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December 2, 2014

Mr. Tauren Beggs  
Hydrogeologist  
Wisconsin Department of Natural Resources  
2984 Shawano Avenue  
Green Bay WI 54313-6727

**Subject:** **2014 Silver Creek Sampling Letter Report**  
**Former Town of Newton Gravel Pit**  
**BRRTS No. 02-36-000268**  
**AECOM Project No: 60135471(82518)**

Dear Mr. Beggs:

AECOM Technical Services, Inc. (AECOM), on the behalf of the City of Manitowoc, is pleased to submit this 2014 Silver Creek Sampling report for sampling conducted on and downstream of the Former Town of Newton Gravel Pit site. The report provides site background information, sampling methodology, and the surface water monitoring results.

#### BACKGROUND INFORMATION

Monitoring of Silver Creek has been conducted periodically since 1993 in association with site investigation activities at the Gravel Pit site. Analytical results from previous monitoring activities are included on Table 1, the summary data table attached to this report. The 2014 sampling event was conducted to assess if there were unknown contaminant sources discharging to Silver Creek within the area of interest, from the Gravel Pit site downstream to the vicinity of CTH CR.

#### SAMPLING METHODOLOGY

At each sample location, water samples were obtained from an undisturbed mid-stream flowing channel of water. Grab samples were collected from across the entire water column using a clean sample jar and then transferred to 40-ml glass vials with hydrochloric acid preservative and Teflon septa. The vials were filled to the top, leaving no headspace or bubbles then quickly capped. Samples were labeled and stored on ice for shipment, with chain of custody, to the laboratory.

Samples collected by AECOM were submitted to a Wisconsin Administrative Code (WAC) Chapter NR 149 certified laboratory (Synergy Environmental Lab, Inc., Appleton, Wisconsin) for analyses of volatile organic compounds (VOCs) by EPA Method 8260B.

Following the collection of the samples, surface water field screening was conducted with a handheld YSI 556MPS water quality meter to obtain pH, conductivity, temperature, and oxidation/reduction (redox) potential measurements. The measurements were collected by lowering the meter into the water and leaving it in place until the readings stabilize then the readings were recorded on a sample collection form.

#### MONITORING RESULTS

On September 30, 2014, AECOM obtained a total of 13 water samples from 12 locations along Silver Creek. Sample locations 1, 2, and 5 were located on the Gravel Pit property. Sample locations 3, 4, and 6 to 12 were downstream of the Gravel Pit property. A duplicate sample was collected at sample location 5. The sample locations are presented on Figure 1. A photo log of the sample locations is also attached.

Sampling was conducted following a period, approximately 8 days, with little or no precipitation (ref. National Weather Service, Green Bay station climate data). The lack of surface water run-off from rain events preceding the sampling event suggests that the water flowing in the stream was "base flow" from groundwater discharge.

#### Field Screening Results

Field screening measurements for pH, temperature, conductivity, dissolved oxygen, and oxidation reduction potential provide general indications of water quality. Field screening data are summarized on Table 1.

#### Laboratory Analytical Results

The laboratory analytical data indicates that contaminant compounds were present at the Silver Creek sample locations historically associated with groundwater discharges adjacent to the Gravel Pit site. The contaminant compounds, or contaminants of concern (COCs), detected during this sampling event were benzene, 1,1-dichloroethane (11-DCA), trichloroethene (TCE), cis-1,2-dichloroethene (Cis DCE), and vinyl chloride (VC). No other sample locations had detectable concentrations of COCs.

The concentration of the COCs found in the surface water samples were compared to applicable WAC Chapter NR 105 Table 9 Human Cancer Criteria Standards for a non-public water supply that is a "warm water forage, limited forage and warm water sport fish community".

Vinyl chloride was the only COC detected at a concentration exceeding its NR Table 9 human cancer criteria standard in water collected at sample locations 3 and 4. These sample locations were located immediately downstream of the Gravel Pit site. Other compounds detected in samples collected immediately downstream of the Gravel Pit site either did not exceed their respective NR 105 Table 9 standards or they were not listed in NR 105 Table 9.

A summary of the sampled locations with COC laboratory analytical results are presented on Table 1 and on Figure 1. Copies of the laboratory analytical reports are attached.

It is anticipated that periodic monitoring of Silver Creek will continue to occur as part of the ongoing monitoring activities at the Gravel Pit site.

If you have any questions regarding these results, please contact Dave Henderson at 414.944.6190 or [dave.henderson@aecom.com](mailto:dave.henderson@aecom.com).

Yours sincerely,

AECOM Technical Services, Inc.



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Cc: Kathleen M. McDaniel, City Attorney, City of Manitowoc  
Dan Koski, Director of Public Infrastructure, City of Manitowoc

Attachments: Table 1, Figure 1, Photo Log, Lab Data

TABLE 1

City of Manitowoc - Newton Gravel Pit

**SUMMARY OF CONTAMINATES DETECTED IN SILVER CREEK  
FORMER TOWN OF NEWTON GRAVEL PIT  
MANITOWOC, WISCONSIN**

Analyte	Table 9 NR 105 <sup>(1)</sup>	SG-1/SW-01 (upstream location abandoned 2003)	SG-2/SW-02 (upstream location abandoned 2003)	SG-4 (abandoned 2003)			
		4/30/1993	4/30/1993	5/19/99	9/30/99	12/8/99	3/30/00
<b>Volatile Organic Compounds (VOCs) (µg/L):</b>							
Benzene	140	<0.30	<0.30	<0.44	<0.44	<0.44	<0.44
t-Butylbenzene		NA	NA	<0.50	<0.50	<0.50	<0.50
Chloromethane							
2-Chlorotoluene		<0.37	<0.37	<0.65	<0.65	<0.65	<0.65
1,2-Dichloroethane	217	<0.38	<0.38	<0.54	<0.54	<0.54	<0.54
1,1-Dichloroethane		<0.34	<0.34	<0.61	<0.61	<0.61	<0.61
1,1-Dichloroethene		<0.78	<0.78	<0.47	<0.47	<0.47	<0.47
cis-1,2-Dichloroethene		<0.39	<0.39	1.4 Q	<0.46	0.8 Q	2.6
trans-1,2-Dichloroethene		<0.35	<0.35	<0.64	<0.64	<0.64	<0.64
Ethylbenzene		<0.44	<0.44	<0.50	<0.50	<0.50	<0.50
Isopropylbenzene		NA	NA	<0.39	<0.39	<0.39	<0.39
Methylene chloride	2700	<0.45	<0.45	<0.38	<0.38	<0.38	<0.38
Naphthalene		<0.34	<0.34	<0.59	<0.59	<0.59	<0.59
n-Propylbenzene		<0.54	<0.54	<0.54	<0.54	<0.54	<0.54
Tetrachloroethene	46	<0.52	<0.52	<0.41	<0.41	<0.41	<0.41
Toluene		<0.29	<0.29	<0.40	<0.40	<0.40	<0.40
1,1,1-Trichloroethane		<0.30	<0.30	<0.53	<0.53	<0.53	<0.53
Trichloroethene	539	<0.34	<0.34	<0.49	<0.49	<0.49	<0.49
1,2,4-Trimethylbenzene		<0.47	<0.47	<0.47	<0.47	<0.47	<0.47
1,3,5-Trimethylbenzene		<0.47	<0.47	<0.45	<0.45	<0.45	<0.45
Total Trimethylbenzene		<0.47	<0.47	<0.47	<0.47	<0.47	<0.47
Vinyl Chloride	10	<0.32	<0.32	<0.52	<0.17	<0.17	0.43
Xylenes, m + p		<0.81	<0.81	<0.77	<0.77	<0.77	<0.77
Xylene, o		<0.41	<0.41	<0.54	<0.54	<0.54	<0.54
Total Xylenes		<0.81	<0.81	<0.77	<0.77	<0.77	<0.77
Styrene		<0.30	<0.30	<0.37	<0.37	<0.37	<0.37
Ethane		NA	NA	NA	NA	<10	NA
Ethene		NA	NA	NA	NA	<10	NA
Methane		NA	NA	NA	NA	32	NA
<b>SVOCs Polycyclic Aromatic Hydrocarbons (PAHs) (µg/L):</b>							
1-Methylnaphthalene		NA	NA	<0.044	<0.044	<0.044	<0.044
2-Methylnaphthalene		NA	NA	<0.049	<0.049	<0.049	<0.049
Acenaphthene		NA	NA	<0.20	<0.20	<0.20	<0.20
Acenaphthylene		NA	NA	<0.18	<0.18	<0.18	<0.18
Anthracene		NA	NA	<0.0090	<0.0089	<0.0089	<0.0089
Benzo(a)anthracene		NA	NA	<0.0088	<0.0087	<0.0087	<0.0087
Benzo(a)pyrene		NA	NA	<0.012	<0.012	<0.012	<0.012
Benzo (b)fluoranthene		NA	NA	<0.016	<0.016	<0.016	<0.016
Benzo(ghi)perylene		NA	NA	<0.018	<0.018	<0.018	<0.018
Benzo(k)fluoranthene		NA	NA	<0.0080	<0.0079	<0.0079	<0.0079
Butyl benzyl phthalate		NA	NA	NA	NA	NA	NA
Bis (2-Ethylhexyl) Phthalate		NA	NA	NA	NA	NA	NA
Chrysene		NA	NA	<0.0090	<0.0089	<0.0089	<0.0089
Dibenzo(a,h)anthracene		NA	NA	<0.018	<0.018	<0.018	<0.018
Fluoranthene		NA	NA	<0.019	<0.019	<0.019	<0.019
Fluorene		NA	NA	<0.020	<0.020	<0.020	<0.020
Indeno(1,2,3-dc)pyrene		NA	NA	<0.0084	<0.0083	<0.0083	<0.0083
Naphthalene		NA	NA	<0.12	<0.12	<0.12	<0.12
N-Nitroso-Di-N-Propylamin		NA	NA	NA	NA	NA	NA
o-Cresol (2-Methylphenol)		NA	NA	NA	NA	NA	NA
p-Cresol (4-Methylphenol)		NA	NA	NA	NA	NA	NA
Phenanthrene		NA	NA	<0.011	<0.011	<0.011	<0.011
Pyrene		NA	NA	<0.013	<0.013	<0.013	<0.013
<b>RCRA Metals (mg/L):</b>							
Antimony		NA	NA	<0.0021	<0.00028	<0.00028	0.00020 Q
Arsenic	0.0133	NA	NA	<0.0027	0.0021	0.0037	0.0011 A(0.00034)
Barium		NA	NA	0.047	0.2	0.27	0.036
Beryllium	0.00033	NA	NA	<0.00063	0.00024	<b>0.00049</b>	<0.000070
Cadmium		NA	NA	<0.00020	<0.00016 A(-0.00040)	0.00068	0.00017 Q
Chromium		NA	NA	0.0012 Q B(0.0011)	0.0077	0.026	0.000080 QA(0.00017)
Copper		NA	NA	0.0044 Q	0.0088	0.032	0.0021 A(-0.003)
Iron		NA	NA	0.98	3.9	14	0.030 A(-0.024)
Lead		NA	NA	<0.003	0.0061	0.021	<0.00015
Manganese		NA	NA	0.044	0.057 E	0.32	0.014
Mercury		NA	NA	<0.000042	<0.000042	0.000057 Q	<0.000042
Nickel		NA	NA	0.0051 Q	0.006	0.018	0.0012
Selenium		NA	NA	<0.0012	0.0024 Q	0.0042 Q	<0.00064 A(0.00083)
Sliver		NA	NA	<0.00050	0.00099 N,*	<0.000090	<0.00010 A(0.00047)
Sodium		NA	NA	15	13	15	18
Thallium		NA	NA	<0.0014	0.0011 A(0.00031)	NA	<0.000093
Zinc		NA	NA	0.0068 Q	0.025 A(0.0023)	0.098	0.0037 Q
<b>Field Screening Measurements</b>							
pH		NA	NA	7.8	7.41	7.47	7.46
Conductivity		NA	NA	631	690	753	628
Temperature		NA	NA	18.2	13.1	6.9	6.8
Dissolved Oxygen		NA	NA	8.24	7.08	7.29	6.99
Redox Potential		NA	NA	147	208	211	NA

**SUMMARY OF CONTAMINATES DETECTED IN SILVER CREEK  
FORMER TOWN OF NEWTON GRAVEL PIT  
MANITOWOC, WISCONSIN**

Analyte	Table 9 NR 105 <sup>(1)</sup>	SG-01 2014 Sample Location 4 (new location 2006)					SG-02 2014 Sample Location 3 (new location 2006)				
		10/18/2006	9/20/2007	9/25/2012	10/22/2013	9/30/2014	10/18/2006	9/20/2007	9/25/2012	10/22/2013	9/30/2014
		<b>Volatile Organic Compounds (VOCs) (µg/L)</b>									
Benzene	140	<0.41	<0.47	<0.5	0.33 J	0.40 J	<0.41	<4.7	<5	<0.24	1.31
t-Butylbenzene		<0.97	<0.34	<0.71	<0.36	<0.36	<0.97	<3.4	<7.1	<0.36	<0.36
Chloromethane			<1	<1.9	<0.81	<0.81		<10	<19	<0.81	<0.81
2-Chlorotoluene		<0.85	<0.49	<0.7	<0.21	<0.21	<0.85	<4.9	<7	<0.21	<0.21
1,2-Dichloroethane	217	<0.36	<0.45	<0.5	<0.41	<0.41	<0.36	<4.5	<5	<0.41	<0.41
1,1-Dichloroethane		<0.75	0.63 J	<0.98	<0.3	0.69 J	<0.75	<4.6	<9.8	<0.3	0.96 J
1,1-Dichloroethene		<0.57	<0.64	<0.6	<0.4	<0.4	<0.57	<5.6	<6	<0.4	<0.4
cis-1,2-Dichloroethene		4.0	51.0	102	31.1	50	1.2 Q	<6.4	101	9.7	61
trans-1,2-Dichloroethene		<0.89	<0.95	<0.79	<0.35	<0.35	<0.89	97	<7.9	<0.35	<0.35
Ethylbenzene		<0.54	<0.38	<0.78	<0.55	<0.55	<0.54	<3.8	<7.8	<0.55	<0.55
Isopropylbenzene		<0.59	<0.48	<0.92	<0.3	<0.3	<0.59	<4.8	<9.2	<0.3	<0.3
Methylene chloride	2700	<0.43	<0.69	<1.1	<0.5	<0.5	<0.43	<6.9	<11	<0.5	<0.5
Naphthalene		<0.74	<1.8	<2.1	<1.7	<1.7	<0.74	<18	<21	<1.7	<1.7
n-Propylbenzene		<0.81	<0.38	<0.59	<0.25	<0.25	<0.81	<3.8	<5.9	<0.25	<0.25
Tetrachloroethene	46	<0.45	<0.52	<0.44	<0.33	<0.33	<0.45	<5.2	<4.4	<0.33	<0.33
Toluene		<0.67	<0.46	<0.53	<0.69	<0.69	<0.67	<4.6	<5.3	<0.69	<0.69
1,1,1-Trichloroethane		<0.90	<0.5	<0.85	<0.33	<0.33	<0.90	<5	<8.5	<0.33	<0.33
Trichloroethene	539	<0.48	1.33 J	1.78	0.40 J	0.80 J	<0.48	<4.4	<4.7	0.46 J	0.63 J
1,2,4-Trimethylbenzene		<0.97	<1.2	<0.8	<2.2	<2.2	<0.97	<12	<8	<2.2	<2.2
1,3,5-Trimethylbenzene		<0.83	<0.37	<0.74	<1.4	<1.4	<0.83	<3.7	<7.4	<1.4	<1.4
Total Trimethylbenzene		<0.97	<1.2	<0.8	<2.2	<2.2	<0.97	<12	<8	<2.2	<2.2
Vinyl Chloride	10	1.8	11.3	32	18.6	24.6	<0.18	51	105	12.4	87
Xylenes, m + p		<1.8	<0.67	<1.1	<0.69	<0.69	<1.8	<6.7	<11	<0.69	<0.69
Xylene, o		<0.83	<0.32	<0.8	<0.63	<0.63	<0.83	<3.2	<8	<0.63	<0.63
Total Xylenes		<1.8	<0.67	<1.1	<0.69	<0.69	<1.8	<6.7	<11	<0.69	<0.69
Styrene		<0.86	NA	NA	NA	NA	<0.86	NA	NA	NA	NA
Ethane		<10	NA	NA	NA	NA	<10	NA	NA	NA	NA
Ethene		<10	NA	NA	NA	NA	<10	NA	NA	NA	NA
Methane		<10	NA	NA	NA	NA	<10	NA	NA	NA	NA
<b>SVOCs Polycyclic Aromatic Hydrocarbon</b>											
1-Methylnaphthalene		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-Methylnaphthalene		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Acenaphthene		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Acenaphthylene		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Anthracene		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzo(a)anthracene		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzo(a)pyrene		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzo (b)fluoranthene		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzo(ghi)perylene		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzo(k)fluoranthene		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Butyl benzyl phthalate		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Bis (2-Ethylhexyl) Phthalate		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chrysene		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Dibenzo(a,h)anthracene		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Fluoranthene		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Fluorene		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Indeno(1,2,3-dc)pyrene		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Naphthalene		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
N-Nitroso-Di-N-Propylamin		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
o-Cresol (2-Methylphenol)		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
p-Cresol (4-Methylphenol)		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Phenanthrene		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Pyrene		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
<b>RCRA Metals (mg/L)</b>											
Antimony		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Arsenic	0.0133	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Barium		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Beryllium	0.00033	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Cadmium		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chromium		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Copper		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Iron		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Lead		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Manganese		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Mercury		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Nickel		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Selenium		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Sliver		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Sodium		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Thallium		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Zinc		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
<b>Field Screening Measurements</b>											
pH		7.4	6.85	7.32	NA	6.44	7.94	6.6	7.21	NA	6.51
Conductivity		797.6	737.7	809	NA	758	796.2	745	805	NA	766
Temperature		9.7	17.5	15.03	NA	10.85	9.8	17	13.23	NA	10.63
Dissolved Oxygen		7.46	4.82	4.58	NA	5.21	8.58	3.54	4.05	NA	5.32
Redox Potential		147	203	-50.4	NA	23	160	203	-46.4	NA	188

