

Solid Waste Perflourochemicals (PFCs) Evaluation
Leachate/Gas Condensate: Shipped to Waste Water Treatment Plants for Disposal
2006 and 2008 Sampling Events

CLIENT ID	Burnsville MSW - Leachate	Burnsville - Condensate	Burnsville - Condensate Dup	Burnsville WM MSW- Leachate
Date	2006	2006	2006	2008
AXYS ID	L8782-11	L8782-9	L8782-10	L11532-16
Workgroup	WG18790	WG18812	WG18812	WG26121
Sample Size	0.207 L	0.502 L	0.501 L	0.0265 L
Units	ng/L	ng/L	ng/L	ng/L
PFBA	27.7	11.3	5.14	1300
PFPeA	67	7.62	7.84	489
PFHxA	781	30.6	40.7	2040
PFHpA	588	17.5	21.7	801
PFOA	1920	80.1	75.1	1100
PFNA	57.7	6.83	7.33	< 47.2
PFDA	18.7	28.4	29	< 47.2
PFUnA	< 6.89	3.23	5.05	< 47.2
PFDoA	< 8.22	4.93	4.99	< 47.2
PFBS	192	< 7.20	< 2.41	R 110
PFHxS	1440	< 8.02	< 7.82	318
PFOS	641	41.3	39.9	< 94.4
PFOSA	13.4	67.8	113	< 47.2

NOTE:

- 1.All leachate and gas condensate generated at the facilities identified on this table is disposed at waste water treatment plants.
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- 3.NQ*: not quantifiable due to matrix interference

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CLIENT ID	Burnsville WM Demo Leachate	Burnsville WM-MSW- Leachate Dup	City of Red Wing - Leachate	City of Red Wing Leachate
Date	2008	2008	2006	2008
AXYS ID	L11532-17	L11532-18	L8782-16	L11647-27
Workgroup	WG26121	WG26121	WG18812	WG26442
Sample Size	0.0174 L	0.0273 L	0.499 L	0.498 L
Units	ng/L	ng/L	ng/L	ng/L
PFBA	1030	1410	37.3	173
PFPeA	626	522	110	182
PFHxA	1940	1940	169	320
PFHpA	1020	837	23.1	52.4
PFOA	1310	1370	22.7	157
PFNA	< 81.0	< 45.9	< 1.36	< 2.51
PFDA	< 71.8	< 45.9	< 1.08	< 2.51
PFUnA	< 71.8	< 45.9	< 0.955	< 2.51
PFDoA	< 71.8	< 45.9	< 1.14	< 2.51
PFBS	< 144	R 108	99.2	312
PFHxS	206	248	12	8.82
PFOS	< 144	< 91.7	6.19	< 5.02
PFOSA	< 71.8	< 45.9	< 0.923	< 2.51

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CLIENT ID	Clay Co SLF - Tank 2	Clay Co SLF - Tank 2 Dup	Clay Co Leachate Tank 2	Clay Co Leachate Tank 2 (Duplicate)
Date	2006	2006	2008	2008
AXYS ID	L8782-20	L8782-21	L11603-10 (A)	WG26452-103 (DUP L11603-10)
Workgroup	WG18790	WG18790	WG26452	WG26452
Sample Size	0.260 L	0.265 L	0.100 L	0.105 L
Units	ng/L	ng/L	ng/L	ng/L
PFBA	6.36	12	261	211
PFPeA	42.9	41.6	327	328
PFHxA	449	517	593	546
PFHpA	268	289	303	280
PFOA	555	615	264	261
PFNA	14.3	12.9	13.2	13.4
PFDA	4.1	4.29	< 12.5	< 11.9
PFUnA	< 1.83	< 1.80	< 12.5	< 11.9
PFDoA	< 2.18	< 2.15	< 12.5	< 11.9
PFBS	111	99.7	115	121
PFHxS	851	849	52.4	57.9
PFOS	165	143	< 24.9	< 23.7
PFOSA	6.55	6.44	< 12.5	< 11.9

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2006 and 2008 Sampling Events

