

Illinois EPA/Clinton Landfill 3 Groundwater Results

25 April 2017

Parameters	Interwell L. Radnor	G40M				
		IEPA Prim.	IEPA Dupe	IEPA Prim./ Dupe RPD	CLI	RPD
Ammonia, dissolved (mg/L)	24	11.2	11.3	0.89%	10	11.76%
Arsenic, dissolved (µg/L)	346	9.78	10.1	3.22%	11	-10.12%
Boron, dissolved (µg/L)	622	312	321	2.84%	360	-12.86%
Cadmium, dissolved (µg/L)	1	<3	<3	N/C	<1	N/C
Chloride, dissolved (mg/L)	51.8	6.97	6.96	0.14%	9.2	-27.65%
Chromium, dissolved (µg/L)	4.6	<5	<5	N/C	<4	N/C
Cyanide, total (mg/L)	0.005	<0.005	<0.005	N/C	<0.005	N/C
Lead, dissolved (µg/L)	1	<5	<5	N/C	<1	N/C
Magnesium, dissolved (mg/L)	82.2	48.7	49.5	1.63%	46	6.52%
Mercury, dissolved (µg/L)	0.2	<0.06	<0.06	N/C	<0.2	N/C
Nitrate, dissolved (mg/L)*	0.14	<0.1	<0.1	N/C	<0.03	N/C
pH	5.79-7.97	7.0	7.0	0.00%	6.86	2.02%
Spec. Cond. (µmhos/cm)	1457	1019	1020	0.10%	1017	0.25%
Sulfate, dissolved (mg/L)	65	<10	<10	N/C	<1	N/C
Total Dissolved Solids (mg/L)	870	564	552	2.15%	480	15.03%
Zinc, dissolved (µg/L)	22	<25	<25	N/C	<6	N/C

11.76% 7.33%
10.12% 1.72%
12.86% 6.77%
27.65%
6.52% 2.28%
2.02% 4.26%
0.25% 1.18%
15.03% 12.35%

Ave RPD, IEPA Prim./Dupe: 1.37%

Parameters	Interwell Org Soil	G07D			G26D		
		IEPA	CLI	RPD	IEPA	CLI	RPD
Ammonia, dissolved (mg/L)	25	4.95	4.6	7.33%	5.8	5.4	7.14%
Arsenic, dissolved (µg/L)	200	70.2	69	1.72%	36.9	40	-8.06%
Boron, dissolved (µg/L)	668	271	290	-6.77%	523	480	8.57%
Cadmium, dissolved (µg/L)	1	<3	<1	N/C	<3	<1	N/C
Chloride, dissolved (mg/L)	33	<1	<5	N/C	1.87	<5	N/C
Chromium, dissolved (µg/L)	15	<5	<4	N/C	<5	<4	N/C
Cyanide, total (mg/L)	0.005	<0.005	<0.005	N/C	<0.005	<0.005	N/C
Lead, dissolved (µg/L)	2.5	<5	<1	N/C	<5	<1	N/C
Magnesium, dissolved (mg/L)	73	39.1	40	-2.28%	55.7	56	-0.54%
Mercury, dissolved (µg/L)	0.20	<0.06	<0.2	N/C	<0.06	<0.2	N/C
Nitrate, dissolved (mg/L)*	1.5	<0.1	<0.03	N/C	<0.1	<0.03	N/C
pH	5.98-8.18	7.2	6.9	4.26%	7.3	7.13	2.36%
Spec. Cond. (µmhos/cm)	1383	766	757	1.18%	980	955	2.58%
Sulfate, dissolved (mg/L)	76	<10	<1	N/C	<10	<1	N/C
Total Dissolved Solids (mg/L)	787	430	380	12.35%	556	470	16.76%
Zinc, dissolved (µg/L)	16	<25	<6	N/C	<25	<6	N/C

Parameters	Interwell Rox-Rob	Intrawell G09R	G09R		
			IEPA	CLI	RPD
Ammonia, dissolved (mg/L)	30	—	5.51	5.2	5.79%
Arsenic, dissolved (µg/L)	11	74.29	16.6	18	-8.09%
Boron, dissolved (µg/L)	666	—	287	300	-4.43%
Cadmium, dissolved (µg/L)	5.2	—	<3	<1	N/C
Chloride, dissolved (mg/L)	71	—	3.85	6.3	-48.28%
Chromium, dissolved (µg/L)	4.8	—	<5	<4	N/C
Cyanide, total (mg/L)	0.005	—	<0.005	<0.005	N/C
Lead, dissolved (µg/L)	3.6	—	<5	<1	N/C
Magnesium, dissolved (mg/L)	114	—	68.4	63	8.22%
Mercury, dissolved (µg/L)	0.2	—	<0.06	<0.2	N/C
Nitrate, dissolved (mg/L)*	0.06	—	0.132	0.04	N/C
pH	6.07-8.22	—	6.9	6.67	3.39%
Spec. Cond. (µmhos/cm)	1543	—	1216	1209	0.58%
Sulfate, dissolved (mg/L)	286	—	21.6	25	-14.59%
Total Dissolved Solids (mg/L)	1064	—	700	660	5.88%
Zinc, dissolved (µg/L)	20	—	<25	<6	N/C

Illinois EPA/PDC Labs Comparison

total RPDs	31
Abs RPDs ≤10%	22
Abs RPDs ≤20%	28
Abs RPDs > 25%	2
RPDs > 0	20
RPDs < 0	11
RPDs = 0	0
Ave Abs RPD	8.43%
Ave RPD w/negatives	-0.64%

N/C = Not calculated

IEPA Prim. = IEPA primary sample of that well

Dupe = IEPA field duplicate of that well

RPD = Relative Percent Difference

*IEPA result is for nitrate + nitrite, so not necessarily comparable to facility result or permitted standards

<# = Below indicated reporting limit

Italic result = exceeds interwell (and intrawell, if applicable)