

# Illinois EPA/Clinton Landfill 3 Groundwater Results

21 April 2016

Parameters	Interwell L. Radnor	G04M			G48M				
		IEPA	CLI	RPD	IEPA 1°	IEPA Dupe	IEPA 1°/ Dupe RPD	CLI	RPD
Ammonia, dissolved (mg/L)	24	9.81	11	-11.44%	7.96	7.88	1.01%	9.2	-14.95%
Arsenic, dissolved (µg/L)	273.5	62.6	63	-0.64%	8.06	9.02	11.24%	7.9	7.79%
Boron, dissolved (µg/L)	622	386	360	6.97%	260	258	0.77%	260	-0.39%
Cadmium, dissolved (µg/L)	1	<3	<1	N/C	<3	<3	N/C	<1	N/C
Chloride, dissolved (mg/L)	51.8	<1	1.85	N/C	4.82	4.85	0.62%	6.3	-26.31%
Chromium, dissolved (µg/L)	4.6	<5	<4	N/C	<5	<5	N/C	<4	N/C
Cyanide, total (mg/L)	0.005	<0.005	<0.005	N/C	<0.005	<0.005	N/C	<0.005	N/C
Lead, dissolved (µg/L)	1	<5	<1	N/C	<5	<5	N/C	<1	N/C
Magnesium, dissolved (mg/L)	82.2	42.2	41.5	1.67%	53.9	53.3	1.12%	56	-4.38%
Mercury, dissolved (µg/L)	0.2	<0.06	<0.20	N/C	<0.06	<0.06	N/C	<0.20	N/C
Nitrate, dissolved (mg/L)*	0.14	<0.1	<0.02	N/C	<0.1	<0.1	N/C	<0.02	N/C
pH	5.79-7.97	7.1	6.75	5.05%	7.1	7.1	0.00%	7.05	0.71%
Phenols	5	<10	<5	N/C	<10	<10	N/C	<5	N/C
Spec. Cond. (µmhos/cm)	1457	916	914	0.22%	1098	1100	0.18%	1049	4.66%
Sulfate, dissolved (mg/L)	65	<10	1.4	N/C	26.2	25.8	1.54%	27	-3.77%
Total Dissolved Solids (mg/L)	870	496	415	17.78%	620	616	0.65%	540	13.47%
Zinc, dissolved (µg/L)	22	<25	<6	N/C	<25	<25	N/C	<6	N/C

Ave RPD, IEPA 1°/Dupe: 1.90%

Parameters	Interwell R-R Silt	G08R			G48R		
		IEPA	CLI	RPD	IEPA	CLI	RPD
Ammonia, dissolved (mg/L)	30	5.08	6.1	-18.25%	0.22	0.25	-12.77%
Arsenic, dissolved (µg/L)	11	1.58	1.4	12.08%	<0.5	<1	N/C
Boron, dissolved (µg/L)	666	228	240	-5.13%	164	160	2.47%
Cadmium, dissolved (µg/L)	5.2	<3	<1	N/C	<3	<1	N/C
Chloride, dissolved (mg/L)	71	7.67	9.5	-21.32%	12.2	14	-13.74%
Chromium, dissolved (µg/L)	4.8	<5	<4	N/C	<5	<4	N/C
Cyanide, total (mg/L)	0.005	<0.005	<0.005	N/C	<0.005	<0.005	N/C
Lead, dissolved (µg/L)	3.6	<5	<1	N/C	<5	<1	N/C
Magnesium, dissolved (mg/L)	114	73.5	72	2.06%	99.6	100	-0.40%
Mercury, dissolved (µg/L)	0.2	<0.06	<0.20	N/C	<0.06	<0.20	N/C
Nitrate, dissolved (mg/L)*	0.06	<0.1	<0.02	N/C	<0.1	<0.02	N/C
pH	6.07-8.22	7.2	7.04	2.25%	6.7	6.61	1.35%
Phenols	14	<10	<5	N/C	14.5	<5	N/C
Spec. Cond. (µmhos/cm)	1543	1276	1254	1.74%	<b>1680</b>	<b>1651</b>	1.74%
Sulfate, dissolved (mg/L)	286	89	90	-1.12%	226	220	2.69%
Total Dissolved Solids (mg/L)	1064	764	630	19.23%	<b>1170</b>	970	18.69%
Zinc, dissolved (µg/L)	20	<25	<6	N/C	<25	<6	N/C

## Illinois EPA/PDC Labs Comparison

total RPDs	33
Abs RPDs ≤10%	21
Abs RPDs ≤20%	31
Abs RPDs > 25%	1
RPDs >0	19
RPDs <0	14
RPDs = 0	0
Ave Abs RPD	7.79%
Ave RPD w/negatives	-0.36%

N/C = Not calculated

IEPA 1° = IEPA primary sample of that well

Dupe = 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)

IEPA Laboratory reported issues with the phenol analysis, so the result in G48R is not considered an exceedance