TABLE 1

City of Manitowoc - Newton Gravel Pit

**SUMMARY OF CONTAMINATES DETECTED IN SILVER CREEK  
FORMER TOWN OF NEWTON GRAVEL PIT  
MANITOWOC, WISCONSIN**

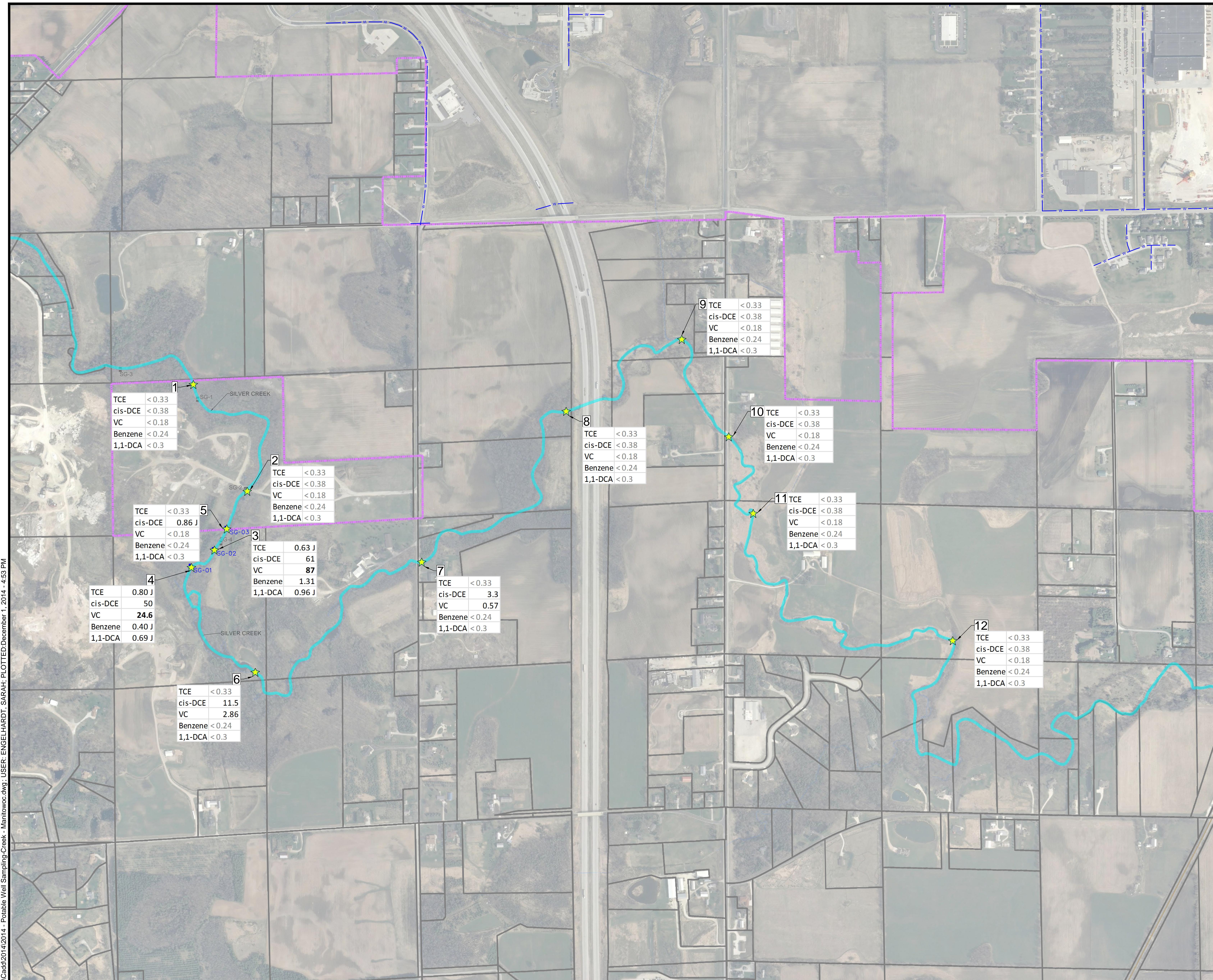
Analyte	Table 9 NR 105 <sup>(1)</sup>	SG-03 2014 Sample Location 5 (new location 2006)						2014 Sample Location 1	2014 Sample Location 2	2014 Sample Location 6
		10/18/2006	9/20/2007	9/25/2012	10/22/2013	9/30/2014	9/30/2014 (Dup)			
<b>Volatile Organic Compounds (VOCs) (µg/L)</b>										
Benzene	140	<0.41	<0.47	<0.5	<0.24	<0.24	<0.24	<0.24	<0.24	<0.24
t-Butylbenzene		<0.97	<0.34	<0.71	<0.36	<0.36	<0.36	<0.36	<0.36	<0.36
Chloromethane			<1	<1.9	<0.81	<0.81	<0.81	<0.81	<0.81	<0.81
2-Chlorotoluene		<0.85	<0.49	<0.7	<0.21	<0.21	<0.21	<0.21	<0.21	<0.21
1,2-Dichloroethane	217	<0.36	<0.45	<0.5	<0.41	<0.41	<0.41	<0.41	<0.41	<0.41
1,1-Dichloroethane		<0.75	<0.56	<0.98	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3
1,1-Dichloroethene		<0.57	<0.64	<0.6	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4
cis-1,2-Dichloroethene		<0.83	2.83	2.31 J	<0.38	0.86 J	0.65 J	<0.38	<0.38	11.5
trans-1,2-Dichloroethene		<0.89	<0.95	<0.79	<0.35	<0.35	<0.35	<0.35	<0.35	<0.35
Ethylbenzene		<0.54	<0.38	<0.78	<0.55	<0.55	<0.55	<0.55	<0.55	<0.55
Isopropylbenzene		<0.59	<0.48	<0.92	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Methylene chloride	2700	<0.43	<0.69	<1.1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Naphthalene		<0.74	<1.8	<2.1	<1.7	<1.7	<1.7	<1.7	<1.7	<1.7
n-Propylbenzene		<0.81	<0.38	<0.59	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25
Tetrachloroethene	46	<0.45	<0.52	<0.44	<0.33	<0.33	<0.33	<0.33	<0.33	<0.33
Toluene		<0.67	<0.46	<0.53	<0.69	<0.69	<0.69	<0.69	<0.69	<0.69
1,1,1-Trichloroethane		<0.90	<0.5	<0.85	<0.33	<0.33	<0.33	<0.33	<0.33	<0.33
Trichloroethene	539	<0.48	1.0 J	0.52 J	<0.33	<0.33	<0.33	<0.33	<0.33	<0.33
1,2,4-Trimethylbenzene		<0.97	<1.2	<0.8	<2.2	<2.2	<2.2	<2.2	<2.2	<2.2
1,3,5-Trimethylbenzene		<0.83	<0.37	<0.74	<1.4	<1.4	<1.4	<1.4	<1.4	<1.4
Total Trimethylbenzene		<0.97	<1.2	<0.8	<2.2	<2.2	<2.2	<2.2	<2.2	<2.2
Vinyl Chloride	10	<0.18	<0.2	<0.18	<0.18	<0.18	<0.18	<0.18	<0.18	2.86
Xylenes, m + p		<1.8	<0.7	<1.1	<0.69	<0.69	<0.69	<0.69	<0.69	<0.69
Xylene, o		<0.83	<0.32	<0.8	<0.63	<0.63	<0.63	<0.63	<0.63	<0.63
Total Xylenes		<1.8	<0.67	<1.1	<0.69	<0.69	<0.69	<0.69	<0.69	<0.69
Styrene		<0.86	NA	NA	NA	NA	NA	NA	NA	NA
Ethane		<10	NA	NA	NA	NA	NA	NA	NA	NA
Ethene		<10	NA	NA	NA	NA	NA	NA	NA	NA
Methane		<10	NA	NA	NA	NA	NA	NA	NA	NA
<b>SVOCs Polycyclic Aromatic Hydrocarbon</b>										
1-Methylnaphthalene		NA	NA	NA	NA	NA	NA	NA	NA	NA
2-Methylnaphthalene		NA	NA	NA	NA	NA	NA	NA	NA	NA
Acenaphthene		NA	NA	NA	NA	NA	NA	NA	NA	NA
Acenaphthylene		NA	NA	NA	NA	NA	NA	NA	NA	NA
Anthracene		NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzo(a)anthracene		NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzo(a)pyrene		NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzo(b)fluoranthene		NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzo(ghi)perylene		NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzo(k)fluoranthene		NA	NA	NA	NA	NA	NA	NA	NA	NA
Butyl benzyl phthalate		NA	NA	NA	NA	NA	NA	NA	NA	NA
Bis (2-Ethylhexyl) Phthalate		NA	NA	NA	NA	NA	NA	NA	NA	NA
Chrysene		NA	NA	NA	NA	NA	NA	NA	NA	NA
Dibenz(a,h)anthracene		NA	NA	NA	NA	NA	NA	NA	NA	NA
Fluoranthene		NA	NA	NA	NA	NA	NA	NA	NA	NA
Fluorene		NA	NA	NA	NA	NA	NA	NA	NA	NA
Indeno(1,2,3-dc)pyrene		NA	NA	NA	NA	NA	NA	NA	NA	NA
Naphthalene		NA	NA	NA	NA	NA	NA	NA	NA	NA
N-Nitroso-Di-N-Propylamin		NA	NA	NA	NA	NA	NA	NA	NA	NA
o-Cresol (2-Methylphenol)		NA	NA	NA	NA	NA	NA	NA	NA	NA
p-Cresol (4-Methylphenol)		NA	NA	NA	NA	NA	NA	NA	NA	NA
Phenanthrene		NA	NA	NA	NA	NA	NA	NA	NA	NA
Pyrene		NA	NA	NA	NA	NA	NA	NA	NA	NA
<b>RCRA Metals (mg/L)</b>										
Antimony		NA	NA	NA	NA	NA	NA	NA	NA	NA
Arsenic	0.0133	NA	NA	NA	NA	NA	NA	NA	NA	NA
Barium		NA	NA	NA	NA	NA	NA	NA	NA	NA
Beryllium	0.00033	NA	NA	NA	NA	NA	NA	NA	NA	NA
Cadmium		NA	NA	NA	NA	NA	NA	NA	NA	NA
Chromium		NA	NA	NA	NA	NA	NA	NA	NA	NA
Copper		NA	NA	NA	NA	NA	NA	NA	NA	NA
Iron		NA	NA	NA	NA	NA	NA	NA	NA	NA
Lead		NA	NA	NA	NA	NA	NA	NA	NA	NA
Manganese		NA	NA	NA	NA	NA	NA	NA	NA	NA
Mercury		NA	NA	NA	NA	NA	NA	NA	NA	NA
Nickel		NA	NA	NA	NA	NA	NA	NA	NA	NA
Selenium		NA	NA	NA	NA	NA	NA	NA	NA	NA
Sliver		NA	NA	NA	NA	NA	NA	NA	NA	NA
Sodium		NA	NA	NA	NA	NA	NA	NA	NA	NA
Thallium		NA	NA	NA	NA	NA	NA	NA	NA	NA
Zinc		NA	NA	NA	NA	NA	NA	NA	NA	NA
<b>Field Screening Measurements</b>										
pH		8.14	6.71	7.18	NA	6.73	6.73	7.23	7.51	6.53
Conductivity		798.3	709	828	NA	748	748	556	705	752
Temperature		9.7	18.4	13.21	NA	11.4	11.4	11.25	12.36	13.14
Dissolved Oxygen		8.4	4.04	5.22	NA	9.13	9.13	3.22	4.21	4.01
Redox Potential		114	200	-80.3	NA	175	175	194	194	164

TABLE 1

City of Manitowoc - Newton Gravel Pit

**SUMMARY OF CONTAMINATES DETECTED IN SILVER CREEK  
FORMER TOWN OF NEWTON GRAVEL PIT  
MANITOWOC, WISCONSIN**

Analyte	Table 9 NR 105 <sup>(1)</sup>	2014 Sample Location 7	2014 Sample Location 8	2014 Sample Location 9	2014 Sample Location 10	2014 Sample Location 11	2014 Sample Location 12
		9/30/2014	9/30/2014	9/30/2014	9/30/2014	9/30/2014	9/30/2014
<b>Volatile Organic Compounds (VOCs) (µg/L)</b>							
Benzene	140	<0.24	<0.24	<0.24	<0.24	<0.24	<0.24
t-Butylbenzene		<0.36	<0.36	<0.36	<0.36	<0.36	<0.36
Chloromethane		<0.81	<0.81	<0.81	<0.81	<0.81	<0.81
2-Chlorotoluene		<0.21	<0.21	<0.21	<0.21	<0.21	<0.21
1,2-Dichloroethane	217	<0.41	<0.41	<0.41	<0.41	<0.41	<0.41
1,1-Dichloroethane		<0.3	<0.3	<0.3	<0.3	<0.3	<0.3
1,1-Dichloroethene		<0.4	<0.4	<0.4	<0.4	<0.4	<0.4
cis-1,2-Dichloroethene		3.3	<0.38	<0.38	<0.38	<0.38	<0.38
trans-1,2-Dichloroethene		<0.35	<0.35	<0.35	<0.35	<0.35	<0.35
Ethylbenzene		<0.55	<0.55	<0.55	<0.55	<0.55	<0.55
Isopropylbenzene		<0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Methylene chloride	2700	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Naphthalene		<1.7	<1.7	<1.7	<1.7	<1.7	<1.7
n-Propylbenzene		<0.25	<0.25	<0.25	<0.25	<0.25	<0.25
Tetrachloroethene	46	<0.33	<0.33	<0.33	<0.33	<0.33	<0.33
Toluene		<0.69	<0.69	<0.69	<0.69	<0.69	<0.69
1,1,1-Trichloroethane		<0.33	<0.33	<0.33	<0.33	<0.33	<0.33
Trichloroethene	539	<0.33	<0.33	<0.33	<0.33	<0.33	<0.33
1,2,4-Trimethylbenzene		<2.2	<2.2	<2.2	<2.2	<2.2	<2.2
1,3,5-Trimethylbenzene		<1.4	<1.4	<1.4	<1.4	<1.4	<1.4
Total Trimethylbenzene		<2.2	<2.2	<2.2	<2.2	<2.2	<2.2
Vinyl Chloride	10	0.57	<0.18	<0.18	<0.18	<0.18	<0.18
Xylenes, m + p		<0.69	<0.69	<0.69	<0.69	<0.69	<0.69
Xylene, o		<0.63	<0.63	<0.63	<0.63	<0.63	<0.63
Total Xylenes		<0.69	<0.69	<0.69	<0.69	<0.69	<0.69
Styrene		NA	NA	NA	NA	NA	NA
Ethane		NA	NA	NA	NA	NA	NA
Ethene		NA	NA	NA	NA	NA	NA
Methane		NA	NA	NA	NA	NA	NA
<b>SVOCs Polycyclic Aromatic Hydrocarbon</b>							
1-Methylnaphthalene		NA	NA	NA	NA	NA	NA
2-Methylnaphthalene		NA	NA	NA	NA	NA	NA
Acenaphthene		NA	NA	NA	NA	NA	NA
Acenaphthylene		NA	NA	NA	NA	NA	NA
Anthracene		NA	NA	NA	NA	NA	NA
Benzo(a)anthracene		NA	NA	NA	NA	NA	NA
Benzo(a)pyrene		NA	NA	NA	NA	NA	NA
Benzo (b)fluoranthene		NA	NA	NA	NA	NA	NA
Benzo(ghi)perylene		NA	NA	NA	NA	NA	NA
Benzo(k)fluoranthene		NA	NA	NA	NA	NA	NA
Butyl benzyl phthalate		NA	NA	NA	NA	NA	NA
Bis (2-Ethylhexyl) Phthalate		NA	NA	NA	NA	NA	NA
Chrysene		NA	NA	NA	NA	NA	NA
Dibenzo(a,h)anthracene		NA	NA	NA	NA	NA	NA
Fluoranthene		NA	NA	NA	NA	NA	NA
Fluorene		NA	NA	NA	NA	NA	NA
Indeno(1,2,3-dc)pyrene		NA	NA	NA	NA	NA	NA
Naphthalene		NA	NA	NA	NA	NA	NA
N-Nitroso-Di-N-Propylamin		NA	NA	NA	NA	NA	NA
o-Cresol (2-Methylphenol)		NA	NA	NA	NA	NA	NA
p-Cresol (4-Methylphenol)		NA	NA	NA	NA	NA	NA
Phenanthrene		NA	NA	NA	NA	NA	NA
Pyrene		NA	NA	NA	NA	NA	NA
<b>RCRA Metals (mg/L)</b>							
Antimony		NA	NA	NA	NA	NA	NA
Arsenic	0.0133	NA	NA	NA	NA	NA	NA
Barium		NA	NA	NA	NA	NA	NA
Beryllium	0.00033	NA	NA	NA	NA	NA	NA
Cadmium		NA	NA	NA	NA	NA	NA
Chromium		NA	NA	NA	NA	NA	NA
Copper		NA	NA	NA	NA	NA	NA
Iron		NA	NA	NA	NA	NA	NA
Lead		NA	NA	NA	NA	NA	NA
Manganese		NA	NA	NA	NA	NA	NA
Mercury		NA	NA	NA	NA	NA	NA
Nickel		NA	NA	NA	NA	NA	NA
Selenium		NA	NA	NA	NA	NA	NA
Silver		NA	NA	NA	NA	NA	NA
Sodium		NA	NA	NA	NA	NA	NA
Thallium		NA	NA	NA	NA	NA	NA
Zinc		NA	NA	NA	NA	NA	NA
<b>Field Screening Measurements</b>							
pH		6.59	6.49	6.53	6.25	7.21	6.72
Conductivity		736	775	737	987	971	825
Temperature		11.91	11.45	12.27	12.01	13.09	12.1
Dissolved Oxygen		7.22	6.21	6.53	7.32	15.71	5.73
Redox Potential		171	175	177	177	167	170



#### LEGEND:

- PROPERTY BOUNDARY
- PROPERTY BOUNDARY - CITY LIMITS
- UTILITIES:
  - POTABLE WATER SUPPLY (from Manitowoc Public Utilities)
- ★ CREEK SAMPLE LOCATIONS

#### NOTES:

TCE = Trichloroethane  
 cis-DCE = cis-1,2-Dichloroethene  
 VC = Vinyl Chloride

1. Results are presented in micro-grams per liter (ug/L)
2. Results are compared to: WAC Chapter NR 105, Table 9 Human Cancer Criteria Standards for a non-public water supply that is a "warm water forage, limited forage and warm water sport fish community".
3. **BOLD** indicates an exceedance of the above referenced standard



0 150 300 600  
SCALE

**AECOM**  
 Milwaukee Office  
 1555 RiverCenter Dr  
 Milwaukee, WI  
 414.944.6080

#### FORMER NEWTON GRAVEL PIT

**SILVER CREEK SAMPLING SUMMARY  
 (SEPTEMBER 30, 2014)**

**PHOTOGRAPHIC LOG**

<b>Client Name:</b> City of Manitowoc		<b>Site Location:</b> Silver Creek, Former Town of Newton Gravel Pit, Manitowoc County, Wisconsin	<b>Project No.</b> 60135471(82518)
<b>Photo No.</b> <b>1</b>	<b>Date:</b> 9/30/14	<b>Direction Photo Taken:</b>  Northwest	
<b>Description:</b>  Sample Location 1 on Silver Creek.			
<b>Photo No.</b> <b>2</b>	<b>Date:</b> 9/30/14	<b>Direction Photo Taken:</b>  North	
<b>Description:</b>  Sample Location 2 on Silver Creek.			

