Solid Waste Perflourochemicals (PFCs) Evaluation
Landfill Gas Results, 2007
Veolia and Pine Bend Landfill

	PFC-LIN-292SA-D,,				102,,SPM	103,,SPM	104,,SPM	BLK
	Opening		Closing		Flat filter	1/2 Puff	20g XAD	101
	%Rec	%Rec	%Rec	%Rec	%Rec	%Rec	%Rec	ng
PFBA	108.3	93.2	100.0	110.5	105.9	113.0	96.6	ND 0.5
PFPeA	93.9	104.9	107.2	95.3	104.5	102.0	93.6	ND 0.5
PFHxA	87.7	100.5	95.6	93.0	111.5	93.0	88.5	ND 0.5
PFHpA	98.7	94.1	103.6	95.6	114.8	71.6	81.8	ND 0.5
PFOA	82.1	83.1	91.6	92.5	90.5	85.2	70.2	ND 0.5
PFNA	96.3	96.7	101.5	91.0	81.4	91.0	71.3	ND 0.5
PFDA	91.7	92.0	90.4	100.1	89.8	93.4	83.1	ND 0.5
PFUnA	98.5	89.0	94.5	109.5	97.7	85.7	70.3	ND 0.5
PFDoA	90.0	101.5	98.3	96.2	109.9	108.8	88.2	ND 0.5
PFBS(80)	72.1	96.6	91.3	84.8	129.6	116.9	348.6	ND 1.000
PFHxS(80)	68.7	84.9	96.1	96.0	141.0	118.3	189.1	ND 1.000
PFOS(80)	75.1	95.0	97.9	93.2	106.0	107.2	110.0	ND 1.000
PFOSA	70.9	88.7	105.4	90.0	114.2	106.1	127.0	ND 0.5

NOTES:

1. Original lab data reported in nanograms was converted to picograms per meter cubed by multiplying each value by 1000 and dividing by the sample volume in meters cubed.

2. Sample Volumes:
    Pine Bend 1: 206.049 m3
    Pine Bend 2: 196.85 m3
    Veolia 1: 206.435 m3
    Veolia 2: 167.446 m3

3. Detection limits modified to 0.0 where ND so that calculations could be made for "Total" on the pg/m3 sheet.

4. Due to apparent breakthrough of contaminant in samples "Total" results must be interpreted as "greater than" the "Total" value.

5. To get a total concentration of any one parameter you must add the value of the Filter, PUF Front, XAD, and PUF Back.

6. When comparing results of PUF Front to PUF Back, when values are equivalent to each other this suggests a significant amount of the contaminant may have broken through. When PUF Back is significantly less than PUF Front, as in PFOA result for Veolia 1, than this suggests that the contaminant may not have broken through and was captured by the sampling device. In looking at all the results, the PUF Back values for most of the results suggest a good deal of break through may have occurred.

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c-pfc4-05

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	FLD BLK	FLD BLK	FLD BLK	FLD BLK	Veolia 2				
	Filter L10366-1,,	XAD/PUF (F+B) L10366-21,,	Filter L10366-2,,	XAD/PUF (F+B) L10366-22,,	Filter L10366-4,,	PUF Front L10366-15,,	XAD L10366-26,,	PUF Back L10366-16,,	Total
	ng	ng	ng	ng	pg/m3	pg/m3	pg/m3	pg/m3	pg/m3
PFBA	ND 0.502	1.03	ND 0.5	ND 0.5	0.0	25.9	1281.0	11.8	1318.7
PFPeA	ND 0.5	ND 0.5	ND 0.5	ND 0.5	4.3	13.0	598.9	9.0	621.0
PFHxA	ND 0.5	ND 0.5	ND 0.5	ND 0.5	35.6	23.2	833.4	12.0	868.6
PFHpA	ND 0.5	ND 0.5	ND 0.5	ND 1.467	31.3	9.8	507.6	3.0	520.4
PFOA	ND 0.5	ND 1.425	ND 0.5	ND 1.181	316.4	52.6	2103.6	20.4	2176.6
PFNA	ND 0.5	ND 0.5	ND 0.5	ND 0.5	90.2	0.0	141.9	3.1	145.0
PFDA	ND 0.5	ND 0.5	ND 0.5	ND 0.5	212.0	0.0	233.4	0.0	233.4
PFUnA	ND 0.5	ND 0.5	ND 0.5	ND 0.5	13.6	0.0	57.1	0.0	57.1
PFDoA	ND 0.5	ND 0.5	ND 0.5	ND 0.5	23.3	0.0	114.2	0.0	114.2
PFBS(80)	ND 1.000	ND 1.147	ND 1.000	ND 1.000	0.0	0.0	0.0	0.0	0.0
PFHxS(80)	ND 1.000	ND 1.000	ND 1.000	ND 1.000	20.4	0.0	0.0	0.0	0.0
PFOS(80)	ND 1.000	ND 1.000	ND 1.000	ND 1.000	111.6	0.0	133.1	0.0	133.1
PFOSA	ND 0.5	ND 0.5	ND 0.5	ND 0.5	29.3	3049.3	315.1	0.0	3364.4

