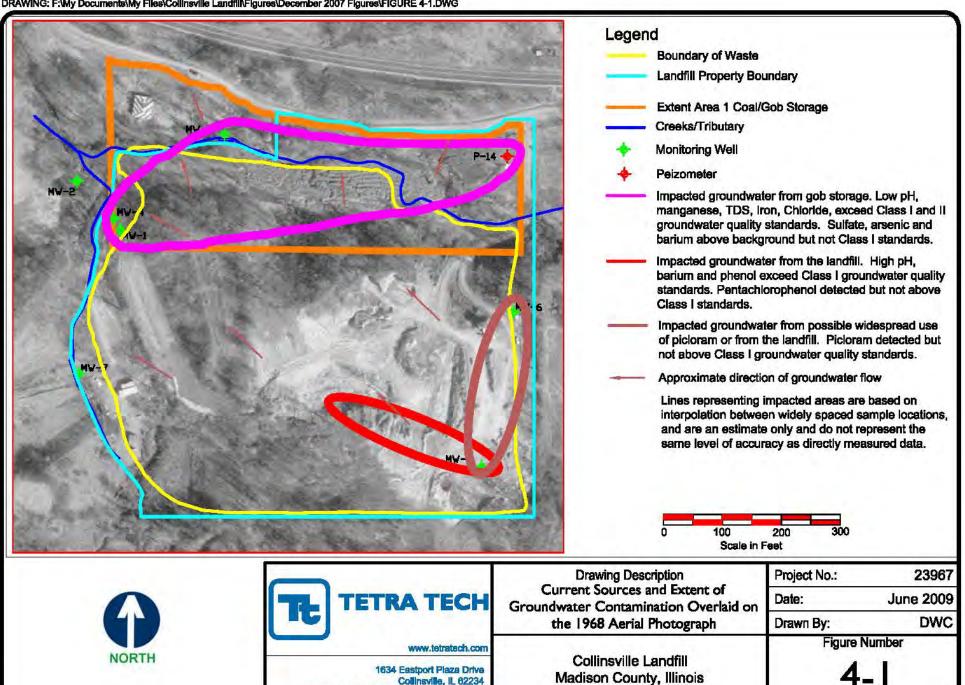
# EXHIBIT FOUR GROUNDWATER IMPACT MAP CLOSED COLLINSVILLE LANDFILL COLLINSVILLE, ILLINOIS

### **EXHIBIT 4-1**

**Source and Extent of Impacted Groundwater** 



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# EXHIBIT FIVE HISTORICAL AND RECENT SAMPLING DATA SENT TO IEPA CLOSED COLLINSVILLE LANDFILL COLLINSVILLE, ILLINOIS

## Exhibit 5-1 Historical Sampling (2007-2008) Information Previously Sent to IEPA in July 2008 (Tables 5-1.1, 5-1.2, 5-1.3, and 5-1.4)

	Monitoring Loc		-			
Compound	Aug-07	Oct-07	Feb-08	May-08	Class	
List 1					4-1	11
Temperature of Water (unfiltered F)	61.97	60.15	52.16	58.12	NA	1.0
Spec Cond. (Unfiltered)	1.921	1.960	2.229	1.935	NA	1
oH (Unfiltered units)	6.59	6.34	6.57	6.21	6.5-9.0	
Elev of GW Surf (ft ref MSL)	486.27	486.30	489.53	489.72	NA	
Depth of Water (ft below LS)	9.91	8.21	6.26	6.15	NA	
BTM Well Elev (ft ref MSL)	231.90	231.90	231.90	231.90	NA	
Depth to Water Fr Mea Pt (ft)	12.63	10.93	8.98	8.87	NA	
List 2 Filtered						4-5
Ammonia as N Diss (mg/L)	<0.10	<0.10	<0.10	<0.10	NA	mg
Arsenic AS, Diss (ug/L)	<5.0	<5.0	<5.0	<5.0	50.0	
Cadmium Cd, Diss (ug/L)	<2.0	<2.0	<2.0	<2.0		ug/
Chloride Diss (mg/L)	300.0	328.0	367.0	334.0	200.0	
Iron Fe, Diss (ug/L)	522.0	1,790.0	48.3	368.0	5,000.0	_
Lead Pb, Diss (ug/L)	<5.0	<5.0	<5.0	<5.0	8.0	-
Manganese Mn, Diss (ug/L)	3,390.0	3,950.0	3,540.0	4,490.0	150.0	
Mercury Hg, Diss (ug/L)	<0.20	<0.20	<0.20	<0.20		ug/
Sulfate SO4, Diss (mg/L)	119.0	135.0	114.0	120.0	400.0	
Total Dissolved Solids (TDS, mg/L)	1,490.0	1,540.0	1,350.0	1,520.0	1,200.0	
List 2 Unfiltered	1,490.0	1,540.0	1,350.0	1,520.0	1,200.0	mg
	0.40	0.40	0.10	0.10	0.00	-
Cyanide CN, Total (mg/L)	<0.10	<0.10	<0.10	<0.10	0.20	
Phenols (Total Recoverable) (ug/L)	<15.0	<15.0	<15.0	<15.0		ug/
Total Organic Carbon (TOC) (mg/L)	2.1	2,5	2.1	2.2		mg
Total Organic Halogens (TOX) (ug/L)	91.5	182.0	159.0	117.0	NA	ug/
List 3 Inorganic Parameters Unfiltered			-			-
Antimony (ug/L)				<3.0	6.0	
Arsenic (ug/L)		-		<3.0	50.0	
Barium (ug/L)		The state of the s	-	172.0	2,000.0	_
Beryllium (ug/L)	-	-		<2.0	4.0	
Boron (ug/L)	- 4		-	152.0	2,000.0	
Cadmium (ug/L)			-	<2.0	5.0	
Chloride (mg/L)		*		353.00	200.0	_
Chromium (ug/L)				7.30	100.0	
Cobalt (ug/L)	-	-	-	<50.0	1,000.0	ug/
Copper (ug/L)		-	- 14	<20.0	650.0	ug/
Cyanide (mg/L)	2.			<0.100	0.20	mg
Fluoride (mg/L)		<del></del>	-	0.14	4.0	
Iron (ug/L)	*	*	4	525.0	5,000.0	ug/
Lead (ug/L)				<5.0	7.5	ug
Manganese (ug/L)	*	*	3-	4,360	150.0	
Mercury (ug/L)	-			<0.20		ug
Nickel (ug/L)		4	34	<40.0	100.0	
Nitrate as N (mg/L)			- 4	<1.0	10.0	
Selenium (ug/L)	1.0			<5.0	50.0	ua
Silver (ug/L)				<10		ug
Sulfate (mg/L)	*	*	- 34	122.0	400.0	
Thallium (ug/L)	*	*	- 2	<1.0		ug
Total Dissolved Solids (mg/L)	*	*	2	1,570.0	1,200.0	
Zinc (ug/L)	-		2	25.1	5,000.0	
List 3 Organic Parameters Unfiltered			7	20,1	3,000.0	139
Alachlor (ug/L)	-			<2.00	20	ug
			- 3	<2.00		ug
Aldicarb (ug/L)				<0.05		
Atrazine (ug/L)	-					ug
Benzene (ug/L) Benzo(a)pyrene (ug/L)			- 7	<0.60 <0.20		ug

### Supplemental Permit Condition 6b Class I Concentrations Closed Collinsville Landfill

Compound	Aug-07	Oct-07	Feb-08	May-08	Class I	
Carbofuran (ug/L)				<10.0	40.0	ug/L
Carbon Tetrachloride (ug/L)		-		<1.00	5.0	ug/L
Chlordane (ug/L)			1 44	< 0.14	2.0	ug/L
Dalapon (ug/L)			7	<1.30	200.0	ug/L
Dichloromethane (ug/L)			-	<0.20	5.0	ug/L
Bis(2-ethylhexyl)phthalate (ug/L)			27	<6.00	6.0	ug/L
1,2-Dibromo-3-chloropropane (ug/L)	- 4	- 4	- 6-	<0.20	0.20	ug/L
Dinoseb (DNBP) (ug/L)	-		4-	<0.700	7.0	ug/L
Endothall (ug/L)	-			<10.0	100.0	ug/L
Endrin (ug/L)	-			<0.06	2.0	ug/L
Ethylene Dibromide (EDB) (ug/L)	5-2		- 4	<0.05	0.05	ug/L
Heptachlor (ug/L)	-	-	4-	< 0.04	0.04	ug/L
Heptachlor Epoxide (ug/L)	4		- 4	<0.20	0.20	
Hexachlorocyclopentadiene (ug/L)			-	<4.00	50.0	_
Lindane (Gamma-Hexachlor cyclohexane)			9-	< 0.04	0.20	
2,4 - D (ug/L)			4	<12.0	70.0	ug/L
ortho-Dichlorobenzene (ug/L)	-			<5.00	600.0	ug/L
para-Dichlorobenzene (ug/L)	- 4			<5.00	75.0	_
1,2-Dichloroethane (ug/L)	-		-	<5.00	5.0	
1,1-Dichloroethene (ug/L)		-	-	<5.00	7.0	ug/L
cis-1,2-Dichloroethene (ug/L)				<5.00	70.0	ug/L
trans-1,2-Dichloroethene (ug/L)	-			<5.00	100.0	ug/L
1,2-Dichloropropane (ug/L)	-	- 4		<5.00	5.0	ug/L
Ethylbenzene (ug/L)	4		-	<5.00	70.0	ug/L
Methoxychlor (ug/L)	4			< 0.50	40.0	ug/L
Monochlorobenzene (Chlorobenzene) (ug/L)	4-			<5.00	100.0	ug/L
Pentachlorophenol (ug/L)	D	94	-	< 0.100	1.0	ug/L
Phenols (ug/L)		-		<15	100.0	ug/L
Picloram (ug/L)	*	*	-	<0.200	500.0	ug/L
Polychlorinated Biphenyls (PCBs) (ug/L)				< 0.500	0.5	ug/L
Simazine (ug/L)	-	- 4		<4.00	4.0	ug/L
Styrene (ug/L)	4			<5.00	100.0	ug/L
2,4,5-TP (Silvex) (ug/L)		**		<5.00	50.0	ug/L
Tetrachloroethene (ug/L)	-			<0.70	5.0	ug/L
Toluene (ug/L)	5	22	-	<5.00	1,000.0	ug/L
Toxaphene (ug/L)	0 =		-	<2.40	3.0	ug/L
1,2,4-Trichlorobenzene (ug/L)	-		-	<10.0	70.0	ug/L
1,1,1-Trichloroethane (ug/L)		-		<5.00	200.0	ug/L
1,1,2-Trichloroethane (ug/L)	14	3-5	54	<0.50	5.0	ug/L
Trichloroethene (ug/L)	9		-	<1.00	5.0	_
Vinyl Chloride (ug/L)		-		<1.00	2.0	ug/L
Xylenes (ug/L)				<5.00	10,000.0	ug/L

NOTES:

All units are as noted

### Bolded where the concentration exceeds Class I groundwater quality standards

<: Compound not detected at or above detection limit. Value shown is the detection limit of the compound for the analytical process.

ref: reference

MSL: Mean Sea Level

LS: Land Surface

<sup>--:</sup> Not tested

<sup>\*:</sup> August and October 2007, additional parameters were analyzed for assessment monitoring. These parameters included unfiltered arsenic, barium, chloride, iron, manganese, sulfate, thaillium, TDS, and pictoram. Results are not reported under 2007-310-SP. Results were reported in the Assessment Monitoring Report submitted January 14, 2008.

	Monitoring Loc		F	Ech 00   May 00		
Compound	Aug-07*	Oct-07*	Feb-08	May-08	Class	100
List 1				-		
Temperature of Water (unfiltered F)	58.08		50.76	58.12	NA	
Spec Cond. (Unfiltered)	0.709		0.756	0.491	NA	
pH (Unfiltered units)	6.94	- 4	6.78	6.62	6.5-9.0	
Elev of GW Surf (ft ref MSL)	481.57	- (	486.32	489.82	NA	
Depth of Water (ft below LS)	13.92	-	10.89	8.24	NA	
BTM Well Elev (ft ref MSL)	480.30	480.30	480.30	480.30	NA	
Depth to Water Fr Mea Pt (ft)	15.14	DRY	12,11	9.46	NA	
List 2 Filtered				3.1		10
Ammonia as N Diss (mg/L)	-	1,24	<0.10	<0.10		mg/
Arsenic AS, Diss (ug/L)	-		<5.0	<5.0	50.0	
Cadmium Cd, Diss (ug/L)		- 2-	<2.0	<2.0		ug/
Chloride Diss (mg/L)			27.0	14.0	200.0	
Iron Fe, Diss (ug/L)	-	-	<40.0	<40.0	5,000.0	ug/
Lead Pb, Diss (ug/L)		- 4	<5.0	<5.0		ug/
Manganese Mn, Diss (ug/L)			<15.0	<15.0	150.0	
Mercury Hg, Diss (ug/L)		1.44	<0.20	<0.20	2.0	
Sulfate SO4, Diss (mg/L)	-		132.0	110.0	400.0	
Total Dissolved Solids (TDS, mg/L)			534.0	406.0	1,200.0	mg/
List 2 Unfiltered						
Cyanide CN, Total (mg/L)			< 0.10	<0.10	0.20	mg
Phenols (Total Recoverable) (ug/L)		- 4	<15.0	<15.0R		ug/
Total Organic Carbon (TOC) (mg/L)			1.4	1.6	NA	
Total Organic Halogens (TOX) (ug/L)		34	<20.0	<20.0	NA	_
List 3 Inorganic Parameters Unfiltered			- 27			-
Antimony (ug/L)			-	<3.0	6.0	ug/
Arsenic (ug/L)	-	-		<3.0	50.0	
Barium (ug/L)			-	43.8	2,000.0	
Beryllium (ug/L)	-	- 2	144	<2.0		ug/
Boron (ug/L)		-		63.1	2,000.0	
Cadmium (ug/L)	-2	-		<2.0	5.0	
Chloride (mg/L)			-0.	14.0	200.0	_
Chromium (ug/L)			-	<7.0	100.0	
Cobalt (ug/L)	-		- (i-	<50.0	1,000.0	_
Copper (ug/L)		-		<20.0	650.0	_
Cyanide (mg/L)		-	-	<0.100	0.20	_
Fluoride (mg/L)			-	0.23		mg
Iron (ug/L)				46.5	5,000.0	ug/
Lead (ug/L)			271	<5.0	7.5	ug/
Manganese (ug/L)		-	_	<15.0	150.0	
				<0.20		ug/
Mercury (ug/L)		-		<40.0		
Nickel (ug/L)					100.0	
Nitrate as N (mg/L)				<1.0	10.0	
Selenium (ug/L)		-		<5.0	50.0	
Silver (ug/L)		-	-	<10	50.0	
Sulfate (mg/L)				106.0	400.0	
Thallium (ug/L)	-		- 7	<1.0		ug
Total Dissolved Solids (mg/L)			134	414.0	1,200.0	
Zinc (ug/L)			144	<20.0	5,000.0	ug
List 3 Organic Parameters Unfiltered						_
Alachior (ug/L)		-42	544	<2.00		ug
Aldicarb (ug/L)	7-	-		<2.00		ug
Atrazine (ug/L)			1,00	<0.05		ug
Benzene (ug/L)		••	5-4	<0.60	5.0	ug
Benzo(a)pyrene (ug/L)	-		-	< 0.20	0.20	ug