**PHOTOGRAPHIC LOG**

<b>Client Name:</b> City of Manitowoc		<b>Site Location:</b> Silver Creek, Former Town of Newton Gravel Pit, Manitowoc County, Wisconsin	<b>Project No.</b> 60135471(82518)
<b>Photo No.</b> <b>3</b>	<b>Date:</b> 9/30/14	<b>Direction Photo Taken:</b> Southwest	
<b>Description:</b>  Sample Location 3 (Staff Gauge 2 Location) on Silver Creek.			
<b>Photo No.</b> <b>4</b>	<b>Date:</b> 9/30/14	<b>Direction Photo Taken:</b> West	
<b>Description:</b>  Sample Location 4 (Staff Gauge 1 Location) on Silver Creek.			

**PHOTOGRAPHIC LOG**

<b>Client Name:</b> City of Manitowoc		<b>Site Location:</b> Silver Creek, Former Town of Newton Gravel Pit, Manitowoc County, Wisconsin	<b>Project No.</b> 60135471(82518)
<b>Photo No.</b> <b>5</b>	<b>Date:</b> 9/30/14	<b>Direction Photo Taken:</b>  Southwest	
<b>Description:</b>  Sample Location 5 (Staff Gauge 3 Location) on Silver Creek.			
<b>Photo No.</b> <b>6</b>	<b>Date:</b> 9/30/14	<b>Direction Photo Taken:</b>  Northwest	
<b>Description:</b>  Sample Location 6 on Silver Creek.			

**PHOTOGRAPHIC LOG**

<b>Client Name:</b> City of Manitowoc		<b>Site Location:</b> Silver Creek, Former Town of Newton Gravel Pit, Manitowoc County, Wisconsin	<b>Project No.</b> 60135471(82518)
<b>Photo No.</b> <b>7</b>	<b>Date:</b> 9/30/14	<b>Direction Photo Taken:</b> North	
<b>Description:</b>  Sample Location 7 on Silver Creek.			
<b>Photo No.</b> <b>8</b>	<b>Date:</b> 9/30/14	<b>Direction Photo Taken:</b> West	
<b>Description:</b>  Sample Location 8 on Silver Creek.			

**PHOTOGRAPHIC LOG**

<b>Client Name:</b> City of Manitowoc		<b>Site Location:</b> Silver Creek, Former Town of Newton Gravel Pit, Manitowoc County, Wisconsin	<b>Project No.</b> 60135471(82518)
<b>Photo No.</b> <b>9</b>	<b>Date:</b> 9/30/14	<b>Direction Photo Taken:</b>  South	
<b>Description:</b>  Sample Location 9 on Silver Creek.			
<b>Photo No.</b> <b>10</b>	<b>Date:</b> 9/30/14	<b>Direction Photo Taken:</b>  East	
<b>Description:</b>  Sample Location 10 on Silver Creek.			

**PHOTOGRAPHIC LOG**

<b>Client Name:</b> City of Manitowoc		<b>Site Location:</b> Silver Creek, Former Town of Newton Gravel Pit, Manitowoc County, Wisconsin	<b>Project No.</b> 60135471(82518)
<b>Photo No.</b> <b>11</b>	<b>Date:</b> 9/30/14	<b>Direction Photo Taken:</b> North	
<b>Description:</b>  Sample Location 11 on Silver Creek.			
<b>Photo No.</b> <b>12</b>	<b>Date:</b> 9/30/14	<b>Direction Photo Taken:</b> West	
<b>Description:</b>  Sample Location 12 on Silver Creek.			

# Synergy Environmental Lab, INC.

1990 Prospect Ct., Appleton, WI 54914 \*P 920-830-2455 \* F 920-733-0631

DAVE HENDERSON  
AECOM  
1555 N RIVER CENTER DRIVE  
MILWAUKEE, WI 53212

Report Date 08-Oct-14

Project Name FMR NEWTON GRAVEL PIT  
Project #

Invoice # E27808

Lab Code 5027808A  
Sample ID CREEK-1  
Sample Matrix Water  
Sample Date 9/30/2014

	Result	Unit	LOD	LOQ	Dil	Method	Ext Date	Run Date	Analyst	Code
Organic										
VOC's										
Benzene	< 0.24	ug/l	0.24	0.77	1	8260B			CJR	1
Bromobenzene	< 0.32	ug/l	0.32	1	1	8260B			CJR	1
Bromodichloromethane	< 0.37	ug/l	0.37	1.2	1	8260B			CJR	1
Bromoform	< 0.35	ug/l	0.35	1.1	1	8260B			CJR	1
tert-Butylbenzene	< 0.36	ug/l	0.36	1.2	1	8260B			CJR	1
sec-Butylbenzene	< 0.33	ug/l	0.33	1	1	8260B			CJR	1
n-Butylbenzene	< 0.35	ug/l	0.35	1.1	1	8260B			CJR	1
Carbon Tetrachloride	< 0.33	ug/l	0.33	1.1	1	8260B			CJR	1
Chlorobenzene	< 0.24	ug/l	0.24	0.77	1	8260B			CJR	1
Chloroethane	< 0.63	ug/l	0.63	2	1	8260B			CJR	1
Chloroform	< 0.28	ug/l	0.28	0.88	1	8260B			CJR	1
Chloromethane	< 0.81	ug/l	0.81	2.6	1	8260B			CJR	1
2-Chlorotoluene	< 0.21	ug/l	0.21	0.66	1	8260B			CJR	1
4-Chlorotoluene	< 0.21	ug/l	0.21	0.68	1	8260B			CJR	1
1,2-Dibromo-3-chloropropane	< 0.88	ug/l	0.88	2.8	1	8260B			CJR	1
Dibromochloromethane	< 0.22	ug/l	0.22	0.7	1	8260B			CJR	1
1,4-Dichlorobenzene	< 0.3	ug/l	0.3	0.96	1	8260B			CJR	1
1,3-Dichlorobenzene	< 0.28	ug/l	0.28	0.89	1	8260B			CJR	1
1,2-Dichlorobenzene	< 0.36	ug/l	0.36	1.2	1	8260B			CJR	1
Dichlorodifluoromethane	< 0.44	ug/l	0.44	1.4	1	8260B			CJR	30
1,2-Dichloroethane	< 0.41	ug/l	0.41	1.3	1	8260B			CJR	1
1,1-Dichloroethane	< 0.3	ug/l	0.3	0.97	1	8260B			CJR	1
1,1-Dichloroethene	< 0.4	ug/l	0.4	1.3	1	8260B			CJR	1
cis-1,2-Dichloroethene	< 0.38	ug/l	0.38	1.2	1	8260B			CJR	1
trans-1,2-Dichloroethene	< 0.35	ug/l	0.35	1.1	1	8260B			CJR	1
1,2-Dichloropropane	< 0.32	ug/l	0.32	1	1	8260B			CJR	1
2,2-Dichloropropane	< 0.36	ug/l	0.36	1.2	1	8260B			CJR	1
1,3-Dichloropropane	< 0.33	ug/l	0.33	1	1	8260B			CJR	1
Di-isopropyl ether	< 0.23	ug/l	0.23	0.73	1	8260B			CJR	1
EDB (1,2-Dibromoethane)	< 0.44	ug/l	0.44	1.4	1	8260B			CJR	1
Ethylbenzene	< 0.55	ug/l	0.55	1.7	1	8260B			CJR	1
Hexachlorobutadiene	< 1.5	ug/l	1.5	4.8	1	8260B			CJR	1
Isopropylbenzene	< 0.3	ug/l	0.3	0.96	1	8260B			CJR	30

**Project Name** FMR NEWTON GRAVEL PIT  
**Project #**

**Invoice #** E27808

**Lab Code** 5027808A  
**Sample ID** CREEK-1  
**Sample Matrix** Water  
**Sample Date** 9/30/2014

	<b>Result</b>	<b>Unit</b>	<b>LOD</b>	<b>LOQ</b>	<b>Dil</b>	<b>Method</b>	<b>Ext Date</b>	<b>Run Date</b>	<b>Analyst</b>	<b>Code</b>
p-Isopropyltoluene	< 0.31	ug/l	0.31	0.98	1	8260B		10/6/2014	CJR	1
Methylene chloride	< 0.5	ug/l	0.5	1.6	1	8260B		10/6/2014	CJR	1
Methyl tert-butyl ether (MTBE)	< 0.23	ug/l	0.23	0.74	1	8260B		10/6/2014	CJR	1
Naphthalene	< 1.7	ug/l	1.7	5.5	1	8260B		10/6/2014	CJR	1
n-Propylbenzene	< 0.25	ug/l	0.25	0.81	1	8260B		10/6/2014	CJR	1
1,1,2,2-Tetrachloroethane	< 0.45	ug/l	0.45	1.4	1	8260B		10/6/2014	CJR	1
1,1,1,2-Tetrachloroethane	< 0.33	ug/l	0.33	1.1	1	8260B		10/6/2014	CJR	1
Tetrachloroethene	< 0.33	ug/l	0.33	1.1	1	8260B		10/6/2014	CJR	1
Toluene	< 0.69	ug/l	0.69	2.2	1	8260B		10/6/2014	CJR	1
1,2,4-Trichlorobenzene	< 0.98	ug/l	0.98	3.1	1	8260B		10/6/2014	CJR	1
1,2,3-Trichlorobenzene	< 1.8	ug/l	1.8	5.8	1	8260B		10/6/2014	CJR	1
1,1,1-Trichloroethane	< 0.33	ug/l	0.33	1	1	8260B		10/6/2014	CJR	1
1,1,2-Trichloroethane	< 0.34	ug/l	0.34	1.1	1	8260B		10/6/2014	CJR	1
Trichloroethene (TCE)	< 0.33	ug/l	0.33	1	1	8260B		10/6/2014	CJR	1
Trichlorofluoromethane	< 0.71	ug/l	0.71	2.3	1	8260B		10/6/2014	CJR	1
1,2,4-Trimethylbenzene	< 2.2	ug/l	2.2	6.9	1	8260B		10/6/2014	CJR	1
1,3,5-Trimethylbenzene	< 1.4	ug/l	1.4	4.5	1	8260B		10/6/2014	CJR	1
Vinyl Chloride	< 0.18	ug/l	0.18	0.57	1	8260B		10/6/2014	CJR	1
m&p-Xylene	< 0.69	ug/l	0.69	2.2	1	8260B		10/6/2014	CJR	1
o-Xylene	< 0.63	ug/l	0.63	2	1	8260B		10/6/2014	CJR	1
SUR - 1,2-Dichloroethane-d4	109	REC %			1	8260B		10/6/2014	CJR	1
SUR - 4-Bromofluorobenzene	104	REC %			1	8260B		10/6/2014	CJR	1
SUR - Dibromofluoromethane	103	REC %			1	8260B		10/6/2014	CJR	1
SUR - Toluene-d8	99	REC %			1	8260B		10/6/2014	CJR	1

**Project Name** FMR NEWTON GRAVEL PIT  
**Project #**

**Invoice #** E27808

**Lab Code** 5027808B  
**Sample ID** CREEK-2  
**Sample Matrix** Water  
**Sample Date** 9/30/2014

	<b>Result</b>	<b>Unit</b>	<b>LOD</b>	<b>LOQ</b>	<b>Dil</b>	<b>Method</b>	<b>Ext Date</b>	<b>Run Date</b>	<b>Analyst</b>	<b>Code</b>
<b>Organic</b>										
VOC's										
Benzene	< 0.24	ug/l	0.24	0.77	1	8260B	10/6/2014	CJR	1	
Bromobenzene	< 0.32	ug/l	0.32	1	1	8260B	10/6/2014	CJR	1	
Bromodichloromethane	< 0.37	ug/l	0.37	1.2	1	8260B	10/6/2014	CJR	1	
Bromoform	< 0.35	ug/l	0.35	1.1	1	8260B	10/6/2014	CJR	1	
tert-Butylbenzene	< 0.36	ug/l	0.36	1.2	1	8260B	10/6/2014	CJR	1	
sec-Butylbenzene	< 0.33	ug/l	0.33	1	1	8260B	10/6/2014	CJR	1	
n-Butylbenzene	< 0.35	ug/l	0.35	1.1	1	8260B	10/6/2014	CJR	1	
Carbon Tetrachloride	< 0.33	ug/l	0.33	1.1	1	8260B	10/6/2014	CJR	1	
Chlorobenzene	< 0.24	ug/l	0.24	0.77	1	8260B	10/6/2014	CJR	1	
Chloroethane	< 0.63	ug/l	0.63	2	1	8260B	10/6/2014	CJR	1	
Chloroform	< 0.28	ug/l	0.28	0.88	1	8260B	10/6/2014	CJR	1	
Chloromethane	< 0.81	ug/l	0.81	2.6	1	8260B	10/6/2014	CJR	1	
2-Chlorotoluene	< 0.21	ug/l	0.21	0.66	1	8260B	10/6/2014	CJR	1	
4-Chlorotoluene	< 0.21	ug/l	0.21	0.68	1	8260B	10/6/2014	CJR	1	
1,2-Dibromo-3-chloropropane	< 0.88	ug/l	0.88	2.8	1	8260B	10/6/2014	CJR	1	
Dibromochloromethane	< 0.22	ug/l	0.22	0.7	1	8260B	10/6/2014	CJR	1	
1,4-Dichlorobenzene	< 0.3	ug/l	0.3	0.96	1	8260B	10/6/2014	CJR	1	
1,3-Dichlorobenzene	< 0.28	ug/l	0.28	0.89	1	8260B	10/6/2014	CJR	1	
1,2-Dichlorobenzene	< 0.36	ug/l	0.36	1.2	1	8260B	10/6/2014	CJR	1	
Dichlorodifluoromethane	< 0.44	ug/l	0.44	1.4	1	8260B	10/6/2014	CJR	30	
1,2-Dichloroethane	< 0.41	ug/l	0.41	1.3	1	8260B	10/6/2014	CJR	1	
1,1-Dichloroethane	< 0.3	ug/l	0.3	0.97	1	8260B	10/6/2014	CJR	1	
1,1-Dichloroethene	< 0.4	ug/l	0.4	1.3	1	8260B	10/6/2014	CJR	1	
cis-1,2-Dichloroethene	< 0.38	ug/l	0.38	1.2	1	8260B	10/6/2014	CJR	1	
trans-1,2-Dichloroethene	< 0.35	ug/l	0.35	1.1	1	8260B	10/6/2014	CJR	1	
1,2-Dichloropropane	< 0.32	ug/l	0.32	1	1	8260B	10/6/2014	CJR	1	
2,2-Dichloropropane	< 0.36	ug/l	0.36	1.2	1	8260B	10/6/2014	CJR	1	
1,3-Dichloropropane	< 0.33	ug/l	0.33	1	1	8260B	10/6/2014	CJR	1	
Di-isopropyl ether	< 0.23	ug/l	0.23	0.73	1	8260B	10/6/2014	CJR	1	
EDB (1,2-Dibromoethane)	< 0.44	ug/l	0.44	1.4	1	8260B	10/6/2014	CJR	1	
Ethylbenzene	< 0.55	ug/l	0.55	1.7	1	8260B	10/6/2014	CJR	1	
Hexachlorobutadiene	< 1.5	ug/l	1.5	4.8	1	8260B	10/6/2014	CJR	1	
Isopropylbenzene	< 0.3	ug/l	0.3	0.96	1	8260B	10/6/2014	CJR	30	
p-Isopropyltoluene	< 0.31	ug/l	0.31	0.98	1	8260B	10/6/2014	CJR	1	
Methylene chloride	< 0.5	ug/l	0.5	1.6	1	8260B	10/6/2014	CJR	1	
Methyl tert-butyl ether (MTBE)	< 0.23	ug/l	0.23	0.74	1	8260B	10/6/2014	CJR	1	
Naphthalene	< 1.7	ug/l	1.7	5.5	1	8260B	10/6/2014	CJR	1	
n-Propylbenzene	< 0.25	ug/l	0.25	0.81	1	8260B	10/6/2014	CJR	1	
1,1,2,2-Tetrachloroethane	< 0.45	ug/l	0.45	1.4	1	8260B	10/6/2014	CJR	1	
1,1,1,2-Tetrachloroethane	< 0.33	ug/l	0.33	1.1	1	8260B	10/6/2014	CJR	1	
Tetrachloroethene	< 0.33	ug/l	0.33	1.1	1	8260B	10/6/2014	CJR	1	
Toluene	< 0.69	ug/l	0.69	2.2	1	8260B	10/6/2014	CJR	1	
1,2,4-Trichlorobenzene	< 0.98	ug/l	0.98	3.1	1	8260B	10/6/2014	CJR	1	
1,2,3-Trichlorobenzene	< 1.8	ug/l	1.8	5.8	1	8260B	10/6/2014	CJR	1	
1,1,1-Trichloroethane	< 0.33	ug/l	0.33	1	1	8260B	10/6/2014	CJR	1	
1,1,2-Trichloroethane	< 0.34	ug/l	0.34	1.1	1	8260B	10/6/2014	CJR	1	
Trichloroethene (TCE)	< 0.33	ug/l	0.33	1	1	8260B	10/6/2014	CJR	1	
Trichlorofluoromethane	< 0.71	ug/l	0.71	2.3	1	8260B	10/6/2014	CJR	1	
1,2,4-Trimethylbenzene	< 2.2	ug/l	2.2	6.9	1	8260B	10/6/2014	CJR	1	
1,3,5-Trimethylbenzene	< 1.4	ug/l	1.4	4.5	1	8260B	10/6/2014	CJR	1	
Vinyl Chloride	< 0.18	ug/l	0.18	0.57	1	8260B	10/6/2014	CJR	1	
m&p-Xylene	< 0.69	ug/l	0.69	2.2	1	8260B	10/6/2014	CJR	1	
o-Xylene	< 0.63	ug/l	0.63	2	1	8260B	10/6/2014	CJR	1	
SUR - 1,2-Dichloroethane-d4	95	REC %			1	8260B	10/6/2014	CJR	1	
SUR - Toluene-d8	96	REC %			1	8260B	10/6/2014	CJR	1	
SUR - 4-Bromofluorobenzene	108	REC %			1	8260B	10/6/2014	CJR	1	
SUR - Dibromofluoromethane	100	REC %			1	8260B	10/6/2014	CJR	1	