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| | Veolia 1 | | | | | Pine Bend 2 | | | | OLR |
	Filter	PUF Front	XAD	PUF Back	Total	Filter	PUF Front	XAD	PUF Back	Total
	L10366-3,,	L10366-13,,	L10366-25,,	L10366-14,,		L10366-6,,	L10366-19,,	L10366-28,,	L10366-20,,	
	pg/m3	pg/m3	pg/m3	pg/m3	pg/m3	pg/m3	pg/m3	pg/m3	pg/m3	pg/m3
PFBA	0.0	0.0	307.6	6.2	313.7	25.4	88.8	3683.9	40.1	3838.1
PFPeA	0.0	6.4	135.7	2.5	144.7	38.5	38.3	2214.2	39.0	2330.0
PFHxA	2.8	30.6	286.0	4.3	323.7	315.5	68.4	2478.1	55.2	2917.2
PFHpA	3.7	17.4	155.4	0.0	176.5	46.5	27.0	1361.0	25.2	1459.8
PFOA	48.3	91.6	641.1	11.5	792.6	469.4	151.3	4842.9	165.6	5629.3
PFNA	37.1	9.9	52.3	0.0	99.3	23.5	8.5	458.6	6.3	496.9
PFDA	115.1	3.6	154.9	0.0	273.6	82.1	8.8	532.0	3.1	626.0
PFUnA	7.7	0.0	28.9	0.0	36.6	7.0	0.0	148.8	0.0	155.9
PFDoA	15.3	0.0	69.7	0.0	85.0	8.9	2.9	366.6	0.0	378.3
PFBS(80)	0.0	0.0	0.0	0.0	0.0	14.6	0.0	0.0	0.0	14.6
PFHxS(80)	17.4	13.6	0.0	0.0	31.0	7.9	0.0	0.0	0.0	7.9
PFOS(80)	69.6	0.0	69.5	0.0	139.2	0.0	0.0	44.8	0.0	44.8
PFOSA	0.0	1234.5	381.4	31.4	1647.2	15.3	324.4	35.6	0.0	375.3

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					OLR
	Pine Bend 1				
	Filter	**PUF Front**	**XAD**	**PUF Back**	**Total**
	L10366-5,,	L10366-17,,	L10366-27,,	L10366-18,,	
	pg/m3	pg/m3	pg/m3	pg/m3	pg/m3
PFBA	26.1	133.5	3642.0	59.7	3861.3
PFPeA	35.0	63.9	2298.1	72.8	2469.7
PFHxA	265.9	104.6	2419.2	72.1	2861.8
PFHpA	41.4	45.2	1463.0	40.5	1590.1
PFOA	388.8	208.6	4977.4	200.3	5775.1
PFNA	19.7	12.1	477.4	8.9	518.1
PFDA	58.0	21.4	627.0	6.1	712.4
PFUnA	5.7	3.9	144.4	0.0	153.9
PFDoA	5.6	13.3	358.2	4.6	381.7
PFBS(80)	10.6	0.0	0.0	0.0	10.6
PFHxS(80)	0.0	0.0	0.0	0.0	0.0
PFOS(80)	0.0	0.0	33.0	0.0	33.0
PFOSA	16.7	209.4	63.7	0.0	289.9

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