APPENDIX A

Laboratory Analytical Method Reporting Limits

Table A-1: Method Reporting Limits – Groundwater

Table A-2: Method Reporting Limits – Soil

Table A-3: Method Reporting Limits – Soil Vapor

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APPENDIX A-1

Table A-1: Method Reporting Limits - Groundwater

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Table A-1. Method Reporting Limits – Groundwater (Empirical Laboratories, LLC, Nashville, TN)

Analytical Group/ Method	Analyte and Location	CAS Number	Units	Project Comparison Limit	Project Comparison Limit Reference	Project RL	Laboratory-Specific	
							LOQ	MDL
VOCs EPA 8260B	1,1,1,2-Tetrachloroethane	630-20-6	µg/L	NE	Note 1	1.0	1.0	0.25
	1,1,1-Trichloroethane	71-55-6	µg/L	60	NMWQCC	1.0	1.0	0.25
	1,1,2,2-Tetrachloroethane	79-34-5	µg/L	NE	Note 1	1.0	1.0	0.25
	1,1,2-Trichloro-1,2,2-Trifluoroethane	76-13-1	µg/L	NE	Note 1	1.0	1.0	0.25
	1,1,2-Trichloroethane	79-00-5	µg/L	5	EPA MCL	1.0	1.0	0.25
	1,1-Dichloroethane	75-34-3	µg/L	25	NMWQCC	1.0	1.0	0.25
	1,1-Dichloroethene	75-35-4	µg/L	5	NMWQCC	1.0	1.0	0.25
	1,1-Dichloropropene	563-58-6	µg/L	NE	Note 1	1.0	1.0	0.25
	1,2,3-Trichlorobenzene	87-61-6	µg/L	NE	Note 1	2.0	2.0	0.5
	1,2,3-Trichloropropane	96-18-4	µg/L	NE	Note 1	2.0	2.0	0.5
	1,2,4-Trichlorobenzene	120-82-1	µg/L	70	EPA MCL	1.0	1.0	0.25
	1,2,4-Trimethylbenzene	95-63-6	µg/L	NE	Note 1	1.0	1.0	0.25
	1,3,5-Trimethylbenzene	108-67-8	µg/L	NE	Note 1	1.0	1.0	0.25
	1,2-Dibromo-3-Chloroprpane	96-12-8	µg/L	NE	Note 1	2.0	2.0	0.5
	1,2-Dibromoethane	106-93-4	µg/L	NE	Note 1	1.0	1.0	0.25
	1,2-Dichlorobenzene	95-50-1	µg/L	600	EPA MCL	1.0	1.0	0.25
	1,2-Dichloroethane	107-06-2	µg/L	5	EPA MCL	1.0	1.0	0.25
	1,2-Dichlorpropane	78-87-5	µg/L	5	EPA MCL	1.0	1.0	0.25
	1,3-Dichlorobenzene	541073-1	µg/L	NE	Note 1	1.0	1.0	0.25
	1,3-Dichloropropane	142-28-9	µg/L	NE	Note 1	1.0	1.0	0.25
	1,4-Dichlorobenzene	106-46-7	µg/L	75	EPA MCL	1.0	1.0	0.25
	1-Chlorohexane	544-10-5	µg/L	NE	Note 1	2.0	2.0	0.5

Table A-1. Method Reporting Limits – Groundwater (Empirical Laboratories, LLC, Nashville, TN) (continued)

Analytical Group/ Method	Analyte and Location	CAS Number	Units	Project Comparison Limit	Project Comparison Limit Reference	Project RL	Laboratory-Specific	
							LOQ	MDL
VOCs EPA 8260B	2,2-Dichloropropane	594-20-7	µg/L	NE	Note 1	1.0	1.0	0.25
	2-Butanone	78-93-3	µg/L	NE	Note 1	10	10	2.5
	2-Chloro Vinyl Ether		µg/L	NE	Note 1	5.0	5.0	1.25
	2-Chlorotoluene	95-49-8	µg/L	NE	Note 1	1.0	1.0	0.25
	2-Hexanone	591-78-6	µg/L	NE	Note 1	5.0	5.0	1.25
	4-Chlorotoluene	166-43-4	µg/L	NE	Note 1	1.0	1.0	0.25
	4-Methyl-2-Pentanone	108-10-1	µg/L	NE	Note 1	5.0	5.0	1.25
	Acetone	67-64-1	µg/L	NE	Note 1	10	10	2.5
	Acrolein	107-02-8	µg/L	NE	Note 1	5.0	5.0	1.25
	Acrylonitrile	107-13-1	µg/L	NE	Note 1	10	10	2.5
	Benzene	71-43-2	µg/L	5	EPA MCL	1.0	1.0	0.25
	Bromobenzene	108-86-1	µg/L	NE	Note 1	1.0	1.0	0.25
	Bromochloromethane	74-97-5	µg/L	NE	Note 1	1.0	1.0	0.25
	Bromodichloromethane	75-27-4	µg/L	NE	Note 1	1.0	1.0	0.25
	Bromoform	75-25-2	µg/L	NE	Note 1	2.0	2.0	0.5
	Bromomethane	74-83-9	µg/L	NE	Note 1	1.0	1.0	0.25
	Carbon Disulfide	75-15-0	µg/L	NE	Note 1	1.0	1.0	0.25
	Carbon Tetrachloride	56-23-5	µg/L	5	EPA MCL	1.0	1.0	0.25
	Chlorobenzene	108-90-7	µg/L	100	EPA MCL	1.0	1.0	0.25
	Chloroethane	75-00-3	µg/L	NE	Note 1	1.0	1.0	0.25
	Chloroform	67-66-3	µg/L	100	NMWQCC	1.0	1.0	0.25
	Chloromethane	74-87-3	µg/L	NE	Note 1	1.0	1.0	0.25

Table A-1. Method Reporting Limits – Groundwater (Empirical Laboratories, LLC, Nashville, TN) (continued)

