

## Illinois EPA/Clinton Landfill 3 Groundwater Results

27 July 2016

Parameters	Interwell L. Radnor	Intrawell G16M	G05M					G16M			G39M		
			IEPA Prim.	IEPA Dupe	IEPA Prim./ Dupe RPD	CLI	RPD	IEPA	CLI	RPD	IEPA	CLI	RPD
Ammonia, dissolved (mg/L)	24	—	14.2	14.3	0.70%	13	9.17%	<b>27.8</b>	<b>25.0</b>	10.61%	15.9	15	5.83%
Arsenic, dissolved (µg/L)	273.5	768.5	75.6	70.4	7.12%	87	-17.50%	359	420	-15.66%	7.61	9.1	-17.83%
Boron, dissolved (µg/L)	622	1287.5	404	412	1.96%	610	-39.69%	668	630	5.86%	476	450	5.62%
Cadmium, dissolved (µg/L)	1	—	<3	<3	N/C	<1	N/C	<3	<1	N/C	<3	<1	N/C
Chloride, dissolved (mg/L)	51.8	—	<1	<1	N/C	1.8	N/C	4.01	6	-39.76%	3.55	4.9	-31.95%
Chromium, dissolved (µg/L)	4.6	—	<5	<5	N/C	<4	N/C	<5	<4	N/C	<5	<4	N/C
Cyanide, total (mg/L)	0.005	—	<0.005	<0.005	N/C	<0.005	N/C	<0.005	<b>0.017</b>	N/C	<0.005	<0.005	N/C
Lead, dissolved (µg/L)	1	—	<5	<5	N/C	<1	N/C	<5	<1	N/C	<5	<1	N/C
Magnesium, dissolved (mg/L)	82.2	—	43.4	43.7	0.69%	43	1.27%	59.3	60	-1.17%	49.7	50	-0.60%
Mercury, dissolved (µg/L)	0.2	—	<0.06	<0.06	N/C	<0.2	N/C	<0.06	<0.2	N/C	<0.06	<0.2	N/C
Nitrate, dissolved (mg/L)*	0.14	—	<0.1	<0.1	N/C	<0.02	N/C	0.112	<0.02	N/C	<0.1	<0.02	N/C
pH	5.79-7.97	—	7.0	7.1	1.42%	6.77	4.05%	7.0	7.08	-1.14%	7.0	7.0	0.00%
Spec. Cond. (µmhos/cm)	1457	—	932	934	0.21%	913	2.17%	1285	1255	2.36%	1136	1132	0.35%
Sulfate, dissolved (mg/L)	65	—	<10	<10	N/C	<1	N/C	10.1	12	-17.19%	<10	<1	N/C
Total Dissolved Solids (mg/L)	870	—	510	522	2.33%	400	25.33%	704	540	26.37%	650	500	26.09%
Zinc, dissolved (µg/L)	22	—	<25	<25	N/C	<6	N/C	<25	<6	N/C	<25	<6	N/C

Ave RPD, IEPA Prim./Dupe: 2.06%

Parameters	Interwell Org Soil	Intrawell G09D	G09D		
			IEPA	CLI	RPD
Ammonia, dissolved (mg/L)	25	—	11.1	9.7	13.46%
Arsenic, dissolved (µg/L)	200	—	<0.5	<1	N/C
Boron, dissolved (µg/L)	668	—	373	330	12.23%
Cadmium, dissolved (µg/L)	1	—	<3	<1	N/C
Chloride, dissolved (mg/L)	33	—	<b>37.4</b>	<b>35</b>	6.63%
Chromium, dissolved (µg/L)	15	—	<5	<4	N/C
Cyanide, total (mg/L)	0.005	—	<0.005	<0.005	N/C
Lead, dissolved (µg/L)	2.5	—	<5	<1	N/C
Magnesium, dissolved (mg/L)	73	—	<b>110</b>	<b>110</b>	0.00%
Mercury, dissolved (µg/L)	0.2	—	<0.06	<0.2	N/C
Nitrate, dissolved (mg/L)*	1.5	—	<0.1	<0.02	N/C
pH	5.98-8.18	—	7.4	7.24	2.19%
Spec. Cond. (µmhos/cm)	1383	—	<b>2,188</b>	<b>2154</b>	1.57%
Sulfate, dissolved (mg/L)	76	351.5	<b>740</b>	<b>760</b>	-2.67%
Total Dissolved Solids (mg/L)	787	—	<b>1,820</b>	<b>1400</b>	26.09%
Zinc, dissolved (µg/L)	16	—	<25	<6	N/C

### Illinois EPA/PDC Labs Comparison

total RPDs	32
Abs RPDs ≤10%	18
Abs RPDs ≤20%	25
Abs RPDs > 25%	7
RPDs > 0	19
RPDs < 0	11
RPDs = 0	2
Ave Abs RPD	11.64%
Ave RPD w/negatives	0.06%

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

**Bold italic result** = exceeds interwell (and intrawell, if applicable)