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October 22, 2013  
Project # 53319.008

Ainura Doronova, Environmental Engineer 1  
New York State Department of Environmental Conservation  
Division of Environmental Remediation, Region 2  
47-40 21<sup>st</sup> Street  
Long Island City, NY 11101-5407

Re: Third Quarterly Post-Remediation Performance Monitoring Letter Report  
NYSDEC Spill No. 1100020  
Cooper Tank and Welding Corporation  
225 Moore Street, Brooklyn, NY

Dear Ms. Doronova:

As per the 8/13/13 NYSDEC request, Gannett Fleming Engineers, P.C. (GF), on behalf of Cooper Tank and Welding Corporation (Cooper), has prepared this Third Quarterly Post-Remediation Performance Monitoring Letter Report (Final Report) to document the groundwater analytical results from the quarterly groundwater sampling event that took place on 9/25/2013. The report presents an evaluation of the concentration trends of Constituents of Concern (COC's) at Cooper, 225 Moore Street, Brooklyn, New York (the "Site"), following completion of the remedial injection program implemented from September 17 through September 28, 2012. Performance monitoring was conducted in accordance with the New York State Department of Environmental Conservation (NYSDEC)-approved Remedial Action Work Plan (RAWP) dated May, 2012 and the letter from NYSDEC, dated 8/13/2013, requesting additional monitoring.

### **Background Summary- Baseline Analysis and Remedial Injection**

Groundwater samples were collected from four on-site monitoring wells (MW-SE-7, MW-SE-9, MW-SE-11, and MW-SE-12) and off-site MW-SE-8 on the sidewalk to the east of Lot 47 and laboratory analyzed for the volatile organic compounds (VOC) listed in Table 2 of CP-51 SCG, by USEPA Method 8260. This analysis provides a baseline to determine the effectiveness of the remedy. Baseline groundwater sampling was performed on August 7, 2012 and all analytical results from the baseline analysis were transmitted electronically on August 29, 2012 to NYSDEC. Reported analytical concentrations from the August 7, 2012 baseline groundwater sampling are summarized in Table 1.

The NYSDEC approved remedial action consisted of the subsurface injection of 2,400 gallons of RegenOx solution and 1,150 gallons of ORC® Advanced solution via 45+ injection points that required extensive hand-clearing due to safety considerations in a complex and cumbersome utility grid. This remedy was successfully implemented to the best practicable extent and applied in accordance with manufacturer's specifications.

Figure 1 illustrates the injection program completed on Site, as detailed in the November 14, 2012 Status Report previously transmitted to NYSDEC.

### **Performance Monitoring Summary**

As detailed in the RAWP, performance monitoring was conducted to evaluate the effectiveness of the remedial action described above. The first quarterly performance monitoring event was conducted on January 8, 2013, approximately three months after completion of the remedial injection event. The second quarterly performance monitoring event was conducted on April 18, 2013, approximately six months after completion of the remedial injection event. As per the request of NYSDEC (8/13/13), a third quarterly performance monitoring event was conducted on September 25, 2013, approximately eleven months after completion of the remedial injection. Groundwater samples during the 1/8/2013 and 4/18/2013 groundwater monitoring events were collected from the four on-site monitoring wells (MW-SE-7, MW-SE-9, MW-SE-11, and MW-SE-12) and off-site MW-SE-8. As requested by NYSDEC, groundwater samples during the 9/25/2013 groundwater monitoring event were collected from two on-site monitoring wells (MW-SE-7 and MW-SE-9) and off-site monitoring wells MW-SE-6 and MW-SE-8. Groundwater samples were laboratory analyzed for the volatile organic compounds (VOCs) listed in Table 2 of CP-51 SCG, by USEPA Method 8260. Free product had not been detected on or off-site in any of the historical investigations conducted by GF, was not detected during baseline sampling, and was not detected during the three post-remedial groundwater monitoring events.

Groundwater results from all three quarterly monitoring events and the baseline sampling event are presented and summarized in Table 1. Analytical results were compared to the concentrations of VOCs measured in the August 7, 2012 baseline analysis. The full laboratory report for the most recent 9/25/2013 event is included as Attachment 1. The full laboratory report from the previous sampling events was transmitted to NYSDEC during submittal of the Final Quarterly Groundwater Monitoring Letter Report dated June 7, 2013.