Analytical Group/ Method	Analyte and Location	CAS Number	Units	Project Comparison Limit	Project Comparison Limit Reference	Project RL	Laboratory-Specific	
							LOQ	MDL
VOCs EPA 8260B	cis-1,2-Dichloroethene	156-59-2	µg/L	70	EPA MCL	1.0	1.0	0.25
	cis-1,3-Dichloropropene	10061-01-5	µg/L	NE	Note 1	1.0	1.0	0.25
	Cyclohexane	110-82-7	µg/L	NE	Note 1	1.0	1.0	0.25
	Dibromochloromethane	74-95-3	µg/L	NE	Note 1	1.0	1.0	0.25
	Dibromomethane	74-95-3	µg/L	NE	Note 1	1.0	1.0	0.25
	Dichlorodifluoromethane	75-71-8	µg/L	NE	Note 1	1.0	1.0	0.25
	Di-Isopropyl Ether	108-203	µg/L	NE	Note 1	1.0	1.0	0.25
	Ethyl tert-Butyl Ether	637-92-3-	µg/L	NE	Note 1	1.0	1.0	0.25
	Ethyl Methacrylate	97-63-2	µg/L	NE	Note 1	1.0	1.0	0.25
	Ethylbenzene	100-41-4	µg/L	700	EPA MCL	1.0	1.0	0.25
	Hexachlorobutadiene	87-68-3	µg/L	NE	Note 1	1.0	1.0	0.25
	Iodomethane	74-88-4	µg/L	NE	Note 1	1.0	1.0	0.25
	Isopropylbenzene	98-82-8	µg/L	NE	Note 1	1.0	1.0	0.25
	Methyl Acetate	79-209	µg/L	NE	Note 1	2.0	2.0	0.5
	Methyl Methacrylate	80-62-6	µg/L	NE	Note 1	1.0	1.0	0.25
	Methyl tert-Butyl Ether	1634-04-4	µg/L	NE	Note 1	1.0	1.0	0.25
	Methylcyclohexane	108-87-2	µg/L	NE	Note 1	1.0	1.0	0.25
	Methylene Chloride	75-09-2	µg/L	5	EPA MCL	1.0	1.0	0.25
	Naphthalene	91-20-3	µg/L	NE	Note 1	1.0	1.0	0.25
	n-Butylbenzene	104-51-8	µg/L	NE	Note 1	1.0	1.0	0.25
	n-Propylbenzene	103-65-1	µg/L	NE	Note 1	1.0	1.0	0.25
	p-Isopropyltoluene	99-87-6	µg/L	NE	Note 1	1.0	1.0	0.25

Table A-1. Method Reporting Limits – Groundwater (Empirical Laboratories, LLC, Nashville, TN) (continued)

Analytical Group/ Method	Analyte and Location	CAS Number	Units	Project Comparison Limit	Project Comparison Limit Reference	Project RL	Laboratory-Specific	
							LOQ	MDL
VOCs EPA 8260B	sec-Butylbenzene	135-98-8	µg/L	NE	Note 1	1.0	1.0	0.25
	Styrene	100-42-5	µg/L	NE	Note 1	1.0	1.0	0.25
	t-Butyl Alcohol	75-65-0	µg/L	NE	Note 1	5.0	5.0	1.25
	tert-Amyl Methyl Ether	994-05-8	µg/L	NE	Note 1	10	10	2.5
	tert-Butylbenzene	98-06-6	µg/L	NE	Note 1	1.0	1.0	0.25
	Tetrachloroethene	127-18-4	µg/L	5	EPA MCL	1.0	1.0	0.25
	Tetrahydrofuran	109-99-9	µg/L	NE	Note 1	5.0	5.0	1.25
	Toluene	108-88-3	µg/L	750	NMWQCC	1.0	1.0	0.25
	trans-1,2-Dichloroethene	156-60-5	µg/L	100	EPA MCL	1.0	1.0	0.25
	trans-1,3-Dichloropropene	10061-02-6	µg/L	NE	Note 1	1.0	1.0	0.25
	Trichloroethene	79-01-6	µg/L	5	EPA MCL	1.0	1.0	0.25
	Trichlorofluoromethane	75-69-4	µg/L	NE	Note 1	1.0	1.0	0.25
	Vinyl Acetate	108-05-4	µg/L	NE	Note 1	5.0	5.0	1.25
	Vinyl Chloride	75-01-4	µg/L	2	EPA MCL	1.0	1.0	0.25
	Xylenes	1330-20-7	µg/L	620	NMWQCC	3.0	3.0	0.75
EDB EPA 8011	Ethylene dibromide	1832-54-8	µg/L	0.05	EPA MCL	0.030	0.030	0.010
TPH EPA 8015B	TPH as Gasoline (C6-C10)	2691-41-0	µg/L	NE	Note 1	50	50	150
	TPH as Diesel (C10-C28)	121-82-4	µg/L	NE	Note 1	100	100	100
VPH MA DEP	C5-C8 Alphatics	NA	µg/L	NE	Note 1	100	100	100
	C9-C12 Alphatics	NA	µg/L	NE	Note 1	100	100	100

Table A-1. Method Reporting Limits – Groundwater (Empirical Laboratories, LLC, Nashville, TN) (continued)

Analytical Group/ Method	Analyte	CAS Number	Units	Project Comparison Limit	Project Comparison Limit Reference	Project RL	Laboratory-Specific	
							LOQ	MDL
EPH MA DEP	C12-C40 Alphatics	NA	µg/L	NE	Note 1	100	100	100
SVOC EPA 8270C	1-Methylnaphthalene	90-12-0	µg/L	NE	Note 1	5.00	5.00	1.25
	1,1'-Biphenyl	92-52-4	µg/L	NE	Note 1	5.00	5.00	1.25
	1,2,4,5-Tetrachlorobenzene	95-94-3	µg/L	NE	Note 1	5.00	5.00	1.25
	1,2,4-Trichlorobenzene	120-82-1	µg/L	NE	Note 1	5.00	5.00	1.25
	1,2-Dichlorobenzene	95-50-1	µg/L	600	EPA MCL	5.00	5.00	1.25
	1,2-Diphenylhydrazine	122-66-7	µg/L	NE	Note 1	5.00	5.00	1.25
	1,3-Dichlorobenzene	541-73-1	µg/L	NE	Note 1	5.00	5.00	1.25
	1,4-Dichlorobenzene	106-46-7	µg/L	75	EPA MCL	5.00	5.00	1.25
	2,3,4,6-Tetrachlorophenol	58-90-2	µg/L	NE	Note 1	5.00	5.00	1.25
	2,4,5-Trichlorophenol	95-95-4	µg/L	NE	Note 1	5.00	5.00	1.25
	2,4,6-Trichlorophenol (TCP)	88-06-2	µg/L	NE	Note 1	5.00	5.00	1.25
	2,4-Dichlorophenol (DCP)	120-83-2	µg/L	NE	Note 1	5.00	5.00	1.25
	2,4-Dimethylphenol	105-67-9	µg/L	NE	Note 1	20.0	20.0	5.00
	2,4-Dinitrophenol	51-28-5	µg/L	NE	Note 1	50.0	50.0	12.5
	2,4-Dinitrotoluene (DNT)	121-14-2	µg/L	NE	Note 1	5.00	5.00	1.25
	2,6-Dinitrotoluene	606-20-2	µg/L	NE	Note 1	5.00	5.00	1.25
	2-Chloronaphthalene	91-58-7	µg/L	NE	Note 1	5.00	5.00	1.25
	2-Chlorophenol	95-57-8	µg/L	NE	Note 1	5.00	5.00	1.25
	2-Methylnaphthalene	91-57-6	µg/L	NE	Note 1	5.00	5.00	1.25
	2-Methylphenol (o-Cresol)	95-48-7	µg/L	NE	Note 1	5.00	5.00	1.25
	2-Nitroaniline	88-74-4	µg/L	NE	Note 1	20.0	20.0	5.00

