	7.40E+03	4.23E+00	1.73E-01	3.49E+01	<0.0013	--	--
1,2,3-Trichloropropane	1.90E+03	6.87E+01	3.43E-01	1.40E-02	3.24E-01	<0.00064	--	--
1,2,4-Trimethylbenzene	5.76E+01	1.48E+03	5.57E+00	2.28E-01	6.98E+00	<0.0013	--	--
1,2-Dibromo-3-chloropropane	6.01E-03	1.23E+03		6.01E-03		<0.0012	--	--
1,2-Dibromoethane (EDB)	2.73E-02	3.91E+03		2.92E-02		<0.00046	--	--
1,2-Dichloroethane	7.13E+03	1.40E+01	1.50E+00	6.13E-02	6.61E-02	**0.0082**	2.66E-02	3.73E-06
1,2-Dichloroethylene, total	4.90E+03	4.08E+01	7.01E-03	2.87E-04	1.92E-01	**0.015**	3.45E-02	7.05E-06
1,2-Dichloropropane	2.97E+03	5.10E+01	2.62E+00	1.07E-01	2.41E-01	<0.00053	--	--
1,3,5-Trimethylbenzene	4.82E+01	1.66E+03	8.77E+00	3.59E-01	7.83E+00	<0.0011	--	--
2-Butanol	1.50E+04	2.20E+01	1.02E-02	4.17E-04	1.04E-01	<0.13	--	--
2-Chlorotoluene	4.70E+02	1.60E+02	3.50E+00	1.43E-01	7.55E-01	<0.00099	--	--
2-Hexanone	1.40E+04	2.29E+01	2.82E-02	1.15E-03	1.08E-01	<0.0038	--	--
3,3,5-Trimethylcyclohexanone	1.20E+04	2.49E+01	5.88E-03	2.41E-04	1.18E-01	<0.0047	--	--
Benzene	1.75E+03	8.30E+01	5.59E+00	2.29E-01	3.92E-01	**0.0055**	8.68E-03	4.96E-06
Bromobenzene	4.72E+02	2.24E+02	3.70E+00	1.51E-01	1.06E+00	<0.00072	--	--
Bromochloromethane	5.97E-02	1.67E+04		1.33E-01		<0.00057	--	--
Bromoform	3.10E+03	8.71E+01		2.19E-02		<0.00053	--	--
Carbon disulfide	1.19E+03	4.57E+01	3.03E+01	1.24E+00	2.16E-01	<0.0031	--	--
Carbon tetrachloride	7.40E+02	4.39E+02	2.98E+01	1.22E+00	2.07E+00	<0.00080	--	--
Chlorobenzene	4.45E+02	3.30E+02	3.90E+00	1.59E-01	1.56E+00	<0.00073	--	--
Chloroethane	4.54E-01	6.71E+03		5.92E-01		**0.0076**		
Chloroform	8.51E+03	4.40E+01	3.58E+00	1.46E-01	2.08E-01	<0.00064	--	--
Chlorotrifluoroethene	1.16E+04	1.90E+02	3.10E+02	1.27E+01	8.97E-01	<0.0039	--	--
Dichlorodifluoromethane	1.40E+01	2.80E+02		1.64E+01		<0.00084	--	--
Diisopropyl ether	1.20E+04	2.49E+01	2.57E-03	1.05E-04	1.18E-01	<0.00035	--	--
Ethylbenzene	1.52E+02	1.10E+03	6.43E+00	2.63E-01	5.19E+00	<0.0011	--	--
Freon 112	1.20E+02			4.09E+00		<0.0036	--	--
Freon 113	1.10E+03	1.60E+02	5.21E+02	2.13E+01	7.55E-01	**5**	5.01E+00	4.56E-03
Isopropylbenzene	6.13E+01	1.45E+03	1.15E+01	4.70E-01	6.82E+00	<0.0011	--	--
m-Dichlorobenzene	1.34E+02	1.70E+03	3.25E+00	1.33E-01	8.02E+00	<0.0011	--	--
Methyl acetate	1.00E+06	2.20E+00	2.06E-02	8.42E-04	1.04E-02	<0.0014	--	--
Methyl chloride	8.20E+03	3.50E+01	2.40E+01	9.81E-01	1.65E-01	<0.00045	--	--
Methyl tert-butyl ether (MTBE)	1.50E+05	6.00E+00	5.87E-01	2.40E-02	2.83E-02	<0.00024	--	--
Methylcyclopentane	4.30E+01	5.52E+02	3.62E-01	1.48E-02	2.60E+00	<0.0033	--	--
Methylene chloride	2.19E+04	8.80E+00	2.12E+00	8.67E-02	4.15E-02	**0.032**	1.13E-01	5.16E-06
n-Butylbenzene	1.38E+01	2.83E+03	1.31E+01	5.36E-01	1.34E+01	<0.0016	--	--
n-Propylbenzene	1.38E+01	2.83E+03	1.31E+01	5.36E-01	1.34E+01	<0.0014	--	--
o-Dichlorobenzene	1.36E+02	1.70E+03	1.98E+00	8.10E-02	8.02E+00	<0.00096	--	--
o-Xylene	1.75E+02	8.30E+02	5.10E+00	2.09E-01	3.92E+00	<0.0011	--	--
p-Dichlorobenzene	7.38E+01	6.17E+02	2.43E+00	9.94E-02	2.91E+00	<0.00085	--	--
p-Isopropyltoluene	2.34E+01	2.57E+03	1.10E+01	4.50E-01	1.21E+01	<0.0018	--	--
Propanal	3.06E+05	4.20E+00	7.69E-02	3.15E-03	1.98E-02	**0.014**	5.35E-02	1.75E-07
sec-Butylbenzene	1.70E+01	2.15E+03	1.87E+01	7.65E-01	1.01E+01	<0.0015	--	--
Styrene	3.10E+02	7.76E+02		1.13E-01		<0.0011	--	--
Tetrachloroethylene	2.37E+02	3.64E+02	1.74E+01	7.12E-01	1.72E+00	<0.00099	--	--
Tetrahydrofuran	1.00E+06	9.50E-01	7.00E-02	2.86E-03	4.48E-03	**0.046**	1.87E-01	1.87E-07
Toluene	5.35E+02	3.00E+02	6.37E+00	2.60E-01	1.42E+00	**0.0034**	2.05E-03	3.83E-06
trans-1,2-Dichloroethylene	4.39E+03	5.90E+01	9.16E+00	3.75E-01	2.78E-01	**0.0023**	4.42E-03	1.01E-06
Trichloroethylene	1.38E+03	1.26E+02	9.37E+00	3.83E-01	5.95E-01	**5.6**	6.69E+00	4.83E-03
Trichlorofluoromethane	1.62E+03	1.59E+02	8.88E+01	3.63E+00	7.50E-01	<0.00042	--	--
Vinyl chloride	2.76E+03	1.86E+01	2.70E+01	1.10E+00	8.78E-02	**0.0014**	4.25E-03	1.54E-06
Xylene (total)	1.61E+02	4.07E+02	7.34E+00	3.00E-01	1.92E+00	<0.0022	--	--

Sum of VOC detections (mg/kg) 1.51E+01

Detected SVOCs								
1,2,4,5-Tetrachlorobenzene	6.06E-01	5.75E+03	1.20E-03	4.92E-05	2.71E+01	<4.9	--	--
1,2,4-Trichlorobenzene	3.00E+02	1.78E+03	1.42E+00	5.81E-02	8.40E+00	<4.0	--	--
2,3,4,6-Tetrachlorophenol	7.00E+00	9.80E+01	1.30E-03	5.32E-05	4.63E-01	<7.2	--	--
2,4-Dichlorophenol	4.60E+03	3.80E+02	2.75E-03	1.12E-04	1.79E+00	<3.0	--	--
2,4-Dimethylphenol	4.20E+03	2.22E+02	2.38E-03	9.73E-05	1.05E+00	<2.7	--	--
2,6-Dinitrotoluene	3.05E-05	3.52E+02		3.02E-05		<1.8	--	--
2-Methylnaphthalene	2.54E+01	8.50E+03	5.18E-01	2.12E-02	4.01E+01	<3.5	--	--

Soil/Water/Vapor Concentration Equilibria - Samples With Total VOCs or SVOCs Greater than 10 mg/kg
Modified Feenstra et al. (1991)/Mariner et al. (1997) Model
Casmalia Hazardous Waste Management Facility
Casmalia, California

SAMPLE INFORMATION - SAMPLE SSS00181

Location	RISSBC-05
Start Depth	5 (ft)
End Depth	7.5 (ft)
Sample Date	10/29/2004
Analytical Methods:	8260B/GCMS-SIM

ASSUMED SOIL PROPERTIES

Dry Bulk Density (ρb)	1.86 kg/L
Total Porosity (φt)	0.45
Water Filled Porosity (φw)	0.45
Air Filled Porosity (φa)	0
Fraction Organic Content (foc)	0.00472

Chemical	Input Parameters			Chemical Parameters		Results		
VOCs/SVOCs Detected in Selected Type 7 Co-Located Samples	Solubility (S) (mg/L)	Organic Carbon Partition Coefficient (Koc) (L/kg)	Henry's Law Constant (H) (atm-L/mol)	Dimensionless Henry's Law Constant (Hc) (-)	Distribution Coefficient (Kd) (L/kg)	Known Total Soil Concentration (Ct) (mg/kg)	Estimated Pore Water Concentration (Cw) (mg/L)	Fraction of Solubility
Detected SVOCs								
3-Methylcholanthrene	1.00E+01	1.00E+07		2.72E-01		<5.5	--	--
Acetophenone	5.50E+03	3.83E+01	9.09E-03	3.72E-04	1.81E-01	<5.3	--	--
Aramite	1.00E-01	1.55E+04	4.40E-05	1.80E-06	7.31E+01	<8.6	--	--
Benzoic acid	2.70E+03	5.66E+01	7.14E-05	2.92E-06	2.67E-01	<0.81	--	--
Benzyl alcohol	1.82E+02	6.92E+01		3.06E-05		<11	--	--
Bis(2-ethylhexyl) phthalate	2.85E-01	5.90E+03	3.61E-04	1.48E-05	2.78E+01	<1.5	--	--
Butyl benzyl phthalate	4.22E+01	5.57E+02	4.78E-03	1.95E-04	2.63E+00	<1.4	--	--
Dibenzofuran	4.30E+00	4.16E+03	1.40E-01	5.73E-03	1.96E+01	<1.8	--	--
Diethyl phthalate	1.08E+03	2.88E+02		1.85E-05		<3.7	--	--
Dimethyl phthalate	4.29E-06	4.00E+03		1.36E-05		<1.7	--	--
Di-n-butyl phthalate	1.30E+01	3.39E+04	9.39E-07	3.85E-08	1.60E+07	<1.8	--	--
Hexachlorobutadiene	3.20E+00	2.30E+03	2.50E+01	1.02E+00	1.09E+01	<4.5	--	--
Isophorone	1.20E+04	2.49E+01	5.88E-03	2.41E-04	1.18E-01	<3.0	--	--
m-Cresol	2.51E+04	1.66E+01	1.59E-03	6.49E-05	7.84E-02	<3.7	--	--
o-Cresol	3.08E+04	1.48E+01	1.20E-03	4.93E-05	7.00E-02	<3.7	--	--
p-Cresol	2.26E+04	1.76E+01	7.69E-04	3.15E-05	8.30E-02	<2.7	--	--
Pentachlorobenzene	2.87E-02	8.31E-01		2.92E-02		<5.4	--	--
Pentachlorophenol	1.40E+01	5.30E+04	2.75E-03	1.12E-04	2.50E+02	<1.8	--	--
Phenanthrene	1.00E+00	1.40E+04	1.59E-01	6.50E-03	6.61E+01	**2**	3.02E-02	3.02E-02
Phenol	9.30E+04	1.42E+01	5.26E-04	2.15E-05	6.70E-02	<3.5	--	--
p-Nitrophenol	1.60E+04	2.13E+01	1.01E-03	4.13E-05	1.00E-01	<2.7	--	--

Sum of SVOC detections (mg/kg) <10

Total Fraction of Solubility 4.17E-02

Soil/Water/Vapor Concentration Equilibria - Samples With Total VOCs or SVOCs Greater than 10 mg/kg
Modified Feenstra et al. (1991)/Mariner et al. (1997) Model
Casmalia Hazardous Waste Management Facility
Casmalia, California

SAMPLE INFORMATION - SAMPLE SSS00194

Location	RISBBC-03
Start Depth	77.5 (ft)
End Depth	82 (ft)
Sample Date	11/3/2004
Analytical Methods:	8260B/GCMS-SIM

ASSUMED SOIL PROPERTIES

Dry Bulk Density (ρb)	1.86 kg/L
Total Porosity (φt)	0.45
Water Filled Porosity (φw)	0.45
Air Filled Porosity (φa)	0
Fraction Organic Content (foc)	0.00472

Chemical	Input Parameters			Chemical Parameters		Results		
VOCs/SVOCs Detected in Selected Type 7 Co-Located Samples	Solubility (S) (mg/L)	Organic Carbon Partition Coefficient (Koc) (L/kg)	Henry's Law Constant (H) (atm-L/mol)	Dimensionless Henry's Law Constant (Hc) (-)	Distribution Coefficient (Kd) (L/kg)	Known Total Soil Concentration (Ct) (mg/kg)	Estimated Pore Water Concentration (Cw) (mg/L)	Fraction of Solubility
Detected VOCs								
1,1,1-Trichloroethane	1.31E+03	1.52E+02	1.67E+01	6.83E-01	7.17E-01	<0.18	--	--
1,1,2,2-Tetrachloroethane	3.06E+03	1.18E+02	4.59E-01	1.88E-02	5.57E-01	<0.14	--	--
1,1,2-Trichloroethane	3.97E+03	5.60E+01	1.08E+00	4.42E-02	2.64E-01	<0.19	--	--
1,1-Dichloroethane	5.30E+03	3.00E+01	5.43E+00	2.22E-01	1.42E-01	**8.1**	2.11E+01	3.98E-03
1,1-Dichloroethylene	3.02E+03	6.50E+01	2.55E+01	1.04E+00	3.07E-01	<0.24	--	--
1,2,3-Trichlorobenzene	1.20E+01	7.40E+03	4.23E+00	1.73E-01	3.49E+01	<0.33	--	--
1,2,3-Trichloropropane	1.90E+03	6.87E+01	3.43E-01	1.40E-02	3.24E-01	<0.16	--	--
1,2,4-Trimethylbenzene	5.76E+01	1.48E+03	5.57E+00	2.28E-01	6.98E+00	<0.33	--	--
1,2-Dibromo-3-chloropropane	6.01E-03	1.23E+03		6.01E-03		<0.31	--	--
1,2-Dibromoethane (EDB)	2.73E-02	3.91E+03		2.92E-02		<0.12	--	--
1,2-Dichloroethane	7.13E+03	1.40E+01	1.50E+00	6.13E-02	6.61E-02	<0.11	--	--
1,2-Dichloroethylene, total	4.90E+03	4.08E+01	7.01E-03	2.87E-04	1.92E-01	**0.44**	1.01E+00	2.07E-04
1,2-Dichloropropane	2.97E+03	5.10E+01	2.62E+00	1.07E-01	2.41E-01	**0.43**	8.91E-01	3.00E-04
1,3,5-Trimethylbenzene	4.82E+01	1.66E+03	8.77E+00	3.59E-01	7.83E+00	<0.28	--	--
2-Butanol	1.50E+04	2.20E+01	1.02E-02	4.17E-04	1.04E-01	<33	--	--
2-Chlorotoluene	4.70E+02	1.60E+02	3.50E+00	1.43E-01	7.55E-01	<0.25	--	--
2-Hexanone	1.40E+04	2.29E+01	2.82E-02	1.15E-03	1.08E-01	<0.98	--	--
3,3,5-Trimethylcyclohexanone	1.20E+04	2.49E+01	5.88E-03	2.41E-04	1.18E-01	<1.2	--	--
Benzene	1.75E+03	8.30E+01	5.59E+00	2.29E-01	3.92E-01	<0.18	--	--
Bromobenzene	4.72E+02	2.24E+02	3.70E+00	1.51E-01	1.06E+00	<0.18	--	--
Bromochloromethane	5.97E-02	1.67E+04		1.33E-01		<0.15	--	--
Bromoform	3.10E+03	8.71E+01		2.19E-02		<0.14	--	--
Carbon disulfide	1.19E+03	4.57E+01	3.03E+01	1.24E+00	2.16E-01	<0.79	--	--
Carbon tetrachloride	7.40E+02	4.39E+02	2.98E+01	1.22E+00	2.07E+00	<0.21	--	--
Chlorobenzene	4.45E+02	3.30E+02	3.90E+00	1.59E-01	1.56E+00	<0.19	--	--
Chloroethane	4.54E-01	6.71E+03		5.92E-01		<0.51	--	--
Chloroform	8.51E+03	4.40E+01	3.58E+00	1.46E-01	2.08E-01	<0.16	--	--
Chlorotrifluoroethene	1.16E+04	1.90E+02	3.10E+02	1.27E+01	8.97E-01	<1.0	--	--
Dichlorodifluoromethane	1.40E+01	2.80E+02		1.64E+01		<0.22	--	--
Diisopropyl ether	1.20E+04	2.49E+01	2.57E-03	1.05E-04	1.18E-01	<0.091	--	--
Ethylbenzene	1.52E+02	1.10E+03	6.43E+00	2.63E-01	5.19E+00	**0.6**	1.10E-01	7.26E-04
Freon 112	1.20E+02			4.09E+00		<0.92	--	--
Freon 113	1.10E+03	1.60E+02	5.21E+02	2.13E+01	7.55E-01	**9.5**	9.53E+00	8.66E-03
Isopropylbenzene	6.13E+01	1.45E+03	1.15E+01	4.70E-01	6.82E+00	<0.28	--	--
m-Dichlorobenzene	1.34E+02	1.70E+03	3.25E+00	1.33E-01	8.02E+00	<0.28	--	--
Methyl acetate	1.00E+06	2.20E+00	2.06E-02	8.42E-04	1.04E-02	<0.35	--	--
Methyl chloride	8.20E+03	3.50E+01	2.40E+01	9.81E-01	1.65E-01	<0.12	--	--
Methyl tert-butyl ether (MTBE)	1.50E+05	6.00E+00	5.87E-01	2.40E-02	2.83E-02	<0.063	--	--
Methylcyclopentane	4.30E+01	5.52E+02	3.62E-01	1.48E-02	2.60E+00	<0.84	--	--
Methylene chloride	2.19E+04	8.80E+00	2.12E+00	8.67E-02	4.15E-02	<0.070	--	--
n-Butylbenzene	1.38E+01	2.83E+03	1.31E+01	5.36E-01	1.34E+01	<0.41	--	--
n-Propylbenzene	1.38E+01	2.83E+03	1.31E+01	5.36E-01	1.34E+01	<0.35	--	--
o-Dichlorobenzene	1.36E+02	1.70E+03	1.98E+00	8.10E-02	8.02E+00	<0.25	--	--
o-Xylene	1.75E+02	8.30E+02	5.10E+00	2.09E-01	3.92E+00	**0.6**	1.44E-01	8.24E-04
p-Dichlorobenzene	7.38E+01	6.17E+02	2.43E+00	9.94E-02	2.91E+00	<0.22	--	--
p-Isopropyltoluene	2.34E+01	2.57E+03	1.10E+01	4.50E-01	1.21E+01	<0.47	--	--
Propanal	3.06E+05	4.20E+00	7.69E-02	3.15E-03	1.98E-02	<2.8	--	--
sec-Butylbenzene	1.70E+01	2.15E+03	1.87E+01	7.65E-01	1.01E+01	<0.39	--	--
Styrene	3.10E+02	7.76E+02		1.13E-01		<0.28	--	--
Tetrachloroethylene	2.37E+02	3.64E+02	1.74E+01	7.12E-01	1.72E+00	**8.4**	4.29E+00	1.81E-02
Tetrahydrofuran	1.00E+06	9.50E-01	7.00E-02	2.86E-03	4.48E-03	<0.26	--	--
Toluene	5.35E+02	3.00E+02	6.37E+00	2.60E-01	1.42E+00	<0.25	--	--
trans-1,2-Dichloroethylene	4.39E+03	5.90E+01	9.16E+00	3.75E-01	2.78E-01	<0.17	--	--
Trichloroethylene	1.38E+03	1.26E+02	9.37E+00	3.83E-01	5.95E-01	**15**	1.79E+01	1.29E-02
Trichlorofluoromethane	1.62E+03	1.59E+02	8.88E+01	3.63E+00	7.50E-01	<0.11	--	--
Vinyl chloride	2.76E+03	1.86E+01	2.70E+01	1.10E+00	8.78E-02	<0.26	--	--
Xylene (total)	1.61E+02	4.07E+02	7.34E+00	3.00E-01	1.92E+00	**2.6**	1.20E+00	7.47E-03

Sum of VOC detections (mg/kg) 4.57E+01

Detected SVOCs								
1,2,4,5-Tetrachlorobenzene	6.06E-01	5.75E+03	1.20E-03	4.92E-05	2.71E+01	<0.27	--	--
1,2,4-Trichlorobenzene	3.00E+02	1.78E+03	1.42E+00	5.81E-02	8.40E+00	<0.22	--	--
2,3,4,6-Tetrachlorophenol	7.00E+00	9.80E+01	1.30E-03	5.32E-05	4.63E-01	<0.40	--	--
2,4-Dichlorophenol	4.60E+03	3.80E+02	2.75E-03	1.12E-04	1.79E+00	<0.16	--	--
2,4-Dimethylphenol	4.20E+03	2.22E+02	2.38E-03	9.73E-05	1.05E+00	<0.15	--	--
2,6-Dinitrotoluene	3.05E-05	3.52E+02		3.02E-05		<0.098	--	--
2-Methylnaphthalene	2.54E+01	8.50E+03	5.18E-01	2.12E-02	4.01E+01	<0.19	--	--

Soil/Water/Vapor Concentration Equilibria - Samples With Total VOCs or SVOCs Greater than 10 mg/kg
Modified Feenstra et al. (1991)/Mariner et al. (1997) Model
Casmalia Hazardous Waste Management Facility
Casmalia, California

SAMPLE INFORMATION - SAMPLE SSS00194

Location	RISBBC-03
Start Depth	77.5 (ft)
End Depth	82 (ft)
Sample Date	11/3/2004
Analytical Methods:	8260B/GCMS-SIM

ASSUMED SOIL PROPERTIES

Dry Bulk Density (ρb)	1.86 kg/L
Total Porosity (φt)	0.45
Water Filled Porosity (φw)	0.45
Air Filled Porosity (φa)	0
Fraction Organic Content (foc)	0.00472

Chemical	Input Parameters			Chemical Parameters		Results		
VOCs/SVOCs Detected in Selected Type 7 Co-Located Samples	Solubility (S) (mg/L)	Organic Carbon Partition Coefficient (Koc) (L/kg)	Henry's Law Constant (H) (atm-L/mol)	Dimensionless Henry's Law Constant (Hc) (-)	Distribution Coefficient (Kd) (L/kg)	Known Total Soil Concentration (Ct) (mg/kg)	Estimated Pore Water Concentration (Cw) (mg/L)	Fraction of Solubility
Detected SVOCs								
3-Methylcholanthrene	1.00E+01	1.00E+07		2.72E-01		<0.30	--	--
Acetophenone	5.50E+03	3.83E+01	9.09E-03	3.72E-04	1.81E-01	<0.29	--	--
Aramite	1.00E-01	1.55E+04	4.40E-05	1.80E-06	7.31E+01	<0.48	--	--
Benzoic acid	2.70E+03	5.66E+01	7.14E-05	2.92E-06	2.67E-01	<0.045	--	--
Benzyl alcohol	1.82E+02	6.92E+01		3.06E-05		<0.60	--	--
Bis(2-ethylhexyl) phthalate	2.85E-01	5.90E+03	3.61E-04	1.48E-05	2.78E+01	<0.082	--	--
Butyl benzyl phthalate	4.22E+01	5.57E+02	4.78E-03	1.95E-04	2.63E+00	<0.079	--	--
Dibenzofuran	4.30E+00	4.16E+03	1.40E-01	5.73E-03	1.96E+01	<0.10	--	--
Diethyl phthalate	1.08E+03	2.88E+02		1.85E-05		<0.21	--	--
Dimethyl phthalate	4.29E-06	4.00E+03		1.36E-05		<0.093	--	--
Di-n-butyl phthalate	1.30E+01	3.39E+04	9.39E-07	3.85E-08	1.60E+07	<0.098	--	--
Hexachlorobutadiene	3.20E+00	2.30E+03	2.50E+01	1.02E+00	1.09E+01	<0.25	--	--
Isophorone	1.20E+04	2.49E+01	5.88E-03	2.41E-04	1.18E-01	<0.16	--	--
m-Cresol	2.51E+04	1.66E+01	1.59E-03	6.49E-05	7.84E-02	<0.20	--	--
o-Cresol	3.08E+04	1.48E+01	1.20E-03	4.93E-05	7.00E-02	<0.20	--	--
p-Cresol	2.26E+04	1.76E+01	7.69E-04	3.15E-05	8.30E-02	<0.15	--	--
Pentachlorobenzene	2.87E-02	8.31E-01		2.92E-02		<0.30	--	--
Pentachlorophenol	1.40E+01	5.30E+04	2.75E-03	1.12E-04	2.50E+02	<0.10	--	--
Phenanthrene	1.00E+00	1.40E+04	1.59E-01	6.50E-03	6.61E+01	<0.091	--	--
Phenol	9.30E+04	1.42E+01	5.26E-04	2.15E-05	6.70E-02	<0.19	--	--
p-Nitrophenol	1.60E+04	2.13E+01	1.01E-03	4.13E-05	1.00E-01	<0.15	--	--

Sum of SVOC detections (mg/kg) <10

Total Fraction of Solubility 5.32E-02

Soil/Water/Vapor Concentration Equilibria - Samples With Total VOCs or SVOCs Greater than 10 mg/kg
Modified Feenstra et al. (1991)/Mariner et al. (1997) Model
Casmalia Hazardous Waste Management Facility
Casmalia, California

SAMPLE INFORMATION - SAMPLE SSS00195

Location	RISBBC-03 (dup)
Start Depth	77.5 (ft)
End Depth	82 (ft)
Sample Date	11/3/2004
Analytical Methods:	8260B/GCMS-SIM

ASSUMED SOIL PROPERTIES

Dry Bulk Density (ρb)	1.86 kg/L
Total Porosity (φt)	0.45
Water Filled Porosity (φw)	0.45
Air Filled Porosity (φa)	0
Fraction Organic Content (foc)	0.00472

Chemical	Input Parameters			Chemical Parameters		Results		
VOCs/SVOCs Detected in Selected Type 7 Co-Located Samples	Solubility (S) (mg/L)	Organic Carbon Partition Coefficient (Koc) (L/kg)	Henry's Law Constant (H) (atm-L/mol)	Dimensionless Henry's Law Constant (Hc) (-)	Distribution Coefficient (Kd) (L/kg)	Known Total Soil Concentration (Ct) (mg/kg)	Estimated Pore Water Concentration (Cw) (mg/L)	Fraction of Solubility
Detected VOCs								
1,1,1-Trichloroethane	1.31E+03	1.52E+02	1.67E+01	6.83E-01	7.17E-01	<0.19	--	--
1,1,2,2-Tetrachloroethane	3.06E+03	1.18E+02	4.59E-01	1.88E-02	5.57E-01	<0.15	--	--
1,1,2-Trichloroethane	3.97E+03	5.60E+01	1.08E+00	4.42E-02	2.64E-01	<0.20	--	--
1,1-Dichloroethane	5.30E+03	3.00E+01	5.43E+00	2.22E-01	1.42E-01	**9.4**	2.45E+01	4.62E-03
1,1-Dichloroethylene	3.02E+03	6.50E+01	2.55E+01	1.04E+00	3.07E-01	<0.26	--	--
1,2,3-Trichlorobenzene	1.20E+01	7.40E+03	4.23E+00	1.73E-01	3.49E+01	<0.36	--	--
1,2,3-Trichloropropane	1.90E+03	6.87E+01	3.43E-01	1.40E-02	3.24E-01	<0.17	--	--
1,2,4-Trimethylbenzene	5.76E+01	1.48E+03	5.57E+00	2.28E-01	6.98E+00	<0.35	--	--
1,2-Dibromo-3-chloropropane	6.01E-03	1.23E+03		6.01E-03		<0.33	--	--
1,2-Dibromoethane (EDB)	2.73E-02	3.91E+03		2.92E-02		<0.13	--	--
1,2-Dichloroethane	7.13E+03	1.40E+01	1.50E+00	6.13E-02	6.61E-02	<0.11	--	--
1,2-Dichloroethylene, total	4.90E+03	4.08E+01	7.01E-03	2.87E-04	1.92E-01	**0.33**	7.60E-01	1.55E-04
1,2-Dichloropropane	2.97E+03	5.10E+01	2.62E+00	1.07E-01	2.41E-01	**0.41**	8.49E-01	2.86E-04
1,3,5-Trimethylbenzene	4.82E+01	1.66E+03	8.77E+00	3.59E-01	7.83E+00	<0.30	--	--
2-Butanol	1.50E+04	2.20E+01	1.02E-02	4.17E-04	1.04E-01	<35	--	--
2-Chlorotoluene	4.70E+02	1.60E+02	3.50E+00	1.43E-01	7.55E-01	<0.27	--	--
2-Hexanone	1.40E+04	2.29E+01	2.82E-02	1.15E-03	1.08E-01	<1.0	--	--
3,3,5-Trimethylcyclohexanone	1.20E+04	2.49E+01	5.88E-03	2.41E-04	1.18E-01	<1.3	--	--
Benzene	1.75E+03	8.30E+01	5.59E+00	2.29E-01	3.92E-01	<0.19	--	--
Bromobenzene	4.72E+02	2.24E+02	3.70E+00	1.51E-01	1.06E+00	<0.20	--	--
Bromochloromethane	5.97E-02	1.67E+04		1.33E-01		<0.16	--	--
Bromoform	3.10E+03	8.71E+01		2.19E-02		<0.14	--	--
Carbon disulfide	1.19E+03	4.57E+01	3.03E+01	1.24E+00	2.16E-01	<0.84	--	--
Carbon tetrachloride	7.40E+02	4.39E+02	2.98E+01	1.22E+00	2.07E+00	<0.22	--	--
Chlorobenzene	4.45E+02	3.30E+02	3.90E+00	1.59E-01	1.56E+00	<0.20	--	--
Chloroethane	4.54E-01	6.71E+03		5.92E-01		<0.54	--	--
Chloroform	8.51E+03	4.40E+01	3.58E+00	1.46E-01	2.08E-01	<0.17	--	--
Chlorotrifluoroethene	1.16E+04	1.90E+02	3.10E+02	1.27E+01	8.97E-01	<1.1	--	--
Dichlorodifluoromethane	1.40E+01	2.80E+02		1.64E+01		<0.23	--	--
Diisopropyl ether	1.20E+04	2.49E+01	2.57E-03	1.05E-04	1.18E-01	<0.096	--	--
Ethylbenzene	1.52E+02	1.10E+03	6.43E+00	2.63E-01	5.19E+00	**0.48**	8.83E-02	5.81E-04
Freon 112	1.20E+02			4.09E+00		<0.98	--	--
Freon 113	1.10E+03	1.60E+02	5.21E+02	2.13E+01	7.55E-01	**10**	1.00E+01	9.12E-03
Isopropylbenzene	6.13E+01	1.45E+03	1.15E+01	4.70E-01	6.82E+00	<0.30	--	--
m-Dichlorobenzene	1.34E+02	1.70E+03	3.25E+00	1.33E-01	8.02E+00	<0.30	--	--
Methyl acetate	1.00E+06	2.20E+00	2.06E-02	8.42E-04	1.04E-02	<0.37	--	--
Methyl chloride	8.20E+03	3.50E+01	2.40E+01	9.81E-01	1.65E-01	<0.12	--	--
Methyl tert-butyl ether (MTBE)	1.50E+05	6.00E+00	5.87E-01	2.40E-02	2.83E-02	<0.067	--	--
Methylcyclopentane	4.30E+01	5.52E+02	3.62E-01	1.48E-02	2.60E+00	<0.89	--	--
Methylene chloride	2.19E+04	8.80E+00	2.12E+00	8.67E-02	4.15E-02	<0.074	--	--
n-Butylbenzene	1.38E+01	2.83E+03	1.31E+01	5.36E-01	1.34E+01	<0.44	--	--
n-Propylbenzene	1.38E+01	2.83E+03	1.31E+01	5.36E-01	1.34E+01	<0.37	--	--
o-Dichlorobenzene	1.36E+02	1.70E+03	1.98E+00	8.10E-02	8.02E+00	<0.26	--	--
o-Xylene	1.75E+02	8.30E+02	5.10E+00	2.09E-01	3.92E+00	**0.49**	1.18E-01	6.73E-04
p-Dichlorobenzene	7.38E+01	6.17E+02	2.43E+00	9.94E-02	2.91E+00	<0.23	--	--
p-Isopropyltoluene	2.34E+01	2.57E+03	1.10E+01	4.50E-01	1.21E+01	<0.50	--	--
Propanal	3.06E+05	4.20E+00	7.69E-02	3.15E-03	1.98E-02	<3.0	--	--
sec-Butylbenzene	1.70E+01	2.15E+03	1.87E+01	7.65E-01	1.01E+01	<0.41	--	--
Styrene	3.10E+02	7.76E+02		1.13E-01		<0.30	--	--
Tetrachloroethylene	2.37E+02	3.64E+02	1.74E+01	7.12E-01	1.72E+00	**9**	4.59E+00	1.94E-02
Tetrahydrofuran	1.00E+06	9.50E-01	7.00E-02	2.86E-03	4.48E-03	<0.28	--	--
Toluene	5.35E+02	3.00E+02	6.37E+00	2.60E-01	1.42E+00	<0.26	--	--
trans-1,2-Dichloroethylene	4.39E+03	5.90E+01	9.16E+00	3.75E-01	2.78E-01	<0.18	--	--
Trichloroethylene	1.38E+03	1.26E+02	9.37E+00	3.83E-01	5.95E-01	**16**	1.91E+01	1.38E-02
Trichlorofluoromethane	1.62E+03	1.59E+02	8.88E+01	3.63E+00	7.50E-01	<0.11	--	--
Vinyl chloride	2.76E+03	1.86E+01	2.70E+01	1.10E+00	8.78E-02	<0.28	--	--
Xylene (total)	1.61E+02	4.07E+02	7.34E+00	3.00E-01	1.92E+00	**2.3**	1.06E+00	6.60E-03

Sum of VOC detections (mg/kg) 4.84E+01

Detected SVOCs								
1,2,4,5-Tetrachlorobenzene	6.06E-01	5.75E+03	1.20E-03	4.92E-05	2.71E+01	<0.27	--	--
1,2,4-Trichlorobenzene	3.00E+02	1.78E+03	1.42E+00	5.81E-02	8.40E+00	<0.22	--	--
2,3,4,6-Tetrachlorophenol	7.00E+00	9.80E+01	1.30E-03	5.32E-05	4.63E-01	<0.40	--	--
2,4-Dichlorophenol	4.60E+03	3.80E+02	2.75E-03	1.12E-04	1.79E+00	<0.16	--	--
2,4-Dimethylphenol	4.20E+03	2.22E+02	2.38E-03	9.73E-05	1.05E+00	<0.15	--	--
2,6-Dinitrotoluene	3.05E-05	3.52E+02		3.02E-05		<0.098	--	--
2-Methylnaphthalene	2.54E+01	8.50E+03	5.18E-01	2.12E-02	4.01E+01	<0.19	--	--

Soil/Water/Vapor Concentration Equilibria - Samples With Total VOCs or SVOCs Greater than 10 mg/kg
Modified Feenstra et al. (1991)/Mariner et al. (1997) Model
Casmalia Hazardous Waste Management Facility
Casmalia, California

SAMPLE INFORMATION - SAMPLE SSS00195

Location	RISBBC-03 (dup)
Start Depth	77.5 (ft)
End Depth	82 (ft)
Sample Date	11/3/2004
Analytical Methods:	8260B/GCMS-SIM

ASSUMED SOIL PROPERTIES

Dry Bulk Density (ρb)	1.86 kg/L
Total Porosity (φt)	0.45
Water Filled Porosity (φw)	0.45
Air Filled Porosity (φa)	0
Fraction Organic Content (foc)	0.00472

Chemical	Input Parameters			Chemical Parameters		Results		
VOCs/SVOCs Detected in Selected Type 7 Co-Located Samples	Solubility (S) (mg/L)	Organic Carbon Partition Coefficient (Koc) (L/kg)	Henry's Law Constant (H) (atm-L/mol)	Dimensionless Henry's Law Constant (Hc) (-)	Distribution Coefficient (Kd) (L/kg)	Known Total Soil Concentration (Ct) (mg/kg)	Estimated Pore Water Concentration (Cw) (mg/L)	Fraction of Solubility
Detected SVOCs								
3-Methylcholanthrene	1.00E+01	1.00E+07		2.72E-01		<0.31	--	--
Acetophenone	5.50E+03	3.83E+01	9.09E-03	3.72E-04	1.81E-01	<0.29	--	--
Aramite	1.00E-01	1.55E+04	4.40E-05	1.80E-06	7.31E+01	<0.48	--	--
Benzoic acid	2.70E+03	5.66E+01	7.14E-05	2.92E-06	2.67E-01	<0.045	--	--
Benzyl alcohol	1.82E+02	6.92E+01		3.06E-05		<0.60	--	--
Bis(2-ethylhexyl) phthalate	2.85E-01	5.90E+03	3.61E-04	1.48E-05	2.78E+01	<0.083	--	--
Butyl benzyl phthalate	4.22E+01	5.57E+02	4.78E-03	1.95E-04	2.63E+00	<0.079	--	--
Dibenzofuran	4.30E+00	4.16E+03	1.40E-01	5.73E-03	1.96E+01	<0.10	--	--
Diethyl phthalate	1.08E+03	2.88E+02		1.85E-05		<0.21	--	--
Dimethyl phthalate	4.29E-06	4.00E+03		1.36E-05		<0.094	--	--
Di-n-butyl phthalate	1.30E+01	3.39E+04	9.39E-07	3.85E-08	1.60E+07	<0.099	--	--
Hexachlorobutadiene	3.20E+00	2.30E+03	2.50E+01	1.02E+00	1.09E+01	<0.25	--	--
Isophorone	1.20E+04	2.49E+01	5.88E-03	2.41E-04	1.18E-01	<0.16	--	--
m-Cresol	2.51E+04	1.66E+01	1.59E-03	6.49E-05	7.84E-02	<0.20	--	--
o-Cresol	3.08E+04	1.48E+01	1.20E-03	4.93E-05	7.00E-02	<0.21	--	--
p-Cresol	2.26E+04	1.76E+01	7.69E-04	3.15E-05	8.30E-02	<0.15	--	--
Pentachlorobenzene	2.87E-02	8.31E-01		2.92E-02		<0.30	--	--
Pentachlorophenol	1.40E+01	5.30E+04	2.75E-03	1.12E-04	2.50E+02	<0.10	--	--
Phenanthrene	1.00E+00	1.40E+04	1.59E-01	6.50E-03	6.61E+01	<0.092	--	--
Phenol	9.30E+04	1.42E+01	5.26E-04	2.15E-05	6.70E-02	<0.20	--	--
p-Nitrophenol	1.60E+04	2.13E+01	1.01E-03	4.13E-05	1.00E-01	<0.15	--	--

Sum of SVOC detections (mg/kg) <10

Total Fraction of Solubility 5.52E-02

Soil/Water/Vapor Concentration Equilibria - Samples With Total VOCs or SVOCs Greater than 10 mg/kg
Modified Feenstra et al. (1991)/Mariner et al. (1997) Model
Casmalia Hazardous Waste Management Facility
Casmalia, California

SAMPLE INFORMATION - SAMPLE SSS00214*

Location	RISBCD-06
Start Depth	10 (ft)
End Depth	14.5 (ft)
Sample Date	9/30/2004
Analytical Methods:	8260B/GCMS-SIM

ASSUMED SOIL PROPERTIES

Dry Bulk Density (ρb)	1.86 kg/L
Total Porosity (φt)	0.45
Water Filled Porosity (φw)	0.45
Air Filled Porosity (φa)	0
Fraction Organic Content (foc)	0.00472

Chemical	Input Parameters			Chemical Parameters		Results		
VOCs/SVOCs Detected in Selected Type 7 Co-Located Samples	Solubility (S) (mg/L)	Organic Carbon Partition Coefficient (Koc) (L/kg)	Henry's Law Constant (H) (atm-L/mol)	Dimensionless Henry's Law Constant (Hc) (-)	Distribution Coefficient (Kd) (L/kg)	Known Total Soil Concentration (Ct) (mg/kg)	Estimated Pore Water Concentration (Cw) (mg/L)	Fraction of Solubility
Detected VOCs								
1,1,1-Trichloroethane	1.31E+03	1.52E+02	1.67E+01	6.83E-01	7.17E-01	<0.00081	--	--
1,1,2,2-Tetrachloroethane	3.06E+03	1.18E+02	4.59E-01	1.88E-02	5.57E-01	<0.00065	--	--
1,1,2-Trichloroethane	3.97E+03	5.60E+01	1.08E+00	4.42E-02	2.64E-01	<0.00085	--	--
1,1-Dichloroethane	5.30E+03	3.00E+01	5.43E+00	2.22E-01	1.42E-01	**0.071**	1.85E-01	3.49E-05
1,1-Dichloroethylene	3.02E+03	6.50E+01	2.55E+01	1.04E+00	3.07E-01	<0.0011	--	--
1,2,3-Trichlorobenzene	1.20E+01	7.40E+03	4.23E+00	1.73E-01	3.49E+01	<0.0015	--	--
1,2,3-Trichloropropane	1.90E+03	6.87E+01	3.43E-01	1.40E-02	3.24E-01	<0.00074	--	--
1,2,4-Trimethylbenzene	5.76E+01	1.48E+03	5.57E+00	2.28E-01	6.98E+00	**8.6**	1.19E+00	2.07E-02
1,2-Dibromo-3-chloropropane	6.01E-03	1.23E+03		6.01E-03		<0.0014	--	--
1,2-Dibromoethane (EDB)	2.73E-02	3.91E+03		2.92E-02		<0.00054	--	--
1,2-Dichloroethane	7.13E+03	1.40E+01	1.50E+00	6.13E-02	6.61E-02	<0.00049	--	--
1,2-Dichloroethylene, total	4.90E+03	4.08E+01	7.01E-03	2.87E-04	1.92E-01	<0.00076	--	--
1,2-Dichloropropane	2.97E+03	5.10E+01	2.62E+00	1.07E-01	2.41E-01	<0.00062	--	--
1,3,5-Trimethylbenzene	4.82E+01	1.66E+03	8.77E+00	3.59E-01	7.83E+00	**0.19**	2.35E-02	4.88E-04
2-Butanol	1.50E+04	2.20E+01	1.02E-02	4.17E-04	1.04E-01	<0.15	--	--
2-Chlorotoluene	4.70E+02	1.60E+02	3.50E+00	1.43E-01	7.55E-01	<0.0012	--	--
2-Hexanone	1.40E+04	2.29E+01	2.82E-02	1.15E-03	1.08E-01	<0.0045	--	--
3,3,5-Trimethylcyclohexanone	1.20E+04	2.49E+01	5.88E-03	2.41E-04	1.18E-01	<0.0055	--	--
Benzene	1.75E+03	8.30E+01	5.59E+00	2.29E-01	3.92E-01	**0.16**	2.52E-01	1.44E-04
Bromobenzene	4.72E+02	2.24E+02	3.70E+00	1.51E-01	1.06E+00	<0.00084	--	--
Bromochloromethane	5.97E-02	1.67E+04		1.33E-01		<0.00066	--	--
Bromoform	3.10E+03	8.71E+01		2.19E-02		<0.00062	--	--
Carbon disulfide	1.19E+03	4.57E+01	3.03E+01	1.24E+00	2.16E-01	**0.03**	6.56E-02	5.51E-05
Carbon tetrachloride	7.40E+02	4.39E+02	2.98E+01	1.22E+00	2.07E+00	<0.00093	--	--
Chlorobenzene	4.45E+02	3.30E+02	3.90E+00	1.59E-01	1.56E+00	**0.0062**	3.45E-03	7.75E-06
Chloroethane	4.54E-01	6.71E+03		5.92E-01		<0.0023	--	--
Chloroform	8.51E+03	4.40E+01	3.58E+00	1.46E-01	2.08E-01	<0.00074	--	--
Chlorotrifluoroethene	1.16E+04	1.90E+02	3.10E+02	1.27E+01	8.97E-01	<0.0045	--	--
Dichlorodifluoromethane	1.40E+01	2.80E+02		1.64E+01		<0.00098	--	--
Diisopropyl ether	1.20E+04	2.49E+01	2.57E-03	1.05E-04	1.18E-01	<0.00041	--	--
Ethylbenzene	1.52E+02	1.10E+03	6.43E+00	2.63E-01	5.19E+00	**0.23**	4.23E-02	2.78E-04
Freon 112	1.20E+02			4.09E+00		<0.0042	--	--
Freon 113	1.10E+03	1.60E+02	5.21E+02	2.13E+01	7.55E-01	<0.0012	--	--
Isopropylbenzene	6.13E+01	1.45E+03	1.15E+01	4.70E-01	6.82E+00	**0.088**	1.25E-02	2.03E-04
m-Dichlorobenzene	1.34E+02	1.70E+03	3.25E+00	1.33E-01	8.02E+00	**0.32**	3.87E-02	2.89E-04
Methyl acetate	1.00E+06	2.20E+00	2.06E-02	8.42E-04	1.04E-02	<0.0016	--	--
Methyl chloride	8.20E+03	3.50E+01	2.40E+01	9.81E-01	1.65E-01	<0.00052	--	--
Methyl tert-butyl ether (MTBE)	1.50E+05	6.00E+00	5.87E-01	2.40E-02	2.83E-02	<0.00028	--	--
Methylcyclopentane	4.30E+01	5.52E+02	3.62E-01	1.48E-02	2.60E+00	**10**	3.51E+00	8.17E-02
Methylene chloride	2.19E+04	8.80E+00	2.12E+00	8.67E-02	4.15E-02	<0.00032	--	--
n-Butylbenzene	1.38E+01	2.83E+03	1.31E+01	5.36E-01	1.34E+01	**0.076**	5.59E-03	4.05E-04
n-Propylbenzene	1.38E+01	2.83E+03	1.31E+01	5.36E-01	1.34E+01	**0.16**	1.18E-02	8.53E-04
o-Dichlorobenzene	1.36E+02	1.70E+03	1.98E+00	8.10E-02	8.02E+00	<0.0011	--	--
o-Xylene	1.75E+02	8.30E+02	5.10E+00	2.09E-01	3.92E+00	**0.23**	5.53E-02	3.16E-04
p-Dichlorobenzene	7.38E+01	6.17E+02	2.43E+00	9.94E-02	2.91E+00	**0.079**	2.50E-02	3.39E-04
p-Isopropyltoluene	2.34E+01	2.57E+03	1.10E+01	4.50E-01	1.21E+01	**0.084**	6.79E-03	2.90E-04
Propanal	3.06E+05	4.20E+00	7.69E-02	3.15E-03	1.98E-02	<0.013	--	--
sec-Butylbenzene	1.70E+01	2.15E+03	1.87E+01	7.65E-01	1.01E+01	**0.042**	4.04E-03	2.38E-04
Styrene	3.10E+02	7.76E+02		1.13E-01		<0.0013	--	--
Tetrachloroethylene	2.37E+02	3.64E+02	1.74E+01	7.12E-01	1.72E+00	<0.0012	--	--
Tetrahydrofuran	1.00E+06	9.50E-01	7.00E-02	2.86E-03	4.48E-03	**1.8**	7.30E+00	7.30E-06
Toluene	5.35E+02	3.00E+02	6.37E+00	2.60E-01	1.42E+00	**0.031**	1.87E-02	3.49E-05
trans-1,2-Dichloroethylene	4.39E+03	5.90E+01	9.16E+00	3.75E-01	2.78E-01	<0.00076	--	--
Trichloroethylene	1.38E+03	1.26E+02	9.37E+00	3.83E-01	5.95E-01	<0.00071	--	--
Trichlorofluoromethane	1.62E+03	1.59E+02	8.88E+01	3.63E+00	7.50E-01	<0.00049	--	--
Vinyl chloride	2.76E+03	1.86E+01	2.70E+01	1.10E+00	8.78E-02	<0.0012	--	--
Xylene (total)	1.61E+02	4.07E+02	7.34E+00	3.00E-01	1.92E+00	**0.36**	1.66E-01	1.03E-03

Sum of VOC detections (mg/kg) 2.26E+01

Detected SVOCs								
1,2,4,5-Tetrachlorobenzene	6.06E-01	5.75E+03	1.20E-03	4.92E-05	2.71E+01	<0.35	--	--
1,2,4-Trichlorobenzene	3.00E+02	1.78E+03	1.42E+00	5.81E-02	8.40E+00	<0.29	--	--
2,3,4,6-Tetrachlorophenol	7.00E+00	9.80E+01	1.30E-03	5.32E-05	4.63E-01	<0.52	--	--
2,4-Dichlorophenol	4.60E+03	3.80E+02	2.75E-03	1.12E-04	1.79E+00	<0.21	--	--
2,4-Dimethylphenol	4.20E+03	2.22E+02	2.38E-03	9.73E-05	1.05E+00	<0.20	--	--
2,6-Dinitrotoluene	3.05E-05	3.52E+02		3.02E-05		<0.13	--	--
2-Methylnaphthalene	2.54E+01	8.50E+03	5.18E-01	2.12E-02	4.01E+01	**0.34**	8.42E-03	3.32E-04

Soil/Water/Vapor Concentration Equilibria - Samples With Total VOCs or SVOCs Greater than 10 mg/kg
Modified Feenstra et al. (1991)/Mariner et al. (1997) Model
Casmalia Hazardous Waste Management Facility
Casmalia, California

SAMPLE INFORMATION - SAMPLE SSS00214*

Location	RISBCD-06
Start Depth	10 (ft)
End Depth	14.5 (ft)
Sample Date	9/30/2004
Analytical Methods:	8260B/GCMS-SIM

ASSUMED SOIL PROPERTIES

Dry Bulk Density (ρb)	1.86 kg/L
Total Porosity (φt)	0.45
Water Filled Porosity (φw)	0.45
Air Filled Porosity (φa)	0
Fraction Organic Content (foc)	0.00472

Chemical	Input Parameters			Chemical Parameters		Results		
VOCs/SVOCs Detected in Selected Type 7 Co-Located Samples	Solubility (S) (mg/L)	Organic Carbon Partition Coefficient (Koc) (L/kg)	Henry's Law Constant (H) (atm-L/mol)	Dimensionless Henry's Law Constant (Hc) (-)	Distribution Coefficient (Kd) (L/kg)	Known Total Soil Concentration (Ct) (mg/kg)	Estimated Pore Water Concentration (Cw) (mg/L)	Fraction of Solubility
Detected SVOCs								
3-Methylcholanthrene	1.00E+01	1.00E+07		2.72E-01		<0.40	--	--
Acetophenone	5.50E+03	3.83E+01	9.09E-03	3.72E-04	1.81E-01	<0.38	--	--
Aramite	1.00E-01	1.55E+04	4.40E-05	1.80E-06	7.31E+01	<0.62	--	--
Benzoic acid	2.70E+03	5.66E+01	7.14E-05	2.92E-06	2.67E-01	<0.058	--	--
Benzyl alcohol	1.82E+02	6.92E+01		3.06E-05		<0.77	--	--
Bis(2-ethylhexyl) phthalate	2.85E-01	5.90E+03	3.61E-04	1.48E-05	2.78E+01	<0.11	--	--
Butyl benzyl phthalate	4.22E+01	5.57E+02	4.78E-03	1.95E-04	2.63E+00	<0.10	--	--
Dibenzofuran	4.30E+00	4.16E+03	1.40E-01	5.73E-03	1.96E+01	<0.13	--	--
Diethyl phthalate	1.08E+03	2.88E+02		1.85E-05		<0.27	--	--
Dimethyl phthalate	4.29E-06	4.00E+03		1.36E-05		<0.12	--	--
Di-n-butyl phthalate	1.30E+01	3.39E+04	9.39E-07	3.85E-08	1.60E+07	<0.13	--	--
Hexachlorobutadiene	3.20E+00	2.30E+03	2.50E+01	1.02E+00	1.09E+01	<0.32	--	--
Isophorone	1.20E+04	2.49E+01	5.88E-03	2.41E-04	1.18E-01	<0.21	--	--
m-Cresol	2.51E+04	1.66E+01	1.59E-03	6.49E-05	7.84E-02	<0.26	--	--
o-Cresol	3.08E+04	1.48E+01	1.20E-03	4.93E-05	7.00E-02	<0.27	--	--
p-Cresol	2.26E+04	1.76E+01	7.69E-04	3.15E-05	8.30E-02	<0.20	--	--
Pentachlorobenzene	2.87E-02	8.31E-01		2.92E-02		<0.39	--	--
Pentachlorophenol	1.40E+01	5.30E+04	2.75E-03	1.12E-04	2.50E+02	<0.13	--	--
Phenanthrene	1.00E+00	1.40E+04	1.59E-01	6.50E-03	6.61E+01	<0.12	--	--
Phenol	9.30E+04	1.42E+01	5.26E-04	2.15E-05	6.70E-02	<0.25	--	--
p-Nitrophenol	1.60E+04	2.13E+01	1.01E-03	4.13E-05	1.00E-01	<0.20	--	--