### Supplemental Permit Condition 6b Class I Concentrations Closed Collinsville Landfill

Compound	Aug-07*	Oct-07*	Feb-08	May-08	Class I	
Carbofuran (ug/L)			-	<10.0	40.0	ug/L
Carbon Tetrachloride (ug/L)		4		<1.00	5.0	ug/L
Chlordane (ug/L)		4		< 0.14	2.0	ug/L
Dalapon (ug/L)		7	- /	<1.30	200.0	ug/L
Dichloromethane (ug/L)		-		<0.20	5,0	ug/L
Bis(2-ethylhexyl)phthalate (ug/L)	0			<6.00	6.0	ug/L
1,2-Dibromo-3-chloropropane (ug/L)	X = 3-	- 4	- 54	<0.20	0.20	ug/L
Dinoseb (DNBP) (ug/L)				< 0.700	7.0	ug/L
Endothall (ug/L)			T-	<10.0	100.0	ug/L
Endrin (ug/L)	- +			<0.06	2.0	ug/L
Ethylene Dibromide (EDB) (ug/L)	- 2-		100	< 0.05	0.05	ug/L
Heptachlor (ug/L)		- 4	-	< 0.04	0.04	_
Heptachlor Epoxide (ug/L)				<0.20	0.20	_
Hexachlorocyclopentadiene (ug/L)			-	<4.00	50.0	
Lindane (Gamma-Hexachlor cyclohexane)		- 4	- /4=	<0.04	0.20	
2,4 - D (ug/L)	- 4	T = - 4	- 4	<12.0	70.0	
ortho-Dichlorobenzene (ug/L)				<5.00	600.0	ug/L
para-Dichlorobenzene (ug/L)			75	<5.00	75.0	
1,2-Dichloroethane (ug/L)	1 2			<5.00	5.0	ug/l
1,1-Dichloroethene (ug/L)	V	-	140	<5.00	7.0	-
cis-1,2-Dichloroethene (ug/L)	-	-	-	<5.00	70.0	
trans-1,2-Dichloroethene (ug/L)			-	<5.00	100.0	
1,2-Dichloropropane (ug/L)	-		944	<5.00	5.0	_
Ethylbenzene (ug/L)	1		- 1	<5.00	70.0	ug/l
Methoxychlor (ug/L)	- 4			<0.50	40.0	_
Monochlorobenzene (Chlorobenzene) (ug/L)	-		- 2	<5.00	100.0	
Pentachlorophenol (ug/L)				<0.100	1.0	ug/l
Phenols (ug/L)	-		- 4	<15.00	100.0	ug/l
Picloram (ug/L)				<0.200	500.0	_
Polychlorinated Biphenyls (PCBs) (ug/L)	-		24	<0.500	0.5	ug/l
Simazine (ug/L)				<4.00	4.0	_
Styrene (ug/L)	4		4	<5.00	100.0	_
2,4,5-TP (Silvex) (ug/L)				<5.00	50.0	
Tetrachloroethene (ug/L)				<0.70	5.0	ug/l
Toluene (ug/L)		P-1	11 4	<5.00	1,000.0	_
Toxaphene (ug/L)	54			<2.40	3.0	ug/l
1,2,4-Trichlorobenzene (ug/L)		-		<10.0	70.0	_
1,1,1-Trichloroethane (ug/L)	4		-	<5.00	200.0	
1,1,2-Trichloroethane (ug/L)		74	- 4	<0.50	5.0	_
Trichloroethene (ug/L)	-		_	<1.00	5.0	
Vinyl Chloride (ug/L)	-		-	<1.00	2.0	
Xylenes (ug/L)				<5.00	10,000.0	- 0

NOTES:

All units are as noted

### Bolded where the concentration exceeds Class I groundwater quality standards

- <: Compound not detected at or above detection limit. Value shown is the detection limit of the compound for the analytical process.
- --: Not tested
- \*: Well was not sampled due to dry conditions.
- R: Relative Percent Difference outside accepted recovery limits.

ref: reference MSL: Mean Sea Level

LS: Land Surface

Monitoring Location MW-3								
Compound	Aug-07	Oct-07	Feb-08	May-08	Class I			
List 1	24.00	00.07	50.04	57.00	***			
Temperature of Water (unfiltered F)	61.63	60.87	53.91	57.00	NA			
Spec Cond. (Unfiltered)	0.408	0.649	0.520	0.322	NA 0.5.00	_		
pH (Unfiltered units)	9.68	9.56	9.12	10.97	6.5-9.0	_		
Elev of GW Surf (ft ref MSL)	534.21	532.40	532.94	542.00	NA	_		
Depth of Water (ft below LS)	10.24	12.64	7.15	4.07	NA	_		
BTM Well Elev (ft ref MSL)	521.60	521.60	521.60	521.60	NA			
Depth to Water Fr Mea Pt (ft)	13.39	15.79	10.30	7.22	NA	_		
List 2 Filtered	0.70	100	0.70	0.70				
Ammonia as N Diss (mg/L)	3.73	4.41	2.76	2.76		mg/l		
Arsenic AS, Diss (ug/L)	<5.0	<5.0	<5.0	<5.0		ug/L		
Cadmium Cd, Diss (ug/L)	<2.0	<2.0	<2.0	<2.0		ug/L		
Chloride Diss (mg/L)	10.0	8.0	13.0	6.0	200.0			
Iron Fe, Diss (ug/L)	<40.0	<40.0	<40.0	<40.0	5,000.0	_		
Lead Pb, Diss (ug/L)	<5.0	<5.0	<5.0	<5.0		ug/L		
Manganese Mn, Diss (ug/L)	<15.0	<15.0	<15.0	<15.0	150.0	_		
Mercury Hg, Diss (ug/L)	<0.20	<0.20	<0.20	<0.20		ug/L		
Sulfate SO4, Diss (mg/L)	<5.0	<5.0	<5.0	5.0	400.0			
Total Dissolved Solids (TDS, mg/L)	554.0	664.0	518.0	518.0	1,200.0	mg/l		
List 2 Unfiltered								
Cyanide CN, Total (mg/L)	<0.10	<0.10	<0.10	<0.10		mg/L		
Phenols (Total Recoverable) (ug/L)	25.0	39.0	<15.0	<15.0		ug/L		
Total Organic Carbon (TOC) (mg/L)	12.5	21.1	8.7	2.8		mg/l		
Total Organic Halogens (TOX) (ug/L)	20.8	<20.0	<20.0	<20.0	NA	ug/L		
List 3 Inorganic Parameters Unfiltered								
Antimony (ug/L)				<3.0		ug/L		
Arsenic (ug/L)	*	*		<3.0	50.0	ug/L		
Barium (ug/L)	*	*		195,000.0	2,000.0	ug/L		
Beryllium (ug/L)	-			<2.0		ug/L		
Boron (ug/L)	-	44		655.0	2,000.0	ug/l		
Cadmium (ug/L)	-			<2.0	5.0	ug/l		
Chloride (mg/L)	*	*		5.0	200.0	mg/		
Chromium (ug/L)	-			10.9	100.0	ug/l		
Cobalt (ug/L)				<50.0	1,000.0	ug/L		
Copper (ug/L)	-			<20.0	650.0	ug/L		
Cyanide (mg/L)				<0.10		mg/		
Fluoride (mg/L)				0.75		mg/l		
Iron (ug/L)	*	*		<40.0	5,000.0			
Lead (ug/L)				<5.0		ug/l		
Manganese (ug/L)	*	*		<15.0		ug/L		
Mercury (ug/L)			- 4	<0.20		ug/L		
Nickel (ug/L)		4-		<40.0	100.0			
Nitrate as N (mg/L)				<1.0		mg/		
Selenium (ug/L)		-		<5.0		ug/l		
Silver (ug/L)				<10		ug/l		
Sulfate (mg/L)	*	*		7.0	400.0			
Thallium (ug/L)		*		<1.0		ug/l		
Total Dissolved Solids (mg/L)	*	*		514.0	1,200.0			
Zinc (ug/L)				<20.0	5,000.0			
List 3 Organic Parameters Unfiltered		7	- 7	\ZU.U	5,000.0	ug/I		
Alachlor (ug/L)			- 3.9	c2.00	20	1000		
				<2,00		ug/l		
Aldicarb (ug/L)		-	- 7	<2.00		ug/		
Atrazine (ug/L)	-	-	-	<0.05		ug/l		
Benzene (ug/L) Benzo(a)pyrene (ug/L)	-	- 4	-	<0.60 <0.20	0.20	ug/l		

### Supplemental Permit Condition 6b Class I Concentrations Closed Collinsville Landfill

Compound	Aug-07	Oct-07	Feb-08	May-08	Class I	
Carbofuran (ug/L)	-			<10.0	40.0	ug/l
Carbon Tetrachloride (ug/L)	-	-	-	<1.00	5.0	
Chlordane (ug/L)	-			< 0.14	2.0	
Dalapon (ug/L)		2		<1.30	200.0	ug/L
Dichloromethane (ug/L)		3-4		<0.20	5.0	ug/L
Bis(2-ethylhexyl)phthalate (ug/L)		**		<6.00	6.0	ug/L
1,2-Dibromo-3-chloropropane (ug/L)		341		<0.20	0.20	ug/L
Dinoseb (DNBP) (ug/L)		34		<0.700	7.0	ug/l
Endothall (ug/L)	1 2			<10.0	100.0	
Endrin (ug/L)		- 2		< 0.06	2.0	ug/l
Ethylene Dibromide (EDB) (ug/L)	1-	4		< 0.05	0.05	ug/l
Heptachlor (ug/L)		-		< 0.04	0.04	
Heptachlor Epoxide (ug/L)		- 4		<0.20	0.20	ug/L
Hexachlorocyclopentadiene (ug/L)				<4.00	50.0	ug/L
Lindane (Gamma-Hexachlor cyclohexane)	-4	-		< 0.04	0.20	
2,4 - D (ug/L)		- 4		<12.0	70.0	ug/L
ortho-Dichlorobenzene (ug/L)				<5.00	600.0	ug/L
para-Dichlorobenzene (ug/L)	1-		- 1	<5.00	75.0	_
1,2-Dichloroethane (ug/L)	-			<5.00	5.0	ug/L
1,1-Dichloroethene (ug/L)				<5.00	7.0	
cis-1,2-Dichloroethene (ug/L)	1-1			<5.00	70.0	_
trans-1,2-Dichloroethene (ug/L)		-		<5.00	100.0	
1,2-Dichloropropane (ug/L)	-	144		<5.00	5.0	ug/l
Ethylbenzene (ug/L)	-	-	**	<5.00	70.0	ug/l
Methoxychlor (ug/L)	-			<0.50	40.0	ug/l
Monochlorobenzene (Chlorobenzene) (ug/L)			_	<5.00	100.0	_
Pentachlorophenol (ug/L)	1-4	- 4	_	0.135	1.0	ug/L
Phenols (ug/L)	-	1		<15	100.0	ug/L
Picloram (ug/L)	*	*	-	<0.200	500.0	ug/i
Polychlorinated Biphenyls (PCBs) (ug/L)	1-4			<0.500	0.5	ug/l
Simazine (ug/L)	-	**	-	<4.00	4.0	ug/l
Styrene (ug/L)	124		-	<5.00	100.0	ug/l
2,4,5-TP (Silvex) (ug/L)			)	<5.00	50	
Tetrachloroethene (ug/L)	7-			<0.70	5.0	
Toluene (ug/L)	171	-	E = 72	<5.00	1,000.0	ug/l
Toxaphene (ug/L)	7.	1	3 T	<2.40	3.0	ug/l
1,2,4-Trichlorobenzene (ug/L)	1			<10.0	70.0	_
1,1,1-Trichloroethane (ug/L)	1 2		- 14	<5.00	200,0	ug/l
1,1,2-Trichloroethane (ug/L)	12	-	- 22	<0.50	5.0	_
Trichloroethene (ug/L)	1/P = 32	**	100	<1.00	5.0	_
Vinyl Chloride (ug/L)			T	<1.00	2.0	ug/l
Xylenes (ug/L)	-	-		<5.00	10,000.0	

NOTES:

All units are as noted

### Bolded where the concentration exceeds Class I groundwater quality standards

Compound not detected at or above detection limit. Value shown is the detection limit of the compound for the analytical process.

ref: reference MSL: Mean Sea Level LS: Land Surface

<sup>--:</sup> Not tested

<sup>\*:</sup> August and October 2007, additional parameters were analyzed for assessment monitoring. These parameters included untiltered arsenic, barium, chloride, iron, manganese, sultate, thallium, TDS, and picloram. Results are not reported under 2007-310-SP. Results were reported in the Assessment Monitoring Report submitted January 14, 2008.

	Monitoring Lo					
Compound	Aug-07	Oct-07	Feb-08	May-08	Class	
List 1						
Temperature of Water (unfiltered F)	61.23	59.79	52.29	55.69	NA	
Spec Cond. (Unfiltered)	1.959	1.930	1.434	1.080	NA	
pH (Unfiltered units)	6.36	6.16	6.50	6.28	6.5-9.0	
Elev of GW Surf (ft ref MSL)	485.71	485.66	489.28	489.64	NA	
Depth of Water (ft below LS)	9.72	9.77	6.15	5.79	NA	
BTM Well Elev (ft ref MSL)	472.00	472.00	472.00	472.00	NA	
Depth to Water Fr Mea Pt (ft)	12.69	12.74	9.12	8.76	NA	
List 2 Filtered			1			
Ammonia as N Diss (mg/L)	<0.10	<0.10	0.15	<0.10	NA	mg/L
Arsenic AS, Diss (ug/L)	7.6	8.6	10.4	9.5	50.0	ug/L
Cadmium Cd, Diss (ug/L)	<2.0	<2.0	<2.0	<2.0		ug/L
Chloride Diss (mg/L)	306.0	366.0	139.0	116.0	200.0	
Iron Fe, Diss (ug/L)	4,740.0	3,790.0	6,770.0	6,700.0	5,000.0	
Lead Pb, Diss (ug/L)	<5.0	<5.0	<5.0	<5.0		ug/L
Manganese Mn, Diss (ug/L)	8,900.0	7,580.0	16,400.0	14,000.0	150.0	
Mercury Hg, Diss (ug/L)	<0.20	<0.20	<0.20	<0.20		ug/L
Sulfate SO4, Diss (mg/L)	107.0	140.0	72.0	79.0	400.0	
Total Dissolved Solids (TDS, mg/L)	1,530.0	1,560.0	866.0	922.0	1,200	
List 2 Unfiltered						
Cyanide CN, Total (mg/L)	<0.10	<0.10	<0.10	<0.10	0.20	mg/L
Phenois (Total Recoverable) (ug/L)	<15.0	<15.0	<15.0	<15.0		ug/L
Total Organic Carbon (TOC) (mg/L)	2.1	2.3	4.3	4.1		mg/L
Total Organic Halogens (TOX) (ug/L)	70.6	78.6	44.1	47.7	NA	
List 3 Inorganic Parameters Unfiltered	10.0	70.0		17.07		392
Antimony (ug/L)				<3.0	6.0	ug/L
Arsenic (ug/L)	*			9.7		ug/L
Barium (ug/L)		*		318.0	2,000.0	
Beryllium (ug/L)	-		1	<2.0	4.0	
Boron (ug/L)		- 3	1 2	97.5	2,000.0	
Cadmium (ug/L)		- 2		<2.0	5.0	
Chloride (mg/L)	*	*		109.0	200.0	
Chromium (ug/L)				<7.0	100.0	
		-	- "	<50.0	1,000.0	
Cobalt (ug/L)	-	-	-	<20.0	650.0	
Copper (ug/L)		-		<0.100		
Cyanide (mg/L)			-			mg/L
Fluoride (mg/L)	*	*		0.24	4.0	mg/L
Iron (ug/L)	- 1			7,510.0	5,000	ug/L
Lead (ug/L)	*	*	- 7	<5.0		ug/L
Manganese (ug/L)			-	13,700.0	150.0	
Mercury (ug/L)	-		-	<0.20		ug/L
Nickel (ug/L)			**	<40.0	100.0	
Nitrate as N (mg/L)				<1.0		mg/l
Selenium (ug/L)				<5.0		ug/L
Silver (ug/L)	*	*		<10		ug/L
Sulfate (mg/L)		*		79.0	400.0	
Thallium (ug/L)				<1.0		ug/L
Total Dissolved Solids (mg/L)	1	*		944.0	1,200.0	
Zinc (ug/L)			-	<20.0	5,000.0	ug/L
List 3 Organic Parameters Unfiltered					· =13	
Alachlor (ug/L)	-			<2.00		ug/L
Aldicarb (ug/L)		-		<2.00		ug/L
Atrazine (ug/L)			-	<0.05	3.0	ug/L
Benzene (ug/L)	-			< 0.60	5.0	ug/L
Benzo(a)pyrene (ug/L)			-	< 0.20	0.20	ug/L

### Supplemental Permit Condition 6b Class I Concentrations Closed Collinsville Landfill

Compound	Aug-07	Oct-07	Feb-08	May-08	Class	
Carbofuran (ug/L)	-	-	-	<10.0	40.0	ug/l
Carbon Tetrachloride (ug/L)	-	+-	J	<1.00	5.0	
Chlordane (ug/L)	5 4	- 24	1.	< 0.14	2.0	_
Dalapon (ug/L)	7	- C		<1.30	200.0	ug/l
Dichloromethane (ug/L)				< 0.20	5.0	_
Bis(2-ethylhexyl)phthalate (ug/L)			2 - 2-	<6.00	6.0	_
1,2-Dibromo-3-chloropropane (ug/L)	-	-	- 2	<0.20	0.20	
Dinoseb (DNBP) (ug/L)				<0.700	7.0	
Endothall (ug/L)	-	4-		<10.0	100.0	
Endrin (ug/L)			-	< 0.06	2.0	_
Ethylene Dibromide (EDB) (ug/L)	-	1	_	< 0.05	0.05	
Heptachlor (ug/L)				< 0.04	0.04	_
Heptachlor Epoxide (ug/L)	34	-	12	<0.20	0.20	_
Hexachlorocyclopentadiene (ug/L)	-			<4.00	50.0	
Lindane (Gamma-Hexachlor cyclohexane)		7/-		< 0.04	0.20	
2,4 - D (ug/L)	- 12		-	<12.0	70.0	
ortho-Dichlorobenzene (ug/L)	1		-	<5.00	600.0	_
para-Dichlorobenzene (ug/L)				<5.00	75.0	
1,2-Dichloroethane (ug/L)	- 22	-	- 4	-<5.00	5.0	_
1,1-Dichloroethene (ug/L)			- 2	<5.00	7.0	_
cis-1,2-Dichloroethene (ug/L)	_		-	<5.00	70.0	
trans-1,2-Dichloroethene (ug/L)	-			<5.00	100.0	_
1,2-Dichloropropane (ug/L)	-		-	<5.00	5.0	_
Ethylbenzene (ug/L)			-	<5.00	70.0	_
Methoxychlor (ug/L)		-		<0.50	40.0	
Monochlorobenzene (Chlorobenzene) (ug/L)			- X	<5.00	100.0	
Pentachlorophenol (ug/L)		24-	-	<0.100	1.0	_
Phenois (ug/L)	-	- 4	- 4	<15	100.0	
Picloram (ug/L)	*	*	-	<0.200	500.0	
Polychlorinated Biphenyls (PCBs) (ug/L)		794		<0.500	0.5	-
Simazine (ug/L)			7,42	<4.00	4.0	
Styrene (ug/L)	-	12	- 1-	<5.00	100.0	
2,4,5-TP (Silvex) (ug/L)		- 4		<5.00	50.0	_
Tetrachloroethene (ug/L)		-	- G	<0.70	5.0	_
Toluene (ug/L)	-	-	72	<5.00	1,000.0	
Toxaphene (ug/L)				<2.40	. 3.0	_
1,2,4-Trichlorobenzene (ug/L)		-		<10.0	70.0	-
1,1,1-Trichloroethane (ug/L)				<5.00	200.0	
1,1,2-Trichloroethane (ug/L)	-	52	1/4	<0.50	5.0	_
Trichloroethene (ug/L)		- 2	-	<1.00	5.0	_
Vinyl Chloride (ug/L)				<1.00	2.0	
Xylenes (ug/L)		-	-	<5.00	10,000.0	

NOTES:

All units are as noted

### Bolded where the concentration exceeds Class I groundwater quality standards

- <: Compound not detected at or above detection limit. Value shown is the detection limit of the compound for the analytical process.
- --: Not tested

ref: reference MSL: Mean Sea Level

LS: Land Surface

<sup>\*:</sup> August and October 2007, additional parameters were analyzed for assessment monitoring. These parameters included unfiltered arsenic, barium, chloride, iron, manganese, sulfate, thallium, TDS, and pictoram. Results are not reported under 2007-310-SP. Results were reported in the Assessment Monitoring Report submitted January 14, 2008.

