

Illinois EPA/McLean County Landfill #2 Groundwater Inorganic Results

23 May 2017

Parameters	Interwell	G116				G212			
		Intrawell	IEPA	MCL	RPD	Intrawell	IEPA	MCL	RPD
Ammonia, dissolved (mg/L)	8.17	2.82	0.66	0.47	33.63%	0.79	0.39	0.30	N/C
Arsenic, dissolved (µg/L)	90.8	5	<0.5	<5	N/C	5	<0.5	<5	N/C
Boron, dissolved (µg/L)	785.4	222.7	160	143	11.22%	211.1	182	162	11.63%
Cadmium, dissolved (µg/L)	1	4	<3	<1	N/C	4	<3	<1	N/C
Chloride, dissolved (mg/L)	30	244.8	202	201	0.50%	295.7	171	176	-2.88%
Chromium, dissolved (µg/L)	1	1	<5	<1	N/C	1	<5	<1	N/C
Cyanide, total (mg/L)	0.005	0.009	<0.005	<0.005	N/C	0.009	0.006	<0.005	N/C
Lead, dissolved (µg/L)	2	5	<5	<2	N/C	5	<5	<2	N/C
Magnesium, dissolved (mg/L)	60.4	88.6	63.3	53.5	16.78%	84.2	54.5	46.1	16.70%
Mercury, dissolved (µg/L)	0.5	0.5	<0.06	<0.5	N/C	0.5	<0.06	<0.5	N/C
Nitrate, dissolved (mg/L)*	0.1	0.14	<0.1	<0.10	N/C	0.1	<0.1	<0.10	N/C
pH	6.48-9.26	6.4-7.4	7.0	6.74	3.78%	5.68-8.13	7.1	6.77	4.76%
Phenols	55	20	<10	<10	N/C	20	<10	<10	N/C
Spec. Cond. (µmhos/cm)	1243.7	1748	1,609	1502	6.88%	2920.3	1473	1386	6.09%
Sulfate, dissolved (mg/L)	37	177.5	139	152	-8.93%	176.5	135	157	-15.07%
Total Dissolved Solids (mg/L)	576.2	1332.6	970	954	1.66%	991	900	890	1.12%
Zinc, dissolved (µg/L)	5	60.2	<25	<5	N/C	20	<25	<5	N/C

Parameters	Interwell	G222				G216					
		Intrawell	IEPA	MCL	RPD	Intrawell	IEPA 1°	IEPA Dupe	IEPA 1°/ Dupe RPD	MCL	RPD
Ammonia, dissolved (mg/L)	8.17	7.98	3.86	3.23	17.77%	3.94	2.75	2.92	6.00%	2.35	18.71%
Arsenic, dissolved (µg/L)	90.8	119.8	61.9	58	6.51%	5	<0.5	<0.5	N/C	<5	N/C
Boron, dissolved (µg/L)	785.4	712	499	434	13.93%	282.2	208	211	1.43%	175	17.95%
Cadmium, dissolved (µg/L)	1	1	<3	<1	N/C	4	<3	<3	N/C	<1	N/C
Chloride, dissolved (mg/L)	30	30	2.91	5	-52.84%	21	29.8	29.6	0.67%	30	-1.01%
Chromium, dissolved (µg/L)	1	1	<5	<1	N/C	1	<5	<5	N/C	<1	N/C
Cyanide, total (mg/L)	0.005	0.005	<0.005	<0.005	N/C	0.009	<0.005	<0.005	N/C	<0.005	N/C
Lead, dissolved (µg/L)	2	2	<5	<2	N/C	5	<5	<5	N/C	<2	N/C
Magnesium, dissolved (mg/L)	60.4	64.8	44.5	36.2	20.57%	77.4	50.2	49.8	0.80%	40.7	20.51%
Mercury, dissolved (µg/L)	0.5	0.5	<0.06	<0.5	N/C	0.5	<0.06	<0.06	N/C	<0.5	N/C
Nitrate, dissolved (mg/L)*	0.1	0.1	<0.1	<0.10	N/C	0.8	<0.1	<0.1	N/C	<0.10	N/C
pH	6.48-9.26	3.32-12.1	7.6	7.25	4.71%	1.82-15.2	7.5	7.4	1.34%	6.9	7.67%
Phenols	55	10	<10	<10	N/C	20	<10	<10	N/C	<10	N/C
Spec. Cond. (µmhos/cm)	1243.7	1630.4	786	764	2.84%	1067	864	872	0.92%	833	4.12%
Sulfate, dissolved (mg/L)	37	73.4	<10	<10	N/C	53.49	<10	<10	N/C	<10	N/C
Total Dissolved Solids (mg/L)	576.2	654.9	456	452	0.88%	585	472	472	0.00%	478	-1.26%
Zinc, dissolved (µg/L)	5	5	<25	<5	N/C	273.3	<25	<25	N/C	<5	N/C

Ave RPD, IEPA 1°/Dupe: 1.60%

N/C = Not calculated

N/S = Not sampled

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)

Illinois EPA/First Environmental Labs Comparison

total RPDs	30
Abs RPDs ≤10%	17
Abs RPDs ≤20%	26
Abs RPDs > 25%	2
RPDs >0	24