

Illinois EPA/McLean County Landfill #2 Groundwater Inorganic Results

7 November 2018

Parameters	Interwell	G115				G215			
		Intrawell	IEPA	MCL	RPD	Intrawell	IEPA	MCL	RPD
Ammonia, dissolved (mg/L)	8.17	2.01	<0.10	0.10	N/C	0.5	0.46	0.43	N/C
Arsenic, dissolved (µg/L)	90.8	5	0.59	<5	N/C	5	<0.50	<5	N/C
Boron, dissolved (µg/L)	785.4	140	167	184	-9.69%	90	52.3	80	-41.87%
Cadmium, dissolved (µg/L)	1	5	<3	<1	N/C	4	<3	<1	N/C
Chloride, dissolved (mg/L)	30	266.8	94.5	96	-1.57%	206.2	128	133	-3.83%
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	<0.005	<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	88.7	47.2	44.8	5.22%	87.6	52.1	51.1	1.94%
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	<0.100	<0.10	N/C	0.1	<0.100	<0.10	N/C
pH	6.48-9.26	7.4-7.7	7.2	6.92	3.97%	6.2-8.3	7.1	7.06	0.56%
Phenols	55	20	<10	<10	N/C	20	<10	<10	N/C
Spec. Cond. (µmhos/cm)	1243.7	2692.3	1,515	1103	31.47%	2220.6	1386	1079	24.91%
Sulfate, dissolved (mg/L)	37	260.8	232	261	-11.76%	165.9	101	116	-13.82%
Total Dissolved Solids (mg/L)	576.2	1009.3	1,000	929	7.36%	993.1	802	713	11.75%
Zinc, dissolved (µg/L)	5	20	<25	<5	N/C	20	<25	<5	N/C

Parameters	Interwell	G222				G110					
		Intrawell	IEPA	MCL	RPD	Intrawell	IEPA 1°	IEPA Dupe	IEPA 1°/ Dupe RPD	MCL	RPD
Ammonia, dissolved (mg/L)	8.17	7.98	4.22	3.90	7.88%	4.22	3.37	3.27	3.01%	2.83	15.93%
Arsenic, dissolved (µg/L)	90.8	119.8	58.2	59	-1.37%	5	1.14	1.15	N/C	<5	N/C
Boron, dissolved (µg/L)	785.4	712	480	476	0.84%	276.4	194	205	5.51%	210	-5.13%
Cadmium, dissolved (µg/L)	1	1	<3	<1	N/C	4	<3	<3	N/C	<1	N/C
Chloride, dissolved (mg/L)	30	30	2.13	<5	N/C	15.7	6.10	6.55	7.11%	7	-10.13%
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	42.3	40.7	3.86%	69.4	42.8	42.1	1.65%	40.6	4.46%
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	<0.100	<0.10	N/C	0.1	<0.100	<0.100	N/C	<0.10	N/C
pH	6.48-9.26	3.32-12.1	7.5	7.19	4.22%	7.4-8.0	7.4	7.4	0.00%	7.16	3.30%
Phenols	55	10	<10	<10	N/C	20	<10	<10	N/C	<10	N/C
Spec. Cond. (µmhos/cm)	1243.7	1630.4	846	763	10.32%	1197	842	843	0.12%	643	26.86%
Sulfate, dissolved (mg/L)	37	73.4	<10	<10	N/C	46.8	<10	<10	N/C	<10	N/C
Total Dissolved Solids (mg/L)	576.2	654.9	466	426	8.97%	455.4	430	428	0.47%	421	1.88%
Zinc, dissolved (µg/L)	5	5	<25	<5	N/C	20	<25	<25	N/C	<5	N/C

Ave RPD, IEPA 1°/Dupe: 2.55%

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	28
Abs RPDs ≤10%	18
Abs RPDs ≤20%	24
Abs RPDs > 25%	3
RPDs >0	19