# Exhibit 5-2 Historical Sampling (2008-2009) Information Previously Sent to IEPA in July 2009 (Tables 5-2.1, 5-2.2, 5-2.3, 5-2.4, 5-2.5)

	Monitoring Loc					
Compound	Aug-08	Nov-08	Feb-09	May-09	Class	
List 1						
Temperature of Water (unfiltered F)	66.43	60.33	54.16	55.45	NA	U.
Spec Cond. (Unfiltered)	2.003	2,468	1.471	2.873	NA	
pH (Unfiltered units)	6.27	6.34	6.45	6.41	6.5-9.0	
Elev of GW Surf (ft ref MSL)	488.02	488.57	489.33	489.65	NA	
Depth of Water (ft below LS)	8.16	7.51	6.85	6.53	NA	
BTM Well Elev (ft ref MSL)	472.20	472.20	472.20	472.20	NA	
Depth to Water Fr Mea Pt (ft)	10.88	10.33	9.57	9.25	NA	
List 2 Filtered						
Ammonia as N Diss (mg/L)	<0.10	<0.10	<0.10	<0.10	NA	mg
Arsenic AS, Diss (ug/L)	<5.0	<5.0	<5.0	<5.0	50.0	ug
Cadmium Cd, Diss (ug/L)	<2.0	<2.0	<2.0	<2.0	5.0	ug
Chloride Diss (mg/L)	393.0	397.0	402.0	389.0	200.0	_
Iron Fe, Diss (ug/L)	300.0	179.0	<40.0	376.0	5,000.0	
Lead Pb, Diss (ug/L)	<5.0	<5.0	<5.0	<5.0	8.0	_
Manganese Mn, Diss (ug/L)	3,030.0	2,730.0 S	2,750.0	4,060.0	150.0	_
Mercury Hg, Diss (ug/L)	<0.20 S	<0.20	<0.20	<0.20	2.0	
Sulfate SO4, Diss (mg/L)	108.0	108.0	105.0	113.0	400.0	
Total Dissolved Solids (TDS, mg/L)	1,460.0	1,390.0	1,440.0	1,510.0	1,200.0	_
List 2 Unfiltered	1,120.5	7,000.0	.,,,,,,,,	.,,,,,,,,	1,200.0	
Cyanide CN, Total (mg/L)	<0.100	<0.100	<0.100 SR	<0.100	0.20	m
Phenois (Total Recoverable) (ug/L)	<15.0	<15.0	<15.0	<15.0	1.0	ug
Total Organic Carbon (TOC) (mg/L)	1.9	1.9	2.1	3.3		mg
Total Organic Halogens (TOX) (ug/L)	125.0 R	105.0	146.0	149.0	NA	ug
List 3 Inorganic Parameters Unfiltered	120.011	100.0	140.0	140.0	11/1	ug
Antimony (ug/L)	-			<3.0 S	6.0	ug
Arsenic (ug/L)				<3.0	50.0	
Barium (ug/L)		- 1	70	218.0	2,000.0	
Beryllium (ug/L)		-	- 3	<2.0	4.0	
Boron (ug/L)		-471		126.0	2,000.0	
Cadmium (ug/L)	1		- 2	<2.0	5.0	_
Chloride (mg/L)				368.0	200.0	_
Chromium (ug/L)	-			<7.0	100.0	_
Cobalt (ug/L)				<50.0		
	-	- 5			1,000.0	_
Copper (ug/L)				<20.0	650.0	_
Cyanide (mg/L)				<0.100	0.20	mg
Fluoride (mg/L)				0.14	4.0	$\overline{}$
Iron (ug/L)	7			458.0	5,000.0	
Lead (ug/L)				<5.0 S	7.5	
Manganese (ug/L)	-	-		4,340.0	150.0	
Mercury (ug/L)	-		-	<0.20	2.0	
Nickel (ug/L)		-		<40.0	100.0	
Nitrate as N (mg/L)	-	-		<1.0	10.0	
Selenium (ug/L)	-			<5.0	50.0	
Silver (ug/L)			-	<10.0	50.0	
Sulfate (mg/L)	-			114.0	400.0	
Thallium (ug/L)	4			<1.0	2.0	
Total Dissolved Solids (mg/L)	24	-	-	1,600.0	1,200.0	
Zinc (ug/L)				<20.0	5,000.0	uç
List 3 Organic Parameters Unfiltered				7.2		
Alachlor (ug/L)	-	-	-	-	2.0	
Aldicarb (ug/L)			-		3.0	
Atrazine (ug/L)	7	-			3.0	
Benzene (ug/L)	7	7-4		< 0.50	5.0	
Benzo(a)pyrene (ug/L)	1		- 4	- 7.	0.20	

### Supplemental Permit Condition 6b Class I Concentrations Closed Collinsville Landfill

Compound	Aug-08	Nov-08	Feb-09	May-09	Class	+ -
Carbofuran (ug/L)	4	- 4		1	40.0	ug/l
Carbon Tetrachloride (ug/L)	-				5.0	
Chlordane (ug/L)		- 32	4	-	2.0	
Dalapon (ug/L)	1-7		4	-	200.0	_
Dichloromethane (ug/L)	1		- 4	<0.50	5.0	_
Bis(2-ethylhexyl)phthalate (ug/L)			-	1.0	6.0	_
1,2-Dibromo-3-chloropropane (ug/L)		-		100	0.20	
Dinoseb (DNBP) (ug/L)	-24				7.0	_
Endothall (ug/L)	-	344		1.00	100.0	
Endrin (ug/L)		-			2.0	_
Ethylene Dibromide (EDB) (ug/L)		- 4		-	0.05	
Heptachlor (ug/L)	-			.,	0.04	
Heptachlor Epoxide (ug/L)	-	14-		-	0.20	
Hexachlorocyclopentadiene (ug/L)	1	. X			50.0	ug/L
Lindane (Gamma-Hexachlor cyclohexane)		-			0.20	
2,4 - D (ug/L)		-				ug/L
ortho-Dichlorobenzene (ug/L)		1	-		600.0	_
para-Dichlorobenzene (ug/L)				<2.0	75.0	_
1,2-Dichloroethane (ug/L)	-	- 4	-		5.0	ug/L
1,1-Dichloroethene (ug/L)		-				ug/L
cis-1,2-Dichloroethene (ug/L)	-	- 4		10-11	70.0	_
trans-1,2-Dichloroethene (ug/L)		-			100.0	ug/L
1,2-Dichloropropane (ug/L)		3-4		14-	5.0	_
Ethylbenzene (ug/L)	1 0.2	-	-		70.0	ug/L
Methoxychlor (ug/L)	-	24	-		40.0	_
Monochlorobenzene (Chlorobenzene) (ug/L)				<2.0	100.0	
Pentachlorophenol (ug/L)				<0.100	1.0	_
Phenols (ug/L)		-		-	100.0	ug/L
Picloram (ug/L)		-		<0.200	500.0	ug/L
Polychlorinated Biphenyls (PCBs) (ug/L)		144			0.5	
Simazine (ug/L)	-	24		-	4.0	
Styrene (ug/L)		-			100.0	ug/L
2,4,5-TP (Silvex) (ug/L)	1				50.0	_
Tetrachloroethene (ug/L)					5.0	_
Toluene (ug/L)	**	- 4			1,000.0	ug/L
Toxaphene (ug/L)		*		-	3.0	
1,2,4-Trichlorobenzene (ug/L)	100				70.0	_
1,1,1-Trichloroethane (ug/L)	-	- 4		-	200.0	_
1,1,2-Trichloroethane (ug/L)			-	- De	5.0	ug/l
Trichloroethene (ug/L)	( )	-				ug/l
Vinyl Chloride (ug/L)	-		-		2.0	
Xylenes (ug/L)		-			10,000.0	ug/l

NOTES:

All units are as noted

### Bolded where the concentration exceeds Class I groundwater quality standards

- Compound not detected at or above detection limit. Value shown is the detection limit of the compound for the analytical process.
- -: Not tested
- R: RPD outside accepted recovery limits
- S: Spike Recovery outside accepted recovery limits
- ret: reterence
- MSL: Mean Sea Level
- LS: Land Surface
- Fr Meas Pt: From Measuring Point

	Monitoring Loc					
Compound	Aug-08	Nov-08	Feb-09	May-09	Class	
List 1	20.45	70.50	40.00	50.57		
Temperature of Water (unfiltered F)	60.45	53.53	49.96	52.57	NA	
Spec Cond. (Unfiltered)	0.909	1.002	0.583	0.870	NA D T O O	
oH (Unfiltered units)	6.67	6.57	6.56	7.10	6.5-9.0	_
Elev of GW Surf (ft ref MSL)	484.86	486.06	486.50	486.90	NA	
Depth of Water (ft below LS)	10.22	9.02	8.58	8.18	NA	
BTM Well Elev (ft ref MSL)	480.30	480.30	480.30	480.30	NA	
Depth to Water Fr Mea Pt (ft)	11.44	10.24	9.80	9.40	NA	
List 2 Filtered				2.14		
Ammonia as N Diss (mg/L)	<0.10	<0.10	<0.10	<0.10		mg/l
Arsenic As, Diss (ug/L)	<5.0	<5.0	<5.0	<5.0	50.0	_
Cadmium Cd, Diss (ug/L)	<2.0	<2.0	<2.0	<2.0		ug/L
Chloride Diss (mg/L)	31.0	37.0	27.0	16.0	200.0	_
Iron Fe, Diss (ug/L)	<40.0	<40.0	<40.0	<40.0	5,000.0	_
Lead Pb, Diss (ug/L)	<5.0	<5.0	<5.0	<5.0	8.0	
Manganese Mn, Diss (ug/L)	<15.0	17.30	<15.0	<15.0	150.0	_
Mercury Hg, Diss (ug/L)	<0.20	<0.20	<0.20	<0.20	2.0	
Sulfate SO4, Diss (mg/L)	187.0	188.0	130.0	104.0 S	400.0	
Total Dissolved Solids (TDS, mg/L)	866.0	652.0	548.0	414.0	1,200.0	mg/l
List 2 Unfiltered	1 10			-		
Cyanide CN, Total (mg/L)	<0.100	<0.100	<0.100	<0.100		mg/l
Phenols (Total Recoverable) (ug/L)	<15.0	<15.0	<15.0	<15.0	1.0	ug/L
Total Organic Carbon (TOC) (mg/L)	1.8	1.4	1.4	1.3	NA	mg/l
Total Organic Halogens (TOX) (ug/L)	24.9	20.8	20.4	<20.0 S	NA	ug/L
List 3 Inorganic Parameters Unfiltered						
Antimony (ug/L)			J-1	<3.0	6.0	ug/L
Arsenic (ug/L)	(2)		***	<3.0	50.0	ug/L
Barium (ug/L)				71.9	2,000.0	ug/L
Beryllium (ug/L)			3-	<2.0	4.0	ug/L
Boron (ug/L)			T	50.7	2,000.0	ug/L
Cadmium (ug/L)			-	<2.0	5.0	ug/l
Chloride (mg/L)	1		34	15.0	200.0	
Chromium (ug/L)				<7.0	100.0	
Cobalt (ug/L)			7-1	<50.0	1,000.0	
Copper (ug/L)			14	<20.0	650.0	
Cyanide (mg/L)	1	·	- 2	<0.100		mg/
Fluoride (mg/L)	-	-		0.21		mg/
Iron (ug/L)	-4	7-		<40.0	5,000.0	ug/l
Lead (ug/L)	2		2.0	<5.0	7.5	ug/l
Manganese (ug/L)	-			<15.0	150.0	
Mercury (ug/L)	-		- 2	<0.20		ug/l
Nickel (ug/L)			1	<40.0	100.0	
Nitrate as N (mg/L)	- 2	- 1		<1.0		mg/
Selenium (ug/L)				<5.0		ug/l
Silver (ug/L)			122	<10.0		ug/
Sulfate (mg/L)		-		103.0	400.0	ug/
Thallium (ug/L)		- J-		<1.0		ug/
Total Dissolved Solids (mg/L)				434.0	1,200.0	
	- 3	-		<20.0	5,000.0	
Zinc (ug/L)		-		<20.0	5,000.0	ug/I
List 3 Organic Parameters Unfiltered					20	11:01
Alachior (ug/L)				77		ug/
Aldicarb (ug/L)	- *			-		ug/
Atrazine (ug/L)	- 7			0.70		ug/
Benzene (ug/L)				< 0.50	5.0	ug/

### Supplemental Permit Condition 6b Class | Concentrations Closed Collinsville Landfill

Compound	Aug-08	Nov-08	Feb-09	May-09	Class I	
Carbofuran (ug/L)		-	4		40.0	ug/l
Carbon Tetrachloride (ug/L)	-		30		5.0	
Chlordane (ug/L)	1	-		-	2.0	
Dalapon (ug/L)	94		-		200.0	ug/L
Dichloromethane (ug/L)	- 4	- Ja		<0.50	5.0	ug/L
Bis(2-ethylhexyl)phthalate (ug/L)			- 54		6.0	ug/L
1,2-Dibromo-3-chloropropane (ug/L)			- 4		0.20	ug/L
Dinoseb (DNBP) (ug/L)		-			7.0	
Endothall (ug/L)		-			100.0	_
Endrin (ug/L)	- 4	**			2.0	ug/L
Ethylene Dibromide (EDB) (ug/L)				-	0.05	ug/L
Heptachlor (ug/L)	J.,	- 10-		-	0.04	
Heptachlor Epoxide (ug/L)	1-4	· ·		4-	0.20	ug/L
Hexachlorocyclopentadiene (ug/L)	24		-		50.0	_
Lindane (Gamma-Hexachlor cyclohexane)	-				0.20	_
2,4 - D (ug/L)		3		-	70.0	_
ortho-Dichlorobenzene (ug/L)		1744		,÷e	600.0	ug/L
para-Dichlorobenzene (ug/L)		12	-	<2.0	75.0	_
1,2-Dichloroethane (ug/L)			7.00	-	5.0	
1,1-Dichloroethene (ug/L)	-		-	-	7.0	_
cis-1,2-Dichloroethene (ug/L)	-	1 44		146	70.0	ug/L
trans-1,2-Dichloroethene (ug/L)		-		144	100.0	ug/L
1,2-Dichloropropane (ug/L)		144			5.0	
Ethylbenzene (ug/L)	1 - 2				70.0	_
Methoxychlor (ug/L)	-				40.0	ug/L
Monochlorobenzene (Chlorobenzene) (ug/L)	- 2			<2.0	100.0	ug/L
Pentachlorophenol (ug/L)	-	. **		<0.100	1.0	ug/L
Phenois (ug/L)	-		-	- +	100.0	ug/L
Picloram (ug/L)				< 0.20	500.0	ug/L
Polychlorinated Biphenyls (PCBs) (ug/L)			7	-	0.5	ug/L
Simazine (ug/L)	-	100			4.0	ug/l
Styrene (ug/L)	-4		744		100.0	ug/l
2,4,5-TP (Silvex) (ug/L)	-		-	**	50.0	ug/l
Tetrachloroethene (ug/L)	-				5.0	ug/L
Toluene (ug/L)			-		1,000.0	ug/l
Toxaphene (ug/L)	/ III	× #	32	11 to 12 to	3.0	ug/l
1,2,4-Trichlorobenzene (ug/L)		-		7 A	70.0	_
1,1,1-Trichloroethane (ug/L)					200.0	ug/l
1,1,2-Trichloroethane (ug/L)			4,5	1	5,0	ug/l
Trichloroethene (ug/L)	-			54	5.0	
Vinyl Chloride (ug/L)	T.	- 4			2.0	_
Xylenes (ug/L)		- 4	•	-	10,000.0	ug/l

