

Table 1. OU2 Excavation Area Analytical Results – TCLP, PCBs, TPH, and Wet Chemistry

Parameter	Regulatory Criteria	Units	Composite Soil Sample OU2-TCLP-SO		Method
			3/23/2022	Units	
TCLP - Herbicides^a					
2,4,5-TP (Silvex)	1.0	mg/L	0.0013 U	mg/l	SW846 1311
2,4-D	10.0	mg/L	0.17 U	mg/l	
TCLP - Pesticides^a					
gamma-BHC (Lindane)	0.4	mg/L	0.000022 U	mg/l	SW846 1311
Chlordane (Technical)	0.03	mg/L	0.00038 U	mg/l	
Endrin	0.02	mg/L	0.000021 U	mg/l	
Heptachlor	0.008	mg/L	0.000026 U	mg/l	
Heptachlor epoxide	0.008	mg/L	0.000020 U	mg/l	
Methoxychlor	10	mg/L	0.000050 U	mg/l	
Toxaphene	0.5	mg/L	0.0021 U	mg/l	
TCLP - Metals^a					
Arsenic	5.0	mg/L	0.10 U	mg/l	SW846 6010D, 3010A
Barium	100	mg/L	2.0 U	mg/l	
Cadmium	1.0	mg/L	0.050 U	mg/l	
Chromium	5.0	mg/L	0.10 U	mg/l	
Lead	5.0	mg/L	0.050 U	mg/l	
Mercury	0.2	mg/L	0.0050 U	mg/l	
Selenium	1.0	mg/L	0.10 U	mg/l	
Silver	5.0	mg/L	0.10 U	mg/l	
TCLP - SVOCs^a					
1,4-Dichlorobenzene	7.5	mg/L	0.0050 U	mg/l	SW846 1311
2,4-Dinitrotoluene	0.13	mg/L	0.0081 U	mg/l	
Hexachloro-1,3-butadiene	0.5	mg/L	0.005 U	mg/l	
Hexachlorobenzene	0.13	mg/L	0.0069 U	mg/l	
Hexachloroethane	3	mg/L	0.016 U	mg/l	
2-Methylphenol (o-Cresol)	200	mg/L	0.0056 U	mg/l	
3&4-Methylphenol (m&p-Cresol)	400	mg/L	0.0098 U	mg/l	
Nitrobenzene	2	mg/L	0.0093 U	mg/l	
Pentachlorophenol	100	mg/L	0.050 U	mg/l	
Pyridine	5	mg/L	0.020 U	mg/l	
2,4,5-Trichlorophenol	400	mg/L	0.0074 U	mg/l	
2,4,6-Trichlorophenol	2	mg/L	0.0075 U	mg/l	
TCLP - VOCs^a					
Benzene	0.5	mg/L	0.0031 U	mg/L	SW846 1311
2-Butanone (MEK)	200	mg/L	0.020 U	mg/L	
Carbon tetrachloride	0.5	mg/L	0.0036 U	mg/L	
Chlorobenzene	100	mg/L	0.0020 U	mg/L	
Chloroform	6	mg/L	0.0030 U	mg/L	
1,4-Dichlorobenzene	7.5	mg/L	0.0026 U	mg/L	
1,2-Dichloroethane	0.5	mg/L	0.0031 U	mg/L	
1,1-Dichloroethene	0.7	mg/L	0.0032 U	mg/L	
Tetrachloroethene	0.7	mg/L	0.0022 U	mg/L	
Trichloroethene	0.5	mg/L	0.0035 U	mg/L	
Vinyl chloride	0.2	mg/L	0.0041 U	mg/L	

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			3/23/2022	Units	
Polychlorinated biphenyls (PCBs)^b					
PCB1016	50	mg/kg	0.076 U	mg/kg	
PCB1221	50	mg/kg	0.095 U	mg/kg	
PCB1232	50	mg/kg	0.095 U	mg/kg	
PCB1242	50	mg/kg	0.076 U	mg/kg	SW846 8082A
PCB1248	50	mg/kg	0.076 U	mg/kg	
PCB1254	50	mg/kg	0.076 U	mg/kg	
PCB1260	50	mg/kg	0.076 U	mg/kg	
Total Petroleum Hydrocarbons (TPH)					
Gasoline Range Organics (GRO) (C6-C10)	--		3.2 U	mg/kg	
Diesel Range Organics (DRO) (C10-C28)	--		181	mg/kg	SW846 8015C
Wet Chemistry Parameters					
Corrosivity (pH) ^c	2.0 < pH < 12.5	S.U.	6.6		SW846 CHAP7
Ignitability ^d	> 140° F	deg F	DNF at 200	deg F	SW846 1020C MOD
Cyanide Reactivity	--		< 1.7	mg/kg	SW846 CHAP7
Sulfide Reactivity	--		< 56	mg/kg	SW846 CHAP7
Solids, Percent	--		87.9	%	SM19 2540G

Notes:

-- = no regulatory criteria

DNF = Did Not Fire (the sample did not combust when prepared for heat of combustion analysis)

MCL = maximum contaminant level

SVOC = semivolatile organic compound

TCLP = toxicity characteristic leaching procedure

VOC = volatile organic compound

U = The material was analyzed for, but was not detected. The method detection limit is indicated.

