

Illinois EPA/McLean County Landfill #2 Groundwater Inorganic Results

12 May 2016

Parameters	Interwell	G219				G220			
		Intrawell	IEPA	MCL	RPD	Intrawell	IEPA	MCL	RPD
Ammonia, dissolved (mg/L)	8.17	3.63	2.75	3.83	-32.83%	9.51	3.26	4.17	-24.50%
Arsenic, dissolved (µg/L)	90.8	32	5.50	<5	N/C	9	25.9	25	3.54%
Boron, dissolved (µg/L)	785.4	293.7	217	199	8.65%	524.1	403	358	11.83%
Cadmium, dissolved (µg/L)	1	1	<3	<1	N/C	1	<3	<1	N/C
Chloride, dissolved (mg/L)	30	20	109	107	1.85%	60.1	3.19	8	-85.97%
Chromium, dissolved (µg/L)	1	1	<5	<1	N/C	1	<5	<1	N/C
Cyanide, total (mg/L)	0.005	0.005	<0.005	<0.005	N/C	0.005	<0.005	<0.005	N/C
Lead, dissolved (µg/L)	2	2	<5	2	N/C	2	<5	<2	N/C
Magnesium, dissolved (mg/L)	60.4	190.3	112	105	6.45%	62.8	40.3	37.2	8.00%
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	0.1	0.133	<0.10	N/C	0.22	<0.1	<0.10	N/C
pH	6.48-9.26	4.43-11.53	6.5	6.55	-0.77%	5.83-10.37	7.7	7.64	0.78%
Phenols	55	6	15.3	14	8.87%	6	<10	<10	N/C
Spec. Cond. (µmhos/cm)	1243.7	2610	2,001	1956	2.27%	1728	849	813	4.33%
Sulfate, dissolved (mg/L)	37	167.2	116	138	-17.32%	100.6	<10	<10	N/C
Total Dissolved Solids (mg/L)	576.2	1528	1,350	1190	12.60%	624.7	488	403	19.08%
Zinc, dissolved (µg/L)	5	5	<25	<5	N/C	5	<25	<5	N/C

Parameters	Interwell	G222				R223					
		Intrawell	IEPA	MCL	RPD	Intrawell	IEPA 1°	IEPA Dupe	IEPA 1°/ Dupe RPD	MCL	RPD
Ammonia, dissolved (mg/L)	8.17	7.98	3.03	4.42	-37.32%	12.1	4.65	4.59	1.30%	6.44	-32.91%
Arsenic, dissolved (µg/L)	90.8	119.8	53.6	56	-4.38%	28.8	29.2	29.7	1.70%	31	-5.13%
Boron, dissolved (µg/L)	785.4	712	479	448	6.69%	581.6	388	379	2.35%	355	7.72%
Cadmium, dissolved (µg/L)	1	1	<3	<1	N/C	1	<3	<3	N/C	<1	N/C
Chloride, dissolved (mg/L)	30	30	10.7	14	-26.72%	50	1.84	1.85	0.54%	7	-116.56%
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	0.005	<0.005	<0.005	N/C	<0.005	N/C
Lead, dissolved (µg/L)	2	2	<5	<2	N/C	2	<5	<5	N/C	<2	N/C
Magnesium, dissolved (mg/L)	60.4	64.8	41.8	39.7	5.15%	46.8	48	47.6	0.84%	44.4	7.38%
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	0.1	<0.1	0.116	N/C	<0.10	N/C
pH	6.48-9.26	3.32-12.1	7.6	7.58	0.26%	4.94-10.63	7.4	7.4	0.00%	7.5	-1.34%
Phenols	55	10	<10	<10	N/C	34.9	<10	<10	N/C	<10	N/C
Spec. Cond. (µmhos/cm)	1243.7	1630.4	822	804	2.21%	1724	1019	1018	0.10%	1002	1.63%
Sulfate, dissolved (mg/L)	37	73.4	<10	<10	N/C	119.9	<10	<10	N/C	21	N/C
Total Dissolved Solids (mg/L)	576.2	654.9	456	422	7.74%	676.3	602	604	0.33%	557	7.93%
Zinc, dissolved (µg/L)	5	5	<25	<5	N/C	5	<25	<25	N/C	<5	N/C

Ave RPD, IEPA 1°/Dupe: 0.89%

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, Inorganic

total RPDs	33
Abs RPDs ≤10%	16
Abs RPDs ≤20%	20
Abs RPDs > 25%	4

Illinois EPA/First Environmental Labs Comparison, Inorganic

total RPDs	3
Abs RPDs ≤10%	2
Abs RPDs ≤20%	3
Abs RPDs > 25%	0