NOTES:

### Bolded where the concentration exceeds Class I groundwater quality standards

- <: Compound not detected at or above detection limit. Value shown is the detection limit of the compound for the analytical process.
- -: Not tested
- S: Spike Recovery outside accepted recovery limits

ref: reference MSL: Mean Sea Level LS: Land Surface

	Monitoring Loca	tion MW-3				
Compound	Aug-08	Nov-08	Feb-09	May-09	Class	
List 1						
Temperature of Water (unfiltered F)	63.01	58.69			NA	
Spec Cond. (Unfiltered)	0.973	0.504	(42	-	NA	
pH (Unfiltered units)	8.27	9.63	34	44	6.5-9.0	
Elev of GW Surf (ft ref MSL)	537.82	536.60			NA	
Depth of Water (ft below LS)	6.63	7.85		-	NA	
BTM Well Elev (ft ref MSL)	521.60	521.60		(4)	NA	
Depth to Water Fr Mea Pt (ft)	9.78	11.00	*		NA	
List 2 Filtered			1 2 31			
Ammonia as N Diss (mg/L)	2.84	2.75	- 12	- 2	NA	mg/
Arsenic AS, Diss (ug/L)	<5.0	<5.0		-	50.0	ug/l
Cadmium Cd, Diss (ug/L)	<2.0	<2.0	4-		5.0	ug/L
Chloride Diss (mg/L)	56.0	19.0		P	200.0	mg/l
Iron Fe, Diss (ug/L)	95.0	360.0	**		5,000.0	ug/L
Lead Pb, Diss (ug/L)	<5.0	<5.0			8.0	ug/L
Manganese Mn, Diss (ug/L)	345.0	444.0	*	2.0	150.0	ug/l
Mercury Hg, Diss (ug/L)	0.58	<0.20		-		ug/L
Sulfate SO4, Diss (mg/L)	<5.0	<50.0	-		400.0	
Total Dissolved Solids (TDS, mg/L)	562.0	568.0	-	-	1,200.0	
List 2 Unfiltered						-
Cyanide CN, Total (mg/L)	<0.100	<0.100	- 20		0.20	mg/
Phenois (Total Recoverable) (ug/L)	<15.0	<15.0		-		ug/L
Total Organic Carbon (TOC) (mg/L)	5.7	3.2		74		mg/
Total Organic Halogens (TOX) (ug/L)	49.3	<0.20	-2-		NA	_
List 3 Inorganic Parameters Unfiltered	70.0		-		- 147	
Antimony (ug/L)	-	-			6.0	ug/l
Arsenic (ug/L)	-	-		-		ug/l
Barium (ug/L)	1 11	-		-	2,000.0	
Beryllium (ug/L)		- 2	_			ug/l
Boron (ug/L)			_	12	2,000.0	
Cadmium (ug/L)		- 4				ug/l
Chloride (mg/L)					200.0	
Chromium (ug/L)					100.0	
Cobalt (ug/L)	-	-	-		1,000.0	
Copper (ug/L)				- 77	650.0	
Cyanide (mg/L)		44		- 7		mg/
Fluoride (mg/L)						
		-	-			mg/
Iron (ug/L)		-			5,000.0	ug/i
Lead (ug/L)					7.5	ug/l
Manganese (ug/L)	-		- 57		150	ug/l
Mercury (ug/L)	-	-	-	-	2.0	ug/l
Nickel (ug/L)	-				100.0	
Nitrate as N (mg/L)	-					mg/
Selenium (ug/L)						ug/
Silver (ug/L)	-			-		ug/
Sulfate (mg/L)		-		-	400.0	
Thallium (ug/L)	-	-				ug/
Total Dissolved Solids (mg/L)	1,24				1,200.0	
Zinc (ug/L)	-		-	**	5,000.0	ug/
List 3 Organic Parameters Unfiltered						
Alachlor (ug/L)		+		-		ug/
Aldicarb (ug/L)		114	-	-		ug/
Atrazine (ug/L)		-	••			ug/
Benzene (ug/L)					5.0	ug/
Benzo(a)pyrene (ug/L)		- T4	**	**	0.20	ug/

### Supplemental Permit Condition 6b Class I Concentrations Closed Collinsville Landfill

Compound	Aug-08	Nov-08	Feb-08	May-09	Class i	
Carbofuran (ug/L)		- 2			40.0	ug/L
Carbon Tetrachloride (ug/L)				- 4	5.0	ug/L
Chlordane (ug/L)					2.0	
Dalapon (ug/L)	7.0			- 4	200.0	ug/L
Dichloromethane (ug/L)	100		-		5.0	
Bis(2-ethylhexyl)phthalate (ug/L)		14			6.0	ug/L
1,2-Dibromo-3-chloropropane (ug/L)		) —	-		0.20	
Dinoseb (DNBP) (ug/L)				-	7.0	_
Endothall (ug/L)	-			-	100.0	ug/L
Endrin (ug/L)	12	1-2			2.0	ug/L
Ethylene Dibromide (EDB) (ug/L)	-	62	-	- 4	0.05	_
Heptachlor (ug/L)					0.04	ug/L
Heptachlor Epoxide (ug/L)	14	j	-		0.20	ug/L
Hexachlorocyclopentadiene (ug/L)	-	4	-	-	50.0	ug/L
Lindane (Gamma-Hexachlor cyclohexane)	1 × 4	1 22	- Y-		0.20	ug/L
2,4 - D (ug/L)		7-7-7	-	-	70.0	
ortho-Dichlorobenzene (ug/L)			-		600.0	
para-Dichlorobenzene (ug/L)	1 1 A		742		75.0	ug/L
1,2-Dichloroethane (ug/L)			-		5.0	
1,1-Dichloroethene (ug/L)	1-1-1	-			7.0	_
cis-1,2-Dichloroethene (ug/L)					70.0	ug/L
trans-1,2-Dichloroethene (ug/L)	-		-	-	100.0	ug/L
1,2-Dichloropropane (ug/L)	17:	-			5.0	ug/L
Ethylbenzene (ug/L)		,	- 2	-	70.0	ug/l
Methoxychlor (ug/L)	-			-	40.0	ug/L
Monochlorobenzene (Chlorobenzene) (ug/L)	-				100.0	ug/l
Pentachlorophenol (ug/L)	-	**	7		1.0	ug/L
Phenois (ug/L)	- 4				100.0	ug/L
Picloram (ug/L)	-		<u> </u>		500.0	ug/L
Polychlorinated Biphenyls (PCBs) (ug/L)	77 (	- 4			0.5	ug/L
Simazine (ug/L)			- 4		4.0	ug/l
Styrene (ug/L)	-				100.0	ug/L
2,4,5-TP (Silvex) (ug/L)	15-		- 7		50	ug/L
Tetrachloroethene (ug/L)	1) - 1-				5.0	ug/l
Toluene (ug/L)	1		74		1,000.0	ug/l
Toxaphene (ug/L)	-		-		3.0	ug/l
1,2,4-Trichlorobenzene (ug/L)		-		-	70.0	
1,1,1-Trichloroethane (ug/L)	1 - T - T-				200.0	ug/l
1,1,2-Trichloroethane (ug/L)	A	-	- 4			ug/l
Trichloroethene (ug/L)	••			**	5.0	ug/l
Vinyl Chloride (ug/L)	( <del>-</del>				2.0	
Xylenes (ug/L)	1		-4	5	10,000.0	ug/l

NOTES:

All units are as noted

### Bolded where the concentration exceeds Class I groundwater quality standards

<: Compound not detected at or above detection limit. Value shown is the detection limit of the compound for the analytical process.

-: Not tested ref: reference MSL: Mean Sea Level LS: Land Surface

	Monitoring Lo	cation MW-4				
Compound	Aug-08	Nov-08	Feb-09	May-09	Class	
List 1		April 1				1.6
Temperature of Water (unfiltered F)	60.30	58.80	53.78	55.04	NA	
Spec Cond. (Unfiltered)	2.132	2.502	1.251	2.154	NA	
pH (Unfiltered units)	6.17	6.29	6.32	6.76	6.5-9.0	1
Elev of GW Surf (ft ref MSL)	487.79	488.10	489.10	489.31	NA	
Depth of Water (ft below LS)	7.64	7.33	6.33	6.12	NA	
BTM Well Elev (ft ref MSL)	473.48	473.48	473.48	473.48	NA	
Depth to Water Fr Mea Pt (ft)	10.61	10.30	9.30	9.09	NA	
List 2 Filtered				1		
Ammonia as N Diss (mg/L)	<0.10	0.16	0.11	0.14	NA	mg/l
Arsenic AS, Diss (ug/L)	8.1	9.1	9.7	11.6	50.0	ug/L
Cadmium Cd, Diss (ug/L)	<2.0	<2.0	<2.0	<2.0		ug/L
Chloride Diss (mg/L)	371.0	303.0	304.0	189.0	200.0	
Iron Fe, Diss (ug/L)	4,420.0	3,450.0	5,080.0	9,810.0	5,000.0	
Lead Pb, Diss (ug/L)	<5.0	<5.0	<5.0	<5.0		ug/L
Manganese Mn, Diss (ug/L)	8,150.0	7,020.0	10,200.0	14,200.0	150.0	
Mercury Hg, Diss (ug/L)	<0.20	<0.20	<0.20 S	<0.20		ug/L
Sulfate SO4, Diss (mg/L)	127.0	101.0	99.0	88.0	400.0	
Total Dissolved Solids (TDS, mg/L)	1,470.0	1,190.0	1,260.0	1,110.0	1,200	
List 2 Unfiltered	1,770.0	1,100.0	1,200.0	7,176.6	1,200	, rigit
Cyanide CN, Total (mg/L)	<0.100	<0.100	<0.100	<0.100	0.20	mg/L
Phenois (Total Recoverable) (ug/L)	<15.0	<15.0	<15.0	<15.0 S		ug/L
Total Organic Carbon (TOC) (mg/L)	1.8	2.2	2.8	3.5		mg/L
Total Organic Halogens (TOX) (ug/L)	135.0	116.0	67.3	96.0 R	NA	_
List 3 Inorganic Parameters Unfiltered	100.0	110.0	07.0	30.011	1363	ugri
Antimony (ug/L)	- 4			<3.0	6.0	ug/L
Arsenic (ug/L)				9.6	50.0	
Barium (ug/L)			-	352.0	2,000.0	
Beryllium (ug/L)				<2.0	4.0	_
Boron (ug/L)	1 1			112.0	2,000.0	
Cadmium (ug/L)				<2.0	5.0	_
Cadmidir (ug/L) Chloride (mg/L)				197.0	200.0	
Chromium (ug/L)	-			<7.0	100.0	
				<50.0		
Cobalt (ug/L)	-			<20.0	1,000.0	_
Copper (ug/L)	-		-			ug/L mg/l
Cyanide (mg/L)	- 7		-	<0.100	4.0	_
Fluoride (mg/L)	-			9,210.0		
Iron (ug/L)	-		-		5,000	
Lead (ug/L)	-		-	<5.0		ug/L
Manganese (ug/L)	-	-		13,900.0	150.0	ug/L
Mercury (ug/L)	-	-		<0.20		ug/L
Nickel (ug/L)				<40.0	100.0	
Nitrate as N (mg/L)	-	-		<1.0		mg/
Selenium (ug/L)	~			<5.0		ug/l
Silver (ug/L)	-		-	<10.0		ug/l
Sulfate (mg/L)		**		89.0	400.0	
Thallium (ug/L)			••	<1.0		ug/l
Total Dissolved Solids (mg/L)	-			1,170.0	1,200.0	
Zinc (ug/L)	-		- 24	<20.0	5,000.0	ug/l
List 3 Organic Parameters Unfiltered						
Alachlor (ug/L)	-			-		ug/l
Aldicarb (ug/L)				-		ug/l
Atrazine (ug/L)		+	- J+			ug/l
Benzene (ug/L)	-		4	<0.50		ug/l
Benzo(a)pyrene (ug/L)			-	-	0.20	ug/

### Supplemental Permit Condition 6b Class I Concentrations Closed Collinsville Landfill

Compound	Aug-08	Nov-08	Feb-09	May-09	Class	11
Carbofuran (ug/L)	-	- 4	- 34		40.0	ug/L
Carbon Tetrachloride (ug/L)	1,22				5.0	_
Chlordane (ug/L)			-		2.0	
Dalapon (ug/L)			-		200.0	_
Dichloromethane (ug/L)	-	- 4-	5-4	<0.50	5.0	_
Bis(2-ethylhexyl)phthalate (ug/L)					6.0	_
1,2-Dibromo-3-chloropropane (ug/L)	*-				0.20	
Dinoseb (DNBP) (ug/L)			- 54		7.0	~
Endothall (ug/L)	-4		7		100.0	
Endrin (ug/L)	- 2	7.		-	2.0	-
Ethylene Dibromide (EDB) (ug/L)			44		0.05	
Heptachlor (ug/L)	1 2				0.04	
Heptachlor Epoxide (ug/L)	-	- 4	74	-	0.20	
Hexachlorocyclopentadiene (ug/L)		-	- 42	42	50.0	ug/l
Lindane (Gamma-Hexachlor cyclohexane)	-		- 4	-	0.20	_
2,4 - D (ug/L)				1	70.0	_
ortho-Dichlorobenzene (ug/L)			144		600.0	_
para-Dichlorobenzene (ug/L)	14		- 4-	<2.0	75.0	_
1,2-Dichloroethane (ug/L)	- 2	-		-	5.0	_
1,1-Dichloroethene (ug/L)				7-0	7.0	$\overline{}$
cis-1,2-Dichloroethene (ug/L)			7.	-	70.0	ug/
trans-1,2-Dichloroethene (ug/L)	-	-		3	100.0	_
1,2-Dichloropropane (ug/L)		**		7-4	5.0	ug/
Ethylbenzene (ug/L)		-		, - , - , - , - , - , , - , , ,	70.0	
Methoxychlor (ug/L)				(m)	40.0	ug/
Monochlorobenzene (Chlorobenzene) (ug/L)		<u>~</u>		<2.0	100.0	ug/
Pentachlorophenol (ug/L)				<0.10	1.0	ug/
Phenols (ug/L)		-	-		100.0	
Picloram (ug/L)	-	-	-	<0.20	500.0	ug/
Polychlorinated Biphenyls (PCBs) (ug/L)	-	4-	-	199	0.5	ug/
Simazine (ug/L)		44		0	4.0	ug/
Styrene (ug/L)				-	100.0	ug/
2,4,5-TP (Silvex) (ug/L)				5-j	50.0	ug/
Tetrachloroethene (ug/L)	14	44		-	5.0	ug/
Toluene (ug/L)		-			1,000.0	ug/
Toxaphene (ug/L)	-			-	3.0	ug/
1,2,4-Trichlorobenzene (ug/L)	0			- · · ·	70.0	ug/
1,1,1-Trichloroethane (ug/L)		-			200.0	ug/
1,1,2-Trichloroethane (ug/L)	- 24			•	5.0	ug/
Trichloroethene (ug/L)			-		5.0	ug/
Vinyl Chloride (ug/L)	*	14		4	2.0	_
Xylenes (ug/L)	_	- 4-		-	10,000.0	ug/

NOTES:

All units are as noted

### Bolded where the concentration exceeds Class I groundwater quality standards

- <: Compound not detected at or above detection limit. Value shown is the detection limit of the compound for the analytical process.
- --: Not tested
- R: RPD outside accepted recovery limits
- S; Spike Recovery outside accepted recovery limits
- ref: reference
- MSL: Mean Sea Level
- LS: Land Surface
- Fr Meas Pt: From Measuring Point