**Project Name** FMR NEWTON GRAVEL PIT  
**Project #**

**Invoice #** E27808

**Lab Code** 5027808C  
**Sample ID** CREEK-3  
**Sample Matrix** Water  
**Sample Date** 9/30/2014

	<b>Result</b>	<b>Unit</b>	<b>LOD</b>	<b>LOQ</b>	<b>Dil</b>	<b>Method</b>	<b>Ext Date</b>	<b>Run Date</b>	<b>Analyst</b>	<b>Code</b>
<b>Organic</b>										
VOC's										
Benzene	1.31	ug/l	0.24	0.77	1	8260B			CJR	1
Bromobenzene	< 0.32	ug/l	0.32	1	1	8260B			CJR	1
Bromodichloromethane	< 0.37	ug/l	0.37	1.2	1	8260B			CJR	1
Bromoform	< 0.35	ug/l	0.35	1.1	1	8260B			CJR	1
tert-Butylbenzene	< 0.36	ug/l	0.36	1.2	1	8260B			CJR	1
sec-Butylbenzene	< 0.33	ug/l	0.33	1	1	8260B			CJR	1
n-Butylbenzene	< 0.35	ug/l	0.35	1.1	1	8260B			CJR	1
Carbon Tetrachloride	< 0.33	ug/l	0.33	1.1	1	8260B			CJR	1
Chlorobenzene	< 0.24	ug/l	0.24	0.77	1	8260B			CJR	1
Chloroethane	< 0.63	ug/l	0.63	2	1	8260B			CJR	1
Chloroform	< 0.28	ug/l	0.28	0.88	1	8260B			CJR	1
Chloromethane	< 0.81	ug/l	0.81	2.6	1	8260B			CJR	1
2-Chlorotoluene	< 0.21	ug/l	0.21	0.66	1	8260B			CJR	1
4-Chlorotoluene	< 0.21	ug/l	0.21	0.68	1	8260B			CJR	1
1,2-Dibromo-3-chloropropane	< 0.88	ug/l	0.88	2.8	1	8260B			CJR	1
Dibromochloromethane	< 0.22	ug/l	0.22	0.7	1	8260B			CJR	1
1,4-Dichlorobenzene	< 0.3	ug/l	0.3	0.96	1	8260B			CJR	1
1,3-Dichlorobenzene	< 0.28	ug/l	0.28	0.89	1	8260B			CJR	1
1,2-Dichlorobenzene	< 0.36	ug/l	0.36	1.2	1	8260B			CJR	1
Dichlorodifluoromethane	< 0.44	ug/l	0.44	1.4	1	8260B			CJR	30
1,2-Dichloroethane	< 0.41	ug/l	0.41	1.3	1	8260B			CJR	1
1,1-Dichloroethane	0.96 "J"	ug/l	0.3	0.97	1	8260B			CJR	1
1,1-Dichloroethene	< 0.4	ug/l	0.4	1.3	1	8260B			CJR	1
cis-1,2-Dichloroethene	61	ug/l	0.38	1.2	1	8260B			CJR	1
trans-1,2-Dichloroethene	< 0.35	ug/l	0.35	1.1	1	8260B			CJR	1
1,2-Dichloropropane	< 0.32	ug/l	0.32	1	1	8260B			CJR	1
2,2-Dichloropropane	< 0.36	ug/l	0.36	1.2	1	8260B			CJR	1
1,3-Dichloropropane	< 0.33	ug/l	0.33	1	1	8260B			CJR	1
Di-isopropyl ether	< 0.23	ug/l	0.23	0.73	1	8260B			CJR	1
EDB (1,2-Dibromoethane)	< 0.44	ug/l	0.44	1.4	1	8260B			CJR	1
Ethylbenzene	< 0.55	ug/l	0.55	1.7	1	8260B			CJR	1
Hexachlorobutadiene	< 1.5	ug/l	1.5	4.8	1	8260B			CJR	1
Isopropylbenzene	< 0.3	ug/l	0.3	0.96	1	8260B			CJR	30
p-Isopropyltoluene	< 0.31	ug/l	0.31	0.98	1	8260B			CJR	1
Methylene chloride	< 0.5	ug/l	0.5	1.6	1	8260B			CJR	1
Methyl tert-butyl ether (MTBE)	< 0.23	ug/l	0.23	0.74	1	8260B			CJR	1
Naphthalene	< 1.7	ug/l	1.7	5.5	1	8260B			CJR	1
n-Propylbenzene	< 0.25	ug/l	0.25	0.81	1	8260B			CJR	1
1,1,2,2-Tetrachloroethane	< 0.45	ug/l	0.45	1.4	1	8260B			CJR	1
1,1,1,2-Tetrachloroethane	< 0.33	ug/l	0.33	1.1	1	8260B			CJR	1
Tetrachloroethene	< 0.33	ug/l	0.33	1.1	1	8260B			CJR	1
Toluene	< 0.69	ug/l	0.69	2.2	1	8260B			CJR	1
1,2,4-Trichlorobenzene	< 0.98	ug/l	0.98	3.1	1	8260B			CJR	1
1,2,3-Trichlorobenzene	< 1.8	ug/l	1.8	5.8	1	8260B			CJR	1
1,1,1-Trichloroethane	< 0.33	ug/l	0.33	1	1	8260B			CJR	1
1,1,2-Trichloroethane	< 0.34	ug/l	0.34	1.1	1	8260B			CJR	1
Trichloroethene (TCE)	0.63 "J"	ug/l	0.33	1	1	8260B			CJR	1
Trichlorofluoromethane	< 0.71	ug/l	0.71	2.3	1	8260B			CJR	1
1,2,4-Trimethylbenzene	< 2.2	ug/l	2.2	6.9	1	8260B			CJR	1
1,3,5-Trimethylbenzene	< 1.4	ug/l	1.4	4.5	1	8260B			CJR	1
Vinyl Chloride	87	ug/l	0.18	0.57	1	8260B			CJR	1
m&p-Xylene	< 0.69	ug/l	0.69	2.2	1	8260B			CJR	1
o-Xylene	< 0.63	ug/l	0.63	2	1	8260B			CJR	1
SUR - 1,2-Dichloroethane-d4	110	REC %			1	8260B			CJR	1
SUR - 4-Bromofluorobenzene	108	REC %			1	8260B			CJR	1
SUR - Dibromofluoromethane	102	REC %			1	8260B			CJR	1
SUR - Toluene-d8	97	REC %			1	8260B			CJR	1

**Project Name** FMR NEWTON GRAVEL PIT  
**Project #**

**Invoice #** E27808

**Lab Code** 5027808D  
**Sample ID** CREEK-4  
**Sample Matrix** Water  
**Sample Date** 9/30/2014

	<b>Result</b>	<b>Unit</b>	<b>LOD</b>	<b>LOQ</b>	<b>Dil</b>	<b>Method</b>	<b>Ext Date</b>	<b>Run Date</b>	<b>Analyst</b>	<b>Code</b>
<b>Organic</b>										
VOC's										
Benzene	0.40 "J"	ug/l	0.24	0.77	1	8260B			CJR	1
Bromobenzene	< 0.32	ug/l	0.32	1	1	8260B			CJR	1
Bromodichloromethane	< 0.37	ug/l	0.37	1.2	1	8260B			CJR	1
Bromoform	< 0.35	ug/l	0.35	1.1	1	8260B			CJR	1
tert-Butylbenzene	< 0.36	ug/l	0.36	1.2	1	8260B			CJR	1
sec-Butylbenzene	< 0.33	ug/l	0.33	1	1	8260B			CJR	1
n-Butylbenzene	< 0.35	ug/l	0.35	1.1	1	8260B			CJR	1
Carbon Tetrachloride	< 0.33	ug/l	0.33	1.1	1	8260B			CJR	1
Chlorobenzene	< 0.24	ug/l	0.24	0.77	1	8260B			CJR	1
Chloroethane	< 0.63	ug/l	0.63	2	1	8260B			CJR	1
Chloroform	< 0.28	ug/l	0.28	0.88	1	8260B			CJR	1
Chloromethane	< 0.81	ug/l	0.81	2.6	1	8260B			CJR	1
2-Chlorotoluene	< 0.21	ug/l	0.21	0.66	1	8260B			CJR	1
4-Chlorotoluene	< 0.21	ug/l	0.21	0.68	1	8260B			CJR	1
1,2-Dibromo-3-chloropropane	< 0.88	ug/l	0.88	2.8	1	8260B			CJR	1
Dibromochloromethane	< 0.22	ug/l	0.22	0.7	1	8260B			CJR	1
1,4-Dichlorobenzene	< 0.3	ug/l	0.3	0.96	1	8260B			CJR	1
1,3-Dichlorobenzene	< 0.28	ug/l	0.28	0.89	1	8260B			CJR	1
1,2-Dichlorobenzene	< 0.36	ug/l	0.36	1.2	1	8260B			CJR	1
Dichlorodifluoromethane	< 0.44	ug/l	0.44	1.4	1	8260B			CJR	30
1,2-Dichloroethane	< 0.41	ug/l	0.41	1.3	1	8260B			CJR	1
1,1-Dichloroethane	0.69 "J"	ug/l	0.3	0.97	1	8260B			CJR	1
1,1-Dichloroethene	< 0.4	ug/l	0.4	1.3	1	8260B			CJR	1
cis-1,2-Dichloroethene	50	ug/l	0.38	1.2	1	8260B			CJR	1
trans-1,2-Dichloroethene	< 0.35	ug/l	0.35	1.1	1	8260B			CJR	1
1,2-Dichloropropane	< 0.32	ug/l	0.32	1	1	8260B			CJR	1
2,2-Dichloropropane	< 0.36	ug/l	0.36	1.2	1	8260B			CJR	1
1,3-Dichloropropane	< 0.33	ug/l	0.33	1	1	8260B			CJR	1
Di-isopropyl ether	< 0.23	ug/l	0.23	0.73	1	8260B			CJR	1
EDB (1,2-Dibromoethane)	< 0.44	ug/l	0.44	1.4	1	8260B			CJR	1
Ethylbenzene	< 0.55	ug/l	0.55	1.7	1	8260B			CJR	1
Hexachlorobutadiene	< 1.5	ug/l	1.5	4.8	1	8260B			CJR	1
Isopropylbenzene	< 0.3	ug/l	0.3	0.96	1	8260B			CJR	30
p-Isopropyltoluene	< 0.31	ug/l	0.31	0.98	1	8260B			CJR	1
Methylene chloride	< 0.5	ug/l	0.5	1.6	1	8260B			CJR	1
Methyl tert-butyl ether (MTBE)	< 0.23	ug/l	0.23	0.74	1	8260B			CJR	1
Naphthalene	< 1.7	ug/l	1.7	5.5	1	8260B			CJR	1
n-Propylbenzene	< 0.25	ug/l	0.25	0.81	1	8260B			CJR	1
1,1,2,2-Tetrachloroethane	< 0.45	ug/l	0.45	1.4	1	8260B			CJR	1
1,1,1,2-Tetrachloroethane	< 0.33	ug/l	0.33	1.1	1	8260B			CJR	1
Tetrachloroethene	< 0.33	ug/l	0.33	1.1	1	8260B			CJR	1
Toluene	< 0.69	ug/l	0.69	2.2	1	8260B			CJR	1
1,2,4-Trichlorobenzene	< 0.98	ug/l	0.98	3.1	1	8260B			CJR	1
1,2,3-Trichlorobenzene	< 1.8	ug/l	1.8	5.8	1	8260B			CJR	1
1,1,1-Trichloroethane	< 0.33	ug/l	0.33	1	1	8260B			CJR	1
1,1,2-Trichloroethane	< 0.34	ug/l	0.34	1.1	1	8260B			CJR	1
Trichloroethene (TCE)	0.80 "J"	ug/l	0.33	1	1	8260B			CJR	1
Trichlorofluoromethane	< 0.71	ug/l	0.71	2.3	1	8260B			CJR	1
1,2,4-Trimethylbenzene	< 2.2	ug/l	2.2	6.9	1	8260B			CJR	1
1,3,5-Trimethylbenzene	< 1.4	ug/l	1.4	4.5	1	8260B			CJR	1
Vinyl Chloride	24.6	ug/l	0.18	0.57	1	8260B			CJR	1
m&p-Xylene	< 0.69	ug/l	0.69	2.2	1	8260B			CJR	1
o-Xylene	< 0.63	ug/l	0.63	2	1	8260B			CJR	1
SUR - Toluene-d8	96	REC %			1	8260B			CJR	1
SUR - Dibromofluoromethane	104	REC %			1	8260B			CJR	1
SUR - 4-Bromofluorobenzene	107	REC %			1	8260B			CJR	1
SUR - 1,2-Dichloroethane-d4	96	REC %			1	8260B			CJR	1