Sum of SVOC detections (mg/kg) <10

Total Fraction of Solubility 1.08E-01

Soil/Water/Vapor Concentration Equilibria - Samples With Total VOCs or SVOCs Greater than 10 mg/kg
Modified Feenstra et al. (1991)/Mariner et al. (1997) Model
Casmalia Hazardous Waste Management Facility
Casmalia, California

SAMPLE INFORMATION - SAMPLE SSS00216

Location	RISBCD-07
Start Depth	5 (ft)
End Depth	8.5 (ft)
Sample Date	10/6/2004
Analytical Methods:	8260B/GCMS-SIM

ASSUMED SOIL PROPERTIES

Dry Bulk Density (ρb)	1.86 kg/L
Total Porosity (φt)	0.45
Water Filled Porosity (φw)	0.45
Air Filled Porosity (φa)	0
Fraction Organic Content (foc)	0.00472

Chemical	Input Parameters			Chemical Parameters		Results		
VOCs/SVOCs Detected in Selected Type 7 Co-Located Samples	Solubility (S) (mg/L)	Organic Carbon Partition Coefficient (Koc) (L/kg)	Henry's Law Constant (H) (atm-L/mol)	Dimensionless Henry's Law Constant (Hc) (-)	Distribution Coefficient (Kd) (L/kg)	Known Total Soil Concentration (Ct) (mg/kg)	Estimated Pore Water Concentration (Cw) (mg/L)	Fraction of Solubility
Detected VOCs								
1,1,1-Trichloroethane	1.31E+03	1.52E+02	1.67E+01	6.83E-01	7.17E-01	**0.24**	2.50E-01	1.91E-04
1,1,2,2-Tetrachloroethane	3.06E+03	1.18E+02	4.59E-01	1.88E-02	5.57E-01	**0.0008**	1.00E-03	3.27E-07
1,1,2-Trichloroethane	3.97E+03	5.60E+01	1.08E+00	4.42E-02	2.64E-01	**0.0082**	1.62E-02	4.08E-06
1,1-Dichloroethane	5.30E+03	3.00E+01	5.43E+00	2.22E-01	1.42E-01	**4.2**	1.10E+01	2.07E-03
1,1-Dichloroethylene	3.02E+03	6.50E+01	2.55E+01	1.04E+00	3.07E-01	**0.21**	3.83E-01	1.27E-04
1,2,3-Trichlorobenzene	1.20E+01	7.40E+03	4.23E+00	1.73E-01	3.49E+01	**0.0048**	1.36E-04	1.14E-05
1,2,3-Trichloropropane	1.90E+03	6.87E+01	3.43E-01	1.40E-02	3.24E-01	<0.00063	--	--
1,2,4-Trimethylbenzene	5.76E+01	1.48E+03	5.57E+00	2.28E-01	6.98E+00	<0.0013	--	--
1,2-Dibromo-3-chloropropane	6.01E-03	1.23E+03		6.01E-03		<0.0012	--	--
1,2-Dibromoethane (EDB)	2.73E-02	3.91E+03		2.92E-02		<0.00046	--	--
1,2-Dichloroethane	7.13E+03	1.40E+01	1.50E+00	6.13E-02	6.61E-02	**0.13**	4.22E-01	5.92E-05
1,2-Dichloroethylene, total	4.90E+03	4.08E+01	7.01E-03	2.87E-04	1.92E-01	**1**	2.30E+00	4.70E-04
1,2-Dichloropropane	2.97E+03	5.10E+01	2.62E+00	1.07E-01	2.41E-01	<0.00053	--	--
1,3,5-Trimethylbenzene	4.82E+01	1.66E+03	8.77E+00	3.59E-01	7.83E+00	<0.0011	--	--
2-Butanol	1.50E+04	2.20E+01	1.02E-02	4.17E-04	1.04E-01	<0.13	--	--
2-Chlorotoluene	4.70E+02	1.60E+02	3.50E+00	1.43E-01	7.55E-01	<0.00099	--	--
2-Hexanone	1.40E+04	2.29E+01	2.82E-02	1.15E-03	1.08E-01	<0.0038	--	--
3,3,5-Trimethylcyclohexanone	1.20E+04	2.49E+01	5.88E-03	2.41E-04	1.18E-01	**0.053**	1.47E-01	1.23E-05
Benzene	1.75E+03	8.30E+01	5.59E+00	2.29E-01	3.92E-01	**0.94**	1.48E+00	8.48E-04
Bromobenzene	4.72E+02	2.24E+02	3.70E+00	1.51E-01	1.06E+00	<0.00072	--	--
Bromochloromethane	5.97E-02	1.67E+04		1.33E-01		<0.00057	--	--
Bromoform	3.10E+03	8.71E+01		2.19E-02		<0.00053	--	--
Carbon disulfide	1.19E+03	4.57E+01	3.03E+01	1.24E+00	2.16E-01	<0.0031	--	--
Carbon tetrachloride	7.40E+02	4.39E+02	2.98E+01	1.22E+00	2.07E+00	<0.00080	--	--
Chlorobenzene	4.45E+02	3.30E+02	3.90E+00	1.59E-01	1.56E+00	**0.0057**	3.17E-03	7.13E-06
Chloroethane	4.54E-01	6.71E+03		5.92E-01		<0.0020	--	--
Chloroform	8.51E+03	4.40E+01	3.58E+00	1.46E-01	2.08E-01	**0.8**	1.78E+00	2.09E-04
Chlorotrifluoroethene	1.16E+04	1.90E+02	3.10E+02	1.27E+01	8.97E-01	**5.9**	5.18E+00	4.45E-04
Dichlorodifluoromethane	1.40E+01	2.80E+02		1.64E+01		**0.014**		
Diisopropyl ether	1.20E+04	2.49E+01	2.57E-03	1.05E-04	1.18E-01	**0.0026**	7.23E-03	6.03E-07
Ethylbenzene	1.52E+02	1.10E+03	6.43E+00	2.63E-01	5.19E+00	**0.079**	1.45E-02	9.56E-05
Freon 112	1.20E+02			4.09E+00		**0.017**		
Freon 113	1.10E+03	1.60E+02	5.21E+02	2.13E+01	7.55E-01	**4.6**	4.61E+00	4.19E-03
Isopropylbenzene	6.13E+01	1.45E+03	1.15E+01	4.70E-01	6.82E+00	<0.0011	--	--
m-Dichlorobenzene	1.34E+02	1.70E+03	3.25E+00	1.33E-01	8.02E+00	**0.0091**	1.10E-03	8.22E-06
Methyl acetate	1.00E+06	2.20E+00	2.06E-02	8.42E-04	1.04E-02	<0.0013	--	--
Methyl chloride	8.20E+03	3.50E+01	2.40E+01	9.81E-01	1.65E-01	<0.00045	--	--
Methyl tert-butyl ether (MTBE)	1.50E+05	6.00E+00	5.87E-01	2.40E-02	2.83E-02	<0.00024	--	--
Methylcyclopentane	4.30E+01	5.52E+02	3.62E-01	1.48E-02	2.60E+00	**0.032**	1.12E-02	2.62E-04
Methylene chloride	2.19E+04	8.80E+00	2.12E+00	8.67E-02	4.15E-02	**0.02**	7.06E-02	3.23E-06
n-Butylbenzene	1.38E+01	2.83E+03	1.31E+01	5.36E-01	1.34E+01	<0.0016	--	--
n-Propylbenzene	1.38E+01	2.83E+03	1.31E+01	5.36E-01	1.34E+01	<0.0013	--	--
o-Dichlorobenzene	1.36E+02	1.70E+03	1.98E+00	8.10E-02	8.02E+00	**0.043**	5.20E-03	3.83E-05
o-Xylene	1.75E+02	8.30E+02	5.10E+00	2.09E-01	3.92E+00	**0.051**	1.23E-02	7.01E-05
p-Dichlorobenzene	7.38E+01	6.17E+02	2.43E+00	9.94E-02	2.91E+00	**0.0068**	2.16E-03	2.92E-05
p-Isopropyltoluene	2.34E+01	2.57E+03	1.10E+01	4.50E-01	1.21E+01	<0.0018	--	--
Propanal	3.06E+05	4.20E+00	7.69E-02	3.15E-03	1.98E-02	<0.011	--	--
sec-Butylbenzene	1.70E+01	2.15E+03	1.87E+01	7.65E-01	1.01E+01	<0.0015	--	--
Styrene	3.10E+02	7.76E+02		1.13E-01		<0.0011	--	--
Tetrachloroethylene	2.37E+02	3.64E+02	1.74E+01	7.12E-01	1.72E+00	**8.2**	4.18E+00	1.77E-02
Tetrahydrofuran	1.00E+06	9.50E-01	7.00E-02	2.86E-03	4.48E-03	**0.17**	6.90E-01	6.90E-07
Toluene	5.35E+02	3.00E+02	6.37E+00	2.60E-01	1.42E+00	**0.085**	5.13E-02	9.58E-05
trans-1,2-Dichloroethylene	4.39E+03	5.90E+01	9.16E+00	3.75E-01	2.78E-01	**0.011**	2.11E-02	4.82E-06
Trichloroethylene	1.38E+03	1.26E+02	9.37E+00	3.83E-01	5.95E-01	**5.9**	7.05E+00	5.09E-03
Trichlorofluoromethane	1.62E+03	1.59E+02	8.88E+01	3.63E+00	7.50E-01	**0.065**	6.55E-02	4.04E-05
Vinyl chloride	2.76E+03	1.86E+01	2.70E+01	1.10E+00	8.78E-02	**0.55**	1.67E+00	6.04E-04
Xylene (total)	1.61E+02	4.07E+02	7.34E+00	3.00E-01	1.92E+00	**0.11**	5.09E-02	3.16E-04

Sum of VOC detections (mg/kg) 3.35E+01

Detected SVOCs								
1,2,4,5-Tetrachlorobenzene	6.06E-01	5.75E+03	1.20E-03	4.92E-05	2.71E+01	<0.30	--	--
1,2,4-Trichlorobenzene	3.00E+02	1.78E+03	1.42E+00	5.81E-02	8.40E+00	**0.41**	4.74E-02	1.58E-04
2,3,4,6-Tetrachlorophenol	7.00E+00	9.80E+01	1.30E-03	5.32E-05	4.63E-01	<0.44	--	--
2,4-Dichlorophenol	4.60E+03	3.80E+02	2.75E-03	1.12E-04	1.79E+00	<0.18	--	--
2,4-Dimethylphenol	4.20E+03	2.22E+02	2.38E-03	9.73E-05	1.05E+00	<0.17	--	--
2,6-Dinitrotoluene	3.05E-05	3.52E+02		3.02E-05		<0.11	--	--
2-Methylnaphthalene	2.54E+01	8.50E+03	5.18E-01	2.12E-02	4.01E+01	<0.21	--	--

Soil/Water/Vapor Concentration Equilibria - Samples With Total VOCs or SVOCs Greater than 10 mg/kg
Modified Feenstra et al. (1991)/Mariner et al. (1997) Model
Casmalia Hazardous Waste Management Facility
Casmalia, California

SAMPLE INFORMATION - SAMPLE SSS00216

Location	RISBCD-07
Start Depth	5 (ft)
End Depth	8.5 (ft)
Sample Date	10/6/2004
Analytical Methods:	8260B/GCMS-SIM

ASSUMED SOIL PROPERTIES

Dry Bulk Density (ρb)	1.86 kg/L
Total Porosity (φt)	0.45
Water Filled Porosity (φw)	0.45
Air Filled Porosity (φa)	0
Fraction Organic Content (foc)	0.00472

Chemical	Input Parameters			Chemical Parameters		Results		
VOCs/SVOCs Detected in Selected Type 7 Co-Located Samples	Solubility (S) (mg/L)	Organic Carbon Partition Coefficient (Koc) (L/kg)	Henry's Law Constant (H) (atm-L/mol)	Dimensionless Henry's Law Constant (Hc) (-)	Distribution Coefficient (Kd) (L/kg)	Known Total Soil Concentration (Ct) (mg/kg)	Estimated Pore Water Concentration (Cw) (mg/L)	Fraction of Solubility
Detected SVOCs								
3-Methylcholanthrene	1.00E+01	1.00E+07		2.72E-01		<0.33	--	--
Acetophenone	5.50E+03	3.83E+01	9.09E-03	3.72E-04	1.81E-01	<0.32	--	--
Aramite	1.00E-01	1.55E+04	4.40E-05	1.80E-06	7.31E+01	<0.52	--	--
Benzoic acid	2.70E+03	5.66E+01	7.14E-05	2.92E-06	2.67E-01	<0.049	--	--
Benzyl alcohol	1.82E+02	6.92E+01		3.06E-05		<0.65	--	--
Bis(2-ethylhexyl) phthalate	2.85E-01	5.90E+03	3.61E-04	1.48E-05	2.78E+01	**1.1**	3.92E-02	1.37E-01
Butyl benzyl phthalate	4.22E+01	5.57E+02	4.78E-03	1.95E-04	2.63E+00	<0.086	--	--
Dibenzofuran	4.30E+00	4.16E+03	1.40E-01	5.73E-03	1.96E+01	<0.11	--	--
Diethyl phthalate	1.08E+03	2.88E+02		1.85E-05		<0.23	--	--
Dimethyl phthalate	4.29E-06	4.00E+03		1.36E-05		<0.10	--	--
Di-n-butyl phthalate	1.30E+01	3.39E+04	9.39E-07	3.85E-08	1.60E+07	<0.11	--	--
Hexachlorobutadiene	3.20E+00	2.30E+03	2.50E+01	1.02E+00	1.09E+01	<0.27	--	--
Isophorone	1.20E+04	2.49E+01	5.88E-03	2.41E-04	1.18E-01	<0.18	--	--
m-Cresol	2.51E+04	1.66E+01	1.59E-03	6.49E-05	7.84E-02	<0.22	--	--
o-Cresol	3.08E+04	1.48E+01	1.20E-03	4.93E-05	7.00E-02	<0.22	--	--
p-Cresol	2.26E+04	1.76E+01	7.69E-04	3.15E-05	8.30E-02	<0.17	--	--
Pentachlorobenzene	2.87E-02	8.31E-01		2.92E-02		<0.33	--	--
Pentachlorophenol	1.40E+01	5.30E+04	2.75E-03	1.12E-04	2.50E+02	<0.11	--	--
Phenanthrene	1.00E+00	1.40E+04	1.59E-01	6.50E-03	6.61E+01	<0.10	--	--
Phenol	9.30E+04	1.42E+01	5.26E-04	2.15E-05	6.70E-02	<0.21	--	--
p-Nitrophenol	1.60E+04	2.13E+01	1.01E-03	4.13E-05	1.00E-01	<0.17	--	--

Sum of SVOC detections (mg/kg) <10

Total Fraction of Solubility 1.71E-01

Soil/Water/Vapor Concentration Equilibria - Samples With Total VOCs or SVOCs Greater than 10 mg/kg
Modified Feenstra et al. (1991)/Mariner et al. (1997) Model
Casmalia Hazardous Waste Management Facility
Casmalia, California

SAMPLE INFORMATION - SAMPLE SSS00217

Location	RISBCD-07 (dup)
Start Depth	5 (ft)
End Depth	8.5 (ft)
Sample Date	10/6/2004
Analytical Methods:	8260B/GCMS-SIM

ASSUMED SOIL PROPERTIES

Dry Bulk Density (ρb)	1.86 kg/L
Total Porosity (φt)	0.45
Water Filled Porosity (φw)	0.45
Air Filled Porosity (φa)	0
Fraction Organic Content (foc)	0.00472

Chemical	Input Parameters			Chemical Parameters		Results		
VOCs/SVOCs Detected in Selected Type 7 Co-Located Samples	Solubility (S) (mg/L)	Organic Carbon Partition Coefficient (Koc) (L/kg)	Henry's Law Constant (H) (atm-L/mol)	Dimensionless Henry's Law Constant (Hc) (-)	Distribution Coefficient (Kd) (L/kg)	Known Total Soil Concentration (Ct) (mg/kg)	Estimated Pore Water Concentration (Cw) (mg/L)	Fraction of Solubility
Detected VOCs								
1,1,1-Trichloroethane	1.31E+03	1.52E+02	1.67E+01	6.83E-01	7.17E-01	**0.62**	6.46E-01	4.93E-04
1,1,2-Trichloroethane	3.97E+03	5.60E+01	1.08E+00	4.42E-02	2.64E-01	**0.02**	3.95E-02	9.96E-06
1,1-Dichloroethane	5.30E+03	3.00E+01	5.43E+00	2.22E-01	1.42E-01	**3.5**	9.13E+00	1.72E-03
1,1-Dichloroethylene	3.02E+03	6.50E+01	2.55E+01	1.04E+00	3.07E-01	**0.35**	6.38E-01	2.11E-04
1,2,3-Trichlorobenzene	1.20E+01	7.40E+03	4.23E+00	1.73E-01	3.49E+01	**0.034**	9.67E-04	8.06E-05
1,2,3-Trichloropropane	1.90E+03	6.87E+01	3.43E-01	1.40E-02	3.24E-01	<0.00064	--	--
1,2-Dibromo-3-chloropropane	6.01E-03	1.23E+03		6.01E-03		<0.0012	--	--
1,2-Dibromoethane (EDB)	2.73E-02	3.91E+03		2.92E-02		<0.00047	--	--
1,2-Dichloroethane	7.13E+03	1.40E+01	1.50E+00	6.13E-02	6.61E-02	**0.23**	7.47E-01	1.05E-04
1,2-Dichloroethylene, total	4.90E+03	4.08E+01	7.01E-03	2.87E-04	1.92E-01	**2.1**	4.83E+00	9.87E-04
1,2-Dichloropropane	2.97E+03	5.10E+01	2.62E+00	1.07E-01	2.41E-01	**0.051**	1.06E-01	3.56E-05
2-Butanol	1.50E+04	2.20E+01	1.02E-02	4.17E-04	1.04E-01	<0.13	--	--
2-Chlorotoluene	4.70E+02	1.60E+02	3.50E+00	1.43E-01	7.55E-01	**0.011**	1.10E-02	2.35E-05
2-Hexanone	1.40E+04	2.29E+01	2.82E-02	1.15E-03	1.08E-01	<0.0039	--	--
3,3,5-Trimethylcyclohexanone	1.20E+04	2.49E+01	5.88E-03	2.41E-04	1.18E-01	**0.14**	3.89E-01	3.24E-05
Benzene	1.75E+03	8.30E+01	5.59E+00	2.29E-01	3.92E-01	**0.95**	1.50E+00	8.57E-04
Bromobenzene	4.72E+02	2.24E+02	3.70E+00	1.51E-01	1.06E+00	<0.00073	--	--
Bromochloromethane	5.97E-02	1.67E+04		1.33E-01		<0.00057	--	--
Bromoform	3.10E+03	8.71E+01		2.19E-02		<0.00053	--	--
Carbon disulfide	1.19E+03	4.57E+01	3.03E+01	1.24E+00	2.16E-01	<0.0031	--	--
Carbon tetrachloride	7.40E+02	4.39E+02	2.98E+01	1.22E+00	2.07E+00	<0.00081	--	--
Chlorobenzene	4.45E+02	3.30E+02	3.90E+00	1.59E-01	1.56E+00	**0.032**	1.78E-02	4.00E-05
Chloroethane	4.54E-01	6.71E+03		5.92E-01		<0.0020	--	--
Chloroform	8.51E+03	4.40E+01	3.58E+00	1.46E-01	2.08E-01	**0.71**	1.58E+00	1.85E-04
Chlorotrifluoroethene	1.16E+04	1.90E+02	3.10E+02	1.27E+01	8.97E-01	**12**	1.05E+01	9.06E-04
Dichlorodifluoromethane	1.40E+01	2.80E+02		1.64E+01		**0.028**		
Diisopropyl ether	1.20E+04	2.49E+01	2.57E-03	1.05E-04	1.18E-01	<0.00036	--	--
Ethylbenzene	1.52E+02	1.10E+03	6.43E+00	2.63E-01	5.19E+00	**0.48**	8.83E-02	5.81E-04
Freon 112	1.20E+02			4.09E+00		**0.13**		
Freon 113	1.10E+03	1.60E+02	5.21E+02	2.13E+01	7.55E-01	**4.7**	4.71E+00	4.29E-03
Isopropylbenzene	6.13E+01	1.45E+03	1.15E+01	4.70E-01	6.82E+00	**0.0085**	1.20E-03	1.96E-05
m-Dichlorobenzene	1.34E+02	1.70E+03	3.25E+00	1.33E-01	8.02E+00	**0.087**	1.05E-02	7.86E-05
Methyl acetate	1.00E+06	2.20E+00	2.06E-02	8.42E-04	1.04E-02	<0.0014	--	--
Methyl chloride	8.20E+03	3.50E+01	2.40E+01	9.81E-01	1.65E-01	<0.00045	--	--
Methyl tert-butyl ether (MTBE)	1.50E+05	6.00E+00	5.87E-01	2.40E-02	2.83E-02	<0.00025	--	--
Methylcyclopentane	4.30E+01	5.52E+02	3.62E-01	1.48E-02	2.60E+00	**0.24**	8.43E-02	1.96E-03
Methylene chloride	2.19E+04	8.80E+00	2.12E+00	8.67E-02	4.15E-02	**0.43**	1.52E+00	6.94E-05
n-Butylbenzene	1.38E+01	2.83E+03	1.31E+01	5.36E-01	1.34E+01	<0.0016	--	--
o-Dichlorobenzene	1.36E+02	1.70E+03	1.98E+00	8.10E-02	8.02E+00	**0.48**	5.81E-02	4.27E-04
o-Xylene	1.75E+02	8.30E+02	5.10E+00	2.09E-01	3.92E+00	**0.35**	8.41E-02	4.81E-04
p-Dichlorobenzene	7.38E+01	6.17E+02	2.43E+00	9.94E-02	2.91E+00	**0.061**	1.93E-02	2.62E-04
p-Isopropyltoluene	2.34E+01	2.57E+03	1.10E+01	4.50E-01	1.21E+01	<0.0018	--	--
Propanal	3.06E+05	4.20E+00	7.69E-02	3.15E-03	1.98E-02	<0.011	--	--
sec-Butylbenzene	1.70E+01	2.15E+03	1.87E+01	7.65E-01	1.01E+01	<0.0015	--	--
Styrene	3.10E+02	7.76E+02		1.13E-01		<0.0011	--	--
Tetrachloroethylene	2.37E+02	3.64E+02	1.74E+01	7.12E-01	1.72E+00	**9.3**	4.74E+00	2.00E-02
Tetrahydrofuran	1.00E+06	9.50E-01	7.00E-02	2.86E-03	4.48E-03	**0.18**	7.30E-01	7.30E-07
Toluene	5.35E+02	3.00E+02	6.37E+00	2.60E-01	1.42E+00	**0.32**	1.93E-01	3.61E-04
trans-1,2-Dichloroethylene	4.39E+03	5.90E+01	9.16E+00	3.75E-01	2.78E-01	**0.027**	5.19E-02	1.18E-05
Trichloroethylene	1.38E+03	1.26E+02	9.37E+00	3.83E-01	5.95E-01	**5.5**	6.57E+00	4.75E-03
Trichlorofluoromethane	1.62E+03	1.59E+02	8.88E+01	3.63E+00	7.50E-01	**0.23**	2.32E-01	1.43E-04
Vinyl chloride	2.76E+03	1.86E+01	2.70E+01	1.10E+00	8.78E-02	**0.29**	8.80E-01	3.19E-04
Xylene (total)	1.61E+02	4.07E+02	7.34E+00	3.00E-01	1.92E+00	**0.81**	3.74E-01	2.33E-03

Sum of VOC detections (mg/kg) 4.44E+01

Detected SVOCs								
1,2,4,5-Tetrachlorobenzene	6.06E-01	5.75E+03	1.20E-03	4.92E-05	2.71E+01	<0.29	--	--
1,2,4-Trichlorobenzene	3.00E+02	1.78E+03	1.42E+00	5.81E-02	8.40E+00	<0.23	--	--
2,3,4,6-Tetrachlorophenol	7.00E+00	9.80E+01	1.30E-03	5.32E-05	4.63E-01	<0.42	--	--
2,4-Dichlorophenol	4.60E+03	3.80E+02	2.75E-03	1.12E-04	1.79E+00	<0.17	--	--
2,4-Dimethylphenol	4.20E+03	2.22E+02	2.38E-03	9.73E-05	1.05E+00	<0.16	--	--
2,6-Dinitrotoluene	3.05E-05	3.52E+02		3.02E-05		<0.10	--	--
2-Methylnaphthalene	2.54E+01	8.50E+03	5.18E-01	2.12E-02	4.01E+01	<0.20	--	--
3-Methylcholanthrene	1.00E+01	1.00E+07		2.72E-01		<0.32	--	--
Acetophenone	5.50E+03	3.83E+01	9.09E-03	3.72E-04	1.81E-01	<0.30	--	--
Aramite	1.00E-01	1.55E+04	4.40E-05	1.80E-06	7.31E+01	<0.50	--	--
Benzoic acid	2.70E+03	5.66E+01	7.14E-05	2.92E-06	2.67E-01	<0.047	--	--

Soil/Water/Vapor Concentration Equilibria - Samples With Total VOCs or SVOCs Greater than 10 mg/kg
Modified Feenstra et al. (1991)/Mariner et al. (1997) Model
Casmalia Hazardous Waste Management Facility
Casmalia, California

SAMPLE INFORMATION - SAMPLE SSS00217

Location	RISBCD-07 (dup)
Start Depth	5 (ft)
End Depth	8.5 (ft)
Sample Date	10/6/2004
Analytical Methods:	8260B/GCMS-SIM

ASSUMED SOIL PROPERTIES

Dry Bulk Density (ρb)	1.86 kg/L
Total Porosity (φt)	0.45
Water Filled Porosity (φw)	0.45
Air Filled Porosity (φa)	0
Fraction Organic Content (foc)	0.00472

Chemical	Input Parameters			Chemical Parameters		Results		
VOCs/SVOCs Detected in Selected Type 7 Co-Located Samples	Solubility (S) (mg/L)	Organic Carbon Partition Coefficient (Koc) (L/kg)	Henry's Law Constant (H) (atm-L/mol)	Dimensionless Henry's Law Constant (Hc) (-)	Distribution Coefficient (Kd) (L/kg)	Known Total Soil Concentration (Ct) (mg/kg)	Estimated Pore Water Concentration (Cw) (mg/L)	Fraction of Solubility
Detected SVOCs								
Benzyl alcohol	1.82E+02	6.92E+01		3.06E-05		<0.62	--	--
Bis(2-ethylhexyl) phthalate	2.85E-01	5.90E+03	3.61E-04	1.48E-05	2.78E+01	<0.086	--	--
Butyl benzyl phthalate	4.22E+01	5.57E+02	4.78E-03	1.95E-04	2.63E+00	<0.082	--	--
Dibenzofuran	4.30E+00	4.16E+03	1.40E-01	5.73E-03	1.96E+01	<0.10	--	--
Diethyl phthalate	1.08E+03	2.88E+02		1.85E-05		<0.22	--	--
Dimethyl phthalate	4.29E-06	4.00E+03		1.36E-05		<0.098	--	--
Di-n-butyl phthalate	1.30E+01	3.39E+04	9.39E-07	3.85E-08	1.60E+07	<0.10	--	--
Hexachlorobutadiene	3.20E+00	2.30E+03	2.50E+01	1.02E+00	1.09E+01	<0.26	--	--
Isophorone	1.20E+04	2.49E+01	5.88E-03	2.41E-04	1.18E-01	<0.17	--	--
m-Cresol	2.51E+04	1.66E+01	1.59E-03	6.49E-05	7.84E-02	<0.21	--	--
o-Cresol	3.08E+04	1.48E+01	1.20E-03	4.93E-05	7.00E-02	<0.21	--	--
p-Cresol	2.26E+04	1.76E+01	7.69E-04	3.15E-05	8.30E-02	<0.16	--	--
Pentachlorobenzene	2.87E-02	8.31E-01		2.92E-02		<0.31	--	--
Pentachlorophenol	1.40E+01	5.30E+04	2.75E-03	1.12E-04	2.50E+02	<0.10	--	--
Phenanthrene	1.00E+00	1.40E+04	1.59E-01	6.50E-03	6.61E+01	<0.096	--	--
Phenol	9.30E+04	1.42E+01	5.26E-04	2.15E-05	6.70E-02	<0.20	--	--
p-Nitrophenol	1.60E+04	2.13E+01	1.01E-03	4.13E-05	1.00E-01	<0.16	--	--

Sum of SVOC detections (mg/kg) <10

Total Fraction of Solubility 4.18E-02

Soil/Water/Vapor Concentration Equilibria - Samples With Total VOCs or SVOCs Greater than 10 mg/kg
Modified Feenstra et al. (1991)/Mariner et al. (1997) Model
Casmalia Hazardous Waste Management Facility
Casmalia, California

SAMPLE INFORMATION - SAMPLE SSS00218

Location	RISBCD-07
Start Depth	10 (ft)
End Depth	12 (ft)
Sample Date	10/6/2004
Analytical Methods:	8260B/GCMS-SIM

ASSUMED SOIL PROPERTIES

Dry Bulk Density (ρb)	1.86 kg/L
Total Porosity (φt)	0.45
Water Filled Porosity (φw)	0.45
Air Filled Porosity (φa)	0
Fraction Organic Content (foc)	0.00472

Chemical	Input Parameters			Chemical Parameters		Results		
VOCs/SVOCs Detected in Selected Type 7 Co-Located Samples	Solubility (S) (mg/L)	Organic Carbon Partition Coefficient (Koc) (L/kg)	Henry's Law Constant (H) (atm-L/mol)	Dimensionless Henry's Law Constant (Hc) (-)	Distribution Coefficient (Kd) (L/kg)	Known Total Soil Concentration (Ct) (mg/kg)	Estimated Pore Water Concentration (Cw) (mg/L)	Fraction of Solubility
Detected VOCs								
1,1,1-Trichloroethane	1.31E+03	1.52E+02	1.67E+01	6.83E-01	7.17E-01	**0.44**	4.59E-01	3.50E-04
1,1,2,2-Tetrachloroethane	3.06E+03	1.18E+02	4.59E-01	1.88E-02	5.57E-01	<0.13	--	--
1,1,2-Trichloroethane	3.97E+03	5.60E+01	1.08E+00	4.42E-02	2.64E-01	<0.17	--	--
1,1-Dichloroethane	5.30E+03	3.00E+01	5.43E+00	2.22E-01	1.42E-01	**3**	7.82E+00	1.48E-03
1,1-Dichloroethylene	3.02E+03	6.50E+01	2.55E+01	1.04E+00	3.07E-01	<0.22	--	--
1,2,3-Trichlorobenzene	1.20E+01	7.40E+03	4.23E+00	1.73E-01	3.49E+01	**0.32**	9.10E-03	7.58E-04
1,2,3-Trichloropropane	1.90E+03	6.87E+01	3.43E-01	1.40E-02	3.24E-01	<0.15	--	--
1,2,4-Trimethylbenzene	5.76E+01	1.48E+03	5.57E+00	2.28E-01	6.98E+00	<0.30	--	--
1,2-Dibromo-3-chloropropane	6.01E-03	1.23E+03		6.01E-03		<0.28	--	--
1,2-Dibromoethane (EDB)	2.73E-02	3.91E+03		2.92E-02		<0.11	--	--
1,2-Dichloroethane	7.13E+03	1.40E+01	1.50E+00	6.13E-02	6.61E-02	**0.19**	6.17E-01	8.65E-05
1,2-Dichloroethylene, total	4.90E+03	4.08E+01	7.01E-03	2.87E-04	1.92E-01	**5.5**	1.27E+01	2.58E-03
1,2-Dichloropropane	2.97E+03	5.10E+01	2.62E+00	1.07E-01	2.41E-01	<0.12	--	--
1,3,5-Trimethylbenzene	4.82E+01	1.66E+03	8.77E+00	3.59E-01	7.83E+00	<0.26	--	--
2-Butanol	1.50E+04	2.20E+01	1.02E-02	4.17E-04	1.04E-01	<30	--	--
2-Chlorotoluene	4.70E+02	1.60E+02	3.50E+00	1.43E-01	7.55E-01	<0.23	--	--
2-Hexanone	1.40E+04	2.29E+01	2.82E-02	1.15E-03	1.08E-01	<0.89	--	--
3,3,5-Trimethylcyclohexanone	1.20E+04	2.49E+01	5.88E-03	2.41E-04	1.18E-01	<1.1	--	--
Benzene	1.75E+03	8.30E+01	5.59E+00	2.29E-01	3.92E-01	**0.8**	1.26E+00	7.21E-04
Bromobenzene	4.72E+02	2.24E+02	3.70E+00	1.51E-01	1.06E+00	<0.17	--	--
Bromochloromethane	5.97E-02	1.67E+04		1.33E-01		<0.13	--	--
Bromoform	3.10E+03	8.71E+01		2.19E-02		<0.12	--	--
Carbon disulfide	1.19E+03	4.57E+01	3.03E+01	1.24E+00	2.16E-01	<0.72	--	--
Carbon tetrachloride	7.40E+02	4.39E+02	2.98E+01	1.22E+00	2.07E+00	<0.19	--	--
Chlorobenzene	4.45E+02	3.30E+02	3.90E+00	1.59E-01	1.56E+00	<0.17	--	--
Chloroethane	4.54E-01	6.71E+03		5.92E-01		<0.46	--	--
Chloroform	8.51E+03	4.40E+01	3.58E+00	1.46E-01	2.08E-01	**0.5**	1.11E+00	1.31E-04
Chlorotrifluoroethene	1.16E+04	1.90E+02	3.10E+02	1.27E+01	8.97E-01	<0.91	--	--
Dichlorodifluoromethane	1.40E+01	2.80E+02		1.64E+01		<0.20	--	--
Diisopropyl ether	1.20E+04	2.49E+01	2.57E-03	1.05E-04	1.18E-01	<0.083	--	--
Ethylbenzene	1.52E+02	1.10E+03	6.43E+00	2.63E-01	5.19E+00	**2.7**	4.97E-01	3.27E-03
Freon 112	1.20E+02			4.09E+00		<0.84	--	--
Freon 113	1.10E+03	1.60E+02	5.21E+02	2.13E+01	7.55E-01	**0.79**	7.92E-01	7.20E-04
Isopropylbenzene	6.13E+01	1.45E+03	1.15E+01	4.70E-01	6.82E+00	<0.25	--	--
m-Dichlorobenzene	1.34E+02	1.70E+03	3.25E+00	1.33E-01	8.02E+00	<0.25	--	--
Methyl acetate	1.00E+06	2.20E+00	2.06E-02	8.42E-04	1.04E-02	<0.32	--	--
Methyl chloride	8.20E+03	3.50E+01	2.40E+01	9.81E-01	1.65E-01	<0.10	--	--
Methyl tert-butyl ether (MTBE)	1.50E+05	6.00E+00	5.87E-01	2.40E-02	2.83E-02	<0.057	--	--
Methylcyclopentane	4.30E+01	5.52E+02	3.62E-01	1.48E-02	2.60E+00	<0.76	--	--
Methylene chloride	2.19E+04	8.80E+00	2.12E+00	8.67E-02	4.15E-02	**0.44**	1.55E+00	7.10E-05
n-Butylbenzene	1.38E+01	2.83E+03	1.31E+01	5.36E-01	1.34E+01	<0.38	--	--
n-Propylbenzene	1.38E+01	2.83E+03	1.31E+01	5.36E-01	1.34E+01	<0.32	--	--
o-Dichlorobenzene	1.36E+02	1.70E+03	1.98E+00	8.10E-02	8.02E+00	**0.77**	9.32E-02	6.86E-04
o-Xylene	1.75E+02	8.30E+02	5.10E+00	2.09E-01	3.92E+00	**2**	4.81E-01	2.75E-03
p-Dichlorobenzene	7.38E+01	6.17E+02	2.43E+00	9.94E-02	2.91E+00	<0.20	--	--
p-Isopropyltoluene	2.34E+01	2.57E+03	1.10E+01	4.50E-01	1.21E+01	<0.43	--	--
Propanal	3.06E+05	4.20E+00	7.69E-02	3.15E-03	1.98E-02	<2.6	--	--
sec-Butylbenzene	1.70E+01	2.15E+03	1.87E+01	7.65E-01	1.01E+01	<0.36	--	--
Styrene	3.10E+02	7.76E+02		1.13E-01		<0.25	--	--
Tetrachloroethylene	2.37E+02	3.64E+02	1.74E+01	7.12E-01	1.72E+00	**0.43**	2.19E-01	9.26E-04
Tetrahydrofuran	1.00E+06	9.50E-01	7.00E-02	2.86E-03	4.48E-03	**4**	1.62E+01	1.62E-05
Toluene	5.35E+02	3.00E+02	6.37E+00	2.60E-01	1.42E+00	**0.82**	4.95E-01	9.24E-04
trans-1,2-Dichloroethylene	4.39E+03	5.90E+01	9.16E+00	3.75E-01	2.78E-01	<0.15	--	--
Trichloroethylene	1.38E+03	1.26E+02	9.37E+00	3.83E-01	5.95E-01	**0.8**	9.56E-01	6.90E-04
Trichlorofluoromethane	1.62E+03	1.59E+02	8.88E+01	3.63E+00	7.50E-01	<0.098	--	--
Vinyl chloride	2.76E+03	1.86E+01	2.70E+01	1.10E+00	8.78E-02	**0.27**	8.19E-01	2.97E-04
Xylene (total)	1.61E+02	4.07E+02	7.34E+00	3.00E-01	1.92E+00	**8.3**	3.84E+00	2.38E-02

Sum of VOC detections (mg/kg) 3.21E+01

Detected SVOCs								
1,2,4,5-Tetrachlorobenzene	6.06E-01	5.75E+03	1.20E-03	4.92E-05	2.71E+01	<0.30	--	--
1,2,4-Trichlorobenzene	3.00E+02	1.78E+03	1.42E+00	5.81E-02	8.40E+00	<0.25	--	--
2,3,4,6-Tetrachlorophenol	7.00E+00	9.80E+01	1.30E-03	5.32E-05	4.63E-01	<0.44	--	--
2,4-Dichlorophenol	4.60E+03	3.80E+02	2.75E-03	1.12E-04	1.79E+00	<0.18	--	--
2,4-Dimethylphenol	4.20E+03	2.22E+02	2.38E-03	9.73E-05	1.05E+00	<0.17	--	--
2,6-Dinitrotoluene	3.05E-05	3.52E+02		3.02E-05		<0.11	--	--
2-Methylnaphthalene	2.54E+01	8.50E+03	5.18E-01	2.12E-02	4.01E+01	<0.21	--	--

Soil/Water/Vapor Concentration Equilibria - Samples With Total VOCs or SVOCs Greater than 10 mg/kg
Modified Feenstra et al. (1991)/Mariner et al. (1997) Model
Casmalia Hazardous Waste Management Facility
Casmalia, California

SAMPLE INFORMATION - SAMPLE SSS00218

Location	RISBCD-07
Start Depth	10 (ft)
End Depth	12 (ft)
Sample Date	10/6/2004
Analytical Methods:	8260B/GCMS-SIM

ASSUMED SOIL PROPERTIES

Dry Bulk Density (ρb)	1.86 kg/L
Total Porosity (φt)	0.45
Water Filled Porosity (φw)	0.45
Air Filled Porosity (φa)	0
Fraction Organic Content (foc)	0.00472

Chemical	Input Parameters			Chemical Parameters		Results		
VOCs/SVOCs Detected in Selected Type 7 Co-Located Samples	Solubility (S) (mg/L)	Organic Carbon Partition Coefficient (Koc) (L/kg)	Henry's Law Constant (H) (atm-L/mol)	Dimensionless Henry's Law Constant (Hc) (-)	Distribution Coefficient (Kd) (L/kg)	Known Total Soil Concentration (Ct) (mg/kg)	Estimated Pore Water Concentration (Cw) (mg/L)	Fraction of Solubility
Detected SVOCs								
3-Methylcholanthrene	1.00E+01	1.00E+07		2.72E-01		<0.34	--	--
Acetophenone	5.50E+03	3.83E+01	9.09E-03	3.72E-04	1.81E-01	<0.32	--	--
Aramite	1.00E-01	1.55E+04	4.40E-05	1.80E-06	7.31E+01	<0.53	--	--
Benzoic acid	2.70E+03	5.66E+01	7.14E-05	2.92E-06	2.67E-01	<0.049	--	--
Benzyl alcohol	1.82E+02	6.92E+01		3.06E-05		<0.66	--	--
Bis(2-ethylhexyl) phthalate	2.85E-01	5.90E+03	3.61E-04	1.48E-05	2.78E+01	<0.091	--	--
Butyl benzyl phthalate	4.22E+01	5.57E+02	4.78E-03	1.95E-04	2.63E+00	<0.087	--	--
Dibenzofuran	4.30E+00	4.16E+03	1.40E-01	5.73E-03	1.96E+01	<0.11	--	--
Diethyl phthalate	1.08E+03	2.88E+02		1.85E-05		<0.23	--	--
Dimethyl phthalate	4.29E-06	4.00E+03		1.36E-05		<0.10	--	--
Di-n-butyl phthalate	1.30E+01	3.39E+04	9.39E-07	3.85E-08	1.60E+07	<0.11	--	--
Hexachlorobutadiene	3.20E+00	2.30E+03	2.50E+01	1.02E+00	1.09E+01	<0.27	--	--
Isophorone	1.20E+04	2.49E+01	5.88E-03	2.41E-04	1.18E-01	<0.18	--	--
m-Cresol	2.51E+04	1.66E+01	1.59E-03	6.49E-05	7.84E-02	<0.22	--	--
o-Cresol	3.08E+04	1.48E+01	1.20E-03	4.93E-05	7.00E-02	<0.23	--	--
p-Cresol	2.26E+04	1.76E+01	7.69E-04	3.15E-05	8.30E-02	<0.17	--	--
Pentachlorobenzene	2.87E-02	8.31E-01		2.92E-02		<0.33	--	--
Pentachlorophenol	1.40E+01	5.30E+04	2.75E-03	1.12E-04	2.50E+02	<0.11	--	--
Phenanthrene	1.00E+00	1.40E+04	1.59E-01	6.50E-03	6.61E+01	<0.10	--	--
Phenol	9.30E+04	1.42E+01	5.26E-04	2.15E-05	6.70E-02	<0.21	--	--
p-Nitrophenol	1.60E+04	2.13E+01	1.01E-03	4.13E-05	1.00E-01	<0.17	--	--

Sum of SVOC detections (mg/kg) <10

Total Fraction of Solubility 4.03E-02

Soil/Water/Vapor Concentration Equilibria - Samples With Total VOCs or SVOCs Greater than 10 mg/kg
Modified Feenstra et al. (1991)/Mariner et al. (1997) Model
Casmalia Hazardous Waste Management Facility
Casmalia, California

SAMPLE INFORMATION - SAMPLE SSS00237*

Location	RISBCD-08
Start Depth	12 (ft)
End Depth	14 (ft)
Sample Date	10/5/2004
Analytical Methods:	8260B/GCMS-SIM

ASSUMED SOIL PROPERTIES

Dry Bulk Density (ρb)	1.86 kg/L
Total Porosity (φt)	0.45
Water Filled Porosity (φw)	0.45
Air Filled Porosity (φa)	0
Fraction Organic Content (foc)	0.00472

Chemical	Input Parameters			Chemical Parameters		Results		
VOCs/SVOCs Detected in Selected Type 7 Co-Located Samples	Solubility (S) (mg/L)	Organic Carbon Partition Coefficient (Koc) (L/kg)	Henry's Law Constant (H) (atm-L/mol)	Dimensionless Henry's Law Constant (Hc) (-)	Distribution Coefficient (Kd) (L/kg)	Known Total Soil Concentration (Ct) (mg/kg)	Estimated Pore Water Concentration (Cw) (mg/L)	Fraction of Solubility
Detected VOCs								
1,1,1-Trichloroethane	1.31E+03	1.52E+02	1.67E+01	6.83E-01	7.17E-01	**7.5**	7.82E+00	5.97E-03
1,1,2,2-Tetrachloroethane	3.06E+03	1.18E+02	4.59E-01	1.88E-02	5.57E-01	<0.65	--	--
1,1,2-Trichloroethane	3.97E+03	5.60E+01	1.08E+00	4.42E-02	2.64E-01	<0.85	--	--
1,1-Dichloroethane	5.30E+03	3.00E+01	5.43E+00	2.22E-01	1.42E-01	**7.8**	2.03E+01	3.84E-03
1,1-Dichloroethylene	3.02E+03	6.50E+01	2.55E+01	1.04E+00	3.07E-01	<1.1	--	--
1,2,3-Trichlorobenzene	1.20E+01	7.40E+03	4.23E+00	1.73E-01	3.49E+01	<1.5	--	--
1,2,3-Trichloropropane	1.90E+03	6.87E+01	3.43E-01	1.40E-02	3.24E-01	<0.74	--	--
1,2,4-Trimethylbenzene	5.76E+01	1.48E+03	5.57E+00	2.28E-01	6.98E+00	**6.6**	9.14E-01	1.59E-02
1,2-Dibromo-3-chloropropane	6.01E-03	1.23E+03		6.01E-03		<1.4	--	--
1,2-Dibromoethane (EDB)	2.73E-02	3.91E+03		2.92E-02		<0.54	--	--
1,2-Dichloroethane	7.13E+03	1.40E+01	1.50E+00	6.13E-02	6.61E-02	<0.49	--	--
1,2-Dichloroethylene, total	4.90E+03	4.08E+01	7.01E-03	2.87E-04	1.92E-01	<0.76	--	--
1,2-Dichloropropane	2.97E+03	5.10E+01	2.62E+00	1.07E-01	2.41E-01	<0.61	--	--
1,3,5-Trimethylbenzene	4.82E+01	1.66E+03	8.77E+00	3.59E-01	7.83E+00	**2**	2.48E-01	5.14E-03
2-Butanol	1.50E+04	2.20E+01	1.02E-02	4.17E-04	1.04E-01	<150	--	--
2-Chlorotoluene	4.70E+02	1.60E+02	3.50E+00	1.43E-01	7.55E-01	<1.1	--	--
2-Hexanone	1.40E+04	2.29E+01	2.82E-02	1.15E-03	1.08E-01	<4.4	--	--
3,3,5-Trimethylcyclohexanone	1.20E+04	2.49E+01	5.88E-03	2.41E-04	1.18E-01	<5.5	--	--
Benzene	1.75E+03	8.30E+01	5.59E+00	2.29E-01	3.92E-01	**1**	1.58E+00	9.02E-04
Bromobenzene	4.72E+02	2.24E+02	3.70E+00	1.51E-01	1.06E+00	<0.83	--	--
Bromochloromethane	5.97E-02	1.67E+04		1.33E-01		<0.66	--	--
Bromoform	3.10E+03	8.71E+01		2.19E-02		<0.61	--	--
Carbon disulfide	1.19E+03	4.57E+01	3.03E+01	1.24E+00	2.16E-01	<3.6	--	--
Carbon tetrachloride	7.40E+02	4.39E+02	2.98E+01	1.22E+00	2.07E+00	<0.93	--	--
Chlorobenzene	4.45E+02	3.30E+02	3.90E+00	1.59E-01	1.56E+00	<0.85	--	--
Chloroethane	4.54E-01	6.71E+03		5.92E-01		<2.3	--	--
Chloroform	8.51E+03	4.40E+01	3.58E+00	1.46E-01	2.08E-01	**3.2**	7.12E+00	8.36E-04
Chlorotrifluoroethene	1.16E+04	1.90E+02	3.10E+02	1.27E+01	8.97E-01	<4.5	--	--
Dichlorodifluoromethane	1.40E+01	2.80E+02		1.64E+01		<0.98	--	--
Diisopropyl ether	1.20E+04	2.49E+01	2.57E-03	1.05E-04	1.18E-01	<0.41	--	--
Ethylbenzene	1.52E+02	1.10E+03	6.43E+00	2.63E-01	5.19E+00	**12**	2.21E+00	1.45E-02
Freon 112	1.20E+02			4.09E+00		<4.2	--	--
Freon 113	1.10E+03	1.60E+02	5.21E+02	2.13E+01	7.55E-01	**4.3**	4.31E+00	3.92E-03
Isopropylbenzene	6.13E+01	1.45E+03	1.15E+01	4.70E-01	6.82E+00	<1.3	--	--
m-Dichlorobenzene	1.34E+02	1.70E+03	3.25E+00	1.33E-01	8.02E+00	<1.3	--	--
Methyl acetate	1.00E+06	2.20E+00	2.06E-02	8.42E-04	1.04E-02	<1.6	--	--
Methyl chloride	8.20E+03	3.50E+01	2.40E+01	9.81E-01	1.65E-01	<0.52	--	--
Methyl tert-butyl ether (MTBE)	1.50E+05	6.00E+00	5.87E-01	2.40E-02	2.83E-02	<0.28	--	--
Methylcyclopentane	4.30E+01	5.52E+02	3.62E-01	1.48E-02	2.60E+00	<3.8	--	--
Methylene chloride	2.19E+04	8.80E+00	2.12E+00	8.67E-02	4.15E-02	**29**	1.02E+02	4.68E-03
n-Butylbenzene	1.38E+01	2.83E+03	1.31E+01	5.36E-01	1.34E+01	<1.9	--	--
n-Propylbenzene	1.38E+01	2.83E+03	1.31E+01	5.36E-01	1.34E+01	<1.6	--	--
o-Dichlorobenzene	1.36E+02	1.70E+03	1.98E+00	8.10E-02	8.02E+00	**5.2**	6.29E-01	4.63E-03
o-Xylene	1.75E+02	8.30E+02	5.10E+00	2.09E-01	3.92E+00	**9.9**	2.38E+00	1.36E-02
p-Dichlorobenzene	7.38E+01	6.17E+02	2.43E+00	9.94E-02	2.91E+00	<0.99	--	--
p-Isopropyltoluene	2.34E+01	2.57E+03	1.10E+01	4.50E-01	1.21E+01	<2.1	--	--
Propanal	3.06E+05	4.20E+00	7.69E-02	3.15E-03	1.98E-02	<13	--	--
sec-Butylbenzene	1.70E+01	2.15E+03	1.87E+01	7.65E-01	1.01E+01	<1.8	--	--
Styrene	3.10E+02	7.76E+02		1.13E-01		<1.3	--	--
Tetrachloroethylene	2.37E+02	3.64E+02	1.74E+01	7.12E-01	1.72E+00	**28**	1.43E+01	6.03E-02
Tetrahydrofuran	1.00E+06	9.50E-01	7.00E-02	2.86E-03	4.48E-03	<1.2	--	--
Toluene	5.35E+02	3.00E+02	6.37E+00	2.60E-01	1.42E+00	**6.1**	3.68E+00	6.88E-03
trans-1,2-Dichloroethylene	4.39E+03	5.90E+01	9.16E+00	3.75E-01	2.78E-01	<0.76	--	--
Trichloroethylene	1.38E+03	1.26E+02	9.37E+00	3.83E-01	5.95E-01	**4.4**	5.26E+00	3.80E-03
Trichlorofluoromethane	1.62E+03	1.59E+02	8.88E+01	3.63E+00	7.50E-01	<0.49	--	--
Vinyl chloride	2.76E+03	1.86E+01	2.70E+01	1.10E+00	8.78E-02	<1.2	--	--
Xylene (total)	1.61E+02	4.07E+02	7.34E+00	3.00E-01	1.92E+00	**48**	2.22E+01	1.38E-01

Sum of VOC detections (mg/kg) 1.75E+02

Detected SVOCs								
1,2,4,5-Tetrachlorobenzene	6.06E-01	5.75E+03	1.20E-03	4.92E-05	2.71E+01	<0.30	--	--
1,2,4-Trichlorobenzene	3.00E+02	1.78E+03	1.42E+00	5.81E-02	8.40E+00	**0.74**	8.56E-02	2.85E-04
2,3,4,6-Tetrachlorophenol	7.00E+00	9.80E+01	1.30E-03	5.32E-05	4.63E-01	<0.44	--	--
2,4-Dichlorophenol	4.60E+03	3.80E+02	2.75E-03	1.12E-04	1.79E+00	<0.18	--	--
2,4-Dimethylphenol	4.20E+03	2.22E+02	2.38E-03	9.73E-05	1.05E+00	<0.17	--	--
2,6-Dinitrotoluene	3.05E-05	3.52E+02		3.02E-05		<0.11	--	--
2-Methylnaphthalene	2.54E+01	8.50E+03	5.18E-01	2.12E-02	4.01E+01	**0.97**	2.40E-02	9.46E-04

Soil/Water/Vapor Concentration Equilibria - Samples With Total VOCs or SVOCs Greater than 10 mg/kg
Modified Feenstra et al. (1991)/Mariner et al. (1997) Model
Casmalia Hazardous Waste Management Facility
Casmalia, California

SAMPLE INFORMATION - SAMPLE SSS00237*

Location	RISBCD-08
Start Depth	12 (ft)
End Depth	14 (ft)
Sample Date	10/5/2004
Analytical Methods:	8260B/GCMS-SIM