CLIENT ID	Clay Co SLF - Tank 1	Clay Co Leachate Tank 1	Elk River SLF - Leachate	Elk River Leachate
Date	2006	2008	2006	2008
AXYS ID	L8782-22	L11603-9	L8782-23	L11532-11
Workgroup	WG18790	WG26452	WG18790	WG26121
Sample Size	0.213 L	0.101 L	0.203 L	0.0196 L
Units	ng/L	ng/L	ng/L	ng/L
PFBA	9.54	243	28.6	2980
PFPeA	21.8	226	51.4	987
PFHxA	106	379	1000	3300
PFHpA	64	446	758	1440
PFOA	66.6	299	1270	2080
PFNA	3.71	< 12.4	66	< 63.7
PFDA	< 2.52	< 12.4	12.7	< 63.7
PFUnA	< 2.24	< 12.4	< 7.02	< 63.7
PFDoA	< 2.67	< 12.4	< 8.38	< 63.7
PFBS	27.5	106	384	423
PFHxS	46.9	203	1700	221
PFOS	4.99	< 24.8	322	< 127
PFOSA	< 2.16	< 12.4	16.8	< 63.7

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2006 and 2008 Sampling Events

CLIENT ID	Elk River - Gas Condensate	Elk River - Gas Condensate	Pine Bend 219 Lined	Pine Bend 15 Unlined
Date	2006	2006	2005	2005
AXYS ID	L8782-24	L8782-24	L7789-6R	L7789-4R
Workgroup	WG18812	WG18812	WG15749	WG15749
Sample Size	0.500 L	0.500 L	4.86 mL	4.43 mL
Units	ng/L	ng/L	ng/l	ng/l
PFBA	5.26	5.26	1600	1400
PFPeA	14	14	2710	9230
PFHxA	104	104	13100	16900
PFHpA	290	290	3990	4270
PFOA	1290	1290	14200	29800
PFNA	97.4	97.4	243	235
PFDA	335	335	<42.0	70
PFUnA	159	159	<43.3	<47.5
PFDoA	153	153	<41.1	278
PFBS	< 13.3	< 13.3	1820	1890
PFHxS	< 24.7	< 24.7	4390	2180
PFOS	306	306	3140	4040
PFOSA	475	475	NQ	NQ

NOTE:

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Solid Waste Perflourochemicals (PFCs) Evaluation
Leachate/Gas Condensate: Shipped to Waste Water Treatment Plants for Disposal
2006 and 2008 Sampling Events

CLIENT ID	Pind Bend Gas Cond	Pind Bend Gas Cond (DUPLICATE)	Pine Bend East Tank	Pine Bend SLF East Tank
Date	2005	2005	2005	2008
AXYS ID	L7789-5R	WG15749-103	L7789-7R	L11742-5
Workgroup	WG15749	WG15749	WG15749	WG26599
Sample Size	5.06 mL	4.91 mL	4.40 mL	0.102 L
Units	ng/l	ng/l	ng/l	ng/L
PFBA	4280	4570	2200	1220
PFPeA	4510	5480	5020	422
PFHxA	35900	37900	28900	442
PFHpA	17500	15100	14700	260
PFOA	75300	83800	81800	2370
PFNA	785	788	884	129
PFDA	170	214	335	38
PFUnA	44	56	53	< 12.3
PFDoA	92	125	<45.5	< 12.3
PFBS	5890	6300	4780	141
PFHxS	12100	9480	7440	205
PFOS	26400	29900	31400	244
PFOSA	NA	NA	NA	42.2

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Solid Waste Perflourochemicals (PFCs) Evaluation
Leachate/Gas Condensate: Shipped to Waste Water Treatment Plants for Disposal
2006 and 2008 Sampling Events

CLIENT ID	Pine Bend West Tank	Pine Bend SLF West Tank	Pine Bend SLF West Tank (Duplicate)	SKB Rich Valley - Leachate
Date	2005	2008	2008	2006
AXYS ID	L7789-3R	L11742-6 (A)	WG26599-104 (DUP L11742-6)	L8782-15
Workgroup	WG15749	WG26599	WG26599	WG18790
Sample Size	4.36 mL	0.00839 L	0.00864 L	0.500 L
Units	ng/l	ng/L	ng/L	ng/L
PFBA	1620	23900	23000	36.6
PFPeA	7710	2930	3160	88.6
PFHxA	21600	2450	2400	320
PFHpA	7500	633	690	160
PFOA	41500	1440	1450	829
PFNA	381	< 149	< 145	12.4
PFDA	109	< 149	< 145	3.99
PFUnA	<48.3	< 149	< 145	< 3.13
PFDoA	<45.9	< 149	< 145	< 3.41
PFBS	2570	< 298	294	80.7
PFHxS	4280	< 298	< 289	566
PFOS	8180	< 298	< 289	318
PFOSA	NA	< 149	< 145	3.05

