Analytical Method Detection Limits
Quality Assurance Project Plan for Site Characterization Sampling Activities
Des Moines TCE Site, Des Moines, Iowa
U.S. EPA Region 7 START 4, Contract No. EP-S7-13-06, Task Order No. 0144

Analyte	CAS #	EPA Method	Wipes	Building Materials	Concrete	Soil		Sediment		Surface Water	
			CRQL (µg/wipe)	CRQL (µg/kg)	CRQL (µg/kg)	ESL (µg/kg)	CRQL (µg/kg)	ESL (µg/kg)	CRQL (µg/kg)	NRWQC (µg/L)	CRQL (µg/L)
PCBs											
Aroclor 1016	12674-11-2	8082	1.0	33	33	0.332	33	59.8	33	0.014[1]	1.0
Aroclor 1221	11104-28-2	8082	1.0	33	33	0.332	33	59.8	33	0.014[1]	1.0
Aroclor 1232	11141-16-5	8082	1.0	33	33	0.332	33	59.8	33	0.014[1]	1.0
Aroclor 1242	53469-21-9	8082	1.0	33	33	0.332	33	59.8	33	0.014[1]	1.0
Aroclor 1248	12672-29-6	8082	1.0	33	33	0.332	33	59.8	33	0.014[1]	1.0
Aroclor 1254	11097-69-1	8082	1.0	33	33	0.332	33	59.8	33	0.014[1]	1.0
Aroclor 1260	11096-82-5	8082	1.0	33	33	0.332	33	59.8	33	0.014[1]	1.0
Aroclor 1268	11100-14-4	8082	1.0	33	33	0.332	33	59.8	33	0.014[1]	1.0

Analyte	CAS #	EPA Method	Wipes		Building Materials		Concrete		Soil			Sediment			Surface Water		
			MDL (ng/m2)	PRL (ng/m2)	MDL (ng/kg)	PRL (ng/kg)	MDL (ng/kg)	PRL (ng/kg)	ESL (ng/kg)	MDL (ng/kg)	PRL (ng/kg)	ESL (ng/kg)	MDL (ng/kg)	PRL (ng/kg)	ESL (pg/L)	MDL (pg/L)	PRL (pg/L)
Dioxins (START-contracted Lab)																	
2,3,7,8-TCDF	51207-31-9	1613B	0.278	1.0	0.278	1.0	0.278	1.0	--	0.278	1.0	--	0.278	1.0	--	1.84	10
2,3,7,8-TCDD	1746-01-6	1613B	0.202	1.0	0.202	1.0	0.202	1.0	--	0.202	1.0	--	0.202	1.0	--	1.67	10
1,2,3,7,8-PeCDF	57117-41-6	1613B	0.601	5.0	0.601	5.0	0.601	5.0	--	0.601	5.0	--	0.601	5.0	--	2.21	50
2,3,4,7,8-PeCDF	57117-31-4	1613B	0.583	5.0	0.583	5.0	0.583	5.0	--	0.583	5.0	--	0.583	5.0	--	2.77	50
1,2,3,7,8-PeCDD	40321-76-4	1613B	0.584	5.0	0.584	5.0	0.584	5.0	--	0.584	5.0	--	0.584	5.0	--	2.89	50
1,2,3,4,7,8-HxCDF	70648-26-9	1613B	0.624	5.0	0.624	5.0	0.624	5.0	--	0.624	5.0	--	0.624	5.0	--	3.42	50
1,2,3,6,7,8-HxCDF	57117-44-9	1613B	0.536	5.0	0.536	5.0	0.536	5.0	--	0.536	5.0	--	0.536	5.0	--	3.04	50
2,3,4,6,7,8-HxCDF	60851-34-5	1613B	0.655	5.0	0.655	5.0	0.655	5.0	--	0.655	5.0	--	0.655	5.0	--	4.05	50
1,2,3,7,8,9-HxCDF	72918-21-9	1613B	0.761	5.0	0.761	5.0	0.761	5.0	--	0.761	5.0	--	0.761	5.0	--	4.20	50
1,2,3,4,7,8-HxCDD	39227-28-6	1613B	0.776	5.0	0.776	5.0	0.776	5.0	--	0.776	5.0	--	0.776	5.0	--	4.46	50
1,2,3,6,7,8-HxCDD	57653-85-7	1613B	0.663	5.0	0.663	5.0	0.663	5.0	--	0.663	5.0	--	0.663	5.0	--	2.68	50
1,2,3,7,8,9-HxCDD	19408-74-3	1613B	0.723	5.0	0.723	5.0	0.723	5.0	--	0.723	5.0	--	0.723	5.0	--	4.09	50
1,2,3,4,6,7,8-HpCDF	67562-39-4	1613B	0.792	5.0	0.792	5.0	0.792	5.0	--	0.792	5.0	--	0.792	5.0	--	3.37	50
1,2,3,4,7,8,9-HpCDF	55673-89-7	1613B	0.726	5.0	0.726	5.0	0.726	5.0	--	0.726	5.0	--	0.726	5.0	--	3.61	50
1,2,3,4,6,7,8-HpCDD	35822-46-9	1613B	0.692	5.0	0.692	5.0	0.692	5.0	--	0.692	5.0	--	0.692	5.0	--	3.92	50
OCDF	39001-02-0	1613B	1.95	10.0	1.95	10.0	1.95	10.0	--	1.95	10.0	--	1.95	10.0	--	7.71	100
OCDD	3268-87-9	1613B	1.40	10.0	1.40	10.0	1.40	10.0	--	1.40	10.0	--	1.40	10.0	--	6.61	100
Total TCDF	55722-27-5	1613B	0.28	1.0	0.28	1.0	0.28	1.0	--	0.28	1.0	--	0.28	1.0	--	1.84	10
Total TCDD	41903-57-5	1613B	0.20	1.0	0.20	1.0	0.20	1.0	--	0.20	1.0	--	0.20	1.0	--	1.67	10
Total PeCDF	30402-15-4	1613B	1.18	10.0	1.18	10.0	1.18	10.0	--	1.18	10.0	--	1.18	10.0	--	4.98	100
Total PeCDD	36088-22-9	1613B	0.58	5.0	0.58	5.0	0.58	5.0	--	0.58	5.0	--	0.58	5.0	--	2.89	50
Total HxCDF	55684-94-1	1613B	2.58	20.0	2.58	20.0	2.58	20.0	--	2.58	20.0	--	2.58	20.0	--	14.71	200
Total HxCDD	34465-46-8	1613B	2.16	15.0	2.16	15.0	2.16	15.0	--	2.16	15.0	--	2.16	15.0	--	11.23	150
Total HpCDF	38998-75-3	1613B	1.52	10.0	1.52	10.0	1.52	10.0	--	1.52	10.0	--	1.52	10.0	--	6.98	100
Total HpCDD	37871-00-4	1613B	0.69	5.0	0.69	5.0	0.69	5.0	--	0.69	5.0	--	0.69	5.0	--	3.92	50