^aAnalyte concentrations are compared to the Toxicity Characteristic Leaching Procedure (40 CFR 261.24) regulatory criteria.

^bPCB concentrations compared to the Toxic Substances Control Act (TSCA) concentration of 50 parts per million.

^cCorrosivity results compared to Characteristic of Corrosivity criteria (40 CFR 261.22). Exhibits the characteristic of corrosivity if it is aqueous and has a pH ≤ 2.5 or ≥ 12.5.

^dIgnitability results compared to the Characteristic of Ignitability criteria (40 CFR 261.21). Exhibits the characteristic of ignitability if it is a liquid, and has a flash point < 60°C (140°F).

Table 2. OU2 Excavation Areas - Concentration Data for Constituents of Interest

Constituent	Units	Concentration Range		Residential Screening Value ^a	Industrial Screening Value ^a
Pentachlorophenol	mg/kg	0.19 U	— 0.415	1	4
Acenaphthene	mg/kg	0.0222	— 52.7	360	4500
Acenaphthylene ^b	mg/kg	0.193 J	— 19.3	180	2300
Anthracene	mg/kg	0.215	— 203	1800	23000
Benzo[a]pyrene (BaP)	mg/kg	0.028	— 65.7	0.11	2.1
BaP Toxic Equivalency (TEQ) ^c	mg/kg	0.0508	— 107	0.11	2.1
Benzo[g,h,i]perylene ^b	mg/kg	0.181	— 28.3	180	2300
Chloronaphthalene, Beta	mg/kg	0.019 U	— 1.60 U	480	6000
Fluoranthene	mg/kg	0.06	— 761	240	3000
Fluorene	mg/kg	0.021	— 60.1	240	3000
Methylnaphthalene, 1-	mg/kg	0.019 U	— 5.37	18	73
Methylnaphthalene, 2-	mg/kg	0.019	— 7.59	24	300
Naphthalene	mg/kg	0.015 U	— 2.46	2	8.6
Phenanthrene ^b	mg/kg	0.040	— 319	180	2300
Pyrene	mg/kg	0.061	— 607	180	2300
2,3,7,8-tetrachlorodibenzo-p-dioxin (TCDD)	pg/g	0.0472 U	— 0.899 U	4.8	22
TCDD TEQ ^d	pg/g	0.997	— 275	4.8	22

Table 3. OU2 Concentration Data for Constituents Listed in Typical Landfill Waste Characterization Questionnaire

Constituent	Units	Concentration Range		Residential Screening Value ^a	Industrial Screening Value ^a
Herbicides & Pesticides					
alpha-Chlordane	µg/kg	9.3 U	— 11 UJ	3600	50000
trans-Chlordane	µg/kg	9.4 UJ	— 34 U	na	na
Endrin	µg/kg	5.2 J	— 11 UJ	1900	25000
Heptachlor	µg/kg	9.3 U	— 18 J	130	630
Heptachlor epoxide	µg/kg	9.3 U	— 11 UJ	70	330
Lindane	µg/kg	9.3 U	— 11 UJ	71	1000
Methoxychlor	µg/kg	19 UJ	— 93 UJ	32000	410000
Toxaphene	µg/kg	94 U	— 370 U	490	2100
2,4-Dichlorophenoxyacetic acid (2,4-D)	µg/kg	TCLP data - see Table 1		70000	960000
2,4,5-TP (Silvex)	µg/kg	TCLP data - see Table 1		51000	660000
Polychlorinated Biphenyls (PCBs)					
Aroclor 1016	µg/kg	76 UJ	— 200 UJ	410	5100
Aroclor 1221	µg/kg	95 UJ	— 200 UJ	200	830
Aroclor 1232	µg/kg	95 UJ	— 200 UJ	170	720
Aroclor 1242	µg/kg	76 UJ	— 200 UJ	230	950
Aroclor 1248	µg/kg	76 UJ	— 200 UJ	230	940
Aroclor 1254	µg/kg	76 UJ	— 200 UJ	120	970
Aroclor 1260	µg/kg	76 UJ	— 200 UJ	240	990

Notes:

^a Residential and industrial regional screening levels are based on a hazard quotient of 0.1 and a cancer risk level of 1E-6. Values were obtained from USEPA, November 2021, as available at <https://www.epa.gov/risk/regional-screening-levels-rsls-generic-tables>.

^b Screening level for constituent is based on pyrene as a surrogate.

^c Screening level for constituent is based on BaP.

^d Screening level for constituent is based on TCDD.