ASSUMED SOIL PROPERTIES

Dry Bulk Density (ρb)	1.86 kg/L
Total Porosity (φt)	0.45
Water Filled Porosity (φw)	0.45
Air Filled Porosity (φa)	0
Fraction Organic Content (foc)	0.00472

Chemical	Input Parameters			Chemical Parameters		Results		
VOCs/SVOCs Detected in Selected Type 7 Co-Located Samples	Solubility (S) (mg/L)	Organic Carbon Partition Coefficient (Koc) (L/kg)	Henry's Law Constant (H) (atm-L/mol)	Dimensionless Henry's Law Constant (Hc) (-)	Distribution Coefficient (Kd) (L/kg)	Known Total Soil Concentration (Ct) (mg/kg)	Estimated Pore Water Concentration (Cw) (mg/L)	Fraction of Solubility
Detected SVOCs								
3-Methylcholanthrene	1.00E+01	1.00E+07		2.72E-01		<0.33	--	--
Acetophenone	5.50E+03	3.83E+01	9.09E-03	3.72E-04	1.81E-01	**0.7**	1.66E+00	3.01E-04
Aramite	1.00E-01	1.55E+04	4.40E-05	1.80E-06	7.31E+01	<0.52	--	--
Benzoic acid	2.70E+03	5.66E+01	7.14E-05	2.92E-06	2.67E-01	<0.049	--	--
Benzyl alcohol	1.82E+02	6.92E+01		3.06E-05		<0.65	--	--
Bis(2-ethylhexyl) phthalate	2.85E-01	5.90E+03	3.61E-04	1.48E-05	2.78E+01	**9.9**	3.52E-01	1.24E+00
Butyl benzyl phthalate	4.22E+01	5.57E+02	4.78E-03	1.95E-04	2.63E+00	**4.8**	1.67E+00	3.96E-02
Dibenzofuran	4.30E+00	4.16E+03	1.40E-01	5.73E-03	1.96E+01	<0.11	--	--
Diethyl phthalate	1.08E+03	2.88E+02		1.85E-05		<0.23	--	--
Dimethyl phthalate	4.29E-06	4.00E+03		1.36E-05		<0.10	--	--
Di-n-butyl phthalate	1.30E+01	3.39E+04	9.39E-07	3.85E-08	1.60E+07	**0.76**	4.75E-08	3.65E-09
Hexachlorobutadiene	3.20E+00	2.30E+03	2.50E+01	1.02E+00	1.09E+01	<0.27	--	--
Isophorone	1.20E+04	2.49E+01	5.88E-03	2.41E-04	1.18E-01	<0.18	--	--
m-Cresol	2.51E+04	1.66E+01	1.59E-03	6.49E-05	7.84E-02	<0.22	--	--
o-Cresol	3.08E+04	1.48E+01	1.20E-03	4.93E-05	7.00E-02	<0.22	--	--
p-Cresol	2.26E+04	1.76E+01	7.69E-04	3.15E-05	8.30E-02	<0.17	--	--
Pentachlorobenzene	2.87E-02	8.31E-01		2.92E-02		<0.33	--	--
Pentachlorophenol	1.40E+01	5.30E+04	2.75E-03	1.12E-04	2.50E+02	<0.11	--	--
Phenanthrene	1.00E+00	1.40E+04	1.59E-01	6.50E-03	6.61E+01	**0.2**	3.02E-03	3.02E-03
Phenol	9.30E+04	1.42E+01	5.26E-04	2.15E-05	6.70E-02	<0.21	--	--
p-Nitrophenol	1.60E+04	2.13E+01	1.01E-03	4.13E-05	1.00E-01	<0.17	--	--

Sum of SVOC detections (mg/kg) 2.09E+01

Total Fraction of Solubility 1.56E+00

Soil/Water/Vapor Concentration Equilibria - Samples With Total VOCs or SVOCs Greater than 10 mg/kg
Modified Feenstra et al. (1991)/Mariner et al. (1997) Model
Casmalia Hazardous Waste Management Facility
Casmalia, California

SAMPLE INFORMATION - SAMPLE SSS00240*

Location	RISBCD-13
Start Depth	8 (ft)
End Depth	10 (ft)
Sample Date	10/25/2004
Analytical Methods:	8260B/GCMS-SIM

ASSUMED SOIL PROPERTIES

Dry Bulk Density (ρb)	1.86 kg/L
Total Porosity (φt)	0.45
Water Filled Porosity (φw)	0.45
Air Filled Porosity (φa)	0
Fraction Organic Content (foc)	0.00472

Chemical	Input Parameters			Chemical Parameters		Results		
VOCs/SVOCs Detected in Selected Type 7 Co-Located Samples	Solubility (S) (mg/L)	Organic Carbon Partition Coefficient (Koc) (L/kg)	Henry's Law Constant (H) (atm-L/mol)	Dimensionless Henry's Law Constant (Hc) (-)	Distribution Coefficient (Kd) (L/kg)	Known Total Soil Concentration (Ct) (mg/kg)	Estimated Pore Water Concentration (Cw) (mg/L)	Fraction of Solubility
Detected VOCs								
1,1,1-Trichloroethane	1.31E+03	1.52E+02	1.67E+01	6.83E-01	7.17E-01	**6.6**	6.88E+00	5.25E-03
1,1,2,2-Tetrachloroethane	3.06E+03	1.18E+02	4.59E-01	1.88E-02	5.57E-01	<0.13	--	--
1,1,2-Trichloroethane	3.97E+03	5.60E+01	1.08E+00	4.42E-02	2.64E-01	<0.18	--	--
1,1-Dichloroethane	5.30E+03	3.00E+01	5.43E+00	2.22E-01	1.42E-01	**6.7**	1.75E+01	3.29E-03
1,1-Dichloroethylene	3.02E+03	6.50E+01	2.55E+01	1.04E+00	3.07E-01	**1.7**	3.10E+00	1.03E-03
1,2,3-Trichlorobenzene	1.20E+01	7.40E+03	4.23E+00	1.73E-01	3.49E+01	<0.31	--	--
1,2,3-Trichloropropane	1.90E+03	6.87E+01	3.43E-01	1.40E-02	3.24E-01	<0.15	--	--
1,2,4-Trimethylbenzene	5.76E+01	1.48E+03	5.57E+00	2.28E-01	6.98E+00	<0.31	--	--
1,2-Dibromo-3-chloropropane	6.01E-03	1.23E+03		6.01E-03		<0.29	--	--
1,2-Dibromoethane (EDB)	2.73E-02	3.91E+03		2.92E-02		<0.11	--	--
1,2-Dichloroethane	7.13E+03	1.40E+01	1.50E+00	6.13E-02	6.61E-02	**0.52**	1.69E+00	2.37E-04
1,2-Dichloroethylene, total	4.90E+03	4.08E+01	7.01E-03	2.87E-04	1.92E-01	**0.21**	4.83E-01	9.87E-05
1,2-Dichloropropane	2.97E+03	5.10E+01	2.62E+00	1.07E-01	2.41E-01	**0.2**	4.14E-01	1.40E-04
1,3,5-Trimethylbenzene	4.82E+01	1.66E+03	8.77E+00	3.59E-01	7.83E+00	<0.27	--	--
2-Butanol	1.50E+04	2.20E+01	1.02E-02	4.17E-04	1.04E-01	<31	--	--
2-Chlorotoluene	4.70E+02	1.60E+02	3.50E+00	1.43E-01	7.55E-01	<0.24	--	--
2-Hexanone	1.40E+04	2.29E+01	2.82E-02	1.15E-03	1.08E-01	<0.92	--	--
3,3,5-Trimethylcyclohexanone	1.20E+04	2.49E+01	5.88E-03	2.41E-04	1.18E-01	<1.1	--	--
Benzene	1.75E+03	8.30E+01	5.59E+00	2.29E-01	3.92E-01	**0.87**	1.37E+00	7.85E-04
Bromobenzene	4.72E+02	2.24E+02	3.70E+00	1.51E-01	1.06E+00	<0.17	--	--
Bromochloromethane	5.97E-02	1.67E+04		1.33E-01		<0.14	--	--
Bromoform	3.10E+03	8.71E+01		2.19E-02		<0.13	--	--
Carbon disulfide	1.19E+03	4.57E+01	3.03E+01	1.24E+00	2.16E-01	<0.74	--	--
Carbon tetrachloride	7.40E+02	4.39E+02	2.98E+01	1.22E+00	2.07E+00	<0.19	--	--
Chlorobenzene	4.45E+02	3.30E+02	3.90E+00	1.59E-01	1.56E+00	<0.18	--	--
Chloroethane	4.54E-01	6.71E+03		5.92E-01		<0.48	--	--
Chloroform	8.51E+03	4.40E+01	3.58E+00	1.46E-01	2.08E-01	**5.7**	1.27E+01	1.49E-03
Chlorotrifluoroethene	1.16E+04	1.90E+02	3.10E+02	1.27E+01	8.97E-01	<0.94	--	--
Dichlorodifluoromethane	1.40E+01	2.80E+02		1.64E+01		<0.20	--	--
Diisopropyl ether	1.20E+04	2.49E+01	2.57E-03	1.05E-04	1.18E-01	<0.085	--	--
Ethylbenzene	1.52E+02	1.10E+03	6.43E+00	2.63E-01	5.19E+00	**1.6**	2.94E-01	1.94E-03
Freon 112	1.20E+02			4.09E+00		<0.86	--	--
Freon 113	1.10E+03	1.60E+02	5.21E+02	2.13E+01	7.55E-01	**5.9**	5.92E+00	5.38E-03
Isopropylbenzene	6.13E+01	1.45E+03	1.15E+01	4.70E-01	6.82E+00	<0.26	--	--
m-Dichlorobenzene	1.34E+02	1.70E+03	3.25E+00	1.33E-01	8.02E+00	<0.26	--	--
Methyl acetate	1.00E+06	2.20E+00	2.06E-02	8.42E-04	1.04E-02	<0.33	--	--
Methyl chloride	8.20E+03	3.50E+01	2.40E+01	9.81E-01	1.65E-01	<0.11	--	--
Methyl tert-butyl ether (MTBE)	1.50E+05	6.00E+00	5.87E-01	2.40E-02	2.83E-02	<0.059	--	--
Methylcyclopentane	4.30E+01	5.52E+02	3.62E-01	1.48E-02	2.60E+00	<0.79	--	--
Methylene chloride	2.19E+04	8.80E+00	2.12E+00	8.67E-02	4.15E-02	**16**	5.64E+01	2.58E-03
n-Butylbenzene	1.38E+01	2.83E+03	1.31E+01	5.36E-01	1.34E+01	<0.39	--	--
n-Propylbenzene	1.38E+01	2.83E+03	1.31E+01	5.36E-01	1.34E+01	<0.33	--	--
o-Dichlorobenzene	1.36E+02	1.70E+03	1.98E+00	8.10E-02	8.02E+00	**0.4**	4.84E-02	3.56E-04
o-Xylene	1.75E+02	8.30E+02	5.10E+00	2.09E-01	3.92E+00	**2.2**	5.29E-01	3.02E-03
p-Dichlorobenzene	7.38E+01	6.17E+02	2.43E+00	9.94E-02	2.91E+00	<0.21	--	--
p-Isopropyltoluene	2.34E+01	2.57E+03	1.10E+01	4.50E-01	1.21E+01	<0.44	--	--
Propanal	3.06E+05	4.20E+00	7.69E-02	3.15E-03	1.98E-02	<2.6	--	--
sec-Butylbenzene	1.70E+01	2.15E+03	1.87E+01	7.65E-01	1.01E+01	<0.37	--	--
Styrene	3.10E+02	7.76E+02		1.13E-01		<0.26	--	--
Tetrachloroethylene	2.37E+02	3.64E+02	1.74E+01	7.12E-01	1.72E+00	**33**	1.68E+01	7.11E-02
Tetrahydrofuran	1.00E+06	9.50E-01	7.00E-02	2.86E-03	4.48E-03	<0.25	--	--
Toluene	5.35E+02	3.00E+02	6.37E+00	2.60E-01	1.42E+00	**2.2**	1.33E+00	2.48E-03
trans-1,2-Dichloroethylene	4.39E+03	5.90E+01	9.16E+00	3.75E-01	2.78E-01	<0.16	--	--
Trichloroethylene	1.38E+03	1.26E+02	9.37E+00	3.83E-01	5.95E-01	**6.3**	7.53E+00	5.44E-03
Trichlorofluoromethane	1.62E+03	1.59E+02	8.88E+01	3.63E+00	7.50E-01	<0.10	--	--
Vinyl chloride	2.76E+03	1.86E+01	2.70E+01	1.10E+00	8.78E-02	<0.25	--	--
Xylene (total)	1.61E+02	4.07E+02	7.34E+00	3.00E-01	1.92E+00	**8**	3.70E+00	2.30E-02

Sum of VOC detections (mg/kg) 9.81E+01

Detected SVOCs								
1,2,4,5-Tetrachlorobenzene	6.06E-01	5.75E+03	1.20E-03	4.92E-05	2.71E+01	<0.31	--	--
1,2,4-Trichlorobenzene	3.00E+02	1.78E+03	1.42E+00	5.81E-02	8.40E+00	<0.25	--	--
2,3,4,6-Tetrachlorophenol	7.00E+00	9.80E+01	1.30E-03	5.32E-05	4.63E-01	<0.45	--	--
2,4-Dichlorophenol	4.60E+03	3.80E+02	2.75E-03	1.12E-04	1.79E+00	<0.19	--	--
2,4-Dimethylphenol	4.20E+03	2.22E+02	2.38E-03	9.73E-05	1.05E+00	<0.17	--	--
2,6-Dinitrotoluene	3.05E-05	3.52E+02		3.02E-05		<0.11	--	--
2-Methylnaphthalene	2.54E+01	8.50E+03	5.18E-01	2.12E-02	4.01E+01	<0.22	--	--

Soil/Water/Vapor Concentration Equilibria - Samples With Total VOCs or SVOCs Greater than 10 mg/kg
Modified Feenstra et al. (1991)/Mariner et al. (1997) Model
Casmalia Hazardous Waste Management Facility
Casmalia, California

SAMPLE INFORMATION - SAMPLE SSS00240*

Location	RISBCD-13
Start Depth	8 (ft)
End Depth	10 (ft)
Sample Date	10/25/2004
Analytical Methods:	8260B/GCMS-SIM

ASSUMED SOIL PROPERTIES

Dry Bulk Density (ρb)	1.86 kg/L
Total Porosity (φt)	0.45
Water Filled Porosity (φw)	0.45
Air Filled Porosity (φa)	0
Fraction Organic Content (foc)	0.00472

Chemical	Input Parameters			Chemical Parameters		Results		
VOCs/SVOCs Detected in Selected Type 7 Co-Located Samples	Solubility (S) (mg/L)	Organic Carbon Partition Coefficient (Koc) (L/kg)	Henry's Law Constant (H) (atm-L/mol)	Dimensionless Henry's Law Constant (Hc) (-)	Distribution Coefficient (Kd) (L/kg)	Known Total Soil Concentration (Ct) (mg/kg)	Estimated Pore Water Concentration (Cw) (mg/L)	Fraction of Solubility
Detected SVOCs								
3-Methylcholanthrene	1.00E+01	1.00E+07		2.72E-01		<0.34	--	--
Acetophenone	5.50E+03	3.83E+01	9.09E-03	3.72E-04	1.81E-01	<0.33	--	--
Aramite	1.00E-01	1.55E+04	4.40E-05	1.80E-06	7.31E+01	<0.54	--	--
Benzoic acid	2.70E+03	5.66E+01	7.14E-05	2.92E-06	2.67E-01	<0.051	--	--
Benzyl alcohol	1.82E+02	6.92E+01		3.06E-05		<0.67	--	--
Bis(2-ethylhexyl) phthalate	2.85E-01	5.90E+03	3.61E-04	1.48E-05	2.78E+01	<0.093	--	--
Butyl benzyl phthalate	4.22E+01	5.57E+02	4.78E-03	1.95E-04	2.63E+00	<0.089	--	--
Dibenzofuran	4.30E+00	4.16E+03	1.40E-01	5.73E-03	1.96E+01	<0.11	--	--
Diethyl phthalate	1.08E+03	2.88E+02		1.85E-05		<0.23	--	--
Dimethyl phthalate	4.29E-06	4.00E+03		1.36E-05		<0.11	--	--
Di-n-butyl phthalate	1.30E+01	3.39E+04	9.39E-07	3.85E-08	1.60E+07	<0.11	--	--
Hexachlorobutadiene	3.20E+00	2.30E+03	2.50E+01	1.02E+00	1.09E+01	<0.28	--	--
Isophorone	1.20E+04	2.49E+01	5.88E-03	2.41E-04	1.18E-01	<0.19	--	--
m-Cresol	2.51E+04	1.66E+01	1.59E-03	6.49E-05	7.84E-02	<0.23	--	--
o-Cresol	3.08E+04	1.48E+01	1.20E-03	4.93E-05	7.00E-02	<0.23	--	--
p-Cresol	2.26E+04	1.76E+01	7.69E-04	3.15E-05	8.30E-02	<0.17	--	--
Pentachlorobenzene	2.87E-02	8.31E-01		2.92E-02		<0.34	--	--
Pentachlorophenol	1.40E+01	5.30E+04	2.75E-03	1.12E-04	2.50E+02	<0.11	--	--
Phenanthrene	1.00E+00	1.40E+04	1.59E-01	6.50E-03	6.61E+01	<0.10	--	--
Phenol	9.30E+04	1.42E+01	5.26E-04	2.15E-05	6.70E-02	<0.22	--	--
p-Nitrophenol	1.60E+04	2.13E+01	1.01E-03	4.13E-05	1.00E-01	<0.17	--	--

Sum of SVOC detections (mg/kg) <10

Total Fraction of Solubility 1.28E-01

Soil/Water/Vapor Concentration Equilibria - Samples With Total VOCs or SVOCs Greater than 10 mg/kg
Modified Feenstra et al. (1991)/Mariner et al. (1997) Model
Casmalia Hazardous Waste Management Facility
Casmalia, California

SAMPLE INFORMATION - SAMPLE SSS00241*

Location	RISBCD-13
Start Depth	20 (ft)
End Depth	22 (ft)
Sample Date	10/25/2004
Analytical Methods:	8260B/GCMS-SIM

ASSUMED SOIL PROPERTIES

Dry Bulk Density (ρb)	1.86 kg/L
Total Porosity (φt)	0.45
Water Filled Porosity (φw)	0.45
Air Filled Porosity (φa)	0
Fraction Organic Content (foc)	0.00472

Chemical	Input Parameters			Chemical Parameters		Results		
VOCs/SVOCs Detected in Selected Type 7 Co-Located Samples	Solubility (S) (mg/L)	Organic Carbon Partition Coefficient (Koc) (L/kg)	Henry's Law Constant (H) (atm-L/mol)	Dimensionless Henry's Law Constant (Hc) (-)	Distribution Coefficient (Kd) (L/kg)	Known Total Soil Concentration (Ct) (mg/kg)	Estimated Pore Water Concentration (Cw) (mg/L)	Fraction of Solubility
Detected VOCs								
1,1,1-Trichloroethane	1.31E+03	1.52E+02	1.67E+01	6.83E-01	7.17E-01	**13**	1.36E+01	1.03E-02
1,1,2,2-Tetrachloroethane	3.06E+03	1.18E+02	4.59E-01	1.88E-02	5.57E-01	<0.14	--	--
1,1,2-Trichloroethane	3.97E+03	5.60E+01	1.08E+00	4.42E-02	2.64E-01	<0.19	--	--
1,1-Dichloroethane	5.30E+03	3.00E+01	5.43E+00	2.22E-01	1.42E-01	**5.4**	1.41E+01	2.66E-03
1,1-Dichloroethylene	3.02E+03	6.50E+01	2.55E+01	1.04E+00	3.07E-01	**2.2**	4.01E+00	1.33E-03
1,2,3-Trichlorobenzene	1.20E+01	7.40E+03	4.23E+00	1.73E-01	3.49E+01	<0.34	--	--
1,2,3-Trichloropropane	1.90E+03	6.87E+01	3.43E-01	1.40E-02	3.24E-01	<0.17	--	--
1,2,4-Trimethylbenzene	5.76E+01	1.48E+03	5.57E+00	2.28E-01	6.98E+00	**2.3**	3.18E-01	5.53E-03
1,2-Dibromo-3-chloropropane	6.01E-03	1.23E+03		6.01E-03		<0.31	--	--
1,2-Dibromoethane (EDB)	2.73E-02	3.91E+03		2.92E-02		<0.12	--	--
1,2-Dichloroethane	7.13E+03	1.40E+01	1.50E+00	6.13E-02	6.61E-02	**0.57**	1.85E+00	2.60E-04
1,2-Dichloroethylene, total	4.90E+03	4.08E+01	7.01E-03	2.87E-04	1.92E-01	**0.59**	1.36E+00	2.77E-04
1,2-Dichloropropane	2.97E+03	5.10E+01	2.62E+00	1.07E-01	2.41E-01	<0.14	--	--
1,3,5-Trimethylbenzene	4.82E+01	1.66E+03	8.77E+00	3.59E-01	7.83E+00	**0.69**	8.55E-02	1.77E-03
2-Butanol	1.50E+04	2.20E+01	1.02E-02	4.17E-04	1.04E-01	<33	--	--
2-Chlorotoluene	4.70E+02	1.60E+02	3.50E+00	1.43E-01	7.55E-01	<0.26	--	--
2-Hexanone	1.40E+04	2.29E+01	2.82E-02	1.15E-03	1.08E-01	<1.0	--	--
3,3,5-Trimethylcyclohexanone	1.20E+04	2.49E+01	5.88E-03	2.41E-04	1.18E-01	<1.2	--	--
Benzene	1.75E+03	8.30E+01	5.59E+00	2.29E-01	3.92E-01	**2.5**	3.95E+00	2.25E-03
Bromobenzene	4.72E+02	2.24E+02	3.70E+00	1.51E-01	1.06E+00	<0.19	--	--
Bromochloromethane	5.97E-02	1.67E+04		1.33E-01		<0.15	--	--
Bromoform	3.10E+03	8.71E+01		2.19E-02		<0.14	--	--
Carbon disulfide	1.19E+03	4.57E+01	3.03E+01	1.24E+00	2.16E-01	<0.80	--	--
Carbon tetrachloride	7.40E+02	4.39E+02	2.98E+01	1.22E+00	2.07E+00	<0.21	--	--
Chlorobenzene	4.45E+02	3.30E+02	3.90E+00	1.59E-01	1.56E+00	<0.19	--	--
Chloroethane	4.54E-01	6.71E+03		5.92E-01		<0.52	--	--
Chloroform	8.51E+03	4.40E+01	3.58E+00	1.46E-01	2.08E-01	**5.9**	1.31E+01	1.54E-03
Chlorotrifluoroethene	1.16E+04	1.90E+02	3.10E+02	1.27E+01	8.97E-01	<1.0	--	--
Dichlorodifluoromethane	1.40E+01	2.80E+02		1.64E+01		<0.22	--	--
Diisopropyl ether	1.20E+04	2.49E+01	2.57E-03	1.05E-04	1.18E-01	<0.092	--	--
Ethylbenzene	1.52E+02	1.10E+03	6.43E+00	2.63E-01	5.19E+00	**9.4**	1.73E+00	1.14E-02
Freon 112	1.20E+02			4.09E+00		<0.93	--	--
Freon 113	1.10E+03	1.60E+02	5.21E+02	2.13E+01	7.55E-01	**2.9**	2.91E+00	2.64E-03
Isopropylbenzene	6.13E+01	1.45E+03	1.15E+01	4.70E-01	6.82E+00	**0.32**	4.53E-02	7.39E-04
m-Dichlorobenzene	1.34E+02	1.70E+03	3.25E+00	1.33E-01	8.02E+00	<0.28	--	--
Methyl acetate	1.00E+06	2.20E+00	2.06E-02	8.42E-04	1.04E-02	<0.35	--	--
Methyl chloride	8.20E+03	3.50E+01	2.40E+01	9.81E-01	1.65E-01	**0.34**	8.35E-01	1.02E-04
Methyl tert-butyl ether (MTBE)	1.50E+05	6.00E+00	5.87E-01	2.40E-02	2.83E-02	<0.064	--	--
Methylcyclopentane	4.30E+01	5.52E+02	3.62E-01	1.48E-02	2.60E+00	<0.85	--	--
Methylene chloride	2.19E+04	8.80E+00	2.12E+00	8.67E-02	4.15E-02	**25**	8.82E+01	4.03E-03
n-Butylbenzene	1.38E+01	2.83E+03	1.31E+01	5.36E-01	1.34E+01	<0.42	--	--
n-Propylbenzene	1.38E+01	2.83E+03	1.31E+01	5.36E-01	1.34E+01	**0.37**	2.72E-02	1.97E-03
o-Dichlorobenzene	1.36E+02	1.70E+03	1.98E+00	8.10E-02	8.02E+00	**2.6**	3.15E-01	2.32E-03
o-Xylene	1.75E+02	8.30E+02	5.10E+00	2.09E-01	3.92E+00	**6.4**	1.54E+00	8.79E-03
p-Dichlorobenzene	7.38E+01	6.17E+02	2.43E+00	9.94E-02	2.91E+00	**0.31**	9.83E-02	1.33E-03
p-Isopropyltoluene	2.34E+01	2.57E+03	1.10E+01	4.50E-01	1.21E+01	<0.47	--	--
Propanal	3.06E+05	4.20E+00	7.69E-02	3.15E-03	1.98E-02	<2.9	--	--
sec-Butylbenzene	1.70E+01	2.15E+03	1.87E+01	7.65E-01	1.01E+01	<0.40	--	--
Styrene	3.10E+02	7.76E+02		1.13E-01		<0.28	--	--
Tetrachloroethylene	2.37E+02	3.64E+02	1.74E+01	7.12E-01	1.72E+00	**21**	1.07E+01	4.52E-02
Tetrahydrofuran	1.00E+06	9.50E-01	7.00E-02	2.86E-03	4.48E-03	<0.27	--	--
Toluene	5.35E+02	3.00E+02	6.37E+00	2.60E-01	1.42E+00	**9.4**	5.67E+00	1.06E-02
trans-1,2-Dichloroethylene	4.39E+03	5.90E+01	9.16E+00	3.75E-01	2.78E-01	<0.17	--	--
Trichloroethylene	1.38E+03	1.26E+02	9.37E+00	3.83E-01	5.95E-01	**4.4**	5.26E+00	3.80E-03
Trichlorofluoromethane	1.62E+03	1.59E+02	8.88E+01	3.63E+00	7.50E-01	<0.11	--	--
Vinyl chloride	2.76E+03	1.86E+01	2.70E+01	1.10E+00	8.78E-02	<0.27	--	--
Xylene (total)	1.61E+02	4.07E+02	7.34E+00	3.00E-01	1.92E+00	**33**	1.53E+01	9.48E-02

Sum of VOC detections (mg/kg) 1.49E+02

Detected SVOCs								
1,2,4,5-Tetrachlorobenzene	6.06E-01	5.75E+03	1.20E-03	4.92E-05	2.71E+01	<0.30	--	--
1,2,4-Trichlorobenzene	3.00E+02	1.78E+03	1.42E+00	5.81E-02	8.40E+00	<0.24	--	--
2,3,4,6-Tetrachlorophenol	7.00E+00	9.80E+01	1.30E-03	5.32E-05	4.63E-01	<0.44	--	--
2,4-Dichlorophenol	4.60E+03	3.80E+02	2.75E-03	1.12E-04	1.79E+00	<0.18	--	--
2,4-Dimethylphenol	4.20E+03	2.22E+02	2.38E-03	9.73E-05	1.05E+00	<0.17	--	--
2,6-Dinitrotoluene	3.05E-05	3.52E+02		3.02E-05		<0.11	--	--
2-Methylnaphthalene	2.54E+01	8.50E+03	5.18E-01	2.12E-02	4.01E+01	<0.21	--	--

Soil/Water/Vapor Concentration Equilibria - Samples With Total VOCs or SVOCs Greater than 10 mg/kg
Modified Feenstra et al. (1991)/Mariner et al. (1997) Model
Casmalia Hazardous Waste Management Facility
Casmalia, California

SAMPLE INFORMATION - SAMPLE SSS00241*

Location	RISBCD-13
Start Depth	20 (ft)
End Depth	22 (ft)
Sample Date	10/25/2004
Analytical Methods:	8260B/GCMS-SIM

ASSUMED SOIL PROPERTIES

Dry Bulk Density (ρb)	1.86 kg/L
Total Porosity (φt)	0.45
Water Filled Porosity (φw)	0.45
Air Filled Porosity (φa)	0
Fraction Organic Content (foc)	0.00472

Chemical	Input Parameters			Chemical Parameters		Results		
VOCs/SVOCs Detected in Selected Type 7 Co-Located Samples	Solubility (S) (mg/L)	Organic Carbon Partition Coefficient (Koc) (L/kg)	Henry's Law Constant (H) (atm-L/mol)	Dimensionless Henry's Law Constant (Hc) (-)	Distribution Coefficient (Kd) (L/kg)	Known Total Soil Concentration (Ct) (mg/kg)	Estimated Pore Water Concentration (Cw) (mg/L)	Fraction of Solubility
Detected SVOCs								
3-Methylcholanthrene	1.00E+01	1.00E+07		2.72E-01		<0.33	--	--
Acetophenone	5.50E+03	3.83E+01	9.09E-03	3.72E-04	1.81E-01	<0.32	--	--
Aramite	1.00E-01	1.55E+04	4.40E-05	1.80E-06	7.31E+01	<0.52	--	--
Benzoic acid	2.70E+03	5.66E+01	7.14E-05	2.92E-06	2.67E-01	<0.049	--	--
Benzyl alcohol	1.82E+02	6.92E+01		3.06E-05		<0.65	--	--
Bis(2-ethylhexyl) phthalate	2.85E-01	5.90E+03	3.61E-04	1.48E-05	2.78E+01	<0.090	--	--
Butyl benzyl phthalate	4.22E+01	5.57E+02	4.78E-03	1.95E-04	2.63E+00	<0.086	--	--
Dibenzofuran	4.30E+00	4.16E+03	1.40E-01	5.73E-03	1.96E+01	<0.11	--	--
Diethyl phthalate	1.08E+03	2.88E+02		1.85E-05		<0.22	--	--
Dimethyl phthalate	4.29E-06	4.00E+03		1.36E-05		<0.10	--	--
Di-n-butyl phthalate	1.30E+01	3.39E+04	9.39E-07	3.85E-08	1.60E+07	<0.11	--	--
Hexachlorobutadiene	3.20E+00	2.30E+03	2.50E+01	1.02E+00	1.09E+01	<0.27	--	--
Isophorone	1.20E+04	2.49E+01	5.88E-03	2.41E-04	1.18E-01	<0.18	--	--
m-Cresol	2.51E+04	1.66E+01	1.59E-03	6.49E-05	7.84E-02	<0.22	--	--
o-Cresol	3.08E+04	1.48E+01	1.20E-03	4.93E-05	7.00E-02	<0.22	--	--
p-Cresol	2.26E+04	1.76E+01	7.69E-04	3.15E-05	8.30E-02	<0.17	--	--
Pentachlorobenzene	2.87E-02	8.31E-01		2.92E-02		<0.33	--	--
Pentachlorophenol	1.40E+01	5.30E+04	2.75E-03	1.12E-04	2.50E+02	<0.11	--	--
Phenanthrene	1.00E+00	1.40E+04	1.59E-01	6.50E-03	6.61E+01	<0.10	--	--
Phenol	9.30E+04	1.42E+01	5.26E-04	2.15E-05	6.70E-02	<0.21	--	--
p-Nitrophenol	1.60E+04	2.13E+01	1.01E-03	4.13E-05	1.00E-01	<0.17	--	--

Sum of SVOC detections (mg/kg) <10

Total Fraction of Solubility 2.14E-01

Soil/Water/Vapor Concentration Equilibria - Samples With Total VOCs or SVOCs Greater than 10 mg/kg
Modified Feenstra et al. (1991)/Mariner et al. (1997) Model
Casmalia Hazardous Waste Management Facility
Casmalia, California

SAMPLE INFORMATION - SAMPLE SSS00243

Location	RISSCD-01
Start Depth	0 (ft)
End Depth	0.5 (ft)
Sample Date	7/26/2004
Analytical Methods:	8260B/GCMS-SIM

ASSUMED SOIL PROPERTIES

Dry Bulk Density (ρb)	1.86 kg/L
Total Porosity (φt)	0.45
Water Filled Porosity (φw)	0.45
Air Filled Porosity (φa)	0
Fraction Organic Content (foc)	0.00472

Chemical	Input Parameters			Chemical Parameters		Results		
VOCs/SVOCs Detected in Selected Type 7 Co-Located Samples	Solubility (S) (mg/L)	Organic Carbon Partition Coefficient (Koc) (L/kg)	Henry's Law Constant (H) (atm-L/mol)	Dimensionless Henry's Law Constant (Hc) (-)	Distribution Coefficient (Kd) (L/kg)	Known Total Soil Concentration (Ct) (mg/kg)	Estimated Pore Water Concentration (Cw) (mg/L)	Fraction of Solubility
Detected VOCs								
1,1,1-Trichloroethane	1.31E+03	1.52E+02	1.67E+01	6.83E-01	7.17E-01	**0.0091**	9.49E-03	7.24E-06
1,1,2,2-Tetrachloroethane	3.06E+03	1.18E+02	4.59E-01	1.88E-02	5.57E-01	<0.00063	--	--
1,1,2-Trichloroethane	3.97E+03	5.60E+01	1.08E+00	4.42E-02	2.64E-01	<0.00083	--	--
1,1-Dichloroethane	5.30E+03	3.00E+01	5.43E+00	2.22E-01	1.42E-01	**0.0027**	7.04E-03	1.33E-06
1,1-Dichloroethylene	3.02E+03	6.50E+01	2.55E+01	1.04E+00	3.07E-01	**0.0022**	4.01E-03	1.33E-06
1,2,3-Trichlorobenzene	1.20E+01	7.40E+03	4.23E+00	1.73E-01	3.49E+01	**0.026**	7.39E-04	6.16E-05
1,2,3-Trichloropropane	1.90E+03	6.87E+01	3.43E-01	1.40E-02	3.24E-01	<0.00073	--	--
1,2,4-Trimethylbenzene	5.76E+01	1.48E+03	5.57E+00	2.28E-01	6.98E+00	<0.0015	--	--
1,2-Dibromo-3-chloropropane	6.01E-03	1.23E+03		6.01E-03		<0.0014	--	--
1,2-Dibromoethane (EDB)	2.73E-02	3.91E+03		2.92E-02		<0.00052	--	--
1,2-Dichloroethane	7.13E+03	1.40E+01	1.50E+00	6.13E-02	6.61E-02	<0.00048	--	--
1,2-Dichloroethylene, total	4.90E+03	4.08E+01	7.01E-03	2.87E-04	1.92E-01	<0.00074	--	--
1,2-Dichloropropane	2.97E+03	5.10E+01	2.62E+00	1.07E-01	2.41E-01	<0.00060	--	--
1,3,5-Trimethylbenzene	4.82E+01	1.66E+03	8.77E+00	3.59E-01	7.83E+00	<0.0013	--	--
2-Butanol	1.50E+04	2.20E+01	1.02E-02	4.17E-04	1.04E-01	**0.27**	7.80E-01	5.20E-05
2-Chlorotoluene	4.70E+02	1.60E+02	3.50E+00	1.43E-01	7.55E-01	<0.0011	--	--
2-Hexanone	1.40E+04	2.29E+01	2.82E-02	1.15E-03	1.08E-01	<0.0044	--	--
3,3,5-Trimethylcyclohexanone	1.20E+04	2.49E+01	5.88E-03	2.41E-04	1.18E-01	<0.0054	--	--
Benzene	1.75E+03	8.30E+01	5.59E+00	2.29E-01	3.92E-01	<0.00080	--	--
Bromobenzene	4.72E+02	2.24E+02	3.70E+00	1.51E-01	1.06E+00	<0.00082	--	--
Bromochloromethane	5.97E-02	1.67E+04		1.33E-01		<0.00065	--	--
Bromoform	3.10E+03	8.71E+01		2.19E-02		<0.00060	--	--
Carbon disulfide	1.19E+03	4.57E+01	3.03E+01	1.24E+00	2.16E-01	<0.0035	--	--
Carbon tetrachloride	7.40E+02	4.39E+02	2.98E+01	1.22E+00	2.07E+00	<0.00091	--	--
Chlorobenzene	4.45E+02	3.30E+02	3.90E+00	1.59E-01	1.56E+00	<0.00083	--	--
Chloroethane	4.54E-01	6.71E+03		5.92E-01		<0.0023	--	--
Chloroform	8.51E+03	4.40E+01	3.58E+00	1.46E-01	2.08E-01	**0.0028**	6.23E-03	7.31E-07
Chlorotrifluoroethene	1.16E+04	1.90E+02	3.10E+02	1.27E+01	8.97E-01	<0.0044	--	--
Dichlorodifluoromethane	1.40E+01	2.80E+02		1.64E+01		<0.00096	--	--
Diisopropyl ether	1.20E+04	2.49E+01	2.57E-03	1.05E-04	1.18E-01	<0.00040	--	--
Ethylbenzene	1.52E+02	1.10E+03	6.43E+00	2.63E-01	5.19E+00	<0.0013	--	--
Freon 112	1.20E+02			4.09E+00		<0.0041	--	--
Freon 113	1.10E+03	1.60E+02	5.21E+02	2.13E+01	7.55E-01	**0.014**	1.40E-02	1.28E-05
Isopropylbenzene	6.13E+01	1.45E+03	1.15E+01	4.70E-01	6.82E+00	<0.0012	--	--
m-Dichlorobenzene	1.34E+02	1.70E+03	3.25E+00	1.33E-01	8.02E+00	**0.0032**	3.87E-04	2.89E-06
Methyl acetate	1.00E+06	2.20E+00	2.06E-02	8.42E-04	1.04E-02	<0.0015	--	--
Methyl chloride	8.20E+03	3.50E+01	2.40E+01	9.81E-01	1.65E-01	<0.00051	--	--
Methyl tert-butyl ether (MTBE)	1.50E+05	6.00E+00	5.87E-01	2.40E-02	2.83E-02	<0.00028	--	--
Methylcyclopentane	4.30E+01	5.52E+02	3.62E-01	1.48E-02	2.60E+00	<0.0037	--	--
Methylene chloride	2.19E+04	8.80E+00	2.12E+00	8.67E-02	4.15E-02	<0.00031	--	--
n-Butylbenzene	1.38E+01	2.83E+03	1.31E+01	5.36E-01	1.34E+01	<0.0018	--	--
n-Propylbenzene	1.38E+01	2.83E+03	1.31E+01	5.36E-01	1.34E+01	<0.0015	--	--
o-Dichlorobenzene	1.36E+02	1.70E+03	1.98E+00	8.10E-02	8.02E+00	**0.0045**	5.44E-04	4.01E-06
o-Xylene	1.75E+02	8.30E+02	5.10E+00	2.09E-01	3.92E+00	<0.0013	--	--
p-Dichlorobenzene	7.38E+01	6.17E+02	2.43E+00	9.94E-02	2.91E+00	<0.00097	--	--
p-Isopropyltoluene	2.34E+01	2.57E+03	1.10E+01	4.50E-01	1.21E+01	<0.0021	--	--
Propanal	3.06E+05	4.20E+00	7.69E-02	3.15E-03	1.98E-02	**0.015**	5.73E-02	1.87E-07
sec-Butylbenzene	1.70E+01	2.15E+03	1.87E+01	7.65E-01	1.01E+01	<0.0017	--	--
Styrene	3.10E+02	7.76E+02		1.13E-01		<0.0012	--	--
Tetrachloroethylene	2.37E+02	3.64E+02	1.74E+01	7.12E-01	1.72E+00	**0.036**	1.84E-02	7.75E-05
Tetrahydrofuran	1.00E+06	9.50E-01	7.00E-02	2.86E-03	4.48E-03	<0.0012	--	--
Toluene	5.35E+02	3.00E+02	6.37E+00	2.60E-01	1.42E+00	<0.0011	--	--
trans-1,2-Dichloroethylene	4.39E+03	5.90E+01	9.16E+00	3.75E-01	2.78E-01	<0.00074	--	--
Trichloroethylene	1.38E+03	1.26E+02	9.37E+00	3.83E-01	5.95E-01	**0.0059**	7.05E-03	5.09E-06
Trichlorofluoromethane	1.62E+03	1.59E+02	8.88E+01	3.63E+00	7.50E-01	<0.00048	--	--
Trifluoromethylbenzene	4.51E+02			6.95E-01		<0.0040	--	--
Vinyl chloride	2.76E+03	1.86E+01	2.70E+01	1.10E+00	8.78E-02	<0.0012	--	--
Xylene (total)	1.61E+02	4.07E+02	7.34E+00	3.00E-01	1.92E+00	<0.0025	--	--

Sum of VOC detections (mg/kg) <10

Detected SVOCs								
1,2,4,5-Tetrachlorobenzene	6.06E-01	5.75E+03	1.20E-03	4.92E-05	2.71E+01	<0.24	--	--
1,2,4-Trichlorobenzene	3.00E+02	1.78E+03	1.42E+00	5.81E-02	8.40E+00	**1.1**	1.27E-01	4.24E-04
2,3,4,6-Tetrachlorophenol	7.00E+00	9.80E+01	1.30E-03	5.32E-05	4.63E-01	<0.35	--	--
2,4-Dichlorophenol	4.60E+03	3.80E+02	2.75E-03	1.12E-04	1.79E+00	<0.14	--	--
2,4-Dimethylphenol	4.20E+03	2.22E+02	2.38E-03	9.73E-05	1.05E+00	<0.13	--	--
2,6-Dinitrotoluene	3.05E-05	3.52E+02		3.02E-05		<0.086	--	--

Soil/Water/Vapor Concentration Equilibria - Samples With Total VOCs or SVOCs Greater than 10 mg/kg
Modified Feenstra et al. (1991)/Mariner et al. (1997) Model
Casmalia Hazardous Waste Management Facility
Casmalia, California

SAMPLE INFORMATION - SAMPLE SSS00243

Location	RISSCD-01
Start Depth	0 (ft)
End Depth	0.5 (ft)
Sample Date	7/26/2004
Analytical Methods:	8260B/GCMS-SIM

ASSUMED SOIL PROPERTIES

Dry Bulk Density (ρb)	1.86 kg/L
Total Porosity (φt)	0.45
Water Filled Porosity (φw)	0.45
Air Filled Porosity (φa)	0
Fraction Organic Content (foc)	0.00472

Chemical	Input Parameters			Chemical Parameters		Results		
VOCs/SVOCs Detected in Selected Type 7 Co-Located Samples	Solubility (S) (mg/L)	Organic Carbon Partition Coefficient (Koc) (L/kg)	Henry's Law Constant (H) (atm-L/mol)	Dimensionless Henry's Law Constant (Hc) (-)	Distribution Coefficient (Kd) (L/kg)	Known Total Soil Concentration (Ct) (mg/kg)	Estimated Pore Water Concentration (Cw) (mg/L)	Fraction of Solubility
Detected SVOCs								
2-Methylnaphthalene	2.54E+01	8.50E+03	5.18E-01	2.12E-02	4.01E+01	**0.19**	4.71E-03	1.85E-04
3-Methylcholanthrene	1.00E+01	1.00E+07		2.72E-01		**0.33**		
Acetophenone	5.50E+03	3.83E+01	9.09E-03	3.72E-04	1.81E-01	<0.26	--	--
Aramite	1.00E-01	1.55E+04	4.40E-05	1.80E-06	7.31E+01	<0.42	--	--
Benzoic acid	2.70E+03	5.66E+01	7.14E-05	2.92E-06	2.67E-01	**0.25**	4.91E-01	1.82E-04
Benzyl alcohol	1.82E+02	6.92E+01		3.06E-05		<0.53	--	--
Bis(2-ethylhexyl) phthalate	2.85E-01	5.90E+03	3.61E-04	1.48E-05	2.78E+01	**29**	1.03E+00	3.62E+00
Butyl benzyl phthalate	4.22E+01	5.57E+02	4.78E-03	1.95E-04	2.63E+00	<0.070	--	--
Dibenzofuran	4.30E+00	4.16E+03	1.40E-01	5.73E-03	1.96E+01	<0.088	--	--
Diethyl phthalate	1.08E+03	2.88E+02		1.85E-05		<0.18	--	--
Dimethyl phthalate	4.29E-06	4.00E+03		1.36E-05		<0.082	--	--
Di-n-butyl phthalate	1.30E+01	3.39E+04	9.39E-07	3.85E-08	1.60E+07	<0.087	--	--
Hexachlorobutadiene	3.20E+00	2.30E+03	2.50E+01	1.02E+00	1.09E+01	<0.22	--	--
Isophorone	1.20E+04	2.49E+01	5.88E-03	2.41E-04	1.18E-01	<0.14	--	--
m-Cresol	2.51E+04	1.66E+01	1.59E-03	6.49E-05	7.84E-02	<0.18	--	--
o-Cresol	3.08E+04	1.48E+01	1.20E-03	4.93E-05	7.00E-02	<0.18	--	--
p-Cresol	2.26E+04	1.76E+01	7.69E-04	3.15E-05	8.30E-02	<0.13	--	--
Pentachlorobenzene	2.87E-02	8.31E-01		2.92E-02		**0.43**		
Pentachlorophenol	1.40E+01	5.30E+04	2.75E-03	1.12E-04	2.50E+02	**0.92**	3.67E-03	2.62E-04
Phenanthrene	1.00E+00	1.40E+04	1.59E-01	6.50E-03	6.61E+01	**0.37**	5.58E-03	5.58E-03
Phenol	9.30E+04	1.42E+01	5.26E-04	2.15E-05	6.70E-02	**0.18**	5.83E-01	6.26E-06
p-Nitrophenol	1.60E+04	2.13E+01	1.01E-03	4.13E-05	1.00E-01	<0.13	--	--

Sum of SVOC detections (mg/kg) 3.28E+01

Total Fraction of Solubility 3.63E+00

Soil/Water/Vapor Concentration Equilibria - Samples With Total VOCs or SVOCs Greater than 10 mg/kg
Modified Feenstra et al. (1991)/Mariner et al. (1997) Model
Casmalia Hazardous Waste Management Facility
Casmalia, California

SAMPLE INFORMATION - SAMPLE SSS00391

Location	RISSRS-05
Start Depth	0.25 (ft)
End Depth	0.75 (ft)
Sample Date	7/27/2004
Analytical Methods:	8260B/GCMS-SIM

ASSUMED SOIL PROPERTIES

Dry Bulk Density (ρb)	1.86 kg/L
Total Porosity (φt)	0.45
Water Filled Porosity (φw)	0.45
Air Filled Porosity (φa)	0
Fraction Organic Content (foc)	0.00472

Chemical	Input Parameters			Chemical Parameters		Results		
VOCs/SVOCs Detected in Selected Type 7 Co-Located Samples	Solubility (S) (mg/L)	Organic Carbon Partition Coefficient (Koc) (L/kg)	Henry's Law Constant (H) (atm-L/mol)	Dimensionless Henry's Law Constant (Hc) (-)	Distribution Coefficient (Kd) (L/kg)	Known Total Soil Concentration (Ct) (mg/kg)	Estimated Pore Water Concentration (Cw) (mg/L)	Fraction of Solubility
Detected SVOCs								
1,2,4,5-Tetrachlorobenzene	6.06E-01	5.75E+03	1.20E-03	4.92E-05	2.71E+01	<4.3	--	--
1,2,4-Trichlorobenzene	3.00E+02	1.78E+03	1.42E+00	5.81E-02	8.40E+00	<3.5	--	--
2,3,4,6-Tetrachlorophenol	7.00E+00	9.80E+01	1.30E-03	5.32E-05	4.63E-01	<6.3	--	--
2,4-Dichlorophenol	4.60E+03	3.80E+02	2.75E-03	1.12E-04	1.79E+00	<2.6	--	--
2,4-Dimethylphenol	4.20E+03	2.22E+02	2.38E-03	9.73E-05	1.05E+00	<2.4	--	--
2,6-Dinitrotoluene	3.05E-05	3.52E+02		3.02E-05		<1.5	--	--
2-Methylnaphthalene	2.54E+01	8.50E+03	5.18E-01	2.12E-02	4.01E+01	**7.7**	1.91E-01	7.51E-03
3-Methylcholanthrene	1.00E+01	1.00E+07		2.72E-01		<4.8	--	--
Acetophenone	5.50E+03	3.83E+01	9.09E-03	3.72E-04	1.81E-01	<4.6	--	--
Aramite	1.00E-01	1.55E+04	4.40E-05	1.80E-06	7.31E+01	<7.5	--	--
Benzoic acid	2.70E+03	5.66E+01	7.14E-05	2.92E-06	2.67E-01	<0.70	--	--
Benzyl alcohol	1.82E+02	6.92E+01		3.06E-05		<9.3	--	--
Bis(2-ethylhexyl) phthalate	2.85E-01	5.90E+03	3.61E-04	1.48E-05	2.78E+01	**2**	7.12E-02	2.50E-01
Butyl benzyl phthalate	4.22E+01	5.57E+02	4.78E-03	1.95E-04	2.63E+00	<1.2	--	--
Dibenzofuran	4.30E+00	4.16E+03	1.40E-01	5.73E-03	1.96E+01	<1.6	--	--
Diethyl phthalate	1.08E+03	2.88E+02		1.85E-05		<3.2	--	--
Dimethyl phthalate	4.29E-06	4.00E+03		1.36E-05		<1.5	--	--
Di-n-butyl phthalate	1.30E+01	3.39E+04	9.39E-07	3.85E-08	1.60E+07	<1.5	--	--
Hexachlorobutadiene	3.20E+00	2.30E+03	2.50E+01	1.02E+00	1.09E+01	<3.9	--	--
Isophorone	1.20E+04	2.49E+01	5.88E-03	2.41E-04	1.18E-01	<2.6	--	--
m-Cresol	2.51E+04	1.66E+01	1.59E-03	6.49E-05	7.84E-02	<3.2	--	--
o-Cresol	3.08E+04	1.48E+01	1.20E-03	4.93E-05	7.00E-02	<3.2	--	--
p-Cresol	2.26E+04	1.76E+01	7.69E-04	3.15E-05	8.30E-02	<2.4	--	--
Pentachlorobenzene	2.87E-02	8.31E-01		2.92E-02		<4.7	--	--
Pentachlorophenol	1.40E+01	5.30E+04	2.75E-03	1.12E-04	2.50E+02	<1.6	--	--
Phenanthrene	1.00E+00	1.40E+04	1.59E-01	6.50E-03	6.61E+01	**7.2**	1.09E-01	1.09E-01
Phenol	9.30E+04	1.42E+01	5.26E-04	2.15E-05	6.70E-02	<3.0	--	--
p-Nitrophenol	1.60E+04	2.13E+01	1.01E-03	4.13E-05	1.00E-01	<2.4	--	--

Sum of SVOC detections (mg/kg) 1.69E+01

Total Fraction of Solubility 3.66E-01

Soil/Water/Vapor Concentration Equilibria - Samples With Total VOCs or SVOCs Greater than 10 mg/kg
Modified Feenstra et al. (1991)/Mariner et al. (1997) Model
Casmalia Hazardous Waste Management Facility
Casmalia, California

SAMPLE INFORMATION - SAMPLE SSS00479

Location	RISSON-31
Start Depth	0 (ft)
End Depth	0.5 (ft)
Sample Date	7/22/2004
Analytical Methods:	8260B/GCMS-SIM

ASSUMED SOIL PROPERTIES

Dry Bulk Density (ρb)	1.86 kg/L
Total Porosity (φt)	0.45
Water Filled Porosity (φw)	0.45
Air Filled Porosity (φa)	0
Fraction Organic Content (foc)	0.00472