Table A-1. Method Reporting Limits – Groundwater (Empirical Laboratories, LLC, Nashville, TN) (continued)

Analytical Group/ Method	Analyte	CAS Number	Units	Project Comparison Limit	Project Comparison Limit Reference	Project RL	Laboratory-Specific	
							LOQ	MDL
SVOC EPA 8270C	2-Nitrophenol (ONP)	88-75-5	µg/L	NE	Note 1	5.00	5.00	1.25
	3,3'-Dichlorobenzidine (DCB)	91-94-1	µg/L	NE	Note 1	5.00	5.00	1.25
	3-Methylphenol	108-39-4	µg/L	NE	Note 1	5.00	5.00	1.25
	3-Nitroaniline	99-09-2	µg/L	NE	Note 1	20.0	20.0	5.00
	4,6-Dinitro-2-methylphenol (DNOC)	534-52-1	µg/L	NE	Note 1	20.0	20.0	5.00
	4-Bromophenyl phenyl ether	101-55-3	µg/L	NE	Note 1	5.00	5.00	1.25
	4-Chloro-3-methylphenol	59-50-7	µg/L	NE	Note 1	5.00	5.00	1.25
	4-Chloroaniline	106-47-8	µg/L	NE	Note 1	5.00	5.00	1.25
	4-Chlorophenyl phenyl ether	7005-72-3	µg/L	NE	Note 1	5.00	5.00	1.25
	4-Methylphenol (p-Cresol)	106-44-5	µg/L	NE	Note 1	5.00	5.00	1.25
	4-Nitroaniline (PNA)	100-01-6	µg/L	NE	Note 1	20.0	20.0	5.00
	4-Nitrophenol (PNP)	100-02-7	µg/L	NE	Note 1	20.0	20.0	5.00
	Acenaphthene	83-32-9	µg/L	NE	Note 1	5.00	5.00	1.25
	Acenaphthylene	208-96-8	µg/L	NE	Note 1	5.00	5.00	1.25
	Acetaphenone	98-86-2	µg/L	NE	Note 1	5.00	5.00	1.25
	Aniline	62-53-3	µg/L	NE	Note 1	5.00	5.00	1.25
	Anthracene	120-12-7	µg/L	NE	Note 1	5.00	5.00	1.25
	Benzidine	92-87-5	µg/L	NE	Note 1	50.0	50.0	12.5
	Benzo(a)anthracene	56-55-3	µg/L	NE	Note 1	5.00	5.00	1.25
	Benzo(a)pyrene	50-32-8	µg/L	**0.2**	**EPA MCL**	5.00	5.00	1.25

Table A-1. Method Reporting Limits – Groundwater (Empirical Laboratories, LLC, Nashville, TN) (continued)

Analytical Group/ Method	Analyte	CAS Number	Units	Project Comparison Limit	Project Comparison Limit Reference	Project RL	Laboratory-Specific	
							LOQ	MDL
SVOC EPA 8270C	Benzo(b)fluoranthene	205-99-2	µg/L	NE	Note 1	5.00	5.00	1.25
	Benzo(g,h,i)perylene	191-24-2	µg/L	NE	Note 1	5.00	5.00	1.25
	Benzo(k)fluoranthene	207-08-9	µg/L	NE	Note 1	5.00	5.00	1.25
	Benzoic Acid	65-85-0	µg/L	NE	Note 1	50.0	50.0	12.5
	Benzyl alcohol	100-51-6	µg/L	NE	Note 1	5.00	5.00	1.25
	bis(2-Chloroethoxy)methane	111-91-1	µg/L	NE	Note 1	5.00	5.00	1.25
	bis(2-Chloroethyl)ether (BCEE)	111-44-4	µg/L	NE	Note 1	5.00	5.00	1.25
	Bis(2-chloroisopropyl)ether, or 2,2'-oxybis (1-Chloropropane)	108-60-1	µg/L	NE	Note 1	5.00	5.00	1.25
	bis(2-Ethylhexyl)phthalate (BEHP)	117-81-7	µg/L	NE	Note 1	5.00	5.00	1.25
	Butyl benzyl phthalate (BBP)	85-68-7	µg/L	NE	Note 1	5.00	5.00	1.25
	Carbazole	86-74-8	µg/L	NE	Note 1	5.00	5.00	1.25
	Chrysene	218-01-9	µg/L	NE	Note 1	5.00	5.00	1.25
	Dibenz(a,h)anthracene	53-70-3	µg/L	NE	Note 1	5.00	5.00	1.25
	Dibenzofuran (DBF)	132-64-9	µg/L	NE	Note 1	5.00	5.00	1.25
	Diethyl phthalate (DEP)	84-66-2	µg/L	NE	Note 1	5.00	5.00	1.25
	Dimethyl phthalate (DMP)	131-11-3	µg/L	NE	Note 1	5.00	5.00	1.25
	Di-n-butyl phthalate (DBP)	84-74-2	µg/L	NE	Note 1	5.00	5.00	1.25
	Di-n-octyl phthalate (DNOP)	117-84-0	µg/L	NE	Note 1	5.00	5.00	1.25
	Fluoranthene	206-44-0	µg/L	NE	Note 1	5.00	5.00	1.25
	Fluorene	86-73-7	µg/L	NE	Note 1	5.00	5.00	1.25
	Hexachlorobenzene (HCB)	118-74-1	µg/L	**1.0**	**EPA MCL**	5.00	5.00	1.25

Table A-1. Method Reporting Limits – Groundwater (Empirical Laboratories, LLC, Nashville, TN) (continued)