### **Post-Remedial Data Evaluation**

As detailed in Table 1, post-remedial groundwater data supports the following conclusions:

- Groundwater analytical results from MW-SE-7 within the primary Area Of Concern (AOC-1) demonstrate a 90% reduction in Benzene (3,300 µg/L in August 2012 to 330 µg/L in September 2013), 96% reduction in Benzene, Toluene, Ethylbenzene, and total Xylenes (BTEX) compounds (11,290 µg/L in August 2012 to 411 µg/L in September 2013), and 97% reduction in total VOCs (14,746 µg/L in August 2012 to 440 µg/L in September 2013).
- Groundwater analytical results from on-site monitoring wells required for sampling during the 9/25/2013 monitoring event (MW-SE-7 and MW-SE-9) representing AOC-1 and AOC-2 demonstrate a 90% reduction in Benzene (3,440 µg/L in August 2012 to 356 µg/L in September 2013), 96% reduction in BTEX compounds (11,458 µg/L in August 2012 to 437

-3-

µg/L in September 2013), and 97% reduction in total measured VOCs (15,290 µg/L in August 2012 to 488 µg/L in September 2013).

- Groundwater analytical results in April 2013 from offsite monitoring well MW-SE-8 demonstrated a 19% reduction in Benzene (700 µg/L in August 2012 to 570 µg/L in April 2013), 21% reduction in BTEX compounds (1,041 µg/L in August 2012 to 827 µg/L in April 2013), and 28% reduction in total measured VOCs (1,972 µg/L in August 2012 to 1,425 µg/L in April 2013). During the latest September 2013 event, groundwater analytical results from offsite well MW-SE-8 demonstrated an increase from the August 2012 baseline sampling event in total BTEX compounds (398%), total measured VOCs (192%), and Benzene (386%).

### **Conclusions and Recommendations**

The groundwater data presented herein demonstrates that the injection strategy was successful in substantially reducing target Constituents of Concern (COC's) on site. Furthermore, documentation presented from previous investigations conducted by GF on behalf of Cooper and current groundwater analytical data from offsite well MW-SE-8 provide evidence of an offsite source of petroleum contamination, not yet remediated, that continues to impact groundwater quality on White Street adjacent to Cooper. Cooper has demonstrated that other than the Sanborn map illustrating a pre-1981 historical presence of an UST no such petroleum source exists on its property nor has Cooper ever stored/used gasoline since their property ownership.

As requested by NYSDEC, GF will complete a fourth quarterly post-remedial groundwater sampling event in approximately three months.

We are available at your convenience to further discuss these findings and conclusions. Please contact us if you have any questions or require further clarification.

Very truly yours,

GANNETT FLEMING ENGINEERS, P.C.



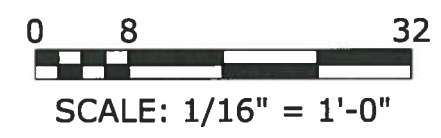
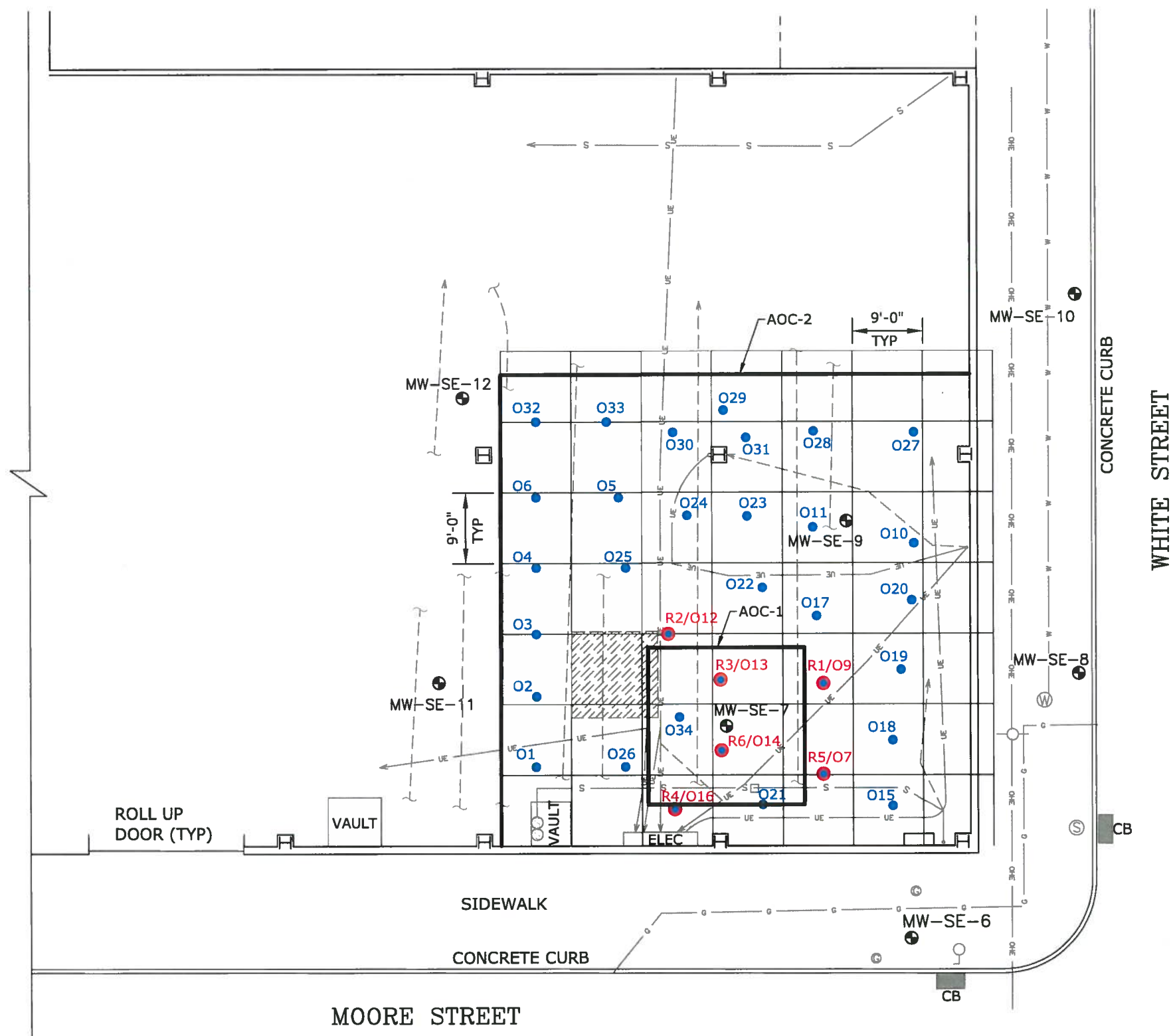
VINCENT FRISINA, P.E.