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VOCs											
Acetone	67-64-1	8260	NA	NA	NA	2500	5	9.9	5	1700	0.5
Benzene	71-43-2	8260	NA	NA	NA	255	10	142	10	114	5
Bromobenzene	108-86-1	8260	NA	NA	NA	--	5	--	5	--	0.5
Bromochloromethane	74-97-5	8260	NA	NA	NA	--	5	--	5	--	0.5
Bromodichloromethane	75-27-4	8260	NA	NA	NA	540	5	--	5	--	0.5
Bromoform	75-25-2	8260	NA	NA	NA	15900	5	492	5	230	0.5
Bromomethane	74-83-9	8260	NA	NA	NA	--	5	--	5	--	0.5
Butanone, 2- (Methyl ethyl ketone)	78-93-3	8260	NA	NA	NA	89600	10	42.4	10	2200	5
Butylbenzene, n-	104-51-8	8260	NA	NA	NA	--	5	--	5	--	0.5
Butylbenzene, sec-	135-98-8	8260	NA	NA	NA	--	5	--	5	--	0.5
Butylbenzene, tert-	98-06-6	8260	NA	NA	NA	--	5	--	5	--	0.5
Carbon disulfide	75-15-0	8260	NA	NA	NA	94.1	5	23.9	5	15	0.5
Carbon tetrachloride	56-23-5	8260	NA	NA	NA	2980	5	1450	5	240	0.5
Chlorobenzene	108-90-7	8260	NA	NA	NA	13100	5	291	5	47	0.5
Chlorodibromomethane (Dibromochloromethane)	124-48-1	8260	NA	NA	NA	2050	5		5		0.5
Chloroethane	75-00-3	8260	NA	NA	NA		5	--	5	--	0.5
Chloroform	67-66-3	8260	NA	NA	NA	1190	5	121	5	140	0.5
Chloromethane	74-87-3	8260	NA	NA	NA	--	5	--	5	--	0.5
Chlorotoluene, 2-	95-49-8	8260	NA	NA	NA	--	5	--	5	--	0.5
Chlorotoluene, 4-	106-43-4	8260	NA	NA	NA	--	5	--	5	--	0.5
Dibromo-3-chloropropane, 1,2-	96-12-8	8260	NA	NA	NA	35.2	5	--	5	--	0.5
Dibromoethane, 1,2-	106-93-4	8260	NA	NA	NA	1230	5	--	5	--	0.5
Dibromomethane	74-95-3	8260	NA	NA	NA	--	5	--	5	--	0.5
Dichlorobenzene, 1,2-	95-50-1	8260	NA	NA	NA	2960	5	294	5	14	0.5
Dichlorobenzene, 1,3-	541-73-1	8260	NA	NA	NA	37700	5	1315	5	38	0.5
Dichlorobenzene, 1,4-	106-46-7	8260	NA	NA	NA	546	5	318	5	9.4	0.5
Dichlorodifluoromethane	75-71-8	8260	NA	NA	NA	39500	5	--	5	--	0.5
Dichloroethane, 1,1-	75-34-3	8260	NA	NA	NA	20100	5	0.575	5	47	0.5
Dichloroethane, 1,2-	107-06-2	8260	NA	NA	NA	21200	5	260	5	910	0.5
Dichloroethene, 1,1-	75-35-4	8260	NA	NA	NA	8280	5	19.4	5	65	0.5
Dichloroethene, *cis*-1,2-	156-59-2	8260	NA	NA	NA	--	5	--	5	--	0.5
Dichloroethene, *trans*-1,2-	156-60-5	8260	NA	NA	NA	784	5	654	5	970	0.5