Analytical Group/ Method	Analyte	CAS Number	Units	Project Comparison Limit	Project Comparison Limit Reference	Project RL	Laboratory-Specific	
							LOQ	MDL
SVOC EPA 8270C	Hexachlorobutadiene (HCBD)	87-68-3	µg/L	NE	Note 1	5.00	5.00	1.25
	Hexachlorocyclopentadiene (HCCPD)	77-47-4	µg/L	50	EPA MCL	5.00	5.00	1.25
	Hexachloroethane (HCE)	67-72-1	µg/L	NE	Note 1	5.00	5.00	1.25
	Indeno(1,2,3-cd)pyrene	193-39-5	µg/L	NE	Note 1	5.00	5.00	1.25
	Isophorone	78-59-1	µg/L	NE	Note 1	5.00	5.00	1.25
	Hexachlorobutadiene (HCBD)	87-68-3	µg/L	NE	Note 1	5.00	5.00	1.25
	Naphthalene	91-20-3	µg/L	NE	Note 1	5.00	5.00	1.25
	Nitrobenzene	98-95-3	µg/L	NE	Note 1	5.00	5.00	1.25
	N-Nitrosodimethylamine	62-75-9	µg/L	NE	Note 1	5.00	5.00	1.25
	N-Nitroso-di-n-propylamine (NDPA)	621-64-7	µg/L	NE	Note 1	5.00	5.00	1.25
	N-nitrosodiphenylamine (NDPHA)	86-30-6	µg/L	NE	Note 1	5.00	5.00	1.25
	Pentachlorophenol	87-86-5	µg/L	1.0	EPA MCL	20.0	20.0	5.0
	Phenanthrene	85-01-8	µg/L	NE	Note 1	5.00	5.00	1.25
	Phenol	108-95-2	µg/L	5.0	NMWQCC	5.00	5.00	1.25
	Pyrene	129-00-0	µg/L	NE	Note 1	5.00	5.00	1.25
	Pyridine	110-86-1	µg/L	NE	Note 1	5.00	5.00	1.25
Metals EPA 6010C	Dissolved Iron (field filtered)	2691-41-0	µg/L	300	EPA MCL	100	100	30
	Dissolved Manganese (field filtered)	121-82-4	µg/L	50	EPA MCL	15	15	3.0
	Total Lead	99-35-4	µg/L	15	EPA MCL	3.0	3.0	1.5
Cations EPA 6010C	Sodium	99-65-0	µg/L	NE	Note1	5,000	5,000	1,000
	Potassium	479-45-8	µg/L	NE	Note1	5,000	5,000	1,000

Table A-1. Method Reporting Limits – Groundwater (Empirical Laboratories, LLC, Nashville, TN) (continued)

Analytical Group/ Method	Analyte	CAS Number	Units	Project Comparison Limit	Project Comparison Limit Reference	Project RL	Laboratory-Specific	
							LOQ	MDL
Cation EPA 6010C	Calcium	98-95-3	µg/L	NE	Note1	5,000	5,000	1,000
	Magnesium	118-96-7	µg/L	NE	Note1	5,000	5,000	1,000
Anions EPA 300.0	Nitrate	14797-55-8	mg/L	10	EPA MCL and NMWQCC	0.20	0.20	0.0330
	Sulfate	14808-79-8	mg/L	250	EPA MCL	2.0	2.0	0.330
	Chloride	16887-006	mg/L	250	EPA MCL and NMWQCC	5.00	5.00	0.170
Alkalinity SM2320B	Alkalinity	NA	mg/L	NE	Note 1	5.00	5.00	1.0
Ammonia SM 4500B, D	Ammonia	7664-41-7	mg/L	NE	Note 1	5.00	5.00	0.11
Sulfide SM4 500 S-2CF	Total Sulfide	18496-25-8	mg/L	NE	Note 1	5.00	5.00	0.80
o-Phosphate SM 4500 PE	o-Phosphate	14265-44-2	mg/L	NE	Note 1	0.040	0.040	0.010

Notes:

NM SSL denotes New Mexico Soil Screening Level (New Mexico Environmental Department, Technical Background Document for Development of Soil Screening Levels, Revision 4.0, June 2006)

EPA SSL denotes EPA regional soil screening Level (May 2010)

Note 1: project comparison levels not established.

In accordance with the DoD QSM requirements, the most current version of the EPA methods will be implemented for each sampling event.

Bold values indicate the LOQ exceeds the standard.

CAS = Chemical Abstract Service

EDB = ethylene dibromide

EPA = U.S. Environmental Protection Agency

Table A-1. Method Reporting Limits – Groundwater (Empirical Laboratories, LLC, Nashville, TN) (concluded)

Notes (continued):

EPH = extractable petroleum hydrocarbon

LOQ = limit of quantitation

µg/L = microgram per liter

MA DEP = Massachusetts Department of Environmental Protection

MCL = maximum contaminant level

MDL = method detection limit

NE = not established

NMWQCC = New Mexico Water Quality Control Commission

RL = reporting limit

SM = standard method

SVOC = semivolatile organic compound

TPH = total petroleum hydrocarbon

APPENDIX A-2

Table A-2: Method Reporting Limits – Soil

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Table A-2: Method Control Limits– Soil (Gulf Coast Analytical Laboratories, Inc., Baton Rouge, LA)

Analytical Group/ Method	Analyte and Location	CAS Number	Units	Project Comparison Limit	Project Comparison Limit Reference	Project RL	Laboratory-Specific	
							LOQ	MDL
VOCs EPA 8260B	Acetone	67-64-1	µg/kg	2.81E07	NM SSL	5.0	5.0	1.06
	Acrolein	107-02-8	µg/kg	150	EPA SSL	25	25	2.00
	Acrylonitrile	75-05-8	µg/kg	4.27E03	NM SSL	25	25	1.07
	Benzene	71-43-2	µg/kg	1100	EPA SSL	2.0	2.0	0.137
	Bromobenzene	108-86-1	µg/kg	3.7E04	NM SSL	2.0	2.0	0.301
	Bromochloromethane	74-97-5	µg/kg	NE	Note 1	2.0	2.0	0.386
	Bromodichloromethane	75-27-4	µg/kg	270	EPA SSL	2.0	2.0	0.150
	Bromoform	75-25-2	µg/kg	6.1E04	EPA SSL	2.0	2.0	0.231
	Bromomethane	74-83-9	µg/kg	7.3E03	EPA SSL	2.0	2.0	1.46
	2-Butanone (MEK)	78-93-3	µg/kg	2.8E07	EPA SSL	5.0	5.0	0.603
	n-Butylbenzene	104-51-8	µg/kg	6.21E04	NM SSL	2.0	2.0	0.349
	sec-Butylbenzene	135-98-8	µg/kg	6.06E04	NM SSL	2.0	2.0	0.251
	tert-Butylbenzene	98-06-6	µg/kg	1.6E05	NM SSL	2.0	2.0	0.237
	Carbon disulfide	75-15-0	µg/kg	4.6E05	NM SSL	2.0	2.0	0.465
	Carbon tetrachloride	56-23-5	µg/kg	610	EPA SSL	2.0	2.0	0.236
	Chlorobenzene	108-90-7	µg/kg	1.94E05	NM SSL	2.0	2.0	0.188
	Chlorodibromomethane	124-48-1	µg/kg	680	EPA SSL	2.0	2.0	0.140
	Chloroethane	75-00-3	µg/kg	6.33E04	NM SSL	2.0	2.0	0.659
	Chloroform	67-66-3	µg/kg	290	EPA SSL	2.0	2.0	0.246
	Chloromethane	74-87-3	µg/kg	2.81E04	NM SSL	2.0	2.0	0.757
	2-Chlorotoluene	95-49-8	µg/kg	2.02E05	NM SSL	2.0	2.0	0.264