	Monitoring Lo					
Compound	Aug-08	Oct-07	Feb-09	May-09	Class	
List 1						
Temperature of Water (unfiltered F)	4-		53.42	62.42	NA	
Spec Cond. (Unfiltered)		7.0	0.924	1.762	NA	
pH (Unfiltered units)			6.58	6.89	6.5-9.0	
Elev of GW Surf (ft ref MSL)	- 4	- D-	532.28	533.00	NA	
Depth of Water (ft below LS)			29.53	28.49	NA	
BTM Well Elev (ft ref MSL)			521.77	521.77	NA	
Depth to Water Fr Mea Pt (ft)			31.42	30.38	NA	7.
List 2 Filtered						
Ammonia as N Diss (mg/L)			<0.10	<0.10	NA	mg/
Arsenic As, Diss (ug/L)			<5.0	<5.0	50.0	_
Cadmium Cd, Diss (ug/L)	-	-	<2.0	<2.0		ug/l
Chloride Diss (mg/L)	71		69.0	64.0	200.0	mg/
Iron Fe, Diss (ug/L)	-		<40.0	<40.0	5,000.0	ug/l
Lead Pb, Diss (ug/L)		••	<5.0	<5.0	8.0	ug/l
Manganese Mn, Diss (ug/L)		••	181.0	180.0	150.0	
Mercury Hg, Diss (ug/L)		**	<0.20	<0.20		ug/l
Sulfate SO4, Diss (mg/L)	-		87.0	91.0	400.0	
Total Dissolved Solids (TDS, mg/L)	-		930.0	912.0	1,200	mg/
List 2 Unfiltered						
Cyanide CN, Total (mg/L)		-	<0.100	< 0.100	0.20	mg/
Phenois (Total Recoverable) (ug/L)		-	<15.0	<15.0	1.0	
Total Organic Carbon (TOC) (mg/L)	- 24	- 4	3.6	3.8	NA	mg/
Total Organic Halogens (TOX) (ug/L)			51.1	68.4 R	NA	
List 3 Inorganic Parameters Unfiltered						
Antimony (ug/L)		4-		<3.0	6.0	ug/l
Arsenic (ug/L)	-		- 4	<3.0	50.0	
Barium (ug/L)				113.0	2,000.0	
Beryllium (ug/L)				<2.0	4.0	_
Boron (ug/L)		2		57.0	2,000.0	
Cadmium (ug/L)	4.	-	1	<2.0	5.0	_
Chloride (mg/L)		-	- 44	64.0	200.0	
Chromium (ug/L)			344	<7.0	100.0	
Cobalt (ug/L)			72	<50.0	1,000.0	
Copper (ug/L)	-			<20.0	650.0	_
Cyanide (mg/L)	-			<0.100	0.20	
Fluoride (mg/L)	-		- 2	0.31	4.0	_
Iron (ug/L)	-	-		<40.0	5,000	
Lead (ug/L)	-	- 2		<5.0		ug/
Manganese (ug/L)				218.0	150.0	
Mercury (ug/L)		- 7		<0.20		ug/
Nickel (ug/L)	1		- 7	<40.0	100.0	
Nitrate as N (mg/L)	-		- 4			mg/
Selenium (ug/L)				<1.0 <5.0		ug/
Silver (ug/L)				<10.0		ug/
		-				
Sulfate (mg/L) Thallium (ug/L)				92.0	400.0	
	1 7		7	<1.0		ug/
Total Dissolved Solids (mg/L)	-	-	-	934.0	1,200.0	
Zinc (ug/L)	-		-	<20.0	5,000.0	ug/
List 3 Organic Parameters Unfiltered						
Alachlor (ug/L)	- 4	- 7		<2.0		ug/
Aldicarb (ug/L)	-			<2.0		ug/
Atrazine (ug/L)	-			<0.05		ug/
Benzene (ug/L)			**	<1.0	5.0	ug/
Benzo(a)pyrene (ug/L)			-	<0.20	0.20	ug

### Supplemental Permit Condition 6b Class I Concentrations Closed Collinsville Landfill

Compound	Aug-08	Oct-07	Feb-09	May-09	Class I	
Carbofuran (ug/L)	E.V. Jan	X-		<10.0	40.0	ug/l
Carbon Tetrachloride (ug/L)	100		74	E Per	5.0	ug/L
Chlordane (ug/L)		W.	12	< 0.14	2.0	ug/L
Dalapon (ug/L)		1-2-		<1.3	200.0	ug/L
Dichloromethane (ug/L)	- 4			0.30 B	5.0	ug/L
Bis(2-ethylhexyl)phthalate (ug/L)	1.	- 4		<6.0	6.0	_
1,2-Dibromo-3-chloropropane (ug/L)	14		- 0-	<0.20	0.20	_
Dinoseb (DNBP) (ug/L)			1	<0.70	7.0	ug/L
Endothall (ug/L)	4	-1-	7-	<10.0	100.0	
Endrin (ug/L)		- 4	-	<0.06	2.0	ug/L
Ethylene Dibromide (EDB) (ug/L)	- 4	-	-	< 0.05	0.05	ug/L
Heptachlor (ug/L)				< 0.04	0.04	
Heptachlor Epoxide (ug/L)		(		<0.20	0.20	
Hexachlorocyclopentadiene (ug/L)	-	- 4		<4.0	50.0	ug/L
Lindane (Gamma-Hexachlor cyclohexane)		1.2	-	< 0.04	0.20	
2,4 - D (ug/L)		-		<12.0	70.0	
ortho-Dichlorobenzene (ug/L)				<5.0	600.0	_
para-Dichlorobenzene (ug/L)	0.74	-	1	<5.0	75.0	_
1,2-Dichloroethane (ug/L)				<5.0	5.0	_
1,1-Dichloroethene (ug/L)		- 12-		<5.0	7.0	ug/l
cis-1,2-Dichloroethene (ug/L)		7		<5.0	70.0	ug/l
trans-1,2-Dichloroethene (ug/L)			1 5	<5.0	100.0	_
1,2-Dichloropropane (ug/L)	-		4 12	<5.0	5.0	ug/l
Ethylbenzene (ug/L)	-	7-2	-	<5.0	70.0	ug/l
Methoxychlor (ug/L)		- 94	F = 144	< 0.50	40.0	ug/l
Monochlorobenzene (Chlorobenzene) (ug/L)		-	-	<5.0	100.0	ug/l
Pentachlorophenol (ug/L)		-		<0.10	1.0	ug/l
Phenois (ug/L)	1		-	<15.0	100.0	ug/l
Picloram (ug/L)		1-		<0.20	500.0	ug/l
Polychlorinated Biphenyls (PCBs) (ug/L)		<u>~</u>	7.4	<0.50	0.5	ug/l
Simazine (ug/L)				<4.0	4.0	ug/l
Styrene (ug/L)	-4	**		<5.0	100.0	ug/l
2,4,5-TP (Silvex) (ug/L)			-	<5.0	50.0	ug/l
Tetrachloroethene (ug/L)			/94	< 0.70	5.0	
Toluene (ug/L)		4	-	<5.0	1,000.0	ug/l
Toxaphene (ug/L)		- **		<2.40	3.0	ug/l
1,2,4-Trichlorobenzene (ug/L)	-	-	e - 1/44	<10.0	70.0	ug/
1,1,1-Trichloroethane (ug/L)	-	-	<u></u>	<5.0	200.0	
1,1,2-Trichloroethane (ug/L)		7-	-	<0.50	5.0	ug/l
Trichloroethene (ug/L)				<1.0	5.0	_
Vinyl Chloride (ug/L)				<1.0	2.0	ug/
Xylenes (ug/L)	-			<5.0	10,000.0	ug/

NOTES:

All units are as noted

### Bolded where the concentration exceeds Class I groundwater quality standards

- <: Compound not detected at or above detection limit. Value shown is the detection limit of the compound for the analytical process.
- --: Not tested
- B: Analyte detected in the associated Method Blank
- R: RPD outside accepted recovery limits
- ref: reference

MSL: Mean Sea Level

LS: Land Surface

## Exhibit 5-3 Historical Sampling (2009-2010) Information Previously Sent to IEPA in July 2010 (Tables 5-3.1, 5-2.2, 5-3.3, 5-2.4)

	Monitoring Loc		T	44		
Compound	Aug-09	Oct-09	Feb-10	May-10	Class	
List 1					-	_
Temperature of Water (unfiltered F)	62.37	58.68	49.95	54.72	NA	
Spec Cond. (Unfiltered)	1.913	2.870	1.997	2.480	NA	
pH (Unfiltered units)	6.36	6.51	6.84	7.00	6.5-9.0	
Elev of GW Surf (ft ref MSL)	488.75	488.88	489.88	490.90	NA	
Depth of Water (ft below LS)	7.43	7.30	6.30	5.28	NA	_
BTM Well Elev (ft ref MSL)	472.20	472.20	472.20	472.20	NA	
Depth to Water Fr Mea Pt (ft)	10.15	10.02	9.02	8.00	NA	
List 2 Filtered						
Ammonia as N Diss (mg/L)	0.47 S	0.28 S	<0.10 S	0.26	NA	mg/
Arsenic AS, Diss (ug/L)	<5.0	<5.0	<5.0	5.1	50.0	ug/l
Cadmium Cd, Diss (ug/L)	<2.0	<2.0	<2.0	<2.0	5.0	ug/
Chloride Diss (mg/L)	374.0	288.0	314.0	341.0	200.0	mg/
Iron Fe, Diss (ug/L)	856.0	386.0	<40.0	6,760.0	5,000.0	
Lead Pb, Diss (ug/L)	<5.0	<5.0	<5.0	<5.0	8.0	_
Manganese Mn, Diss (ug/L)	3,360.0	2,400.0	2,470.0	4,270.0	150.0	
Mercury Hg, Diss (ug/L)	<0.20	<0.20	<0.20	<0.20 S		ug/
Sulfate SO4, Diss (mg/L)	95.0	91.0	103.0	94.0	400.0	
Total Dissolved Solids (TDS, mg/L)	1,390.0 H	1,370.0	1,530.0	1,630.0*	1,200.0	_
List 2 Unfiltered		.,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	10-22.2	1	.,,	
Cyanide CN, Total (mg/L)	<0.100	<0.100	<0.100	<0.100	0.20	mg/
Phenois (Total Recoverable) (ug/L)	<15.0	<15.0	<15.0	<15.0	100.0	
Total Organic Carbon (TOC) (mg/L)	3.5	3.0	2.4	1.4		mg/
Total Organic Halogens (TOX) (ug/L)	171.0	115.0	156.6	44.8**	NA	
List 3 Inorganic Parameters Unfiltered	17.110	1,0.0	100.0	7,1.0	(47)	ug,
Antimony (ug/L)		- 4		<3.0	6.0	ug/l
Arsenic (ug/L)		-		4.3	50.0	
Barium (ug/L)			- 2	223.0	2,000.0	_
Beryllium (ug/L)				<2.0		ug/
Boron (ug/L)		-	7.4	129.0	2,000.0	
Cadmium (ug/L)				<2.0	5.0	
Chloride (mg/L)			-	325.0	200.0	
			-	<7.0		
Chromium (ug/L)	-	-		<50.0	100.0	_
Cobalt (ug/L)		-			1,000.0	_
Copper (ug/L)			-	<20.0	650.0	
Cyanide (mg/L)	-	-	-	<0.100		mg/
Fluoride (mg/L)	-	-		0.15	4.0	
Iron (ug/L)				7,150.0	5,000.0	_
Lead (ug/L)	**			<5.0		ug/
Manganese (ug/L)	-			4,310.0	150.0	
Mercury (ug/L)	-			<0.20		ug/
Nickel (ug/L)	-		-	<40.0	100.0	
Nitrate as N (mg/L)		-		<1.0		mg/
Selenium (ug/L)	- P = = E   • •	14-		<5.0		ug/
Silver (ug/L)	•			<10.0		ug/
Sulfate (mg/L)	- 77	-	7-2	94.0	400.0	_
Thallium (ug/L)	74		*	<1.0		ug/
Total Dissolved Solids (mg/L)	·			1,490.0*	1,200.0	
Zinc (ug/L)	-		- 4	<20.0	5,000.0	ua/

### Supplemental Permit Condition 6b Class I Concentrations Closed Collinsville Landfill

Monitoring Location MW-1									
Compound	Aug-09	Oct-09	Feb-10	May-10	Class I				
List 3 Organic Parameters Unfiltered									
Benzene (ug/L)		- (-		<0.15	5.0	ug/L			
Dichloromethane (ug/L)		**		<0.15		ug/L			
para-Dichlorobenzene (ug/L)			- 10	< 0.25	75.0	ug/L			
Monochlorobenzene (Chlorobenzene) (ug/L)				< 0.25	100.0	ug/L			
Pentachlorophenol (ug/L)	4			< 0.069	1.0	ug/L			
Picloram (ug/L)	-	-		< 0.056	500.0	ug/L			

NOTES:

All units are as noted

### Bolded where the concentration exceeds Class I groundwater quality standards

- <: Compound not detected at or above detection limit. Value shown is the detection limit of the compound for the analytical process.
- -: Not tested
- \* Indicates a laboratory instrument malfunction and results were not obtained. There was insufficient sample to reanalize the sample. The sample was recollected on March 16, 2010 and the results are reported above.
- \*\* Indicates a laboratory instrument malfunction and results were not obtained. There was insufficient sample to reanalize the sample. The sample was recollected on June 29, 2010 and the results are reported above.
- R: RPD outside accepted recovery limits
- S: Spike Recovery outside accepted recovery limits

ref: reference MSL: Mean Sea Level LS: Land Surface

Table 5-3.2

4.5	Monitoring Loc		5-1-40 T	May 10	-	
Compound	Aug-09	Oct-09	Feb-10	May-10	Class	Charles and
List 1	50.00	57.00	40.70	50.05	NIA	-
Temperature of Water (unfiltered F)	58.60	57.22	48.72	52.05	NA NA	-
Spec Cond. (Unfiltered)	0.624	1.087	0.722	0.678	NA O C D D	_
pH (Unfiltered units)	6.34	6.65	6.85	6.33	6.5-9.0	_
Elev of GW Surf (ft ref MSL)	485.60	487.28	486.91	487.95	NA	-
Depth of Water (ft below LS)	9.48	7.80	8.17	7.13	NA	_
BTM Well Elev (ft ref MSL)	480.30	480.30	480.30	480.30	NA	_
Depth to Water Fr Mea Pt (ft)	10.70	9.02	9.39	8.35	NA	
List 2 Filtered					_	
Ammonia as N Diss (mg/L)	<0.10	<0.10	<0.10	<0.10	NA	
Arsenic As, Diss (ug/L)	<5.0	<5.0	<5.0	<5.0		ug/
Cadmium Cd, Diss (ug/L)	<2.0	<2.0	<2.0	<2.0		ug/
Chloride Diss (mg/L)	27,0 S	20.0	10.0	6.0	200.0	
Iron Fe, Diss (ug/L)	<40.0	76.8	<40.0	46.5	5,000.0	ug/
Lead Pb, Diss (ug/L)	<5.0	<5.0	<5.0	<5.0	8.0	ug/
Manganese Mn, Diss (ug/L)	53.40	<15.0	<15.0	<15.0	150.0	ug/
Mercury Hg, Diss (ug/L)	<0.20	<0.20	<0.20	<0.20	2.0	ug/
Sulfate SO4, Diss (mg/L)	119.0	104.0	92.0	66.0	400.0	mg/
Total Dissolved Solids (TDS, mg/L)	482.0 H	406.0	368.0	288.0	1,200.0	mg/
List 2 Unfiltered		1				
Cyanide CN, Total (mg/L)	<0.100	<0.100	< 0.100	< 0.100	0.20	mg/
Phenols (Total Recoverable) (ug/L)	<15.0	<15.0	<15.0	<15.0	100.0	
Total Organic Carbon (TOC) (mg/L)	1.6	3.2	1.1	1.1	NA	_
Total Organic Halogens (TOX) (ug/L)	<20.0	22.0	<20.0	28.4**	NA	_
List 3 Inorganic Parameters Unfiltered					- '"'	-3
Antimony (ug/L)				<3.0	6.0	ug/
Arsenic (ug/L)	-	-		<3.0	50.0	
Barium (ug/L)		1.	7.0	54.0	2,000.0	
Beryllium (ug/L)				<2.0	4.0	_
Boron (ug/L)		-		53.4	2,000.0	
Cadmium (ug/L)		-	4-	<2.0	5.0	
Chloride (mg/L)				5.0	200.0	
Chromium (ug/L)		-	_	<7.0	100.0	
Cobalt (ug/L)				<50.0	1,000.0	
Copper (ug/L)		1 5		<20.0	650.0	
				<0.100		mg/
Cyanide (mg/L)	-		- 22			_
Fluoride (mg/L)	-		**	0.18		mg/
Iron (ug/L)	-	-	-	260.0	5,000.0	
Lead (ug/L)				<5.0		ug/
Manganese (ug/L)				<15.0	150.0	
Mercury (ug/L)	-	-		<0.20		ug/
Nickel (ug/L)		-		<40.0	100.0	
Nitrate as N (mg/L)	144			<1.0		mg
Selenium (ug/L)		-	-	<5.0		ug/
Silver (ug/L)			-	<10.0		ug
Sulfate (mg/L)	44	1-4	100	66.0	400.0	
Thallium (ug/L)				<1.0		ug/
Total Dissolved Solids (mg/L)				278.0	1,200.0	
Zinc (ug/L)			- 4	<20.0	5,000.0	ug

### Supplemental Permit Condition 6b Class I Concentrations Closed Collinsville Landfill

Monitoring Location MW-2									
Compound	Aug-09	Oct-09	Feb-10	May-10	Class	7			
List 3 Organic Parameters Unfiltered	11 - 1								
Benzene (ug/L)			-	<0.15	5.0	ug/L			
Dichloromethane (ug/L)		1 2 24		<0.15	5.0	ug/L			
para-Dichlorobenzene (ug/L)		244		<0.25	75.0	ug/L			
Monochlorobenzene (Chlorobenzene) (ug/L)			- V-	< 0.25	100.0	ug/L			
Pentachiorophenol (ug/L)	-	-		< 0.069	1.0	ug/L			
Picloram (ug/L)	T	4	154	< 0.056	500.0	ug/L			