Chemical	Input Parameters			Chemical Parameters		Results		
VOCs/SVOCs Detected in Selected Type 7 Co-Located Samples	Solubility (S) (mg/L)	Organic Carbon Partition Coefficient (Koc) (L/kg)	Henry's Law Constant (H) (atm-L/mol)	Dimensionless Henry's Law Constant (Hc) (-)	Distribution Coefficient (Kd) (L/kg)	Known Total Soil Concentration (Ct) (mg/kg)	Estimated Pore Water Concentration (Cw) (mg/L)	Fraction of Solubility
Detected VOCs								
1,1,1-Trichloroethane	1.31E+03	1.52E+02	1.67E+01	6.83E-01	7.17E-01	**0.004**	4.17E-03	3.18E-06
1,1,2,2-Tetrachloroethane	3.06E+03	1.18E+02	4.59E-01	1.88E-02	5.57E-01	<0.00073	--	--
1,1,2-Trichloroethane	3.97E+03	5.60E+01	1.08E+00	4.42E-02	2.64E-01	<0.00096	--	--
1,1-Dichloroethane	5.30E+03	3.00E+01	5.43E+00	2.22E-01	1.42E-01	<0.00062	--	--
1,1-Dichloroethylene	3.02E+03	6.50E+01	2.55E+01	1.04E+00	3.07E-01	<0.0012	--	--
1,2,3-Trichlorobenzene	1.20E+01	7.40E+03	4.23E+00	1.73E-01	3.49E+01	<0.0017	--	--
1,2,3-Trichloropropane	1.90E+03	6.87E+01	3.43E-01	1.40E-02	3.24E-01	<0.00083	--	--
1,2,4-Trimethylbenzene	5.76E+01	1.48E+03	5.57E+00	2.28E-01	6.98E+00	<0.0017	--	--
1,2-Dibromo-3-chloropropane	6.01E-03	1.23E+03		6.01E-03		<0.0016	--	--
1,2-Dibromoethane (EDB)	2.73E-02	3.91E+03		2.92E-02		<0.00060	--	--
1,2-Dichloroethane	7.13E+03	1.40E+01	1.50E+00	6.13E-02	6.61E-02	<0.00055	--	--
1,2-Dichloroethylene, total	4.90E+03	4.08E+01	7.01E-03	2.87E-04	1.92E-01	**0.0018**	4.14E-03	8.46E-07
1,2-Dichloropropane	2.97E+03	5.10E+01	2.62E+00	1.07E-01	2.41E-01	<0.00069	--	--
1,3,5-Trimethylbenzene	4.82E+01	1.66E+03	8.77E+00	3.59E-01	7.83E+00	<0.0014	--	--
2-Butanol	1.50E+04	2.20E+01	1.02E-02	4.17E-04	1.04E-01	<0.17	--	--
2-Chlorotoluene	4.70E+02	1.60E+02	3.50E+00	1.43E-01	7.55E-01	<0.0013	--	--
2-Hexanone	1.40E+04	2.29E+01	2.82E-02	1.15E-03	1.08E-01	<0.0050	--	--
3,3,5-Trimethylcyclohexanone	1.20E+04	2.49E+01	5.88E-03	2.41E-04	1.18E-01	<0.0062	--	--
Benzene	1.75E+03	8.30E+01	5.59E+00	2.29E-01	3.92E-01	<0.00092	--	--
Bromobenzene	4.72E+02	2.24E+02	3.70E+00	1.51E-01	1.06E+00	<0.00094	--	--
Bromochloromethane	5.97E-02	1.67E+04		1.33E-01		<0.00074	--	--
Bromoform	3.10E+03	8.71E+01		2.19E-02		<0.00069	--	--
Carbon disulfide	1.19E+03	4.57E+01	3.03E+01	1.24E+00	2.16E-01	**0.0059**	1.29E-02	1.08E-05
Carbon tetrachloride	7.40E+02	4.39E+02	2.98E+01	1.22E+00	2.07E+00	<0.0010	--	--
Chlorobenzene	4.45E+02	3.30E+02	3.90E+00	1.59E-01	1.56E+00	<0.00096	--	--
Chloroethane	4.54E-01	6.71E+03		5.92E-01		<0.0026	--	--
Chloroform	8.51E+03	4.40E+01	3.58E+00	1.46E-01	2.08E-01	<0.00083	--	--
Chlorotrifluoroethene	1.16E+04	1.90E+02	3.10E+02	1.27E+01	8.97E-01	<0.0051	--	--
Dichlorodifluoromethane	1.40E+01	2.80E+02		1.64E+01		<0.0011	--	--
Diisopropyl ether	1.20E+04	2.49E+01	2.57E-03	1.05E-04	1.18E-01	<0.00046	--	--
Ethylbenzene	1.52E+02	1.10E+03	6.43E+00	2.63E-01	5.19E+00	<0.0014	--	--
Freon 112	1.20E+02			4.09E+00		<0.0047	--	--
Freon 113	1.10E+03	1.60E+02	5.21E+02	2.13E+01	7.55E-01	**0.0085**	8.52E-03	7.75E-06
Isopropylbenzene	6.13E+01	1.45E+03	1.15E+01	4.70E-01	6.82E+00	<0.0014	--	--
m-Dichlorobenzene	1.34E+02	1.70E+03	3.25E+00	1.33E-01	8.02E+00	<0.0014	--	--
Methyl acetate	1.00E+06	2.20E+00	2.06E-02	8.42E-04	1.04E-02	<0.0018	--	--
Methyl chloride	8.20E+03	3.50E+01	2.40E+01	9.81E-01	1.65E-01	<0.00058	--	--
Methyl tert-butyl ether (MTBE)	1.50E+05	6.00E+00	5.87E-01	2.40E-02	2.83E-02	<0.00032	--	--
Methylcyclopentane	4.30E+01	5.52E+02	3.62E-01	1.48E-02	2.60E+00	<0.0043	--	--
Methylene chloride	2.19E+04	8.80E+00	2.12E+00	8.67E-02	4.15E-02	<0.00035	--	--
n-Butylbenzene	1.38E+01	2.83E+03	1.31E+01	5.36E-01	1.34E+01	<0.0021	--	--
n-Propylbenzene	1.38E+01	2.83E+03	1.31E+01	5.36E-01	1.34E+01	<0.0018	--	--
o-Dichlorobenzene	1.36E+02	1.70E+03	1.98E+00	8.10E-02	8.02E+00	<0.0013	--	--
o-Xylene	1.75E+02	8.30E+02	5.10E+00	2.09E-01	3.92E+00	<0.0015	--	--
p-Dichlorobenzene	7.38E+01	6.17E+02	2.43E+00	9.94E-02	2.91E+00	<0.0011	--	--
p-Isopropyltoluene	2.34E+01	2.57E+03	1.10E+01	4.50E-01	1.21E+01	<0.0024	--	--
Propanal	3.06E+05	4.20E+00	7.69E-02	3.15E-03	1.98E-02	<0.014	--	--
sec-Butylbenzene	1.70E+01	2.15E+03	1.87E+01	7.65E-01	1.01E+01	<0.0020	--	--
Styrene	3.10E+02	7.76E+02		1.13E-01		<0.0014	--	--
Tetrachloroethylene	2.37E+02	3.64E+02	1.74E+01	7.12E-01	1.72E+00	**0.0072**	3.67E-03	1.55E-05
Tetrahydrofuran	1.00E+06	9.50E-01	7.00E-02	2.86E-03	4.48E-03	<0.0013	--	--
Toluene	5.35E+02	3.00E+02	6.37E+00	2.60E-01	1.42E+00	<0.0013	--	--
trans-1,2-Dichloroethylene	4.39E+03	5.90E+01	9.16E+00	3.75E-01	2.78E-01	<0.00085	--	--
Trichloroethylene	1.38E+03	1.26E+02	9.37E+00	3.83E-01	5.95E-01	**0.01**	1.20E-02	8.63E-06
Trichlorofluoromethane	1.62E+03	1.59E+02	8.88E+01	3.63E+00	7.50E-01	<0.00055	--	--
Trifluoromethylbenzene	4.51E+02			6.95E-01		<0.0046	--	--
Vinyl chloride	2.76E+03	1.86E+01	2.70E+01	1.10E+00	8.78E-02	<0.0013	--	--
Xylene (total)	1.61E+02	4.07E+02	7.34E+00	3.00E-01	1.92E+00	<0.0028	--	--

Sum of VOC detections (mg/kg) <10

Detected SVOCs								
1,2,4,5-Tetrachlorobenzene	6.06E-01	5.75E+03	1.20E-03	4.92E-05	2.71E+01	<0.25	--	--
1,2,4-Trichlorobenzene	3.00E+02	1.78E+03	1.42E+00	5.81E-02	8.40E+00	<0.20	--	--
2,3,4,6-Tetrachlorophenol	7.00E+00	9.80E+01	1.30E-03	5.32E-05	4.63E-01	<0.36	--	--
2,4-Dichlorophenol	4.60E+03	3.80E+02	2.75E-03	1.12E-04	1.79E+00	<0.15	--	--
2,4-Dimethylphenol	4.20E+03	2.22E+02	2.38E-03	9.73E-05	1.05E+00	<0.14	--	--
2,6-Dinitrotoluene	3.05E-05	3.52E+02		3.02E-05		**0.2**		

Soil/Water/Vapor Concentration Equilibria - Samples With Total VOCs or SVOCs Greater than 10 mg/kg
Modified Feenstra et al. (1991)/Mariner et al. (1997) Model
Casmalia Hazardous Waste Management Facility
Casmalia, California

SAMPLE INFORMATION - SAMPLE SSS00479

Location	RISSON-31
Start Depth	0 (ft)
End Depth	0.5 (ft)
Sample Date	7/22/2004
Analytical Methods:	8260B/GCMS-SIM

ASSUMED SOIL PROPERTIES

Dry Bulk Density (ρb)	1.86 kg/L
Total Porosity (φt)	0.45
Water Filled Porosity (φw)	0.45
Air Filled Porosity (φa)	0
Fraction Organic Content (foc)	0.00472

Chemical	Input Parameters			Chemical Parameters		Results		
VOCs/SVOCs Detected in Selected Type 7 Co-Located Samples	Solubility (S) (mg/L)	Organic Carbon Partition Coefficient (Koc) (L/kg)	Henry's Law Constant (H) (atm-L/mol)	Dimensionless Henry's Law Constant (Hc) (-)	Distribution Coefficient (Kd) (L/kg)	Known Total Soil Concentration (Ct) (mg/kg)	Estimated Pore Water Concentration (Cw) (mg/L)	Fraction of Solubility
Detected SVOCs								
2-Methylnaphthalene	2.54E+01	8.50E+03	5.18E-01	2.12E-02	4.01E+01	<0.17	--	--
3-Methylcholanthrene	1.00E+01	1.00E+07		2.72E-01		<0.27	--	--
Acetophenone	5.50E+03	3.83E+01	9.09E-03	3.72E-04	1.81E-01	<0.26	--	--
Aramite	1.00E-01	1.55E+04	4.40E-05	1.80E-06	7.31E+01	<0.43	--	--
Benzoic acid	2.70E+03	5.66E+01	7.14E-05	2.92E-06	2.67E-01	<0.040	--	--
Benzyl alcohol	1.82E+02	6.92E+01		3.06E-05		<0.54	--	--
Bis(2-ethylhexyl) phthalate	2.85E-01	5.90E+03	3.61E-04	1.48E-05	2.78E+01	**0.089**	3.17E-03	1.11E-02
Butyl benzyl phthalate	4.22E+01	5.57E+02	4.78E-03	1.95E-04	2.63E+00	<0.071	--	--
Dibenzofuran	4.30E+00	4.16E+03	1.40E-01	5.73E-03	1.96E+01	<0.090	--	--
Diethyl phthalate	1.08E+03	2.88E+02		1.85E-05		**20**		
Dimethyl phthalate	4.29E-06	4.00E+03		1.36E-05		<0.084	--	--
Di-n-butyl phthalate	1.30E+01	3.39E+04	9.39E-07	3.85E-08	1.60E+07	<0.089	--	--
Hexachlorobutadiene	3.20E+00	2.30E+03	2.50E+01	1.02E+00	1.09E+01	<0.22	--	--
Isophorone	1.20E+04	2.49E+01	5.88E-03	2.41E-04	1.18E-01	<0.15	--	--
m-Cresol	2.51E+04	1.66E+01	1.59E-03	6.49E-05	7.84E-02	<0.18	--	--
o-Cresol	3.08E+04	1.48E+01	1.20E-03	4.93E-05	7.00E-02	<0.18	--	--
p-Cresol	2.26E+04	1.76E+01	7.69E-04	3.15E-05	8.30E-02	<0.14	--	--
Pentachlorobenzene	2.87E-02	8.31E-01		2.92E-02		<0.27	--	--
Pentachlorophenol	1.40E+01	5.30E+04	2.75E-03	1.12E-04	2.50E+02	<0.090	--	--
Phenanthrene	1.00E+00	1.40E+04	1.59E-01	6.50E-03	6.61E+01	<0.082	--	--
Phenol	9.30E+04	1.42E+01	5.26E-04	2.15E-05	6.70E-02	<0.17	--	--
p-Nitrophenol	1.60E+04	2.13E+01	1.01E-03	4.13E-05	1.00E-01	<0.14	--	--

Sum of SVOC detections (mg/kg) 2.03E+01

Total Fraction of Solubility 1.12E-02

Soil/Water/Vapor Concentration Equilibria - Samples With Total VOCs or SVOCs Greater than 10 mg/kg
Modified Feenstra et al. (1991)/Mariner et al. (1997) Model
Casmalia Hazardous Waste Management Facility
Casmalia, California

SAMPLE INFORMATION - SAMPLE SSS00604

Location	RISBON-37
Start Depth	5 (ft)
End Depth	7 (ft)
Sample Date	8/25/2004
Analytical Methods:	8260B/GCMS-SIM

ASSUMED SOIL PROPERTIES

Dry Bulk Density (ρb)	1.86 kg/L
Total Porosity (φt)	0.45
Water Filled Porosity (φw)	0.45
Air Filled Porosity (φa)	0
Fraction Organic Content (foc)	0.00472

Chemical	Input Parameters			Chemical Parameters		Results		
VOCs/SVOCs Detected in Selected Type 7 Co-Located Samples	Solubility (S) (mg/L)	Organic Carbon Partition Coefficient (Koc) (L/kg)	Henry's Law Constant (H) (atm-L/mol)	Dimensionless Henry's Law Constant (Hc) (-)	Distribution Coefficient (Kd) (L/kg)	Known Total Soil Concentration (Ct) (mg/kg)	Estimated Pore Water Concentration (Cw) (mg/L)	Fraction of Solubility
Detected VOCs								
1,1,1-Trichloroethane	1.31E+03	1.52E+02	1.67E+01	6.83E-01	7.17E-01	<0.00083	--	--
1,1,2,2-Tetrachloroethane	3.06E+03	1.18E+02	4.59E-01	1.88E-02	5.57E-01	<0.00067	--	--
1,1,2-Trichloroethane	3.97E+03	5.60E+01	1.08E+00	4.42E-02	2.64E-01	<0.00088	--	--
1,1-Dichloroethane	5.30E+03	3.00E+01	5.43E+00	2.22E-01	1.42E-01	**0.029**	7.56E-02	1.43E-05
1,1-Dichloroethylene	3.02E+03	6.50E+01	2.55E+01	1.04E+00	3.07E-01	**0.0048**	8.75E-03	2.90E-06
1,2,3-Trichlorobenzene	1.20E+01	7.40E+03	4.23E+00	1.73E-01	3.49E+01	<0.0016	--	--
1,2,3-Trichloropropane	1.90E+03	6.87E+01	3.43E-01	1.40E-02	3.24E-01	<0.00077	--	--
1,2,4-Trimethylbenzene	5.76E+01	1.48E+03	5.57E+00	2.28E-01	6.98E+00	**0.075**	1.04E-02	1.80E-04
1,2-Dibromo-3-chloropropane	6.01E-03	1.23E+03		6.01E-03		<0.0014	--	--
1,2-Dibromoethane (EDB)	2.73E-02	3.91E+03		2.92E-02		<0.00056	--	--
1,2-Dichloroethane	7.13E+03	1.40E+01	1.50E+00	6.13E-02	6.61E-02	<0.00051	--	--
1,2-Dichloroethylene, total	4.90E+03	4.08E+01	7.01E-03	2.87E-04	1.92E-01	<0.00079	--	--
1,2-Dichloropropane	2.97E+03	5.10E+01	2.62E+00	1.07E-01	2.41E-01	<0.00064	--	--
1,3,5-Trimethylbenzene	4.82E+01	1.66E+03	8.77E+00	3.59E-01	7.83E+00	**0.025**	3.10E-03	6.43E-05
2-Chlorotoluene	4.70E+02	1.60E+02	3.50E+00	1.43E-01	7.55E-01	<0.0012	--	--
2-Hexanone	1.40E+04	2.29E+01	2.82E-02	1.15E-03	1.08E-01	<0.0046	--	--
3,3,5-Trimethylcyclohexanone	1.20E+04	2.49E+01	5.88E-03	2.41E-04	1.18E-01	<0.0057	--	--
Benzene	1.75E+03	8.30E+01	5.59E+00	2.29E-01	3.92E-01	**0.026**	4.10E-02	2.34E-05
Bromobenzene	4.72E+02	2.24E+02	3.70E+00	1.51E-01	1.06E+00	<0.00087	--	--
Bromochloromethane	5.97E-02	1.67E+04		1.33E-01		<0.00069	--	--
Bromoform	3.10E+03	8.71E+01		2.19E-02		<0.00064	--	--
Carbon disulfide	1.19E+03	4.57E+01	3.03E+01	1.24E+00	2.16E-01	**0.088**	1.92E-01	1.62E-04
Carbon tetrachloride	7.40E+02	4.39E+02	2.98E+01	1.22E+00	2.07E+00	<0.00097	--	--
Chlorobenzene	4.45E+02	3.30E+02	3.90E+00	1.59E-01	1.56E+00	<0.00088	--	--
Chloroethane	4.54E-01	6.71E+03		5.92E-01		<0.0024	--	--
Chloroform	8.51E+03	4.40E+01	3.58E+00	1.46E-01	2.08E-01	<0.00077	--	--
Chlorotrifluoroethene	1.16E+04	1.90E+02	3.10E+02	1.27E+01	8.97E-01	<0.0047	--	--
Dichlorodifluoromethane	1.40E+01	2.80E+02		1.64E+01		<0.0010	--	--
Diisopropyl ether	1.20E+04	2.49E+01	2.57E-03	1.05E-04	1.18E-01	<0.00043	--	--
Ethylbenzene	1.52E+02	1.10E+03	6.43E+00	2.63E-01	5.19E+00	**0.069**	1.27E-02	8.35E-05
Freon 112	1.20E+02			4.09E+00		<0.0043	--	--
Freon 113	1.10E+03	1.60E+02	5.21E+02	2.13E+01	7.55E-01	<0.0013	--	--
Isopropylbenzene	6.13E+01	1.45E+03	1.15E+01	4.70E-01	6.82E+00	**0.025**	3.54E-03	5.77E-05
m-Dichlorobenzene	1.34E+02	1.70E+03	3.25E+00	1.33E-01	8.02E+00	<0.0013	--	--
Methyl acetate	1.00E+06	2.20E+00	2.06E-02	8.42E-04	1.04E-02	<0.0016	--	--
Methyl chloride	8.20E+03	3.50E+01	2.40E+01	9.81E-01	1.65E-01	<0.00054	--	--
Methyl tert-butyl ether (MTBE)	1.50E+05	6.00E+00	5.87E-01	2.40E-02	2.83E-02	<0.00029	--	--
Methylcyclopentane	4.30E+01	5.52E+02	3.62E-01	1.48E-02	2.60E+00	**0.14**	4.92E-02	1.14E-03
Methylene chloride	2.19E+04	8.80E+00	2.12E+00	8.67E-02	4.15E-02	<0.00033	--	--
n-Butylbenzene	1.38E+01	2.83E+03	1.31E+01	5.36E-01	1.34E+01	**0.023**	1.69E-03	1.23E-04
n-Propylbenzene	1.38E+01	2.83E+03	1.31E+01	5.36E-01	1.34E+01	**0.033**	2.43E-03	1.76E-04
o-Dichlorobenzene	1.36E+02	1.70E+03	1.98E+00	8.10E-02	8.02E+00	<0.0012	--	--
o-Xylene	1.75E+02	8.30E+02	5.10E+00	2.09E-01	3.92E+00	**0.012**	2.88E-03	1.65E-05
p-Dichlorobenzene	7.38E+01	6.17E+02	2.43E+00	9.94E-02	2.91E+00	<0.0010	--	--
p-Isopropyltoluene	2.34E+01	2.57E+03	1.10E+01	4.50E-01	1.21E+01	**0.01**	8.08E-04	3.45E-05
Propanal	3.06E+05	4.20E+00	7.69E-02	3.15E-03	1.98E-02	**0.018**	6.88E-02	2.25E-07
sec-Butylbenzene	1.70E+01	2.15E+03	1.87E+01	7.65E-01	1.01E+01	**0.023**	2.21E-03	1.30E-04
Styrene	3.10E+02	7.76E+02		1.13E-01		<0.0013	--	--
Tetrachloroethylene	2.37E+02	3.64E+02	1.74E+01	7.12E-01	1.72E+00	**560**	2.86E+02	1.21E+00
Tetrahydrofuran	1.00E+06	9.50E-01	7.00E-02	2.86E-03	4.48E-03	<0.0012	--	--
Toluene	5.35E+02	3.00E+02	6.37E+00	2.60E-01	1.42E+00	**0.013**	7.84E-03	1.47E-05
trans-1,2-Dichloroethylene	4.39E+03	5.90E+01	9.16E+00	3.75E-01	2.78E-01	**0.061**	1.17E-01	2.67E-05
Trichloroethylene	1.38E+03	1.26E+02	9.37E+00	3.83E-01	5.95E-01	**42**	5.02E+01	3.62E-02
Trichlorofluoromethane	1.62E+03	1.59E+02	8.88E+01	3.63E+00	7.50E-01	<0.00051	--	--
Trifluoromethylbenzene	4.51E+02			6.95E-01		<0.0043	--	--
Vinyl chloride	2.76E+03	1.86E+01	2.70E+01	1.10E+00	8.78E-02	**0.032**	9.70E-02	3.52E-05
Xylene (total)	1.61E+02	4.07E+02	7.34E+00	3.00E-01	1.92E+00	**0.042**	1.94E-02	1.21E-04

Sum of VOC detections (mg/kg) 6.03E+02

Detected SVOCs								
1,2,4,5-Tetrachlorobenzene	6.06E-01	5.75E+03	1.20E-03	4.92E-05	2.71E+01	<0.29	--	--
1,2,4-Trichlorobenzene	3.00E+02	1.78E+03	1.42E+00	5.81E-02	8.40E+00	<0.24	--	--
2,3,4,6-Tetrachlorophenol	7.00E+00	9.80E+01	1.30E-03	5.32E-05	4.63E-01	<0.43	--	--
2,4-Dichlorophenol	4.60E+03	3.80E+02	2.75E-03	1.12E-04	1.79E+00	<0.17	--	--
2,4-Dimethylphenol	4.20E+03	2.22E+02	2.38E-03	9.73E-05	1.05E+00	<0.16	--	--
2,6-Dinitrotoluene	3.05E-05	3.52E+02		3.02E-05		<0.10	--	--
2-Methylnaphthalene	2.54E+01	8.50E+03	5.18E-01	2.12E-02	4.01E+01	<0.20	--	--

Soil/Water/Vapor Concentration Equilibria - Samples With Total VOCs or SVOCs Greater than 10 mg/kg
Modified Feenstra et al. (1991)/Mariner et al. (1997) Model
Casmalia Hazardous Waste Management Facility
Casmalia, California

SAMPLE INFORMATION - SAMPLE SSS00604

Location	RISBON-37
Start Depth	5 (ft)
End Depth	7 (ft)
Sample Date	8/25/2004
Analytical Methods:	8260B/GCMS-SIM

ASSUMED SOIL PROPERTIES

Dry Bulk Density (ρb)	1.86 kg/L
Total Porosity (φt)	0.45
Water Filled Porosity (φw)	0.45
Air Filled Porosity (φa)	0
Fraction Organic Content (foc)	0.00472

Chemical	Input Parameters			Chemical Parameters		Results		
VOCs/SVOCs Detected in Selected Type 7 Co-Located Samples	Solubility (S) (mg/L)	Organic Carbon Partition Coefficient (Koc) (L/kg)	Henry's Law Constant (H) (atm-L/mol)	Dimensionless Henry's Law Constant (Hc) (-)	Distribution Coefficient (Kd) (L/kg)	Known Total Soil Concentration (Ct) (mg/kg)	Estimated Pore Water Concentration (Cw) (mg/L)	Fraction of Solubility
Detected SVOCs								
3-Methylcholanthrene	1.00E+01	1.00E+07		2.72E-01		<0.32	--	--
Acetophenone	5.50E+03	3.83E+01	9.09E-03	3.72E-04	1.81E-01	<0.31	--	--
Aramite	1.00E-01	1.55E+04	4.40E-05	1.80E-06	7.31E+01	<0.51	--	--
Benzoic acid	2.70E+03	5.66E+01	7.14E-05	2.92E-06	2.67E-01	<0.048	--	--
Benzyl alcohol	1.82E+02	6.92E+01		3.06E-05		<0.63	--	--
Bis(2-ethylhexyl) phthalate	2.85E-01	5.90E+03	3.61E-04	1.48E-05	2.78E+01	**0.33**	1.17E-02	4.12E-02
Butyl benzyl phthalate	4.22E+01	5.57E+02	4.78E-03	1.95E-04	2.63E+00	<0.083	--	--
Dibenzofuran	4.30E+00	4.16E+03	1.40E-01	5.73E-03	1.96E+01	<0.11	--	--
Diethyl phthalate	1.08E+03	2.88E+02		1.85E-05		**0.23**		
Dimethyl phthalate	4.29E-06	4.00E+03		1.36E-05		<0.099	--	--
Di-n-butyl phthalate	1.30E+01	3.39E+04	9.39E-07	3.85E-08	1.60E+07	<0.10	--	--
Hexachlorobutadiene	3.20E+00	2.30E+03	2.50E+01	1.02E+00	1.09E+01	<0.26	--	--
Isophorone	1.20E+04	2.49E+01	5.88E-03	2.41E-04	1.18E-01	<0.17	--	--
m-Cresol	2.51E+04	1.66E+01	1.59E-03	6.49E-05	7.84E-02	<0.22	--	--
o-Cresol	3.08E+04	1.48E+01	1.20E-03	4.93E-05	7.00E-02	<0.22	--	--
p-Cresol	2.26E+04	1.76E+01	7.69E-04	3.15E-05	8.30E-02	<0.16	--	--
Pentachlorobenzene	2.87E-02	8.31E-01		2.92E-02		<0.32	--	--
Pentachlorophenol	1.40E+01	5.30E+04	2.75E-03	1.12E-04	2.50E+02	<0.11	--	--
Phenanthrene	1.00E+00	1.40E+04	1.59E-01	6.50E-03	6.61E+01	**0.24**	3.62E-03	3.62E-03
Phenol	9.30E+04	1.42E+01	5.26E-04	2.15E-05	6.70E-02	<0.21	--	--
p-Nitrophenol	1.60E+04	2.13E+01	1.01E-03	4.13E-05	1.00E-01	<0.16	--	--

Sum of SVOC detections (mg/kg) <10

Total Fraction of Solubility 1.29E+00

Soil/Water/Vapor Concentration Equilibria - Samples With Total VOCs or SVOCs Greater than 10 mg/kg
Modified Feenstra et al. (1991)/Mariner et al. (1997) Model
Casmalia Hazardous Waste Management Facility
Casmalia, California

SAMPLE INFORMATION - SAMPLE SSS00605

Location	RISBON-37
Start Depth	10 (ft)
End Depth	13.5 (ft)
Sample Date	8/25/2004
Analytical Methods:	8260B/GCMS-SIM

ASSUMED SOIL PROPERTIES

Dry Bulk Density (ρb)	1.86 kg/L
Total Porosity (φt)	0.45
Water Filled Porosity (φw)	0.45
Air Filled Porosity (φa)	0
Fraction Organic Content (foc)	0.00472

Chemical	Input Parameters			Chemical Parameters		Results		
VOCs/SVOCs Detected in Selected Type 7 Co-Located Samples	Solubility (S) (mg/L)	Organic Carbon Partition Coefficient (Koc) (L/kg)	Henry's Law Constant (H) (atm-L/mol)	Dimensionless Henry's Law Constant (Hc) (-)	Distribution Coefficient (Kd) (L/kg)	Known Total Soil Concentration (Ct) (mg/kg)	Estimated Pore Water Concentration (Cw) (mg/L)	Fraction of Solubility
Detected VOCs								
1,1,1-Trichloroethane	1.31E+03	1.52E+02	1.67E+01	6.83E-01	7.17E-01	<0.00080	--	--
1,1,2,2-Tetrachloroethane	3.06E+03	1.18E+02	4.59E-01	1.88E-02	5.57E-01	<0.00065	--	--
1,1,2-Trichloroethane	3.97E+03	5.60E+01	1.08E+00	4.42E-02	2.64E-01	<0.00085	--	--
1,1-Dichloroethane	5.30E+03	3.00E+01	5.43E+00	2.22E-01	1.42E-01	**0.11**	2.87E-01	5.41E-05
1,1-Dichloroethylene	3.02E+03	6.50E+01	2.55E+01	1.04E+00	3.07E-01	**0.031**	5.65E-02	1.87E-05
1,2,3-Trichlorobenzene	1.20E+01	7.40E+03	4.23E+00	1.73E-01	3.49E+01	<0.0015	--	--
1,2,3-Trichloropropane	1.90E+03	6.87E+01	3.43E-01	1.40E-02	3.24E-01	<0.00074	--	--
1,2,4-Trimethylbenzene	5.76E+01	1.48E+03	5.57E+00	2.28E-01	6.98E+00	**0.2**	2.77E-02	4.81E-04
1,2-Dibromo-3-chloropropane	6.01E-03	1.23E+03		6.01E-03		<0.0014	--	--
1,2-Dibromoethane (EDB)	2.73E-02	3.91E+03		2.92E-02		<0.00054	--	--
1,2-Dichloroethane	7.13E+03	1.40E+01	1.50E+00	6.13E-02	6.61E-02	<0.00049	--	--
1,2-Dichloroethylene, total	4.90E+03	4.08E+01	7.01E-03	2.87E-04	1.92E-01	<0.00076	--	--
1,2-Dichloropropane	2.97E+03	5.10E+01	2.62E+00	1.07E-01	2.41E-01	<0.00061	--	--
1,3,5-Trimethylbenzene	4.82E+01	1.66E+03	8.77E+00	3.59E-01	7.83E+00	**0.064**	7.93E-03	1.64E-04
2-Chlorotoluene	4.70E+02	1.60E+02	3.50E+00	1.43E-01	7.55E-01	<0.0011	--	--
2-Hexanone	1.40E+04	2.29E+01	2.82E-02	1.15E-03	1.08E-01	<0.0044	--	--
3,3,5-Trimethylcyclohexanone	1.20E+04	2.49E+01	5.88E-03	2.41E-04	1.18E-01	<0.0055	--	--
Benzene	1.75E+03	8.30E+01	5.59E+00	2.29E-01	3.92E-01	**0.12**	1.89E-01	1.08E-04
Bromobenzene	4.72E+02	2.24E+02	3.70E+00	1.51E-01	1.06E+00	<0.00083	--	--
Bromochloromethane	5.97E-02	1.67E+04		1.33E-01		<0.00066	--	--
Bromoform	3.10E+03	8.71E+01		2.19E-02		<0.00061	--	--
Carbon disulfide	1.19E+03	4.57E+01	3.03E+01	1.24E+00	2.16E-01	**0.28**	6.12E-01	5.14E-04
Carbon tetrachloride	7.40E+02	4.39E+02	2.98E+01	1.22E+00	2.07E+00	<0.00093	--	--
Chlorobenzene	4.45E+02	3.30E+02	3.90E+00	1.59E-01	1.56E+00	<0.00085	--	--
Chloroethane	4.54E-01	6.71E+03		5.92E-01		<0.0023	--	--
Chloroform	8.51E+03	4.40E+01	3.58E+00	1.46E-01	2.08E-01	<0.00074	--	--
Chlorotrifluoroethene	1.16E+04	1.90E+02	3.10E+02	1.27E+01	8.97E-01	<0.0045	--	--
Dichlorodifluoromethane	1.40E+01	2.80E+02		1.64E+01		<0.00098	--	--
Diisopropyl ether	1.20E+04	2.49E+01	2.57E-03	1.05E-04	1.18E-01	<0.00041	--	--
Ethylbenzene	1.52E+02	1.10E+03	6.43E+00	2.63E-01	5.19E+00	**0.28**	5.15E-02	3.39E-04
Freon 112	1.20E+02			4.09E+00		<0.0042	--	--
Freon 113	1.10E+03	1.60E+02	5.21E+02	2.13E+01	7.55E-01	<0.0012	--	--
Isopropylbenzene	6.13E+01	1.45E+03	1.15E+01	4.70E-01	6.82E+00	**0.083**	1.18E-02	1.92E-04
m-Dichlorobenzene	1.34E+02	1.70E+03	3.25E+00	1.33E-01	8.02E+00	<0.0013	--	--
Methyl acetate	1.00E+06	2.20E+00	2.06E-02	8.42E-04	1.04E-02	<0.0016	--	--
Methyl chloride	8.20E+03	3.50E+01	2.40E+01	9.81E-01	1.65E-01	<0.00052	--	--
Methyl tert-butyl ether (MTBE)	1.50E+05	6.00E+00	5.87E-01	2.40E-02	2.83E-02	<0.00028	--	--
Methylcyclopentane	4.30E+01	5.52E+02	3.62E-01	1.48E-02	2.60E+00	<0.0038	--	--
Methylene chloride	2.19E+04	8.80E+00	2.12E+00	8.67E-02	4.15E-02	<0.00032	--	--
n-Butylbenzene	1.38E+01	2.83E+03	1.31E+01	5.36E-01	1.34E+01	**0.053**	3.90E-03	2.82E-04
n-Propylbenzene	1.38E+01	2.83E+03	1.31E+01	5.36E-01	1.34E+01	**0.097**	7.13E-03	5.17E-04
o-Dichlorobenzene	1.36E+02	1.70E+03	1.98E+00	8.10E-02	8.02E+00	**0.0027**	3.27E-04	2.40E-06
o-Xylene	1.75E+02	8.30E+02	5.10E+00	2.09E-01	3.92E+00	**0.043**	1.03E-02	5.91E-05
p-Dichlorobenzene	7.38E+01	6.17E+02	2.43E+00	9.94E-02	2.91E+00	<0.00099	--	--
p-Isopropyltoluene	2.34E+01	2.57E+03	1.10E+01	4.50E-01	1.21E+01	**0.021**	1.70E-03	7.25E-05
Propanal	3.06E+05	4.20E+00	7.69E-02	3.15E-03	1.98E-02	**0.025**	9.55E-02	3.12E-07
sec-Butylbenzene	1.70E+01	2.15E+03	1.87E+01	7.65E-01	1.01E+01	**0.056**	5.39E-03	3.17E-04
Styrene	3.10E+02	7.76E+02		1.13E-01		<0.0013	--	--
Tetrachloroethylene	2.37E+02	3.64E+02	1.74E+01	7.12E-01	1.72E+00	**1600**	8.16E+02	3.44E+00
Tetrahydrofuran	1.00E+06	9.50E-01	7.00E-02	2.86E-03	4.48E-03	<0.0012	--	--
Toluene	5.35E+02	3.00E+02	6.37E+00	2.60E-01	1.42E+00	**0.064**	3.86E-02	7.22E-05
trans-1,2-Dichloroethylene	4.39E+03	5.90E+01	9.16E+00	3.75E-01	2.78E-01	**0.3**	5.76E-01	1.31E-04
Trichloroethylene	1.38E+03	1.26E+02	9.37E+00	3.83E-01	5.95E-01	**120**	1.43E+02	1.04E-01
Trichlorofluoromethane	1.62E+03	1.59E+02	8.88E+01	3.63E+00	7.50E-01	<0.00049	--	--
Trifluoromethylbenzene	4.51E+02			6.95E-01		<0.0041	--	--
Vinyl chloride	2.76E+03	1.86E+01	2.70E+01	1.10E+00	8.78E-02	**0.092**	2.79E-01	1.01E-04
Xylene (total)	1.61E+02	4.07E+02	7.34E+00	3.00E-01	1.92E+00	**0.16**	7.40E-02	4.59E-04

Sum of VOC detections (mg/kg) 1.72E+03

Detected SVOCs								
1,2,4,5-Tetrachlorobenzene	6.06E-01	5.75E+03	1.20E-03	4.92E-05	2.71E+01	<0.28	--	--
1,2,4-Trichlorobenzene	3.00E+02	1.78E+03	1.42E+00	5.81E-02	8.40E+00	<0.23	--	--
2,3,4,6-Tetrachlorophenol	7.00E+00	9.80E+01	1.30E-03	5.32E-05	4.63E-01	<0.42	--	--
2,4-Dichlorophenol	4.60E+03	3.80E+02	2.75E-03	1.12E-04	1.79E+00	<0.17	--	--
2,4-Dimethylphenol	4.20E+03	2.22E+02	2.38E-03	9.73E-05	1.05E+00	<0.16	--	--
2,6-Dinitrotoluene	3.05E-05	3.52E+02		3.02E-05		<0.10	--	--
2-Methylnaphthalene	2.54E+01	8.50E+03	5.18E-01	2.12E-02	4.01E+01	<0.20	--	--

Soil/Water/Vapor Concentration Equilibria - Samples With Total VOCs or SVOCs Greater than 10 mg/kg
Modified Feenstra et al. (1991)/Mariner et al. (1997) Model
Casmalia Hazardous Waste Management Facility
Casmalia, California

SAMPLE INFORMATION - SAMPLE SSS00605

Location	RISBON-37
Start Depth	10 (ft)
End Depth	13.5 (ft)
Sample Date	8/25/2004
Analytical Methods:	8260B/GCMS-SIM

ASSUMED SOIL PROPERTIES

Dry Bulk Density (ρb)	1.86 kg/L
Total Porosity (φt)	0.45
Water Filled Porosity (φw)	0.45
Air Filled Porosity (φa)	0
Fraction Organic Content (foc)	0.00472

Chemical	Input Parameters			Chemical Parameters		Results		
VOCs/SVOCs Detected in Selected Type 7 Co-Located Samples	Solubility (S) (mg/L)	Organic Carbon Partition Coefficient (Koc) (L/kg)	Henry's Law Constant (H) (atm-L/mol)	Dimensionless Henry's Law Constant (Hc) (-)	Distribution Coefficient (Kd) (L/kg)	Known Total Soil Concentration (Ct) (mg/kg)	Estimated Pore Water Concentration (Cw) (mg/L)	Fraction of Solubility
Detected SVOCs								
3-Methylcholanthrene	1.00E+01	1.00E+07		2.72E-01		<0.32	--	--
Acetophenone	5.50E+03	3.83E+01	9.09E-03	3.72E-04	1.81E-01	<0.30	--	--
Aramite	1.00E-01	1.55E+04	4.40E-05	1.80E-06	7.31E+01	<0.50	--	--
Benzoic acid	2.70E+03	5.66E+01	7.14E-05	2.92E-06	2.67E-01	<0.047	--	--
Benzyl alcohol	1.82E+02	6.92E+01		3.06E-05		<0.62	--	--
Bis(2-ethylhexyl) phthalate	2.85E-01	5.90E+03	3.61E-04	1.48E-05	2.78E+01	**0.29**	1.03E-02	3.62E-02
Butyl benzyl phthalate	4.22E+01	5.57E+02	4.78E-03	1.95E-04	2.63E+00	<0.082	--	--
Dibenzofuran	4.30E+00	4.16E+03	1.40E-01	5.73E-03	1.96E+01	<0.10	--	--
Diethyl phthalate	1.08E+03	2.88E+02		1.85E-05		<0.21	--	--
Dimethyl phthalate	4.29E-06	4.00E+03		1.36E-05		<0.097	--	--
Di-n-butyl phthalate	1.30E+01	3.39E+04	9.39E-07	3.85E-08	1.60E+07	<0.10	--	--
Hexachlorobutadiene	3.20E+00	2.30E+03	2.50E+01	1.02E+00	1.09E+01	<0.26	--	--
Isophorone	1.20E+04	2.49E+01	5.88E-03	2.41E-04	1.18E-01	<0.17	--	--
m-Cresol	2.51E+04	1.66E+01	1.59E-03	6.49E-05	7.84E-02	<0.21	--	--
o-Cresol	3.08E+04	1.48E+01	1.20E-03	4.93E-05	7.00E-02	<0.21	--	--
p-Cresol	2.26E+04	1.76E+01	7.69E-04	3.15E-05	8.30E-02	<0.16	--	--
Pentachlorobenzene	2.87E-02	8.31E-01		2.92E-02		<0.31	--	--
Pentachlorophenol	1.40E+01	5.30E+04	2.75E-03	1.12E-04	2.50E+02	<0.10	--	--
Phenanthrene	1.00E+00	1.40E+04	1.59E-01	6.50E-03	6.61E+01	<0.095	--	--
Phenol	9.30E+04	1.42E+01	5.26E-04	2.15E-05	6.70E-02	<0.20	--	--
p-Nitrophenol	1.60E+04	2.13E+01	1.01E-03	4.13E-05	1.00E-01	<0.16	--	--

Sum of SVOC detections (mg/kg) <10

Total Fraction of Solubility 3.59E+00

Soil/Water/Vapor Concentration Equilibria - Samples With Total VOCs or SVOCs Greater than 10 mg/kg
Modified Feenstra et al. (1991)/Mariner et al. (1997) Model
Casmalia Hazardous Waste Management Facility
Casmalia, California

SAMPLE INFORMATION - SAMPLE SSS00606

Location	RISBON-37 (dup)
Start Depth	10 (ft)
End Depth	13.5 (ft)
Sample Date	8/25/2004
Analytical Methods:	8260B/GCMS-SIM

ASSUMED SOIL PROPERTIES

Dry Bulk Density (ρb)	1.86 kg/L
Total Porosity (φt)	0.45
Water Filled Porosity (φw)	0.45
Air Filled Porosity (φa)	0
Fraction Organic Content (foc)	0.00472

Chemical	Input Parameters			Chemical Parameters		Results		
VOCs/SVOCs Detected in Selected Type 7 Co-Located Samples	Solubility (S) (mg/L)	Organic Carbon Partition Coefficient (Koc) (L/kg)	Henry's Law Constant (H) (atm-L/mol)	Dimensionless Henry's Law Constant (Hc) (-)	Distribution Coefficient (Kd) (L/kg)	Known Total Soil Concentration (Ct) (mg/kg)	Estimated Pore Water Concentration (Cw) (mg/L)	Fraction of Solubility
Detected VOCs								
1,1,1-Trichloroethane	1.31E+03	1.52E+02	1.67E+01	6.83E-01	7.17E-01	<0.00095	--	--
1,1,2,2-Tetrachloroethane	3.06E+03	1.18E+02	4.59E-01	1.88E-02	5.57E-01	<0.00076	--	--
1,1,2-Trichloroethane	3.97E+03	5.60E+01	1.08E+00	4.42E-02	2.64E-01	<0.0010	--	--
1,1-Dichloroethane	5.30E+03	3.00E+01	5.43E+00	2.22E-01	1.42E-01	**0.027**	7.04E-02	1.33E-05
1,1-Dichloroethylene	3.02E+03	6.50E+01	2.55E+01	1.04E+00	3.07E-01	<0.0013	--	--
1,2,3-Trichlorobenzene	1.20E+01	7.40E+03	4.23E+00	1.73E-01	3.49E+01	<0.0018	--	--
1,2,3-Trichloropropane	1.90E+03	6.87E+01	3.43E-01	1.40E-02	3.24E-01	<0.00087	--	--
1,2,4-Trimethylbenzene	5.76E+01	1.48E+03	5.57E+00	2.28E-01	6.98E+00	**2**	2.77E-01	4.81E-03
1,2-Dibromo-3-chloropropane	6.01E-03	1.23E+03		6.01E-03		<0.0016	--	--
1,2-Dibromoethane (EDB)	2.73E-02	3.91E+03		2.92E-02		<0.00063	--	--
1,2-Dichloroethane	7.13E+03	1.40E+01	1.50E+00	6.13E-02	6.61E-02	<0.00058	--	--
1,2-Dichloroethylene, total	4.90E+03	4.08E+01	7.01E-03	2.87E-04	1.92E-01	**14**	3.22E+01	6.58E-03
1,2-Dichloropropane	2.97E+03	5.10E+01	2.62E+00	1.07E-01	2.41E-01	<0.00072	--	--
1,3,5-Trimethylbenzene	4.82E+01	1.66E+03	8.77E+00	3.59E-01	7.83E+00	**0.016**	1.98E-03	4.11E-05
2-Chlorotoluene	4.70E+02	1.60E+02	3.50E+00	1.43E-01	7.55E-01	<0.0014	--	--
2-Hexanone	1.40E+04	2.29E+01	2.82E-02	1.15E-03	1.08E-01	<0.0052	--	--
3,3,5-Trimethylcyclohexanone	1.20E+04	2.49E+01	5.88E-03	2.41E-04	1.18E-01	<0.0064	--	--
Benzene	1.75E+03	8.30E+01	5.59E+00	2.29E-01	3.92E-01	**0.083**	1.31E-01	7.48E-05
Bromobenzene	4.72E+02	2.24E+02	3.70E+00	1.51E-01	1.06E+00	<0.00098	--	--
Bromochloromethane	5.97E-02	1.67E+04		1.33E-01		<0.00078	--	--
Bromoform	3.10E+03	8.71E+01		2.19E-02		<0.00072	--	--
Carbon disulfide	1.19E+03	4.57E+01	3.03E+01	1.24E+00	2.16E-01	<0.0042	--	--
Carbon tetrachloride	7.40E+02	4.39E+02	2.98E+01	1.22E+00	2.07E+00	<0.0011	--	--
Chlorobenzene	4.45E+02	3.30E+02	3.90E+00	1.59E-01	1.56E+00	<0.0010	--	--
Chloroethane	4.54E-01	6.71E+03		5.92E-01		<0.0027	--	--
Chloroform	8.51E+03	4.40E+01	3.58E+00	1.46E-01	2.08E-01	<0.00087	--	--
Chlorotrifluoroethene	1.16E+04	1.90E+02	3.10E+02	1.27E+01	8.97E-01	<0.0054	--	--
Dichlorodifluoromethane	1.40E+01	2.80E+02		1.64E+01		<0.0012	--	--
Diisopropyl ether	1.20E+04	2.49E+01	2.57E-03	1.05E-04	1.18E-01	<0.00048	--	--
Ethylbenzene	1.52E+02	1.10E+03	6.43E+00	2.63E-01	5.19E+00	**0.69**	1.27E-01	8.35E-04
Freon 112	1.20E+02			4.09E+00		<0.0049	--	--
Freon 113	1.10E+03	1.60E+02	5.21E+02	2.13E+01	7.55E-01	<0.0014	--	--
Isopropylbenzene	6.13E+01	1.45E+03	1.15E+01	4.70E-01	6.82E+00	**0.097**	1.37E-02	2.24E-04
m-Dichlorobenzene	1.34E+02	1.70E+03	3.25E+00	1.33E-01	8.02E+00	<0.0015	--	--
Methyl acetate	1.00E+06	2.20E+00	2.06E-02	8.42E-04	1.04E-02	<0.0019	--	--
Methyl chloride	8.20E+03	3.50E+01	2.40E+01	9.81E-01	1.65E-01	<0.00061	--	--
Methyl tert-butyl ether (MTBE)	1.50E+05	6.00E+00	5.87E-01	2.40E-02	2.83E-02	<0.00033	--	--
Methylcyclopentane	4.30E+01	5.52E+02	3.62E-01	1.48E-02	2.60E+00	**0.3**	1.05E-01	2.45E-03
Methylene chloride	2.19E+04	8.80E+00	2.12E+00	8.67E-02	4.15E-02	<0.00037	--	--
n-Butylbenzene	1.38E+01	2.83E+03	1.31E+01	5.36E-01	1.34E+01	**0.038**	2.79E-03	2.02E-04
n-Propylbenzene	1.38E+01	2.83E+03	1.31E+01	5.36E-01	1.34E+01	**0.15**	1.10E-02	7.99E-04
o-Dichlorobenzene	1.36E+02	1.70E+03	1.98E+00	8.10E-02	8.02E+00	**0.0027**	3.27E-04	2.40E-06
o-Xylene	1.75E+02	8.30E+02	5.10E+00	2.09E-01	3.92E+00	**0.37**	8.90E-02	5.08E-04
p-Dichlorobenzene	7.38E+01	6.17E+02	2.43E+00	9.94E-02	2.91E+00	<0.0012	--	--
p-Isopropyltoluene	2.34E+01	2.57E+03	1.10E+01	4.50E-01	1.21E+01	**0.059**	4.77E-03	2.04E-04
Propanal	3.06E+05	4.20E+00	7.69E-02	3.15E-03	1.98E-02	**0.037**	1.41E-01	4.62E-07
sec-Butylbenzene	1.70E+01	2.15E+03	1.87E+01	7.65E-01	1.01E+01	**0.043**	4.14E-03	2.43E-04
Styrene	3.10E+02	7.76E+02		1.13E-01		<0.0015	--	--
Tetrachloroethylene	2.37E+02	3.64E+02	1.74E+01	7.12E-01	1.72E+00	**0.22**	1.12E-01	4.74E-04
Tetrahydrofuran	1.00E+06	9.50E-01	7.00E-02	2.86E-03	4.48E-03	**0.012**	4.87E-02	4.87E-08
Toluene	5.35E+02	3.00E+02	6.37E+00	2.60E-01	1.42E+00	**0.5**	3.02E-01	5.64E-04
trans-1,2-Dichloroethylene	4.39E+03	5.90E+01	9.16E+00	3.75E-01	2.78E-01	<0.00089	--	--
Trichloroethylene	1.38E+03	1.26E+02	9.37E+00	3.83E-01	5.95E-01	**0.44**	5.26E-01	3.80E-04
Trichlorofluoromethane	1.62E+03	1.59E+02	8.88E+01	3.63E+00	7.50E-01	<0.00058	--	--
Trifluoromethylbenzene	4.51E+02			6.95E-01		<0.0049	--	--
Vinyl chloride	2.76E+03	1.86E+01	2.70E+01	1.10E+00	8.78E-02	**0.24**	7.28E-01	2.64E-04
Xylene (total)	1.61E+02	4.07E+02	7.34E+00	3.00E-01	1.92E+00	**0.9**	4.16E-01	2.58E-03

Sum of VOC detections (mg/kg) 2.02E+01

Detected SVOCs								
1,2,4,5-Tetrachlorobenzene	6.06E-01	5.75E+03	1.20E-03	4.92E-05	2.71E+01	<0.29	--	--
1,2,4-Trichlorobenzene	3.00E+02	1.78E+03	1.42E+00	5.81E-02	8.40E+00	<0.24	--	--
2,3,4,6-Tetrachlorophenol	7.00E+00	9.80E+01	1.30E-03	5.32E-05	4.63E-01	<0.43	--	--
2,4-Dichlorophenol	4.60E+03	3.80E+02	2.75E-03	1.12E-04	1.79E+00	<0.17	--	--
2,4-Dimethylphenol	4.20E+03	2.22E+02	2.38E-03	9.73E-05	1.05E+00	<0.16	--	--
2,6-Dinitrotoluene	3.05E-05	3.52E+02		3.02E-05		<0.10	--	--
2-Methylnaphthalene	2.54E+01	8.50E+03	5.18E-01	2.12E-02	4.01E+01	<0.20	--	--

Soil/Water/Vapor Concentration Equilibria - Samples With Total VOCs or SVOCs Greater than 10 mg/kg
Modified Feenstra et al. (1991)/Mariner et al. (1997) Model
Casmalia Hazardous Waste Management Facility
Casmalia, California

SAMPLE INFORMATION - SAMPLE SSS00606

Location	RISBON-37 (dup)
Start Depth	10 (ft)
End Depth	13.5 (ft)
Sample Date	8/25/2004
Analytical Methods:	8260B/GCMS-SIM

ASSUMED SOIL PROPERTIES

Dry Bulk Density (ρb)	1.86 kg/L
Total Porosity (φt)	0.45
Water Filled Porosity (φw)	0.45
Air Filled Porosity (φa)	0
Fraction Organic Content (foc)	0.00472

Chemical	Input Parameters			Chemical Parameters		Results		
VOCs/SVOCs Detected in Selected Type 7 Co-Located Samples	Solubility (S) (mg/L)	Organic Carbon Partition Coefficient (Koc) (L/kg)	Henry's Law Constant (H) (atm-L/mol)	Dimensionless Henry's Law Constant (Hc) (-)	Distribution Coefficient (Kd) (L/kg)	Known Total Soil Concentration (Ct) (mg/kg)	Estimated Pore Water Concentration (Cw) (mg/L)	Fraction of Solubility
Detected SVOCs								
3-Methylcholanthrene	1.00E+01	1.00E+07		2.72E-01		<0.33	--	--
Acetophenone	5.50E+03	3.83E+01	9.09E-03	3.72E-04	1.81E-01	<0.31	--	--
Aramite	1.00E-01	1.55E+04	4.40E-05	1.80E-06	7.31E+01	<0.51	--	--
Benzoic acid	2.70E+03	5.66E+01	7.14E-05	2.92E-06	2.67E-01	<0.048	--	--
Benzyl alcohol	1.82E+02	6.92E+01		3.06E-05		<0.64	--	--
Bis(2-ethylhexyl) phthalate	2.85E-01	5.90E+03	3.61E-04	1.48E-05	2.78E+01	**0.3**	1.07E-02	3.75E-02
Butyl benzyl phthalate	4.22E+01	5.57E+02	4.78E-03	1.95E-04	2.63E+00	<0.084	--	--
Dibenzofuran	4.30E+00	4.16E+03	1.40E-01	5.73E-03	1.96E+01	<0.11	--	--
Diethyl phthalate	1.08E+03	2.88E+02		1.85E-05		<0.22	--	--
Dimethyl phthalate	4.29E-06	4.00E+03		1.36E-05		<0.10	--	--
Di-n-butyl phthalate	1.30E+01	3.39E+04	9.39E-07	3.85E-08	1.60E+07	<0.11	--	--
Hexachlorobutadiene	3.20E+00	2.30E+03	2.50E+01	1.02E+00	1.09E+01	<0.27	--	--
Isophorone	1.20E+04	2.49E+01	5.88E-03	2.41E-04	1.18E-01	<0.17	--	--
m-Cresol	2.51E+04	1.66E+01	1.59E-03	6.49E-05	7.84E-02	<0.22	--	--
o-Cresol	3.08E+04	1.48E+01	1.20E-03	4.93E-05	7.00E-02	<0.22	--	--
p-Cresol	2.26E+04	1.76E+01	7.69E-04	3.15E-05	8.30E-02	<0.16	--	--
Pentachlorobenzene	2.87E-02	8.31E-01		2.92E-02		<0.32	--	--
Pentachlorophenol	1.40E+01	5.30E+04	2.75E-03	1.12E-04	2.50E+02	<0.11	--	--
Phenanthrene	1.00E+00	1.40E+04	1.59E-01	6.50E-03	6.61E+01	<0.098	--	--
Phenol	9.30E+04	1.42E+01	5.26E-04	2.15E-05	6.70E-02	<0.21	--	--
p-Nitrophenol	1.60E+04	2.13E+01	1.01E-03	4.13E-05	1.00E-01	<0.16	--	--