Table A-2: Method Control Limits – Soil (Gulf Coast Analytical Laboratories, Inc., Baton Rouge, LA) (continued)

Analytical Group/ Method	Analyte and Location	CAS Number	Units	Project Comparison Limit	Project Comparison Limit Reference	Project RL	Laboratory-Specific	
							LOQ	MDL
VOCs EPA 8260B	4-Chlorotoluene	106-43-4	µg/kg	5.5E06	EPA SSL	2.0	2.0	0.306
	1,2-Dibromo-3-chloropropane	96-12-8	µg/kg	5.4	EPA SSL	2.0	2.0	0.801
	1,2-Dibromoethane	106-93-4	µg/kg	34	EPA SSL	2.0	2.0	0.239
	Dibromomethane	74-95-3	µg/kg	2.5E04	EPA SSL	2.0	2.0	0.314
	1,2-Dichlorobenzene	95-50-1	µg/kg	3.74E04	NM SSL	2.0	2.0	0.325
	1,3-Dichlorobenzene	541-73-1	µg/kg	3.26E04	NM SSL	2.0	2.0	0.319
	1,4-Dichlorobenzene	106-46-7	µg/kg	2.4E03	EPA SSL	2.0	2.0	0.411
	Dichlorodifluoromethane	75-71-8	µg/kg	1.61E05	NM SSL	2.0	2.0	0.111
	1,1-Dichloroethane	75-34-3	µg/kg	3.3E03	EPA SSL	2.0	2.0	0.332
	1,2-Dichloroethane	107-06-2	µg/kg	430	EPA SSL	2.0	2.0	0.131
	1,1-Dichloroethene	75-35-4	µg/kg	2.06E05	NM SSL	2.0	2.0	0.667
	cis-1,2-Dichloroethene	156-59-2	µg/kg	7.65E04	NM SSL	2.0	2.0	0.172
	trans-1,2-Dichloroethene	156-60-5	µg/kg	1.12E05	NM SSL	2.0	2.0	0.202
	1,2-Dichloropropane	78-87-5	µg/kg	890	EPA SSL	2.0	2.0	0.108
	1,3-Dichloropropane	142-28-9	µg/kg	1.2E04	NM SSL	2.0	2.0	0.179
	2,2-Dichloropropane	594-20-7	µg/kg	NE	Note 1	2.0	2.0	1.16
	1,1-Dichloropropene	563-58-6	µg/kg	NE	Note 1	2.0	2.0	0.208
	cis-1,3-Dichloropropene	10061-01-5	µg/kg	NE	Note 1	2.0	2.0	0.145
	trans-1,3-Dichloropropene	10061-02-6	µg/kg	NE	Note 1	2.0	2.0	0.220
	Ethylbenzene	100-41-4	µg/kg	5.4E03	EPA SSL	2.0	2.0	0.206
	Hexachlorobutadiene	87-68-3	µg/kg	6.2E03	EPA SSL	2.0	2.0	0.233
	2-Hexanone	591-78-6	µg/kg	2.1E05	EPA SSL	5.0	5.0	0.339

Table A-2: Method Control Limits – Soil (Gulf Coast Analytical Laboratories, Inc., Baton Rouge, LA) (continued)

Analytical Group/ Method	Analyte and Location	CAS Number	Units	Project Comparison Limit	Project Comparison Limit Reference	Project RL	Laboratory-Specific	
							LOQ	MDL
VOCs EPA 8260B	Isopropylbenzene	98-82-8	µg/kg	2.71E05	NM SSL	2.0	2.0	0.195
	p-Isopropyltoluene	99-87-6	µg/kg	NE	Note 1	2.0	2.0	0.266
	Methylene chloride	75-09-2	µg/kg	1.1E04	EPA SSL	5.0	5.0	0.348
	Methyl-tert-butyl ether	1634-04-4	µg/kg	4.3E04	EPA SSL	2.0	2.0	0.167
	4-Methyl-2-pentanone	108-10-1	µg/kg	5.3E06	EPA SSL	5.0	5.0	0.341
	Naphthalene	91-20-3	µg/kg	3.6	EPA SSL	2.0	2.0	0.825
	n-Propylbenzene	103-65-1	µg/kg	6.21E04	NM SSL	2.0	2.0	0.271
	Styrene	100-42-5	µg/kg	1.0E05	NM SSL	2.0	2.0	0.264
	1,1,1,2-Tetrachloroethane	630-20-6	µg/kg	1.9E03	EPA SSL	2.0	2.0	0.105
	1,1,2,2-Tetrachloroethane	79-34-5	µg/kg	560	EPA SSL	2.0	2.0	0.276
	Tetrachloroethene	127-18-4	µg/kg	550	EPA SSL	2.0	2.0	0.207
	Toluene	108-88-3	µg/kg	2.52E05	NM SSL	2.0	2.0	0.200
	1,2,3-Trichlorobenzene	87-61-6	µg/kg	4.9E04	EPA SSL	2.0	2.0	0.270
	1,2,4-Trichlorobenzene	120-82-1	µg/kg	2.2E04	EPA SSL	2.0	2.0	0.305
	1,1,1-Trichloroethane	71-55-6	µg/kg	5.63E05	NM SSL	2.0	2.0	0.231
	1,1,2-Trichloroethane	79-00-5	µg/kg	1.1E03	EPA SSL	2.0	2.0	0.235
	Trichloroethene	79-01-6	µg/kg	638	NM SSL	2.0	2.0	0.234
	Trichlorofluoromethane	75-69-4	µg/kg	5.88E05	NM SSL	2.0	2.0	0.134
	1,2,3-Trichloropropane	96-18-4	µg/kg	5	EPA SSL	2.0	2.0	0.347
	1,2,4-Trimethylbenzene	95-63-6	µg/kg	5.8E04	NM SSL	2.0	2.0	0.298
	1,3,5-Trimethylbenzene	108-67-8	µg/kg	2.48E04	NM SSL	2.0	2.0	0.241
	Vinyl acetate	108-05-4	µg/kg	9.7E05	EPA SSL	2.0	2.0	0.222

Table A-2: Method Reporting Limits – Soil (Gulf Coast Analytical Laboratories, Inc., Baton Rouge, LA) (continued)