NOTE:

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Solid Waste Perflourochemicals (PFCs) Evaluation
Leachate/Gas Condensate: Shipped to Waste Water Treatment Plants for Disposal
2006 and 2008 Sampling Events

CLIENT ID	SKB Rich Valley Leachate	SKB Rosemount Cell 4B - Leachate	SKB Rosemount Cell 4B - Leachate Dup	SKB Rosemount Cell 2C - Leachate
Date	2008	2006	2006	2006
AXYS ID	L11561-16	L8782-13	L8782-14	L7995-3R
Workgroup	WG26307	WG18790	WG18790	WG16412/16480
Sample Size	0.103 L	0.500 L	0.500 L	0.00102 L
Units	ng/L	ng/L	ng/L	ng/L
PFBA	1270	23.8	20.1	23500
PFPeA	< 19.9	48.5	39.5	9150
PFHxA	277	65.8	65.6	9050
PFHpA	148	37.2	33.2	2370
PFOA	603	40.5	37.6	9640
PFNA	< 12.1	< 1.36	< 1.36	<263
PFDA	< 12.1	< 1.07	< 1.07	<254
PFUnA	< 12.1	< 0.952	< 0.951	<251
PFDoA	< 12.1	< 1.14	< 1.14	<250
PFBS	199	628	615	3450
PFHxS	592	24.1	21	1360
PFOS	< 24.2	9.25	10	4780
PFOSA	< 12.1	1.14	1.06	<245

NOTE:

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CLIENT ID	SKB Rosemount Cell 2C - Leachate (DUPLICATE)	SKB Rosemount Leachate	SKB Rosemount Leachate (Duplicate)	Spruce Ridge Leachate
Date	2006	2008	2008	2008
AXYS ID	WG16480-103	L11561-13 (A)	WG26175-105 (DUP L11561-13)	L11701-14
Workgroup	WG16412/16480	WG26175	WG26175	WG26521
Sample Size	0.00102 L	0.0216 L	0.0234 L	0.0883 L
Units	ng/L	ng/L	ng/L	ng/L
PFBA	24600	15800	15500	1120
PFPeA	8760	3820	3660	66
PFHxA	9370	6650	6580	1560
PFHpA	2600	1840	1860	739
PFOA	8060	17600	16900	763
PFNA	<262	< 58.0	< 53.4	< 15.5
PFDA	<253	< 58.0	< 53.4	< 14.2
PFUnA	<250	< 58.0	< 53.4	< 14.2
PFDoA	<249	< 58.0	< 53.4	< 14.2
PFBS	3410	2640	2600	1090
PFHxS	1110	170	148	205
PFOS	2720	< 116	< 107	< 28.3
PFOSA	<244	< 58.0	< 53.4	< 14.2

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CLIENT ID	Spruce Ridge Phase IV - Leachate	Spruce Ridge - Mixed Leachate	Spruce Ridge - Gas Condensate	Spruce Ridge - Demo Leachate
Date	2006	2006	2006	2006
AXYS ID	L8782-25	L8782-26	L8782-27	L8782-28
Workgroup	WG18790	WG18790	WG19073	WG18790
Sample Size	0.201 L	0.261 L	0.250 L	0.501 L
Units	ng/L	ng/L	ng/L	ng/L
PFBA	39.8	21.1	12.6	39.4
PFPeA	92.6	34.2	25.9	532
PFHxA	1300	754	42.2	2350
PFHpA	876	435	19.1	587
PFOA	1280	2400	84.9	1060
PFNA	38.6	98.5	4.09	50.8
PFDA	< 7.99	33.9	13.5	4.5
PFUnA	< 7.10	< 5.46	2.27	< 2.85
PFDoA	< 8.47	< 6.52	2.99	< 3.40
PFBS	343	448	< 4.82	230
PFHxS	1880	1940	< 6.15	826
PFOS	280	732	27.9	613
PFOSA	< 6.86	30.3	288	4.59

NOTE:

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Solid Waste Perflourochemicals (PFCs) Evaluation
Leachate/Gas Condensate: Shipped to Waste Water Treatment Plants for Disposal
2006 and 2008 Sampling Events

CLIENT ID	Steele Co SLF - Phase III	Steele Co SLF - Phase IV	Steele Co SLF - Phase I,II	Steele Co SLF - Phase I,II (Duplicate)
Date	2006	2006	2006	2006
AXYS ID	L8782-18	L8782-19	L8782-17 (A)	WG18790-104 (DUP L8782-17)
Workgroup	WG18790	WG18790	WG18790	WG18790
Sample Size	0.499 L	0.508 L	0.501 L	0.251 L
Units	ng/L	ng/L	ng/L	ng/L
PFBA	14.6	14.8	3.8	4.18
PFPeA	31.6	24	14.1	15.2
PFHxA	364	327	47.5	50.6
PFHpA	197	189	33.9	33.8
PFOA	659	512	96.3	99.2
PFNA	13.5	51	2.27	< 2.71
PFDA	3.74	12.3	1.25	< 2.14
PFUnA	< 2.86	< 2.81	< 0.954	< 1.90
PFDoA	< 3.41	< 3.70	< 1.13	< 2.26
PFBS	83	45.4	15.8	14.1
PFHxS	854	687	26.6	22
PFOS	176	208	54.2	55.4
PFOSA	4.4	8.82	3.5	5.67

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Solid Waste Perflourochemicals (PFCs) Evaluation
Leachate/Gas Condensate: Shipped to Waste Water Treatment Plants for Disposal
2006 and 2008 Sampling Events

CLIENT ID	Steele Co SLF Phase 3-West Leachate Tank	Steele Co SLF MH-1A Phase 1 Leachate	Steele Co SLF Phase 4 Leachate	Steele Co SLF Phase 4 Leachate Dup
Date	2008	2008	2008	2008
AXYS ID	L11647-12	L11647-11	L11647-13	L11647-14
Workgroup	WG27030	WG26796	WG26796	WG26796
Sample Size	0.0981 L	0.215 L	0.0463 L	0.0721 L
Units	ng/L	ng/L	ng/L	ng/L
PFBA	401	111	433	348
PFPeA	127	32.7	270	240
PFHxA	449	65.2	877	846
PFHpA	170	59.9	676	660
PFOA	501	125	556	511
PFNA	< 18.9	< 5.80	< 31.2	18.9
PFDA	13.4	< 5.80	< 27.0	< 17.3
PFUnA	< 12.7	< 5.80	< 27.0	< 17.3
PFDoA	< 12.7	< 5.80	< 27.0	< 17.3
PFBS	167	69.8	345	321
PFHxS	375	31.3	198	163
PFOS	< 25.5	< 11.6	< 54.0	< 34.7
PFOSA	< 12.7	< 5.80	< 27.0	< 17.3

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Leachate/Gas Condensate: Shipped to Waste Water Treatment Plants for Disposal
2006 and 2008 Sampling Events

CLIENT ID	Veolia Rolling Hills Leachate	Veolia Rolling Hills Leachate (Duplicate)	Voyageurs Landfill - Leachate	Voyageurs Industrial Leachate
Date	2008	2008	2006	2008
AXYS ID	L11647-23 (A)	WG26442-103 (DUP L11647-23)	L8792-4	L11561-25
Workgroup	WG26442	WG26442	WG18790	WG26307
Sample Size	0.0435 L	0.0469 L	0.516 L	0.0947 L
Units	ng/L	ng/L	ng/L	ng/L
PFBA	4210	4010	23	NQ*
PFPeA	392	328	61.1	74.7
PFHxA	1110	1100	577	566
PFHpA	571	547	243	408
PFOA	1150	1210	623	376
PFNA	< 28.7	< 26.6	62.3	37.6
PFDA	< 28.7	< 26.6	< 6.23	< 13.2
PFUnA	< 28.7	< 26.6	< 5.53	< 13.2
PFDoA	< 28.7	< 26.6	< 6.60	< 13.2
PFBS	15100	14400	64.6	317
PFHxS	248	231	118	58.2
PFOS	< 57.5	< 53.3	45.8	< 26.4
PFOSA	< 28.7	< 26.6	< 5.35	< 13.2

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