Data Qualifiers: J = estimated result U = analyte not detected, method detection limit is shown

Table 4. OU2 Excavation Areas - Representative Surface Soil Results for Constituents of Interest

Parcel	Soil Volume to be Excavated (CY)	Representative TCDD TEQ Sample Type	TCDD TEQ (pg/g)	Representative PAH/PCP Sample Type	BaP TEQ (mg/kg)	PCP (mg/kg)	Acenaphthene (mg/kg)	Acenaphthylene (mg/kg)	Anthracene (mg/kg)	BaP (mg/kg)	Benzo[g,h,i] perylene (mg/kg)	Chloro-naphthalene, Beta- (mg/kg)	Fluoranthene (mg/kg)	Fluorene (mg/kg)	Methyl-naphthalene, 1- (mg/kg)	Methyl-naphthalene, 2- (mg/kg)	Naphthalene (mg/kg)	Phenanthrene (mg/kg)	Pyrene (mg/kg)
CS-56	421	5-point Composite	203	5-point Composite	3.61	0.415	0.0884 J	0.831	1.64	2.12	1.35	--	6.27	0.178 J	0.0302 J	0.0324 J	0.0366 J	1.96	7.01
RISB05	86	5-point Composite	84.2	Soil Boring	0.0508	--	0.0470 J	--	--	0.028 J	--	--	0.060 J	0.0270	--	0.0320	0.0150 U	--	0.061 J
SB-136	461	5-point Composite	130	Soil Boring	0.850	0.190 U	0.0328 J	0.398	0.797	0.606	0.533	0.0190 U	0.740	0.0210	0.0190 U	0.0190	0.0220 J	0.128 J	0.953
SB-148	358	5-point Composite	70.4	Soil Boring	0.322	0.200 UJ	0.0222 J	0.193 J	0.215 J	0.182 J	0.181 J	0.0200 UJ	0.113 J	0.0505 J	0.0200 UJ	0.0200 UJ	0.0200 UJ	0.0400 J	0.141 J
SS-108	332	Maximum of Discrete Surface Soil Samples	1.00	Maximum of Discrete Surface Soil Samples	17.2	0.360 U	0.252 J	4.31	7.00	10.5	5.51	0.0360 U	19.0	0.568	0.0647 J	0.124 J	0.148 J	2.32	31.7
SS-115	343	5-point Composite	275	5-point Composite	8.71	0.390 U	0.227 J	3.00	4.83	5.12	3.45	--	7.55	0.526	0.0635 J	0.0802 J	0.0954 J	1.24	10.9
SS-117	253	Maximum of Discrete Surface Soil Samples	10.8	Maximum of Discrete Surface Soil Samples	33.2	0.410 U	0.300 J	4.20	9.43	20.5	9.30	0.0410 U	86.7	0.635 J	0.0961 J	0.155 J	0.265 J	8.11	96.1
TB-05	92	5-point Composite	7.55	Soil Boring	16.0	0.190 U	0.426 J	2.57 J	6.89	11.1	5.03	0.0190 UJ	21.5	0.400 J	0.0730 J	0.114 J	0.0678 J	1.35 J	19.5
TB-16	42	5-point Composite	5.94	Maximum of Discrete Surface Soil Samples	107	16.0 U	52.7	19.3	203	65.7	28.3	1.60 U	761	60.1	2.12 J	2.78 J	2.46 J	319	607
TB-16C	90	5-point Composite	18.7	Maximum of Discrete Surface Soil Samples	18.5	0.200 U	0.252	4.10	9.04	11.4	6.38	0.0200 U	17.8	0.631	0.124 J	0.205	0.274	1.66	23.7
TB-16F	266	5-point Composite	10.3	5-point Composite	14.1	0.230 U	22.0	2.69	35.1	8.71 J	3.60	--	105	36.5	5.37 J	7.59 J	2.45	137	76.6
TB-17	78	5-point Composite	9.45	Soil Boring	16.4	0.440 U	0.234 J	3.19	6.37	9.53	6.71	0.0440 U	5.18	0.412 J	0.0846 J	0.167 J	0.183 J	0.703	13.3
Total	2822	Minimum Maximum	0.997 275		0.0508 107	0.190 U 0.415	0.0222 J 52.7	0.193 J 19.3	0.215 203	0.028 J 65.7	0.181 28.3	0.019 U 1.60 U	0.060 761	0.021 60.1	0.019 U 5.37 J	0.019 7.59 J	0.015 U 2.46	0.040 319	0.061 607

Notes:

The representative samples were collected from 2016 to 2020.

-- = data not available

BaP = benzo[a]pyrene

PAH = polycyclic aromatic hydrocarbon

PCP = pentachlorophenol

OU = operable unit

TCDD = 2,3,7,8-tetrachlorodibenzo-p-dioxin

TEQ = toxic equivalency

Data Qualifiers:

J = estimated result

U = result not detected, method detection limit is shown

UJ = result estimated and not detected, method detection limit is shown