Analytical Group/ Method	Analyte and Location	CAS Number	Units	Project Comparison Limit	Project Comparison Limit Reference	Project RL	Laboratory-Specific	
							LOQ	MDL
VOCs EPA 8260B	Vinyl chloride	75-01-4	µg/kg	60	EPA SSL	2.0	2.0	0.135
	o-Xylene	95-47-6	µg/kg	9.95E04	NM SSL	2.0	2.0	0.189
	m,p-Xylene	136777-61-2	µg/kg	8.2E04	NM SSL	4.0	4.0	0.503
	Xylenes, total	1330-20-7	µg/kg	8.2E04	NM SSL	6.0	6.0	0.686
	1-Chlorohexane	544-10-5	µg/kg	NE	Note 1	2.0	2.0	0.141
VPH MA DEP	C5-C8 Alphatics	NA	µg/kg	NE	Note 1	1,500	1,500	220
	C9-C12 Alphatics	NA	µg/kg	NE	Note 1	1,000	1,000	264
EPH MA DEP	C9-C18 Alphatics	NA	µg/kg	NE	Note 1	20,000	20,000	1,926
	C19 –C36 Alphatics	NA	µg/kg	NE	Note 1	20,000	20,000	1,112
TPH Gasoline and Diesel EPA 8015B	C-6-C10	8006-61-9	µg/kg	NE	Note 1	5,000	5,000	1,000
	C10-C28	GCSV-00-4	µg/kg	NE	Note 1	5,000	5,000	1,000
SVOC EPA 8270D	Acenaphthene	83-32-9	µg/kg	3.4E06	EPA SSL	330	330	18.7
	Acenaphthylene	208-96-8	µg/kg	NE	Note 1	330	330	11.1
	Aniline	62-53-3	µg/kg	8.5E04	EPA SSL	330	330	17.7
	Anthracene	120-12-7	µg/kg	1.7E07	EPA SSL	330	330	11.6
	Benzo(a)anthracene	56-55-3	µg/kg	150	EPA SSL	330	330	14.1
	Benzo(b)fluoranthene	205-99-2	µg/kg	150	EPA SSL	330	330	10.3
	Benzo(k)fluoranthene	207-08-9	µg/kg	1.5E03	EPA SSL	330	330	15.1
	Benzo(g,h,i)perylene	191-24-2	µg/kg	NE	Note 1	330	330	9.12
	Benzo(a)pyrene	50-32-8	µg/kg	**15**	**EPA SSL**	330	330	19.0
	4-Bromophenyl-phenylether	101-55-3	µg/kg	NE	Note 1	330	330	29.1
	Butyl benzyl phthalate	85-68-7	µg/kg	2.6E05	EPA SSL	330	330	6.96

Table A-2: Method Reporting Limits – Soil (Gulf Coast Analytical Laboratories, Inc., Baton Rouge, LA) (continued)

Analytical Group/ Method	Analyte and Location	CAS Number	Units	Project Comparison Limit	Project Comparison Limit Reference	Project RL	Laboratory-Specific	
							LOQ	MDL
SVOC EPA 8270D	Carbazole	86-74-8	µg/kg	NE	Note1	330	330	23.7
	4-Chloroaniline	106-47-8	µg/kg	2.4E03	EPA SSL	330	330	32.9
	4-Chloro-3-methylphenol	59-50-7	µg/kg	6.1E06	EPA SSL	330	330	26.0
	Bis(2-chloroethoxy)methane	111-91-1	µg/kg	1.8E05	EPA SSL	330	330	18.2
	bis(2-Chloroethyl)ether	111-44-4	µg/kg	**210**	**EPA SSL**	330	330	24.9
	Bis(2-chloroisopropyl) ether	108-60-1	µg/kg	4.6E03	EPA	330	330	17.0
	2-Chloronaphthalene	91-58-7	µg/kg	3.99E06	NM SSL	330	330	17.9
	2-Chlorophenol	95-47-8	µg/kg	1.66E05	NM SSL	330	330	25.4
	4-Chlorophenyl-phenylether	7005-72-3	µg/kg	NE	Note 1	330	330	36.7
	Chrysene	218-01-9	µg/kg	1.5E04	EPA SSL	330	330	11.1
	Dibenzo(a,h)anthracene	53-70-3	µg/kg	**15**	**EPA SSL**	330	330	9.06
	Dibenzofuran	132-64-9	µg/kg	7.8E04	EPA SSL	330	330	11.4
	Di-n-butylphthalate	84-74-2	µg/kg	6.1E06	EPA SSL	330	330	7.97
	1,2-Dichlorobenzene	95-50-1	µg/kg	3.74E04	NM SSL	330	330	17.7
	1,3-Dichlorobenzene	541-73-1	µg/kg	3.26E04	NM SSL	330	330	18.5
	1,4-Dichlorobenzene	106-46-7	µg/kg	2.4E03	EPA SSL	330	330	10.4
	3,3'-Dichlorobenzidine	91-94-1	µg/kg	1.1E03	EPA SSL	660	660	211
	2,4-Dichlorophenol	120-83-2	µg/kg	1.8E05	EPA SSL	330	330	53.1
	2,6-Dichlorophenol	87-65-0	µg/kg	NE	Note 1	330	330	13.3
	Diethylphthalate	84-66-2	µg/kg	4.89E04	NM SSL	330	330	30.5
	2,4-Dimethylphenol	105-67-9	µg/kg	1.22E03	EPA SSL	330	330	42.0
	Dimethylphthalate	131-11-3	µg/kg	NE	Note 1	330	330	7.31
	2,4-Dinitrophenol	51-28-5	µg/kg	1.2E05	EPA SSL	1650	1650	177

Table A-2: Method Reporting Limits– Soil (Gulf Coast Analytical Laboratories, Inc., Baton Rouge, LA) (continued)

Analytical Group/ Method	Analyte and Location	CAS Number	Units	Project Comparison Limit	Project Comparison Limit Reference	Project RL	Laboratory-Specific	
							LOQ	MDL
SVOC EPA 8270D	2,4-Dinitrotoluene	121-14-2	µg/kg	1.6E03	EPA SSL	330	330	46.5
	2,6-Dinitrotoluene	606-20-2	µg/kg	1.6E04	EPA SSL	330	330	19.5
	Di-n-octylphthalate	117-84-0	µg/kg	NE	Note 1	330	330	10.8
	Bis(2-ethylhexyl)phthalate	117-81-7	µg/kg	3.5E04	EPA SSL	330	330	12.7
	Fluoranthene	206-44-0	µg/kg	2.29E06	NM SSL	330	330	7.30
	Fluorene	86-73-7	µg/kg	2.3E06	NM SSL	330	330	10.1
	Hexachlorobenzene	118-74-1	µg/kg	**300**	**EPA SSL**	330	330	39.5
	Hexachlorobutadiene	87-68-3	µg/kg	6.2E03	EPA SSL	330	330	21.7
	Hexachlorocyclopentadiene	77-47-4	µg/kg	3.66E05	NM SSL	330	330	49.3
	Hexachloroethane	67-72-1	µg/kg	3.5E04	EPA SSL	330	330	49.0
	Indeno(1,2,3-cd)pyrene	193-39-5	µg/kg	**150**	**EPA SSL**	330	330	13.2
	Isophorone	78-59-1	µg/kg	5.1E05	EPA SSL	330	330	10.8
	2-Methyl-4,6-Dinitrophenol	534-52-1	µg/kg	4.9E03	EPA SSL	1650	1650	32.4
	2-Methylnaphthalene	91-57-6	µg/kg	3.1E05	EPA SSL	330	330	17.7
	2-Methylphenol	95-48-7	µg/kg	3.1E06	EPA SSL	330	330	10.1
	4-Methylphenol (and/or 3-Methylphenol)	1319-77-3	µg/kg	7.5E06	EPA SSL	330	330	58.1
	Naphthalene	91-20-3	µg/kg	3.6E06	EPA SSL	330	330	11.0
	2-Nitroaniline	88-74-4	µg/kg	6.1E05	EPA SSL	1650	1650	37.1
	3-Nitroaniline	99-09-2	µg/kg	NE	Note 1	1650	1650	40.3
	4-Nitroaniline	100-01-6	µg/kg	2.4E04	EPA SSL	1650	1650	61.6
	Nitrobenzene	98-95-3	µg/kg	4.8E03	EPA SSL	330	330	15.3
	2-Nitrophenol	88-75-5	µg/kg	NE	Note 1	330	330	15.1