NOTES:

All units are as noted

### Bolded where the concentration exceeds Class I groundwater quality standards

- <: Compound not detected at or above detection limit. Value shown is the detection limit of the compound for the analytical process.</p>
- : Not tested
- \*\* Indicates a laboratory instrument malfunction and results were not obtained. There was insufficient sample to reanalize the sample. The sample was recollected on June 30, 2010 and the results are reported above.
- S: Spike Recovery outside accepted recovery limits

ref: reference

MSL: Mean Sea Level

LS: Land Surface

0.0000000000000000000000000000000000000	Monitoring Loc		F-4-40 T	Mary 40 I	01	
Compound	Aug-09	Oct-09	Feb-10	May-10	Class I	
List 1	50.50	57.50	50.40	50.00	414	0 1
Temperature of Water (unfiltered F)	59.56	57.56	52.16	53.26	NA	-
Spec Cond. (Unfiltered)	1.893	2.863	1.773	1.501	NA 0.5.0.0	_
pH (Unfiltered units)	6.13	6.41	6.55	6.91	6.5-9.0	-
Elev of GW Surf (ft ref MSL)	488.00	488.25	489.46	490.61	NA	
Depth of Water (ft below LS)	7.43	7.18	5.97	4.82	NA	
BTM Well Elev (ft ref MSL)	472.00	472.00	472.00	472.00	NA	
Depth to Water Fr Mea Pt (ft)	10.40	10.15	8.94	7.79	NA	-
List 2 Filtered						
Ammonia as N Diss (mg/L)	<0.10	0.13	0.12	0.13		mg/l
Arsenic AS, Diss (ug/L)	<10.0	9.5	10.6	18.1	50.0	_
Cadmium Cd, Diss (ug/L)	<2.0	<2.0	<2.0	<2.0	5.0	_
Chloride Diss (mg/L)	374.0	263.0	222.0	101.0	200.0	_
Iron Fe, Diss (ug/L)	5,820.0	6,100.0	9,580.0	18,800.0 S	5,000.0	
Lead Pb, Diss (ug/L)	<5.0	<5.0	<5.0	<5.0	8.0	
Manganese Mn, Diss (ug/L)	9,750.0	9,470.0	11,800.0	15,700.0 S	150.0	
Mercury Hg, Diss (ug/L)	<0.20	<0.20	<0.20	<0.20	2.0	
Sulfate SO4, Diss (mg/L)	111.0	96.0	89.0	27.0	400.0	
Total Dissolved Solids (TDS, mg/L)	1,440.0	1,380.0	1,190.0	890.0	1,200	mg/l
List 2 Unfiltered			+			
Cyanide CN, Total (mg/L)	<0.100	< 0.100	< 0.100	<0.100	0.20	mg/l
Phenois (Total Recoverable) (ug/L)	<15.0	<15.0	16.0	<15.0	100.0	ug/L
Total Organic Carbon (TOC) (mg/L)	2.9	2.9	3.2	3.6	NA	mg/l
Total Organic Halogens (TOX) (ug/L)	229.0	88.8 S	84.4	38.6**	NA	ug/L
List 3 Inorganic Parameters Unfiltered	30					100
Antimony (ug/L)	-			<3.0	6.0	ug/L
Arsenic (ug/L)		- 4	- 34	17.6	50.0	
Barium (ug/L)				337.0	2,000.0	
Beryllium (ug/L)		200	-	<2.0		ug/L
Boron (ug/L)	-		-	114.0	2,000.0	
Cadmium (ug/L)	-	- 4	-	<2.0	5.0	
Chloride (mg/L)		- 4		98.0	200.0	
Chromium (ug/L)		-		<7.0	100.0	
Cobalt (ug/L)			3.4	<50.0	1,000.0	
Copper (ug/L)		- 4		<20.0	650.0	
Cyanide (mg/L)	-	72	7.	<0.100		mg/l
Fluoride (mg/L)	- 22	7.	- 2	0.26	4.0	
Iron (ug/L)			1	18,600.0	5,000	
Lead (ug/L)				<5.0	7.5	_×
Manganese (ug/L)	-			16,100.0	150.0	ug/L
Mercury (ug/L)				<0.20		ug/L
	-	- 77			100.0	
Nickel (ug/L)			-	<40.0		
Nitrate as N (mg/L)		-	(44)	<1.0		mg/
Selenium (ug/L)	-		-	<5.0	50.0	
Silver (ug/L)			-	<10.0		ug/l
Sulfate (mg/L)	-			27.0	400.0	_
Thallium (ug/L)	7	-	- 4	<1.0	2.0	
Total Dissolved Solids (mg/L)	-		-	878.0	1,200.0	
Zinc (ug/L)		.44	J	<20.0	5,000.0	u

### Supplemental Permit Condition 6b Class I Concentrations Closed Collinsville Landfill

Monitoring Location MW-4									
Compound	Aug-09	Oct-09	Feb-10	May-10	Class	1			
List 3 Organic Parameters Unfiltered	7					rest			
Benzene (ug/L)		-	7	<0.15	5.0	ug/L			
Dichloromethane (ug/L)			4 - 4	<0.15	5.0	ug/L			
para-Dichlorobenzene (ug/L)		-	(inter-	<0.25	75.0	ug/L			
Monochlorobenzene (Chlorobenzene) (ug/L)			- (m	< 0.25	100.0	ug/L			
Pentachlorophenol (ug/L)	-		-	< 0.069	1.0	ug/L			
Picloram (ug/L)	9-5	-	(94	< 0.056	500.0	ug/L			

NOTES:

All units are as noted

### Bolded where the concentration exceeds Class I groundwater quality standards

- <: Compound not detected at or above detection limit. Value shown is the detection limit of the compound for the analytical process.
- -: Not tested
- \*\* Indicates a laboratory instrument malfunction and results were not obtained. There was insufficient sample to reanalize the sample. The sample was recollected on June 29, 2010 and the results are reported above.
- R: RPD outside accepted recovery limits
- S: Spike Recovery outside accepted recovery limits

ret: reterence

MSL: Mean Sea Level LS: Land Surface

	Monitoring Loc					
Compound	Aug-09	Oct-09	Feb-10	May-10	Class	
List 1						
Temperature of Water (unfiltered F)	67.62	57.56	55.81	60.12	NA	
Spec Cond. (Unfiltered)	1.205	1.831	1.300	1.472	NA	
pH (Unfiltered units)	6.30	6.69	6.86	6.73	6.5-9.0	
Elev of GW Surf (ft ref MSL)	533.73	532.14	534.76	534.51	NA	
Depth of Water (ft below LS)	28.08	29.67	27.05	27.30	NA	
BTM Well Elev (ft ref MSL)	521.77	521.77	521.77	521.77	NA	
Depth to Water Fr Mea Pt (ft)	29.97	31.56	28.94	29.19	NA	
List 2 Filtered		- 76				
Ammonia as N Diss (mg/L)	<0.10	<0.10	<0.10	<0.10	NA	mg/
Arsenic As, Diss (ug/L)	<5.0	<5.0	<5.0	<5.0	50.0	ug/l
Cadmium Cd, Diss (ug/L)	<2.0	<2.0	<2.0	<2.0	5.0	ug/l
Chloride Diss (mg/L)	61.0	58.0	66.0	64.0	200.0	mg/
Iron Fe, Diss (ug/L)	<40.0	<40.0	<40.0	<40.0	5,000.0	ug/l
Lead Pb, Diss (ug/L)	<5.0	<5.0	<5.0	<5.0	8.0	ug/l
Manganese Mn, Diss (ug/L)	212.0	220.0	205.0	160.0	150.0	ug/l
Mercury Hg, Diss (ug/L)	<0.20	<0.20	<0.20	<0.20	2.0	ug/
Sulfate SO4, Diss (mg/L)	90.0	82.0	91.0	84.0	400.0	
Total Dissolved Solids (TDS, mg/L)	882.0 H	904.0 H	864.0	928.0	1,200	
List 2 Unfiltered						
Cyanide CN, Total (mg/L)	<0.100	< 0.100	<0.100	<0.100	0.20	ma/
Phenols (Total Recoverable) (ug/L)	<15.0	<15.0	19.0	<15.0	100.0	_
Total Organic Carbon (TOC) (mg/L)	3.8	4.2	4.0	3.2		mg/
Total Organic Halogens (TOX) (ug/L)	255.0	59.6	49.0	48.6**	NA	
List 3 Inorganic Parameters Unfiltered						-
Antimony (ug/L)	<3.0	<5.0	<5.0	<3.0	6.0	ug/
Arsenic (ug/L)	<3.0	<3.0	<3.0	<3.0	50.0	
Barium (ug/L)	107.0	104.0	101.0	95.4	2,000.0	
Beryllium (ug/L)	<2.0	<1.0	<1.0	<2.0	4.0	
Boron (ug/L)	68.6	70.5	81.6	80.3	2,000.0	
Cadmium (ug/L)	<2.0	<2.0	<2.0	<2.0	5.0	
Chloride (mg/L)	60.0 S	58.0 S	50.0	65.0	200.0	-
Chromium (ug/L)	<7.0	<10.0	<10.0	<7.0	100.0	-
Cobalt (ug/L)	<50.0	<10.0	<10.0	<50.0	1,000.0	
Copper (ug/L)	<20.0	<10.0	10.1	<20.0	650.0	_
Cyanide (mg/L)	<0.100	<0.100	<0.100	<0.100	0.20	
Fluoride (mg/L)	0.38	0.35	0.41	0.33	4.0	
Iron (ug/L)	474.0	56.7	42.1	174.0	5,000	_
Lead (ug/L)	<5.0	<2.0	<2.0	<5.0		ug/
Manganese (ug/L)	225.0	222.0	201.0	149.0	150.0	
Mercury (ug/L)	<0.20	<0.20	<0.20 S	<0.20 S		ug/
	<40.0	<10.0	<10.0	<40.0	100.0	
Nickel (ug/L)	<1.0	<0.01	<0.05	<1.0		mg/
Nitrate as N (mg/L)						
Selenium (ug/L)	<5.0	<6.0	<6.0	<5.0		ug/
Silver (ug/L)	<10.0 B	<10.0	<10.0	<10.0		ug/
Sulfate (mg/L)	89.0	82.0 S	91.0	88.0	400.0	
Thallium (ug/L)	<1.0	<2.0	<2.0	<1.0	2,0	
Total Dissolved Solids (mg/L)	894.0	924.0	856.0	916.0	1,200.0	_
Zinc (ug/L)	<20.0	<10.0	<10.0	<20.0	5,000.0	ug/
List 3 Organic Parameters Unfiltered	12.50					
Alachlor (ug/L)	<0.01	<0.01	<0.01			ug
Aldicarb (ug/L)	<0.50	<0.50	<0.50			ug
Atrazine (ug/L)	<0.05	<0.05	<0.05			ug
Benzene (ug/L)	<0.15	<0.15	<0.15	<0.15		ug
Benzo(a)pyrene (ug/L)	<0.08	<0.08	<0.08	1029	0.20	ug

### Supplemental Permit Condition 6b Class I Concentrations Closed Collinsville Landfill

Compound	Aug-09	Oct-09	Feb-10	May-10	Class I	
Carbofuran (ug/L)	<0.50	< 0.50	<0.50		40.0	
Chlordane (ug/L)	< 0.02	<0.02	<0.02	-	2.0	ug/L
Dalapon (ug/L)	< 0.60	< 0.60	<0.60	- L	200.0	ug/L
Dichloromethane (ug/L)	0.32	0.25	0.21	<0.15	5.0	ug/L
Bis(2-ethylhexyl)phthalate (ug/L)	<2.0	<2.0	<2.0		6.0	ug/L
1,2-Dibromo-3-chloropropane (ug/L)	<0.05	< 0.05	< 0.05		0.20	ug/L
Dinoseb (DNBP) (ug/L)	< 0.037	< 0.037	< 0.037		7.0	ug/L
Endothall (ug/L)	<10.0	<10.0	<10.0		100.0	ug/L
Endrin (ug/L)	<0.02	< 0.02	< 0.02		2.0	ug/L
Ethylene Dibromide (EDB) (ug/L)	< 0.05	< 0.05	< 0.05	-	0.05	ug/L
Heptachlor (ug/L)	<0.01	< 0.01	< 0.01		0.04	
Heptachlor Epoxide (ug/L)	<0.02	< 0.02	< 0.02	-	0.20	ug/L
Hexachlorocyclopentadiene (ug/L)	<2.0	<2.0	<2.0	- 4	50.0	ug/L
Lindane (Gamma-Hexachlor cyclohexane)	< 0.03	< 0.03	< 0.03	-	0.20	
2,4 - D (ug/L)	< 0.09	< 0.09	< 0.09		70.0	
ortho-Dichlorobenzene (ug/L)	<0.25	< 0.25	< 0.25		600.0	ug/L
para-Dichlorobenzene (ug/L)	<0.25	< 0.25	< 0.25	< 0.25	75.0	ug/L
1,2-Dichloroethane (ug/L)	<0.25	< 0.25	< 0.25		5.0	ug/L
1,1-Dichloroethene (ug/L)	< 0.25	< 0.25	<0.25	1944	7.0	ug/L
cis-1,2-Dichloroethene (ug/L)	<0.30	< 0.30	< 0.30	6-	70.0	_
trans-1,2-Dichloroethene (ug/L)	< 0.25	< 0.25	< 0.25		100.0	
1,2-Dichloropropane (ug/L)	<0.25	< 0.25	< 0.25	14.	5.0	ug/L
Ethylbenzene (ug/L)	< 0.25	< 0.25	< 0.25	1.2	70.0	
Methoxychlor (ug/L)	< 0.02	< 0.02	< 0.02	- 0	40.0	ug/L
Monochlorobenzene (Chlorobenzene) (ug/L)	<0.25	< 0.25	<0.25	< 0.25	100.0	
Pentachlorophenol (ug/L)	< 0.069	< 0.069	< 0.069	< 0.069	1.0	ug/L
Phenois (ug/L)	<15.0	<15.0	19.0	<15.0	100.0	ug/L
Picloram (ug/L)	< 0.056	< 0.056	< 0.056	< 0.056	500.0	ug/L
Polychlorinated Biphenyls (PCBs) (ug/L)	<0.50	<0.50	< 0.50		0.5	ug/L
Simazine (ug/L)	<0.50	< 0.50	<0.50		4.0	ug/L
Styrene (ug/L)	< 0.25	<0.25	< 0.25		100.0	ug/L
2,4,5-TP (Silvex) (ug/L)	< 0.09	< 0.09	<0.09		50.0	ug/L
Tetrachloroethene (ug/L)	<0.15	< 0.15	< 0.15	-	5.0	ug/L
Toluene (ug/L)	<0.25	<0.25	<0.25		1,000.0	ug/L
Toxaphene (ug/L)	< 0.35	< 0.35	< 0.35		3.0	ug/L
1,2,4-Trichlorobenzene (ug/L)	<0.25	<0.25	· <0.25		70.0	_
1,1,1-Trichloroethane (ug/L)	<0.30	<0.30	<0.30		200.0	ug/L
1,1,2-Trichloroethane (ug/L)	<0.15	<0.15	<0.15		5.0	ug/L
Trichloroethene (ug/L)	<0.25	< 0.25	<0.25		5.0	
Vinyl Chloride (ug/L)	<0.25	<0.25	<0.25	-	2.0	ug/L
Xylenes (ug/L)	< 0.30	< 0.30	<0.30	-	10,000.0	-

NOTES:

All units are as noted

### Bolded where the concentration exceeds Class I groundwater quality standards

- <: Compound not detected at or above detection limit. Value shown is the detection limit of the compound for the analytical process.
- -: Not tested

- B: Analyte detected in the associated Method Blank
- R: RPD outside accepted recovery limits

ref: reference

MSL: Mean Sea Level LS: Land Surface

<sup>\*\*</sup> Indicates a laboratory instrument malfunction and results were not obtained. There was insufficient sample to reanalize the sample. The sample was recollected on June 30, 2010 and the results are reported above.

