Table 4-1. Soil Gas Cumulative Cancer Risk and Noncancer Hazard Index
CH2M Hill, 2009

Field ID	Analyte	Result (µg/m^3)	Result Modified for Attenuation Factor (µg/m^3)	Carcinogenic Residential Air RSL (µg/m^3)	Noncancer Residential Air RSL (µg/m^3)	Residential Risk	Residential HI
Bldg-1032	Ethylbenzene	1.39	0.14	0.97	1,000	1.4 E-07	1.4 E-04
Bldg-1032	Styrene	1.35	0.13		1,000		1.3 E-04
Bldg-1032	cis-1,3-Dichloropropene	ND		0.61	21		
Bldg-1032	trans-1,3-Dichloropropene	ND		0.61	21		
Bldg-1032	1,4-DCB	3.31	0.33	0.22	830	1.5 E-06	4.0 E-04
Bldg-1032	1,2-EDB	ND		0.0041	9.4		
Bldg-1032	1,2-DCA	ND		0.094	2,500		
Bldg-1032	m,p-xylene	3.51	0.35		730		4.8 E-04
Bldg-1032	1,3,5-Trimethylbenzene	ND			6.3		
Bldg-1032	Toluene	80.52	8.05		5,200		0.002
Bldg-1032	Chlorobenzene	ND			52		
Bldg-1032	1,2,4-Trichlorobenzene	ND			4.2		
Bldg-1032	Tetrachloroethylene	ND		0.41	280		
Bldg-1032	cis-1,2-DCE	ND					
Bldg-1032	MTBE	3.03	0.3	9.4	3,100	3.2 E-08	9.8 E-05
Bldg-1032	1,3-DCB	ND		0.22	830		
Bldg-1032	Carbon tetrachloride	ND		0.16	200		
Bldg-1032	Acetone	61.44	6.14		32,000		1.9 E-04
Bldg-1032	Chloroform	ND		0.11	100		
Bldg-1032	Benzene	8.23	0.82	0.31	31	2.7 E-06	0.03
Bldg-1032	1,1,1-TCA	ND			5,200		
Bldg-1032	Bromomethane	ND			5.2		
Bldg-1032	Chloromethane	1.01	0.1		94		0.001
Bldg-1032	Chloroethane	ND			10,000		
Bldg-1032	Vinyl chloride	ND		0.16	100		
Bldg-1032	Methylene chloride	9.8	0.98	5.2	1,100	1.9 E-07	8.9 E-04
Bldg-1032	1,1-DCA	ND		1.5			
Bldg-1032	1,1-DCE	ND			210		
Bldg-1032	Trichlorofluoromethane	1.4	0.14		730		1.9 E-04
Bldg-1032	Dichlorodifluoromethane	2.52	0.25		210		0.001
Bldg-1032	1,1,2-Trichloro-1,2,2-trifluoroethane	1.84	0.18		31,000		5.9 E-06
Bldg-1032	1,2-Dichloro-1,1,2,2-tetrafluoroethane	ND					

Table 4-1. Soil Gas Cumulative Cancer Risk and Noncancer Hazard Index
CH2M Hill, 2009 (Continued)

Field ID	Analyte	Result (µg/m^3)	Result Modified for Attenuation Factor (µg/m^3)	Carcinogenic Residential Air RSL (µg/m^3)	Noncancer Residential Air RSL (µg/m^3)	Residential Risk	Residential HI
Bldg-1032	1,2-Dichloropropane	1.43	0.14	0.24	4.2	6.0 E-07	0.03
Bldg-1032	MEK (2-Butanone)	12.5	1.25		5,200		2.4 E-04
Bldg-1032	1,1,2-TCA	ND		0.15			
Bldg-1032	TCE	3.24	0.32	1.2		2.7 E-07	
Bldg-1032	1,1,2,2-Tetrachloroethane	ND		0.042			
Bldg-1032	Hexachlorobutadiene	ND		0.11			
Bldg-1032	o-xylene	1.39	0.14		730		1.9 E-04
Bldg-1032	1,2-DCB	ND			210		
Bldg-1032	1,2,4-Trimethylbenzene	ND			7.3		
				Bldg-1032 Cumulative Risk and HI:		**5.0 E-06**	**0.07**
Bldg-1048	Ethylbenzene	1.39	0.139	0.97	1,000	1.4 E-07	1.4 E-04
Bldg-1048	Styrene	2.49	0.249		1,000		2.5 E-04
Bldg-1048	cis-1,3-Dichloropropene	ND		0.61	21		
Bldg-1048	trans-1,3-Dichloropropene	ND		0.61	21		
Bldg-1048	1,4-DCB	2.7	0.27	0.22	830	1.2 E-06	3.3 E-04
Bldg-1048	1,2-EDB	ND		0.0041	9.4		
Bldg-1048	1,2-DCA	ND		0.094	2,500		
Bldg-1048	m,p-xylene	3.15	0.315		730		4.3 E-04
Bldg-1048	1,3,5-Trimethylbenzene	ND			6.3		
Bldg-1048	Toluene	7.07	0.707		5,200		1.4 E-04
Bldg-1048	Chlorobenzene	ND			52		
Bldg-1048	1,2,4-Trichlorobenzene	ND			4.2		
Bldg-1048	Tetrachloroethylene	3.27	0.327	0.41	280	8.0 E-07	0.001
Bldg-1048	cis-1,2-DCE	ND					
Bldg-1048	MTBE	ND		9.4	3,100		
Bldg-1048	1,3-DCB	ND		0.22	830		
Bldg-1048	Carbon tetrachloride	ND		0.16	200		
Bldg-1048	Acetone	69.51	6.951		32,000		2.2 E-04
Bldg-1048	Chloroform	ND		0.11	100		
Bldg-1048	Benzene	20.64	2.064	0.31	31	8.7 E-06	0.07
Bldg-1048	1,1,1-TCA	1.97	0.197		5,200		3.8 E-05
Bldg-1048	Bromomethane	ND			5.2		
Bldg-1048	Chloromethane	ND			94		
Bldg-1048	Chloroethane	ND			10,000		