Table A-2: Method Reporting Limits – Soil (Gulf Coast Analytical Laboratories, Inc., Baton Rouge, LA) (continued)

Analytical Group/ Method	Analyte and Location	CAS Number	Units	Project Comparison Limit	Project Comparison Limit Reference	Project RL	Laboratory-Specific	
							LOQ	MDL
SVOC EPA 8270D	4-Nitrophenol	100-02-7	µg/kg	NE	Note 1	1650	1650	114
	N-Nitrosodiethylamine	55-18-5	µg/kg	**0.77**	**EPA SSL**	330	330	17.4
	N-Nitrosodimethylamine	62-75-9	µg/kg	**2.3**	**EPA SSL**	330	330	17.0
	N-Nitrosodiphenylamine	86-30-6	µg/kg	9.9E04	EPA SSL	330	330	10.5
	N-Nitroso-di-n-propylamine	621-64-7	µg/kg	**69**	**EPA SSL**	330	330	16.7
	Pentachlorobenzene	608-93-5	µg/kg	4.89E04	NM SSL	330	330	26.4
	Pentachlorophenol	87-86-5	µg/kg	3.0E06	EPA SSL	1650	1650	27.0
	Phenanthrene	85-01-8	µg/kg	1.83E06	NM SSL	330	330	13.4
	Phenol	108-95-2	µg/kg	1.8E07	NM SSL	330	330	16.0
	Pyrene	129-00-0	µg/kg	1.7E06	EPA SSL	330	330	46.3
	Pyridine	110-86-1	µg/kg	7.8E04	EPA SSL	330	330	18.6
	1,2,4,5-Tetrachlorobenzene	95-94-3	µg/kg	1.8E04	EPA SSL	330	330	7.95
	2,3,4,6-Tetrachlorophenol	58-90-2	µg/kg	1.8E06	EPA SSL	330	330	13.5
	1,2,4-Trichlorobenzene	120-82-1	µg/kg	2.2E04	EPA SSL	330	330	22.0
	2,4,5-Trichlorophenol	95-95-4	µg/kg	6.1E06	EPA SSL	330	330	39.4
	2,4,6-Trichlorophenol	88-06-2	µg/kg	6.11E06	EPA SSL	330	330	51.8
	1,2-Diphenylhydrazine	122-66-7	µg/kg	610	EPA SSL	330	330	7.51
Lead EPA 6010C	Lead	7439-92-1	mg/kg	400	EPA and NM SSL	0.6	0.6	0.0662

Table A-2: Method Reporting Limits– Soil (Gulf Coast Analytical Laboratories, Inc., Baton Rouge, LA) (concluded)

Note:

NM SSL denotes Technical Background Document for Development of Soil Screening Levels, Revision 5.0. Hazardous Waste Bureau and Ground Water Quality Bureau Voluntary Remediation Program. August, updated December 2009.

EPA SSL denotes U.S. Environmental Protection Agency regional soil screening Level (May 2010)

Note 1: project comparison levels not established.

In accordance with the U.S. Department of Defense Quality System Manual requirements, the most current version of the EPA methods will be implemented for each sampling event.

CAS = Chemical Abstract Service

EPH = extractable petroleum hydrocarbon

LOQ = limit of quantitation

µg/kg = microgram per kilogram

MA DEP = Massachusetts Department of Environmental Protection

MDL = method detection limit

NE = not established

RL = reporting limit

SVOC = semivolatile organic compound

VPH = volatile petroleum hydrocarbon

APPENDIX A-3

Table A-3: Method Reporting Limits – Soil Vapor

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Table A-3: Method Reporting Limits - Soil Vapor (RTI Laboratories, Livonia, MI)

Analytical Group/ Method	Analyte and Location	CAS Number	Units	Project Comparison Limit	Project Comparison Limit Reference	Project RL	Laboratory-Specific	
							LOQ	MDL
VOCs/TPH EPA TO-15	1,1,1-Trichloroethane	71-55-6	ppbv	NE	Note 1	1	1	0.33
	1,1,2,2-Tetrachloroethane	79-34-5	ppbv	NE	Note 1	1	1	0.42
	1,1,2-Trichloro-1,2,2-trifluoroethane	76-13-1	ppbv	NE	Note 1	1	1	0.31
	1,1,2-Trichloroethane	79-00-5	ppbv	NE	Note 1	0.5	0.5	0.23
	1,1-Dichloroethane	75-34-3	ppbv	NE	Note 1	1	1	0.38
	1,1-Dichloroethene	75-35-4	ppbv	NE	Note 1	2	2	0.65
	1,2,4-Trichlorobenzene	120-82-1	ppbv	NE	Note 1	2	2	0.52
	1,2,4-Trimethylbenzene	95-63-6	ppbv	NE	Note 1	1	1	0.42
	1,2-Dibromoethane	106-93-4	ppbv	NE	Note 1	0.5	0.5	0.19
	1,2-Dichlorobenzene	95-50-1	ppbv	NE	Note 1	1	1	0.37
	1,2-Dichloroethane	594-20-7	ppbv	NE	Note 1	1	1	0.33
	1,2-Dichloropropane	78-87-5	ppbv	NE	Note 1	0.5	0.5	0.23
	1,3,5-Trimethylbenzene	108-67-8	ppbv	NE	Note 1	1	1	0.38
	1,3-Butadiene	106-99-0	ppbv	NE	Note 1	3	3	1.34
	1,3-Dichlorobenzene	541-73-1	ppbv	NE	Note 1	1	1	0.36
	1,4-Dichlorobenzene	106-46-7	ppbv	NE	Note 1	1	1	0.45
	1,4-Dioxane	123-91-1	ppbv	NE	Note 1	5	5	1.8
	2-Butanone	78-93-3	ppbv	NE	Note 1	2	2	0.54
	2-Hexanone	591-78-6	ppbv	NE	Note 1	5	5	2.16
	2-Propanol	67-63-0	ppbv	NE	Note 1	1	1	0.44
	4-Methyl-2-pentanone	108-10-1	ppbv	NE	Note 1	5	5	1.07