Vice President/Director of Environmental Services

cc: David Hillcoat – Cooper Tank and Welding Corp.  
F. Inyard, P.E. (GF)



- LEGEND:**
- SOIL BORING/GROUNDWATER MONITORING WELL LOCATIONS
  - O1 ● ORC INJECTION POINTS
  - REGENOX AND ORC INJECTION POINTS
  - UE — UNDERGROUND ELECTRIC LINE
  - OHE — OVERHEAD ELECTRIC LINE
  - S — SEWER LINE
  - W — WATER LINE
  - UNKNOWN UTILITY LINE
  - G — GAS LINE
  - GPR ANOMALY
  - BUILDING COLUMN
  - CB CATCH BASIN
  - ELEC ELECTRIC PANEL
  - STREET LIGHT
  - AOC AREA OF CONCERN



**REMEDIAL INJECTION POINTS**  
 COOPER TANK & WELDING CORP.  
 225 MOORE STREET, BROOKLYN, NY

10/23/12 11:10am FILE= K:\PROJECTS\53000\53319\008\F1-Injection pts.dwg by LKAMORNIK XREF FILE = NONE

**TABLE 1  
SUMMARY OF WATER SAMPLE RESULTS  
CP-51 LIST VOLATILE ORGANIC COMPOUNDS**

**COOPER TANK  
225 MOORE STREET  
BROOKLYN, NEW YORK**

SAMPLE ID	MW SE-11	MW SE-11	MW SE-11	MW SE-6	MW SE-9	MW SE-9	MW SE-9	MW SE-9	MW SE-12	MW SE-12	MW SE-12	MW SE-7	MW SE-7	MW SE-7	MW SE-7	MW SE-8	MW SE-8	MW SE-8	MW SE-8	SITE TOTAL	SITE TOTAL	SITE TOTAL	SITE TOTAL												
SAMPLE TYPE:	Water	Water	Water	Water	Water	Water	Water	Water	Water	Water	Water	Water	Water	Water	Water	Water	Water	Water	Water	Water	Water	Water	Water												
SAMPLE DATE:	8/7/2012	1/8/2013	4/18/2013	9/25/2013	8/7/2012	1/8/2013	4/18/2013	9/25/2013	8/7/2012	1/8/2013	4/18/2013	8/7/2012	1/8/2013	4/18/2013	9/25/2013	8/7/2012	1/8/2013	4/18/2013	9/25/2013	8/7/2012	1/8/2013	4/18/2013	9/25/2013												
<b>GC/MS VOA (ppb) - 8260B</b>																																			
1,2,4-Trimethylbenzene	4.8	1.1	1.0	U	13	2.1	67	10	U	2.2	4.5	1.0	U	1.0	U	2000	D	480	1000	11.0	500	D	220	220	280.0										
1,3,5-Trimethylbenzene	1.6	1.0	U	1.0	U	3.2	1.3	27	11	2	U	1.5	1.0	U	1.0	U	540	D	110	370	2.8	71	49	52	68.0										
Benzene	80	17	22	17	140	160	10	U	26	77	1.0	U	1.0	U	3300	D	1700	1700	330.0	700	D	450	570	3400.0	3597	1877	1722	356.0							
Ethylbenzene	3.8	1.0	U	1.0	U	11	11	48	10	U	2	U	3.6	1.0	U	1.0	U	1900	D	580	830	14.0	190	110	120	330.0									
Isopropylbenzene	3.2	1.2	1.3	10	110	130	10	U	4.5	3.1	1.0	U	1.0	U	180	50	100	3.9	10.0	76	86	55.0													
m+p Xylene	13	3.2	3.4	24	7.6	66	20	U	4	U	13	2	U	2	U	5500	D	1300	2000	40	110	66	91	880											
Methyl tert-Butyl Ether	0.35	U	1.0	U	1.0	U	2	U	0.35	U	10	U	10	U	2	U	0.35	U	25	U	50	U	1.0	U	0.35	U	5	U	10	U	10.0	U			
Naphthalene	1.1	2	U	2.0	U	9.5	3.6	58	20	U	7.7	1.0	2	U	2	U	490	D	140	270	6.1	59	44	62	67										
n-Butylbenzene	0.71	J	1.0	U	1.0	U	3.9	39	160	10	U	2.2	0.66	J	1.0	U	1.0	U	25	25	U	68	1.0	U	25	28	23	20.0							
n-Propylbenzene	4.1	1.2	1.2	19	190	360	10	U	5.5	3.8	1.0	U	1.0	U	190	78	210	5.4	150	130	140	82.0													
