Worksheet #15.1: Project Action Limits and Laboratory Reporting Limits – Target Analyte List (TAL) VOCs by EPA 8260B/C (Soil)

Analyte	CAS Number	Units	Laboratory Limits		PALs	Accuracy and Precision Criteria			
			Lab RL	Lab MDL	2017 EPA Resident Soil THQ=3.0[a]	LCS Recovery Limits	LCS Precision	MS/MSD Recovery Limits	MS/MSD Precision
1,1,1-Trichloroethane	71-55-6	mg/kg	0.005	0.00074	***24000***	70 - 132	30	60 - 135	40
1,1,2,2-Tetrachloroethane	79-34-5	mg/kg	0.005	0.00087	***60***	61 - 137	30	19 - 178	40
1,1,2-Trichloro-1,2,2-trifluoroethane	76-13-1	mg/kg	0.005	0.00067	***20000***	70 - 134	30	38 - 130	40
1,1,2-Trichloroethane	79-00-5	mg/kg	0.005	0.0005	***4.5***	70 - 130	30	53 - 138	40
1,1-Dichloroethane	75-34-3	mg/kg	0.005	0.00087	***360***	70 - 130	30	55 - 133	40
1,1-Dichloroethene	75-35-4	mg/kg	0.005	0.0005	***680***	70 - 130	30	50 - 134	40
1,2,3-Trichlorobenzene	87-61-6	mg/kg	0.005	0.00044	***190***	66 - 147	30	10 - 136	40
1,2,4-Trichlorobenzene	120-82-1	mg/kg	0.005	0.00097	***170***	68 - 140	30	10 - 130	40
1,2-Dibromo-3-chloropropane	96-12-8	mg/kg	0.005	0.00244	***0.53***	51 - 135	30	49 - 150	40
1,2-Dibromoethane	106-93-4	mg/kg	0.005	0.0003	***3.6***	70 - 130	30	57 - 130	40
1,2-Dichlorobenzene	95-50-1	mg/kg	0.005	0.00025	***5400***	70 - 130	30	70 - 130	40
1,2-Dichloroethane	107-06-2	mg/kg	0.005	0.00052	***46***	70 - 130	30	55 - 132	40
1,2-Dichloropropane	78-87-5	mg/kg	0.005	0.0005	***28***	70 - 130	30	61 - 130	40
1,3-Dichlorobenzene	541-73-1	mg/kg	0.005	0.00031	-	70 - 130	30	70 - 130	40
1,4-Dichlorobenzene	106-46-7	mg/kg	0.005	0.00032	***260***	70 - 130	30	70 - 130	40
2-Butanone	78-93-3	mg/kg	0.01	0.0019	***81000***	48 - 146	30	11 - 164	40
2-Hexanone	591-78-6	mg/kg	0.01	0.00101	***600***	53 - 135	30	33 - 145	40
4-Methyl-2-pentanone	108-10-1	mg/kg	0.01	0.00147	***99000***	57 - 133	30	32 - 141	40
Acetone	67-64-1	mg/kg	0.05	0.0072	***180000***	41 - 173	30	10 - 200	40
Benzene	71-43-2	mg/kg	0.005	0.00063	***120***	70 - 131	30	56 - 132	40
Bromochloromethane	74-97-5	mg/kg	0.005	0.0009	***450***	70 - 130	30	70 - 130	40
Bromodichloromethane	75-27-4	mg/kg	0.005	0.00066	***29***	70 - 120	30	66 - 130	40
Bromoform	75-25-2	mg/kg	0.005	0.00137	***1900***	59 - 137	30	51 - 137	40
Bromomethane	74-83-9	mg/kg	0.005	0.0011	***21***	57 - 155	30	37 - 147	40
Carbon disulfide	75-15-0	mg/kg	0.01	0.00055	***2300***	70 - 138	30	51 - 151	40
Carbon tetrachloride	56-23-5	mg/kg	0.005	0.00113	***65***	70 - 136	30	57 - 135	40
Chlorobenzene	108-90-7	mg/kg	0.005	0.00096	***830***	70 - 130	30	62 - 130	40
Chloroethane	75-00-3	mg/kg	0.005	0.00026	***41000***	62 - 146	30	44 - 136	40
Chloroform	67-66-3	mg/kg	0.005	0.00087	***32***	70 - 130	30	61 - 133	40
Chloromethane	74-87-3	mg/kg	0.005	0.0012	***330***	61 - 137	30	61 - 133	40
cis-1,2-Dichloroethene	156-59-2	mg/kg	0.005	0.00057	***470***	70 - 130	30	56 - 130	40
cis-1,3-Dichloropropene	10061-01-5	mg/kg	0.005	0.00045	-	70 - 130	30	52 - 130	40
Cyclohexane	110-82-7	mg/kg	0.005	0.00192	***20000***	70 - 130	30	54 - 130	40
Dibromochloromethane	124-48-1	mg/kg	0.005	0.00094	***830***	60 - 135	30	61 - 140	40
Dichlorodifluoromethane	75-71-8	mg/kg	0.005	0.00073	***260***	62 - 146	30	10 - 152	40
Ethylbenzene	100-41-4	mg/kg	0.005	0.00045	***580***	70 - 130	30	48 - 138	40
Isopropylbenzene	98-82-8	mg/kg	0.005	0.00075	***5800***	65 - 140	30	65 - 140	40
m,p-Xylene	179601-23-1	mg/kg	0.01	0.0005	***1700***	70 - 130	30	33 - 140	40
Methyl Acetate	79-20-9	mg/kg	0.025	0.00275	***1700***	59 - 136	30	60 - 140	40
Methyl tert-butyl ether	1634-04-4	mg/kg	0.005	0.00183	***230000***	70 - 130	30	26 - 170	40
Methylcyclohexane	108-87-2	mg/kg	0.005	0.00146	-	70 - 130	30	60 - 140	40
Methylene chloride	75-09-2	mg/kg	0.025	0.005	***1000***	61- 150	30	48 - 147	40
o-Xylene	95-47-6	mg/kg	0.005	0.0004	***1900***	70 - 130	30	38 - 142	40
Styrene	100-42-5	mg/kg	0.005	0.00071	***18000***	70 -130	30	46 - 130	40
Tetrachloroethene	127-18-4	mg/kg	0.005	0.00074	***240***	70- 130	30	66 -130	40
Toluene	108-88-3	mg/kg	0.005	0.0009	***15000***	70 - 130	30	48 - 135	40
trans-1,2-Dichloroethene	156-60-5	mg/kg	0.005	0.00114	***4700***	70 - 132	30	55 - 132	40
trans-1,3-Dichloropropene	10061-02-6	mg/kg	0.005	0.00058	-	70 - 131	30	40 - 135	40
Trichloroethene	79-01-6	mg/kg	0.005	0.00028	***12***	70 - 130	30	57 - 130	40
Trichlorofluoromethane	75-69-4	mg/kg	0.005	0.0005	***70000***	68 - 146	30	44- 130	40
Vinyl chloride	75-01-4	mg/kg	0.005	0.0006	***5.9***	65 - 139	30	41 - 135	40
Xylene (total)	1330-20-7	mg/kg	0.01	0.0005	***1700***	70 - 130	30	49 - 137	40

Notes:
a - EPA 2017 Removal Management Levels (July 2017);

CAS - Chemical Abstracts Service Registry
LCS - Laboratory Control Sample
MDL - Method Detection Limit
mg/kg - milligrams per kilogram
MS/MSD - Matrix Spike/Matrix Spike Duplicate
PALs - Project Action Levels
THQ - Target Hazard Qotient

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