Table A-3: Method Reporting Limits - Soil Vapor (RTI Laboratories, Livonia, MI) (continued)

Analytical Group/ Method	Analyte and Location	CAS Number	Units	Project Comparison Limit	Project Comparison Limit Reference	Project RL	Laboratory-Specific	
							LOQ	MDL
VOCs/TPH EPA TO-15	Acetone	67-64-1	ppbv	NE	Note 1	2	2	0.44
	Benzene	71-43-2	ppbv	NE	Note 1	1	1	0.39
	Benzyl chloride	100-44-7	ppbv	NE	Note 1	1	1	0.54
	Bromodichloromethane	75-27-4	ppbv	NE	Note 1	0.5	0.5	0.21
	Bromoform	75-25-2	ppbv	NE	Note 1	1	1	0.41
	Bromomethane	74-83-9	ppbv	NE	Note 1	2	2	0.71
	Carbon disulfide	75-15-0	ppbv	NE	Note 1	2	2	0.41
	Carbon tetrachloride	56-23-5	ppbv	NE	Note 1	1	1	0.35
	Chlorobenzene	108-90-7	ppbv	NE	Note 1	1	1	0.39
	Chlorodibromomethane	124-48-1	ppbv	NE	Note 1	1	1	0.34
	Chloroethane	75-00-3	ppbv	NE	Note 1	1	1	0.49
	Chloroform	67-66-3	ppbv	NE	Note 1	1	1	0.3
	Chloromethane	74-87-3	ppbv	NE	Note 1	2	2	0.68
	cis-1,2-Dichloroethene	156-59-2	ppbv	NE	Note 1	1	1	1
	cis-1,3-dichloropropene	10061-01-5	ppbv	NE	Note 1	0.5	0.5	0.24
	Cyclohexane	110-82-7	ppbv	NE	Note 1	1	1	0.37
	Dichlorodifluoromethane	75-71-8	ppbv	NE	Note 1	1	1	0.4
	Ethanol	64-17-5	ppbv	NE	Note 1	1	1	0.53
	Ethyl acetate	141-78-6	ppbv	NE	Note 1	1	1	0.55
	Ethylbenzene	100-41-4	ppbv	NE	Note 1	1	1	0.35
	Heptane	142-82-5	ppbv	NE	Note 1	1	1	0.37
	Hexachlorobutadiene	87-68-3	ppbv	NE	Note 1	2	2	0.54

Table A-3: Method Reporting Limits- Soil Vapor (RTI Laboratories, Livonia, MI) (continued)

Analytical Group/ Method	Analyte and Location	CAS Number	Units	Project Comparison Limit	Project Comparison Limit Reference	Project RL	Laboratory-Specific	
							LOQ	MDL
VOCs/TPH EPA TO-15	m,p-Xylene	179601-23-1	ppbv	NE	Note 1	2	2	0.75
	Methylene chloride	75-09-2	ppbv	NE	Note 1	2	2	0.31
	n-Hexane	110-54-3	ppbv	NE	Note 1	1	1	0.31
	o-Xylene	95-47.6	ppbv	NE	Note 1	1	1	0.39
	Propylene	115-07-1	ppbv	NE	Note 1	1	1	0.37
	Styrene	100-42-5	ppbv	NE	Note 1	1	1	0.43
	tert-Butyl Methyl Ether	1634-04-4	ppbv	NE	Note 1	2	2	0.61
	Tetrachloroethene	127-18-4	ppbv	NE	Note 1	0.5	0.5	0.21
	Tetrahydrofuran	109-99-9	ppbv	NE	Note 1	2	2	0.58
	Toluene	108-88-3	ppbv	NE	Note 1	0.5	0.5	0.24
	trans-1,2-Dichloroethene	156-60-5	ppbv	NE	Note 1	1	1	0.38
	trans-1,3-dichloropropene	10061-02-6	ppbv	NE	Note 1	1	1	0.31
	Trichloroethene	79-01-6	ppbv	NE	Note 1	1	1	0.35
	Trichlorofluoromethane	75-69-4	ppbv	NE	Note 1	1	1	0.31
	Vinyl acetate	108-05-4	ppbv	NE	Note 1	1	1	0.31
	Vinyl chloride	75-01-4	ppbv	NE	Note 1	1	1	0.41
	Xylenes, Total	1330-20-7	ppbv	NE	Note 1	3	3	1.14
VOC/TPH EPA TO-15	C5-C12, range	NA	ppbv	NE	Note 1	50	50	50

Table A-3: Method Reporting Limits- Soil Vapor (RTI Laboratories, Livonia, MI) (concluded)

Analytical Group/ Method	Analyte and Location	CAS Number	Units	Project Comparison Limit	Project Comparison Limit Reference	Project RL	Laboratory-Specific	
							LOQ	MDL
APH Method MA DEP	C5-C8 Aliphatic	NA	ppbv	NE	Note 1	50	50	50
	C9-C12 Aliphatic	NA	ppbv	NE	Note 1	50	50	50
	Benzene	71-43-2	ppbv	NE	Note 1	1	1	.39
	Toluene	108-88-3	ppbv	NE	Note 1	0.5	0.5	.24
	Ethylbenzene	100-41-4	ppbv	NE	Note 1	1	1	.35
	Xylenes	1330-20-7	ppbv	NE	Note 1	3	3	1.14
	Naphthalene	91-20-3	ppbv	NE	Note 1	5	5	5
Fixed Gases ASTM D2504	Oxygen	7782-44-7	%	NE	Note 1	0.1	0.1	0.1
	Nitrogen	7727-37-9	%	NE	Note 1	0.1	0.1	0.1
	Carbon Monoxide	630-08-0	%	NE	Note 1	0.1	0.1	0.1
	Carbon Dioxide	124-38-9	%	NE	Note 1	0.1	0.1	0.1
	Methane	74-82-8	%	NE	Note 1	0.5	0.5	0.5

Notes:

Note 1: Project comparison limits not established.

In accordance with the U.S. Department of Defense Quality Systems Manual requirements, the most current version of the EPA methods will be implemented for each sampling event.

APH = air- phase petroleum hydrocarbon
ASTM = ASTM International
CAS = Chemical Abstract Service
MDL = method detection limit
EPA = U.S. Environmental Protection Agency
LOQ = limit of quantitation
MA DEP = Massachusetts Department of Environmental Protection
NE = not established
ppbv = parts per billion by volume
RL = reporting limit
TPH = total petroleum hydrocarbon
VOC = volatile organic compound