o-Xylene	2.4	1.0	U	1.0	U	6.3	2.7	13	10	U	2	U	2.3	1.0	U	1.0	U	380	D	290	400	13.0	10	8.8	16	300.0									
p-Isopropyltoluene	0.43	U	1.0	U	1.0	U	2	U	0.88	J	10	U	10	U	2	U	0.43	U	1.0	U	1.0	U	17	17	15	11.0									
sec-Butylbenzene	0.46	U	1.0	U	1.0	U	2.3	28	78	10	U	2	U	0.46	U	1.0	U	1.0	U	15	25	U	50	U	1.0	U	11	11	10	U	10.0	U			
tert-Butylbenzene	0.44	U	1.0	U	1.0	U	2	U	1.7	10	U	10	U	2	U	0.44	U	1.0	U	1.0	U	1.8	25	U	50	U	1.0	U	2.1	5	U	10	U	10.0	U
Toluene	4.1	1.0	U	1.0	U	3.1	6.7	24	10	U	2	U	4	1.0	U	1.0	U	210	D	450	310	14.0	31	27	30	270.0									
Total BTEX	103.3	20.2	25.4	61.4	168	311	0	26	99.9	0	0	11290	4320	5240	411	1041	662	827	5180	11661	4651	5265	437												
TOTAL VOCs	118.1	23.7	27.9	122.3	543.7	1191	11	48.1	114.5	0	0	14746.15	5178	7258	440.2	1972	1237	1425	5763	15522	6393	7297	488												

SAMPLE ID DATE	MW SE-11 1/8/2013	MW SE-11 4/18/2013	MW SE-9 1/8/2013	MW SE-9 4/18/2013	MW SE-9 9/25/2013	MW SE-12 1/8/2013	MW SE-12 4/18/2013	MW SE-7 1/8/2013	MW SE-7 4/18/2013	MW SE-7 9/25/2013	MW SE-8 1/8/2013	MW SE-8 4/18/2013	MW SE-8 9/25/2013	SITE TOTAL (MW-SE7 and MW-SE9) 9/25/2013
Total BTEX CONCENTRATION CHANGE (+/-%)	-80.45	-75.41	85.12	-100.00	-84.52	-100.00	-100.00	-61.74	-53.59	-96.36	-36.43	-20.58	397.60	-96.19
Total Benzene CONCENTRATION CHANGE (+/-%)	-78.75	-72.50	14.29	-100.00	-81.43	-100.00	-100.00	-48.48	-48.48	-90.00	-35.71	-18.57	385.71	-89.65
TOTAL MEASURED VOCs CONCENTRATION CHANGE (+/-%)	-79.93	-76.38	119.05	-97.98	-91.15	-100.00	-100.00	-64.89	-50.78	-97.01	-37.29	-27.74	192.23	-96.81

Notes:  
 Site total concentrations through 4/18/13 include measured analytical concentrations in all wells except offsite well MW-8  
 Site total concentrations for 9/25/13 include measured analytical concentrations in wells MW-SE7 and MW-SE9, as required by NYSDEC  
 Monitoring well MW-SE6 had not been required for baseline and post remedial sampling, therefore baseline sampling data does not exist for MW-SE6  
 - Indicates a percent-reduction in concentration from the August 2012 baseline event  
 ■ Indicates a percent-increase in concentration from the August 2012 baseline event  
 J Indicates an estimated value.  
 U Analyzed for but not detected.  
 μg/L Micrograms per liter  
 Shaded areas indicate August 2012 Baseline Sampling Event

**ATTACHMENT 1**

**LABORATORY REPORT FOR 9/25/2013 SAMPLING EVENT**



October 2, 2013

Scott Narod  
Gannett Fleming - NY  
100 Crossways Park West, Suite 300  
Woodbury, NY 11797

Project Location: Brooklyn, NY  
Client Job Number:  
Project Number: 53319.008  
Laboratory Work Order Number: 13I0899

Enclosed are results of analyses for samples received by the laboratory on September 25, 2013. If you have any questions concerning this report, please feel free to contact me.