Table 4-1. Soil Gas Cumulative Cancer Risk and Noncancer Hazard Index CH2M Hill, 2009 (Continued)

Field ID	Analyte	Result (µg/m^3)	Result Modified for Attenuation Factor (µg/m^3)	Carcinogenic Residential Air RSL (µg/m^3)	Noncancer Residential Air RSL (µg/m^3)	Residential Risk	Residential HI
Bldg-1048	Vinyl chloride	ND		0.16	100		
Bldg-1048	Methylene chloride	3.62	0.362	5.2	1,100	7.0 E-08	3.3 E-04
Bldg-1048	1,1-DCA	ND		1.5			
Bldg-1048	1,1-DCE	ND			210		
Bldg-1048	Trichlorofluoromethane	154.5	15.45		730		0.02
Bldg-1048	Dichlorodifluoromethane	954.45	95.445		210		0.5
Bldg-1048	1,1,2-Trichloro-1,2,2-trifluoroethane	ND			31,000		
Bldg-1048	1,2-Dichloro-1,1,2,2-tetrafluoroethane	ND					
Bldg-1048	1,2-Dichloropropane	ND		0.24	4.2		
Bldg-1048	MEK (2-Butanone)	7.82	0.782		5,200		1.5 E-04
Bldg-1048	1,1,2-TCA	ND		0.15			
Bldg-1048	TCE	1.7	0.17	1.2		1.4 E-07	
Bldg-1048	1,1,2,2-Tetrachloroethane	ND		0.042			
Bldg-1048	Hexachlorobutadiene	ND		0.11			
Bldg-1048	o-xylene	1.57	0.157		730		2.2 E-04
Bldg-1048	1,2-DCB	ND			210		
Bldg-1048	1,2,4-Trimethylbenzene	ND			7.3		
				Bldg-1048 Cumulative Risk and HI:		**9.0 E-06**	**0.5**
Bldg-1032-2	Ethylbenzene	0.72	0.07	0.97	1,000	7.4 E-08	7.2 E-05
Bldg-1032-2	Styrene	ND			1,000		
Bldg-1032-2	cis-1,3-Dichloropropene	ND		0.61	21		
Bldg-1032-2	trans-1,3-Dichloropropene	ND		0.61	21		
Bldg-1032-2	1,4-DCB	1.41	0.14	0.22	830	6.4 E-07	1.7 E-04
Bldg-1032-2	1,2-EDB	ND		0.0041	9.4		
Bldg-1032-2	1,2-DCA	ND		0.094	2,500		
Bldg-1032-2	m,p-xylene	1.89	0.19		730		2.6 E-04
Bldg-1032-2	1,3,5-Trimethylbenzene	ND			6.3		
Bldg-1032-2	Toluene	1.24	0.124		5,200		2.4 E-05
Bldg-1032-2	Chlorobenzene	ND			52		
Bldg-1032-2	1,2,4-Trichlorobenzene	ND			4.2		
Bldg-1032-2	Tetrachloroethylene	ND		0.41	280		
Bldg-1032-2	cis-1,2-DCE	ND					

Table 4-1. Soil Gas Cumulative Cancer Risk and Noncancer Hazard Index CH2M Hill, 2009 (Concluded)