**Project Name** FMR NEWTON GRAVEL PIT  
**Project #**

**Invoice #** E27808

**Lab Code** 5027808E  
**Sample ID** CREEK-5  
**Sample Matrix** Water  
**Sample Date** 9/30/2014

	<b>Result</b>	<b>Unit</b>	<b>LOD</b>	<b>LOQ</b>	<b>Dil</b>	<b>Method</b>	<b>Ext Date</b>	<b>Run Date</b>	<b>Analyst</b>	<b>Code</b>
<b>Organic</b>										
VOC's										
Benzene	< 0.24	ug/l	0.24	0.77	1	8260B	10/6/2014	CJR	1	
Bromobenzene	< 0.32	ug/l	0.32	1	1	8260B	10/6/2014	CJR	1	
Bromodichloromethane	< 0.37	ug/l	0.37	1.2	1	8260B	10/6/2014	CJR	1	
Bromoform	< 0.35	ug/l	0.35	1.1	1	8260B	10/6/2014	CJR	1	
tert-Butylbenzene	< 0.36	ug/l	0.36	1.2	1	8260B	10/6/2014	CJR	1	
sec-Butylbenzene	< 0.33	ug/l	0.33	1	1	8260B	10/6/2014	CJR	1	
n-Butylbenzene	< 0.35	ug/l	0.35	1.1	1	8260B	10/6/2014	CJR	1	
Carbon Tetrachloride	< 0.33	ug/l	0.33	1.1	1	8260B	10/6/2014	CJR	1	
Chlorobenzene	< 0.24	ug/l	0.24	0.77	1	8260B	10/6/2014	CJR	1	
Chloroethane	< 0.63	ug/l	0.63	2	1	8260B	10/6/2014	CJR	1	
Chloroform	< 0.28	ug/l	0.28	0.88	1	8260B	10/6/2014	CJR	1	
Chloromethane	< 0.81	ug/l	0.81	2.6	1	8260B	10/6/2014	CJR	1	
2-Chlorotoluene	< 0.21	ug/l	0.21	0.66	1	8260B	10/6/2014	CJR	1	
4-Chlorotoluene	< 0.21	ug/l	0.21	0.68	1	8260B	10/6/2014	CJR	1	
1,2-Dibromo-3-chloropropane	< 0.88	ug/l	0.88	2.8	1	8260B	10/6/2014	CJR	1	
Dibromochloromethane	< 0.22	ug/l	0.22	0.7	1	8260B	10/6/2014	CJR	1	
1,4-Dichlorobenzene	< 0.3	ug/l	0.3	0.96	1	8260B	10/6/2014	CJR	1	
1,3-Dichlorobenzene	< 0.28	ug/l	0.28	0.89	1	8260B	10/6/2014	CJR	1	
1,2-Dichlorobenzene	< 0.36	ug/l	0.36	1.2	1	8260B	10/6/2014	CJR	1	
Dichlorodifluoromethane	< 0.44	ug/l	0.44	1.4	1	8260B	10/6/2014	CJR	30	
1,2-Dichloroethane	< 0.41	ug/l	0.41	1.3	1	8260B	10/6/2014	CJR	1	
1,1-Dichloroethane	< 0.3	ug/l	0.3	0.97	1	8260B	10/6/2014	CJR	1	
1,1-Dichloroethene	< 0.4	ug/l	0.4	1.3	1	8260B	10/6/2014	CJR	1	
cis-1,2-Dichloroethene	0.86 "J"	ug/l	0.38	1.2	1	8260B	10/6/2014	CJR	1	
trans-1,2-Dichloroethene	< 0.35	ug/l	0.35	1.1	1	8260B	10/6/2014	CJR	1	
1,2-Dichloropropane	< 0.32	ug/l	0.32	1	1	8260B	10/6/2014	CJR	1	
2,2-Dichloropropane	< 0.36	ug/l	0.36	1.2	1	8260B	10/6/2014	CJR	1	
1,3-Dichloropropane	< 0.33	ug/l	0.33	1	1	8260B	10/6/2014	CJR	1	
Di-isopropyl ether	< 0.23	ug/l	0.23	0.73	1	8260B	10/6/2014	CJR	1	
EDB (1,2-Dibromoethane)	< 0.44	ug/l	0.44	1.4	1	8260B	10/6/2014	CJR	1	
Ethylbenzene	< 0.55	ug/l	0.55	1.7	1	8260B	10/6/2014	CJR	1	
Hexachlorobutadiene	< 1.5	ug/l	1.5	4.8	1	8260B	10/6/2014	CJR	1	
Isopropylbenzene	< 0.3	ug/l	0.3	0.96	1	8260B	10/6/2014	CJR	30	
p-Isopropyltoluene	< 0.31	ug/l	0.31	0.98	1	8260B	10/6/2014	CJR	1	
Methylene chloride	< 0.5	ug/l	0.5	1.6	1	8260B	10/6/2014	CJR	1	
Methyl tert-butyl ether (MTBE)	< 0.23	ug/l	0.23	0.74	1	8260B	10/6/2014	CJR	1	
Naphthalene	< 1.7	ug/l	1.7	5.5	1	8260B	10/6/2014	CJR	1	
n-Propylbenzene	< 0.25	ug/l	0.25	0.81	1	8260B	10/6/2014	CJR	1	
1,1,2,2-Tetrachloroethane	< 0.45	ug/l	0.45	1.4	1	8260B	10/6/2014	CJR	1	
1,1,1,2-Tetrachloroethane	< 0.33	ug/l	0.33	1.1	1	8260B	10/6/2014	CJR	1	
Tetrachloroethene	< 0.33	ug/l	0.33	1.1	1	8260B	10/6/2014	CJR	1	
Toluene	< 0.69	ug/l	0.69	2.2	1	8260B	10/6/2014	CJR	1	
1,2,4-Trichlorobenzene	< 0.98	ug/l	0.98	3.1	1	8260B	10/6/2014	CJR	1	
1,2,3-Trichlorobenzene	< 1.8	ug/l	1.8	5.8	1	8260B	10/6/2014	CJR	1	
1,1,1-Trichloroethane	< 0.33	ug/l	0.33	1	1	8260B	10/6/2014	CJR	1	
1,1,2-Trichloroethane	< 0.34	ug/l	0.34	1.1	1	8260B	10/6/2014	CJR	1	
Trichloroethene (TCE)	< 0.33	ug/l	0.33	1	1	8260B	10/6/2014	CJR	1	
Trichlorofluoromethane	< 0.71	ug/l	0.71	2.3	1	8260B	10/6/2014	CJR	1	
1,2,4-Trimethylbenzene	< 2.2	ug/l	2.2	6.9	1	8260B	10/6/2014	CJR	1	
1,3,5-Trimethylbenzene	< 1.4	ug/l	1.4	4.5	1	8260B	10/6/2014	CJR	1	
Vinyl Chloride	< 0.18	ug/l	0.18	0.57	1	8260B	10/6/2014	CJR	1	
m&p-Xylene	< 0.69	ug/l	0.69	2.2	1	8260B	10/6/2014	CJR	1	
o-Xylene	< 0.63	ug/l	0.63	2	1	8260B	10/6/2014	CJR	1	
SUR - 1,2-Dichloroethane-d4	95	REC %			1	8260B	10/6/2014	CJR	1	
SUR - 4-Bromofluorobenzene	105	REC %			1	8260B	10/6/2014	CJR	1	
SUR - Dibromofluoromethane	104	REC %			1	8260B	10/6/2014	CJR	1	
SUR - Toluene-d8	98	REC %			1	8260B	10/6/2014	CJR	1	

**Project Name** FMR NEWTON GRAVEL PIT  
**Project #**

**Invoice #** E27808

**Lab Code** 5027808F  
**Sample ID** CREEK-6  
**Sample Matrix** Water  
**Sample Date** 9/30/2014

	<b>Result</b>	<b>Unit</b>	<b>LOD</b>	<b>LOQ</b>	<b>Dil</b>	<b>Method</b>	<b>Ext Date</b>	<b>Run Date</b>	<b>Analyst</b>	<b>Code</b>
<b>Organic</b>										
VOC's										
Benzene	< 0.24	ug/l	0.24	0.77	1	8260B	10/6/2014	CJR	1	
Bromobenzene	< 0.32	ug/l	0.32	1	1	8260B	10/6/2014	CJR	1	
Bromodichloromethane	< 0.37	ug/l	0.37	1.2	1	8260B	10/6/2014	CJR	1	
Bromoform	< 0.35	ug/l	0.35	1.1	1	8260B	10/6/2014	CJR	1	
tert-Butylbenzene	< 0.36	ug/l	0.36	1.2	1	8260B	10/6/2014	CJR	1	
sec-Butylbenzene	< 0.33	ug/l	0.33	1	1	8260B	10/6/2014	CJR	1	
n-Butylbenzene	< 0.35	ug/l	0.35	1.1	1	8260B	10/6/2014	CJR	1	
Carbon Tetrachloride	< 0.33	ug/l	0.33	1.1	1	8260B	10/6/2014	CJR	1	
Chlorobenzene	< 0.24	ug/l	0.24	0.77	1	8260B	10/6/2014	CJR	1	
Chloroethane	< 0.63	ug/l	0.63	2	1	8260B	10/6/2014	CJR	1	
Chloroform	< 0.28	ug/l	0.28	0.88	1	8260B	10/6/2014	CJR	1	
Chloromethane	< 0.81	ug/l	0.81	2.6	1	8260B	10/6/2014	CJR	1	
2-Chlorotoluene	< 0.21	ug/l	0.21	0.66	1	8260B	10/6/2014	CJR	1	
4-Chlorotoluene	< 0.21	ug/l	0.21	0.68	1	8260B	10/6/2014	CJR	1	
1,2-Dibromo-3-chloropropane	< 0.88	ug/l	0.88	2.8	1	8260B	10/6/2014	CJR	1	
Dibromochloromethane	< 0.22	ug/l	0.22	0.7	1	8260B	10/6/2014	CJR	1	
1,4-Dichlorobenzene	< 0.3	ug/l	0.3	0.96	1	8260B	10/6/2014	CJR	1	
1,3-Dichlorobenzene	< 0.28	ug/l	0.28	0.89	1	8260B	10/6/2014	CJR	1	
1,2-Dichlorobenzene	< 0.36	ug/l	0.36	1.2	1	8260B	10/6/2014	CJR	1	
Dichlorodifluoromethane	< 0.44	ug/l	0.44	1.4	1	8260B	10/6/2014	CJR	30	
1,2-Dichloroethane	< 0.41	ug/l	0.41	1.3	1	8260B	10/6/2014	CJR	1	
1,1-Dichloroethane	< 0.3	ug/l	0.3	0.97	1	8260B	10/6/2014	CJR	1	
1,1-Dichloroethene	< 0.4	ug/l	0.4	1.3	1	8260B	10/6/2014	CJR	1	
cis-1,2-Dichloroethene	11.5	ug/l	0.38	1.2	1	8260B	10/6/2014	CJR	1	
trans-1,2-Dichloroethene	< 0.35	ug/l	0.35	1.1	1	8260B	10/6/2014	CJR	1	
1,2-Dichloropropane	< 0.32	ug/l	0.32	1	1	8260B	10/6/2014	CJR	1	
2,2-Dichloropropane	< 0.36	ug/l	0.36	1.2	1	8260B	10/6/2014	CJR	1	
1,3-Dichloropropane	< 0.33	ug/l	0.33	1	1	8260B	10/6/2014	CJR	1	
Di-isopropyl ether	< 0.23	ug/l	0.23	0.73	1	8260B	10/6/2014	CJR	1	
EDB (1,2-Dibromoethane)	< 0.44	ug/l	0.44	1.4	1	8260B	10/6/2014	CJR	1	
Ethylbenzene	< 0.55	ug/l	0.55	1.7	1	8260B	10/6/2014	CJR	1	
Hexachlorobutadiene	< 1.5	ug/l	1.5	4.8	1	8260B	10/6/2014	CJR	1	
Isopropylbenzene	< 0.3	ug/l	0.3	0.96	1	8260B	10/6/2014	CJR	30	
p-Isopropyltoluene	< 0.31	ug/l	0.31	0.98	1	8260B	10/6/2014	CJR	1	
Methylene chloride	< 0.5	ug/l	0.5	1.6	1	8260B	10/6/2014	CJR	1	
Methyl tert-butyl ether (MTBE)	< 0.23	ug/l	0.23	0.74	1	8260B	10/6/2014	CJR	1	
Naphthalene	< 1.7	ug/l	1.7	5.5	1	8260B	10/6/2014	CJR	1	
n-Propylbenzene	< 0.25	ug/l	0.25	0.81	1	8260B	10/6/2014	CJR	1	
1,1,2,2-Tetrachloroethane	< 0.45	ug/l	0.45	1.4	1	8260B	10/6/2014	CJR	1	
1,1,1,2-Tetrachloroethane	< 0.33	ug/l	0.33	1.1	1	8260B	10/6/2014	CJR	1	
Tetrachloroethene	< 0.33	ug/l	0.33	1.1	1	8260B	10/6/2014	CJR	1	
Toluene	< 0.69	ug/l	0.69	2.2	1	8260B	10/6/2014	CJR	1	
1,2,4-Trichlorobenzene	< 0.98	ug/l	0.98	3.1	1	8260B	10/6/2014	CJR	1	
1,2,3-Trichlorobenzene	< 1.8	ug/l	1.8	5.8	1	8260B	10/6/2014	CJR	1	
1,1,1-Trichloroethane	< 0.33	ug/l	0.33	1	1	8260B	10/6/2014	CJR	1	
1,1,2-Trichloroethane	< 0.34	ug/l	0.34	1.1	1	8260B	10/6/2014	CJR	1	
Trichloroethene (TCE)	< 0.33	ug/l	0.33	1	1	8260B	10/6/2014	CJR	1	
Trichlorofluoromethane	< 0.71	ug/l	0.71	2.3	1	8260B	10/6/2014	CJR	1	
1,2,4-Trimethylbenzene	< 2.2	ug/l	2.2	6.9	1	8260B	10/6/2014	CJR	1	
1,3,5-Trimethylbenzene	< 1.4	ug/l	1.4	4.5	1	8260B	10/6/2014	CJR	1	
Vinyl Chloride	2.86	ug/l	0.18	0.57	1	8260B	10/6/2014	CJR	1	
m&p-Xylene	< 0.69	ug/l	0.69	2.2	1	8260B	10/6/2014	CJR	1	
o-Xylene	< 0.63	ug/l	0.63	2	1	8260B	10/6/2014	CJR	1	
SUR - 1,2-Dichloroethane-d4	100	REC %			1	8260B	10/6/2014	CJR	1	
SUR - 4-Bromofluorobenzene	114	REC %			1	8260B	10/6/2014	CJR	1	
SUR - Dibromofluoromethane	101	REC %			1	8260B	10/6/2014	CJR	1	
SUR - Toluene-d8	98	REC %			1	8260B	10/6/2014	CJR	1	

**Project Name** FMR NEWTON GRAVEL PIT  
**Project #**

**Invoice #** E27808

**Lab Code** 5027808G  
**Sample ID** CREEK-7  
**Sample Matrix** Water  
**Sample Date** 9/30/2014

	<b>Result</b>	<b>Unit</b>	<b>LOD</b>	<b>LOQ</b>	<b>Dil</b>	<b>Method</b>	<b>Ext Date</b>	<b>Run Date</b>	<b>Analyst</b>	<b>Code</b>
<b>Organic VOC's</b>										
Benzene										
Benzene	< 0.24	ug/l	0.24	0.77	1	8260B	10/6/2014	CJR	1	
Bromobenzene	< 0.32	ug/l	0.32	1	1	8260B	10/6/2014	CJR	1	
Bromodichloromethane	< 0.37	ug/l	0.37	1.2	1	8260B	10/6/2014	CJR	1	
Bromoform	< 0.35	ug/l	0.35	1.1	1	8260B	10/6/2014	CJR	1	
tert-Butylbenzene	< 0.36	ug/l	0.36	1.2	1	8260B	10/6/2014	CJR	1	
sec-Butylbenzene	< 0.33	ug/l	0.33	1	1	8260B	10/6/2014	CJR	1	
n-Butylbenzene	< 0.35	ug/l	0.35	1.1	1	8260B	10/6/2014	CJR	1	
Carbon Tetrachloride	< 0.33	ug/l	0.33	1.1	1	8260B	10/6/2014	CJR	1	
Chlorobenzene	< 0.24	ug/l	0.24	0.77	1	8260B	10/6/2014	CJR	1	
Chloroethane	< 0.63	ug/l	0.63	2	1	8260B	10/6/2014	CJR	1	
Chloroform	< 0.28	ug/l	0.28	0.88	1	8260B	10/6/2014	CJR	1	
Chloromethane	< 0.81	ug/l	0.81	2.6	1	8260B	10/6/2014	CJR	1	
2-Chlorotoluene	< 0.21	ug/l	0.21	0.66	1	8260B	10/6/2014	CJR	1	
4-Chlorotoluene	< 0.21	ug/l	0.21	0.68	1	8260B	10/6/2014	CJR	1	
1,2-Dibromo-3-chloropropane	< 0.88	ug/l	0.88	2.8	1	8260B	10/6/2014	CJR	1	
Dibromochloromethane	< 0.22	ug/l	0.22	0.7	1	8260B	10/6/2014	CJR	1	
1,4-Dichlorobenzene	< 0.3	ug/l	0.3	0.96	1	8260B	10/6/2014	CJR	1	
1,3-Dichlorobenzene	< 0.28	ug/l	0.28	0.89	1	8260B	10/6/2014	CJR	1	
1,2-Dichlorobenzene	< 0.36	ug/l	0.36	1.2	1	8260B	10/6/2014	CJR	1	
Dichlorodifluoromethane	< 0.44	ug/l	0.44	1.4	1	8260B	10/6/2014	CJR	30	
1,2-Dichloroethane	< 0.41	ug/l	0.41	1.3	1	8260B	10/6/2014	CJR	1	
1,1-Dichloroethane	< 0.3	ug/l	0.3	0.97	1	8260B	10/6/2014	CJR	1	
1,1-Dichloroethene	< 0.4	ug/l	0.4	1.3	1	8260B	10/6/2014	CJR	1	
cis-1,2-Dichloroethene	3.3	ug/l	0.38	1.2	1	8260B	10/6/2014	CJR	1	
trans-1,2-Dichloroethene	< 0.35	ug/l	0.35	1.1	1	8260B	10/6/2014	CJR	1	
1,2-Dichloropropane	< 0.32	ug/l	0.32	1	1	8260B	10/6/2014	CJR	1	
2,2-Dichloropropane	< 0.36	ug/l	0.36	1.2	1	8260B	10/6/2014	CJR	1	
1,3-Dichloropropane	< 0.33	ug/l	0.33	1	1	8260B	10/6/2014	CJR	1	
Di-isopropyl ether	< 0.23	ug/l	0.23	0.73	1	8260B	10/6/2014	CJR	1	
EDB (1,2-Dibromoethane)	< 0.44	ug/l	0.44	1.4	1	8260B	10/6/2014	CJR	1	
Ethylbenzene	< 0.55	ug/l	0.55	1.7	1	8260B	10/6/2014	CJR	1	
Hexachlorobutadiene	< 1.5	ug/l	1.5	4.8	1	8260B	10/6/2014	CJR	1	
Isopropylbenzene	< 0.3	ug/l	0.3	0.96	1	8260B	10/6/2014	CJR	30	
p-Isopropyltoluene	< 0.31	ug/l	0.31	0.98	1	8260B	10/6/2014	CJR	1	
Methylene chloride	< 0.5	ug/l	0.5	1.6	1	8260B	10/6/2014	CJR	1	
Methyl tert-butyl ether (MTBE)	< 0.23	ug/l	0.23	0.74	1	8260B	10/6/2014	CJR	1	
Naphthalene	< 1.7	ug/l	1.7	5.5	1	8260B	10/6/2014	CJR	1	
n-Propylbenzene	< 0.25	ug/l	0.25	0.81	1	8260B	10/6/2014	CJR	1	
1,1,2,2-Tetrachloroethane	< 0.45	ug/l	0.45	1.4	1	8260B	10/6/2014	CJR	1	
1,1,1,2-Tetrachloroethane	< 0.33	ug/l	0.33	1.1	1	8260B	10/6/2014	CJR	1	
Tetrachloroethene	< 0.33	ug/l	0.33	1.1	1	8260B	10/6/2014	CJR	1	
Toluene	< 0.69	ug/l	0.69	2.2	1	8260B	10/6/2014	CJR	1	
1,2,4-Trichlorobenzene	< 0.98	ug/l	0.98	3.1	1	8260B	10/6/2014	CJR	1	
1,2,3-Trichlorobenzene	< 1.8	ug/l	1.8	5.8	1	8260B	10/6/2014	CJR	1	
1,1,1-Trichloroethane	< 0.33	ug/l	0.33	1	1	8260B	10/6/2014	CJR	1	
1,1,2-Trichloroethane	< 0.34	ug/l	0.34	1.1	1	8260B	10/6/2014	CJR	1	
Trichloroethene (TCE)	< 0.33	ug/l	0.33	1	1	8260B	10/6/2014	CJR	1	
Trichlorofluoromethane	< 0.71	ug/l	0.71	2.3	1	8260B	10/6/2014	CJR	1	
1,2,4-Trimethylbenzene	< 2.2	ug/l	2.2	6.9	1	8260B	10/6/2014	CJR	1	
1,3,5-Trimethylbenzene	< 1.4	ug/l	1.4	4.5	1	8260B	10/6/2014	CJR	1	
Vinyl Chloride	0.57	ug/l	0.18	0.57	1	8260B	10/6/2014	CJR	1	
m&p-Xylene	< 0.69	ug/l	0.69	2.2	1	8260B	10/6/2014	CJR	1	
o-Xylene	< 0.63	ug/l	0.63	2	1	8260B	10/6/2014	CJR	1	
SUR - Dibromofluoromethane	102	REC %			1	8260B	10/6/2014	CJR	1	
SUR - 1,2-Dichloroethane-d4	95	REC %			1	8260B	10/6/2014	CJR	1	
SUR - 4-Bromofluorobenzene	104	REC %			1	8260B	10/6/2014	CJR	1	
SUR - Toluene-d8	98	REC %			1	8260B	10/6/2014	CJR	1	