Sincerely,



James M. Georgantas  
Project Manager



39 Spruce Street \* East Longmeadow, MA 01028 \* FAX 413/525-6405 \* TEL. 413/525-2332

Gannett Fleming - NY  
100 Crossways Park West, Suite 300  
Woodbury, NY 11797  
ATTN: Scott Narod

REPORT DATE: 10/2/2013

PURCHASE ORDER NUMBER:

PROJECT NUMBER: 53319.008

**ANALYTICAL SUMMARY**

WORK ORDER NUMBER: 1310899

The results of analyses performed on the following samples submitted to the CON-TEST Analytical Laboratory are found in this report.

PROJECT LOCATION: Brooklyn, NY

FIELD SAMPLE #	LAB ID:	MATRIX	SAMPLE DESCRIPTION	TEST	SUB LAB
MW-SE-6	1310899-01	Ground Water		SW-846 8260C	
MW-SE-8	1310899-02	Ground Water		SW-846 8260C	
MW-SE-7	1310899-03	Ground Water		SW-846 8260C	
MW-SE-9	1310899-04	Ground Water		SW-846 8260C	
Trip Blank	1310899-05	Trip Blank Water		SW-846 8260C	
Field Blank	1310899-06	Water		SW-846 8260C	



**CASE NARRATIVE SUMMARY**

All reported results are within defined laboratory quality control objectives unless listed below or otherwise qualified in this report.

**SW-846 8260C**

**Qualifications:**

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Elevated reporting limits for all volatile compounds due to foaming sample matrix.

**Analyte & Samples(s) Qualified:**

1310899-04[MW-SE-9]

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Reported results are estimated. Analysis performed on a previously used vial.

**Analyte & Samples(s) Qualified:**

, 1,2,4-Trimethylbenzene, 1,3,5-Trimethylbenzene, Ethylbenzene, Isopropylbenzene (Cumene), m+p Xylene, Methyl tert-Butyl Ether (MTBE), Naphthalene, n-Butylbenzene, n-Propylbenzene, o-Xylene, p-Isopropyltoluene (p-Cymene), sec-Butylbenzene, tert-Butylbenzene, Toluene  
1310899-03[MW-SE-7]

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Elevated reporting limit due to high concentration of target compounds. Requested reporting limit not met.

**Analyte & Samples(s) Qualified:**

1310899-01[MW-SE-6], 1310899-02[MW-SE-8]

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Continuing calibration did not meet method specifications and was biased on the low side for this compound. Increased uncertainty is associated with the reported value which is likely to be biased on the low side.

**Analyte & Samples(s) Qualified:**

**Naphthalene**

1310899-01[MW-SE-6], 1310899-02[MW-SE-8], 1310899-04[MW-SE-9], 1310899-05[Trip Blank], 1310899-06[Field Blank], B081746-BLK1, B081746-BS1, B081746-BSD1, B081895-BLK1, B081895-BS1, B081895-BSD1

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The results of analyses reported only relate to samples submitted to the Con-Test Analytical Laboratory for testing.

I certify that the analyses listed above, unless specifically listed as subcontracted, if any, were performed under my direction according to the approved methodologies listed in this document, and that based upon my inquiry of those individuals immediately responsible for obtaining the information, the material contained in this report is, to the best of my knowledge and belief, accurate and complete.



Michael A. Erickson  
Laboratory Director

Project Location: Brooklyn, NY

Sample Description:

Work Order: 1310899

Date Received: 9/25/2013

Field Sample #: MW-SE-6

Sampled: 9/25/2013 08:34

Sample ID: 1310899-01

Sample Matrix: Ground Water

Sample Flags: RL-01

Volatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Benzene	17	2.0	µg/L	2		SW-846 8260C	9/30/13	9/30/13 15:10	LBD
n-Butylbenzene	3.9	2.0	µg/L	2		SW-846 8260C	9/30/13	9/30/13 15:10	LBD
sec-Butylbenzene	2.3	2.0	µg/L	2		SW-846 8260C	9/30/13	9/30/13 15:10	LBD
tert-Butylbenzene	ND	2.0	µg/L	2		SW-846 8260C	9/30/13	9/30/13 15:10	LBD
Ethylbenzene	11	2.0	µg/L	2		SW-846 8260C	9/30/13	9/30/13 15:10	LBD
Isopropylbenzene (Cumene)	10	2.0	µg/L	2		SW-846 8260C	9/30/13	9/30/13 15:10	LBD
p-Isopropyltoluene (p-Cymene)	ND	2.0	µg/L	2		SW-846 8260C	9/30/13	9/30/13 15:10	LBD
Methyl tert-Butyl Ether (MTBE)	ND	2.0	µg/L	2		SW-846 8260C	9/30/13	9/30/13 15:10	LBD
Naphthalene	9.5	4.0	µg/L	2	V-05	SW-846 8260C	9/30/13	9/30/13 15:10	LBD
n-Propylbenzene	19	2.0	µg/L	2		SW-846 8260C	9/30/13	9/30/13 15:10	LBD
Toluene	3.1	2.0	µg/L	2		SW-846 8260C	9/30/13	9/30/13 15:10	LBD
1,2,4-Trimethylbenzene	13	2.0	µg/L	2		SW-846 8260C	9/30/13	9/30/13 15:10	LBD
1,3,5-Trimethylbenzene	3.2	2.0	µg/L	2		SW-846 8260C	9/30/13	9/30/13 15:10	LBD
m+p Xylene	24	4.0	µg/L	2		SW-846 8260C	9/30/13	9/30/13 15:10	LBD
o-Xylene	6.3	2.0	µg/L	2		SW-846 8260C	9/30/13	9/30/13 15:10	LBD

Surrogates	% Recovery	Recovery Limits	Flag/Qual
1,2-Dichloroethane-d4	94.8	70-130	
Toluene-d8	99.2	70-130	
4-Bromofluorobenzene	98.8	70-130	

Project Location: Brooklyn, NY

Sample Description:

Work Order: 1310899

Date Received: 9/25/2013

Field Sample #: MW-SE-8

Sampled: 9/25/2013 07:25

Sample ID: 1310899-02

Sample Matrix: Ground Water

Volatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Benzene	3400	100	µg/L	100		SW-846 8260C	9/27/13	9/30/13 14:39	LBD
n-Butylbenzene	20	10	µg/L	10		SW-846 8260C	9/27/13	9/27/13 18:54	LBD
sec-Butylbenzene	ND	10	µg/L	10		SW-846 8260C	9/27/13	9/27/13 18:54	LBD
tert-Butylbenzene	ND	10	µg/L	10		SW-846 8260C	9/27/13	9/27/13 18:54	LBD
Ethylbenzene	330	10	µg/L	10		SW-846 8260C	9/27/13	9/27/13 18:54	LBD
Isopropylbenzene (Cumene)	55	10	µg/L	10		SW-846 8260C	9/27/13	9/27/13 18:54	LBD
p-Isopropyltoluene (p-Cymene)	11	10	µg/L	10		SW-846 8260C	9/27/13	9/27/13 18:54	LBD
Methyl tert-Butyl Ether (MTBE)	ND	10	µg/L	10		SW-846 8260C	9/27/13	9/27/13 18:54	LBD
Naphthalene	67	20	µg/L	10	V-05	SW-846 8260C	9/27/13	9/27/13 18:54	LBD
n-Propylbenzene	82	10	µg/L	10		SW-846 8260C	9/27/13	9/27/13 18:54	LBD
Toluene	270	10	µg/L	10		SW-846 8260C	9/27/13	9/27/13 18:54	LBD
1,2,4-Trimethylbenzene	280	10	µg/L	10		SW-846 8260C	9/27/13	9/27/13 18:54	LBD
1,3,5-Trimethylbenzene	68	10	µg/L	10		SW-846 8260C	9/27/13	9/27/13 18:54	LBD
m+p Xylene	880	20	µg/L	10		SW-846 8260C	9/27/13	9/27/13 18:54	LBD
o-Xylene	300	10	µg/L	10		SW-846 8260C	9/27/13	9/27/13 18:54	LBD

Surrogates	% Recovery	Recovery Limits	Flag/Qual
1,2-Dichloroethane-d4	92.8	70-130	
1,2-Dichloroethane-d4	100	70-130	
Toluene-d8	98.3	70-130	
Toluene-d8	102	70-130	
4-Bromofluorobenzene	98.7	70-130	
4-Bromofluorobenzene	99.4	70-130	

Project Location: Brooklyn, NY

Sample Description:

Work Order: 1310899

Date Received: 9/25/2013

Field Sample #: MW-SE-7

Sampled: 9/25/2013 09:49

Sample ID: 1310899-03

Sample Matrix: Ground Water

Volatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Benzene	330	50	µg/L	50		SW-846 8260C	9/27/13	9/27/13 19:24	LBD
n-Butylbenzene	ND	1.0	µg/L	1	H-08	SW-846 8260C	10/1/13	10/1/13 16:12	LBD
sec-Butylbenzene	ND	1.0	µg/L	1	H-08	SW-846 8260C	10/1/13	10/1/13 16:12	LBD
tert-Butylbenzene	ND	1.0	µg/L	1	H-08	SW-846 8260C	10/1/13	10/1/13 16:12	LBD
Ethylbenzene	14	1.0	µg/L	1	H-08	SW-846 8260C	10/1/13	10/1/13 16:12	LBD
Isopropylbenzene (Cumene)	3.9	1.0	µg/L	1	H-08	SW-846 8260C	10/1/13	10/1/13 16:12	LBD
p-Isopropyltoluene (p-Cymene)	ND	1.0	µg/L	1	H-08	SW-846 8260C	10/1/13	10/1/13 16:12	LBD
Methyl tert-Butyl Ether (MTBE)	ND	1.0	µg/L	1	H-08	SW-846 8260C	10/1/13	10/1/13 16:12	LBD
Naphthalene	6.1	2.0	µg/L	1	H-08	SW-846 8260C	10/1/13	10/1/13 16:12	LBD
n-Propylbenzene	5.4	1.0	µg/L	1	H-08	SW-846 8260C	10/1/13	10/1/13 16:12	LBD
Toluene	14	1.0	µg/L	1	H-08	SW-846 8260C	10/1/13	10/1/13 16:12	LBD
1,2,4-Trimethylbenzene	11	1.0	µg/L	1	H-08	SW-846 8260C	10/1/13	10/1/13 16:12	LBD
1,3,5-Trimethylbenzene	2.8	1.0	µg/L	1	H-08	SW-846 8260C	10/1/13	10/1/13 16:12	LBD
m+p Xylene	40	2.0	µg/L	1	H-08	SW-846 8260C	10/1/13	10/1/13 16:12	LBD
o-Xylene	13	1.0	µg/L	1	H-08	SW-846 8260C	10/1/13	10/1/13 16:12	LBD

Surrogates	% Recovery	Recovery Limits	Flag/Qual
1,2-Dichloroethane-d4	103	70-130	
1,2-Dichloroethane-d4	100	70-130	
Toluene-d8	97.8	70-130	
Toluene-d8	101	70-130	
4-Bromofluorobenzene	94.4	70-130	
4-Bromofluorobenzene	99.9	70-130	

Project Location: Brooklyn, NY

Sample Description:

Work Order: 1310899

Date Received: 9/25/2013

Field Sample #: MW-SE-9

Sampled: 9/25/2013 10:48

Sample ID: 1310899-04

Sample Matrix: Ground Water

Sample Flags: DL-01

Volatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Benzene	26	2.0	µg/L	2		SW-846 8260C	9/27/13	9/27/13 19:55	LBD
n-Butylbenzene	2.2	2.0	µg/L	2		SW-846 8260C	9/27/13	9/27/13 19:55	LBD
sec-Butylbenzene	ND	2.0	µg/L	2		SW-846 8260C	9/27/13	9/27/13 19:55	LBD
tert-Butylbenzene	ND	2.0	µg/L	2		SW-846 8260C	9/27/13	9/27/13 19:55	LBD
Ethylbenzene	ND	2.0	µg/L	2		SW-846 8260C	9/27/13	9/27/13 19:55	LBD
Isopropylbenzene (Cumene)	4.5	2.0	µg/L	2		SW-846 8260C	9/27/13	9/27/13 19:55	LBD
p-Isopropyltoluene (p-Cymene)	ND	2.0	µg/L	2		SW-846 8260C	9/27/13	9/27/13 19:55	LBD
Methyl tert-Butyl Ether (MTBE)	ND	2.0	µg/L	2		SW-846 8260C	9/27/13	9/27/13 19:55	LBD
Naphthalene	7.7	4.0	µg/L	2	V-05	SW-846 8260C	9/27/13	9/27/13 19:55	LBD
n-Propylbenzene	5.5	2.0	µg/L	2		SW-846 8260C	9/27/13	9/27/13 19:55	LBD
Toluene	ND	2.0	µg/L	2		SW-846 8260C	9/27/13	9/27/13 19:55	LBD
1,2,4-Trimethylbenzene	2.2	2.0	µg/L	2		SW-846 8260C	9/27/13	9/27/13 19:55	LBD
1,3,5-Trimethylbenzene	ND	2.0	µg/L	2		SW-846 8260C	9/27/13	9/27/13 19:55	LBD
m+p Xylene	ND	4.0	µg/L	2		SW-846 8260C	9/27/13	9/27/13 19:55	LBD
o-Xylene	ND	2.0	µg/L	2		SW-846 8260C	9/27/13	9/27/13 19:55	LBD