### Exhibit 5-4

Background Data Sets from 2007 and 2010

(Appendix E – Table 1 modified 7/28/2010 and Table 14 version 3) Previously Sent to IEPA in April 2010 and November 2008, Respectively

### Appendix E - Table 1 (Modified 7/28/2010)

### Statistical Calculations for Background Re-establishment for MW-6 Closed Collinsville Landfill

Monitoring Location MW6: Background				Marina I	51 4 1 41 AT	T.		•	W. T.	To: D	T 000/ 01	000				
	5/19/2009	8/5/2009   1	0/13/2009   2	/18/2010	Distribution <sup>4</sup>	Minimum   N	laximum	Average	Variance	St. Dev.	99%CL	95%CI				
List 1	-				Calculated in 2	000 Can table	44 \/a-pie	- 2		_						
Temperature of Water (unfiltered F)						Table 1 of the latest and the latest										
Spec Cond. (Unfiltered)	-	Calculated in 2008 See table 14 Version 3 Calculated in 2008 See table 14 Version 3														
pH (Unfiltered units)		Calculated in 2008 See table 14 Version 3														
Elev of GW Surf (ft ref MSL)	Calculated in 2008 See table 14 Version 3  Calculated in 2008 See table 14 Version 3															
Depth of Water (ft below LS)	Calculated in 2008 See table 14 Version 3  Calculated in 2008 See table 14 Version 3															
BTM Well Elev (ft ref MSL)																
Depth to Water Fr Mea Pt (ft)					Calculated in 2	008 See table	14 Version	n 3								
List 2 Filtered																
Ammonia as N Diss (mg/L)	<0.10	<0.10	<0.10	<0.10	NA	<0.10	<0.10	<0.10	NA	NA	0.10	0.10				
Arsenic AS, Diss (ug/L)	<5.00	<5.00	<5.00	<5.00	NA	<5.00	<5.00	<5.00	NA	NA	5.00	5.00				
Cadmium Cd, Diss (ug/L)	<2.00	<2.00	<2.00	<2.00	NA	<2.00	<2.00	<2.00	NA	NA	2.00	2.00				
Chloride Diss (mg/L)	64.00	61.00	58.00	66.00	Normal	58.00	66.00	62.25	12.3	3.50	80.02	71.46				
Iron Fe, Diss (ug/L)	<40.00	<40.00	<40.00	<40.00	NA	<40.00	<40.00	<40.00	NA	NA	40.00	40.00				
Lead Pb, Diss (ug/L)	<5.00	<5.00	<5.00	<5.00	NA.	<5.00	<5.00	<5.00	NA	NA	5.00	5.00				
Manganese Mn, Diss (ug/L)	180.00	212.00	220.00	205.00	Normal	180.00	220.00	204.25	298.9	17.29	292.03	249.73				
Mercury Hg, Diss (ug/L)	<0.2	<0.2	<0.2	<0.2	NA	<0.2	<0.2	<0.2	NA	NA	0.2000	0.2000				
Sulfate SO4, Diss (mg/L) b	91.00	90.00	82.00	91.00	Lognormal	82.00	91.00	88.50	19.0	4.36	113.47	101.85				
Total Dissolved Solids (TDS, mg/L)	912.00	882.00	904.00	864.00	Normal	864.00	912.00	890.50	473.0	21.75	1,000.92					
List 2 Unfiltered	0.2.00	002.00.	00 1.00 ]	55 1.55	1,0,1,1,0,1	00 1100	0,0,00	000.00	37.0.0	1 2 1110	7,000,00	4				
Cyanide CN, Total (mg/L)	<0.1	<0.11	<0.1	<0.1	NA I	<0.1	<0.1	<0.1	NA	NA.	T 0 1000	0 1000				
Phenois (Total Recoverable) (ug/L)	40.11	<0.1 <0.1 <0.1 NA <0.1 <0.1 <0.1 NA NA 0.1000 0.10 Calculated in 2008 See table 14 Version 3														
Total Organic Carbon (TOC) (mg/L)					Calculated in 2					_		_				
Total Organic Carbon (TOC) (mg/L) Total Organic Halogens (TOX) (ug/L)					Calculated in 2											
					Calculated in 2	OUO See table	e 14 Version	13			_	_				
List 3 Inorganic Parameters Unfiltered	7 -201	-2.0[	4E 0	<5.0	NA T	<3.0	<5.0	NA I	NA	l NA	5.00	1 = 00				
Antimony (ug/L)	<3.0	<3.0	<5.0		7 77 7				NA	NA.	5.00	5.00				
Arsenic (ug/L)	_				Calculated in 2				_		_	_				
Barium (ug/L)			· aal		Calculated in 2						1 - 1 -					
Beryllium (ug/L)	<2.00	<2.00	<1.00	<1.00	NA	<1.00	<2.00	NA	NA	NA	2.00	2.00				
Boron (ug/L)	57.00	68.60	70.50	81.60	Normal	57.00	81.60	69.43	101.5	10.07	120.57	95.93				
Cadmium (ug/L)	<2.0	<2.0	<2.0	<2.0	NA	<2.0	<2.0	<2.0	NA	NA	2.00	2.00				
Chloride (mg/L)					Calculated in 2											
Chromium (ug/L)	<7.0	<7.0	<10.0	<10.0	NA	<7.0	<7.0	NA	NA	NA	10.00	10.00				
Cobalt (ug/L)	<50.0	<50.0	<10.0	<10.0	NA	<10.0	<50.0	NA .	NA	NA	50.00	50.00				
Copper (ug/L)	<20.0	<20.0	<10.0	<10.0	NA	<10.0	<20.0	NA	NA	NA	20.00	20.00				
Cyanide (mg/L)	<0.10	<0.10	<0.10	<0.10	NA	<0.10	< 0.10	<0.10	NA	NA	0.10	0.10				
Fluoride (mg/L)	0.31	0.38	0.35	0.41	Normal	0.31	0.41	0.36	0.0	0.04	0.58	0.47				
Iron (ug/L)					Calculated in 2	008 See table	e 14 Version	n 3								
Lead (ug/L)	<5.0	<5.0	<2.0	<2.0	NA	<2.0	<5.0	NA	NA	NA	5.00	5.00				
Manganese (ug/L)					Calculated in 2	008 See table	e 14 Version	n 3								
		-0.0	<0.2	<0.2	NA	<0.2	<0.2	<0.2	NA	NA	0.20	0.20				
Mercury (ug/L)	<0.2	< 0.2	NU.21			<0.2					74.44					
Mercury (ug/L) Nickel (ug/L)	<0.2			<10.0	NA			NA	NA	NA	40.00	I 40.00				
Nickel (ug/L)	<40.0	<40.0	<10.0	<10.0	NA	<10.0	<40.0				1.00					
Nickel (ug/L) Nitrate as N (mg/L)	<40.0 <1.0	<40.0 <1.0	<10.0 <0.01	<10.0 <0.01	NA NA	<10.0 <0.01	<40.0 <1.0	NA	NA	NA	1.00	1.00				
Nickel (ug/L) Nitrate as N (mg/L) Selenium (ug/L)	<40.0 <1.0 <5.0	<40.0 <1.0 <5.0	<10.0 <0.01 <6.0	<10.0 <0.01 <6.0	NA NA NA	<10.0 <0.01 <5.0	<40.0 <1.0 <6.0	NA NA	NA NA	NA NA	1.00 6.00	1.00 6.00				
Nickel (ug/L) Nitrate as N (mg/L) Selenium (ug/L) Silver (ug/L)	<40.0 <1.0	<40.0 <1.0	<10.0 <0.01	<10.0 <0.01 <6.0 <10.0	NA NA NA NA	<10.0 <0.01 <5.0 <10.0	<40.0 <1.0 <6.0 <10.0	NA NA <10.0	NA	NA	1.00	1.00 6.00				
Nickel (ug/L) Nitrate as N (mg/L) Selenium (ug/L) Silver (ug/L) Sulfate (mg/L)	<40.0 <1.0 <5.0	<40.0 <1.0 <5.0	<10.0 <0.01 <6.0	<10.0 <0.01 <6.0 <10.0	NA NA NA NA Calculated in 2	<10.0 <0.01 <5.0 <10.0 008 See table	<40.0 <1.0 <6.0 <10.0 214 Version	NA NA <10.0	NA NA	NA NA	1.00 6.00	1.00 6.00				
Nickel (ug/L) Nitrate as N (mg/L) Selenium (ug/L) Silver (ug/L) Sulfate (mg/L) Thallium (ug/L)	<40.0 <1.0 <5.0	<40.0 <1.0 <5.0	<10.0 <0.01 <6.0	<10.0 <0.01 <6.0 <10.0	NA NA NA NA Calculated in 2 Calculated in 2	<10.0 <0.01 <5.0 <10.0 008 See table	<40.0 <1.0 <6.0 <10.0 e 14 Version e 14 Version	NA NA <10.0	NA NA	NA NA	1.00 6.00	1.00 6.00				
Nickel (ug/L) Nitrate as N (mg/L) Selenium (ug/L) Silver (ug/L) Sulfate (mg/L) Thallium (ug/L) Total Dissolved Solids (mg/L)	<40.0 <1.0 <5.0 <10.0	<40.0 <1.0 <5.0 <10.0	<10.0 <0.01 <6.0 <10.0	<10.0 <0.01 <6.0 <10.0	NA NA NA NA Calculated in 2 Calculated in 2 Calculated in 2	<10.0 <0.01 <5.0 <10.0 008 See table 008 See table	<40.0 <1.0 <6.0 <10.0 e 14 Version e 14 Version e 14 Version	NA NA <10.0	NA NA NA	NA NA NA	1.00 6.00 10.00	1.00 6.00 10.00				
Nickel (ug/L) Nitrate as N (mg/L) Selenium (ug/L) Silver (ug/L) Sulfate (mg/L) Thallium (ug/L) Total Dissolved Solids (mg/L) Zinc (ug/L)	<40.0 <1.0 <5.0	<40.0 <1.0 <5.0	<10.0 <0.01 <6.0	<10.0 <0.01 <6.0 <10.0	NA NA NA NA Calculated in 2 Calculated in 2	<10.0 <0.01 <5.0 <10.0 008 See table	<40.0 <1.0 <6.0 <10.0 e 14 Version e 14 Version	NA NA <10.0	NA NA	NA NA	1.00 6.00	1.00 6.00 10.00				
Nickel (ug/L) Nitrate as N (mg/L) Selenium (ug/L) Silver (ug/L) Sulfate (mg/L) Thallium (ug/L) Total Dissolved Solids (mg/L) Zinc (ug/L) List 3 Organic Parameters Unfiltered	<40.0 <1.0 <5.0 <10.0 <10.0	<40.0 <1.0 <5.0 <10.0	<10.0 <0.01 <6.0 <10.0	<10.0 <0.01 <6.0 <10.0	NA NA NA NA Calculated in 2 Calculated in 2 Calculated in 2 NA	<10.0 <0.01 <5.0 <10.0 008 See table 008 See table 008 See table <10.0	<40.0 <1.0 <6.0 <10.0 = 14 Version = 14 Version = 14 Version <20.0	NA NA <10.0 n 3 n 3 n 3	NA NA NA	NA NA NA	1.00 6.00 10.00	6.00 10.00				
Nickel (ug/L) Nitrate as N (mg/L) Selenium (ug/L) Silver (ug/L) Sulfate (mg/L) Thallium (ug/L) Total Dissolved Solids (mg/L) Zinc (ug/L)	<40.0 <1.0 <5.0 <10.0	<40.0 <1.0 <5.0 <10.0	<10.0 <0.01 <6.0 <10.0	<10.0 <0.01 <6.0 <10.0	NA NA NA NA Calculated in 2 Calculated in 2 Calculated in 2	<10.0 <0.01 <5.0 <10.0 008 See table 008 See table	<40.0 <1.0 <6.0 <10.0 e 14 Version e 14 Version e 14 Version	NA NA <10.0	NA NA NA	NA NA NA	1.00 6.00 10.00	1.00 6.00 10.00				

### Appendix E - Table 1 (Modified 7/28/2010)

### Statistical Calculations for Background Re-establishment for MW-6 **Closed Collinsville Landfill**

Monitoring Location MW6: Background Establishment Location

	5/19/2009	8/5/2009			Distribution	Minimum	Maximum	Average	Variance			95%CL
Benzene (ug/L)	<0.60	< 0.60	<0.60	<0.60	NA	<0.60	<0.60	< 0.60	NA	NA	0.60	0.60
Benzo(a)pyrene (ug/L)	<0.20	<0.20	<0.20	<0.20	NA	<0.20	<0.20	<0.20	NA	NA	0.20	0.20
Carbofuran (ug/L)	<10.0	<10.0	<10.0	<10.0	NA .	<10.0	<10.0	<10.0	NA	NA	10.0	10.0
Carbon Tetrachloride (ug/L)	<1.00	<1.00	<1.00	<1.00	NA	<1.00	<1.00	<1.00	NA	NA	1.00	1.00
Chlordane (ug/L)	<0.14	< 0.14	<0.14	< 0.14	NA.	< 0.14	< 0.14	< 0.14	NA	NA	0.14	0.14
Dalapon (ug/L)	<1.30	<1.30	<1.30	<1.30	NA	<1.30	<1.30	<1.30	NA	NA	1.30	1.30
Dichloromethane (ug/L)	0.30	0.32	0.25	0.21	Normal	0.21	0.32	0.27	0.0	0.05	0.52	0.40
Di (2-ethylhxyl)phthalate (ug/L)	<6.00	<6.00	<6.00	<6.00	NA	<6.00	<6.00	<6.00	NA	NA	6.00	6,00
1,2-Dibromo-3-chloropropane (ug/L)	<0.20	<0.20	<0.20	< 0.20	NA.	<0.20	<0.20	<0.20	NA	NA	0.20	0.20
Dinoseb (DNBP) (ug/L)	<0.700	<0.700	< 0.700	< 0.700	NA .	< 0.700	<0.700	< 0.700	NA	NA	0.700	0.700
Endothall (ug/L)	<10	<10	<10	<10	NA	<10	<10	<10	NA	NA	10.0	10.0
Endrin (ug/L)	<0.06	<0.06	< 0.06	<0.06	NA	< 0.06	< 0.06	< 0.06	NA	NA	0.06	0.06
Ethylene Dibromide (EDB) (ug/L)	< 0.05	< 0.05	< 0.05	< 0.05	NA	< 0.05	< 0.05	< 0.05	NA	NA	0.05	0.05
Heptachlor (ug/L)	< 0.04	< 0.04	< 0.04	< 0.04	NA	< 0.04	< 0.04	< 0.04	NA	NA	0.04	0.04
Heptachlor Epoxide (ug/L)	<0.20	<0.20	< 0.20	< 0.20	NA	< 0.20	<0.20	< 0.20	NA	NA	0.20	0.20
Hexachlorocyclopentadiene (ug/L)	<4.00	<4.00	<4.00	<4.00	NA	<4.00	<4.00	<4.00	NA	NA	4.00	4.00
Lindane (Gamma-Hexachlor cyclohexane)	< 0.04	< 0.04	< 0.04	< 0.04	NA	< 0.04	< 0.04	< 0.04	NA	NA	0.04	0.04
2,4 - D (ug/L)	<12.0		<12.0	<12.0	NA	<12.0	<12.0	<12.0	NA	NA	12.0	12.0
ortho-Dichlorobenzene (ug/L)	<5.00	<5.00	<5.00	<5.00	NA.	<5.00	<5.00	<5.00	NA	NA	5.00	5.00
para-Dichlorobenzene (ug/L)	<5.00	<5.00	<5.00	<5.00	NA	<5.00	<5.00	<5.00	NA	NA	5.00	5.00
1,2-Dichloroethane (ug/L)	<5.00	<5.00	<5.00	<5.00	NA	<5.00	<5.00	<5.00	NA	NA	5.00	5.00
1,1-Dichloroethylene (ug/L)	<5.00	<5.00	<5.00		NA	<5.00	<5.00	<5.00	NA	NA	5.00	5.00
cis-1,2-Dichloroethylene (ug/L)	<5.00	<5.00	<5.00			<5.00	<5.00	<5.00	NA	NA	5.00	5.00
trans-1,2-Dichloroethylene (ug/L)	<5.00		<5.00	<5.00		<5.00	<5.00	<5.00	NA	NA	5.00	5.00
1,2-Dichloropropane (ug/L)	<5.00	<5.00	<5.00	<5.00	NA	<5.00	<5.00	<5.00	NA	NA	5.00	5.00
Ethylbenzene (ug/L)	<5.00	<5.00	<5.00	<5.00		<5.00	<5.00	<5.00	NA	NA	5.00	5.00
Methoxychlor (ug/L)	<0.50	< 0.50	< 0.50	< 0.50		< 0.50	< 0.50	< 0.50	NA	NA	0.50	0.50
Monochlorobenzene (Chlorobenzene) (ug/l	<5.00	<5.00	<5.00			<5.00	<5.00	<5.00	NA	NA	5.00	5.00
Pentachiorophenol (ug/L)	<0.100		<0.100			<0.100	< 0.100	<0.100	NA	NA	0.100	0.100
Phenols (ug/L)					Calculated in	2008 See ta	ble 14 Versio	n 3				1 (4)
Picloram (ug/L)					Calculated in							
Polychlorinated Biphenyls (PCBs) (ug/L)	< 0.500	< 0.500	< 0.500	< 0.500	NA.	<0.500	< 0.500	< 0.500	NA	NA	0.50	0.50
Simazine (ug/L)	<4.00	<4.00	<4.00	<4.00	NA.	<4.00	<4.00	<4.00	NA	NA	4.00	4.00
Styrene (ug/L)	<5.00	<5.00	<5.00	<5.00	NA.	<5.00	<5.00	<5.00	NA	NA	5.00	5.00
2,4,5-TP (Silvex) (ug/L)	<5.00	<5.00	<5.00			<5.00	<5.00	<5.00	NA	NA	5.00	5.00
Tetrachloroethylene (ug/L)	< 0.70	< 0.70	< 0.70		NA.	< 0.70	<0.70	<0.70	NA	NA	0.70	0.70
Toluene (ug/L)	<5.00	<5.00	<5.00		NA	<5.00	<5.00	<5.00	NA	NA	5.00	5.00
Toxaphene (ug/L)	<2.40	<2.40	<2.40		NA	<2.40	<2.40	<2.40	NA	NA	2.00	2.00
1,2,4-Trichlorobenzene (ug/L)	<10.0	<10.0	<10.0		NA.	<10.0	<10.0	<10.0	NA	NA	10.0	10.0
1,1,1-Trichloroethane (ug/L)	<5.00	<5.00	<5.00			<5.00	<5.00	<5.00	NA	NA	5.00	5.00
1,1,2-Trichloroethane (ug/L)	<0.50	<0.50	<0.50		NA.	<0.50	<0.50	<0.50	NA	NA	0.50	0.50
Trichloroethylene (ug/L)	<1.00	<1.00	<1.00	<1.00		<1.00	<1.00	<1.00	NA	NA	1.00	1.00
Vinyl Chloride (ug/L)	<1.00	<1.00	<1.00		NA.	<1.00	<1.00	<1.00	NA	NA	1.00	1.00
Xylenes (ug/L)	<5.00		<5.00			<5.00	<5.00	<5.00	NA	NA	5.00	5.00

Notes:

a - Shapiro-Wilk test for normality was used
 b - Natural log of data was normally distributed, all calculations made on log-normal data.
 \* - Formulas for calculations were used from "Statistical Analysis of Ground-Water at RCRA Facilities" - April 1989.