Field ID	Analyte	Result (µg/m^3)	Result Modified for Attenuation Factor (µg/m^3)	Carcinogenic Residential Air RSL (µg/m^3)	Noncancer Residential Air RSL (µg/m^3)	Residential Risk	Residential HI
Bldg-1032-2	MTBE	ND		9.4	3,100		
Bldg-1032-2	1,3-DCB	ND		0.22	830		
Bldg-1032-2	Carbon tetrachloride	ND		0.16	200		
Bldg-1032-2	Acetone	22.37	2.24		32,000		7.0 E-05
Bldg-1032-2	Chloroform	ND		0.11	100		
Bldg-1032-2	Benzene	1.63	0.16	0.31	31	5.2 E-07	0.005
Bldg-1032-2	1,1,1-TCA	ND			5,200		
Bldg-1032-2	Bromomethane	ND			5.2		
Bldg-1032-2	Chloromethane	1.61	0.16		94		0.001
Bldg-1032-2	Chloroethane	ND			10,000		
Bldg-1032-2	Vinyl chloride	ND		0.16	100		
Bldg-1032-2	Methylene chloride	3.13	0.31	5.2	1,100	6.0 E-08	2.8 E-04
Bldg-1032-2	1,1-DCA	ND		1.5			
Bldg-1032-2	1,1-DCE	ND			210		
Bldg-1032-2	Trichlorofluoromethane	1.4	0.14		730		1.9 E-04
Bldg-1032-2	Dichlorodifluoromethane	2.57	0.26		210		0.001
Bldg-1032-2	1,1,2-Trichloro-1,2,2-trifluoroethane	ND			31,000		
Bldg-1032-2	1,2-Dichloro-1,1,2,2-tetrafluoroethane	ND					
Bldg-1032-2	1,2-Dichloropropane	ND		0.24	4.2		
Bldg-1032-2	MEK (2-Butanone)	11.24	1.12		5,200		2.2 E-04
Bldg-1032-2	1,1,2-TCA	ND		0.15			
Bldg-1032-2	TCE	1.97	0.2	1.2		1.6 E-07	
Bldg-1032-2	1,1,2,2-Tetrachloroethane	ND		0.042			
Bldg-1032-2	Hexachlorobutadiene	1.6	0.16	0.11		1.5 E-06	
Bldg-1032-2	o-xylene	ND			730		
Bldg-1032-2	1,2-DCB	ND			210		
Bldg-1032-2	1,2,4-Trimethylbenzene	ND			7.3		
					Bldg-1032-2 Cumulative Risk and HI:	**3.0 E-06**	**0.009**

Table 6-1. Potential Modified EPA TO-15 Low-Level Method Reporting Limits

Compound	Reporting Limit (ppbv)	Reporting Limit (µg/m^3)
Freon 12	0.10	0.49
Freon 114	0.10	0.7
Chloromethane	0.10	0.21
Vinyl Chloride	0.10	0.26
1,3-Butadiene	0.10	0.22
Bromomethane	0.10	0.39
Chloroethane	0.50	1.3
Freon 11	0.10	0.56
Ethanol	0.50	0.94
Freon 113	0.10	0.77
1,1-Dichloroethene	0.10	0.4
Actone	0.50	1.2
2-Propanol	0.50	1.2
Carbon Disulfide	0.50	1.6
3-Chloropropene	0.50	1.6
Methylene Chloride	0.20	0.69
MTBE	0.10	0.36
trans-1,2-Dichloroethene	0.10	0.4
Hexane	0.10	0.35
1,1-Dichloroethane	0.10	0.4
2-Butanone (Methyl Ethyl Ketone)	0.50	1.5
cis-1,2-Dichloroethene	0.10	0.4
Tetrahydrofuran	0.50	1.5
Chloroform	0.10	0.49
1,1,1-Trichloroethane	0.10	0.54
Cyclohexane	0.10	0.34
Carbon Tetrachloride	0.10	0.63
2,2,4-Trimethylpentane	0.50	2.3
Benzene	0.10	0.32
1,2-Dichloroethane	0.10	0.4
Heptane	0.10	0.41
Trichloroethene	0.10	0.54
1,2-Dichloropropane	0.10	0.46
1,4-Dioxane	0.10	0.36
Bromodichloromethane	0.10	0.67
cis-1,3-Dichloropropene	0.10	0.45
4-Methyl-2-pentanone	0.10	0.41
Toluene	0.10	0.38
trans-1,3-Dichloropropene	0.10	0.45
1,1,2-Trichloroethane	0.10	0.54
Tetrachloroethene	0.10	0.68
2-Hexane	0.50	2
Dibromochloromethane	0.10	0.85
1,2-Dibromoethane (EDB)	0.10	0.77
Chlorobenzene	0.10	0.46
Ethyl Benzene	0.10	0.43
m,p-Xylene	0.10	0.43
o-Xylene	0.10	0.43
Styrene	0.10	0.42
Bromoform	0.10	1
Cumene	0.10	0.49
1,1,2,2-Tetrachlrorethane	0.10	0.69
Propylbenzene	0.10	0.49

Table 6-1. Potential Modified EPA TO-15 Low-Level Method Reporting Limits (Concluded)

Compound	Reporting Limit (ppbv)	Reporting Limit (µg/m^3)
4-Ethyltoluene	0.10	0.49
1,3,5-Trimethylbenzene	0.10	0.49
1,2,4-Trimethylbenzene	0.10	0.49
1,3-Dichlorobenzene	0.10	0.6
1,4-Dichlorobenzene	0.10	0.6
alpha-Chlorotoluene	0.10	0.52
1,2-Dichlorobenzene	0.10	0.6
1,2,4-Trichlorobenzene	0.50	3.7
Hexachlorobutadiene	0.50	5.3
Surrogate		
1,2-Dichloroethane-d4	70-130	70-130
Toluene-d8	70-130	70-130
4-Bromofluorobenzene	70-130	70-130