Sum of SVOC detections (mg/kg) <10

Total Fraction of Solubility 5.87E-02

Soil/Water/Vapor Concentration Equilibria - Samples With Total VOCs or SVOCs Greater than 10 mg/kg
Modified Feenstra et al. (1991)/Mariner et al. (1997) Model
Casmalia Hazardous Waste Management Facility
Casmalia, California

SAMPLE INFORMATION - SAMPLE SSS00618

Location	RISBON-41
Start Depth	5 (ft)
End Depth	7 (ft)
Sample Date	8/25/2004
Analytical Methods:	8260B/GCMS-SIM

ASSUMED SOIL PROPERTIES

Dry Bulk Density (ρb)	1.86 kg/L
Total Porosity (φt)	0.45
Water Filled Porosity (φw)	0.45
Air Filled Porosity (φa)	0
Fraction Organic Content (foc)	0.00472

Chemical	Input Parameters			Chemical Parameters		Results		
VOCs/SVOCs Detected in Selected Type 7 Co-Located Samples	Solubility (S) (mg/L)	Organic Carbon Partition Coefficient (Koc) (L/kg)	Henry's Law Constant (H) (atm-L/mol)	Dimensionless Henry's Law Constant (Hc) (-)	Distribution Coefficient (Kd) (L/kg)	Known Total Soil Concentration (Ct) (mg/kg)	Estimated Pore Water Concentration (Cw) (mg/L)	Fraction of Solubility
Detected VOCs								
1,1,1-Trichloroethane	1.31E+03	1.52E+02	1.67E+01	6.83E-01	7.17E-01	<0.00094	--	--
1,1,2,2-Tetrachloroethane	3.06E+03	1.18E+02	4.59E-01	1.88E-02	5.57E-01	<0.00076	--	--
1,1,2-Trichloroethane	3.97E+03	5.60E+01	1.08E+00	4.42E-02	2.64E-01	<0.0010	--	--
1,1-Dichloroethane	5.30E+03	3.00E+01	5.43E+00	2.22E-01	1.42E-01	**0.042**	1.10E-01	2.07E-05
1,1-Dichloroethylene	3.02E+03	6.50E+01	2.55E+01	1.04E+00	3.07E-01	**0.01**	1.82E-02	6.04E-06
1,2,3-Trichlorobenzene	1.20E+01	7.40E+03	4.23E+00	1.73E-01	3.49E+01	<0.0018	--	--
1,2,3-Trichloropropane	1.90E+03	6.87E+01	3.43E-01	1.40E-02	3.24E-01	<0.00087	--	--
1,2,4-Trimethylbenzene	5.76E+01	1.48E+03	5.57E+00	2.28E-01	6.98E+00	<0.0017	--	--
1,2-Dibromo-3-chloropropane	6.01E-03	1.23E+03		6.01E-03		<0.0016	--	--
1,2-Dibromoethane (EDB)	2.73E-02	3.91E+03		2.92E-02		<0.00063	--	--
1,2-Dichloroethane	7.13E+03	1.40E+01	1.50E+00	6.13E-02	6.61E-02	<0.00057	--	--
1,2-Dichloroethylene, total	4.90E+03	4.08E+01	7.01E-03	2.87E-04	1.92E-01	**17**	3.91E+01	7.99E-03
1,2-Dichloropropane	2.97E+03	5.10E+01	2.62E+00	1.07E-01	2.41E-01	<0.00072	--	--
1,3,5-Trimethylbenzene	4.82E+01	1.66E+03	8.77E+00	3.59E-01	7.83E+00	<0.0015	--	--
2-Chlorotoluene	4.70E+02	1.60E+02	3.50E+00	1.43E-01	7.55E-01	<0.0013	--	--
2-Hexanone	1.40E+04	2.29E+01	2.82E-02	1.15E-03	1.08E-01	<0.0052	--	--
3,3,5-Trimethylcyclohexanone	1.20E+04	2.49E+01	5.88E-03	2.41E-04	1.18E-01	<0.0064	--	--
Benzene	1.75E+03	8.30E+01	5.59E+00	2.29E-01	3.92E-01	**0.014**	2.21E-02	1.26E-05
Bromobenzene	4.72E+02	2.24E+02	3.70E+00	1.51E-01	1.06E+00	<0.00098	--	--
Bromochloromethane	5.97E-02	1.67E+04		1.33E-01		<0.00078	--	--
Bromoform	3.10E+03	8.71E+01		2.19E-02		<0.00072	--	--
Carbon disulfide	1.19E+03	4.57E+01	3.03E+01	1.24E+00	2.16E-01	**0.056**	1.22E-01	1.03E-04
Carbon tetrachloride	7.40E+02	4.39E+02	2.98E+01	1.22E+00	2.07E+00	<0.0011	--	--
Chlorobenzene	4.45E+02	3.30E+02	3.90E+00	1.59E-01	1.56E+00	<0.0010	--	--
Chloroethane	4.54E-01	6.71E+03		5.92E-01		<0.0027	--	--
Chloroform	8.51E+03	4.40E+01	3.58E+00	1.46E-01	2.08E-01	<0.00087	--	--
Chlorotrifluoroethene	1.16E+04	1.90E+02	3.10E+02	1.27E+01	8.97E-01	<0.0053	--	--
Dichlorodifluoromethane	1.40E+01	2.80E+02		1.64E+01		<0.0011	--	--
Diisopropyl ether	1.20E+04	2.49E+01	2.57E-03	1.05E-04	1.18E-01	<0.00048	--	--
Ethylbenzene	1.52E+02	1.10E+03	6.43E+00	2.63E-01	5.19E+00	**0.0038**	6.99E-04	4.60E-06
Freon 112	1.20E+02			4.09E+00		<0.0049	--	--
Freon 113	1.10E+03	1.60E+02	5.21E+02	2.13E+01	7.55E-01	<0.0014	--	--
Isopropylbenzene	6.13E+01	1.45E+03	1.15E+01	4.70E-01	6.82E+00	<0.0015	--	--
m-Dichlorobenzene	1.34E+02	1.70E+03	3.25E+00	1.33E-01	8.02E+00	<0.0015	--	--
Methyl acetate	1.00E+06	2.20E+00	2.06E-02	8.42E-04	1.04E-02	<0.0018	--	--
Methyl chloride	8.20E+03	3.50E+01	2.40E+01	9.81E-01	1.65E-01	<0.00061	--	--
Methyl tert-butyl ether (MTBE)	1.50E+05	6.00E+00	5.87E-01	2.40E-02	2.83E-02	<0.00033	--	--
Methylcyclopentane	4.30E+01	5.52E+02	3.62E-01	1.48E-02	2.60E+00	**0.022**	7.73E-03	1.80E-04
Methylene chloride	2.19E+04	8.80E+00	2.12E+00	8.67E-02	4.15E-02	<0.00037	--	--
n-Butylbenzene	1.38E+01	2.83E+03	1.31E+01	5.36E-01	1.34E+01	<0.0022	--	--
n-Propylbenzene	1.38E+01	2.83E+03	1.31E+01	5.36E-01	1.34E+01	<0.0018	--	--
o-Dichlorobenzene	1.36E+02	1.70E+03	1.98E+00	8.10E-02	8.02E+00	<0.0013	--	--
o-Xylene	1.75E+02	8.30E+02	5.10E+00	2.09E-01	3.92E+00	<0.0015	--	--
p-Dichlorobenzene	7.38E+01	6.17E+02	2.43E+00	9.94E-02	2.91E+00	<0.0012	--	--
p-Isopropyltoluene	2.34E+01	2.57E+03	1.10E+01	4.50E-01	1.21E+01	<0.0025	--	--
Propanal	3.06E+05	4.20E+00	7.69E-02	3.15E-03	1.98E-02	<0.015	--	--
sec-Butylbenzene	1.70E+01	2.15E+03	1.87E+01	7.65E-01	1.01E+01	<0.0021	--	--
Styrene	3.10E+02	7.76E+02		1.13E-01		<0.0015	--	--
Tetrachloroethylene	2.37E+02	3.64E+02	1.74E+01	7.12E-01	1.72E+00	**3.7**	1.89E+00	7.97E-03
Tetrahydrofuran	1.00E+06	9.50E-01	7.00E-02	2.86E-03	4.48E-03	<0.0014	--	--
Toluene	5.35E+02	3.00E+02	6.37E+00	2.60E-01	1.42E+00	**0.0048**	2.90E-03	5.41E-06
trans-1,2-Dichloroethylene	4.39E+03	5.90E+01	9.16E+00	3.75E-01	2.78E-01	**0.43**	8.26E-01	1.88E-04
Trichloroethylene	1.38E+03	1.26E+02	9.37E+00	3.83E-01	5.95E-01	**22**	2.63E+01	1.90E-02
Trichlorofluoromethane	1.62E+03	1.59E+02	8.88E+01	3.63E+00	7.50E-01	<0.00057	--	--
Trifluoromethylbenzene	4.51E+02			6.95E-01		<0.0048	--	--
Vinyl chloride	2.76E+03	1.86E+01	2.70E+01	1.10E+00	8.78E-02	**0.68**	2.06E+00	7.47E-04
Xylene (total)	1.61E+02	4.07E+02	7.34E+00	3.00E-01	1.92E+00	<0.0030	--	--

Sum of VOC detections (mg/kg) 4.40E+01

Detected SVOCs								
1,2,4,5-Tetrachlorobenzene	6.06E-01	5.75E+03	1.20E-03	4.92E-05	2.71E+01	<0.28	--	--
1,2,4-Trichlorobenzene	3.00E+02	1.78E+03	1.42E+00	5.81E-02	8.40E+00	<0.23	--	--
2,3,4,6-Tetrachlorophenol	7.00E+00	9.80E+01	1.30E-03	5.32E-05	4.63E-01	<0.41	--	--
2,4-Dichlorophenol	4.60E+03	3.80E+02	2.75E-03	1.12E-04	1.79E+00	<0.17	--	--
2,4-Dimethylphenol	4.20E+03	2.22E+02	2.38E-03	9.73E-05	1.05E+00	<0.16	--	--
2,6-Dinitrotoluene	3.05E-05	3.52E+02		3.02E-05		<0.10	--	--
2-Methylnaphthalene	2.54E+01	8.50E+03	5.18E-01	2.12E-02	4.01E+01	<0.20	--	--

Soil/Water/Vapor Concentration Equilibria - Samples With Total VOCs or SVOCs Greater than 10 mg/kg
Modified Feenstra et al. (1991)/Mariner et al. (1997) Model
Casmalia Hazardous Waste Management Facility
Casmalia, California

SAMPLE INFORMATION - SAMPLE SSS00618

Location	RISBON-41
Start Depth	5 (ft)
End Depth	7 (ft)
Sample Date	8/25/2004
Analytical Methods:	8260B/GCMS-SIM

ASSUMED SOIL PROPERTIES

Dry Bulk Density (ρb)	1.86 kg/L
Total Porosity (φt)	0.45
Water Filled Porosity (φw)	0.45
Air Filled Porosity (φa)	0
Fraction Organic Content (foc)	0.00472

Chemical	Input Parameters			Chemical Parameters		Results		
VOCs/SVOCs Detected in Selected Type 7 Co-Located Samples	Solubility (S) (mg/L)	Organic Carbon Partition Coefficient (Koc) (L/kg)	Henry's Law Constant (H) (atm-L/mol)	Dimensionless Henry's Law Constant (Hc) (-)	Distribution Coefficient (Kd) (L/kg)	Known Total Soil Concentration (Ct) (mg/kg)	Estimated Pore Water Concentration (Cw) (mg/L)	Fraction of Solubility
Detected SVOCs								
3-Methylcholanthrene	1.00E+01	1.00E+07		2.72E-01		<0.31	--	--
Acetophenone	5.50E+03	3.83E+01	9.09E-03	3.72E-04	1.81E-01	<0.30	--	--
Aramite	1.00E-01	1.55E+04	4.40E-05	1.80E-06	7.31E+01	<0.49	--	--
Benzoic acid	2.70E+03	5.66E+01	7.14E-05	2.92E-06	2.67E-01	<0.046	--	--
Benzyl alcohol	1.82E+02	6.92E+01		3.06E-05		<0.61	--	--
Bis(2-ethylhexyl) phthalate	2.85E-01	5.90E+03	3.61E-04	1.48E-05	2.78E+01	**0.27**	9.61E-03	3.37E-02
Butyl benzyl phthalate	4.22E+01	5.57E+02	4.78E-03	1.95E-04	2.63E+00	<0.081	--	--
Dibenzofuran	4.30E+00	4.16E+03	1.40E-01	5.73E-03	1.96E+01	<0.10	--	--
Diethyl phthalate	1.08E+03	2.88E+02		1.85E-05		<0.21	--	--
Dimethyl phthalate	4.29E-06	4.00E+03		1.36E-05		<0.096	--	--
Di-n-butyl phthalate	1.30E+01	3.39E+04	9.39E-07	3.85E-08	1.60E+07	<0.10	--	--
Hexachlorobutadiene	3.20E+00	2.30E+03	2.50E+01	1.02E+00	1.09E+01	<0.26	--	--
Isophorone	1.20E+04	2.49E+01	5.88E-03	2.41E-04	1.18E-01	<0.17	--	--
m-Cresol	2.51E+04	1.66E+01	1.59E-03	6.49E-05	7.84E-02	<0.21	--	--
o-Cresol	3.08E+04	1.48E+01	1.20E-03	4.93E-05	7.00E-02	<0.21	--	--
p-Cresol	2.26E+04	1.76E+01	7.69E-04	3.15E-05	8.30E-02	<0.16	--	--
Pentachlorobenzene	2.87E-02	8.31E-01		2.92E-02		<0.31	--	--
Pentachlorophenol	1.40E+01	5.30E+04	2.75E-03	1.12E-04	2.50E+02	<0.10	--	--
Phenanthrene	1.00E+00	1.40E+04	1.59E-01	6.50E-03	6.61E+01	<0.094	--	--
Phenol	9.30E+04	1.42E+01	5.26E-04	2.15E-05	6.70E-02	<0.20	--	--
p-Nitrophenol	1.60E+04	2.13E+01	1.01E-03	4.13E-05	1.00E-01	<0.16	--	--

Sum of SVOC detections (mg/kg) <10

Total Fraction of Solubility 6.99E-02

Soil/Water/Vapor Concentration Equilibria - Samples With Total VOCs or SVOCs Greater than 10 mg/kg
Modified Feenstra et al. (1991)/Mariner et al. (1997) Model
Casmalia Hazardous Waste Management Facility
Casmalia, California

SAMPLE INFORMATION - SAMPLE SSS00708

Location	RISBON-63
Start Depth	5 (ft)
End Depth	7 (ft)
Sample Date	10/13/2004
Analytical Methods:	8260B/GCMS-SIM

ASSUMED SOIL PROPERTIES

Dry Bulk Density (ρb)	1.86 kg/L
Total Porosity (φt)	0.45
Water Filled Porosity (φw)	0.45
Air Filled Porosity (φa)	0
Fraction Organic Content (foc)	0.00472

Chemical	Input Parameters			Chemical Parameters		Results		
VOCs/SVOCs Detected in Selected Type 7 Co-Located Samples	Solubility (S) (mg/L)	Organic Carbon Partition Coefficient (Koc) (L/kg)	Henry's Law Constant (H) (atm-L/mol)	Dimensionless Henry's Law Constant (Hc) (-)	Distribution Coefficient (Kd) (L/kg)	Known Total Soil Concentration (Ct) (mg/kg)	Estimated Pore Water Concentration (Cw) (mg/L)	Fraction of Solubility
Detected VOCs								
1,1,1-Trichloroethane	1.31E+03	1.52E+02	1.67E+01	6.83E-01	7.17E-01	<0.18	--	--
1,1,2,2-Tetrachloroethane	3.06E+03	1.18E+02	4.59E-01	1.88E-02	5.57E-01	<0.14	--	--
1,1,2-Trichloroethane	3.97E+03	5.60E+01	1.08E+00	4.42E-02	2.64E-01	<0.19	--	--
1,1-Dichloroethane	5.30E+03	3.00E+01	5.43E+00	2.22E-01	1.42E-01	<0.12	--	--
1,1-Dichloroethylene	3.02E+03	6.50E+01	2.55E+01	1.04E+00	3.07E-01	<0.25	--	--
1,2,3-Trichlorobenzene	1.20E+01	7.40E+03	4.23E+00	1.73E-01	3.49E+01	<0.34	--	--
1,2,3-Trichloropropane	1.90E+03	6.87E+01	3.43E-01	1.40E-02	3.24E-01	<0.16	--	--
1,2,4-Trimethylbenzene	5.76E+01	1.48E+03	5.57E+00	2.28E-01	6.98E+00	<0.33	--	--
1,2-Dibromo-3-chloropropane	6.01E-03	1.23E+03		6.01E-03		<0.31	--	--
1,2-Dibromoethane (EDB)	2.73E-02	3.91E+03		2.92E-02		<0.12	--	--
1,2-Dichloroethane	7.13E+03	1.40E+01	1.50E+00	6.13E-02	6.61E-02	<0.11	--	--
1,2-Dichloroethylene, total	4.90E+03	4.08E+01	7.01E-03	2.87E-04	1.92E-01	**11**	2.53E+01	5.17E-03
1,2-Dichloropropane	2.97E+03	5.10E+01	2.62E+00	1.07E-01	2.41E-01	<0.14	--	--
1,3,5-Trimethylbenzene	4.82E+01	1.66E+03	8.77E+00	3.59E-01	7.83E+00	<0.28	--	--
2-Butanol	1.50E+04	2.20E+01	1.02E-02	4.17E-04	1.04E-01	<33	--	--
2-Chlorotoluene	4.70E+02	1.60E+02	3.50E+00	1.43E-01	7.55E-01	<0.26	--	--
2-Hexanone	1.40E+04	2.29E+01	2.82E-02	1.15E-03	1.08E-01	<0.99	--	--
3,3,5-Trimethylcyclohexanone	1.20E+04	2.49E+01	5.88E-03	2.41E-04	1.18E-01	<1.2	--	--
Benzene	1.75E+03	8.30E+01	5.59E+00	2.29E-01	3.92E-01	<0.18	--	--
Bromobenzene	4.72E+02	2.24E+02	3.70E+00	1.51E-01	1.06E+00	<0.19	--	--
Bromochloromethane	5.97E-02	1.67E+04		1.33E-01		<0.15	--	--
Bromoform	3.10E+03	8.71E+01		2.19E-02		<0.14	--	--
Carbon disulfide	1.19E+03	4.57E+01	3.03E+01	1.24E+00	2.16E-01	<0.79	--	--
Carbon tetrachloride	7.40E+02	4.39E+02	2.98E+01	1.22E+00	2.07E+00	<0.21	--	--
Chlorobenzene	4.45E+02	3.30E+02	3.90E+00	1.59E-01	1.56E+00	<0.19	--	--
Chloroethane	4.54E-01	6.71E+03		5.92E-01		<0.51	--	--
Chloroform	8.51E+03	4.40E+01	3.58E+00	1.46E-01	2.08E-01	<0.16	--	--
Chlorotrifluoroethene	1.16E+04	1.90E+02	3.10E+02	1.27E+01	8.97E-01	<1.0	--	--
Dichlorodifluoromethane	1.40E+01	2.80E+02		1.64E+01		<0.22	--	--
Diisopropyl ether	1.20E+04	2.49E+01	2.57E-03	1.05E-04	1.18E-01	<0.091	--	--
Ethylbenzene	1.52E+02	1.10E+03	6.43E+00	2.63E-01	5.19E+00	<0.28	--	--
Freon 112	1.20E+02			4.09E+00		<0.93	--	--
Freon 113	1.10E+03	1.60E+02	5.21E+02	2.13E+01	7.55E-01	<0.27	--	--
Isopropylbenzene	6.13E+01	1.45E+03	1.15E+01	4.70E-01	6.82E+00	<0.28	--	--
m-Dichlorobenzene	1.34E+02	1.70E+03	3.25E+00	1.33E-01	8.02E+00	<0.28	--	--
Methyl acetate	1.00E+06	2.20E+00	2.06E-02	8.42E-04	1.04E-02	<0.35	--	--
Methyl chloride	8.20E+03	3.50E+01	2.40E+01	9.81E-01	1.65E-01	<0.12	--	--
Methyl tert-butyl ether (MTBE)	1.50E+05	6.00E+00	5.87E-01	2.40E-02	2.83E-02	<0.063	--	--
Methylcyclopentane	4.30E+01	5.52E+02	3.62E-01	1.48E-02	2.60E+00	<0.84	--	--
Methylene chloride	2.19E+04	8.80E+00	2.12E+00	8.67E-02	4.15E-02	<0.070	--	--
n-Butylbenzene	1.38E+01	2.83E+03	1.31E+01	5.36E-01	1.34E+01	<0.42	--	--
n-Propylbenzene	1.38E+01	2.83E+03	1.31E+01	5.36E-01	1.34E+01	<0.35	--	--
o-Dichlorobenzene	1.36E+02	1.70E+03	1.98E+00	8.10E-02	8.02E+00	<0.25	--	--
o-Xylene	1.75E+02	8.30E+02	5.10E+00	2.09E-01	3.92E+00	<0.29	--	--
p-Dichlorobenzene	7.38E+01	6.17E+02	2.43E+00	9.94E-02	2.91E+00	<0.22	--	--
p-Isopropyltoluene	2.34E+01	2.57E+03	1.10E+01	4.50E-01	1.21E+01	<0.47	--	--
Propanal	3.06E+05	4.20E+00	7.69E-02	3.15E-03	1.98E-02	<2.8	--	--
sec-Butylbenzene	1.70E+01	2.15E+03	1.87E+01	7.65E-01	1.01E+01	<0.39	--	--
Styrene	3.10E+02	7.76E+02		1.13E-01		<0.28	--	--
Tetrachloroethylene	2.37E+02	3.64E+02	1.74E+01	7.12E-01	1.72E+00	<0.26	--	--
Tetrahydrofuran	1.00E+06	9.50E-01	7.00E-02	2.86E-03	4.48E-03	<0.26	--	--
Toluene	5.35E+02	3.00E+02	6.37E+00	2.60E-01	1.42E+00	<0.25	--	--
trans-1,2-Dichloroethylene	4.39E+03	5.90E+01	9.16E+00	3.75E-01	2.78E-01	**0.34**	6.53E-01	1.49E-04
Trichloroethylene	1.38E+03	1.26E+02	9.37E+00	3.83E-01	5.95E-01	**3.8**	4.54E+00	3.28E-03
Trichlorofluoromethane	1.62E+03	1.59E+02	8.88E+01	3.63E+00	7.50E-01	<0.11	--	--
Vinyl chloride	2.76E+03	1.86E+01	2.70E+01	1.10E+00	8.78E-02	**0.28**	8.49E-01	3.08E-04
Xylene (total)	1.61E+02	4.07E+02	7.34E+00	3.00E-01	1.92E+00	<0.56	--	--

Sum of VOC detections (mg/kg) 1.54E+01

Detected SVOCs								
1,2,4,5-Tetrachlorobenzene	6.06E-01	5.75E+03	1.20E-03	4.92E-05	2.71E+01	<0.28	--	--
1,2,4-Trichlorobenzene	3.00E+02	1.78E+03	1.42E+00	5.81E-02	8.40E+00	<0.23	--	--
2,3,4,6-Tetrachlorophenol	7.00E+00	9.80E+01	1.30E-03	5.32E-05	4.63E-01	<0.41	--	--
2,4-Dichlorophenol	4.60E+03	3.80E+02	2.75E-03	1.12E-04	1.79E+00	<0.17	--	--
2,4-Dimethylphenol	4.20E+03	2.22E+02	2.38E-03	9.73E-05	1.05E+00	<0.15	--	--
2,6-Dinitrotoluene	3.05E-05	3.52E+02		3.02E-05		<0.099	--	--
2-Methylnaphthalene	2.54E+01	8.50E+03	5.18E-01	2.12E-02	4.01E+01	<0.19	--	--

Soil/Water/Vapor Concentration Equilibria - Samples With Total VOCs or SVOCs Greater than 10 mg/kg
Modified Feenstra et al. (1991)/Mariner et al. (1997) Model
Casmalia Hazardous Waste Management Facility
Casmalia, California

SAMPLE INFORMATION - SAMPLE SSS00708

Location	RISBON-63
Start Depth	5 (ft)
End Depth	7 (ft)
Sample Date	10/13/2004
Analytical Methods:	8260B/GCMS-SIM

ASSUMED SOIL PROPERTIES

Dry Bulk Density (ρb)	1.86 kg/L
Total Porosity (φt)	0.45
Water Filled Porosity (φw)	0.45
Air Filled Porosity (φa)	0
Fraction Organic Content (foc)	0.00472

Chemical	Input Parameters			Chemical Parameters		Results		
VOCs/SVOCs Detected in Selected Type 7 Co-Located Samples	Solubility (S) (mg/L)	Organic Carbon Partition Coefficient (Koc) (L/kg)	Henry's Law Constant (H) (atm-L/mol)	Dimensionless Henry's Law Constant (Hc) (-)	Distribution Coefficient (Kd) (L/kg)	Known Total Soil Concentration (Ct) (mg/kg)	Estimated Pore Water Concentration (Cw) (mg/L)	Fraction of Solubility
Detected SVOCs								
3-Methylcholanthrene	1.00E+01	1.00E+07		2.72E-01		<0.31	--	--
Acetophenone	5.50E+03	3.83E+01	9.09E-03	3.72E-04	1.81E-01	<0.30	--	--
Aramite	1.00E-01	1.55E+04	4.40E-05	1.80E-06	7.31E+01	<0.49	--	--
Benzoic acid	2.70E+03	5.66E+01	7.14E-05	2.92E-06	2.67E-01	<0.046	--	--
Benzyl alcohol	1.82E+02	6.92E+01		3.06E-05		<0.61	--	--
Bis(2-ethylhexyl) phthalate	2.85E-01	5.90E+03	3.61E-04	1.48E-05	2.78E+01	<0.084	--	--
Butyl benzyl phthalate	4.22E+01	5.57E+02	4.78E-03	1.95E-04	2.63E+00	<0.080	--	--
Dibenzofuran	4.30E+00	4.16E+03	1.40E-01	5.73E-03	1.96E+01	<0.10	--	--
Diethyl phthalate	1.08E+03	2.88E+02		1.85E-05		<0.21	--	--
Dimethyl phthalate	4.29E-06	4.00E+03		1.36E-05		<0.095	--	--
Di-n-butyl phthalate	1.30E+01	3.39E+04	9.39E-07	3.85E-08	1.60E+07	<0.10	--	--
Hexachlorobutadiene	3.20E+00	2.30E+03	2.50E+01	1.02E+00	1.09E+01	<0.25	--	--
Isophorone	1.20E+04	2.49E+01	5.88E-03	2.41E-04	1.18E-01	<0.17	--	--
m-Cresol	2.51E+04	1.66E+01	1.59E-03	6.49E-05	7.84E-02	<0.21	--	--
o-Cresol	3.08E+04	1.48E+01	1.20E-03	4.93E-05	7.00E-02	<0.21	--	--
p-Cresol	2.26E+04	1.76E+01	7.69E-04	3.15E-05	8.30E-02	<0.15	--	--
Pentachlorobenzene	2.87E-02	8.31E-01		2.92E-02		<0.31	--	--
Pentachlorophenol	1.40E+01	5.30E+04	2.75E-03	1.12E-04	2.50E+02	<0.10	--	--
Phenanthrene	1.00E+00	1.40E+04	1.59E-01	6.50E-03	6.61E+01	<0.093	--	--
Phenol	9.30E+04	1.42E+01	5.26E-04	2.15E-05	6.70E-02	<0.20	--	--
p-Nitrophenol	1.60E+04	2.13E+01	1.01E-03	4.13E-05	1.00E-01	<0.15	--	--

Sum of SVOC detections (mg/kg) <10

Total Fraction of Solubility 8.90E-03

Soil/Water/Vapor Concentration Equilibria - Samples With Total VOCs or SVOCs Greater than 10 mg/kg
Modified Feenstra et al. (1991)/Mariner et al. (1997) Model
Casmalia Hazardous Waste Management Facility
Casmalia, California

SAMPLE INFORMATION - SAMPLE SSS00900*

Location	RISBCD-11A
Start Depth	41 (ft)
End Depth	42 (ft)
Sample Date	8/12/2004
Analytical Methods:	8260B/GCMS-SIM

ASSUMED SOIL PROPERTIES

Dry Bulk Density (ρb)	1.86 kg/L
Total Porosity (φt)	0.45
Water Filled Porosity (φw)	0.45
Air Filled Porosity (φa)	0
Fraction Organic Content (foc)	0.00472

Chemical	Input Parameters			Chemical Parameters		Results		
VOCs/SVOCs Detected in Selected Type 7 Co-Located Samples	Solubility (S) (mg/L)	Organic Carbon Partition Coefficient (Koc) (L/kg)	Henry's Law Constant (H) (atm-L/mol)	Dimensionless Henry's Law Constant (Hc) (-)	Distribution Coefficient (Kd) (L/kg)	Known Total Soil Concentration (Ct) (mg/kg)	Estimated Pore Water Concentration (Cw) (mg/L)	Fraction of Solubility
Detected VOCs								
1,1,1-Trichloroethane	1.31E+03	1.52E+02	1.67E+01	6.83E-01	7.17E-01	**30**	3.13E+01	2.39E-02
1,1,2,2-Tetrachloroethane	3.06E+03	1.18E+02	4.59E-01	1.88E-02	5.57E-01	**0.15**	1.88E-01	6.13E-05
1,1,2-Trichloroethane	3.97E+03	5.60E+01	1.08E+00	4.42E-02	2.64E-01	**0.15**	2.96E-01	7.47E-05
1,1-Dichloroethane	5.30E+03	3.00E+01	5.43E+00	2.22E-01	1.42E-01	**6.3**	1.64E+01	3.10E-03
1,1-Dichloroethylene	3.02E+03	6.50E+01	2.55E+01	1.04E+00	3.07E-01	**1.2**	2.19E+00	7.25E-04
1,2,3-Trichlorobenzene	1.20E+01	7.40E+03	4.23E+00	1.73E-01	3.49E+01	**0.7**	1.99E-02	1.66E-03
1,2,3-Trichloropropane	1.90E+03	6.87E+01	3.43E-01	1.40E-02	3.24E-01	<0.00087	--	--
1,2,4-Trimethylbenzene	5.76E+01	1.48E+03	5.57E+00	2.28E-01	6.98E+00	**0.47**	6.51E-02	1.13E-03
1,2-Dibromo-3-chloropropane	6.01E-03	1.23E+03		6.01E-03		**0.17**		
1,2-Dibromoethane (EDB)	2.73E-02	3.91E+03		2.92E-02		<0.00063	--	--
1,2-Dichloroethane	7.13E+03	1.40E+01	1.50E+00	6.13E-02	6.61E-02	**0.91**	2.95E+00	4.14E-04
1,2-Dichloroethylene, total	4.90E+03	4.08E+01	7.01E-03	2.87E-04	1.92E-01	**2.4**	5.52E+00	1.13E-03
1,2-Dichloropropane	2.97E+03	5.10E+01	2.62E+00	1.07E-01	2.41E-01	**0.22**	4.56E-01	1.54E-04
1,3,5-Trimethylbenzene	4.82E+01	1.66E+03	8.77E+00	3.59E-01	7.83E+00	**0.28**	3.47E-02	7.20E-04
2-Chlorotoluene	4.70E+02	1.60E+02	3.50E+00	1.43E-01	7.55E-01	**0.061**	6.12E-02	1.30E-04
2-Hexanone	1.40E+04	2.29E+01	2.82E-02	1.15E-03	1.08E-01	**0.14**	4.00E-01	2.86E-05
3,3,5-Trimethylcyclohexanone	1.20E+04	2.49E+01	5.88E-03	2.41E-04	1.18E-01	**6.3**	1.75E+01	1.46E-03
Benzene	1.75E+03	8.30E+01	5.59E+00	2.29E-01	3.92E-01	**2.5**	3.95E+00	2.25E-03
Bromobenzene	4.72E+02	2.24E+02	3.70E+00	1.51E-01	1.06E+00	**0.041**	3.16E-02	6.69E-05
Bromochloromethane	5.97E-02	1.67E+04		1.33E-01		<0.00078	--	--
Bromoform	3.10E+03	8.71E+01		2.19E-02		<0.00072	--	--
Carbon disulfide	1.19E+03	4.57E+01	3.03E+01	1.24E+00	2.16E-01	**3.9**	8.52E+00	7.16E-03
Carbon tetrachloride	7.40E+02	4.39E+02	2.98E+01	1.22E+00	2.07E+00	<0.0011	--	--
Chlorobenzene	4.45E+02	3.30E+02	3.90E+00	1.59E-01	1.56E+00	**0.28**	1.56E-01	3.50E-04
Chloroethane	4.54E-01	6.71E+03		5.92E-01		**0.0061**		
Chloroform	8.51E+03	4.40E+01	3.58E+00	1.46E-01	2.08E-01	**3.4**	7.56E+00	8.88E-04
Chlorotrifluoroethene	1.16E+04	1.90E+02	3.10E+02	1.27E+01	8.97E-01	**0.52**	4.57E-01	3.93E-05
Dichlorodifluoromethane	1.40E+01	2.80E+02		1.64E+01		**0.06**		
Diisopropyl ether	1.20E+04	2.49E+01	2.57E-03	1.05E-04	1.18E-01	<0.00048	--	--
Ethylbenzene	1.52E+02	1.10E+03	6.43E+00	2.63E-01	5.19E+00	**32**	5.89E+00	3.87E-02
Freon 112	1.20E+02			4.09E+00		**10**		
Freon 113	1.10E+03	1.60E+02	5.21E+02	2.13E+01	7.55E-01	**37**	3.71E+01	3.37E-02
Isopropylbenzene	6.13E+01	1.45E+03	1.15E+01	4.70E-01	6.82E+00	**0.22**	3.12E-02	5.08E-04
m-Dichlorobenzene	1.34E+02	1.70E+03	3.25E+00	1.33E-01	8.02E+00	**0.57**	6.90E-02	5.15E-04
Methyl acetate	1.00E+06	2.20E+00	2.06E-02	8.42E-04	1.04E-02	<0.0019	--	--
Methyl chloride	8.20E+03	3.50E+01	2.40E+01	9.81E-01	1.65E-01	**0.0025**	6.14E-03	7.49E-07
Methyl tert-butyl ether (MTBE)	1.50E+05	6.00E+00	5.87E-01	2.40E-02	2.83E-02	<0.00033	--	--
Methylcyclopentane	4.30E+01	5.52E+02	3.62E-01	1.48E-02	2.60E+00	**0.32**	1.12E-01	2.62E-03
Methylene chloride	2.19E+04	8.80E+00	2.12E+00	8.67E-02	4.15E-02	**8.6**	3.03E+01	1.39E-03
n-Butylbenzene	1.38E+01	2.83E+03	1.31E+01	5.36E-01	1.34E+01	**0.075**	5.51E-03	4.00E-04
n-Propylbenzene	1.38E+01	2.83E+03	1.31E+01	5.36E-01	1.34E+01	**0.19**	1.40E-02	1.01E-03
o-Dichlorobenzene	1.36E+02	1.70E+03	1.98E+00	8.10E-02	8.02E+00	**21**	2.54E+00	1.87E-02
o-Xylene	1.75E+02	8.30E+02	5.10E+00	2.09E-01	3.92E+00	**25**	6.01E+00	3.43E-02
p-Dichlorobenzene	7.38E+01	6.17E+02	2.43E+00	9.94E-02	2.91E+00	**3.3**	1.05E+00	1.42E-02
p-Isopropyltoluene	2.34E+01	2.57E+03	1.10E+01	4.50E-01	1.21E+01	**0.046**	3.72E-03	1.59E-04
Propanal	3.06E+05	4.20E+00	7.69E-02	3.15E-03	1.98E-02	<0.015	--	--
sec-Butylbenzene	1.70E+01	2.15E+03	1.87E+01	7.65E-01	1.01E+01	**0.027**	2.60E-03	1.53E-04
Styrene	3.10E+02	7.76E+02		1.13E-01		**0.19**		
Tetrachloroethylene	2.37E+02	3.64E+02	1.74E+01	7.12E-01	1.72E+00	**210**	1.07E+02	4.52E-01
Tetrahydrofuran	1.00E+06	9.50E-01	7.00E-02	2.86E-03	4.48E-03	**7.8**	3.17E+01	3.17E-05
Toluene	5.35E+02	3.00E+02	6.37E+00	2.60E-01	1.42E+00	**32**	1.93E+01	3.61E-02
Trichloroethylene	1.38E+03	1.26E+02	9.37E+00	3.83E-01	5.95E-01	**20**	2.39E+01	1.73E-02
Trichlorofluoromethane	1.62E+03	1.59E+02	8.88E+01	3.63E+00	7.50E-01	**1.2**	1.21E+00	7.46E-04
Trifluoromethylbenzene	4.51E+02			6.95E-01		**0.58**		
Vinyl chloride	2.76E+03	1.86E+01	2.70E+01	1.10E+00	8.78E-02	**1.2**	3.64E+00	1.32E-03
Xylene (total)	1.61E+02	4.07E+02	7.34E+00	3.00E-01	1.92E+00	**140**	6.47E+01	4.02E-01

Sum of VOC detections (mg/kg) 6.11E+02

Detected SVOCs								
1,2,4-Trichlorobenzene	3.00E+02	1.78E+03	1.42E+00	5.81E-02	8.40E+00	**23**	2.66E+00	8.87E-03
2,3,4,6-Tetrachlorophenol	7.00E+00	9.80E+01	1.30E-03	5.32E-05	4.63E-01	**0.74**	1.05E+00	1.50E-01
2,4-Dichlorophenol	4.60E+03	3.80E+02	2.75E-03	1.12E-04	1.79E+00	**1.3**	6.39E-01	1.39E-04
2,4-Dimethylphenol	4.20E+03	2.22E+02	2.38E-03	9.73E-05	1.05E+00	**1.6**	1.24E+00	2.95E-04
2,6-Dinitrotoluene	3.05E-05	3.52E+02		3.02E-05		<0.11	--	--
2-Methylnaphthalene	2.54E+01	8.50E+03	5.18E-01	2.12E-02	4.01E+01	**1.7**	4.21E-02	1.66E-03
3-Methylcholanthrene	1.00E+01	1.00E+07		2.72E-01		<0.35	--	--
Acetophenone	5.50E+03	3.83E+01	9.09E-03	3.72E-04	1.81E-01	**1.1**	2.60E+00	4.73E-04

Soil/Water/Vapor Concentration Equilibria - Samples With Total VOCs or SVOCs Greater than 10 mg/kg
Modified Feenstra et al. (1991)/Mariner et al. (1997) Model
Casmalia Hazardous Waste Management Facility
Casmalia, California

SAMPLE INFORMATION - SAMPLE SSS00900*

Location	RISBCD-11A
Start Depth	41 (ft)
End Depth	42 (ft)
Sample Date	8/12/2004
Analytical Methods:	8260B/GCMS-SIM

ASSUMED SOIL PROPERTIES

Dry Bulk Density (ρb)	1.86 kg/L
Total Porosity (φt)	0.45
Water Filled Porosity (φw)	0.45
Air Filled Porosity (φa)	0
Fraction Organic Content (foc)	0.00472

Chemical	Input Parameters			Chemical Parameters		Results		
VOCs/SVOCs Detected in Selected Type 7 Co-Located Samples	Solubility (S) (mg/L)	Organic Carbon Partition Coefficient (Koc) (L/kg)	Henry's Law Constant (H) (atm-L/mol)	Dimensionless Henry's Law Constant (Hc) (-)	Distribution Coefficient (Kd) (L/kg)	Known Total Soil Concentration (Ct) (mg/kg)	Estimated Pore Water Concentration (Cw) (mg/L)	Fraction of Solubility
Detected SVOCs								
Aramite	1.00E-01	1.55E+04	4.40E-05	1.80E-06	7.31E+01	<0.56	--	--
Benzoic acid	2.70E+03	5.66E+01	7.14E-05	2.92E-06	2.67E-01	<0.052	--	--
Benzyl alcohol	1.82E+02	6.92E+01		3.06E-05		<0.69	--	--
Bis(2-ethylhexyl) phthalate	2.85E-01	5.90E+03	3.61E-04	1.48E-05	2.78E+01	**22**	7.83E-01	2.75E+00
Butyl benzyl phthalate	4.22E+01	5.57E+02	4.78E-03	1.95E-04	2.63E+00	**2.5**	8.70E-01	2.06E-02
Dibenzofuran	4.30E+00	4.16E+03	1.40E-01	5.73E-03	1.96E+01	**0.14**	7.05E-03	1.64E-03
Diethyl phthalate	1.08E+03	2.88E+02		1.85E-05		**1.1**		
Dimethyl phthalate	4.29E-06	4.00E+03		1.36E-05		<0.11	--	--
Di-n-butyl phthalate	1.30E+01	3.39E+04	9.39E-07	3.85E-08	1.60E+07	**1.5**	9.37E-08	7.21E-09
Hexachlorobutadiene	3.20E+00	2.30E+03	2.50E+01	1.02E+00	1.09E+01	<0.29	--	--
Hexachlorophene	2.24E-11	1.40E+02		-1.00E+04		**20**		
Isophorone	1.20E+04	2.49E+01	5.88E-03	2.41E-04	1.18E-01	<0.19	--	--
m-Cresol	2.51E+04	1.66E+01	1.59E-03	6.49E-05	7.84E-02	**2.4**	7.49E+00	2.99E-04
o-Cresol	3.08E+04	1.48E+01	1.20E-03	4.93E-05	7.00E-02	**1**	3.21E+00	1.04E-04
p-Cresol	2.26E+04	1.76E+01	7.69E-04	3.15E-05	8.30E-02	**1**	3.08E+00	1.36E-04
Pentachlorobenzene	2.87E-02	8.31E-01		2.92E-02		<0.35	--	--
Pentachlorophenol	1.40E+01	5.30E+04	2.75E-03	1.12E-04	2.50E+02	**1.5**	5.99E-03	4.28E-04
Phenanthrene	1.00E+00	1.40E+04	1.59E-01	6.50E-03	6.61E+01	**0.42**	6.33E-03	6.33E-03
Phenol	9.30E+04	1.42E+01	5.26E-04	2.15E-05	6.70E-02	**0.68**	2.20E+00	2.37E-05
p-Nitrophenol	1.60E+04	2.13E+01	1.01E-03	4.13E-05	1.00E-01	<0.18	--	--

Sum of SVOC detections (mg/kg) 1.48E+02

Total Fraction of Solubility 4.04E+00

Soil/Water/Vapor Concentration Equilibria - Samples With Total VOCs or SVOCs Greater than 10 mg/kg
Modified Feenstra et al. (1991)/Mariner et al. (1997) Model
Casmalia Hazardous Waste Management Facility
Casmalia, California

SAMPLE INFORMATION - SAMPLE SSS00901*

Location	RISBCL-01C
Start Depth	74 (ft)
End Depth	75 (ft)
Sample Date	8/12/2004
Analytical Methods:	8260B/GCMS-SIM

ASSUMED SOIL PROPERTIES

Dry Bulk Density (ρb)	1.86 kg/L
Total Porosity (φt)	0.45
Water Filled Porosity (φw)	0.45
Air Filled Porosity (φa)	0
Fraction Organic Content (foc)	0.00472

Chemical	Input Parameters			Chemical Parameters		Results		
VOCs/SVOCs Detected in Selected Type 7 Co-Located Samples	Solubility (S) (mg/L)	Organic Carbon Partition Coefficient (Koc) (L/kg)	Henry's Law Constant (H) (atm-L/mol)	Dimensionless Henry's Law Constant (Hc) (-)	Distribution Coefficient (Kd) (L/kg)	Known Total Soil Concentration (Ct) (mg/kg)	Estimated Pore Water Concentration (Cw) (mg/L)	Fraction of Solubility
Detected VOCs								
1,1,1-Trichloroethane	1.31E+03	1.52E+02	1.67E+01	6.83E-01	7.17E-01	**57**	5.94E+01	4.54E-02
1,1,2,2-Tetrachloroethane	3.06E+03	1.18E+02	4.59E-01	1.88E-02	5.57E-01	**0.15**	1.88E-01	6.13E-05
1,1,2-Trichloroethane	3.97E+03	5.60E+01	1.08E+00	4.42E-02	2.64E-01	**0.2**	3.95E-01	9.96E-05
1,1-Dichloroethane	5.30E+03	3.00E+01	5.43E+00	2.22E-01	1.42E-01	**9.6**	2.50E+01	4.72E-03
1,1-Dichloroethylene	3.02E+03	6.50E+01	2.55E+01	1.04E+00	3.07E-01	**5.2**	9.48E+00	3.14E-03
1,2,3-Trichlorobenzene	1.20E+01	7.40E+03	4.23E+00	1.73E-01	3.49E+01	**0.2**	5.69E-03	4.74E-04
1,2,3-Trichloropropane	1.90E+03	6.87E+01	3.43E-01	1.40E-02	3.24E-01	<0.00085	--	--
1,2,4-Trimethylbenzene	5.76E+01	1.48E+03	5.57E+00	2.28E-01	6.98E+00	**0.34**	4.71E-02	8.17E-04
1,2-Dibromo-3-chloropropane	6.01E-03	1.23E+03		6.01E-03		**0.47**		
1,2-Dibromoethane (EDB)	2.73E-02	3.91E+03		2.92E-02		**0.11**		
1,2-Dichloroethane	7.13E+03	1.40E+01	1.50E+00	6.13E-02	6.61E-02	**4.8**	1.56E+01	2.19E-03
1,2-Dichloroethylene, total	4.90E+03	4.08E+01	7.01E-03	2.87E-04	1.92E-01	**0.2**	4.60E-01	9.40E-05
1,2-Dichloropropane	2.97E+03	5.10E+01	2.62E+00	1.07E-01	2.41E-01	**0.3**	6.22E-01	2.09E-04
1,3,5-Trimethylbenzene	4.82E+01	1.66E+03	8.77E+00	3.59E-01	7.83E+00	**0.16**	1.98E-02	4.11E-04
2-Chlorotoluene	4.70E+02	1.60E+02	3.50E+00	1.43E-01	7.55E-01	**0.031**	3.11E-02	6.61E-05
2-Hexanone	1.40E+04	2.29E+01	2.82E-02	1.15E-03	1.08E-01	**1.3**	3.71E+00	2.65E-04
3,3,5-Trimethylcyclohexanone	1.20E+04	2.49E+01	5.88E-03	2.41E-04	1.18E-01	**4.7**	1.31E+01	1.09E-03
Benzene	1.75E+03	8.30E+01	5.59E+00	2.29E-01	3.92E-01	**0.36**	5.68E-01	3.25E-04
Bromobenzene	4.72E+02	2.24E+02	3.70E+00	1.51E-01	1.06E+00	**0.044**	3.39E-02	7.18E-05
Bromochloromethane	5.97E-02	1.67E+04		1.33E-01		**1.1**		
Bromoform	3.10E+03	8.71E+01		2.19E-02		**0.0022**		
Carbon disulfide	1.19E+03	4.57E+01	3.03E+01	1.24E+00	2.16E-01	**8.6**	1.88E+01	1.58E-02
Carbon tetrachloride	7.40E+02	4.39E+02	2.98E+01	1.22E+00	2.07E+00	<0.0011	--	--
Chlorobenzene	4.45E+02	3.30E+02	3.90E+00	1.59E-01	1.56E+00	**0.28**	1.56E-01	3.50E-04
Chloroethane	4.54E-01	6.71E+03		5.92E-01		<0.0027	--	--
Chloroform	8.51E+03	4.40E+01	3.58E+00	1.46E-01	2.08E-01	**20**	4.45E+01	5.22E-03
Chlorotrifluoroethene	1.16E+04	1.90E+02	3.10E+02	1.27E+01	8.97E-01	**0.2**	1.76E-01	1.51E-05
Dichlorodifluoromethane	1.40E+01	2.80E+02		1.64E+01		**0.085**		
Diisopropyl ether	1.20E+04	2.49E+01	2.57E-03	1.05E-04	1.18E-01	**0.15**	4.17E-01	3.48E-05
Ethylbenzene	1.52E+02	1.10E+03	6.43E+00	2.63E-01	5.19E+00	**28**	5.15E+00	3.39E-02
Freon 112	1.20E+02			4.09E+00		**4.8**		
Freon 113	1.10E+03	1.60E+02	5.21E+02	2.13E+01	7.55E-01	**28**	2.81E+01	2.55E-02
Isopropylbenzene	6.13E+01	1.45E+03	1.15E+01	4.70E-01	6.82E+00	**0.13**	1.84E-02	3.00E-04
m-Dichlorobenzene	1.34E+02	1.70E+03	3.25E+00	1.33E-01	8.02E+00	**0.43**	5.20E-02	3.88E-04
Methyl acetate	1.00E+06	2.20E+00	2.06E-02	8.42E-04	1.04E-02	**0.0086**	3.41E-02	3.41E-08
Methyl chloride	8.20E+03	3.50E+01	2.40E+01	9.81E-01	1.65E-01	**0.023**	5.65E-02	6.89E-06
Methyl tert-butyl ether (MTBE)	1.50E+05	6.00E+00	5.87E-01	2.40E-02	2.83E-02	**0.012**	4.44E-02	2.96E-07
Methylcyclopentane	4.30E+01	5.52E+02	3.62E-01	1.48E-02	2.60E+00	**0.46**	1.62E-01	3.76E-03
Methylene chloride	2.19E+04	8.80E+00	2.12E+00	8.67E-02	4.15E-02	<0.00036	--	--
n-Butylbenzene	1.38E+01	2.83E+03	1.31E+01	5.36E-01	1.34E+01	**0.025**	1.84E-03	1.33E-04
n-Propylbenzene	1.38E+01	2.83E+03	1.31E+01	5.36E-01	1.34E+01	**0.11**	8.09E-03	5.86E-04
o-Dichlorobenzene	1.36E+02	1.70E+03	1.98E+00	8.10E-02	8.02E+00	**21**	2.54E+00	1.87E-02
o-Xylene	1.75E+02	8.30E+02	5.10E+00	2.09E-01	3.92E+00	**22**	5.29E+00	3.02E-02
p-Dichlorobenzene	7.38E+01	6.17E+02	2.43E+00	9.94E-02	2.91E+00	**2.8**	8.88E-01	1.20E-02
p-Isopropyltoluene	2.34E+01	2.57E+03	1.10E+01	4.50E-01	1.21E+01	**0.014**	1.13E-03	4.84E-05
Propanal	3.06E+05	4.20E+00	7.69E-02	3.15E-03	1.98E-02	<0.015	--	--
sec-Butylbenzene	1.70E+01	2.15E+03	1.87E+01	7.65E-01	1.01E+01	<0.0020	--	--
Styrene	3.10E+02	7.76E+02		1.13E-01		**0.12**		
Tetrachloroethylene	2.37E+02	3.64E+02	1.74E+01	7.12E-01	1.72E+00	**180**	9.18E+01	3.88E-01
Tetrahydrofuran	1.00E+06	9.50E-01	7.00E-02	2.86E-03	4.48E-03	**33**	1.34E+02	1.34E-04
Toluene	5.35E+02	3.00E+02	6.37E+00	2.60E-01	1.42E+00	**37**	2.23E+01	4.17E-02
Trichloroethylene	1.38E+03	1.26E+02	9.37E+00	3.83E-01	5.95E-01	**25**	2.99E+01	2.16E-02
Trichlorofluoromethane	1.62E+03	1.59E+02	8.88E+01	3.63E+00	7.50E-01	**3.2**	3.22E+00	1.99E-03
Trifluoromethylbenzene	4.51E+02			6.95E-01		**0.41**		
Vinyl chloride	2.76E+03	1.86E+01	2.70E+01	1.10E+00	8.78E-02	**0.044**	1.33E-01	4.83E-05
Xylene (total)	1.61E+02	4.07E+02	7.34E+00	3.00E-01	1.92E+00	**120**	5.55E+01	3.45E-01

Sum of VOC detections (mg/kg) 6.22E+02

Detected SVOCs								
1,2,4,5-Tetrachlorobenzene	6.06E-01	5.75E+03	1.20E-03	4.92E-05	2.71E+01	<0.33	--	--
1,2,4-Trichlorobenzene	3.00E+02	1.78E+03	1.42E+00	5.81E-02	8.40E+00	**3.3**	3.82E-01	1.27E-03
2,3,4,6-Tetrachlorophenol	7.00E+00	9.80E+01	1.30E-03	5.32E-05	4.63E-01	**0.54**	7.67E-01	1.10E-01
2,4-Dichlorophenol	4.60E+03	3.80E+02	2.75E-03	1.12E-04	1.79E+00	**4.9**	2.41E+00	5.23E-04
2,4-Dimethylphenol	4.20E+03	2.22E+02	2.38E-03	9.73E-05	1.05E+00	**0.29**	2.25E-01	5.35E-05
2,6-Dinitrotoluene	3.05E-05	3.52E+02		3.02E-05		<0.12	--	--
2-Methylnaphthalene	2.54E+01	8.50E+03	5.18E-01	2.12E-02	4.01E+01	**0.34**	8.42E-03	3.32E-04
3-Methylcholanthrene	1.00E+01	1.00E+07		2.72E-01		<0.37	--	--

