

Illinois EPA/McLean County Landfill #2 Groundwater Inorganic Results

17 October 2016

Parameters	Interwell	G210				G214			
		Intrawell	IEPA	MCL	RPD	Intrawell	IEPA	MCL	RPD
Ammonia, dissolved (mg/L)	8.17	0.5	0.20	0.21	-4.88%	0.5	<0.1	<0.10	N/C
Arsenic, dissolved (µg/L)	90.8	5	0.64	<5	N/C	5	<0.5	<5	N/C
Boron, dissolved (µg/L)	785.4	130	135	129	4.55%	148.6	122	116	5.04%
Cadmium, dissolved (µg/L)	1	4	<3	<1	N/C	4	<3	<1	N/C
Chloride, dissolved (mg/L)	30	250.46	151	149	1.33%	176.4	123	120	2.47%
Chromium, dissolved (µg/L)	1	1	<5	<1	N/C	1	<5	<1	N/C
Cyanide, total (mg/L)	0.005	9	<0.005	<0.005	N/C	9	<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	80.6	49.8	49.3	1.01%	164	61.2	58.8	4.00%
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	<0.1	<0.10	N/C	8.7	<0.1	<0.10	N/C
pH	6.48-9.26	7.2-8.2	7.1	6.48	9.13%	5.31-8.33	7.0	6.68	4.68%
Phenols	55	20	<10	<10	N/C	20	<10	<10	N/C
Spec. Cond. (µmhos/cm)	1243.7	1709	1,353	1246	8.23%	1590	1468	1329	9.94%
Sulfate, dissolved (mg/L)	37	183.6	116	117	-0.86%	1270.2	233	260	-10.95%
Total Dissolved Solids (mg/L)	576.2	969.8	788	837	-6.03%	2089.8	1020	946	7.53%
Zinc, dissolved (µg/L)	5	20	<25	<5	N/C	138.5	77.1	68	12.54%

Parameters	Interwell	G222				G211					
		Intrawell	IEPA	MCL	RPD	Intrawell	IEPA 1°	IEPA Dupe	IEPA 1°/ Dupe RPD	MCL	RPD
Ammonia, dissolved (mg/L)	8.17	7.98	4.07	5.71	-33.54%	0.9	0.31	0.32	3.17%	0.29	8.26%
Arsenic, dissolved (µg/L)	90.8	119.8	60.4	22	93.20%	5	<0.5	<0.5	N/C	<5	N/C
Boron, dissolved (µg/L)	785.4	712	498	369	29.76%	302.9	205	205	0.00%	203	0.98%
Cadmium, dissolved (µg/L)	1	1	<3	<1	N/C	4	<3	<3	N/C	<1	N/C
Chloride, dissolved (mg/L)	30	30	1.43	5	-111.04%	198.2	196	196	0.00%	197	-0.51%
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	9	<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	42.1	46.5	-9.93%	86.2	53.5	54.7	2.22%	52.9	2.24%
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	0.102	<0.1	N/C	<0.10	N/C
pH	6.48-9.26	3.32-12.1	7.7	7.64	0.78%	6.9-7.8	7.2	7.1	1.40%	6.97	2.55%
Phenols	55	10	<10	<10	N/C	28	<10	<10	N/C	<10	N/C
Spec. Cond. (µmhos/cm)	1243.7	1630.4	794	728	8.67%	1507	1553	1540	0.84%	1410	9.23%
Sulfate, dissolved (mg/L)	37	73.4	<10	11	N/C	277.5	161	163	1.23%	161	0.62%
Total Dissolved Solids (mg/L)	576.2	654.9	416	548	-27.39%	1531.9	950	958	0.84%	891	6.83%
Zinc, dissolved (µg/L)	5	5	<25	<5	N/C	20	<25	<25	N/C	<5	N/C

Ave RPD, IEPA 1°/Dupe: 1.21%

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	32
Abs RPDs ≤10%	25
Abs RPDs ≤20%	26
Abs RPDs > 25%	5