**Project Name** FMR NEWTON GRAVEL PIT  
**Project #**

**Invoice #** E27808

**Lab Code** 5027808H  
**Sample ID** CREEK-8  
**Sample Matrix** Water  
**Sample Date** 9/30/2014

	<b>Result</b>	<b>Unit</b>	<b>LOD</b>	<b>LOQ</b>	<b>Dil</b>	<b>Method</b>	<b>Ext Date</b>	<b>Run Date</b>	<b>Analyst</b>	<b>Code</b>
<b>Organic</b>										
VOC's										
Benzene	< 0.24	ug/l	0.24	0.77	1	8260B	10/6/2014	CJR	1	
Bromobenzene	< 0.32	ug/l	0.32	1	1	8260B	10/6/2014	CJR	1	
Bromodichloromethane	< 0.37	ug/l	0.37	1.2	1	8260B	10/6/2014	CJR	1	
Bromoform	< 0.35	ug/l	0.35	1.1	1	8260B	10/6/2014	CJR	1	
tert-Butylbenzene	< 0.36	ug/l	0.36	1.2	1	8260B	10/6/2014	CJR	1	
sec-Butylbenzene	< 0.33	ug/l	0.33	1	1	8260B	10/6/2014	CJR	1	
n-Butylbenzene	< 0.35	ug/l	0.35	1.1	1	8260B	10/6/2014	CJR	1	
Carbon Tetrachloride	< 0.33	ug/l	0.33	1.1	1	8260B	10/6/2014	CJR	1	
Chlorobenzene	< 0.24	ug/l	0.24	0.77	1	8260B	10/6/2014	CJR	1	
Chloroethane	< 0.63	ug/l	0.63	2	1	8260B	10/6/2014	CJR	1	
Chloroform	< 0.28	ug/l	0.28	0.88	1	8260B	10/6/2014	CJR	1	
Chloromethane	< 0.81	ug/l	0.81	2.6	1	8260B	10/6/2014	CJR	1	
2-Chlorotoluene	< 0.21	ug/l	0.21	0.66	1	8260B	10/6/2014	CJR	1	
4-Chlorotoluene	< 0.21	ug/l	0.21	0.68	1	8260B	10/6/2014	CJR	1	
1,2-Dibromo-3-chloropropane	< 0.88	ug/l	0.88	2.8	1	8260B	10/6/2014	CJR	1	
Dibromochloromethane	< 0.22	ug/l	0.22	0.7	1	8260B	10/6/2014	CJR	1	
1,4-Dichlorobenzene	< 0.3	ug/l	0.3	0.96	1	8260B	10/6/2014	CJR	1	
1,3-Dichlorobenzene	< 0.28	ug/l	0.28	0.89	1	8260B	10/6/2014	CJR	1	
1,2-Dichlorobenzene	< 0.36	ug/l	0.36	1.2	1	8260B	10/6/2014	CJR	1	
Dichlorodifluoromethane	< 0.44	ug/l	0.44	1.4	1	8260B	10/6/2014	CJR	30	
1,2-Dichloroethane	< 0.41	ug/l	0.41	1.3	1	8260B	10/6/2014	CJR	1	
1,1-Dichloroethane	< 0.3	ug/l	0.3	0.97	1	8260B	10/6/2014	CJR	1	
1,1-Dichloroethene	< 0.4	ug/l	0.4	1.3	1	8260B	10/6/2014	CJR	1	
cis-1,2-Dichloroethene	< 0.38	ug/l	0.38	1.2	1	8260B	10/6/2014	CJR	1	
trans-1,2-Dichloroethene	< 0.35	ug/l	0.35	1.1	1	8260B	10/6/2014	CJR	1	
1,2-Dichloropropane	< 0.32	ug/l	0.32	1	1	8260B	10/6/2014	CJR	1	
2,2-Dichloropropane	< 0.36	ug/l	0.36	1.2	1	8260B	10/6/2014	CJR	1	
1,3-Dichloropropane	< 0.33	ug/l	0.33	1	1	8260B	10/6/2014	CJR	1	
Di-isopropyl ether	< 0.23	ug/l	0.23	0.73	1	8260B	10/6/2014	CJR	1	
EDB (1,2-Dibromoethane)	< 0.44	ug/l	0.44	1.4	1	8260B	10/6/2014	CJR	1	
Ethylbenzene	< 0.55	ug/l	0.55	1.7	1	8260B	10/6/2014	CJR	1	
Hexachlorobutadiene	< 1.5	ug/l	1.5	4.8	1	8260B	10/6/2014	CJR	1	
Isopropylbenzene	< 0.3	ug/l	0.3	0.96	1	8260B	10/6/2014	CJR	30	
p-Isopropyltoluene	< 0.31	ug/l	0.31	0.98	1	8260B	10/6/2014	CJR	1	
Methylene chloride	< 0.5	ug/l	0.5	1.6	1	8260B	10/6/2014	CJR	1	
Methyl tert-butyl ether (MTBE)	< 0.23	ug/l	0.23	0.74	1	8260B	10/6/2014	CJR	1	
Naphthalene	< 1.7	ug/l	1.7	5.5	1	8260B	10/6/2014	CJR	1	
n-Propylbenzene	< 0.25	ug/l	0.25	0.81	1	8260B	10/6/2014	CJR	1	
1,1,2,2-Tetrachloroethane	< 0.45	ug/l	0.45	1.4	1	8260B	10/6/2014	CJR	1	
1,1,1,2-Tetrachloroethane	< 0.33	ug/l	0.33	1.1	1	8260B	10/6/2014	CJR	1	
Tetrachloroethene	< 0.33	ug/l	0.33	1.1	1	8260B	10/6/2014	CJR	1	
Toluene	< 0.69	ug/l	0.69	2.2	1	8260B	10/6/2014	CJR	1	
1,2,4-Trichlorobenzene	< 0.98	ug/l	0.98	3.1	1	8260B	10/6/2014	CJR	1	
1,2,3-Trichlorobenzene	< 1.8	ug/l	1.8	5.8	1	8260B	10/6/2014	CJR	1	
1,1,1-Trichloroethane	< 0.33	ug/l	0.33	1	1	8260B	10/6/2014	CJR	1	
1,1,2-Trichloroethane	< 0.34	ug/l	0.34	1.1	1	8260B	10/6/2014	CJR	1	
Trichloroethene (TCE)	< 0.33	ug/l	0.33	1	1	8260B	10/6/2014	CJR	1	
Trichlorofluoromethane	< 0.71	ug/l	0.71	2.3	1	8260B	10/6/2014	CJR	1	
1,2,4-Trimethylbenzene	< 2.2	ug/l	2.2	6.9	1	8260B	10/6/2014	CJR	1	
1,3,5-Trimethylbenzene	< 1.4	ug/l	1.4	4.5	1	8260B	10/6/2014	CJR	1	
Vinyl Chloride	< 0.18	ug/l	0.18	0.57	1	8260B	10/6/2014	CJR	1	
m&p-Xylene	< 0.69	ug/l	0.69	2.2	1	8260B	10/6/2014	CJR	1	
o-Xylene	< 0.63	ug/l	0.63	2	1	8260B	10/6/2014	CJR	1	
SUR - 1,2-Dichloroethane-d4	107	REC %			1	8260B	10/6/2014	CJR	1	
SUR - 4-Bromofluorobenzene	104	REC %			1	8260B	10/6/2014	CJR	1	
SUR - Dibromofluoromethane	102	REC %			1	8260B	10/6/2014	CJR	1	
SUR - Toluene-d8	97	REC %			1	8260B	10/6/2014	CJR	1	

**Project Name** FMR NEWTON GRAVEL PIT  
**Project #**

**Invoice #** E27808

**Lab Code** 5027808I  
**Sample ID** CREEK-9  
**Sample Matrix** Water  
**Sample Date** 9/30/2014

	<b>Result</b>	<b>Unit</b>	<b>LOD</b>	<b>LOQ</b>	<b>Dil</b>	<b>Method</b>	<b>Ext Date</b>	<b>Run Date</b>	<b>Analyst</b>	<b>Code</b>
<b>Organic</b>										
VOC's										
Benzene	< 0.24	ug/l	0.24	0.77	1	8260B	10/7/2014	CJR	1	
Bromobenzene	< 0.32	ug/l	0.32	1	1	8260B	10/7/2014	CJR	1	
Bromodichloromethane	< 0.37	ug/l	0.37	1.2	1	8260B	10/7/2014	CJR	1	
Bromoform	< 0.35	ug/l	0.35	1.1	1	8260B	10/7/2014	CJR	1	
tert-Butylbenzene	< 0.36	ug/l	0.36	1.2	1	8260B	10/7/2014	CJR	1	
sec-Butylbenzene	< 0.33	ug/l	0.33	1	1	8260B	10/7/2014	CJR	1	
n-Butylbenzene	< 0.35	ug/l	0.35	1.1	1	8260B	10/7/2014	CJR	1	
Carbon Tetrachloride	< 0.33	ug/l	0.33	1.1	1	8260B	10/7/2014	CJR	1	
Chlorobenzene	< 0.24	ug/l	0.24	0.77	1	8260B	10/7/2014	CJR	1	
Chloroethane	< 0.63	ug/l	0.63	2	1	8260B	10/7/2014	CJR	1	
Chloroform	< 0.28	ug/l	0.28	0.88	1	8260B	10/7/2014	CJR	1	
Chloromethane	< 0.81	ug/l	0.81	2.6	1	8260B	10/7/2014	CJR	1	
2-Chlorotoluene	< 0.21	ug/l	0.21	0.66	1	8260B	10/7/2014	CJR	1	
4-Chlorotoluene	< 0.21	ug/l	0.21	0.68	1	8260B	10/7/2014	CJR	1	
1,2-Dibromo-3-chloropropane	< 0.88	ug/l	0.88	2.8	1	8260B	10/7/2014	CJR	1	
Dibromochloromethane	< 0.22	ug/l	0.22	0.7	1	8260B	10/7/2014	CJR	1	
1,4-Dichlorobenzene	< 0.3	ug/l	0.3	0.96	1	8260B	10/7/2014	CJR	1	
1,3-Dichlorobenzene	< 0.28	ug/l	0.28	0.89	1	8260B	10/7/2014	CJR	1	
1,2-Dichlorobenzene	< 0.36	ug/l	0.36	1.2	1	8260B	10/7/2014	CJR	1	
Dichlorodifluoromethane	< 0.44	ug/l	0.44	1.4	1	8260B	10/7/2014	CJR	30	
1,2-Dichloroethane	< 0.41	ug/l	0.41	1.3	1	8260B	10/7/2014	CJR	1	
1,1-Dichloroethane	< 0.3	ug/l	0.3	0.97	1	8260B	10/7/2014	CJR	1	
1,1-Dichloroethene	< 0.4	ug/l	0.4	1.3	1	8260B	10/7/2014	CJR	1	
cis-1,2-Dichloroethene	< 0.38	ug/l	0.38	1.2	1	8260B	10/7/2014	CJR	1	
trans-1,2-Dichloroethene	< 0.35	ug/l	0.35	1.1	1	8260B	10/7/2014	CJR	1	
1,2-Dichloropropane	< 0.32	ug/l	0.32	1	1	8260B	10/7/2014	CJR	1	
2,2-Dichloropropane	< 0.36	ug/l	0.36	1.2	1	8260B	10/7/2014	CJR	1	
1,3-Dichloropropane	< 0.33	ug/l	0.33	1	1	8260B	10/7/2014	CJR	1	
Di-isopropyl ether	< 0.23	ug/l	0.23	0.73	1	8260B	10/7/2014	CJR	1	
EDB (1,2-Dibromoethane)	< 0.44	ug/l	0.44	1.4	1	8260B	10/7/2014	CJR	1	
Ethylbenzene	< 0.55	ug/l	0.55	1.7	1	8260B	10/7/2014	CJR	1	
Hexachlorobutadiene	< 1.5	ug/l	1.5	4.8	1	8260B	10/7/2014	CJR	1	
Isopropylbenzene	< 0.3	ug/l	0.3	0.96	1	8260B	10/7/2014	CJR	30	
p-Isopropyltoluene	< 0.31	ug/l	0.31	0.98	1	8260B	10/7/2014	CJR	1	
Methylene chloride	< 0.5	ug/l	0.5	1.6	1	8260B	10/7/2014	CJR	1	
Methyl tert-butyl ether (MTBE)	< 0.23	ug/l	0.23	0.74	1	8260B	10/7/2014	CJR	1	
Naphthalene	< 1.7	ug/l	1.7	5.5	1	8260B	10/7/2014	CJR	1	
n-Propylbenzene	< 0.25	ug/l	0.25	0.81	1	8260B	10/7/2014	CJR	1	
1,1,2,2-Tetrachloroethane	< 0.45	ug/l	0.45	1.4	1	8260B	10/7/2014	CJR	1	
1,1,1,2-Tetrachloroethane	< 0.33	ug/l	0.33	1.1	1	8260B	10/7/2014	CJR	1	
Tetrachloroethene	< 0.33	ug/l	0.33	1.1	1	8260B	10/7/2014	CJR	1	
Toluene	< 0.69	ug/l	0.69	2.2	1	8260B	10/7/2014	CJR	1	
1,2,4-Trichlorobenzene	< 0.98	ug/l	0.98	3.1	1	8260B	10/7/2014	CJR	1	
1,2,3-Trichlorobenzene	< 1.8	ug/l	1.8	5.8	1	8260B	10/7/2014	CJR	1	
1,1,1-Trichloroethane	< 0.33	ug/l	0.33	1	1	8260B	10/7/2014	CJR	1	
1,1,2-Trichloroethane	< 0.34	ug/l	0.34	1.1	1	8260B	10/7/2014	CJR	1	
Trichloroethene (TCE)	< 0.33	ug/l	0.33	1	1	8260B	10/7/2014	CJR	1	
Trichlorofluoromethane	< 0.71	ug/l	0.71	2.3	1	8260B	10/7/2014	CJR	1	
1,2,4-Trimethylbenzene	< 2.2	ug/l	2.2	6.9	1	8260B	10/7/2014	CJR	1	
1,3,5-Trimethylbenzene	< 1.4	ug/l	1.4	4.5	1	8260B	10/7/2014	CJR	1	
Vinyl Chloride	< 0.18	ug/l	0.18	0.57	1	8260B	10/7/2014	CJR	1	
m&p-Xylene	< 0.69	ug/l	0.69	2.2	1	8260B	10/7/2014	CJR	1	
o-Xylene	< 0.63	ug/l	0.63	2	1	8260B	10/7/2014	CJR	1	
SUR - 1,2-Dichloroethane-d4	104	REC %			1	8260B	10/7/2014	CJR	1	
SUR - Toluene-d8	93	REC %			1	8260B	10/7/2014	CJR	1	
SUR - 4-Bromofluorobenzene	103	REC %			1	8260B	10/7/2014	CJR	1	
SUR - Dibromofluoromethane	102	REC %			1	8260B	10/7/2014	CJR	1	