### Appendix E - Table 2 Modified 7/29/2010

### Comparison of MW-6 Analytical Results to Class I Groundwater Standards, 99% Confidence Limits and 2XPQLs Closed Collinsville Landfill

Monitoring Location MW6: Comparison to Class I Standards, 99% Confidence Limits and 2XPQLs

	5/19/2009	8/5/2009	10/13/2009	2/18/2010	Class I	99%CL 2008°	99%CL 2008° 9	9%CL 2010* 9	9%CL 2010*	2XPQL
List 1	1-	13,112,123	(13/24/34/34/	4.14.44	131313					- 11 - 11
Temperature of Water (unfiltered F)	62.42	62.62	57.56	55.81	NA	77.77	70.05			N/A
Spec Cond. (Unfiltered)	1.762	1.205		1.300	NA	2.59	2.08			NA
pH (Unfiltered units)	6.89	6.30		6.86	6.5-9.0	7.47	7.21		14	NA
Elev of GW Surf (ft ref MSL)	533.32	533.72		534.76	NA	538.57	536.08			NA
Depth of Water (ft below LS)	28.49			27.05	NA	33.81	32.39		16	NA
BTM Well Elev (ft ref MSL)	521.77			521.77	NA	520.75	520.75			NA
Depth to Water Fr Mea Pt (ft)	30.38			28.94	NA	35.70	34.28			NA
List 2 Filtered										
Ammonia as N Diss (mg/L)	<0.10	<0.10	<0.10	< 0.10	NA		7.1	0.10	0.10	NA
Arsenic AS, Diss (ug/L)	<5.00			<5.00	50.0			5.00	5.00	10
Cadmium Cd, Diss (ug/L)	<2.00	<2.00		<2.00	5.0			2.00	2.00	4
Chloride Diss (mg/L)	64.00			66.00	200.0			80.02	71.46	2
Iron Fe, Diss (ug/L)	<40.00			<40.00	5,000.0		-	40.00	40.00	80
Lead Pb, Diss (ug/L)	<5.00	<5.00		<5.00	8.0			5.00	5.00	10
Manganese Mn, Diss (ug/L)	180.00			205.00	150.0		72	292.03	249.73	30
Mercury Hg, Diss (ug/L)	<0.2	<0.2		<0.2	2.0			0.2000	0.2000	0.4
Sulfate SO4, Diss (mg/L) b	91.00	90.00	82.00	91.00	400.0	- 100	- 2 - 1	113.47	101.85	2
Total Dissolved Solids (TDS, mg/L)	912.00			864.00	1,200.0			1000.92	947.71	20
List 2 Unfiltered	1 2,2,5	1 002.00	i. no rice	00,100	1,200.0			1000.02		
Cyanide CN, Total (mg/L)	<0.1	<0.1	<0.1	<0.1	0.20			0.1000	0,1000	0.2
Phenois (Total Recoverable) (ug/L)	<15.0			19.00	1.0		NA	-	-	30
Total Organic Carbon (TOC) (mg/L)	<3.80	<3.80		<4.20	NA	8.20	6.09			NA
Total Organic Halogens (TOX) (ug/L)	68.40			49.00	NA	140.73	100.95			NA
List 3 Inorganic Parameters Unfiltered		200.00	00.00	70.00	1.50	1,10,10	100.00			
Antimony (ug/L)	<3.0	<3.0	<5.0	<5.0	6.0			5.00	5.00	6
Arsenic (ug/L)	<3.0			<3.0	50.0		NA			10
Barium (ug/L)	113.00			101.00	2,000.0	280.64	217.04			40
Beryllium (ug/L)	<2.00	<2.00		<1.00	4.0		-	1.00	1.00	4
Boron (ug/L)	57.00			81.60	2,000.0	-	-	120.57	95.93	80
Cadmium (ug/L)	<2.0			<2.0	5.0			2.00	2.00	4
Chloride (mg/L)	64.00	60.00		50.00	200.0	75.58	70.07		- 0	2
Chromium (ug/L)	<7.0	<7.0		<10.0	100.0		-	10.00	10.00	14
Cobalt (ug/L)	<50.0	<50.0		<10.0	1,000.0			50.00	50.00	100
Copper (ug/L)	<20.0	<20.0	<10.0	<10.0	650.0			20.00	20.00	10
Cyanide (mg/L)	<0.10	<0.10	< 0.10	< 0.10	0.20	- 14 I	A	0.10	0.10	0.2
Fluoride (mg/L)	0.31	0.38	0.35	0.41	4.0		- W - T	0.58	0.47	0.2
Iron (ug/L)	<40.0	474.00	56.70	42.10	5,000.0	69000	5600		- V2	80
Lead (ug/L)	<5.0	<5.0	<2.0	<2.0	7.5	= -120 -0		5.00	5.00	10
Manganese (ug/L)	218.00	225.00	222.00	201.00	150		374.85		-	30
Mercury (ug/L)	<0.2	<0.2	<0.2	<0.2	2.0	1.00		0.20	0.20	0.4
Nickel (ug/L)	<40.0	<40.0	<10.0	<10.0	100.0	F LY L		40.00	40.00	80
Nitrate as N (mg/L)	<1.0	<1.0	<0.01	<0.01	10.0	*		1.00	1.00	. 2
Selenium (ug/L)	<5.0	<5.0	<6.0	<6.0	50.0			6.00	6.00	10
Silver (ug/L)	<10.0	<10.0	<10.0	<10.0	50.0		-	10.00	10.00	20
Sulfate (mg/L)	92.00	89.00	82.00	91.00	400.0	154.05	133.16			2
Thallium (ug/L)	<1.00	<1.00		<2.00	2.0	1.20	NA		7	2
Total Dissolved Solids (mg/L)	934.00	894.00	924.00	856.00	1,200.0	1025.84	982.12	-	1744	20
Zinc (ug/L)	<20.0	<20.0	<10.0	<10.0	5,000.0	y		20.00	20.00	40
List 3 Organic Parameters Unfiltered										
Alachlor (ug/L)	<2.00	<2.00	<2.00	<2.00	2.0	P - 1-12	-14" - I	2.00	2.00	4

### Appendix E - Table 2 Modified 7/29/2010

### Comparison of MW-6 Analytical Results to Class I Groundwater Standards, 99% Confidence Limits and 2XPQLs Closed Collinsville Landfill

Monitoring Location MW6: Comparison to Class I Standards, 99% Confidence Limits and 2XPQLs

	5/19/2009	8/5/2009	10/13/2009	2/18/2010	Class I	99%CL 2008°	99%CL 2008°	99%CL 2010*	99%CL 2010*	2XPQL
Aldicarb (ug/L)	<2.00	<2.00	<2.00	<2.00	3.0			2.00	2.00	4
Atrazine (ug/L)	< 0.05	< 0.05	< 0.05		3.0			0.050		0.16
Benzene (ug/L)	< 0.60	< 0.60	< 0.60	< 0.60	5.0			0.60		1.2
Benzo(a)pyrene (ug/L)	<0.20	< 0.20	<0.20		0.20			0.20		0.4
Carbofuran (ug/L)	<10.0	<10.0	<10.0		40.0		-	10.00		20
Carbon Tetrachloride (ug/L)	<1.00	<1.00	<1.00		5.0			1.00		2
Chlordane (ug/L)	< 0.14	<0.14	<0.14		2.0		- L	0.14		0.28
Dalapon (ug/L)	<1.30	<1.30	<1.30		200.0		1	1.30		2.6
Dichloromethane (ug/L)	0.30		0.25		5.0			0.52		0.5
Di (2-ethylhxyl)phthalate (ug/L)	<6.00	<6.00	<6.00		6.0			6.00		12
1,2-Dibromo-3-chloropropane (ug/L)	<0.20	<0.20	<0.20		0.20			0.20		0.4
Dinoseb (DNBP) (ug/L)	<0.700	< 0.700	<0.700		7.0		-	0.700		1.4
Endothall (ug/L)	<10	<10	<10					10.00		20
Endrin (ug/L)	<0.06	<0.06	<0.06		2.0		-	0.06		0.12
Ethylene Dibromide (EDB) (ug/L)	<0.05	<0.05	<0.05					0.050		0.12
Heptachlor (ug/L)	<0.04	<0.04	<0.04		0.03		-	0.040		0.08
Heptachlor Epoxide (ug/L)	<0.20	<0.20	<0.20		0.20			0.20		0.4
Hexachlorocyclopentadiene (ug/L)	<4.00	<4.00	<4.00		50.0		-	4.00		0.4
Lindane (Gamma-Hexachlor cyclohexane)	<0.04	<0.04	<0.04		0.20			0.040		0.08
2,4 - D (ug/L)	<12.0	<12.0	<12.0		70.0		-	12.00		
ortho-Dichlorobenzene (ug/L)	<5.00	<5.00	<5.00		600.0		-	5.00		24
para-Dichlorobenzene (ug/L)	<5.00	<5.00	<5.00		75.0		-			10
	<5.00	<5.00	<5.00					5.00		10
1,2-Dichloroethane (ug/L)					5.0			5.00		10
1,1-Dichloroethylene (ug/L)	<5.00	<5.00	<5.00		7.0		1.9	5.00		10
cis-1,2-Dichloroethylene (ug/L)	<5.00	<5.00	<5.00		70.0		7	5.00		10
trans-1,2-Dichloroethylene (ug/L)	<5.00	<5.00	<5.00		100.0			5.00		10
1,2-Dichloropropane (ug/L)	<5.00	<5.00	<5.00		5.0		- V	5.00		10
Ethylbenzene (ug/L)	<5.00	<5.00	<5.00		70.0		*11	5.00		10
Methoxychlor (ug/L)	<0.50		<0.50		40.0			0.50		1
Monochlorobenzene (Chlorobenzene) (ug/l		<5.00	<5.00		100.0		-	5.00		10
Pentachlorophenol (ug/L)	<0.100	<0.100	<0.100		1.0		~	0.100	0.100	NA
Phenois (ug/L)	<15.0	<15.0	<15.0		100.0		NA		-	30
Pictoram (ug/L)	<0.20	<0.20	<0.20		500.0		NA			0.4
Polychlorinated Biphenyls (PCBs) (ug/L)	<0.500	<0.500	<0.500		0.5			0.500	0,500	
Simazine (ug/L)	<4.00	<4.00	<4.00		4.0			4.00		
Styrene (ug/L)	<5.00	<5.00	<5.00		100.0			5.00		10
2,4,5-TP (Silvex) (ug/L)	<5.00	<5.00	<5.00		50		-	5.00		10
Tetrachloroethylene (ug/L)	<0.70		<0.70		5.0		-	0.70		1.4
Toluene (ug/L)	<5.00	<5.00	<5.00				•	5.00		10
Toxaphene (ug/L)	<2.40	<2.40	<2.40		3.0			2.40		4.8
1,2,4-Trichlorobenzene (ug/L)	<10.0	<10.0	<10.0		70.0			10.00		20
1,1,1-Trichloroethane (ug/L)	<5.00	<5.00	<5.00		200.0			5.00		10
1,1,2-Trichloroethane (ug/L)	<0.50	<0.50	<0.50		5.0		- 4	0.50		1
Trichloroethylene (ug/L)	<1.00	<1.00	<1.00		5.0			1,00		2
Vinyl Chloride (ug/L)	<1.00	<1.00	<1.00		2,0			1.00		2
Xylenes (ug/L)	<5.00	<5.00	<5.00	<5.00	10,000.0		200	5.00	5.00	10

### Notes:

- a See 2008 99% and 95% CL
- b lognormal calculations
- c See 2010 99% and 95% CL

### Table 14 (Version 3) Background Collinsville Landfill

				Back	ground We	ell MW-6*							
Compound	Nov-07	Feb-07	Apr-07	Aug-07	Oct-07	Distribution*	Minimum	Maximum	Average	Variance	Std Dev	99% UCL	95% UCL
List 1													
Temperature of Water (unfiltered F)	60.72	55.8	57.68	67	58.06	Normal	55.8	67	59.85	19.05	4.36	77.77	70.05
Spec Cond. (Unfiltered)	1.42	1.14	1.893	1.294	1.348	Normal	1.14	1.893	1.42	0.08	0.28	2.59	2.08
pH (Unfiltered units)**	6.83	6.97	7.05	6.73	6.71	Normal <sup>e</sup>	6.71	7.05	6.86	0.02	0.15	7.47	7.21
Elev of GW Surf (ft ref MSL)	532.48	533.2	534.45	533.22	530.62	Normal	530.62	534.45	532.79	1.98	1.41	538.57	536.08
Depth of Water (ft below LS)	31.22	30.5	29.25	30.48	31.19	Normal	29.25	31.22	30.53	0.64	0.80	33.81	32.39
BTM Well Elev (ft ref MSL)	520.75	520.75	520.75	520.75	520.75	NA	520.75	520.75	520.75	0.00	0.00	520.75	520.75
Depth to Water Fr Mea Pt (ft)	33.11	32.39	31.14	32.37	33.08	Normal	31.14	33.11	32.42	0.64	0.80	35.70	34.28
Analytes List 2 Unfiltered													
Phenois (Total Recoverable) (ug/L)	<15.0	<15.0	<15.0	<15.0	<15.0	NA	<15.0	<15.0	<15.0	NA	NA	15.0°	NA
Total Organic Carbon (TOC) (mg/L)	3.4	3.6	4.5	3.7	1.3	Normal	1.3	4.5	3.30	1.43	1.19	8.20	6.09
Total Organic Halogens (TOX) (ug/L)	65.7	63.4	<20.0	52.9	50.2	Normal	<20.0	65.7	48.44	505.58	22.49	140.73	100.95
List 3 Inorganic Parameters Unfiltered													
Arsenic (ug/L)	<5.0	<3.0	<5.0	<3.0	<3.0	Nonparametric <sup>c</sup>	<3.0	<5.0	1.9 <sup>d</sup>	NA	NA	5.00°	NA .
Barium (ug/L)	123	159	95.4	107	181	Normal	95.4	181	133.08	1292.43	35.95	280.64	217.04
Chloride (mg/L)	65	58	63	62	66	Normal	58	66	62.80	9.70	3.11	75.58	70.07
Iron (ug/L)	140	1920	70.6	57	309	Lognormal <sup>b</sup>	57	1920	201.75	7.56	4.15	69000	5600
Manganese (ug/L)	327	174	151	145	206	Normal	145	327	200.60	5566.30	74.61	506.84	374.85
Sulfate (mg/L)	113	96	122	94	103	Normal	94	122	105.60	139.30	11.80	154.05	133.16
Thallium (ug/L)	<1.0	<1.0	<1.0	1.2	<1.0	Nonparametric	<1.0	1.2	0.64 <sup>d</sup>	NA	NA	1.2°	NA
Total Dissolved Solids (mg/L)	946	906	892	930	948	Normal	892	948	924.40	610.80	24.71	1025.84	982.12
List 3 Organic Parameters Unfiltered													
Sulfide (mg/L)	<0.05	<0.05	< 0.05	<0.05	<0.05	NA	<0.05	<0.05	<0.05	NA	NA	NA	NA
Picloram (ug/L)	0.942	<0.20	<0.20	<0.20	<0.20	Nonparametric <sup>c</sup>	<0.20	0.942	0.2684 <sup>d</sup>	NA	NA	NA	NA

- a Shapiro-Wilk test for normality was used
- b Natural log of data was normally distributed, all calculations made on log-normal data.
- c Nonparametric distribution, minimum of seven samples required to compute statistics. Maximum concentration used for UCL
- d 1/2 the less than value was used for calculation purposes.
- e pH values were used, no conversion to pH units was done.
  \*- Formulas for calculations were used from "Statistical Analysis of Ground-Water at RCRA Facilities" April 1989.
- \*\* The LCL for pH is 6.25