Soil/Water/Vapor Concentration Equilibria - Samples With Total VOCs or SVOCs Greater than 10 mg/kg
Modified Feenstra et al. (1991)/Mariner et al. (1997) Model
Casmalia Hazardous Waste Management Facility
Casmalia, California

SAMPLE INFORMATION - SAMPLE SSS00901*

Location	RISBCL-01C
Start Depth	74 (ft)
End Depth	75 (ft)
Sample Date	8/12/2004
Analytical Methods:	8260B/GCMS-SIM

ASSUMED SOIL PROPERTIES

Dry Bulk Density (ρb)	1.86 kg/L
Total Porosity (φt)	0.45
Water Filled Porosity (φw)	0.45
Air Filled Porosity (φa)	0
Fraction Organic Content (foc)	0.00472

Chemical	Input Parameters			Chemical Parameters		Results		
VOCs/SVOCs Detected in Selected Type 7 Co-Located Samples	Solubility (S) (mg/L)	Organic Carbon Partition Coefficient (Koc) (L/kg)	Henry's Law Constant (H) (atm-L/mol)	Dimensionless Henry's Law Constant (Hc) (-)	Distribution Coefficient (Kd) (L/kg)	Known Total Soil Concentration (Ct) (mg/kg)	Estimated Pore Water Concentration (Cw) (mg/L)	Fraction of Solubility
Detected SVOCs								
Acetophenone	5.50E+03	3.83E+01	9.09E-03	3.72E-04	1.81E-01	**0.6**	1.42E+00	2.58E-04
Aramite	1.00E-01	1.55E+04	4.40E-05	1.80E-06	7.31E+01	<0.58	--	--
Benzoic acid	2.70E+03	5.66E+01	7.14E-05	2.92E-06	2.67E-01	**2**	3.93E+00	1.46E-03
Benzyl alcohol	1.82E+02	6.92E+01		3.06E-05		**0.83**		
Bis(2-ethylhexyl) phthalate	2.85E-01	5.90E+03	3.61E-04	1.48E-05	2.78E+01	<0.10	--	--
Butyl benzyl phthalate	4.22E+01	5.57E+02	4.78E-03	1.95E-04	2.63E+00	<0.096	--	--
Dibenzofuran	4.30E+00	4.16E+03	1.40E-01	5.73E-03	1.96E+01	<0.12	--	--
Diethyl phthalate	1.08E+03	2.88E+02		1.85E-05		<0.25	--	--
Dimethyl phthalate	4.29E-06	4.00E+03		1.36E-05		**0.35**		
Di-n-butyl phthalate	1.30E+01	3.39E+04	9.39E-07	3.85E-08	1.60E+07	<0.12	--	--
Hexachlorobutadiene	3.20E+00	2.30E+03	2.50E+01	1.02E+00	1.09E+01	<0.30	--	--
Isophorone	1.20E+04	2.49E+01	5.88E-03	2.41E-04	1.18E-01	**28**	7.79E+01	6.49E-03
m-Cresol	2.51E+04	1.66E+01	1.59E-03	6.49E-05	7.84E-02	**0.7**	2.19E+00	8.71E-05
o-Cresol	3.08E+04	1.48E+01	1.20E-03	4.93E-05	7.00E-02	**2**	6.41E+00	2.08E-04
p-Cresol	2.26E+04	1.76E+01	7.69E-04	3.15E-05	8.30E-02	**2**	6.15E+00	2.72E-04
Pentachlorobenzene	2.87E-02	8.31E-01		2.92E-02		<0.37	--	--
Pentachlorophenol	1.40E+01	5.30E+04	2.75E-03	1.12E-04	2.50E+02	**0.51**	2.04E-03	1.45E-04
Phenanthrene	1.00E+00	1.40E+04	1.59E-01	6.50E-03	6.61E+01	<0.11	--	--
Phenol	9.30E+04	1.42E+01	5.26E-04	2.15E-05	6.70E-02	**13**	4.21E+01	4.52E-04
p-Nitrophenol	1.60E+04	2.13E+01	1.01E-03	4.13E-05	1.00E-01	<0.19	--	--

Sum of SVOC detections (mg/kg) 7.55E+01

Total Fraction of Solubility 1.13E+00

Soil/Water/Vapor Concentration Equilibria - Samples With Total VOCs or SVOCs Greater than 10 mg/kg
Modified Feenstra et al. (1991)/Mariner et al. (1997) Model
Casmalia Hazardous Waste Management Facility
Casmalia, California

SAMPLE INFORMATION - SAMPLE SSS00904*

Location	RISBCD-08
Start Depth	24 (ft)
End Depth	26 (ft)
Sample Date	10/5/2004
Analytical Methods:	8260B/GCMS-SIM

ASSUMED SOIL PROPERTIES

Dry Bulk Density (ρb)	1.86 kg/L
Total Porosity (φt)	0.45
Water Filled Porosity (φw)	0.45
Air Filled Porosity (φa)	0
Fraction Organic Content (foc)	0.00472

Chemical	Input Parameters			Chemical Parameters		Results		
VOCs/SVOCs Detected in Selected Type 7 Co-Located Samples	Solubility (S) (mg/L)	Organic Carbon Partition Coefficient (Koc) (L/kg)	Henry's Law Constant (H) (atm-L/mol)	Dimensionless Henry's Law Constant (Hc) (-)	Distribution Coefficient (Kd) (L/kg)	Known Total Soil Concentration (Ct) (mg/kg)	Estimated Pore Water Concentration (Cw) (mg/L)	Fraction of Solubility
Detected VOCs								
1,1,1-Trichloroethane	1.31E+03	1.52E+02	1.67E+01	6.83E-01	7.17E-01	**0.5**	5.21E-01	3.98E-04
1,1,2,2-Tetrachloroethane	3.06E+03	1.18E+02	4.59E-01	1.88E-02	5.57E-01	**0.022**	2.75E-02	9.00E-06
1,1,2-Trichloroethane	3.97E+03	5.60E+01	1.08E+00	4.42E-02	2.64E-01	**0.0068**	1.34E-02	3.39E-06
1,1-Dichloroethane	5.30E+03	3.00E+01	5.43E+00	2.22E-01	1.42E-01	**0.27**	7.04E-01	1.33E-04
1,1-Dichloroethylene	3.02E+03	6.50E+01	2.55E+01	1.04E+00	3.07E-01	**0.21**	3.83E-01	1.27E-04
1,2,3-Trichlorobenzene	1.20E+01	7.40E+03	4.23E+00	1.73E-01	3.49E+01	<0.0016	--	--
1,2,3-Trichloropropane	1.90E+03	6.87E+01	3.43E-01	1.40E-02	3.24E-01	<0.00077	--	--
1,2,4-Trimethylbenzene	5.76E+01	1.48E+03	5.57E+00	2.28E-01	6.98E+00	**0.017**	2.35E-03	4.09E-05
1,2-Dibromo-3-chloropropane	6.01E-03	1.23E+03		6.01E-03		<0.0014	--	--
1,2-Dibromoethane (EDB)	2.73E-02	3.91E+03		2.92E-02		<0.00056	--	--
1,2-Dichloroethane	7.13E+03	1.40E+01	1.50E+00	6.13E-02	6.61E-02	**0.03**	9.74E-02	1.37E-05
1,2-Dichloroethylene, total	4.90E+03	4.08E+01	7.01E-03	2.87E-04	1.92E-01	**0.16**	3.68E-01	7.52E-05
1,2-Dichloropropane	2.97E+03	5.10E+01	2.62E+00	1.07E-01	2.41E-01	<0.00064	--	--
1,3,5-Trimethylbenzene	4.82E+01	1.66E+03	8.77E+00	3.59E-01	7.83E+00	**0.0051**	6.32E-04	1.31E-05
2-Butanol	1.50E+04	2.20E+01	1.02E-02	4.17E-04	1.04E-01	<0.15	--	--
2-Chlorotoluene	4.70E+02	1.60E+02	3.50E+00	1.43E-01	7.55E-01	**0.0036**	3.61E-03	7.68E-06
2-Hexanone	1.40E+04	2.29E+01	2.82E-02	1.15E-03	1.08E-01	<0.0046	--	--
3,3,5-Trimethylcyclohexanone	1.20E+04	2.49E+01	5.88E-03	2.41E-04	1.18E-01	<0.0057	--	--
Benzene	1.75E+03	8.30E+01	5.59E+00	2.29E-01	3.92E-01	**0.18**	2.84E-01	1.62E-04
Bromobenzene	4.72E+02	2.24E+02	3.70E+00	1.51E-01	1.06E+00	**0.0097**	7.47E-03	1.58E-05
Bromochloromethane	5.97E-02	1.67E+04		1.33E-01		<0.00069	--	--
Bromoform	3.10E+03	8.71E+01		2.19E-02		<0.00064	--	--
Carbon disulfide	1.19E+03	4.57E+01	3.03E+01	1.24E+00	2.16E-01	<0.0037	--	--
Carbon tetrachloride	7.40E+02	4.39E+02	2.98E+01	1.22E+00	2.07E+00	<0.00097	--	--
Chlorobenzene	4.45E+02	3.30E+02	3.90E+00	1.59E-01	1.56E+00	**0.0093**	5.17E-03	1.16E-05
Chloroethane	4.54E-01	6.71E+03		5.92E-01		<0.0024	--	--
Chloroform	8.51E+03	4.40E+01	3.58E+00	1.46E-01	2.08E-01	**0.17**	3.78E-01	4.44E-05
Chlorotrifluoroethene	1.16E+04	1.90E+02	3.10E+02	1.27E+01	8.97E-01	<0.0047	--	--
Dichlorodifluoromethane	1.40E+01	2.80E+02		1.64E+01		<0.0010	--	--
Diisopropyl ether	1.20E+04	2.49E+01	2.57E-03	1.05E-04	1.18E-01	<0.00043	--	--
Ethylbenzene	1.52E+02	1.10E+03	6.43E+00	2.63E-01	5.19E+00	**1**	1.84E-01	1.21E-03
Freon 112	1.20E+02			4.09E+00		<0.0043	--	--
Freon 113	1.10E+03	1.60E+02	5.21E+02	2.13E+01	7.55E-01	**0.36**	3.61E-01	3.28E-04
Isopropylbenzene	6.13E+01	1.45E+03	1.15E+01	4.70E-01	6.82E+00	**0.007**	9.91E-04	1.62E-05
m-Dichlorobenzene	1.34E+02	1.70E+03	3.25E+00	1.33E-01	8.02E+00	<0.0013	--	--
Methyl acetate	1.00E+06	2.20E+00	2.06E-02	8.42E-04	1.04E-02	<0.0016	--	--
Methyl chloride	8.20E+03	3.50E+01	2.40E+01	9.81E-01	1.65E-01	<0.00054	--	--
Methyl tert-butyl ether (MTBE)	1.50E+05	6.00E+00	5.87E-01	2.40E-02	2.83E-02	<0.00030	--	--
Methylcyclopentane	4.30E+01	5.52E+02	3.62E-01	1.48E-02	2.60E+00	**0.01**	3.51E-03	8.17E-05
Methylene chloride	2.19E+04	8.80E+00	2.12E+00	8.67E-02	4.15E-02	**0.83**	2.93E+00	1.34E-04
n-Butylbenzene	1.38E+01	2.83E+03	1.31E+01	5.36E-01	1.34E+01	<0.0020	--	--
n-Propylbenzene	1.38E+01	2.83E+03	1.31E+01	5.36E-01	1.34E+01	**0.0041**	3.01E-04	2.18E-05
o-Dichlorobenzene	1.36E+02	1.70E+03	1.98E+00	8.10E-02	8.02E+00	**0.024**	2.90E-03	2.14E-05
o-Xylene	1.75E+02	8.30E+02	5.10E+00	2.09E-01	3.92E+00	**1**	2.40E-01	1.37E-03
p-Dichlorobenzene	7.38E+01	6.17E+02	2.43E+00	9.94E-02	2.91E+00	**0.0054**	1.71E-03	2.32E-05
p-Isopropyltoluene	2.34E+01	2.57E+03	1.10E+01	4.50E-01	1.21E+01	<0.0022	--	--
Propanal	3.06E+05	4.20E+00	7.69E-02	3.15E-03	1.98E-02	<0.013	--	--
sec-Butylbenzene	1.70E+01	2.15E+03	1.87E+01	7.65E-01	1.01E+01	<0.0018	--	--
Styrene	3.10E+02	7.76E+02		1.13E-01		<0.0013	--	--
Tetrachloroethylene	2.37E+02	3.64E+02	1.74E+01	7.12E-01	1.72E+00	**2.4**	1.22E+00	5.17E-03
Tetrahydrofuran	1.00E+06	9.50E-01	7.00E-02	2.86E-03	4.48E-03	<0.0012	--	--
Toluene	5.35E+02	3.00E+02	6.37E+00	2.60E-01	1.42E+00	**0.22**	1.33E-01	2.48E-04
trans-1,2-Dichloroethylene	4.39E+03	5.90E+01	9.16E+00	3.75E-01	2.78E-01	**0.003**	5.76E-03	1.31E-06
Trichloroethylene	1.38E+03	1.26E+02	9.37E+00	3.83E-01	5.95E-01	**2.4**	2.87E+00	2.07E-03
Trichlorofluoromethane	1.62E+03	1.59E+02	8.88E+01	3.63E+00	7.50E-01	<0.00051	--	--
Vinyl chloride	2.76E+03	1.86E+01	2.70E+01	1.10E+00	8.78E-02	**0.004**	1.21E-02	4.40E-06
Xylene (total)	1.61E+02	4.07E+02	7.34E+00	3.00E-01	1.92E+00	**2.2**	1.02E+00	6.32E-03

Sum of VOC detections (mg/kg) 1.21E+01

Detected SVOCs								
1,2,4,5-Tetrachlorobenzene	6.06E-01	5.75E+03	1.20E-03	4.92E-05	2.71E+01	<0.29	--	--
1,2,4-Trichlorobenzene	3.00E+02	1.78E+03	1.42E+00	5.81E-02	8.40E+00	<0.24	--	--
2,3,4,6-Tetrachlorophenol	7.00E+00	9.80E+01	1.30E-03	5.32E-05	4.63E-01	<0.43	--	--
2,4-Dichlorophenol	4.60E+03	3.80E+02	2.75E-03	1.12E-04	1.79E+00	<0.17	--	--
2,4-Dimethylphenol	4.20E+03	2.22E+02	2.38E-03	9.73E-05	1.05E+00	<0.16	--	--
2,6-Dinitrotoluene	3.05E-05	3.52E+02		3.02E-05		<0.10	--	--
2-Methylnaphthalene	2.54E+01	8.50E+03	5.18E-01	2.12E-02	4.01E+01	<0.20	--	--

Soil/Water/Vapor Concentration Equilibria - Samples With Total VOCs or SVOCs Greater than 10 mg/kg
Modified Feenstra et al. (1991)/Mariner et al. (1997) Model
Casmalia Hazardous Waste Management Facility
Casmalia, California

SAMPLE INFORMATION - SAMPLE SSS00904*

Location	RISBCD-08
Start Depth	24 (ft)
End Depth	26 (ft)
Sample Date	10/5/2004
Analytical Methods:	8260B/GCMS-SIM

ASSUMED SOIL PROPERTIES

Dry Bulk Density (ρb)	1.86 kg/L
Total Porosity (φt)	0.45
Water Filled Porosity (φw)	0.45
Air Filled Porosity (φa)	0
Fraction Organic Content (foc)	0.00472

Chemical	Input Parameters			Chemical Parameters		Results		
VOCs/SVOCs Detected in Selected Type 7 Co-Located Samples	Solubility (S) (mg/L)	Organic Carbon Partition Coefficient (Koc) (L/kg)	Henry's Law Constant (H) (atm-L/mol)	Dimensionless Henry's Law Constant (Hc) (-)	Distribution Coefficient (Kd) (L/kg)	Known Total Soil Concentration (Ct) (mg/kg)	Estimated Pore Water Concentration (Cw) (mg/L)	Fraction of Solubility
Detected SVOCs								
3-Methylcholanthrene	1.00E+01	1.00E+07		2.72E-01		<0.32	--	--
Acetophenone	5.50E+03	3.83E+01	9.09E-03	3.72E-04	1.81E-01	<0.31	--	--
Aramite	1.00E-01	1.55E+04	4.40E-05	1.80E-06	7.31E+01	<0.51	--	--
Benzoic acid	2.70E+03	5.66E+01	7.14E-05	2.92E-06	2.67E-01	<0.048	--	--
Benzyl alcohol	1.82E+02	6.92E+01		3.06E-05		<0.64	--	--
Bis(2-ethylhexyl) phthalate	2.85E-01	5.90E+03	3.61E-04	1.48E-05	2.78E+01	<0.088	--	--
Butyl benzyl phthalate	4.22E+01	5.57E+02	4.78E-03	1.95E-04	2.63E+00	<0.084	--	--
Dibenzofuran	4.30E+00	4.16E+03	1.40E-01	5.73E-03	1.96E+01	<0.11	--	--
Diethyl phthalate	1.08E+03	2.88E+02		1.85E-05		<0.22	--	--
Dimethyl phthalate	4.29E-06	4.00E+03		1.36E-05		<0.099	--	--
Di-n-butyl phthalate	1.30E+01	3.39E+04	9.39E-07	3.85E-08	1.60E+07	<0.11	--	--
Hexachlorobutadiene	3.20E+00	2.30E+03	2.50E+01	1.02E+00	1.09E+01	<0.27	--	--
Isophorone	1.20E+04	2.49E+01	5.88E-03	2.41E-04	1.18E-01	<0.17	--	--
m-Cresol	2.51E+04	1.66E+01	1.59E-03	6.49E-05	7.84E-02	<0.22	--	--
o-Cresol	3.08E+04	1.48E+01	1.20E-03	4.93E-05	7.00E-02	<0.22	--	--
p-Cresol	2.26E+04	1.76E+01	7.69E-04	3.15E-05	8.30E-02	<0.16	--	--
Pentachlorobenzene	2.87E-02	8.31E-01		2.92E-02		<0.32	--	--
Pentachlorophenol	1.40E+01	5.30E+04	2.75E-03	1.12E-04	2.50E+02	<0.11	--	--
Phenanthrene	1.00E+00	1.40E+04	1.59E-01	6.50E-03	6.61E+01	<0.098	--	--
Phenol	9.30E+04	1.42E+01	5.26E-04	2.15E-05	6.70E-02	<0.21	--	--
p-Nitrophenol	1.60E+04	2.13E+01	1.01E-03	4.13E-05	1.00E-01	<0.16	--	--

Sum of SVOC detections (mg/kg) <10

Total Fraction of Solubility 1.81E-02

Soil/Water/Vapor Concentration Equilibria - Samples With Total VOCs or SVOCs Greater than 10 mg/kg
Modified Feenstra et al. (1991)/Mariner et al. (1997) Model
Casmalia Hazardous Waste Management Facility
Casmalia, California

SAMPLE INFORMATION - SAMPLE SSS00905*

Location	RISBCD-07
Start Depth	22 (ft)
End Depth	24 (ft)
Sample Date	10/6/2004
Analytical Methods:	8260B/GCMS-SIM

ASSUMED SOIL PROPERTIES

Dry Bulk Density (ρb)	1.86 kg/L
Total Porosity (φt)	0.45
Water Filled Porosity (φw)	0.45
Air Filled Porosity (φa)	0
Fraction Organic Content (foc)	0.00472

Chemical	Input Parameters			Chemical Parameters		Results		
VOCs/SVOCs Detected in Selected Type 7 Co-Located Samples	Solubility (S) (mg/L)	Organic Carbon Partition Coefficient (Koc) (L/kg)	Henry's Law Constant (H) (atm-L/mol)	Dimensionless Henry's Law Constant (Hc) (-)	Distribution Coefficient (Kd) (L/kg)	Known Total Soil Concentration (Ct) (mg/kg)	Estimated Pore Water Concentration (Cw) (mg/L)	Fraction of Solubility
Detected VOCs								
1,1,1-Trichloroethane	1.31E+03	1.52E+02	1.67E+01	6.83E-01	7.17E-01	**6**	6.25E+00	4.78E-03
1,1,2,2-Tetrachloroethane	3.06E+03	1.18E+02	4.59E-01	1.88E-02	5.57E-01	<1.2	--	--
1,1,2-Trichloroethane	3.97E+03	5.60E+01	1.08E+00	4.42E-02	2.64E-01	<1.6	--	--
1,1-Dichloroethane	5.30E+03	3.00E+01	5.43E+00	2.22E-01	1.42E-01	**7.5**	1.96E+01	3.69E-03
1,1-Dichloroethylene	3.02E+03	6.50E+01	2.55E+01	1.04E+00	3.07E-01	<2.1	--	--
1,2,3-Trichlorobenzene	1.20E+01	7.40E+03	4.23E+00	1.73E-01	3.49E+01	**18**	5.12E-01	4.27E-02
1,2,3-Trichloropropane	1.90E+03	6.87E+01	3.43E-01	1.40E-02	3.24E-01	<1.4	--	--
1,2,4-Trimethylbenzene	5.76E+01	1.48E+03	5.57E+00	2.28E-01	6.98E+00	**9.9**	1.37E+00	2.38E-02
1,2-Dibromo-3-chloropropane	6.01E-03	1.23E+03		6.01E-03		<2.7	--	--
1,2-Dibromoethane (EDB)	2.73E-02	3.91E+03		2.92E-02		<1.0	--	--
1,2-Dichloroethane	7.13E+03	1.40E+01	1.50E+00	6.13E-02	6.61E-02	<0.94	--	--
1,2-Dichloroethylene, total	4.90E+03	4.08E+01	7.01E-03	2.87E-04	1.92E-01	**25**	5.76E+01	1.17E-02
1,2-Dichloropropane	2.97E+03	5.10E+01	2.62E+00	1.07E-01	2.41E-01	<1.2	--	--
1,3,5-Trimethylbenzene	4.82E+01	1.66E+03	8.77E+00	3.59E-01	7.83E+00	**3.1**	3.84E-01	7.97E-03
2-Butanol	1.50E+04	2.20E+01	1.02E-02	4.17E-04	1.04E-01	<290	--	--
2-Chlorotoluene	4.70E+02	1.60E+02	3.50E+00	1.43E-01	7.55E-01	<2.2	--	--
2-Hexanone	1.40E+04	2.29E+01	2.82E-02	1.15E-03	1.08E-01	<8.6	--	--
3,3,5-Trimethylcyclohexanone	1.20E+04	2.49E+01	5.88E-03	2.41E-04	1.18E-01	<11	--	--
Benzene	1.75E+03	8.30E+01	5.59E+00	2.29E-01	3.92E-01	**5.9**	9.31E+00	5.32E-03
Bromobenzene	4.72E+02	2.24E+02	3.70E+00	1.51E-01	1.06E+00	<1.6	--	--
Bromochloromethane	5.97E-02	1.67E+04		1.33E-01		<1.3	--	--
Bromoform	3.10E+03	8.71E+01		2.19E-02		<1.2	--	--
Carbon disulfide	1.19E+03	4.57E+01	3.03E+01	1.24E+00	2.16E-01	<6.9	--	--
Carbon tetrachloride	7.40E+02	4.39E+02	2.98E+01	1.22E+00	2.07E+00	<1.8	--	--
Chlorobenzene	4.45E+02	3.30E+02	3.90E+00	1.59E-01	1.56E+00	<1.6	--	--
Chloroethane	4.54E-01	6.71E+03		5.92E-01		<4.4	--	--
Chloroform	8.51E+03	4.40E+01	3.58E+00	1.46E-01	2.08E-01	**2.6**	5.78E+00	6.79E-04
Chlorotrifluoroethene	1.16E+04	1.90E+02	3.10E+02	1.27E+01	8.97E-01	<8.8	--	--
Dichlorodifluoromethane	1.40E+01	2.80E+02		1.64E+01		<1.9	--	--
Diisopropyl ether	1.20E+04	2.49E+01	2.57E-03	1.05E-04	1.18E-01	<0.79	--	--
Ethylbenzene	1.52E+02	1.10E+03	6.43E+00	2.63E-01	5.19E+00	**66**	1.21E+01	7.99E-02
Freon 112	1.20E+02			4.09E+00		<8.0	--	--
Freon 113	1.10E+03	1.60E+02	5.21E+02	2.13E+01	7.55E-01	**15**	1.50E+01	1.37E-02
Isopropylbenzene	6.13E+01	1.45E+03	1.15E+01	4.70E-01	6.82E+00	<2.4	--	--
m-Dichlorobenzene	1.34E+02	1.70E+03	3.25E+00	1.33E-01	8.02E+00	**5.7**	6.90E-01	5.15E-03
Methyl acetate	1.00E+06	2.20E+00	2.06E-02	8.42E-04	1.04E-02	<3.0	--	--
Methyl chloride	8.20E+03	3.50E+01	2.40E+01	9.81E-01	1.65E-01	<1.0	--	--
Methyl tert-butyl ether (MTBE)	1.50E+05	6.00E+00	5.87E-01	2.40E-02	2.83E-02	<0.55	--	--
Methylcyclopentane	4.30E+01	5.52E+02	3.62E-01	1.48E-02	2.60E+00	<7.3	--	--
Methylene chloride	2.19E+04	8.80E+00	2.12E+00	8.67E-02	4.15E-02	**2.5**	8.82E+00	4.03E-04
n-Butylbenzene	1.38E+01	2.83E+03	1.31E+01	5.36E-01	1.34E+01	<3.6	--	--
n-Propylbenzene	1.38E+01	2.83E+03	1.31E+01	5.36E-01	1.34E+01	<3.0	--	--
o-Dichlorobenzene	1.36E+02	1.70E+03	1.98E+00	8.10E-02	8.02E+00	**41**	4.96E+00	3.65E-02
o-Xylene	1.75E+02	8.30E+02	5.10E+00	2.09E-01	3.92E+00	**49**	1.18E+01	6.73E-02
p-Dichlorobenzene	7.38E+01	6.17E+02	2.43E+00	9.94E-02	2.91E+00	**6.7**	2.12E+00	2.88E-02
p-Isopropyltoluene	2.34E+01	2.57E+03	1.10E+01	4.50E-01	1.21E+01	<4.1	--	--
Propanal	3.06E+05	4.20E+00	7.69E-02	3.15E-03	1.98E-02	<25	--	--
sec-Butylbenzene	1.70E+01	2.15E+03	1.87E+01	7.65E-01	1.01E+01	<3.4	--	--
Styrene	3.10E+02	7.76E+02		1.13E-01		<2.4	--	--
Tetrachloroethylene	2.37E+02	3.64E+02	1.74E+01	7.12E-01	1.72E+00	**68**	3.47E+01	1.46E-01
Tetrahydrofuran	1.00E+06	9.50E-01	7.00E-02	2.86E-03	4.48E-03	**5.7**	2.31E+01	2.31E-05
Toluene	5.35E+02	3.00E+02	6.37E+00	2.60E-01	1.42E+00	**27**	1.63E+01	3.04E-02
trans-1,2-Dichloroethylene	4.39E+03	5.90E+01	9.16E+00	3.75E-01	2.78E-01	<1.5	--	--
Trichloroethylene	1.38E+03	1.26E+02	9.37E+00	3.83E-01	5.95E-01	**11**	1.31E+01	9.49E-03
Trichlorofluoromethane	1.62E+03	1.59E+02	8.88E+01	3.63E+00	7.50E-01	<0.94	--	--
Vinyl chloride	2.76E+03	1.86E+01	2.70E+01	1.10E+00	8.78E-02	<2.3	--	--
Xylene (total)	1.61E+02	4.07E+02	7.34E+00	3.00E-01	1.92E+00	**270**	1.25E+02	7.75E-01

Sum of VOC detections (mg/kg) 6.46E+02

Detected SVOCs								
1,2,4,5-Tetrachlorobenzene	6.06E-01	5.75E+03	1.20E-03	4.92E-05	2.71E+01	<3.1	--	--
1,2,4-Trichlorobenzene	3.00E+02	1.78E+03	1.42E+00	5.81E-02	8.40E+00	**80**	9.26E+00	3.09E-02
2,3,4,6-Tetrachlorophenol	7.00E+00	9.80E+01	1.30E-03	5.32E-05	4.63E-01	<4.6	--	--
2,4-Dichlorophenol	4.60E+03	3.80E+02	2.75E-03	1.12E-04	1.79E+00	<1.9	--	--
2,4-Dimethylphenol	4.20E+03	2.22E+02	2.38E-03	9.73E-05	1.05E+00	**2.9**	2.25E+00	5.35E-04
2,6-Dinitrotoluene	3.05E-05	3.52E+02		3.02E-05		<1.1	--	--
2-Methylnaphthalene	2.54E+01	8.50E+03	5.18E-01	2.12E-02	4.01E+01	**19**	4.71E-01	1.85E-02

Soil/Water/Vapor Concentration Equilibria - Samples With Total VOCs or SVOCs Greater than 10 mg/kg
Modified Feenstra et al. (1991)/Mariner et al. (1997) Model
Casmalia Hazardous Waste Management Facility
Casmalia, California

SAMPLE INFORMATION - SAMPLE SSS00905*

Location	RISBCD-07
Start Depth	22 (ft)
End Depth	24 (ft)
Sample Date	10/6/2004
Analytical Methods:	8260B/GCMS-SIM

ASSUMED SOIL PROPERTIES

Dry Bulk Density (ρb)	1.86 kg/L
Total Porosity (φt)	0.45
Water Filled Porosity (φw)	0.45
Air Filled Porosity (φa)	0
Fraction Organic Content (foc)	0.00472

Chemical	Input Parameters			Chemical Parameters		Results		
VOCs/SVOCs Detected in Selected Type 7 Co-Located Samples	Solubility (S) (mg/L)	Organic Carbon Partition Coefficient (Koc) (L/kg)	Henry's Law Constant (H) (atm-L/mol)	Dimensionless Henry's Law Constant (Hc) (-)	Distribution Coefficient (Kd) (L/kg)	Known Total Soil Concentration (Ct) (mg/kg)	Estimated Pore Water Concentration (Cw) (mg/L)	Fraction of Solubility
Detected SVOCs								
3-Methylcholanthrene	1.00E+01	1.00E+07		2.72E-01		<3.5	--	--
Acetophenone	5.50E+03	3.83E+01	9.09E-03	3.72E-04	1.81E-01	<3.3	--	--
Aramite	1.00E-01	1.55E+04	4.40E-05	1.80E-06	7.31E+01	<5.4	--	--
Benzoic acid	2.70E+03	5.66E+01	7.14E-05	2.92E-06	2.67E-01	<0.51	--	--
Benzyl alcohol	1.82E+02	6.92E+01		3.06E-05		<6.8	--	--
Bis(2-ethylhexyl) phthalate	2.85E-01	5.90E+03	3.61E-04	1.48E-05	2.78E+01	**100**	3.56E+00	1.25E+01
Butyl benzyl phthalate	4.22E+01	5.57E+02	4.78E-03	1.95E-04	2.63E+00	**29**	1.01E+01	2.39E-01
Dibenzofuran	4.30E+00	4.16E+03	1.40E-01	5.73E-03	1.96E+01	**1.1**	5.54E-02	1.29E-02
Diethyl phthalate	1.08E+03	2.88E+02		1.85E-05		<2.3	--	--
Dimethyl phthalate	4.29E-06	4.00E+03		1.36E-05		<1.1	--	--
Di-n-butyl phthalate	1.30E+01	3.39E+04	9.39E-07	3.85E-08	1.60E+07	**13**	8.12E-07	6.25E-08
Hexachlorobutadiene	3.20E+00	2.30E+03	2.50E+01	1.02E+00	1.09E+01	**6.3**	5.67E-01	1.77E-01
Isophorone	1.20E+04	2.49E+01	5.88E-03	2.41E-04	1.18E-01	<1.9	--	--
m-Cresol	2.51E+04	1.66E+01	1.59E-03	6.49E-05	7.84E-02	<2.3	--	--
p-Cresol	2.26E+04	1.76E+01	7.69E-04	3.15E-05	8.30E-02	<1.7	--	--
Pentachlorobenzene	2.87E-02	8.31E-01		2.92E-02		<3.4	--	--
Pentachlorophenol	1.40E+01	5.30E+04	2.75E-03	1.12E-04	2.50E+02	**4.5**	1.80E-02	1.28E-03
Phenanthrene	1.00E+00	1.40E+04	1.59E-01	6.50E-03	6.61E+01	**2.6**	3.92E-02	3.92E-02
Phenol	9.30E+04	1.42E+01	5.26E-04	2.15E-05	6.70E-02	**2.5**	8.09E+00	8.70E-05
p-Nitrophenol	1.60E+04	2.13E+01	1.01E-03	4.13E-05	1.00E-01	<1.7	--	--

Sum of SVOC detections (mg/kg) 5.07E+02

Total Fraction of Solubility 1.43E+01

Soil/Water/Vapor Concentration Equilibria - Samples With Total VOCs or SVOCs Greater than 10 mg/kg
Modified Feenstra et al. (1991)/Mariner et al. (1997) Model
Casmalia Hazardous Waste Management Facility
Casmalia, California

SAMPLE INFORMATION - SAMPLE SSS00910*

Location	RISBON-59
Start Depth	29 (ft)
End Depth	32.5 (ft)
Sample Date	10/20/2004
Analytical Methods:	8260B/GCMS-SIM

ASSUMED SOIL PROPERTIES

Dry Bulk Density (ρb)	1.86 kg/L
Total Porosity (φt)	0.45
Water Filled Porosity (φw)	0.45
Air Filled Porosity (φa)	0
Fraction Organic Content (foc)	0.00472

Chemical	Input Parameters			Chemical Parameters		Results		
VOCs/SVOCs Detected in Selected Type 7 Co-Located Samples	Solubility (S) (mg/L)	Organic Carbon Partition Coefficient (Koc) (L/kg)	Henry's Law Constant (H) (atm-L/mol)	Dimensionless Henry's Law Constant (Hc) (-)	Distribution Coefficient (Kd) (L/kg)	Known Total Soil Concentration (Ct) (mg/kg)	Estimated Pore Water Concentration (Cw) (mg/L)	Fraction of Solubility
Detected VOCs								
1,1,1-Trichloroethane	1.31E+03	1.52E+02	1.67E+01	6.83E-01	7.17E-01	<0.18	--	--
1,1,2,2-Tetrachloroethane	3.06E+03	1.18E+02	4.59E-01	1.88E-02	5.57E-01	<0.15	--	--
1,1,2-Trichloroethane	3.97E+03	5.60E+01	1.08E+00	4.42E-02	2.64E-01	<0.19	--	--
1,1-Dichloroethane	5.30E+03	3.00E+01	5.43E+00	2.22E-01	1.42E-01	<0.13	--	--
1,1-Dichloroethylene	3.02E+03	6.50E+01	2.55E+01	1.04E+00	3.07E-01	<0.25	--	--
1,2,3-Trichlorobenzene	1.20E+01	7.40E+03	4.23E+00	1.73E-01	3.49E+01	<0.35	--	--
1,2,3-Trichloropropane	1.90E+03	6.87E+01	3.43E-01	1.40E-02	3.24E-01	<0.17	--	--
1,2,4-Trimethylbenzene	5.76E+01	1.48E+03	5.57E+00	2.28E-01	6.98E+00	**11**	1.52E+00	2.64E-02
1,2-Dibromo-3-chloropropane	6.01E-03	1.23E+03		6.01E-03		<0.32	--	--
1,2-Dibromoethane (EDB)	2.73E-02	3.91E+03		2.92E-02		<0.12	--	--
1,2-Dichloroethane	7.13E+03	1.40E+01	1.50E+00	6.13E-02	6.61E-02	<0.11	--	--
1,2-Dichloroethylene, total	4.90E+03	4.08E+01	7.01E-03	2.87E-04	1.92E-01	<0.17	--	--
1,2-Dichloropropane	2.97E+03	5.10E+01	2.62E+00	1.07E-01	2.41E-01	<0.14	--	--
1,3,5-Trimethylbenzene	4.82E+01	1.66E+03	8.77E+00	3.59E-01	7.83E+00	**2.3**	2.85E-01	5.91E-03
2-Butanol	1.50E+04	2.20E+01	1.02E-02	4.17E-04	1.04E-01	<34	--	--
2-Chlorotoluene	4.70E+02	1.60E+02	3.50E+00	1.43E-01	7.55E-01	<0.26	--	--
2-Hexanone	1.40E+04	2.29E+01	2.82E-02	1.15E-03	1.08E-01	<1.0	--	--
3,3,5-Trimethylcyclohexanone	1.20E+04	2.49E+01	5.88E-03	2.41E-04	1.18E-01	<1.2	--	--
Benzene	1.75E+03	8.30E+01	5.59E+00	2.29E-01	3.92E-01	**0.63**	9.94E-01	5.68E-04
Bromobenzene	4.72E+02	2.24E+02	3.70E+00	1.51E-01	1.06E+00	<0.19	--	--
Bromochloromethane	5.97E-02	1.67E+04		1.33E-01		<0.15	--	--
Bromoform	3.10E+03	8.71E+01		2.19E-02		<0.14	--	--
Carbon disulfide	1.19E+03	4.57E+01	3.03E+01	1.24E+00	2.16E-01	<0.81	--	--
Carbon tetrachloride	7.40E+02	4.39E+02	2.98E+01	1.22E+00	2.07E+00	<0.21	--	--
Chlorobenzene	4.45E+02	3.30E+02	3.90E+00	1.59E-01	1.56E+00	<0.19	--	--
Chloroethane	4.54E-01	6.71E+03		5.92E-01		<0.52	--	--
Chloroform	8.51E+03	4.40E+01	3.58E+00	1.46E-01	2.08E-01	<0.17	--	--
Chlorotrifluoroethene	1.16E+04	1.90E+02	3.10E+02	1.27E+01	8.97E-01	<1.0	--	--
Dichlorodifluoromethane	1.40E+01	2.80E+02		1.64E+01		<0.22	--	--
Diisopropyl ether	1.20E+04	2.49E+01	2.57E-03	1.05E-04	1.18E-01	<0.093	--	--
Ethylbenzene	1.52E+02	1.10E+03	6.43E+00	2.63E-01	5.19E+00	**4.8**	8.83E-01	5.81E-03
Freon 112	1.20E+02			4.09E+00		<0.95	--	--
Freon 113	1.10E+03	1.60E+02	5.21E+02	2.13E+01	7.55E-01	<0.28	--	--
Isopropylbenzene	6.13E+01	1.45E+03	1.15E+01	4.70E-01	6.82E+00	**1.5**	2.12E-01	3.46E-03
m-Dichlorobenzene	1.34E+02	1.70E+03	3.25E+00	1.33E-01	8.02E+00	<0.29	--	--
Methyl acetate	1.00E+06	2.20E+00	2.06E-02	8.42E-04	1.04E-02	<0.36	--	--
Methyl chloride	8.20E+03	3.50E+01	2.40E+01	9.81E-01	1.65E-01	<0.12	--	--
Methyl tert-butyl ether (MTBE)	1.50E+05	6.00E+00	5.87E-01	2.40E-02	2.83E-02	<0.065	--	--
Methylcyclopentane	4.30E+01	5.52E+02	3.62E-01	1.48E-02	2.60E+00	**9.8**	3.44E+00	8.01E-02
Methylene chloride	2.19E+04	8.80E+00	2.12E+00	8.67E-02	4.15E-02	<0.072	--	--
n-Butylbenzene	1.38E+01	2.83E+03	1.31E+01	5.36E-01	1.34E+01	**3**	2.21E-01	1.60E-02
n-Propylbenzene	1.38E+01	2.83E+03	1.31E+01	5.36E-01	1.34E+01	**3.5**	2.57E-01	1.86E-02
o-Dichlorobenzene	1.36E+02	1.70E+03	1.98E+00	8.10E-02	8.02E+00	<0.26	--	--
o-Xylene	1.75E+02	8.30E+02	5.10E+00	2.09E-01	3.92E+00	**3.5**	8.41E-01	4.81E-03
p-Dichlorobenzene	7.38E+01	6.17E+02	2.43E+00	9.94E-02	2.91E+00	<0.23	--	--
p-Isopropyltoluene	2.34E+01	2.57E+03	1.10E+01	4.50E-01	1.21E+01	**2.4**	1.94E-01	8.29E-03
Propanal	3.06E+05	4.20E+00	7.69E-02	3.15E-03	1.98E-02	<2.9	--	--
sec-Butylbenzene	1.70E+01	2.15E+03	1.87E+01	7.65E-01	1.01E+01	**2.1**	2.02E-01	1.19E-02
Styrene	3.10E+02	7.76E+02		1.13E-01		<0.29	--	--
Tetrachloroethylene	2.37E+02	3.64E+02	1.74E+01	7.12E-01	1.72E+00	<0.26	--	--
Tetrahydrofuran	1.00E+06	9.50E-01	7.00E-02	2.86E-03	4.48E-03	<0.27	--	--
Toluene	5.35E+02	3.00E+02	6.37E+00	2.60E-01	1.42E+00	<0.26	--	--
trans-1,2-Dichloroethylene	4.39E+03	5.90E+01	9.16E+00	3.75E-01	2.78E-01	<0.17	--	--
Trichloroethylene	1.38E+03	1.26E+02	9.37E+00	3.83E-01	5.95E-01	<0.16	--	--
Trichlorofluoromethane	1.62E+03	1.59E+02	8.88E+01	3.63E+00	7.50E-01	<0.11	--	--
Vinyl chloride	2.76E+03	1.86E+01	2.70E+01	1.10E+00	8.78E-02	<0.27	--	--
Xylene (total)	1.61E+02	4.07E+02	7.34E+00	3.00E-01	1.92E+00	**8.3**	3.84E+00	2.38E-02

Sum of VOC detections (mg/kg) 5.28E+01

Detected SVOCs								
1,2,4,5-Tetrachlorobenzene	6.06E-01	5.75E+03	1.20E-03	4.92E-05	2.71E+01	<0.60	--	--
1,2,4-Trichlorobenzene	3.00E+02	1.78E+03	1.42E+00	5.81E-02	8.40E+00	<0.49	--	--
2,3,4,6-Tetrachlorophenol	7.00E+00	9.80E+01	1.30E-03	5.32E-05	4.63E-01	<0.89	--	--
2,4-Dichlorophenol	4.60E+03	3.80E+02	2.75E-03	1.12E-04	1.79E+00	<0.36	--	--
2,4-Dimethylphenol	4.20E+03	2.22E+02	2.38E-03	9.73E-05	1.05E+00	<0.33	--	--
2,6-Dinitrotoluene	3.05E-05	3.52E+02		3.02E-05		<0.22	--	--
2-Methylnaphthalene	2.54E+01	8.50E+03	5.18E-01	2.12E-02	4.01E+01	**2.8**	6.94E-02	2.73E-03

Soil/Water/Vapor Concentration Equilibria - Samples With Total VOCs or SVOCs Greater than 10 mg/kg
Modified Feenstra et al. (1991)/Mariner et al. (1997) Model
Casmalia Hazardous Waste Management Facility
Casmalia, California

SAMPLE INFORMATION - SAMPLE SSS00910*

Location	RISBON-59
Start Depth	29 (ft)
End Depth	32.5 (ft)
Sample Date	10/20/2004
Analytical Methods:	8260B/GCMS-SIM

ASSUMED SOIL PROPERTIES

Dry Bulk Density (ρb)	1.86 kg/L
Total Porosity (φt)	0.45
Water Filled Porosity (φw)	0.45
Air Filled Porosity (φa)	0
Fraction Organic Content (foc)	0.00472

Chemical	Input Parameters			Chemical Parameters		Results		
VOCs/SVOCs Detected in Selected Type 7 Co-Located Samples	Solubility (S) (mg/L)	Organic Carbon Partition Coefficient (Koc) (L/kg)	Henry's Law Constant (H) (atm-L/mol)	Dimensionless Henry's Law Constant (Hc) (-)	Distribution Coefficient (Kd) (L/kg)	Known Total Soil Concentration (Ct) (mg/kg)	Estimated Pore Water Concentration (Cw) (mg/L)	Fraction of Solubility
Detected SVOCs								
3-Methylcholanthrene	1.00E+01	1.00E+07		2.72E-01		<0.67	--	--
Acetophenone	5.50E+03	3.83E+01	9.09E-03	3.72E-04	1.81E-01	<0.64	--	--
Aramite	1.00E-01	1.55E+04	4.40E-05	1.80E-06	7.31E+01	<1.1	--	--
Benzoic acid	2.70E+03	5.66E+01	7.14E-05	2.92E-06	2.67E-01	<0.099	--	--
Benzyl alcohol	1.82E+02	6.92E+01		3.06E-05		<1.3	--	--
Bis(2-ethylhexyl) phthalate	2.85E-01	5.90E+03	3.61E-04	1.48E-05	2.78E+01	<0.18	--	--
Butyl benzyl phthalate	4.22E+01	5.57E+02	4.78E-03	1.95E-04	2.63E+00	<0.17	--	--
Dibenzofuran	4.30E+00	4.16E+03	1.40E-01	5.73E-03	1.96E+01	<0.22	--	--
Diethyl phthalate	1.08E+03	2.88E+02		1.85E-05		<0.45	--	--
Dimethyl phthalate	4.29E-06	4.00E+03		1.36E-05		<0.21	--	--
Di-n-butyl phthalate	1.30E+01	3.39E+04	9.39E-07	3.85E-08	1.60E+07	<0.22	--	--
Hexachlorobutadiene	3.20E+00	2.30E+03	2.50E+01	1.02E+00	1.09E+01	<0.55	--	--
Isophorone	1.20E+04	2.49E+01	5.88E-03	2.41E-04	1.18E-01	<0.36	--	--
m-Cresol	2.51E+04	1.66E+01	1.59E-03	6.49E-05	7.84E-02	<0.45	--	--
o-Cresol	3.08E+04	1.48E+01	1.20E-03	4.93E-05	7.00E-02	<0.45	--	--
p-Cresol	2.26E+04	1.76E+01	7.69E-04	3.15E-05	8.30E-02	<0.33	--	--
Pentachlorobenzene	2.87E-02	8.31E-01		2.92E-02		<0.66	--	--
Pentachlorophenol	1.40E+01	5.30E+04	2.75E-03	1.12E-04	2.50E+02	<0.22	--	--
Phenanthrene	1.00E+00	1.40E+04	1.59E-01	6.50E-03	6.61E+01	**0.6**	9.05E-03	9.05E-03
Phenol	9.30E+04	1.42E+01	5.26E-04	2.15E-05	6.70E-02	<0.43	--	--
p-Nitrophenol	1.60E+04	2.13E+01	1.01E-03	4.13E-05	1.00E-01	<0.33	--	--

Sum of SVOC detections (mg/kg) <10

Total Fraction of Solubility 2.18E-01

Soil/Water/Vapor Concentration Equilibria - Samples With Total VOCs or SVOCs Greater than 10 mg/kg
Modified Feenstra et al. (1991)/Mariner et al. (1997) Model
Casmalia Hazardous Waste Management Facility
Casmalia, California

SAMPLE INFORMATION - SAMPLE SSS00913*

Location	RISBCD-13
Start Depth	30 (ft)
End Depth	31.5 (ft)
Sample Date	10/25/2004
Analytical Methods:	8260B/GCMS-SIM

ASSUMED SOIL PROPERTIES

Dry Bulk Density (ρb)	1.86 kg/L
Total Porosity (φt)	0.45
Water Filled Porosity (φw)	0.45
Air Filled Porosity (φa)	0
Fraction Organic Content (foc)	0.00472

Chemical	Input Parameters			Chemical Parameters		Results		
VOCs/SVOCs Detected in Selected Type 7 Co-Located Samples	Solubility (S) (mg/L)	Organic Carbon Partition Coefficient (Koc) (L/kg)	Henry's Law Constant (H) (atm-L/mol)	Dimensionless Henry's Law Constant (Hc) (-)	Distribution Coefficient (Kd) (L/kg)	Known Total Soil Concentration (Ct) (mg/kg)	Estimated Pore Water Concentration (Cw) (mg/L)	Fraction of Solubility
Detected VOCs								
1,1,1-Trichloroethane	1.31E+03	1.52E+02	1.67E+01	6.83E-01	7.17E-01	**12**	1.25E+01	9.55E-03
1,1,2,2-Tetrachloroethane	3.06E+03	1.18E+02	4.59E-01	1.88E-02	5.57E-01	<3.3	--	--
1,1,2-Trichloroethane	3.97E+03	5.60E+01	1.08E+00	4.42E-02	2.64E-01	<4.3	--	--
1,1-Dichloroethane	5.30E+03	3.00E+01	5.43E+00	2.22E-01	1.42E-01	**6.8**	1.77E+01	3.34E-03
1,1-Dichloroethylene	3.02E+03	6.50E+01	2.55E+01	1.04E+00	3.07E-01	<5.6	--	--
1,2,3-Trichlorobenzene	1.20E+01	7.40E+03	4.23E+00	1.73E-01	3.49E+01	<7.7	--	--
1,2,3-Trichloropropane	1.90E+03	6.87E+01	3.43E-01	1.40E-02	3.24E-01	<3.7	--	--
1,2,4-Trimethylbenzene	5.76E+01	1.48E+03	5.57E+00	2.28E-01	6.98E+00	<7.5	--	--
1,2-Dibromo-3-chloropropane	6.01E-03	1.23E+03		6.01E-03		<7.0	--	--
1,2-Dibromoethane (EDB)	2.73E-02	3.91E+03		2.92E-02		<2.7	--	--
1,2-Dichloroethane	7.13E+03	1.40E+01	1.50E+00	6.13E-02	6.61E-02	**2.5**	8.12E+00	1.14E-03
1,2-Dichloroethylene, total	4.90E+03	4.08E+01	7.01E-03	2.87E-04	1.92E-01	<3.8	--	--
1,2-Dichloropropane	2.97E+03	5.10E+01	2.62E+00	1.07E-01	2.41E-01	<3.1	--	--
1,3,5-Trimethylbenzene	4.82E+01	1.66E+03	8.77E+00	3.59E-01	7.83E+00	<6.5	--	--
2-Butanol	1.50E+04	2.20E+01	1.02E-02	4.17E-04	1.04E-01	<750	--	--
2-Chlorotoluene	4.70E+02	1.60E+02	3.50E+00	1.43E-01	7.55E-01	<5.8	--	--
2-Hexanone	1.40E+04	2.29E+01	2.82E-02	1.15E-03	1.08E-01	<22	--	--
3,3,5-Trimethylcyclohexanone	1.20E+04	2.49E+01	5.88E-03	2.41E-04	1.18E-01	<28	--	--
Benzene	1.75E+03	8.30E+01	5.59E+00	2.29E-01	3.92E-01	**7.1**	1.12E+01	6.40E-03
Bromobenzene	4.72E+02	2.24E+02	3.70E+00	1.51E-01	1.06E+00	<4.2	--	--
Bromochloromethane	5.97E-02	1.67E+04		1.33E-01		<3.3	--	--
Bromoform	3.10E+03	8.71E+01		2.19E-02		<3.1	--	--
Carbon disulfide	1.19E+03	4.57E+01	3.03E+01	1.24E+00	2.16E-01	<18	--	--
Carbon tetrachloride	7.40E+02	4.39E+02	2.98E+01	1.22E+00	2.07E+00	<4.7	--	--
Chlorobenzene	4.45E+02	3.30E+02	3.90E+00	1.59E-01	1.56E+00	<4.3	--	--
Chloroethane	4.54E-01	6.71E+03		5.92E-01		<12	--	--
Chloroform	8.51E+03	4.40E+01	3.58E+00	1.46E-01	2.08E-01	**9.8**	2.18E+01	2.56E-03
Chlorotrifluoroethene	1.16E+04	1.90E+02	3.10E+02	1.27E+01	8.97E-01	<23	--	--
Dichlorodifluoromethane	1.40E+01	2.80E+02		1.64E+01		<4.9	--	--
Diisopropyl ether	1.20E+04	2.49E+01	2.57E-03	1.05E-04	1.18E-01	<2.1	--	--
Ethylbenzene	1.52E+02	1.10E+03	6.43E+00	2.63E-01	5.19E+00	**13**	2.39E+00	1.57E-02
Freon 112	1.20E+02			4.09E+00		<21	--	--
Freon 113	1.10E+03	1.60E+02	5.21E+02	2.13E+01	7.55E-01	<6.2	--	--
Isopropylbenzene	6.13E+01	1.45E+03	1.15E+01	4.70E-01	6.82E+00	<6.4	--	--
m-Dichlorobenzene	1.34E+02	1.70E+03	3.25E+00	1.33E-01	8.02E+00	<6.4	--	--
Methyl acetate	1.00E+06	2.20E+00	2.06E-02	8.42E-04	1.04E-02	<8.0	--	--
Methyl chloride	8.20E+03	3.50E+01	2.40E+01	9.81E-01	1.65E-01	**10**	2.46E+01	3.00E-03
Methyl tert-butyl ether (MTBE)	1.50E+05	6.00E+00	5.87E-01	2.40E-02	2.83E-02	<1.4	--	--
Methylcyclopentane	4.30E+01	5.52E+02	3.62E-01	1.48E-02	2.60E+00	<19	--	--
Methylene chloride	2.19E+04	8.80E+00	2.12E+00	8.67E-02	4.15E-02	**110**	3.88E+02	1.77E-02
n-Butylbenzene	1.38E+01	2.83E+03	1.31E+01	5.36E-01	1.34E+01	<9.5	--	--
n-Propylbenzene	1.38E+01	2.83E+03	1.31E+01	5.36E-01	1.34E+01	<8.0	--	--
o-Dichlorobenzene	1.36E+02	1.70E+03	1.98E+00	8.10E-02	8.02E+00	<5.7	--	--
o-Xylene	1.75E+02	8.30E+02	5.10E+00	2.09E-01	3.92E+00	**7.3**	1.76E+00	1.00E-02
p-Dichlorobenzene	7.38E+01	6.17E+02	2.43E+00	9.94E-02	2.91E+00	<5.0	--	--
p-Isopropyltoluene	2.34E+01	2.57E+03	1.10E+01	4.50E-01	1.21E+01	<11	--	--
Propanal	3.06E+05	4.20E+00	7.69E-02	3.15E-03	1.98E-02	<64	--	--
sec-Butylbenzene	1.70E+01	2.15E+03	1.87E+01	7.65E-01	1.01E+01	<8.9	--	--
Styrene	3.10E+02	7.76E+02		1.13E-01		<6.4	--	--
Tetrachloroethylene	2.37E+02	3.64E+02	1.74E+01	7.12E-01	1.72E+00	**24**	1.22E+01	5.17E-02
Tetrahydrofuran	1.00E+06	9.50E-01	7.00E-02	2.86E-03	4.48E-03	**16**	6.49E+01	6.49E-05
Toluene	5.35E+02	3.00E+02	6.37E+00	2.60E-01	1.42E+00	**16**	9.65E+00	1.80E-02
trans-1,2-Dichloroethylene	4.39E+03	5.90E+01	9.16E+00	3.75E-01	2.78E-01	<3.8	--	--
Trichloroethylene	1.38E+03	1.26E+02	9.37E+00	3.83E-01	5.95E-01	**6.2**	7.41E+00	5.35E-03
Trichlorofluoromethane	1.62E+03	1.59E+02	8.88E+01	3.63E+00	7.50E-01	<2.5	--	--
Vinyl chloride	2.76E+03	1.86E+01	2.70E+01	1.10E+00	8.78E-02	<6.1	--	--
Xylene (total)	1.61E+02	4.07E+02	7.34E+00	3.00E-01	1.92E+00	**39**	1.80E+01	1.12E-01