**Project Name** FMR NEWTON GRAVEL PIT  
**Project #**

**Invoice #** E27808

**Lab Code** 5027808J  
**Sample ID** CREEK-10  
**Sample Matrix** Water  
**Sample Date** 9/30/2014

	<b>Result</b>	<b>Unit</b>	<b>LOD</b>	<b>LOQ</b>	<b>Dil</b>	<b>Method</b>	<b>Ext Date</b>	<b>Run Date</b>	<b>Analyst</b>	<b>Code</b>
<b>Organic</b>										
VOC's										
Benzene	< 0.24	ug/l	0.24	0.77	1	8260B	10/7/2014	CJR	1	
Bromobenzene	< 0.32	ug/l	0.32	1	1	8260B	10/7/2014	CJR	1	
Bromodichloromethane	< 0.37	ug/l	0.37	1.2	1	8260B	10/7/2014	CJR	1	
Bromoform	< 0.35	ug/l	0.35	1.1	1	8260B	10/7/2014	CJR	1	
tert-Butylbenzene	< 0.36	ug/l	0.36	1.2	1	8260B	10/7/2014	CJR	1	
sec-Butylbenzene	< 0.33	ug/l	0.33	1	1	8260B	10/7/2014	CJR	1	
n-Butylbenzene	< 0.35	ug/l	0.35	1.1	1	8260B	10/7/2014	CJR	1	
Carbon Tetrachloride	< 0.33	ug/l	0.33	1.1	1	8260B	10/7/2014	CJR	1	
Chlorobenzene	< 0.24	ug/l	0.24	0.77	1	8260B	10/7/2014	CJR	1	
Chloroethane	< 0.63	ug/l	0.63	2	1	8260B	10/7/2014	CJR	1	
Chloroform	< 0.28	ug/l	0.28	0.88	1	8260B	10/7/2014	CJR	1	
Chloromethane	< 0.81	ug/l	0.81	2.6	1	8260B	10/7/2014	CJR	1	
2-Chlorotoluene	< 0.21	ug/l	0.21	0.66	1	8260B	10/7/2014	CJR	1	
4-Chlorotoluene	< 0.21	ug/l	0.21	0.68	1	8260B	10/7/2014	CJR	1	
1,2-Dibromo-3-chloropropane	< 0.88	ug/l	0.88	2.8	1	8260B	10/7/2014	CJR	1	
Dibromochloromethane	< 0.22	ug/l	0.22	0.7	1	8260B	10/7/2014	CJR	1	
1,4-Dichlorobenzene	< 0.3	ug/l	0.3	0.96	1	8260B	10/7/2014	CJR	1	
1,3-Dichlorobenzene	< 0.28	ug/l	0.28	0.89	1	8260B	10/7/2014	CJR	1	
1,2-Dichlorobenzene	< 0.36	ug/l	0.36	1.2	1	8260B	10/7/2014	CJR	1	
Dichlorodifluoromethane	< 0.44	ug/l	0.44	1.4	1	8260B	10/7/2014	CJR	30	
1,2-Dichloroethane	< 0.41	ug/l	0.41	1.3	1	8260B	10/7/2014	CJR	1	
1,1-Dichloroethane	< 0.3	ug/l	0.3	0.97	1	8260B	10/7/2014	CJR	1	
1,1-Dichloroethene	< 0.4	ug/l	0.4	1.3	1	8260B	10/7/2014	CJR	1	
cis-1,2-Dichloroethene	< 0.38	ug/l	0.38	1.2	1	8260B	10/7/2014	CJR	1	
trans-1,2-Dichloroethene	< 0.35	ug/l	0.35	1.1	1	8260B	10/7/2014	CJR	1	
1,2-Dichloropropane	< 0.32	ug/l	0.32	1	1	8260B	10/7/2014	CJR	1	
2,2-Dichloropropane	< 0.36	ug/l	0.36	1.2	1	8260B	10/7/2014	CJR	1	
1,3-Dichloropropane	< 0.33	ug/l	0.33	1	1	8260B	10/7/2014	CJR	1	
Di-isopropyl ether	< 0.23	ug/l	0.23	0.73	1	8260B	10/7/2014	CJR	1	
EDB (1,2-Dibromoethane)	< 0.44	ug/l	0.44	1.4	1	8260B	10/7/2014	CJR	1	
Ethylbenzene	< 0.55	ug/l	0.55	1.7	1	8260B	10/7/2014	CJR	1	
Hexachlorobutadiene	< 1.5	ug/l	1.5	4.8	1	8260B	10/7/2014	CJR	1	
Isopropylbenzene	< 0.3	ug/l	0.3	0.96	1	8260B	10/7/2014	CJR	30	
p-Isopropyltoluene	< 0.31	ug/l	0.31	0.98	1	8260B	10/7/2014	CJR	1	
Methylene chloride	< 0.5	ug/l	0.5	1.6	1	8260B	10/7/2014	CJR	1	
Methyl tert-butyl ether (MTBE)	< 0.23	ug/l	0.23	0.74	1	8260B	10/7/2014	CJR	1	
Naphthalene	< 1.7	ug/l	1.7	5.5	1	8260B	10/7/2014	CJR	1	
n-Propylbenzene	< 0.25	ug/l	0.25	0.81	1	8260B	10/7/2014	CJR	1	
1,1,2,2-Tetrachloroethane	< 0.45	ug/l	0.45	1.4	1	8260B	10/7/2014	CJR	1	
1,1,1,2-Tetrachloroethane	< 0.33	ug/l	0.33	1.1	1	8260B	10/7/2014	CJR	1	
Tetrachloroethene	< 0.33	ug/l	0.33	1.1	1	8260B	10/7/2014	CJR	1	
Toluene	< 0.69	ug/l	0.69	2.2	1	8260B	10/7/2014	CJR	1	
1,2,4-Trichlorobenzene	< 0.98	ug/l	0.98	3.1	1	8260B	10/7/2014	CJR	1	
1,2,3-Trichlorobenzene	< 1.8	ug/l	1.8	5.8	1	8260B	10/7/2014	CJR	1	
1,1,1-Trichloroethane	< 0.33	ug/l	0.33	1	1	8260B	10/7/2014	CJR	1	
1,1,2-Trichloroethane	< 0.34	ug/l	0.34	1.1	1	8260B	10/7/2014	CJR	1	
Trichloroethene (TCE)	< 0.33	ug/l	0.33	1	1	8260B	10/7/2014	CJR	1	
Trichlorofluoromethane	< 0.71	ug/l	0.71	2.3	1	8260B	10/7/2014	CJR	1	
1,2,4-Trimethylbenzene	< 2.2	ug/l	2.2	6.9	1	8260B	10/7/2014	CJR	1	
1,3,5-Trimethylbenzene	< 1.4	ug/l	1.4	4.5	1	8260B	10/7/2014	CJR	1	
Vinyl Chloride	< 0.18	ug/l	0.18	0.57	1	8260B	10/7/2014	CJR	1	
m&p-Xylene	< 0.69	ug/l	0.69	2.2	1	8260B	10/7/2014	CJR	1	
o-Xylene	< 0.63	ug/l	0.63	2	1	8260B	10/7/2014	CJR	1	
SUR - 1,2-Dichloroethane-d4	92	REC %			1	8260B	10/7/2014	CJR	1	
SUR - 4-Bromofluorobenzene	109	REC %			1	8260B	10/7/2014	CJR	1	
SUR - Dibromofluoromethane	100	REC %			1	8260B	10/7/2014	CJR	1	
SUR - Toluene-d8	94	REC %			1	8260B	10/7/2014	CJR	1	

**Project Name** FMR NEWTON GRAVEL PIT  
**Project #**

**Invoice #** E27808

**Lab Code** 5027808K  
**Sample ID** CREEK-11  
**Sample Matrix** Water  
**Sample Date** 9/30/2014

	<b>Result</b>	<b>Unit</b>	<b>LOD</b>	<b>LOQ</b>	<b>Dil</b>	<b>Method</b>	<b>Ext Date</b>	<b>Run Date</b>	<b>Analyst</b>	<b>Code</b>
<b>Organic VOC's</b>										
Benzene										
Benzene	< 0.24	ug/l	0.24	0.77	1	8260B	10/7/2014	CJR	1	
Bromobenzene	< 0.32	ug/l	0.32	1	1	8260B	10/7/2014	CJR	1	
Bromodichloromethane	< 0.37	ug/l	0.37	1.2	1	8260B	10/7/2014	CJR	1	
Bromoform	< 0.35	ug/l	0.35	1.1	1	8260B	10/7/2014	CJR	1	
tert-Butylbenzene	< 0.36	ug/l	0.36	1.2	1	8260B	10/7/2014	CJR	1	
sec-Butylbenzene	< 0.33	ug/l	0.33	1	1	8260B	10/7/2014	CJR	1	
n-Butylbenzene	< 0.35	ug/l	0.35	1.1	1	8260B	10/7/2014	CJR	1	
Carbon Tetrachloride	< 0.33	ug/l	0.33	1.1	1	8260B	10/7/2014	CJR	1	
Chlorobenzene	< 0.24	ug/l	0.24	0.77	1	8260B	10/7/2014	CJR	1	
Chloroethane	< 0.63	ug/l	0.63	2	1	8260B	10/7/2014	CJR	1	
Chloroform	< 0.28	ug/l	0.28	0.88	1	8260B	10/7/2014	CJR	1	
Chloromethane	< 0.81	ug/l	0.81	2.6	1	8260B	10/7/2014	CJR	1	
2-Chlorotoluene	< 0.21	ug/l	0.21	0.66	1	8260B	10/7/2014	CJR	1	
4-Chlorotoluene	< 0.21	ug/l	0.21	0.68	1	8260B	10/7/2014	CJR	1	
1,2-Dibromo-3-chloropropane	< 0.88	ug/l	0.88	2.8	1	8260B	10/7/2014	CJR	1	
Dibromochloromethane	< 0.22	ug/l	0.22	0.7	1	8260B	10/7/2014	CJR	1	
1,4-Dichlorobenzene	< 0.3	ug/l	0.3	0.96	1	8260B	10/7/2014	CJR	1	
1,3-Dichlorobenzene	< 0.28	ug/l	0.28	0.89	1	8260B	10/7/2014	CJR	1	
1,2-Dichlorobenzene	< 0.36	ug/l	0.36	1.2	1	8260B	10/7/2014	CJR	1	
Dichlorodifluoromethane	< 0.44	ug/l	0.44	1.4	1	8260B	10/7/2014	CJR	30	
1,2-Dichloroethane	< 0.41	ug/l	0.41	1.3	1	8260B	10/7/2014	CJR	1	
1,1-Dichloroethane	< 0.3	ug/l	0.3	0.97	1	8260B	10/7/2014	CJR	1	
1,1-Dichloroethene	< 0.4	ug/l	0.4	1.3	1	8260B	10/7/2014	CJR	1	
cis-1,2-Dichloroethene	< 0.38	ug/l	0.38	1.2	1	8260B	10/7/2014	CJR	1	
trans-1,2-Dichloroethene	< 0.35	ug/l	0.35	1.1	1	8260B	10/7/2014	CJR	1	
1,2-Dichloropropane	< 0.32	ug/l	0.32	1	1	8260B	10/7/2014	CJR	1	
2,2-Dichloropropane	< 0.36	ug/l	0.36	1.2	1	8260B	10/7/2014	CJR	1	
1,3-Dichloropropane	< 0.33	ug/l	0.33	1	1	8260B	10/7/2014	CJR	1	
Di-isopropyl ether	< 0.23	ug/l	0.23	0.73	1	8260B	10/7/2014	CJR	1	
EDB (1,2-Dibromoethane)	< 0.44	ug/l	0.44	1.4	1	8260B	10/7/2014	CJR	1	
Ethylbenzene	< 0.55	ug/l	0.55	1.7	1	8260B	10/7/2014	CJR	1	
Hexachlorobutadiene	< 1.5	ug/l	1.5	4.8	1	8260B	10/7/2014	CJR	1	
Isopropylbenzene	< 0.3	ug/l	0.3	0.96	1	8260B	10/7/2014	CJR	30	
p-Isopropyltoluene	< 0.31	ug/l	0.31	0.98	1	8260B	10/7/2014	CJR	1	
Methylene chloride	< 0.5	ug/l	0.5	1.6	1	8260B	10/7/2014	CJR	1	
Methyl tert-butyl ether (MTBE)	< 0.23	ug/l	0.23	0.74	1	8260B	10/7/2014	CJR	1	
Naphthalene	< 1.7	ug/l	1.7	5.5	1	8260B	10/7/2014	CJR	1	
n-Propylbenzene	< 0.25	ug/l	0.25	0.81	1	8260B	10/7/2014	CJR	1	
1,1,2,2-Tetrachloroethane	< 0.45	ug/l	0.45	1.4	1	8260B	10/7/2014	CJR	1	
1,1,1,2-Tetrachloroethane	< 0.33	ug/l	0.33	1.1	1	8260B	10/7/2014	CJR	1	
Tetrachloroethene	< 0.33	ug/l	0.33	1.1	1	8260B	10/7/2014	CJR	1	
Toluene	< 0.69	ug/l	0.69	2.2	1	8260B	10/7/2014	CJR	1	
1,2,4-Trichlorobenzene	< 0.98	ug/l	0.98	3.1	1	8260B	10/7/2014	CJR	1	
1,2,3-Trichlorobenzene	< 1.8	ug/l	1.8	5.8	1	8260B	10/7/2014	CJR	1	
1,1,1-Trichloroethane	< 0.33	ug/l	0.33	1	1	8260B	10/7/2014	CJR	1	
1,1,2-Trichloroethane	< 0.34	ug/l	0.34	1.1	1	8260B	10/7/2014	CJR	1	
Trichloroethene (TCE)	< 0.33	ug/l	0.33	1	1	8260B	10/7/2014	CJR	1	
Trichlorofluoromethane	< 0.71	ug/l	0.71	2.3	1	8260B	10/7/2014	CJR	1	
1,2,4-Trimethylbenzene	< 2.2	ug/l	2.2	6.9	1	8260B	10/7/2014	CJR	1	
1,3,5-Trimethylbenzene	< 1.4	ug/l	1.4	4.5	1	8260B	10/7/2014	CJR	1	
Vinyl Chloride	< 0.18	ug/l	0.18	0.57	1	8260B	10/7/2014	CJR	1	
m&p-Xylene	< 0.69	ug/l	0.69	2.2	1	8260B	10/7/2014	CJR	1	
o-Xylene	< 0.63	ug/l	0.63	2	1	8260B	10/7/2014	CJR	1	
SUR - Toluene-d8	97	REC %			1	8260B	10/7/2014	CJR	1	
SUR - Dibromofluoromethane	101	REC %			1	8260B	10/7/2014	CJR	1	
SUR - 4-Bromofluorobenzene	102	REC %			1	8260B	10/7/2014	CJR	1	
SUR - 1,2-Dichloroethane-d4	103	REC %			1	8260B	10/7/2014	CJR	1	

**Project Name** FMR NEWTON GRAVEL PIT  
**Project #**

**Invoice #** E27808

**Lab Code** 5027808L  
**Sample ID** CREEK-12  
**Sample Matrix** Water  
**Sample Date** 9/30/2014

	<b>Result</b>	<b>Unit</b>	<b>LOD</b>	<b>LOQ</b>	<b>Dil</b>	<b>Method</b>	<b>Ext Date</b>	<b>Run Date</b>	<b>Analyst</b>	<b>Code</b>
<b>Organic</b>										
VOC's										
Benzene	< 0.24	ug/l	0.24	0.77	1	8260B	10/7/2014	CJR	1	
Bromobenzene	< 0.32	ug/l	0.32	1	1	8260B	10/7/2014	CJR	1	
Bromodichloromethane	< 0.37	ug/l	0.37	1.2	1	8260B	10/7/2014	CJR	1	
Bromoform	< 0.35	ug/l	0.35	1.1	1	8260B	10/7/2014	CJR	1	
tert-Butylbenzene	< 0.36	ug/l	0.36	1.2	1	8260B	10/7/2014	CJR	1	
sec-Butylbenzene	< 0.33	ug/l	0.33	1	1	8260B	10/7/2014	CJR	1	
n-Butylbenzene	< 0.35	ug/l	0.35	1.1	1	8260B	10/7/2014	CJR	1	
Carbon Tetrachloride	< 0.33	ug/l	0.33	1.1	1	8260B	10/7/2014	CJR	1	
Chlorobenzene	< 0.24	ug/l	0.24	0.77	1	8260B	10/7/2014	CJR	1	
Chloroethane	< 0.63	ug/l	0.63	2	1	8260B	10/7/2014	CJR	1	
Chloroform	< 0.28	ug/l	0.28	0.88	1	8260B	10/7/2014	CJR	1	
Chloromethane	< 0.81	ug/l	0.81	2.6	1	8260B	10/7/2014	CJR	1	
2-Chlorotoluene	< 0.21	ug/l	0.21	0.66	1	8260B	10/7/2014	CJR	1	
4-Chlorotoluene	< 0.21	ug/l	0.21	0.68	1	8260B	10/7/2014	CJR	1	
1,2-Dibromo-3-chloropropane	< 0.88	ug/l	0.88	2.8	1	8260B	10/7/2014	CJR	1	
Dibromochloromethane	< 0.22	ug/l	0.22	0.7	1	8260B	10/7/2014	CJR	1	
1,4-Dichlorobenzene	< 0.3	ug/l	0.3	0.96	1	8260B	10/7/2014	CJR	1	
1,3-Dichlorobenzene	< 0.28	ug/l	0.28	0.89	1	8260B	10/7/2014	CJR	1	
1,2-Dichlorobenzene	< 0.36	ug/l	0.36	1.2	1	8260B	10/7/2014	CJR	1	
Dichlorodifluoromethane	< 0.44	ug/l	0.44	1.4	1	8260B	10/7/2014	CJR	30	
1,2-Dichloroethane	< 0.41	ug/l	0.41	1.3	1	8260B	10/7/2014	CJR	1	
1,1-Dichloroethane	< 0.3	ug/l	0.3	0.97	1	8260B	10/7/2014	CJR	1	
1,1-Dichloroethene	< 0.4	ug/l	0.4	1.3	1	8260B	10/7/2014	CJR	1	
cis-1,2-Dichloroethene	< 0.38	ug/l	0.38	1.2	1	8260B	10/7/2014	CJR	1	
trans-1,2-Dichloroethene	< 0.35	ug/l	0.35	1.1	1	8260B	10/7/2014	CJR	1	
1,2-Dichloropropane	< 0.32	ug/l	0.32	1	1	8260B	10/7/2014	CJR	1	
2,2-Dichloropropane	< 0.36	ug/l	0.36	1.2	1	8260B	10/7/2014	CJR	1	
1,3-Dichloropropane	< 0.33	ug/l	0.33	1	1	8260B	10/7/2014	CJR	1	
Di-isopropyl ether	< 0.23	ug/l	0.23	0.73	1	8260B	10/7/2014	CJR	1	
EDB (1,2-Dibromoethane)	< 0.44	ug/l	0.44	1.4	1	8260B	10/7/2014	CJR	1	
Ethylbenzene	< 0.55	ug/l	0.55	1.7	1	8260B	10/7/2014	CJR	1	
Hexachlorobutadiene	< 1.5	ug/l	1.5	4.8	1	8260B	10/7/2014	CJR	1	
Isopropylbenzene	< 0.3	ug/l	0.3	0.96	1	8260B	10/7/2014	CJR	30	
p-Isopropyltoluene	< 0.31	ug/l	0.31	0.98	1	8260B	10/7/2014	CJR	1	
Methylene chloride	< 0.5	ug/l	0.5	1.6	1	8260B	10/7/2014	CJR	1	
Methyl tert-butyl ether (MTBE)	< 0.23	ug/l	0.23	0.74	1	8260B	10/7/2014	CJR	1	
Naphthalene	< 1.7	ug/l	1.7	5.5	1	8260B	10/7/2014	CJR	1	
n-Propylbenzene	< 0.25	ug/l	0.25	0.81	1	8260B	10/7/2014	CJR	1	
1,1,2,2-Tetrachloroethane	< 0.45	ug/l	0.45	1.4	1	8260B	10/7/2014	CJR	1	
1,1,1,2-Tetrachloroethane	< 0.33	ug/l	0.33	1.1	1	8260B	10/7/2014	CJR	1	
Tetrachloroethene	< 0.33	ug/l	0.33	1.1	1	8260B	10/7/2014	CJR	1	
Toluene	< 0.69	ug/l	0.69	2.2	1	8260B	10/7/2014	CJR	1	
1,2,4-Trichlorobenzene	< 0.98	ug/l	0.98	3.1	1	8260B	10/7/2014	CJR	1	
1,2,3-Trichlorobenzene	< 1.8	ug/l	1.8	5.8	1	8260B	10/7/2014	CJR	1	
1,1,1-Trichloroethane	< 0.33	ug/l	0.33	1	1	8260B	10/7/2014	CJR	1	
1,1,2-Trichloroethane	< 0.34	ug/l	0.34	1.1	1	8260B	10/7/2014	CJR	1	
Trichloroethene (TCE)	< 0.33	ug/l	0.33	1	1	8260B	10/7/2014	CJR	1	
Trichlorofluoromethane	< 0.71	ug/l	0.71	2.3	1	8260B	10/7/2014	CJR	1	
1,2,4-Trimethylbenzene	< 2.2	ug/l	2.2	6.9	1	8260B	10/7/2014	CJR	1	
1,3,5-Trimethylbenzene	< 1.4	ug/l	1.4	4.5	1	8260B	10/7/2014	CJR	1	
Vinyl Chloride	< 0.18	ug/l	0.18	0.57	1	8260B	10/7/2014	CJR	1	
m&p-Xylene	< 0.69	ug/l	0.69	2.2	1	8260B	10/7/2014	CJR	1	
o-Xylene	< 0.63	ug/l	0.63	2	1	8260B	10/7/2014	CJR	1	
SUR - 1,2-Dichloroethane-d4	94	REC %			1	8260B	10/7/2014	CJR	1	
SUR - 4-Bromofluorobenzene	96	REC %			1	8260B	10/7/2014	CJR	1	
SUR - Dibromofluoromethane	109	REC %			1	8260B	10/7/2014	CJR	1	
SUR - Toluene-d8	92	REC %			1	8260B	10/7/2014	CJR	1	

