

Ramsey County TCAAP Project Cleanup Criteria

	MPCA Residential Soil Reference Values (2009) (mg/kg)	MPCA Soil Leaching Values (2005) (mg/kg)
Metals		
Antimony	12	NA
Arsenic	9	NA
Barium	1100	NA
Cadmium	25	NA
Chromium VI	87	NA
Copper	100	NA
Iron*	25000	NA
Lead	300	NA
Manganese	3600	NA
Mercury	0.5	NA
Thallium	3	NA
Vanadium*	50	NA

*TCAAP site specific criteria (MPCA Letter dated 1/27/2014).

Polynuclear Aromatic Hydrocarbons (PAHs)		
Acenaphthene	1200	NA
Anthracene	7880	NA
Benzo(a)pyrene Equivalents	2	NA
Fluoranthene	1080	NA
Fluorene	850	NA
2-Methyl naphthalene	100	NA
Naphthalene	10	NA
Pyrene	890	NA
Quinoline	4	NA

Semi-volatiles		
1,4-Dioxane	150	0.031

Polychlorinated Biphenyls (PCBs)		
Total PCBs	1.2	NA

Petroleum		
Diesel Range Organics**	100	NA

**Based on MPCA guidance document c-rem1-01 "Best Management Practices for the Off-Site Reuse of Unregulated Fill", Feb 2012.

Volatile Organic Compounds (VOCs)		
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Acetone	340	0.7
Allyl chloride	NE	0.032
Benzene	6	0.034
Bromobenzene	NE	NE
Bromochloromethane	NE	NE
Bromodichloromethane	10	0.15
Bromoform	NE	0.14
2-Butanone (MEK)	5,500	6.4
n-Butylbenzene	30	NE
sec-Butylbenzene	25	NE
tert-Butylbenzene	30	NE
Carbon tetrachloride	0.3	0.023
Chlorobenzene	11	1.1
Chloroethane	1,000	NE
Chloroform	2.5	0.17
2-Chlorotoluene	436	NE
4-Chlorotoluene	NE	NE
1,2-Dibromo-3-chloropropane	NE	0.001
Dibromochloromethane	NE	NE
1,2-Dibromoethane (EDB)	0.3	0.00001
Dibromomethane	260	NA
1,2-Dichlorobenzene	NE	8.1
1,3-Dichlorobenzene	NE	4.2
1,4-Dichlorobenzene	NE	0.13
Dichlorodifluoromethane	16	38
1,1-Dichloroethane	34	0.18
1,2-Dichloroethane	4	0.01
1,1-Dichloroethene	20	0.025
cis-1,2-Dichloroethene	8	0.14
trans-1,2-Dichloroethene	11	0.27
Dichlorofluoromethane	NE	NE
1,2-Dichloropropane	4	NE
1,3-Dichloropropane	NE	NE
2,2-Dichloropropane	NE	NE
1,1-Dichloropropene	NE	NE
cis-1,3-Dichloropropene	NE	0.005
trans-1,3-Dichloropropene	NE	0.005
Diethyl ether (Ethyl Ether)	30	NA
Ethylbenzene	200	4.7
Hexachloro-1,3-butadiene	NE	25
Isopropylbenzene (Cumene)	NE	18
p-Isopropyltoluene	NE	NE
Methylene chloride	NE	NE
4-Methyl-2-pentanone (MIBK)	1,700	NE
Methyl-tert-butyl ether	NE	NE
Naphthalene	10	7.5
n-Propylbenzene	30	NE

Styrene	210	1.9
1,1,1,2-Tetrachloroethane	31	1.4
1,1,2,2-Tetrachloroethane	3.5	0.005
Tetrachloroethene	72	0.068
Tetrahydrofuran	NE	NE
Toluene	107	6.4
1,2,3-Trichlorobenzene	NE	NE
1,2,4-Trichlorobenzene	200	0.31
1,1,1-Trichloroethane	140	3.5
1,1,2-Trichloroethane	9	0.01
Trichloroethene	29	0.14
Trichlorofluoromethane	67	22
1,2,3-Trichloropropane	NE	NE
1,1,2-Trichlorotrifluoroethane	NE	NE
1,2,4-Trimethylbenzene	8	NE
1,3,5-Trimethylbenzene	3	NE
Vinyl chloride	0.8	0.001
Xylene (total)	45	45

NA: Not applicable for Ramsey County Project

NE: Not established by MPCA