Sum of VOC detections (mg/kg) 2.80E+02

Detected SVOCs								
1,2,4,5-Tetrachlorobenzene	6.06E-01	5.75E+03	1.20E-03	4.92E-05	2.71E+01	<0.29	--	--
1,2,4-Trichlorobenzene	3.00E+02	1.78E+03	1.42E+00	5.81E-02	8.40E+00	**2.6**	3.01E-01	1.00E-03
2,3,4,6-Tetrachlorophenol	7.00E+00	9.80E+01	1.30E-03	5.32E-05	4.63E-01	<0.43	--	--
2,4-Dichlorophenol	4.60E+03	3.80E+02	2.75E-03	1.12E-04	1.79E+00	<0.18	--	--
2,4-Dimethylphenol	4.20E+03	2.22E+02	2.38E-03	9.73E-05	1.05E+00	<0.16	--	--
2,6-Dinitrotoluene	3.05E-05	3.52E+02		3.02E-05		<0.10	--	--
2-Methylnaphthalene	2.54E+01	8.50E+03	5.18E-01	2.12E-02	4.01E+01	**1.6**	3.96E-02	1.56E-03

Soil/Water/Vapor Concentration Equilibria - Samples With Total VOCs or SVOCs Greater than 10 mg/kg
Modified Feenstra et al. (1991)/Mariner et al. (1997) Model
Casmalia Hazardous Waste Management Facility
Casmalia, California

SAMPLE INFORMATION - SAMPLE SSS00913*

Location	RISBCD-13
Start Depth	30 (ft)
End Depth	31.5 (ft)
Sample Date	10/25/2004
Analytical Methods:	8260B/GCMS-SIM

ASSUMED SOIL PROPERTIES

Dry Bulk Density (ρb)	1.86 kg/L
Total Porosity (φt)	0.45
Water Filled Porosity (φw)	0.45
Air Filled Porosity (φa)	0
Fraction Organic Content (foc)	0.00472

Chemical	Input Parameters			Chemical Parameters		Results		
VOCs/SVOCs Detected in Selected Type 7 Co-Located Samples	Solubility (S) (mg/L)	Organic Carbon Partition Coefficient (Koc) (L/kg)	Henry's Law Constant (H) (atm-L/mol)	Dimensionless Henry's Law Constant (Hc) (-)	Distribution Coefficient (Kd) (L/kg)	Known Total Soil Concentration (Ct) (mg/kg)	Estimated Pore Water Concentration (Cw) (mg/L)	Fraction of Solubility
Detected SVOCs								
3-Methylcholanthrene	1.00E+01	1.00E+07		2.72E-01		<0.33	--	--
Acetophenone	5.50E+03	3.83E+01	9.09E-03	3.72E-04	1.81E-01	<0.31	--	--
Aramite	1.00E-01	1.55E+04	4.40E-05	1.80E-06	7.31E+01	<0.51	--	--
Benzoic acid	2.70E+03	5.66E+01	7.14E-05	2.92E-06	2.67E-01	<0.048	--	--
Benzyl alcohol	1.82E+02	6.92E+01		3.06E-05		<0.64	--	--
Bis(2-ethylhexyl) phthalate	2.85E-01	5.90E+03	3.61E-04	1.48E-05	2.78E+01	**16**	5.70E-01	2.00E+00
Butyl benzyl phthalate	4.22E+01	5.57E+02	4.78E-03	1.95E-04	2.63E+00	**3.5**	1.22E+00	2.89E-02
Dibenzofuran	4.30E+00	4.16E+03	1.40E-01	5.73E-03	1.96E+01	**0.11**	5.54E-03	1.29E-03
Diethyl phthalate	1.08E+03	2.88E+02		1.85E-05		<0.22	--	--
Dimethyl phthalate	4.29E-06	4.00E+03		1.36E-05		<0.10	--	--
Di-n-butyl phthalate	1.30E+01	3.39E+04	9.39E-07	3.85E-08	1.60E+07	**1.3**	8.12E-08	6.25E-09
Hexachlorobutadiene	3.20E+00	2.30E+03	2.50E+01	1.02E+00	1.09E+01	**0.52**	4.68E-02	1.46E-02
Isophorone	1.20E+04	2.49E+01	5.88E-03	2.41E-04	1.18E-01	<0.18	--	--
m-Cresol	2.51E+04	1.66E+01	1.59E-03	6.49E-05	7.84E-02	<0.22	--	--
o-Cresol	3.08E+04	1.48E+01	1.20E-03	4.93E-05	7.00E-02	**8**	2.56E+01	8.33E-04
p-Cresol	2.26E+04	1.76E+01	7.69E-04	3.15E-05	8.30E-02	**0.68**	2.09E+00	9.26E-05
Pentachlorobenzene	2.87E-02	8.31E-01		2.92E-02		<0.32	--	--
Pentachlorophenol	1.40E+01	5.30E+04	2.75E-03	1.12E-04	2.50E+02	<0.11	--	--
Phenanthrene	1.00E+00	1.40E+04	1.59E-01	6.50E-03	6.61E+01	**0.2**	3.02E-03	3.02E-03
Phenol	9.30E+04	1.42E+01	5.26E-04	2.15E-05	6.70E-02	<0.21	--	--
p-Nitrophenol	1.60E+04	2.13E+01	1.01E-03	4.13E-05	1.00E-01	<0.16	--	--

Sum of SVOC detections (mg/kg) 4.15E+01

Total Fraction of Solubility 2.31E+00

Soil/Water/Vapor Concentration Equilibria - Samples With Total VOCs or SVOCs Greater than 10 mg/kg
Modified Feenstra et al. (1991)/Mariner et al. (1997) Model
Casmalia Hazardous Waste Management Facility
Casmalia, California

SAMPLE INFORMATION - SAMPLE SSS00918*

Location	RISBCD-06
Start Depth	24 (ft)
End Depth	25.5 (ft)
Sample Date	10/26/2004
Analytical Methods:	8260B/GCMS-SIM

ASSUMED SOIL PROPERTIES

Dry Bulk Density (ρb)	1.86 kg/L
Total Porosity (φt)	0.45
Water Filled Porosity (φw)	0.45
Air Filled Porosity (φa)	0
Fraction Organic Content (foc)	0.00472

Chemical	Input Parameters			Chemical Parameters		Results		
VOCs/SVOCs Detected in Selected Type 7 Co-Located Samples	Solubility (S) (mg/L)	Organic Carbon Partition Coefficient (Koc) (L/kg)	Henry's Law Constant (H) (atm-L/mol)	Dimensionless Henry's Law Constant (Hc) (-)	Distribution Coefficient (Kd) (L/kg)	Known Total Soil Concentration (Ct) (mg/kg)	Estimated Pore Water Concentration (Cw) (mg/L)	Fraction of Solubility
Detected VOCs								
1,1,1-Trichloroethane	1.31E+03	1.52E+02	1.67E+01	6.83E-01	7.17E-01	**13**	1.36E+01	1.03E-02
1,1,2,2-Tetrachloroethane	3.06E+03	1.18E+02	4.59E-01	1.88E-02	5.57E-01	<2.9	--	--
1,1,2-Trichloroethane	3.97E+03	5.60E+01	1.08E+00	4.42E-02	2.64E-01	<3.8	--	--
1,1-Dichloroethane	5.30E+03	3.00E+01	5.43E+00	2.22E-01	1.42E-01	<2.5	--	--
1,1-Dichloroethylene	3.02E+03	6.50E+01	2.55E+01	1.04E+00	3.07E-01	<5.0	--	--
1,2,3-Trichlorobenzene	1.20E+01	7.40E+03	4.23E+00	1.73E-01	3.49E+01	<6.8	--	--
1,2,3-Trichloropropane	1.90E+03	6.87E+01	3.43E-01	1.40E-02	3.24E-01	<3.3	--	--
1,2,4-Trimethylbenzene	5.76E+01	1.48E+03	5.57E+00	2.28E-01	6.98E+00	<6.7	--	--
1,2-Dibromo-3-chloropropane	6.01E-03	1.23E+03		6.01E-03		<6.2	--	--
1,2-Dibromoethane (EDB)	2.73E-02	3.91E+03		2.92E-02		<2.4	--	--
1,2-Dichloroethane	7.13E+03	1.40E+01	1.50E+00	6.13E-02	6.61E-02	<2.2	--	--
1,2-Dichloroethylene, total	4.90E+03	4.08E+01	7.01E-03	2.87E-04	1.92E-01	<3.4	--	--
1,2-Dichloropropane	2.97E+03	5.10E+01	2.62E+00	1.07E-01	2.41E-01	<2.8	--	--
1,3,5-Trimethylbenzene	4.82E+01	1.66E+03	8.77E+00	3.59E-01	7.83E+00	<5.7	--	--
2-Butanol	1.50E+04	2.20E+01	1.02E-02	4.17E-04	1.04E-01	<660	--	--
2-Chlorotoluene	4.70E+02	1.60E+02	3.50E+00	1.43E-01	7.55E-01	<5.2	--	--
2-Hexanone	1.40E+04	2.29E+01	2.82E-02	1.15E-03	1.08E-01	<20	--	--
3,3,5-Trimethylcyclohexanone	1.20E+04	2.49E+01	5.88E-03	2.41E-04	1.18E-01	<25	--	--
Benzene	1.75E+03	8.30E+01	5.59E+00	2.29E-01	3.92E-01	<3.7	--	--
Bromobenzene	4.72E+02	2.24E+02	3.70E+00	1.51E-01	1.06E+00	<3.8	--	--
Bromochloromethane	5.97E-02	1.67E+04		1.33E-01		<3.0	--	--
Bromoform	3.10E+03	8.71E+01		2.19E-02		<2.8	--	--
Carbon disulfide	1.19E+03	4.57E+01	3.03E+01	1.24E+00	2.16E-01	<16	--	--
Carbon tetrachloride	7.40E+02	4.39E+02	2.98E+01	1.22E+00	2.07E+00	<4.2	--	--
Chlorobenzene	4.45E+02	3.30E+02	3.90E+00	1.59E-01	1.56E+00	<3.8	--	--
Chloroethane	4.54E-01	6.71E+03		5.92E-01		<10	--	--
Chloroform	8.51E+03	4.40E+01	3.58E+00	1.46E-01	2.08E-01	<3.3	--	--
Chlorotrifluoroethene	1.16E+04	1.90E+02	3.10E+02	1.27E+01	8.97E-01	<20	--	--
Dichlorodifluoromethane	1.40E+01	2.80E+02		1.64E+01		<4.4	--	--
Diisopropyl ether	1.20E+04	2.49E+01	2.57E-03	1.05E-04	1.18E-01	<1.8	--	--
Ethylbenzene	1.52E+02	1.10E+03	6.43E+00	2.63E-01	5.19E+00	**36**	6.63E+00	4.36E-02
Freon 112	1.20E+02			4.09E+00		<19	--	--
Freon 113	1.10E+03	1.60E+02	5.21E+02	2.13E+01	7.55E-01	**20**	2.01E+01	1.82E-02
Isopropylbenzene	6.13E+01	1.45E+03	1.15E+01	4.70E-01	6.82E+00	<5.7	--	--
m-Dichlorobenzene	1.34E+02	1.70E+03	3.25E+00	1.33E-01	8.02E+00	<5.7	--	--
Methyl acetate	1.00E+06	2.20E+00	2.06E-02	8.42E-04	1.04E-02	<7.1	--	--
Methyl chloride	8.20E+03	3.50E+01	2.40E+01	9.81E-01	1.65E-01	<2.3	--	--
Methyl tert-butyl ether (MTBE)	1.50E+05	6.00E+00	5.87E-01	2.40E-02	2.83E-02	<1.3	--	--
Methylcyclopentane	4.30E+01	5.52E+02	3.62E-01	1.48E-02	2.60E+00	<17	--	--
Methylene chloride	2.19E+04	8.80E+00	2.12E+00	8.67E-02	4.15E-02	<1.4	--	--
n-Butylbenzene	1.38E+01	2.83E+03	1.31E+01	5.36E-01	1.34E+01	<8.4	--	--
n-Propylbenzene	1.38E+01	2.83E+03	1.31E+01	5.36E-01	1.34E+01	<7.1	--	--
o-Dichlorobenzene	1.36E+02	1.70E+03	1.98E+00	8.10E-02	8.02E+00	**23**	2.78E+00	2.05E-02
o-Xylene	1.75E+02	8.30E+02	5.10E+00	2.09E-01	3.92E+00	**28**	6.73E+00	3.85E-02
p-Dichlorobenzene	7.38E+01	6.17E+02	2.43E+00	9.94E-02	2.91E+00	<4.5	--	--
p-Isopropyltoluene	2.34E+01	2.57E+03	1.10E+01	4.50E-01	1.21E+01	<9.5	--	--
Propanal	3.06E+05	4.20E+00	7.69E-02	3.15E-03	1.98E-02	<57	--	--
sec-Butylbenzene	1.70E+01	2.15E+03	1.87E+01	7.65E-01	1.01E+01	<7.9	--	--
Styrene	3.10E+02	7.76E+02		1.13E-01		<5.7	--	--
Tetrachloroethylene	2.37E+02	3.64E+02	1.74E+01	7.12E-01	1.72E+00	**220**	1.12E+02	4.74E-01
Tetrahydrofuran	1.00E+06	9.50E-01	7.00E-02	2.86E-03	4.48E-03	<5.3	--	--
Toluene	5.35E+02	3.00E+02	6.37E+00	2.60E-01	1.42E+00	**19**	1.15E+01	2.14E-02
trans-1,2-Dichloroethylene	4.39E+03	5.90E+01	9.16E+00	3.75E-01	2.78E-01	<3.4	--	--
Trichloroethylene	1.38E+03	1.26E+02	9.37E+00	3.83E-01	5.95E-01	**15**	1.79E+01	1.29E-02
Trichlorofluoromethane	1.62E+03	1.59E+02	8.88E+01	3.63E+00	7.50E-01	<2.2	--	--
Vinyl chloride	2.76E+03	1.86E+01	2.70E+01	1.10E+00	8.78E-02	<5.4	--	--
Xylene (total)	1.61E+02	4.07E+02	7.34E+00	3.00E-01	1.92E+00	**160**	7.40E+01	4.59E-01

Sum of VOC detections (mg/kg) 5.34E+02

Detected SVOCs								
1,2,4,5-Tetrachlorobenzene	6.06E-01	5.75E+03	1.20E-03	4.92E-05	2.71E+01	<0.29	--	--
1,2,4-Trichlorobenzene	3.00E+02	1.78E+03	1.42E+00	5.81E-02	8.40E+00	<0.23	--	--
2,3,4,6-Tetrachlorophenol	7.00E+00	9.80E+01	1.30E-03	5.32E-05	4.63E-01	<0.42	--	--
2,4-Dichlorophenol	4.60E+03	3.80E+02	2.75E-03	1.12E-04	1.79E+00	<0.17	--	--
2,4-Dimethylphenol	4.20E+03	2.22E+02	2.38E-03	9.73E-05	1.05E+00	<0.16	--	--
2,6-Dinitrotoluene	3.05E-05	3.52E+02		3.02E-05		<0.10	--	--
2-Methylnaphthalene	2.54E+01	8.50E+03	5.18E-01	2.12E-02	4.01E+01	<0.20	--	--

Soil/Water/Vapor Concentration Equilibria - Samples With Total VOCs or SVOCs Greater than 10 mg/kg
Modified Feenstra et al. (1991)/Mariner et al. (1997) Model
Casmalia Hazardous Waste Management Facility
Casmalia, California

SAMPLE INFORMATION - SAMPLE SSS00918*

Location	RISBCD-06
Start Depth	24 (ft)
End Depth	25.5 (ft)
Sample Date	10/26/2004
Analytical Methods:	8260B/GCMS-SIM

ASSUMED SOIL PROPERTIES

Dry Bulk Density (ρb)	1.86 kg/L
Total Porosity (φt)	0.45
Water Filled Porosity (φw)	0.45
Air Filled Porosity (φa)	0
Fraction Organic Content (foc)	0.00472

Chemical	Input Parameters			Chemical Parameters		Results		
VOCs/SVOCs Detected in Selected Type 7 Co-Located Samples	Solubility (S) (mg/L)	Organic Carbon Partition Coefficient (Koc) (L/kg)	Henry's Law Constant (H) (atm-L/mol)	Dimensionless Henry's Law Constant (Hc) (-)	Distribution Coefficient (Kd) (L/kg)	Known Total Soil Concentration (Ct) (mg/kg)	Estimated Pore Water Concentration (Cw) (mg/L)	Fraction of Solubility
Detected SVOCs								
3-Methylcholanthrene	1.00E+01	1.00E+07		2.72E-01		<0.32	--	--
Acetophenone	5.50E+03	3.83E+01	9.09E-03	3.72E-04	1.81E-01	<0.31	--	--
Aramite	1.00E-01	1.55E+04	4.40E-05	1.80E-06	7.31E+01	<0.50	--	--
Benzoic acid	2.70E+03	5.66E+01	7.14E-05	2.92E-06	2.67E-01	<0.047	--	--
Benzyl alcohol	1.82E+02	6.92E+01		3.06E-05		<0.63	--	--
Bis(2-ethylhexyl) phthalate	2.85E-01	5.90E+03	3.61E-04	1.48E-05	2.78E+01	<0.087	--	--
Butyl benzyl phthalate	4.22E+01	5.57E+02	4.78E-03	1.95E-04	2.63E+00	<0.083	--	--
Dibenzofuran	4.30E+00	4.16E+03	1.40E-01	5.73E-03	1.96E+01	<0.10	--	--
Diethyl phthalate	1.08E+03	2.88E+02		1.85E-05		<0.22	--	--
Dimethyl phthalate	4.29E-06	4.00E+03		1.36E-05		<0.098	--	--
Di-n-butyl phthalate	1.30E+01	3.39E+04	9.39E-07	3.85E-08	1.60E+07	<0.10	--	--
Hexachlorobutadiene	3.20E+00	2.30E+03	2.50E+01	1.02E+00	1.09E+01	<0.26	--	--
Isophorone	1.20E+04	2.49E+01	5.88E-03	2.41E-04	1.18E-01	<0.17	--	--
m-Cresol	2.51E+04	1.66E+01	1.59E-03	6.49E-05	7.84E-02	<0.21	--	--
o-Cresol	3.08E+04	1.48E+01	1.20E-03	4.93E-05	7.00E-02	<0.21	--	--
p-Cresol	2.26E+04	1.76E+01	7.69E-04	3.15E-05	8.30E-02	<0.16	--	--
Pentachlorobenzene	2.87E-02	8.31E-01		2.92E-02		<0.32	--	--
Pentachlorophenol	1.40E+01	5.30E+04	2.75E-03	1.12E-04	2.50E+02	<0.11	--	--
Phenanthrene	1.00E+00	1.40E+04	1.59E-01	6.50E-03	6.61E+01	<0.096	--	--
Phenol	9.30E+04	1.42E+01	5.26E-04	2.15E-05	6.70E-02	<0.20	--	--
p-Nitrophenol	1.60E+04	2.13E+01	1.01E-03	4.13E-05	1.00E-01	<0.16	--	--

Sum of SVOC detections (mg/kg) <10

Total Fraction of Solubility 1.10E+00

Soil/Water/Vapor Concentration Equilibria - Samples With Total VOCs or SVOCs Greater than 10 mg/kg
Modified Feenstra et al. (1991)/Mariner et al. (1997) Model
Casmalia Hazardous Waste Management Facility
Casmalia, California

SAMPLE INFORMATION - SAMPLE SSS00923*

Location	RISBBC-05
Start Depth	35 (ft)
End Depth	36.5 (ft)
Sample Date	11/1/2004
Analytical Methods:	8260B/GCMS-SIM

ASSUMED SOIL PROPERTIES

Dry Bulk Density (ρb)	1.86 kg/L
Total Porosity (φt)	0.45
Water Filled Porosity (φw)	0.45
Air Filled Porosity (φa)	0
Fraction Organic Content (foc)	0.00472

Chemical	Input Parameters			Chemical Parameters		Results		
VOCs/SVOCs Detected in Selected Type 7 Co-Located Samples	Solubility (S) (mg/L)	Organic Carbon Partition Coefficient (Koc) (L/kg)	Henry's Law Constant (H) (atm-L/mol)	Dimensionless Henry's Law Constant (Hc) (-)	Distribution Coefficient (Kd) (L/kg)	Known Total Soil Concentration (Ct) (mg/kg)	Estimated Pore Water Concentration (Cw) (mg/L)	Fraction of Solubility
Detected VOCs								
1,1,1-Trichloroethane	1.31E+03	1.52E+02	1.67E+01	6.83E-01	7.17E-01	<1.7	--	--
1,1,2,2-Tetrachloroethane	3.06E+03	1.18E+02	4.59E-01	1.88E-02	5.57E-01	<1.3	--	--
1,1,2-Trichloroethane	3.97E+03	5.60E+01	1.08E+00	4.42E-02	2.64E-01	<1.8	--	--
1,1-Dichloroethane	5.30E+03	3.00E+01	5.43E+00	2.22E-01	1.42E-01	<1.2	--	--
1,1-Dichloroethylene	3.02E+03	6.50E+01	2.55E+01	1.04E+00	3.07E-01	<2.3	--	--
1,2,3-Trichlorobenzene	1.20E+01	7.40E+03	4.23E+00	1.73E-01	3.49E+01	<3.2	--	--
1,2,3-Trichloropropane	1.90E+03	6.87E+01	3.43E-01	1.40E-02	3.24E-01	<1.5	--	--
1,2,4-Trimethylbenzene	5.76E+01	1.48E+03	5.57E+00	2.28E-01	6.98E+00	<3.1	--	--
1,2-Dibromo-3-chloropropane	6.01E-03	1.23E+03		6.01E-03		<2.9	--	--
1,2-Dibromoethane (EDB)	2.73E-02	3.91E+03		2.92E-02		<1.1	--	--
1,2-Dichloroethane	7.13E+03	1.40E+01	1.50E+00	6.13E-02	6.61E-02	<1.0	--	--
1,2-Dichloroethylene, total	4.90E+03	4.08E+01	7.01E-03	2.87E-04	1.92E-01	**9.2**	2.12E+01	4.32E-03
1,2-Dichloropropane	2.97E+03	5.10E+01	2.62E+00	1.07E-01	2.41E-01	<1.3	--	--
1,3,5-Trimethylbenzene	4.82E+01	1.66E+03	8.77E+00	3.59E-01	7.83E+00	<2.7	--	--
2-Butanol	1.50E+04	2.20E+01	1.02E-02	4.17E-04	1.04E-01	<310	--	--
2-Chlorotoluene	4.70E+02	1.60E+02	3.50E+00	1.43E-01	7.55E-01	<2.4	--	--
2-Hexanone	1.40E+04	2.29E+01	2.82E-02	1.15E-03	1.08E-01	<9.3	--	--
3,3,5-Trimethylcyclohexanone	1.20E+04	2.49E+01	5.88E-03	2.41E-04	1.18E-01	<11	--	--
Benzene	1.75E+03	8.30E+01	5.59E+00	2.29E-01	3.92E-01	<1.7	--	--
Bromobenzene	4.72E+02	2.24E+02	3.70E+00	1.51E-01	1.06E+00	<1.7	--	--
Bromochloromethane	5.97E-02	1.67E+04		1.33E-01		<1.4	--	--
Bromoform	3.10E+03	8.71E+01		2.19E-02		<1.3	--	--
Carbon disulfide	1.19E+03	4.57E+01	3.03E+01	1.24E+00	2.16E-01	<7.4	--	--
Carbon tetrachloride	7.40E+02	4.39E+02	2.98E+01	1.22E+00	2.07E+00	<1.9	--	--
Chlorobenzene	4.45E+02	3.30E+02	3.90E+00	1.59E-01	1.56E+00	<1.8	--	--
Chloroethane	4.54E-01	6.71E+03		5.92E-01		<4.8	--	--
Chloroform	8.51E+03	4.40E+01	3.58E+00	1.46E-01	2.08E-01	<1.5	--	--
Chlorotrifluoroethene	1.16E+04	1.90E+02	3.10E+02	1.27E+01	8.97E-01	<9.5	--	--
Dichlorodifluoromethane	1.40E+01	2.80E+02		1.64E+01		<2.0	--	--
Diisopropyl ether	1.20E+04	2.49E+01	2.57E-03	1.05E-04	1.18E-01	<0.85	--	--
Ethylbenzene	1.52E+02	1.10E+03	6.43E+00	2.63E-01	5.19E+00	**42**	7.73E+00	5.09E-02
Freon 112	1.20E+02			4.09E+00		<8.7	--	--
Freon 113	1.10E+03	1.60E+02	5.21E+02	2.13E+01	7.55E-01	<2.6	--	--
Isopropylbenzene	6.13E+01	1.45E+03	1.15E+01	4.70E-01	6.82E+00	<2.6	--	--
m-Dichlorobenzene	1.34E+02	1.70E+03	3.25E+00	1.33E-01	8.02E+00	<2.6	--	--
Methyl acetate	1.00E+06	2.20E+00	2.06E-02	8.42E-04	1.04E-02	<3.3	--	--
Methyl chloride	8.20E+03	3.50E+01	2.40E+01	9.81E-01	1.65E-01	<1.1	--	--
Methyl tert-butyl ether (MTBE)	1.50E+05	6.00E+00	5.87E-01	2.40E-02	2.83E-02	<0.59	--	--
Methylcyclopentane	4.30E+01	5.52E+02	3.62E-01	1.48E-02	2.60E+00	<7.9	--	--
Methylene chloride	2.19E+04	8.80E+00	2.12E+00	8.67E-02	4.15E-02	**23**	8.11E+01	3.71E-03
n-Butylbenzene	1.38E+01	2.83E+03	1.31E+01	5.36E-01	1.34E+01	<3.9	--	--
n-Propylbenzene	1.38E+01	2.83E+03	1.31E+01	5.36E-01	1.34E+01	<3.3	--	--
o-Dichlorobenzene	1.36E+02	1.70E+03	1.98E+00	8.10E-02	8.02E+00	<2.3	--	--
o-Xylene	1.75E+02	8.30E+02	5.10E+00	2.09E-01	3.92E+00	**32**	7.69E+00	4.40E-02
p-Dichlorobenzene	7.38E+01	6.17E+02	2.43E+00	9.94E-02	2.91E+00	<2.1	--	--
p-Isopropyltoluene	2.34E+01	2.57E+03	1.10E+01	4.50E-01	1.21E+01	<4.4	--	--
Propanal	3.06E+05	4.20E+00	7.69E-02	3.15E-03	1.98E-02	<27	--	--
sec-Butylbenzene	1.70E+01	2.15E+03	1.87E+01	7.65E-01	1.01E+01	<3.7	--	--
Styrene	3.10E+02	7.76E+02		1.13E-01		<2.6	--	--
Tetrachloroethylene	2.37E+02	3.64E+02	1.74E+01	7.12E-01	1.72E+00	**24**	1.22E+01	5.17E-02
Tetrahydrofuran	1.00E+06	9.50E-01	7.00E-02	2.86E-03	4.48E-03	**4.7**	1.91E+01	1.91E-05
Toluene	5.35E+02	3.00E+02	6.37E+00	2.60E-01	1.42E+00	**2.3**	1.39E+00	2.59E-03
trans-1,2-Dichloroethylene	4.39E+03	5.90E+01	9.16E+00	3.75E-01	2.78E-01	<1.6	--	--
Trichloroethylene	1.38E+03	1.26E+02	9.37E+00	3.83E-01	5.95E-01	**34**	4.06E+01	2.93E-02
Trichlorofluoromethane	1.62E+03	1.59E+02	8.88E+01	3.63E+00	7.50E-01	<1.0	--	--
Vinyl chloride	2.76E+03	1.86E+01	2.70E+01	1.10E+00	8.78E-02	<2.5	--	--
Xylene (total)	1.61E+02	4.07E+02	7.34E+00	3.00E-01	1.92E+00	**140**	6.47E+01	4.02E-01

Sum of VOC detections (mg/kg) 3.11E+02

Detected SVOCs								
1,2,4,5-Tetrachlorobenzene	6.06E-01	5.75E+03	1.20E-03	4.92E-05	2.71E+01	<0.30	--	--
1,2,4-Trichlorobenzene	3.00E+02	1.78E+03	1.42E+00	5.81E-02	8.40E+00	<0.25	--	--
2,3,4,6-Tetrachlorophenol	7.00E+00	9.80E+01	1.30E-03	5.32E-05	4.63E-01	<0.44	--	--
2,4-Dichlorophenol	4.60E+03	3.80E+02	2.75E-03	1.12E-04	1.79E+00	**0.37**	1.82E-01	3.95E-05
2,4-Dimethylphenol	4.20E+03	2.22E+02	2.38E-03	9.73E-05	1.05E+00	<0.17	--	--
2,6-Dinitrotoluene	3.05E-05	3.52E+02		3.02E-05		<0.11	--	--
2-Methylnaphthalene	2.54E+01	8.50E+03	5.18E-01	2.12E-02	4.01E+01	<0.21	--	--

Soil/Water/Vapor Concentration Equilibria - Samples With Total VOCs or SVOCs Greater than 10 mg/kg
Modified Feenstra et al. (1991)/Mariner et al. (1997) Model
Casmalia Hazardous Waste Management Facility
Casmalia, California

SAMPLE INFORMATION - SAMPLE SSS00923*

Location	RISBBC-05
Start Depth	35 (ft)
End Depth	36.5 (ft)
Sample Date	11/1/2004
Analytical Methods:	8260B/GCMS-SIM

ASSUMED SOIL PROPERTIES

Dry Bulk Density (ρb)	1.86 kg/L
Total Porosity (φt)	0.45
Water Filled Porosity (φw)	0.45
Air Filled Porosity (φa)	0
Fraction Organic Content (foc)	0.00472

Chemical	Input Parameters			Chemical Parameters		Results		
VOCs/SVOCs Detected in Selected Type 7 Co-Located Samples	Solubility (S) (mg/L)	Organic Carbon Partition Coefficient (Koc) (L/kg)	Henry's Law Constant (H) (atm-L/mol)	Dimensionless Henry's Law Constant (Hc) (-)	Distribution Coefficient (Kd) (L/kg)	Known Total Soil Concentration (Ct) (mg/kg)	Estimated Pore Water Concentration (Cw) (mg/L)	Fraction of Solubility
Detected SVOCs								
3-Methylcholanthrene	1.00E+01	1.00E+07		2.72E-01		<0.34	--	--
Acetophenone	5.50E+03	3.83E+01	9.09E-03	3.72E-04	1.81E-01	<0.32	--	--
Aramite	1.00E-01	1.55E+04	4.40E-05	1.80E-06	7.31E+01	<0.53	--	--
Benzoic acid	2.70E+03	5.66E+01	7.14E-05	2.92E-06	2.67E-01	**0.049**	9.63E-02	3.57E-05
Benzyl alcohol	1.82E+02	6.92E+01		3.06E-05		<0.66	--	--
Bis(2-ethylhexyl) phthalate	2.85E-01	5.90E+03	3.61E-04	1.48E-05	2.78E+01	**0.43**	1.53E-02	5.37E-02
Butyl benzyl phthalate	4.22E+01	5.57E+02	4.78E-03	1.95E-04	2.63E+00	<0.087	--	--
Dibenzofuran	4.30E+00	4.16E+03	1.40E-01	5.73E-03	1.96E+01	<0.11	--	--
Diethyl phthalate	1.08E+03	2.88E+02		1.85E-05		<0.23	--	--
Dimethyl phthalate	4.29E-06	4.00E+03		1.36E-05		<0.10	--	--
Di-n-butyl phthalate	1.30E+01	3.39E+04	9.39E-07	3.85E-08	1.60E+07	**0.13**	8.12E-09	6.25E-10
Hexachlorobutadiene	3.20E+00	2.30E+03	2.50E+01	1.02E+00	1.09E+01	<0.27	--	--
Isophorone	1.20E+04	2.49E+01	5.88E-03	2.41E-04	1.18E-01	<0.18	--	--
m-Cresol	2.51E+04	1.66E+01	1.59E-03	6.49E-05	7.84E-02	<0.22	--	--
o-Cresol	3.08E+04	1.48E+01	1.20E-03	4.93E-05	7.00E-02	<0.23	--	--
p-Cresol	2.26E+04	1.76E+01	7.69E-04	3.15E-05	8.30E-02	<0.17	--	--
Pentachlorobenzene	2.87E-02	8.31E-01		2.92E-02		<0.33	--	--
Pentachlorophenol	1.40E+01	5.30E+04	2.75E-03	1.12E-04	2.50E+02	<0.11	--	--
Phenanthrene	1.00E+00	1.40E+04	1.59E-01	6.50E-03	6.61E+01	<0.10	--	--
Phenol	9.30E+04	1.42E+01	5.26E-04	2.15E-05	6.70E-02	<0.21	--	--
p-Nitrophenol	1.60E+04	2.13E+01	1.01E-03	4.13E-05	1.00E-01	<0.17	--	--

Sum of SVOC detections (mg/kg) <10

Total Fraction of Solubility 6.42E-01

Soil/Water/Vapor Concentration Equilibria - Samples With Total VOCs or SVOCs Greater than 10 mg/kg
Modified Feenstra et al. (1991)/Mariner et al. (1997) Model
Casmalia Hazardous Waste Management Facility
Casmalia, California

SAMPLE INFORMATION - SAMPLE SSS00926*

Location	RISBCD-11
Start Depth	42 (ft)
End Depth	43.5 (ft)
Sample Date	10/26/2004
Analytical Methods:	8260B/GCMS-SIM

ASSUMED SOIL PROPERTIES

Dry Bulk Density (ρb)	1.86 kg/L
Total Porosity (φt)	0.45
Water Filled Porosity (φw)	0.45
Air Filled Porosity (φa)	0
Fraction Organic Content (foc)	0.00472

Chemical	Input Parameters			Chemical Parameters		Results		
VOCs/SVOCs Detected in Selected Type 7 Co-Located Samples	Solubility (S) (mg/L)	Organic Carbon Partition Coefficient (Koc) (L/kg)	Henry's Law Constant (H) (atm-L/mol)	Dimensionless Henry's Law Constant (Hc) (-)	Distribution Coefficient (Kd) (L/kg)	Known Total Soil Concentration (Ct) (mg/kg)	Estimated Pore Water Concentration (Cw) (mg/L)	Fraction of Solubility
Detected VOCs								
1,1,1-Trichloroethane	1.31E+03	1.52E+02	1.67E+01	6.83E-01	7.17E-01	**19**	1.98E+01	1.51E-02
1,1,2,2-Tetrachloroethane	3.06E+03	1.18E+02	4.59E-01	1.88E-02	5.57E-01	<0.79	--	--
1,1,2-Trichloroethane	3.97E+03	5.60E+01	1.08E+00	4.42E-02	2.64E-01	<1.0	--	--
1,1-Dichloroethane	5.30E+03	3.00E+01	5.43E+00	2.22E-01	1.42E-01	**3.8**	9.91E+00	1.87E-03
1,1-Dichloroethylene	3.02E+03	6.50E+01	2.55E+01	1.04E+00	3.07E-01	**1.5**	2.73E+00	9.06E-04
1,2,3-Trichlorobenzene	1.20E+01	7.40E+03	4.23E+00	1.73E-01	3.49E+01	<1.8	--	--
1,2,3-Trichloropropane	1.90E+03	6.87E+01	3.43E-01	1.40E-02	3.24E-01	<0.90	--	--
1,2,4-Trimethylbenzene	5.76E+01	1.48E+03	5.57E+00	2.28E-01	6.98E+00	**4.6**	6.37E-01	1.11E-02
1,2-Dibromo-3-chloropropane	6.01E-03	1.23E+03		6.01E-03		<1.7	--	--
1,2-Dibromoethane (EDB)	2.73E-02	3.91E+03		2.92E-02		<0.65	--	--
1,2-Dichloroethane	7.13E+03	1.40E+01	1.50E+00	6.13E-02	6.61E-02	**0.7**	2.27E+00	3.19E-04
1,2-Dichloroethylene, total	4.90E+03	4.08E+01	7.01E-03	2.87E-04	1.92E-01	**1.3**	2.99E+00	6.11E-04
1,2-Dichloropropane	2.97E+03	5.10E+01	2.62E+00	1.07E-01	2.41E-01	<0.75	--	--
1,3,5-Trimethylbenzene	4.82E+01	1.66E+03	8.77E+00	3.59E-01	7.83E+00	**1.6**	1.98E-01	4.11E-03
2-Butanol	1.50E+04	2.20E+01	1.02E-02	4.17E-04	1.04E-01	<180	--	--
2-Chlorotoluene	4.70E+02	1.60E+02	3.50E+00	1.43E-01	7.55E-01	<1.4	--	--
2-Hexanone	1.40E+04	2.29E+01	2.82E-02	1.15E-03	1.08E-01	<5.4	--	--
3,3,5-Trimethylcyclohexanone	1.20E+04	2.49E+01	5.88E-03	2.41E-04	1.18E-01	<6.7	--	--
Benzene	1.75E+03	8.30E+01	5.59E+00	2.29E-01	3.92E-01	**3.1**	4.89E+00	2.80E-03
Bromobenzene	4.72E+02	2.24E+02	3.70E+00	1.51E-01	1.06E+00	<1.0	--	--
Bromochloromethane	5.97E-02	1.67E+04		1.33E-01		<0.81	--	--
Bromoform	3.10E+03	8.71E+01		2.19E-02		<0.75	--	--
Carbon disulfide	1.19E+03	4.57E+01	3.03E+01	1.24E+00	2.16E-01	<4.3	--	--
Carbon tetrachloride	7.40E+02	4.39E+02	2.98E+01	1.22E+00	2.07E+00	<1.1	--	--
Chlorobenzene	4.45E+02	3.30E+02	3.90E+00	1.59E-01	1.56E+00	<1.0	--	--
Chloroethane	4.54E-01	6.71E+03		5.92E-01		<2.8	--	--
Chloroform	8.51E+03	4.40E+01	3.58E+00	1.46E-01	2.08E-01	<0.90	--	--
Chlorotrifluoroethene	1.16E+04	1.90E+02	3.10E+02	1.27E+01	8.97E-01	<5.5	--	--
Dichlorodifluoromethane	1.40E+01	2.80E+02		1.64E+01		<1.2	--	--
Diisopropyl ether	1.20E+04	2.49E+01	2.57E-03	1.05E-04	1.18E-01	<0.50	--	--
Ethylbenzene	1.52E+02	1.10E+03	6.43E+00	2.63E-01	5.19E+00	**30**	5.52E+00	3.63E-02
Freon 112	1.20E+02			4.09E+00		<5.1	--	--
Freon 113	1.10E+03	1.60E+02	5.21E+02	2.13E+01	7.55E-01	**12**	1.20E+01	1.09E-02
Isopropylbenzene	6.13E+01	1.45E+03	1.15E+01	4.70E-01	6.82E+00	<1.5	--	--
m-Dichlorobenzene	1.34E+02	1.70E+03	3.25E+00	1.33E-01	8.02E+00	<1.5	--	--
Methyl acetate	1.00E+06	2.20E+00	2.06E-02	8.42E-04	1.04E-02	<1.9	--	--
Methyl chloride	8.20E+03	3.50E+01	2.40E+01	9.81E-01	1.65E-01	<0.63	--	--
Methyl tert-butyl ether (MTBE)	1.50E+05	6.00E+00	5.87E-01	2.40E-02	2.83E-02	<0.35	--	--
Methylcyclopentane	4.30E+01	5.52E+02	3.62E-01	1.48E-02	2.60E+00	<4.6	--	--
Methylene chloride	2.19E+04	8.80E+00	2.12E+00	8.67E-02	4.15E-02	**1.2**	4.23E+00	1.94E-04
n-Butylbenzene	1.38E+01	2.83E+03	1.31E+01	5.36E-01	1.34E+01	<2.3	--	--
n-Propylbenzene	1.38E+01	2.83E+03	1.31E+01	5.36E-01	1.34E+01	<1.9	--	--
o-Dichlorobenzene	1.36E+02	1.70E+03	1.98E+00	8.10E-02	8.02E+00	**5.6**	6.77E-01	4.99E-03
o-Xylene	1.75E+02	8.30E+02	5.10E+00	2.09E-01	3.92E+00	**19**	4.57E+00	2.61E-02
p-Dichlorobenzene	7.38E+01	6.17E+02	2.43E+00	9.94E-02	2.91E+00	<1.2	--	--
p-Isopropyltoluene	2.34E+01	2.57E+03	1.10E+01	4.50E-01	1.21E+01	<2.6	--	--
Propanal	3.06E+05	4.20E+00	7.69E-02	3.15E-03	1.98E-02	<15	--	--
sec-Butylbenzene	1.70E+01	2.15E+03	1.87E+01	7.65E-01	1.01E+01	<2.1	--	--
Styrene	3.10E+02	7.76E+02		1.13E-01		<1.5	--	--
Tetrachloroethylene	2.37E+02	3.64E+02	1.74E+01	7.12E-01	1.72E+00	**62**	3.16E+01	1.33E-01
Tetrahydrofuran	1.00E+06	9.50E-01	7.00E-02	2.86E-03	4.48E-03	**2.8**	1.14E+01	1.14E-05
Toluene	5.35E+02	3.00E+02	6.37E+00	2.60E-01	1.42E+00	**25**	1.51E+01	2.82E-02
trans-1,2-Dichloroethylene	4.39E+03	5.90E+01	9.16E+00	3.75E-01	2.78E-01	<0.92	--	--
Trichloroethylene	1.38E+03	1.26E+02	9.37E+00	3.83E-01	5.95E-01	**7.1**	8.49E+00	6.13E-03
Trichlorofluoromethane	1.62E+03	1.59E+02	8.88E+01	3.63E+00	7.50E-01	<0.59	--	--
Vinyl chloride	2.76E+03	1.86E+01	2.70E+01	1.10E+00	8.78E-02	<1.5	--	--
Xylene (total)	1.61E+02	4.07E+02	7.34E+00	3.00E-01	1.92E+00	**110**	5.09E+01	3.16E-01

Sum of VOC detections (mg/kg) 3.10E+02

Detected SVOCs								
1,2,4,5-Tetrachlorobenzene	6.06E-01	5.75E+03	1.20E-03	4.92E-05	2.71E+01	<0.33	--	--
1,2,4-Trichlorobenzene	3.00E+02	1.78E+03	1.42E+00	5.81E-02	8.40E+00	**6.9**	7.98E-01	2.66E-03
2,3,4,6-Tetrachlorophenol	7.00E+00	9.80E+01	1.30E-03	5.32E-05	4.63E-01	<0.48	--	--
2,4-Dichlorophenol	4.60E+03	3.80E+02	2.75E-03	1.12E-04	1.79E+00	<0.20	--	--
2,4-Dimethylphenol	4.20E+03	2.22E+02	2.38E-03	9.73E-05	1.05E+00	<0.18	--	--
2,6-Dinitrotoluene	3.05E-05	3.52E+02		3.02E-05		<0.12	--	--
2-Methylnaphthalene	2.54E+01	8.50E+03	5.18E-01	2.12E-02	4.01E+01	**3.2**	7.93E-02	3.12E-03

Soil/Water/Vapor Concentration Equilibria - Samples With Total VOCs or SVOCs Greater than 10 mg/kg
Modified Feenstra et al. (1991)/Mariner et al. (1997) Model
Casmalia Hazardous Waste Management Facility
Casmalia, California

SAMPLE INFORMATION - SAMPLE SSS00926*

Location	RISBCD-11
Start Depth	42 (ft)
End Depth	43.5 (ft)
Sample Date	10/26/2004
Analytical Methods:	8260B/GCMS-SIM

ASSUMED SOIL PROPERTIES

Dry Bulk Density (ρb)	1.86 kg/L
Total Porosity (φt)	0.45
Water Filled Porosity (φw)	0.45
Air Filled Porosity (φa)	0
Fraction Organic Content (foc)	0.00472

Chemical	Input Parameters			Chemical Parameters		Results		
VOCs/SVOCs Detected in Selected Type 7 Co-Located Samples	Solubility (S) (mg/L)	Organic Carbon Partition Coefficient (Koc) (L/kg)	Henry's Law Constant (H) (atm-L/mol)	Dimensionless Henry's Law Constant (Hc) (-)	Distribution Coefficient (Kd) (L/kg)	Known Total Soil Concentration (Ct) (mg/kg)	Estimated Pore Water Concentration (Cw) (mg/L)	Fraction of Solubility
Detected SVOCs								
3-Methylcholanthrene	1.00E+01	1.00E+07		2.72E-01		<0.37	--	--
Acetophenone	5.50E+03	3.83E+01	9.09E-03	3.72E-04	1.81E-01	<0.35	--	--
Aramite	1.00E-01	1.55E+04	4.40E-05	1.80E-06	7.31E+01	<0.58	--	--
Benzoic acid	2.70E+03	5.66E+01	7.14E-05	2.92E-06	2.67E-01	<0.054	--	--
Benzyl alcohol	1.82E+02	6.92E+01		3.06E-05		<0.72	--	--
Bis(2-ethylhexyl) phthalate	2.85E-01	5.90E+03	3.61E-04	1.48E-05	2.78E+01	**25**	8.90E-01	3.12E+00
Butyl benzyl phthalate	4.22E+01	5.57E+02	4.78E-03	1.95E-04	2.63E+00	**7.2**	2.51E+00	5.94E-02
Dibenzofuran	4.30E+00	4.16E+03	1.40E-01	5.73E-03	1.96E+01	**0.23**	1.16E-02	2.69E-03
Diethyl phthalate	1.08E+03	2.88E+02		1.85E-05		<0.25	--	--
Dimethyl phthalate	4.29E-06	4.00E+03		1.36E-05		<0.11	--	--
Di-n-butyl phthalate	1.30E+01	3.39E+04	9.39E-07	3.85E-08	1.60E+07	**1.9**	1.19E-07	9.13E-09
Hexachlorobutadiene	3.20E+00	2.30E+03	2.50E+01	1.02E+00	1.09E+01	**0.85**	7.65E-02	2.39E-02
Isophorone	1.20E+04	2.49E+01	5.88E-03	2.41E-04	1.18E-01	<0.20	--	--
m-Cresol	2.51E+04	1.66E+01	1.59E-03	6.49E-05	7.84E-02	<0.25	--	--
o-Cresol	3.08E+04	1.48E+01	1.20E-03	4.93E-05	7.00E-02	<0.25	--	--
p-Cresol	2.26E+04	1.76E+01	7.69E-04	3.15E-05	8.30E-02	<0.18	--	--
Pentachlorobenzene	2.87E-02	8.31E-01		2.92E-02		<0.36	--	--
Pentachlorophenol	1.40E+01	5.30E+04	2.75E-03	1.12E-04	2.50E+02	<0.12	--	--
Phenanthrene	1.00E+00	1.40E+04	1.59E-01	6.50E-03	6.61E+01	**0.41**	6.18E-03	6.18E-03
Phenol	9.30E+04	1.42E+01	5.26E-04	2.15E-05	6.70E-02	<0.23	--	--
p-Nitrophenol	1.60E+04	2.13E+01	1.01E-03	4.13E-05	1.00E-01	<0.18	--	--

Sum of SVOC detections (mg/kg) 8.67E+01

Total Fraction of Solubility 3.82E+00

Soil/Water/Vapor Concentration Equilibria - Samples With Total VOCs or SVOCs Greater than 10 mg/kg
Modified Feenstra et al. (1991)/Mariner et al. (1997) Model
Casmalia Hazardous Waste Management Facility
Casmalia, California

SAMPLE INFORMATION - SAMPLE SSS00929*

Location	RISBCD-09
Start Depth	8 (ft)
End Depth	10.5 (ft)
Sample Date	11/4/2004
Analytical Methods:	8260B/GCMS-SIM

ASSUMED SOIL PROPERTIES

Dry Bulk Density (ρb)	1.86 kg/L
Total Porosity (φt)	0.45
Water Filled Porosity (φw)	0.45
Air Filled Porosity (φa)	0
Fraction Organic Content (foc)	0.00472