**Project Name** FMR NEWTON GRAVEL PIT  
**Project #**

**Invoice #** E27808

**Lab Code** 5027808M  
**Sample ID** CREEK-5 DUP  
**Sample Matrix** Water  
**Sample Date** 9/30/2014

	<b>Result</b>	<b>Unit</b>	<b>LOD</b>	<b>LOQ</b>	<b>Dil</b>	<b>Method</b>	<b>Ext Date</b>	<b>Run Date</b>	<b>Analyst</b>	<b>Code</b>
<b>Organic</b>										
VOC's										
Benzene	< 0.24	ug/l	0.24	0.77	1	8260B			CJR	1
Bromobenzene	< 0.32	ug/l	0.32	1	1	8260B			CJR	1
Bromodichloromethane	< 0.37	ug/l	0.37	1.2	1	8260B			CJR	1
Bromoform	< 0.35	ug/l	0.35	1.1	1	8260B			CJR	1
tert-Butylbenzene	< 0.36	ug/l	0.36	1.2	1	8260B			CJR	1
sec-Butylbenzene	< 0.33	ug/l	0.33	1	1	8260B			CJR	1
n-Butylbenzene	< 0.35	ug/l	0.35	1.1	1	8260B			CJR	1
Carbon Tetrachloride	< 0.33	ug/l	0.33	1.1	1	8260B			CJR	1
Chlorobenzene	< 0.24	ug/l	0.24	0.77	1	8260B			CJR	1
Chloroethane	< 0.63	ug/l	0.63	2	1	8260B			CJR	1
Chloroform	< 0.28	ug/l	0.28	0.88	1	8260B			CJR	1
Chloromethane	< 0.81	ug/l	0.81	2.6	1	8260B			CJR	1
2-Chlorotoluene	< 0.21	ug/l	0.21	0.66	1	8260B			CJR	1
4-Chlorotoluene	< 0.21	ug/l	0.21	0.68	1	8260B			CJR	1
1,2-Dibromo-3-chloropropane	< 0.88	ug/l	0.88	2.8	1	8260B			CJR	1
Dibromochloromethane	< 0.22	ug/l	0.22	0.7	1	8260B			CJR	1
1,4-Dichlorobenzene	< 0.3	ug/l	0.3	0.96	1	8260B			CJR	1
1,3-Dichlorobenzene	< 0.28	ug/l	0.28	0.89	1	8260B			CJR	1
1,2-Dichlorobenzene	< 0.36	ug/l	0.36	1.2	1	8260B			CJR	1
Dichlorodifluoromethane	< 0.44	ug/l	0.44	1.4	1	8260B			CJR	1
1,2-Dichloroethane	< 0.41	ug/l	0.41	1.3	1	8260B			CJR	1
1,1-Dichloroethane	< 0.3	ug/l	0.3	0.97	1	8260B			CJR	1
1,1-Dichloroethene	< 0.4	ug/l	0.4	1.3	1	8260B			CJR	1
cis-1,2-Dichloroethene	0.65 "J"	ug/l	0.38	1.2	1	8260B			CJR	1
trans-1,2-Dichloroethene	< 0.35	ug/l	0.35	1.1	1	8260B			CJR	1
1,2-Dichloropropane	< 0.32	ug/l	0.32	1	1	8260B			CJR	1
2,2-Dichloropropane	< 0.36	ug/l	0.36	1.2	1	8260B			CJR	1
1,3-Dichloropropane	< 0.33	ug/l	0.33	1	1	8260B			CJR	1
Di-isopropyl ether	< 0.23	ug/l	0.23	0.73	1	8260B			CJR	1
EDB (1,2-Dibromoethane)	< 0.44	ug/l	0.44	1.4	1	8260B			CJR	1
Ethylbenzene	< 0.55	ug/l	0.55	1.7	1	8260B			CJR	1
Hexachlorobutadiene	< 1.5	ug/l	1.5	4.8	1	8260B			CJR	1
Isopropylbenzene	< 0.3	ug/l	0.3	0.96	1	8260B			CJR	1
p-Isopropyltoluene	< 0.31	ug/l	0.31	0.98	1	8260B			CJR	1
Methylene chloride	< 0.5	ug/l	0.5	1.6	1	8260B			CJR	1
Methyl tert-butyl ether (MTBE)	< 0.23	ug/l	0.23	0.74	1	8260B			CJR	1
Naphthalene	< 1.7	ug/l	1.7	5.5	1	8260B			CJR	1
n-Propylbenzene	< 0.25	ug/l	0.25	0.81	1	8260B			CJR	1
1,1,2,2-Tetrachloroethane	< 0.45	ug/l	0.45	1.4	1	8260B			CJR	1
1,1,1,2-Tetrachloroethane	< 0.33	ug/l	0.33	1.1	1	8260B			CJR	1
Tetrachloroethene	< 0.33	ug/l	0.33	1.1	1	8260B			CJR	1
Toluene	< 0.69	ug/l	0.69	2.2	1	8260B			CJR	1
1,2,4-Trichlorobenzene	< 0.98	ug/l	0.98	3.1	1	8260B			CJR	1
1,2,3-Trichlorobenzene	< 1.8	ug/l	1.8	5.8	1	8260B			CJR	1
1,1,1-Trichloroethane	< 0.33	ug/l	0.33	1	1	8260B			CJR	1
1,1,2-Trichloroethane	< 0.34	ug/l	0.34	1.1	1	8260B			CJR	1
Trichloroethene (TCE)	< 0.33	ug/l	0.33	1	1	8260B			CJR	1
Trichlorofluoromethane	< 0.71	ug/l	0.71	2.3	1	8260B			CJR	1
1,2,4-Trimethylbenzene	< 2.2	ug/l	2.2	6.9	1	8260B			CJR	1
1,3,5-Trimethylbenzene	< 1.4	ug/l	1.4	4.5	1	8260B			CJR	1
Vinyl Chloride	< 0.18	ug/l	0.18	0.57	1	8260B			CJR	1
m&p-Xylene	< 0.69	ug/l	0.69	2.2	1	8260B			CJR	1
o-Xylene	< 0.63	ug/l	0.63	2	1	8260B			CJR	1
SUR - 1,2-Dichloroethane-d4	101	REC %			1	8260B			CJR	1
SUR - 4-Bromofluorobenzene	105	REC %			1	8260B			CJR	1
SUR - Dibromofluoromethane	99	REC %			1	8260B			CJR	1
SUR - Toluene-d8	94	REC %			1	8260B			CJR	1

**Project Name** FMR NEWTON GRAVEL PIT  
**Project #**

**Invoice #** E27808

**Lab Code** 5027808N  
**Sample ID** TRIP BLANK  
**Sample Matrix** Water  
**Sample Date** 9/30/2014

	<b>Result</b>	<b>Unit</b>	<b>LOD</b>	<b>LOQ</b>	<b>Dil</b>	<b>Method</b>	<b>Ext Date</b>	<b>Run Date</b>	<b>Analyst</b>	<b>Code</b>
<b>Organic</b>										
VOC's										
Benzene	< 0.24	ug/l	0.24	0.77	1	8260B			CJR	1
Bromobenzene	< 0.32	ug/l	0.32	1	1	8260B			CJR	1
Bromodichloromethane	< 0.37	ug/l	0.37	1.2	1	8260B			CJR	1
Bromoform	< 0.35	ug/l	0.35	1.1	1	8260B			CJR	1
tert-Butylbenzene	< 0.36	ug/l	0.36	1.2	1	8260B			CJR	1
sec-Butylbenzene	< 0.33	ug/l	0.33	1	1	8260B			CJR	1
n-Butylbenzene	< 0.35	ug/l	0.35	1.1	1	8260B			CJR	1
Carbon Tetrachloride	< 0.33	ug/l	0.33	1.1	1	8260B			CJR	1
Chlorobenzene	< 0.24	ug/l	0.24	0.77	1	8260B			CJR	1
Chloroethane	< 0.63	ug/l	0.63	2	1	8260B			CJR	1
Chloroform	< 0.28	ug/l	0.28	0.88	1	8260B			CJR	1
Chloromethane	< 0.81	ug/l	0.81	2.6	1	8260B			CJR	1
2-Chlorotoluene	< 0.21	ug/l	0.21	0.66	1	8260B			CJR	1
4-Chlorotoluene	< 0.21	ug/l	0.21	0.68	1	8260B			CJR	1
1,2-Dibromo-3-chloropropane	< 0.88	ug/l	0.88	2.8	1	8260B			CJR	1
Dibromochloromethane	< 0.22	ug/l	0.22	0.7	1	8260B			CJR	1
1,4-Dichlorobenzene	< 0.3	ug/l	0.3	0.96	1	8260B			CJR	1
1,3-Dichlorobenzene	< 0.28	ug/l	0.28	0.89	1	8260B			CJR	1
1,2-Dichlorobenzene	< 0.36	ug/l	0.36	1.2	1	8260B			CJR	1
Dichlorodifluoromethane	< 0.44	ug/l	0.44	1.4	1	8260B			CJR	1
1,2-Dichloroethane	< 0.41	ug/l	0.41	1.3	1	8260B			CJR	1
1,1-Dichloroethane	< 0.3	ug/l	0.3	0.97	1	8260B			CJR	1
1,1-Dichloroethene	< 0.4	ug/l	0.4	1.3	1	8260B			CJR	1
cis-1,2-Dichloroethene	< 0.38	ug/l	0.38	1.2	1	8260B			CJR	1
trans-1,2-Dichloroethene	< 0.35	ug/l	0.35	1.1	1	8260B			CJR	1
1,2-Dichloropropane	< 0.32	ug/l	0.32	1	1	8260B			CJR	1
2,2-Dichloropropane	< 0.36	ug/l	0.36	1.2	1	8260B			CJR	1
1,3-Dichloropropane	< 0.33	ug/l	0.33	1	1	8260B			CJR	1
Di-isopropyl ether	< 0.23	ug/l	0.23	0.73	1	8260B			CJR	1
EDB (1,2-Dibromoethane)	< 0.44	ug/l	0.44	1.4	1	8260B			CJR	1
Ethylbenzene	< 0.55	ug/l	0.55	1.7	1	8260B			CJR	1
Hexachlorobutadiene	< 1.5	ug/l	1.5	4.8	1	8260B			CJR	1
Isopropylbenzene	< 0.3	ug/l	0.3	0.96	1	8260B			CJR	1
p-Isopropyltoluene	< 0.31	ug/l	0.31	0.98	1	8260B			CJR	1
Methylene chloride	< 0.5	ug/l	0.5	1.6	1	8260B			CJR	1
Methyl tert-butyl ether (MTBE)	< 0.23	ug/l	0.23	0.74	1	8260B			CJR	1
Naphthalene	< 1.7	ug/l	1.7	5.5	1	8260B			CJR	1
n-Propylbenzene	< 0.25	ug/l	0.25	0.81	1	8260B			CJR	1
1,1,2,2-Tetrachloroethane	< 0.45	ug/l	0.45	1.4	1	8260B			CJR	1
1,1,1,2-Tetrachloroethane	< 0.33	ug/l	0.33	1.1	1	8260B			CJR	1
Tetrachloroethene	< 0.33	ug/l	0.33	1.1	1	8260B			CJR	1
Toluene	< 0.69	ug/l	0.69	2.2	1	8260B			CJR	1
1,2,4-Trichlorobenzene	< 0.98	ug/l	0.98	3.1	1	8260B			CJR	1
1,2,3-Trichlorobenzene	< 1.8	ug/l	1.8	5.8	1	8260B			CJR	1
1,1,1-Trichloroethane	< 0.33	ug/l	0.33	1	1	8260B			CJR	1
1,1,2-Trichloroethane	< 0.34	ug/l	0.34	1.1	1	8260B			CJR	1
Trichloroethene (TCE)	< 0.33	ug/l	0.33	1	1	8260B			CJR	1
Trichlorofluoromethane	< 0.71	ug/l	0.71	2.3	1	8260B			CJR	1
1,2,4-Trimethylbenzene	< 2.2	ug/l	2.2	6.9	1	8260B			CJR	1
1,3,5-Trimethylbenzene	< 1.4	ug/l	1.4	4.5	1	8260B			CJR	1
Vinyl Chloride	< 0.18	ug/l	0.18	0.57	1	8260B			CJR	1
m&p-Xylene	< 0.69	ug/l	0.69	2.2	1	8260B			CJR	1
o-Xylene	< 0.63	ug/l	0.63	2	1	8260B			CJR	1
SUR - Toluene-d8	92	REC %			1	8260B			CJR	1
SUR - 1,2-Dichloroethane-d4	103	REC %			1	8260B			CJR	1
SUR - 4-Bromofluorobenzene	113	REC %			1	8260B			CJR	1
SUR - Dibromofluoromethane	99	REC %			1	8260B			CJR	1

"J" Flag: Analyte detected between LOD and LOQ

LOD Limit of Detection

LOQ Limit of Quantitation

<b>Code</b>	<b>Comment</b>
1	Laboratory QC within limits.
30	Area percent recovery below 50% for closing calibration standard.



All solid sample results reported on a dry weight basis unless otherwise indicated. All LOD's and LOQ's are adjusted for dilutions but not dry weight. Subcontracted results are denoted by SUB in the analyst field.

**Authorized Signature**





CHAIN OF STUDY RECORD

Synergy

*Environmental Lab, Inc.*

1990 Prospect Ct. • Appleton, WI 54914  
920-830-2455 • FAX 920-733-0631

Lab I.D. #	Account No. :	Quote No.:
Project #:	Sampler: (signature)	
	<i>John D</i>	

Project (Name / location): Former Newton Gravel P.T / Manitowoc WI		Other Analysis							
Reports To: DAVE Henderson		Analysis Requested							
Company AETION	Invoice To: SAME								
Address 1535 N River Center Dr. STE #1	Address SAME								
City State Zip Milwaukee, WI 53212	City State Zip								
Phone 414-944-6190	Phone								
FAX 414-944-6080	FAX								
Lab I.D.	Sample I.D.	Collection Date	Time	Comp	Grab	Filtered Y/N	No. of Containers	Sample Type (Mainly)	Preservation
2027808L	Creek-11	9/20/94	1300	X	X	X	3	GW	HCl
	Creek-12		1240	X	X	X	3	GW	HCl
W	Creek-5'DWP		1135	X	X	X	3	GW	HCl
N	Trip Blank		930	X	X	X	3	GW	HCl
Comments/Special Instructions (*Specify groundwater "GW", Drinking Water "DW", Waste Water "WW", Soil "S", Air "A", Oil, Sludge etc.)									
<i>Analysis per Contract</i>									
Sample Integrity - To be completed by receiving lab.		Relinquished By: (sign)		Time		Date	Received By: (sign)		
Method of Shipment:		<i>John</i>		700		<i>10/11/94</i>			
Temp. of Temp. Blank _____ °C On Ice <input checked="" type="checkbox"/>									
Cooler seal intact upon receipt: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No									
Received in Laboratory By: <i>John</i> Date: <i>10/11/94</i>									