Chemical	Input Parameters			Chemical Parameters		Results		
VOCs/SVOCs Detected in Selected Type 7 Co-Located Samples	Solubility (S) (mg/L)	Organic Carbon Partition Coefficient (Koc) (L/kg)	Henry's Law Constant (H) (atm-L/mol)	Dimensionless Henry's Law Constant (Hc) (-)	Distribution Coefficient (Kd) (L/kg)	Known Total Soil Concentration (Ct) (mg/kg)	Estimated Pore Water Concentration (Cw) (mg/L)	Fraction of Solubility
Detected VOCs								
1,1,1-Trichloroethane	1.31E+03	1.52E+02	1.67E+01	6.83E-01	7.17E-01	**0.99**	1.03E+00	7.88E-04
1,1,2,2-Tetrachloroethane	3.06E+03	1.18E+02	4.59E-01	1.88E-02	5.57E-01	<0.14	--	--
1,1,2-Trichloroethane	3.97E+03	5.60E+01	1.08E+00	4.42E-02	2.64E-01	<0.18	--	--
1,1-Dichloroethane	5.30E+03	3.00E+01	5.43E+00	2.22E-01	1.42E-01	**6.9**	1.80E+01	3.39E-03
1,1-Dichloroethylene	3.02E+03	6.50E+01	2.55E+01	1.04E+00	3.07E-01	<0.24	--	--
1,2,3-Trichlorobenzene	1.20E+01	7.40E+03	4.23E+00	1.73E-01	3.49E+01	**0.35**	9.95E-03	8.29E-04
1,2,3-Trichloropropane	1.90E+03	6.87E+01	3.43E-01	1.40E-02	3.24E-01	<0.16	--	--
1,2,4-Trimethylbenzene	5.76E+01	1.48E+03	5.57E+00	2.28E-01	6.98E+00	**1.3**	1.80E-01	3.12E-03
1,2-Dibromo-3-chloropropane	6.01E-03	1.23E+03		6.01E-03		<0.30	--	--
1,2-Dibromoethane (EDB)	2.73E-02	3.91E+03		2.92E-02		<0.12	--	--
1,2-Dichloroethane	7.13E+03	1.40E+01	1.50E+00	6.13E-02	6.61E-02	**0.57**	1.85E+00	2.60E-04
1,2-Dichloroethylene, total	4.90E+03	4.08E+01	7.01E-03	2.87E-04	1.92E-01	<0.16	--	--
1,2-Dichloropropane	2.97E+03	5.10E+01	2.62E+00	1.07E-01	2.41E-01	<0.13	--	--
1,3,5-Trimethylbenzene	4.82E+01	1.66E+03	8.77E+00	3.59E-01	7.83E+00	**0.36**	4.46E-02	9.25E-04
2-Butanol	1.50E+04	2.20E+01	1.02E-02	4.17E-04	1.04E-01	**60**	1.73E+02	1.16E-02
2-Chlorotoluene	4.70E+02	1.60E+02	3.50E+00	1.43E-01	7.55E-01	<0.25	--	--
2-Hexanone	1.40E+04	2.29E+01	2.82E-02	1.15E-03	1.08E-01	<0.96	--	--
3,3,5-Trimethylcyclohexanone	1.20E+04	2.49E+01	5.88E-03	2.41E-04	1.18E-01	**1.9**	5.28E+00	4.40E-04
Benzene	1.75E+03	8.30E+01	5.59E+00	2.29E-01	3.92E-01	**2.7**	4.26E+00	2.43E-03
Bromobenzene	4.72E+02	2.24E+02	3.70E+00	1.51E-01	1.06E+00	<0.18	--	--
Bromochloromethane	5.97E-02	1.67E+04		1.33E-01		<0.14	--	--
Bromoform	3.10E+03	8.71E+01		2.19E-02		<0.13	--	--
Carbon disulfide	1.19E+03	4.57E+01	3.03E+01	1.24E+00	2.16E-01	<0.77	--	--
Carbon tetrachloride	7.40E+02	4.39E+02	2.98E+01	1.22E+00	2.07E+00	<0.20	--	--
Chlorobenzene	4.45E+02	3.30E+02	3.90E+00	1.59E-01	1.56E+00	**0.21**	1.17E-01	2.63E-04
Chloroethane	4.54E-01	6.71E+03		5.92E-01		<0.50	--	--
Chloroform	8.51E+03	4.40E+01	3.58E+00	1.46E-01	2.08E-01	<0.16	--	--
Chlorotrifluoroethene	1.16E+04	1.90E+02	3.10E+02	1.27E+01	8.97E-01	<0.98	--	--
Dichlorodifluoromethane	1.40E+01	2.80E+02		1.64E+01		<0.21	--	--
Diisopropyl ether	1.20E+04	2.49E+01	2.57E-03	1.05E-04	1.18E-01	<0.089	--	--
Ethylbenzene	1.52E+02	1.10E+03	6.43E+00	2.63E-01	5.19E+00	**12**	2.21E+00	1.45E-02
Freon 112	1.20E+02			4.09E+00		<0.90	--	--
Freon 113	1.10E+03	1.60E+02	5.21E+02	2.13E+01	7.55E-01	**2.3**	2.31E+00	2.10E-03
Isopropylbenzene	6.13E+01	1.45E+03	1.15E+01	4.70E-01	6.82E+00	<0.27	--	--
m-Dichlorobenzene	1.34E+02	1.70E+03	3.25E+00	1.33E-01	8.02E+00	**0.46**	5.57E-02	4.16E-04
Methyl acetate	1.00E+06	2.20E+00	2.06E-02	8.42E-04	1.04E-02	**0.36**	1.43E+00	1.43E-06
Methyl chloride	8.20E+03	3.50E+01	2.40E+01	9.81E-01	1.65E-01	<0.11	--	--
Methyl tert-butyl ether (MTBE)	1.50E+05	6.00E+00	5.87E-01	2.40E-02	2.83E-02	<0.061	--	--
Methylcyclopentane	4.30E+01	5.52E+02	3.62E-01	1.48E-02	2.60E+00	<0.82	--	--
Methylene chloride	2.19E+04	8.80E+00	2.12E+00	8.67E-02	4.15E-02	**0.31**	1.09E+00	5.00E-05
n-Butylbenzene	1.38E+01	2.83E+03	1.31E+01	5.36E-01	1.34E+01	<0.41	--	--
n-Propylbenzene	1.38E+01	2.83E+03	1.31E+01	5.36E-01	1.34E+01	<0.34	--	--
o-Dichlorobenzene	1.36E+02	1.70E+03	1.98E+00	8.10E-02	8.02E+00	**4.4**	5.32E-01	3.92E-03
o-Xylene	1.75E+02	8.30E+02	5.10E+00	2.09E-01	3.92E+00	**9**	2.16E+00	1.24E-02
p-Dichlorobenzene	7.38E+01	6.17E+02	2.43E+00	9.94E-02	2.91E+00	**0.65**	2.06E-01	2.79E-03
p-Isopropyltoluene	2.34E+01	2.57E+03	1.10E+01	4.50E-01	1.21E+01	<0.46	--	--
Propanal	3.06E+05	4.20E+00	7.69E-02	3.15E-03	1.98E-02	<2.8	--	--
sec-Butylbenzene	1.70E+01	2.15E+03	1.87E+01	7.65E-01	1.01E+01	<0.38	--	--
Styrene	3.10E+02	7.76E+02		1.13E-01		<0.27	--	--
Tetrachloroethylene	2.37E+02	3.64E+02	1.74E+01	7.12E-01	1.72E+00	**3.5**	1.79E+00	7.54E-03
Tetrahydrofuran	1.00E+06	9.50E-01	7.00E-02	2.86E-03	4.48E-03	**11**	4.46E+01	4.46E-05
trans-1,2-Dichloroethylene	4.39E+03	5.90E+01	9.16E+00	3.75E-01	2.78E-01	<0.16	--	--
Trichloroethylene	1.38E+03	1.26E+02	9.37E+00	3.83E-01	5.95E-01	**0.41**	4.90E-01	3.54E-04
Trichlorofluoromethane	1.62E+03	1.59E+02	8.88E+01	3.63E+00	7.50E-01	<0.11	--	--
Vinyl chloride	2.76E+03	1.86E+01	2.70E+01	1.10E+00	8.78E-02	**0.99**	3.00E+00	1.09E-03
Xylene (total)	1.61E+02	4.07E+02	7.34E+00	3.00E-01	1.92E+00	**48**	2.22E+01	1.38E-01

Sum of VOC detections (mg/kg) 1.69E+02

Detected SVOCs								
1,2,4,5-Tetrachlorobenzene	6.06E-01	5.75E+03	1.20E-03	4.92E-05	2.71E+01	<0.32	--	--
1,2,4-Trichlorobenzene	3.00E+02	1.78E+03	1.42E+00	5.81E-02	8.40E+00	<0.26	--	--
2,3,4,6-Tetrachlorophenol	7.00E+00	9.80E+01	1.30E-03	5.32E-05	4.63E-01	<0.46	--	--
2,4-Dichlorophenol	4.60E+03	3.80E+02	2.75E-03	1.12E-04	1.79E+00	<0.19	--	--
2,4-Dimethylphenol	4.20E+03	2.22E+02	2.38E-03	9.73E-05	1.05E+00	<0.18	--	--
2,6-Dinitrotoluene	3.05E-05	3.52E+02		3.02E-05		<0.11	--	--
2-Methylnaphthalene	2.54E+01	8.50E+03	5.18E-01	2.12E-02	4.01E+01	<0.22	--	--
3-Methylcholanthrene	1.00E+01	1.00E+07		2.72E-01		<0.35	--	--

Soil/Water/Vapor Concentration Equilibria - Samples With Total VOCs or SVOCs Greater than 10 mg/kg
Modified Feenstra et al. (1991)/Mariner et al. (1997) Model
Casmalia Hazardous Waste Management Facility
Casmalia, California

SAMPLE INFORMATION - SAMPLE SSS00929*

Location	RISBCD-09
Start Depth	8 (ft)
End Depth	10.5 (ft)
Sample Date	11/4/2004
Analytical Methods:	8260B/GCMS-SIM

ASSUMED SOIL PROPERTIES

Dry Bulk Density (ρb)	1.86 kg/L
Total Porosity (φt)	0.45
Water Filled Porosity (φw)	0.45
Air Filled Porosity (φa)	0
Fraction Organic Content (foc)	0.00472

Chemical	Input Parameters			Chemical Parameters		Results		
VOCs/SVOCs Detected in Selected Type 7 Co-Located Samples	Solubility (S) (mg/L)	Organic Carbon Partition Coefficient (Koc) (L/kg)	Henry's Law Constant (H) (atm-L/mol)	Dimensionless Henry's Law Constant (Hc) (-)	Distribution Coefficient (Kd) (L/kg)	Known Total Soil Concentration (Ct) (mg/kg)	Estimated Pore Water Concentration (Cw) (mg/L)	Fraction of Solubility
Detected SVOCs								
Acetophenone	5.50E+03	3.83E+01	9.09E-03	3.72E-04	1.81E-01	<0.34	--	--
Aramite	1.00E-01	1.55E+04	4.40E-05	1.80E-06	7.31E+01	<0.55	--	--
Benzoic acid	2.70E+03	5.66E+01	7.14E-05	2.92E-06	2.67E-01	<0.052	--	--
Benzyl alcohol	1.82E+02	6.92E+01		3.06E-05		<0.69	--	--
Bis(2-ethylhexyl) phthalate	2.85E-01	5.90E+03	3.61E-04	1.48E-05	2.78E+01	<0.095	--	--
Butyl benzyl phthalate	4.22E+01	5.57E+02	4.78E-03	1.95E-04	2.63E+00	<0.091	--	--
Dibenzofuran	4.30E+00	4.16E+03	1.40E-01	5.73E-03	1.96E+01	<0.12	--	--
Diethyl phthalate	1.08E+03	2.88E+02		1.85E-05		<0.24	--	--
Dimethyl phthalate	4.29E-06	4.00E+03		1.36E-05		<0.11	--	--
Di-n-butyl phthalate	1.30E+01	3.39E+04	9.39E-07	3.85E-08	1.60E+07	<0.11	--	--
Hexachlorobutadiene	3.20E+00	2.30E+03	2.50E+01	1.02E+00	1.09E+01	<0.29	--	--
Isophorone	1.20E+04	2.49E+01	5.88E-03	2.41E-04	1.18E-01	<0.19	--	--
m-Cresol	2.51E+04	1.66E+01	1.59E-03	6.49E-05	7.84E-02	<0.24	--	--
o-Cresol	3.08E+04	1.48E+01	1.20E-03	4.93E-05	7.00E-02	<0.24	--	--
p-Cresol	2.26E+04	1.76E+01	7.69E-04	3.15E-05	8.30E-02	<0.18	--	--
Pentachlorobenzene	2.87E-02	8.31E-01		2.92E-02		<0.35	--	--
Pentachlorophenol	1.40E+01	5.30E+04	2.75E-03	1.12E-04	2.50E+02	<0.12	--	--
Phenanthrene	1.00E+00	1.40E+04	1.59E-01	6.50E-03	6.61E+01	<0.11	--	--
Phenol	9.30E+04	1.42E+01	5.26E-04	2.15E-05	6.70E-02	<0.22	--	--
p-Nitrophenol	1.60E+04	2.13E+01	1.01E-03	4.13E-05	1.00E-01	<0.18	--	--

Sum of SVOC detections (mg/kg) <10

Total Fraction of Solubility 2.07E-01

Soil/Water/Vapor Concentration Equilibria - Samples With Total VOCs or SVOCs Greater than 10 mg/kg
Modified Feenstra et al. (1991)/Mariner et al. (1997) Model
Casmalia Hazardous Waste Management Facility
Casmalia, California

SAMPLE INFORMATION - SAMPLE SSS00930*

Location	RISBCD-09
Start Depth	33 (ft)
End Depth	35 (ft)
Sample Date	11/4/2004
Analytical Methods:	8260B/GCMS-SIM

ASSUMED SOIL PROPERTIES

Dry Bulk Density (ρb)	1.86 kg/L
Total Porosity (φt)	0.45
Water Filled Porosity (φw)	0.45
Air Filled Porosity (φa)	0
Fraction Organic Content (foc)	0.00472

Chemical	Input Parameters			Chemical Parameters		Results		
VOCs/SVOCs Detected in Selected Type 7 Co-Located Samples	Solubility (S) (mg/L)	Organic Carbon Partition Coefficient (Koc) (L/kg)	Henry's Law Constant (H) (atm-L/mol)	Dimensionless Henry's Law Constant (Hc) (-)	Distribution Coefficient (Kd) (L/kg)	Known Total Soil Concentration (Ct) (mg/kg)	Estimated Pore Water Concentration (Cw) (mg/L)	Fraction of Solubility
Detected VOCs								
1,1,1-Trichloroethane	1.31E+03	1.52E+02	1.67E+01	6.83E-01	7.17E-01	**12**	1.25E+01	9.55E-03
1,1,2,2-Tetrachloroethane	3.06E+03	1.18E+02	4.59E-01	1.88E-02	5.57E-01	<0.11	--	--
1,1,2-Trichloroethane	3.97E+03	5.60E+01	1.08E+00	4.42E-02	2.64E-01	<0.14	--	--
1,1-Dichloroethane	5.30E+03	3.00E+01	5.43E+00	2.22E-01	1.42E-01	**8.5**	2.22E+01	4.18E-03
1,1-Dichloroethylene	3.02E+03	6.50E+01	2.55E+01	1.04E+00	3.07E-01	**1.6**	2.92E+00	9.66E-04
1,2,3-Trichlorobenzene	1.20E+01	7.40E+03	4.23E+00	1.73E-01	3.49E+01	<0.25	--	--
1,2,3-Trichloropropane	1.90E+03	6.87E+01	3.43E-01	1.40E-02	3.24E-01	<0.12	--	--
1,2,4-Trimethylbenzene	5.76E+01	1.48E+03	5.57E+00	2.28E-01	6.98E+00	<0.25	--	--
1,2-Dibromo-3-chloropropane	6.01E-03	1.23E+03		6.01E-03		<0.23	--	--
1,2-Dibromoethane (EDB)	2.73E-02	3.91E+03		2.92E-02		<0.089	--	--
1,2-Dichloroethane	7.13E+03	1.40E+01	1.50E+00	6.13E-02	6.61E-02	**1.4**	4.55E+00	6.38E-04
1,2-Dichloroethylene, total	4.90E+03	4.08E+01	7.01E-03	2.87E-04	1.92E-01	**0.96**	2.21E+00	4.51E-04
1,2-Dichloropropane	2.97E+03	5.10E+01	2.62E+00	1.07E-01	2.41E-01	<0.10	--	--
1,3,5-Trimethylbenzene	4.82E+01	1.66E+03	8.77E+00	3.59E-01	7.83E+00	<0.21	--	--
2-Butanol	1.50E+04	2.20E+01	1.02E-02	4.17E-04	1.04E-01	<24	--	--
2-Chlorotoluene	4.70E+02	1.60E+02	3.50E+00	1.43E-01	7.55E-01	<0.19	--	--
2-Hexanone	1.40E+04	2.29E+01	2.82E-02	1.15E-03	1.08E-01	<0.74	--	--
3,3,5-Trimethylcyclohexanone	1.20E+04	2.49E+01	5.88E-03	2.41E-04	1.18E-01	<0.90	--	--
Benzene	1.75E+03	8.30E+01	5.59E+00	2.29E-01	3.92E-01	**1.8**	2.84E+00	1.62E-03
Bromobenzene	4.72E+02	2.24E+02	3.70E+00	1.51E-01	1.06E+00	<0.14	--	--
Bromochloromethane	5.97E-02	1.67E+04		1.33E-01		<0.11	--	--
Bromoform	3.10E+03	8.71E+01		2.19E-02		<0.10	--	--
Carbon disulfide	1.19E+03	4.57E+01	3.03E+01	1.24E+00	2.16E-01	<0.59	--	--
Carbon tetrachloride	7.40E+02	4.39E+02	2.98E+01	1.22E+00	2.07E+00	<0.15	--	--
Chlorobenzene	4.45E+02	3.30E+02	3.90E+00	1.59E-01	1.56E+00	**0.27**	1.50E-01	3.38E-04
Chloroethane	4.54E-01	6.71E+03		5.92E-01		<0.38	--	--
Chloroform	8.51E+03	4.40E+01	3.58E+00	1.46E-01	2.08E-01	**6.2**	1.38E+01	1.62E-03
Chlorotrifluoroethene	1.16E+04	1.90E+02	3.10E+02	1.27E+01	8.97E-01	**0.89**	7.82E-01	6.72E-05
Dichlorodifluoromethane	1.40E+01	2.80E+02		1.64E+01		<0.16	--	--
Diisopropyl ether	1.20E+04	2.49E+01	2.57E-03	1.05E-04	1.18E-01	<0.068	--	--
Ethylbenzene	1.52E+02	1.10E+03	6.43E+00	2.63E-01	5.19E+00	**12**	2.21E+00	1.45E-02
Freon 112	1.20E+02			4.09E+00		<0.69	--	--
Isopropylbenzene	6.13E+01	1.45E+03	1.15E+01	4.70E-01	6.82E+00	<0.21	--	--
m-Dichlorobenzene	1.34E+02	1.70E+03	3.25E+00	1.33E-01	8.02E+00	<0.21	--	--
Methyl acetate	1.00E+06	2.20E+00	2.06E-02	8.42E-04	1.04E-02	<0.26	--	--
Methyl chloride	8.20E+03	3.50E+01	2.40E+01	9.81E-01	1.65E-01	<0.086	--	--
Methyl tert-butyl ether (MTBE)	1.50E+05	6.00E+00	5.87E-01	2.40E-02	2.83E-02	<0.047	--	--
Methylcyclopentane	4.30E+01	5.52E+02	3.62E-01	1.48E-02	2.60E+00	<0.63	--	--
n-Butylbenzene	1.38E+01	2.83E+03	1.31E+01	5.36E-01	1.34E+01	<0.31	--	--
n-Propylbenzene	1.38E+01	2.83E+03	1.31E+01	5.36E-01	1.34E+01	<0.26	--	--
o-Dichlorobenzene	1.36E+02	1.70E+03	1.98E+00	8.10E-02	8.02E+00	**0.31**	3.75E-02	2.76E-04
o-Xylene	1.75E+02	8.30E+02	5.10E+00	2.09E-01	3.92E+00	**7.1**	1.71E+00	9.75E-03
p-Dichlorobenzene	7.38E+01	6.17E+02	2.43E+00	9.94E-02	2.91E+00	<0.16	--	--
p-Isopropyltoluene	2.34E+01	2.57E+03	1.10E+01	4.50E-01	1.21E+01	<0.35	--	--
Propanal	3.06E+05	4.20E+00	7.69E-02	3.15E-03	1.98E-02	<2.1	--	--
sec-Butylbenzene	1.70E+01	2.15E+03	1.87E+01	7.65E-01	1.01E+01	<0.29	--	--
Styrene	3.10E+02	7.76E+02		1.13E-01		<0.21	--	--
Tetrahydrofuran	1.00E+06	9.50E-01	7.00E-02	2.86E-03	4.48E-03	<0.20	--	--
trans-1,2-Dichloroethylene	4.39E+03	5.90E+01	9.16E+00	3.75E-01	2.78E-01	<0.13	--	--
Trichloroethylene	1.38E+03	1.26E+02	9.37E+00	3.83E-01	5.95E-01	**12**	1.43E+01	1.04E-02
Trichlorofluoromethane	1.62E+03	1.59E+02	8.88E+01	3.63E+00	7.50E-01	**0.83**	8.36E-01	5.16E-04
Vinyl chloride	2.76E+03	1.86E+01	2.70E+01	1.10E+00	8.78E-02	<0.20	--	--

Sum of VOC detections (mg/kg) 6.59E+01

Detected SVOCs								
1,2,4,5-Tetrachlorobenzene	6.06E-01	5.75E+03	1.20E-03	4.92E-05	2.71E+01	<0.32	--	--
1,2,4-Trichlorobenzene	3.00E+02	1.78E+03	1.42E+00	5.81E-02	8.40E+00	**4**	4.63E-01	1.54E-03
2,3,4,6-Tetrachlorophenol	7.00E+00	9.80E+01	1.30E-03	5.32E-05	4.63E-01	<0.47	--	--
2,4-Dichlorophenol	4.60E+03	3.80E+02	2.75E-03	1.12E-04	1.79E+00	**0.33**	1.62E-01	3.52E-05
2,4-Dimethylphenol	4.20E+03	2.22E+02	2.38E-03	9.73E-05	1.05E+00	**0.98**	7.60E-01	1.81E-04
2,6-Dinitrotoluene	3.05E-05	3.52E+02		3.02E-05		<0.11	--	--
2-Methylnaphthalene	2.54E+01	8.50E+03	5.18E-01	2.12E-02	4.01E+01	**1.3**	3.22E-02	1.27E-03
3-Methylcholanthrene	1.00E+01	1.00E+07		2.72E-01		<0.36	--	--
Acetophenone	5.50E+03	3.83E+01	9.09E-03	3.72E-04	1.81E-01	<0.34	--	--
Aramite	1.00E-01	1.55E+04	4.40E-05	1.80E-06	7.31E+01	<0.56	--	--
Benzoic acid	2.70E+03	5.66E+01	7.14E-05	2.92E-06	2.67E-01	<0.052	--	--
Benzyl alcohol	1.82E+02	6.92E+01		3.06E-05		<0.70	--	--

Soil/Water/Vapor Concentration Equilibria - Samples With Total VOCs or SVOCs Greater than 10 mg/kg
Modified Feenstra et al. (1991)/Mariner et al. (1997) Model
Casmalia Hazardous Waste Management Facility
Casmalia, California

SAMPLE INFORMATION - SAMPLE SSS00930*

Location	RISBCD-09
Start Depth	33 (ft)
End Depth	35 (ft)
Sample Date	11/4/2004
Analytical Methods:	8260B/GCMS-SIM

ASSUMED SOIL PROPERTIES

Dry Bulk Density (ρb)	1.86 kg/L
Total Porosity (φt)	0.45
Water Filled Porosity (φw)	0.45
Air Filled Porosity (φa)	0
Fraction Organic Content (foc)	0.00472

Chemical	Input Parameters			Chemical Parameters		Results		
VOCs/SVOCs Detected in Selected Type 7 Co-Located Samples	Solubility (S) (mg/L)	Organic Carbon Partition Coefficient (Koc) (L/kg)	Henry's Law Constant (H) (atm-L/mol)	Dimensionless Henry's Law Constant (Hc) (-)	Distribution Coefficient (Kd) (L/kg)	Known Total Soil Concentration (Ct) (mg/kg)	Estimated Pore Water Concentration (Cw) (mg/L)	Fraction of Solubility
Detected SVOCs								
Bis(2-ethylhexyl) phthalate	2.85E-01	5.90E+03	3.61E-04	1.48E-05	2.78E+01	**18**	6.41E-01	2.25E+00
Butyl benzyl phthalate	4.22E+01	5.57E+02	4.78E-03	1.95E-04	2.63E+00	**3.3**	1.15E+00	2.72E-02
Dibenzofuran	4.30E+00	4.16E+03	1.40E-01	5.73E-03	1.96E+01	<0.12	--	--
Diethyl phthalate	1.08E+03	2.88E+02		1.85E-05		<0.24	--	--
Dimethyl phthalate	4.29E-06	4.00E+03		1.36E-05		<0.11	--	--
Di-n-butyl phthalate	1.30E+01	3.39E+04	9.39E-07	3.85E-08	1.60E+07	**1.2**	7.50E-08	5.77E-09
Hexachlorobutadiene	3.20E+00	2.30E+03	2.50E+01	1.02E+00	1.09E+01	<0.29	--	--
Isophorone	1.20E+04	2.49E+01	5.88E-03	2.41E-04	1.18E-01	<0.19	--	--
m-Cresol	2.51E+04	1.66E+01	1.59E-03	6.49E-05	7.84E-02	<0.24	--	--
o-Cresol	3.08E+04	1.48E+01	1.20E-03	4.93E-05	7.00E-02	**1**	3.21E+00	1.04E-04
p-Cresol	2.26E+04	1.76E+01	7.69E-04	3.15E-05	8.30E-02	**0.99**	3.05E+00	1.35E-04
Pentachlorobenzene	2.87E-02	8.31E-01		2.92E-02		<0.35	--	--
Pentachlorophenol	1.40E+01	5.30E+04	2.75E-03	1.12E-04	2.50E+02	**0.28**	1.12E-03	7.99E-05
Phenanthrene	1.00E+00	1.40E+04	1.59E-01	6.50E-03	6.61E+01	**0.21**	3.17E-03	3.17E-03
Phenol	9.30E+04	1.42E+01	5.26E-04	2.15E-05	6.70E-02	**0.32**	1.04E+00	1.11E-05
p-Nitrophenol	1.60E+04	2.13E+01	1.01E-03	4.13E-05	1.00E-01	<0.18	--	--

Sum of SVOC detections (mg/kg) 4.03E+01

Total Fraction of Solubility 2.34E+00

Soil/Water/Vapor Concentration Equilibria - Samples With Total VOCs or SVOCs Greater than 10 mg/kg
Modified Feenstra et al. (1991)/Mariner et al. (1997) Model
Casmalia Hazardous Waste Management Facility
Casmalia, California

SAMPLE INFORMATION - SAMPLE SSS00932

Location	RISBBC-04
Start Depth	57.5 (ft)
End Depth	59.5 (ft)
Sample Date	11/2/2004
Analytical Methods:	8260B/GCMS-SIM

ASSUMED SOIL PROPERTIES

Dry Bulk Density (ρb)	1.86 kg/L
Total Porosity (φt)	0.45
Water Filled Porosity (φw)	0.45
Air Filled Porosity (φa)	0
Fraction Organic Content (foc)	0.00472

Chemical	Input Parameters			Chemical Parameters		Results		
VOCs/SVOCs Detected in Selected Type 7 Co-Located Samples	Solubility (S) (mg/L)	Organic Carbon Partition Coefficient (Koc) (L/kg)	Henry's Law Constant (H) (atm-L/mol)	Dimensionless Henry's Law Constant (Hc) (-)	Distribution Coefficient (Kd) (L/kg)	Known Total Soil Concentration (Ct) (mg/kg)	Estimated Pore Water Concentration (Cw) (mg/L)	Fraction of Solubility
Detected VOCs								
1,1,1-Trichloroethane	1.31E+03	1.52E+02	1.67E+01	6.83E-01	7.17E-01	<0.00081	--	--
1,1,2,2-Tetrachloroethane	3.06E+03	1.18E+02	4.59E-01	1.88E-02	5.57E-01	<0.00065	--	--
1,1,2-Trichloroethane	3.97E+03	5.60E+01	1.08E+00	4.42E-02	2.64E-01	<0.00086	--	--
1,1-Dichloroethane	5.30E+03	3.00E+01	5.43E+00	2.22E-01	1.42E-01	**0.072**	1.88E-01	3.54E-05
1,1-Dichloroethylene	3.02E+03	6.50E+01	2.55E+01	1.04E+00	3.07E-01	**0.85**	1.55E+00	5.13E-04
1,2,3-Trichlorobenzene	1.20E+01	7.40E+03	4.23E+00	1.73E-01	3.49E+01	**43**	1.22E+00	1.02E-01
1,2,3-Trichloropropane	1.90E+03	6.87E+01	3.43E-01	1.40E-02	3.24E-01	<0.00075	--	--
1,2,4-Trimethylbenzene	5.76E+01	1.48E+03	5.57E+00	2.28E-01	6.98E+00	**0.098**	1.36E-02	2.36E-04
1,2-Dibromo-3-chloropropane	6.01E-03	1.23E+03		6.01E-03		<0.0014	--	--
1,2-Dibromoethane (EDB)	2.73E-02	3.91E+03		2.92E-02		<0.00054	--	--
1,2-Dichloroethane	7.13E+03	1.40E+01	1.50E+00	6.13E-02	6.61E-02	<0.00049	--	--
1,2-Dichloroethylene, total	4.90E+03	4.08E+01	7.01E-03	2.87E-04	1.92E-01	**2.5**	5.76E+00	1.17E-03
1,2-Dichloropropane	2.97E+03	5.10E+01	2.62E+00	1.07E-01	2.41E-01	<0.00062	--	--
1,3,5-Trimethylbenzene	4.82E+01	1.66E+03	8.77E+00	3.59E-01	7.83E+00	**0.051**	6.32E-03	1.31E-04
2-Butanol	1.50E+04	2.20E+01	1.02E-02	4.17E-04	1.04E-01	<0.15	--	--
2-Chlorotoluene	4.70E+02	1.60E+02	3.50E+00	1.43E-01	7.55E-01	**0.027**	2.71E-02	5.76E-05
2-Hexanone	1.40E+04	2.29E+01	2.82E-02	1.15E-03	1.08E-01	<0.0045	--	--
3,3,5-Trimethylcyclohexanone	1.20E+04	2.49E+01	5.88E-03	2.41E-04	1.18E-01	<0.0055	--	--
Benzene	1.75E+03	8.30E+01	5.59E+00	2.29E-01	3.92E-01	**0.012**	1.89E-02	1.08E-05
Bromobenzene	4.72E+02	2.24E+02	3.70E+00	1.51E-01	1.06E+00	<0.00084	--	--
Bromochloromethane	5.97E-02	1.67E+04		1.33E-01		<0.00067	--	--
Bromoform	3.10E+03	8.71E+01		2.19E-02		<0.00062	--	--
Carbon disulfide	1.19E+03	4.57E+01	3.03E+01	1.24E+00	2.16E-01	**0.0057**	1.25E-02	1.05E-05
Carbon tetrachloride	7.40E+02	4.39E+02	2.98E+01	1.22E+00	2.07E+00	<0.00094	--	--
Chlorobenzene	4.45E+02	3.30E+02	3.90E+00	1.59E-01	1.56E+00	<0.00086	--	--
Chloroethane	4.54E-01	6.71E+03		5.92E-01		<0.0023	--	--
Chloroform	8.51E+03	4.40E+01	3.58E+00	1.46E-01	2.08E-01	<0.00075	--	--
Chlorotrifluoroethene	1.16E+04	1.90E+02	3.10E+02	1.27E+01	8.97E-01	**4.6**	4.04E+00	3.47E-04
Dichlorodifluoromethane	1.40E+01	2.80E+02		1.64E+01		<0.00099	--	--
Diisopropyl ether	1.20E+04	2.49E+01	2.57E-03	1.05E-04	1.18E-01	<0.00041	--	--
Ethylbenzene	1.52E+02	1.10E+03	6.43E+00	2.63E-01	5.19E+00	**35**	6.44E+00	4.24E-02
Freon 112	1.20E+02			4.09E+00		<0.0042	--	--
Freon 113	1.10E+03	1.60E+02	5.21E+02	2.13E+01	7.55E-01	**1.5**	1.50E+00	1.37E-03
Isopropylbenzene	6.13E+01	1.45E+03	1.15E+01	4.70E-01	6.82E+00	**0.21**	2.97E-02	4.85E-04
m-Dichlorobenzene	1.34E+02	1.70E+03	3.25E+00	1.33E-01	8.02E+00	**0.19**	2.30E-02	1.72E-04
Methyl acetate	1.00E+06	2.20E+00	2.06E-02	8.42E-04	1.04E-02	<0.0016	--	--
Methyl chloride	8.20E+03	3.50E+01	2.40E+01	9.81E-01	1.65E-01	<0.00053	--	--
Methyl tert-butyl ether (MTBE)	1.50E+05	6.00E+00	5.87E-01	2.40E-02	2.83E-02	<0.00029	--	--
Methylcyclopentane	4.30E+01	5.52E+02	3.62E-01	1.48E-02	2.60E+00	**0.1**	3.51E-02	8.17E-04
Methylene chloride	2.19E+04	8.80E+00	2.12E+00	8.67E-02	4.15E-02	**0.0039**	1.38E-02	6.29E-07
n-Butylbenzene	1.38E+01	2.83E+03	1.31E+01	5.36E-01	1.34E+01	**0.0032**	2.35E-04	1.71E-05
n-Propylbenzene	1.38E+01	2.83E+03	1.31E+01	5.36E-01	1.34E+01	**0.069**	5.07E-03	3.68E-04
o-Dichlorobenzene	1.36E+02	1.70E+03	1.98E+00	8.10E-02	8.02E+00	**0.55**	6.65E-02	4.90E-04
o-Xylene	1.75E+02	8.30E+02	5.10E+00	2.09E-01	3.92E+00	**36**	8.65E+00	4.95E-02
p-Dichlorobenzene	7.38E+01	6.17E+02	2.43E+00	9.94E-02	2.91E+00	**0.23**	7.29E-02	9.88E-04
p-Isopropyltoluene	2.34E+01	2.57E+03	1.10E+01	4.50E-01	1.21E+01	**0.004**	3.23E-04	1.38E-05
Propanal	3.06E+05	4.20E+00	7.69E-02	3.15E-03	1.98E-02	<0.013	--	--
sec-Butylbenzene	1.70E+01	2.15E+03	1.87E+01	7.65E-01	1.01E+01	<0.0018	--	--
Styrene	3.10E+02	7.76E+02		1.13E-01		<0.0013	--	--
Tetrachloroethylene	2.37E+02	3.64E+02	1.74E+01	7.12E-01	1.72E+00	**1.2**	6.12E-01	2.58E-03
Tetrahydrofuran	1.00E+06	9.50E-01	7.00E-02	2.86E-03	4.48E-03	**0.0099**	4.02E-02	4.02E-08
Toluene	5.35E+02	3.00E+02	6.37E+00	2.60E-01	1.42E+00	**0.26**	1.57E-01	2.93E-04
trans-1,2-Dichloroethylene	4.39E+03	5.90E+01	9.16E+00	3.75E-01	2.78E-01	**0.062**	1.19E-01	2.71E-05
Trichloroethylene	1.38E+03	1.26E+02	9.37E+00	3.83E-01	5.95E-01	**0.093**	1.11E-01	8.03E-05
Trichlorofluoromethane	1.62E+03	1.59E+02	8.88E+01	3.63E+00	7.50E-01	<0.00049	--	--
Vinyl chloride	2.76E+03	1.86E+01	2.70E+01	1.10E+00	8.78E-02	**1.3**	3.94E+00	1.43E-03
Xylene (total)	1.61E+02	4.07E+02	7.34E+00	3.00E-01	1.92E+00	**92**	4.25E+01	2.64E-01

Sum of VOC detections (mg/kg) 2.20E+02

Detected SVOCs								
1,2,4,5-Tetrachlorobenzene	6.06E-01	5.75E+03	1.20E-03	4.92E-05	2.71E+01	**0.7**	2.56E-02	4.22E-02
1,2,4-Trichlorobenzene	3.00E+02	1.78E+03	1.42E+00	5.81E-02	8.40E+00	**120**	1.39E+01	4.63E-02
2,3,4,6-Tetrachlorophenol	7.00E+00	9.80E+01	1.30E-03	5.32E-05	4.63E-01	<0.46	--	--
2,4-Dichlorophenol	4.60E+03	3.80E+02	2.75E-03	1.12E-04	1.79E+00	<0.19	--	--
2,4-Dimethylphenol	4.20E+03	2.22E+02	2.38E-03	9.73E-05	1.05E+00	**0.25**	1.94E-01	4.62E-05
2,6-Dinitrotoluene	3.05E-05	3.52E+02		3.02E-05		<0.11	--	--
2-Methylnaphthalene	2.54E+01	8.50E+03	5.18E-01	2.12E-02	4.01E+01	<0.22	--	--

Soil/Water/Vapor Concentration Equilibria - Samples With Total VOCs or SVOCs Greater than 10 mg/kg
Modified Feenstra et al. (1991)/Mariner et al. (1997) Model
Casmalia Hazardous Waste Management Facility
Casmalia, California

SAMPLE INFORMATION - SAMPLE SSS00932

Location	RISBBC-04
Start Depth	57.5 (ft)
End Depth	59.5 (ft)
Sample Date	11/2/2004
Analytical Methods:	8260B/GCMS-SIM

ASSUMED SOIL PROPERTIES

Dry Bulk Density (ρb)	1.86 kg/L
Total Porosity (φt)	0.45
Water Filled Porosity (φw)	0.45
Air Filled Porosity (φa)	0
Fraction Organic Content (foc)	0.00472

Chemical	Input Parameters			Chemical Parameters		Results		
VOCs/SVOCs Detected in Selected Type 7 Co-Located Samples	Solubility (S) (mg/L)	Organic Carbon Partition Coefficient (Koc) (L/kg)	Henry's Law Constant (H) (atm-L/mol)	Dimensionless Henry's Law Constant (Hc) (-)	Distribution Coefficient (Kd) (L/kg)	Known Total Soil Concentration (Ct) (mg/kg)	Estimated Pore Water Concentration (Cw) (mg/L)	Fraction of Solubility
Detected SVOCs								
3-Methylcholanthrene	1.00E+01	1.00E+07		2.72E-01		<0.35	--	--
Acetophenone	5.50E+03	3.83E+01	9.09E-03	3.72E-04	1.81E-01	<0.33	--	--
Aramite	1.00E-01	1.55E+04	4.40E-05	1.80E-06	7.31E+01	<0.55	--	--
Benzoic acid	2.70E+03	5.66E+01	7.14E-05	2.92E-06	2.67E-01	<0.051	--	--
Benzyl alcohol	1.82E+02	6.92E+01		3.06E-05		<0.68	--	--
Bis(2-ethylhexyl) phthalate	2.85E-01	5.90E+03	3.61E-04	1.48E-05	2.78E+01	<0.094	--	--
Butyl benzyl phthalate	4.22E+01	5.57E+02	4.78E-03	1.95E-04	2.63E+00	<0.090	--	--
Dibenzofuran	4.30E+00	4.16E+03	1.40E-01	5.73E-03	1.96E+01	<0.11	--	--
Diethyl phthalate	1.08E+03	2.88E+02		1.85E-05		<0.24	--	--
Dimethyl phthalate	4.29E-06	4.00E+03		1.36E-05		<0.11	--	--
Di-n-butyl phthalate	1.30E+01	3.39E+04	9.39E-07	3.85E-08	1.60E+07	**0.43**	2.69E-08	2.07E-09
Hexachlorobutadiene	3.20E+00	2.30E+03	2.50E+01	1.02E+00	1.09E+01	<0.29	--	--
Isophorone	1.20E+04	2.49E+01	5.88E-03	2.41E-04	1.18E-01	<0.19	--	--
m-Cresol	2.51E+04	1.66E+01	1.59E-03	6.49E-05	7.84E-02	<0.23	--	--
o-Cresol	3.08E+04	1.48E+01	1.20E-03	4.93E-05	7.00E-02	<0.23	--	--
p-Cresol	2.26E+04	1.76E+01	7.69E-04	3.15E-05	8.30E-02	<0.17	--	--
Pentachlorophenol	1.40E+01	5.30E+04	2.75E-03	1.12E-04	2.50E+02	<0.11	--	--
Phenanthrene	1.00E+00	1.40E+04	1.59E-01	6.50E-03	6.61E+01	<0.10	--	--
Phenol	9.30E+04	1.42E+01	5.26E-04	2.15E-05	6.70E-02	<0.22	--	--
p-Nitrophenol	1.60E+04	2.13E+01	1.01E-03	4.13E-05	1.00E-01	<0.17	--	--

Sum of SVOC detections (mg/kg) 1.22E+02

Total Fraction of Solubility 5.58E-01

Soil/Water/Vapor Concentration Equilibria - Samples With Total VOCs or SVOCs Greater than 10 mg/kg
Modified Feenstra et al. (1991)/Mariner et al. (1997) Model
Casmalia Hazardous Waste Management Facility
Casmalia, California

SAMPLE INFORMATION - SAMPLE SSS00934*

Location	RISBBC-03
Start Depth	37 (ft)
End Depth	38.5 (ft)
Sample Date	11/3/2004
Analytical Methods:	8260B/GCMS-SIM

ASSUMED SOIL PROPERTIES

Dry Bulk Density (ρb)	1.86 kg/L
Total Porosity (φt)	0.45
Water Filled Porosity (φw)	0.45
Air Filled Porosity (φa)	0
Fraction Organic Content (foc)	0.00472

Chemical	Input Parameters			Chemical Parameters		Results		
VOCs/SVOCs Detected in Selected Type 7 Co-Located Samples	Solubility (S) (mg/L)	Organic Carbon Partition Coefficient (Koc) (L/kg)	Henry's Law Constant (H) (atm-L/mol)	Dimensionless Henry's Law Constant (Hc) (-)	Distribution Coefficient (Kd) (L/kg)	Known Total Soil Concentration (Ct) (mg/kg)	Estimated Pore Water Concentration (Cw) (mg/L)	Fraction of Solubility
Detected VOCs								
1,1,1-Trichloroethane	1.31E+03	1.52E+02	1.67E+01	6.83E-01	7.17E-01	<0.17	--	--
1,1,2,2-Tetrachloroethane	3.06E+03	1.18E+02	4.59E-01	1.88E-02	5.57E-01	<0.13	--	--
1,1,2-Trichloroethane	3.97E+03	5.60E+01	1.08E+00	4.42E-02	2.64E-01	<0.18	--	--
1,1-Dichloroethane	5.30E+03	3.00E+01	5.43E+00	2.22E-01	1.42E-01	<0.11	--	--
1,1-Dichloroethylene	3.02E+03	6.50E+01	2.55E+01	1.04E+00	3.07E-01	<0.23	--	--
1,2,3-Trichlorobenzene	1.20E+01	7.40E+03	4.23E+00	1.73E-01	3.49E+01	<0.32	--	--
1,2,3-Trichloropropane	1.90E+03	6.87E+01	3.43E-01	1.40E-02	3.24E-01	<0.15	--	--
1,2,4-Trimethylbenzene	5.76E+01	1.48E+03	5.57E+00	2.28E-01	6.98E+00	**0.86**	1.19E-01	2.07E-03
1,2-Dibromo-3-chloropropane	6.01E-03	1.23E+03		6.01E-03		<0.29	--	--
1,2-Dibromoethane (EDB)	2.73E-02	3.91E+03		2.92E-02		<0.11	--	--
1,2-Dichloroethane	7.13E+03	1.40E+01	1.50E+00	6.13E-02	6.61E-02	<0.10	--	--
1,2-Dichloroethylene, total	4.90E+03	4.08E+01	7.01E-03	2.87E-04	1.92E-01	**1.1**	2.53E+00	5.17E-04
1,2-Dichloropropane	2.97E+03	5.10E+01	2.62E+00	1.07E-01	2.41E-01	<0.13	--	--
1,3,5-Trimethylbenzene	4.82E+01	1.66E+03	8.77E+00	3.59E-01	7.83E+00	**0.35**	4.34E-02	9.00E-04
2-Butanol	1.50E+04	2.20E+01	1.02E-02	4.17E-04	1.04E-01	<31	--	--
2-Chlorotoluene	4.70E+02	1.60E+02	3.50E+00	1.43E-01	7.55E-01	<0.24	--	--
2-Hexanone	1.40E+04	2.29E+01	2.82E-02	1.15E-03	1.08E-01	<0.93	--	--
3,3,5-Trimethylcyclohexanone	1.20E+04	2.49E+01	5.88E-03	2.41E-04	1.18E-01	<1.1	--	--
Benzene	1.75E+03	8.30E+01	5.59E+00	2.29E-01	3.92E-01	<0.17	--	--
Bromobenzene	4.72E+02	2.24E+02	3.70E+00	1.51E-01	1.06E+00	<0.17	--	--
Bromochloromethane	5.97E-02	1.67E+04		1.33E-01		<0.14	--	--
Bromoform	3.10E+03	8.71E+01		2.19E-02		<0.13	--	--
Carbon disulfide	1.19E+03	4.57E+01	3.03E+01	1.24E+00	2.16E-01	<0.74	--	--
Carbon tetrachloride	7.40E+02	4.39E+02	2.98E+01	1.22E+00	2.07E+00	<0.19	--	--
Chlorobenzene	4.45E+02	3.30E+02	3.90E+00	1.59E-01	1.56E+00	<0.18	--	--
Chloroethane	4.54E-01	6.71E+03		5.92E-01		<0.48	--	--
Chloroform	8.51E+03	4.40E+01	3.58E+00	1.46E-01	2.08E-01	<0.15	--	--
Chlorotrifluoroethene	1.16E+04	1.90E+02	3.10E+02	1.27E+01	8.97E-01	<0.95	--	--
Dichlorodifluoromethane	1.40E+01	2.80E+02		1.64E+01		<0.20	--	--
Diisopropyl ether	1.20E+04	2.49E+01	2.57E-03	1.05E-04	1.18E-01	<0.085	--	--
Ethylbenzene	1.52E+02	1.10E+03	6.43E+00	2.63E-01	5.19E+00	**5.2**	9.57E-01	6.30E-03
Freon 112	1.20E+02			4.09E+00		<0.87	--	--
Freon 113	1.10E+03	1.60E+02	5.21E+02	2.13E+01	7.55E-01	<0.26	--	--
Isopropylbenzene	6.13E+01	1.45E+03	1.15E+01	4.70E-01	6.82E+00	<0.26	--	--
m-Dichlorobenzene	1.34E+02	1.70E+03	3.25E+00	1.33E-01	8.02E+00	<0.26	--	--
Methyl acetate	1.00E+06	2.20E+00	2.06E-02	8.42E-04	1.04E-02	<0.33	--	--
Methyl chloride	8.20E+03	3.50E+01	2.40E+01	9.81E-01	1.65E-01	<0.11	--	--
Methyl tert-butyl ether (MTBE)	1.50E+05	6.00E+00	5.87E-01	2.40E-02	2.83E-02	<0.059	--	--
Methylcyclopentane	4.30E+01	5.52E+02	3.62E-01	1.48E-02	2.60E+00	<0.79	--	--
Methylene chloride	2.19E+04	8.80E+00	2.12E+00	8.67E-02	4.15E-02	<0.066	--	--
n-Butylbenzene	1.38E+01	2.83E+03	1.31E+01	5.36E-01	1.34E+01	<0.39	--	--
n-Propylbenzene	1.38E+01	2.83E+03	1.31E+01	5.36E-01	1.34E+01	<0.33	--	--
o-Dichlorobenzene	1.36E+02	1.70E+03	1.98E+00	8.10E-02	8.02E+00	<0.23	--	--
o-Xylene	1.75E+02	8.30E+02	5.10E+00	2.09E-01	3.92E+00	**4.9**	1.18E+00	6.73E-03
p-Dichlorobenzene	7.38E+01	6.17E+02	2.43E+00	9.94E-02	2.91E+00	<0.21	--	--
p-Isopropyltoluene	2.34E+01	2.57E+03	1.10E+01	4.50E-01	1.21E+01	<0.44	--	--
Propanal	3.06E+05	4.20E+00	7.69E-02	3.15E-03	1.98E-02	<2.7	--	--
sec-Butylbenzene	1.70E+01	2.15E+03	1.87E+01	7.65E-01	1.01E+01	<0.37	--	--
Styrene	3.10E+02	7.76E+02		1.13E-01		<0.26	--	--
Tetrachloroethylene	2.37E+02	3.64E+02	1.74E+01	7.12E-01	1.72E+00	<0.24	--	--
Tetrahydrofuran	1.00E+06	9.50E-01	7.00E-02	2.86E-03	4.48E-03	<0.25	--	--
Toluene	5.35E+02	3.00E+02	6.37E+00	2.60E-01	1.42E+00	**1**	6.03E-01	1.13E-03
trans-1,2-Dichloroethylene	4.39E+03	5.90E+01	9.16E+00	3.75E-01	2.78E-01	<0.16	--	--
Trichloroethylene	1.38E+03	1.26E+02	9.37E+00	3.83E-01	5.95E-01	**0.34**	4.06E-01	2.93E-04
Trichlorofluoromethane	1.62E+03	1.59E+02	8.88E+01	3.63E+00	7.50E-01	<0.10	--	--
Vinyl chloride	2.76E+03	1.86E+01	2.70E+01	1.10E+00	8.78E-02	<0.25	--	--
Xylene (total)	1.61E+02	4.07E+02	7.34E+00	3.00E-01	1.92E+00	**17**	7.86E+00	4.88E-02

Sum of VOC detections (mg/kg) 3.08E+01

Detected SVOCs								
1,2,4,5-Tetrachlorobenzene	6.06E-01	5.75E+03	1.20E-03	4.92E-05	2.71E+01	<0.28	--	--
1,2,4-Trichlorobenzene	3.00E+02	1.78E+03	1.42E+00	5.81E-02	8.40E+00	<0.23	--	--
2,3,4,6-Tetrachlorophenol	7.00E+00	9.80E+01	1.30E-03	5.32E-05	4.63E-01	<0.42	--	--
2,4-Dichlorophenol	4.60E+03	3.80E+02	2.75E-03	1.12E-04	1.79E+00	**23**	1.13E+01	2.46E-03
2,4-Dimethylphenol	4.20E+03	2.22E+02	2.38E-03	9.73E-05	1.05E+00	<0.16	--	--
2,6-Dinitrotoluene	3.05E-05	3.52E+02		3.02E-05		<0.10	--	--
2-Methylnaphthalene	2.54E+01	8.50E+03	5.18E-01	2.12E-02	4.01E+01	<0.20	--	--

Soil/Water/Vapor Concentration Equilibria - Samples With Total VOCs or SVOCs Greater than 10 mg/kg
Modified Feenstra et al. (1991)/Mariner et al. (1997) Model
Casmalia Hazardous Waste Management Facility
Casmalia, California

SAMPLE INFORMATION - SAMPLE SSS00934*

Location	RISBBC-03
Start Depth	37 (ft)
End Depth	38.5 (ft)
Sample Date	11/3/2004
Analytical Methods:	8260B/GCMS-SIM

ASSUMED SOIL PROPERTIES

Dry Bulk Density (ρb)	1.86 kg/L
Total Porosity (φt)	0.45
Water Filled Porosity (φw)	0.45
Air Filled Porosity (φa)	0
Fraction Organic Content (foc)	0.00472

Chemical	Input Parameters			Chemical Parameters		Results		
VOCs/SVOCs Detected in Selected Type 7 Co-Located Samples	Solubility (S) (mg/L)	Organic Carbon Partition Coefficient (Koc) (L/kg)	Henry's Law Constant (H) (atm-L/mol)	Dimensionless Henry's Law Constant (Hc) (-)	Distribution Coefficient (Kd) (L/kg)	Known Total Soil Concentration (Ct) (mg/kg)	Estimated Pore Water Concentration (Cw) (mg/L)	Fraction of Solubility
Detected SVOCs								
3-Methylcholanthrene	1.00E+01	1.00E+07		2.72E-01		<0.32	--	--
Acetophenone	5.50E+03	3.83E+01	9.09E-03	3.72E-04	1.81E-01	<0.30	--	--
Aramite	1.00E-01	1.55E+04	4.40E-05	1.80E-06	7.31E+01	<0.50	--	--
Benzoic acid	2.70E+03	5.66E+01	7.14E-05	2.92E-06	2.67E-01	**0.33**	6.48E-01	2.40E-04
Benzyl alcohol	1.82E+02	6.92E+01		3.06E-05		<0.62	--	--
Bis(2-ethylhexyl) phthalate	2.85E-01	5.90E+03	3.61E-04	1.48E-05	2.78E+01	**0.24**	8.54E-03	3.00E-02
Butyl benzyl phthalate	4.22E+01	5.57E+02	4.78E-03	1.95E-04	2.63E+00	<0.082	--	--
Dibenzofuran	4.30E+00	4.16E+03	1.40E-01	5.73E-03	1.96E+01	<0.10	--	--
Diethyl phthalate	1.08E+03	2.88E+02		1.85E-05		<0.21	--	--
Dimethyl phthalate	4.29E-06	4.00E+03		1.36E-05		<0.097	--	--
Di-n-butyl phthalate	1.30E+01	3.39E+04	9.39E-07	3.85E-08	1.60E+07	<0.10	--	--
Hexachlorobutadiene	3.20E+00	2.30E+03	2.50E+01	1.02E+00	1.09E+01	<0.26	--	--
Isophorone	1.20E+04	2.49E+01	5.88E-03	2.41E-04	1.18E-01	<0.17	--	--
m-Cresol	2.51E+04	1.66E+01	1.59E-03	6.49E-05	7.84E-02	<0.21	--	--
o-Cresol	3.08E+04	1.48E+01	1.20E-03	4.93E-05	7.00E-02	<0.21	--	--
p-Cresol	2.26E+04	1.76E+01	7.69E-04	3.15E-05	8.30E-02	**0.48**	1.48E+00	6.54E-05
Pentachlorobenzene	2.87E-02	8.31E-01		2.92E-02		<0.31	--	--
Pentachlorophenol	1.40E+01	5.30E+04	2.75E-03	1.12E-04	2.50E+02	<0.10	--	--
Phenanthrene	1.00E+00	1.40E+04	1.59E-01	6.50E-03	6.61E+01	<0.095	--	--
Phenol	9.30E+04	1.42E+01	5.26E-04	2.15E-05	6.70E-02	**1.4**	4.53E+00	4.87E-05
p-Nitrophenol	1.60E+04	2.13E+01	1.01E-03	4.13E-05	1.00E-01	**0.23**	6.72E-01	4.20E-05

Sum of SVOC detections (mg/kg) 2.57E+01

Total Fraction of Solubility 9.96E-02

Soil/Water/Vapor Concentration Equilibria - Samples With Total VOCs or SVOCs Greater than 10 mg/kg
Modified Feenstra et al. (1991)/Mariner et al. (1997) Model
Casmalia Hazardous Waste Management Facility
Casmalia, California

Notes:
See attached text (Attachment C.13-5) for applicable equations.
*Sample also evaluated based on Elevated UVIF _MIP Response
UVIF - Ultra Violet Induced Fluorescence; MIP - Membrane Interface Probe
VOC = volatile organic compound; SVOC = semivolatile organic compound
ft = feet
kg/L = kilograms per liter
mg/L = milligrams per liter
L/kg = liters per kilogram
atm-L/mol = atmosphere-liters per mole
mg/kg = milligrams per kilogram
Only samples with total volatile organic compounds and/or semivolatile organic compounds greater than 10 mg/kg are represented
Any analyte detected in any of the samples are included in the analyte list for each sample