Surrogates	% Recovery	Recovery Limits	Flag/Qual
1,2-Dichloroethane-d4	103	70-130	
Toluene-d8	101	70-130	
4-Bromofluorobenzene	96.4	70-130	

Project Location: Brooklyn, NY

Sample Description:

Work Order: 1310899

Date Received: 9/25/2013

Field Sample #: Trip Blank

Sampled: 9/25/2013 00:00

Sample ID: 1310899-05

Sample Matrix: Trip Blank Water

Volatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Benzene	ND	1.0	µg/L	1		SW-846 8260C	9/27/13	9/27/13 13:14	LBD
n-Butylbenzene	ND	1.0	µg/L	1		SW-846 8260C	9/27/13	9/27/13 13:14	LBD
sec-Butylbenzene	ND	1.0	µg/L	1		SW-846 8260C	9/27/13	9/27/13 13:14	LBD
tert-Butylbenzene	ND	1.0	µg/L	1		SW-846 8260C	9/27/13	9/27/13 13:14	LBD
Ethylbenzene	ND	1.0	µg/L	1		SW-846 8260C	9/27/13	9/27/13 13:14	LBD
Isopropylbenzene (Cumene)	ND	1.0	µg/L	1		SW-846 8260C	9/27/13	9/27/13 13:14	LBD
p-Isopropyltoluene (p-Cymene)	ND	1.0	µg/L	1		SW-846 8260C	9/27/13	9/27/13 13:14	LBD
Methyl tert-Butyl Ether (MTBE)	ND	1.0	µg/L	1		SW-846 8260C	9/27/13	9/27/13 13:14	LBD
Naphthalene	ND	2.0	µg/L	1	V-05	SW-846 8260C	9/27/13	9/27/13 13:14	LBD
n-Propylbenzene	ND	1.0	µg/L	1		SW-846 8260C	9/27/13	9/27/13 13:14	LBD
Toluene	ND	1.0	µg/L	1		SW-846 8260C	9/27/13	9/27/13 13:14	LBD
1,2,4-Trimethylbenzene	ND	1.0	µg/L	1		SW-846 8260C	9/27/13	9/27/13 13:14	LBD
1,3,5-Trimethylbenzene	ND	1.0	µg/L	1		SW-846 8260C	9/27/13	9/27/13 13:14	LBD
m+p Xylene	ND	2.0	µg/L	1		SW-846 8260C	9/27/13	9/27/13 13:14	LBD
o-Xylene	ND	1.0	µg/L	1		SW-846 8260C	9/27/13	9/27/13 13:14	LBD

Surrogates	% Recovery	Recovery Limits	Flag/Qual
1,2-Dichloroethane-d4	107	70-130	
Toluene-d8	98.4	70-130	
4-Bromofluorobenzene	93.4	70-130	

Project Location: Brooklyn, NY

Sample Description:

Work Order: 1310899

Date Received: 9/25/2013

Field Sample #: Field Blank

Sampled: 9/25/2013 11:30

Sample ID: 1310899-06

Sample Matrix: Water

Volatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Benzene	ND	1.0	µg/L	1		SW-846 8260C	9/27/13	9/27/13 13:45	LBD
n-Butylbenzene	ND	1.0	µg/L	1		SW-846 8260C	9/27/13	9/27/13 13:45	LBD
sec-Butylbenzene	ND	1.0	µg/L	1		SW-846 8260C	9/27/13	9/27/13 13:45	LBD
tert-Butylbenzene	ND	1.0	µg/L	1		SW-846 8260C	9/27/13	9/27/13 13:45	LBD
Ethylbenzene	ND	1.0	µg/L	1		SW-846 8260C	9/27/13	9/27/13 13:45	LBD
Isopropylbenzene (Cumene)	ND	1.0	µg/L	1		SW-846 8260C	9/27/13	9/27/13 13:45	LBD
p-Isopropyltoluene (p-Cymene)	ND	1.0	µg/L	1		SW-846 8260C	9/27/13	9/27/13 13:45	LBD
Methyl tert-Butyl Ether (MTBE)	ND	1.0	µg/L	1		SW-846 8260C	9/27/13	9/27/13 13:45	LBD
Naphthalene	ND	2.0	µg/L	1	V-05	SW-846 8260C	9/27/13	9/27/13 13:45	LBD
n-Propylbenzene	ND	1.0	µg/L	1		SW-846 8260C	9/27/13	9/27/13 13:45	LBD
Toluene	ND	1.0	µg/L	1		SW-846 8260C	9/27/13	9/27/13 13:45	LBD
1,2,4-Trimethylbenzene	ND	1.0	µg/L	1		SW-846 8260C	9/27/13	9/27/13 13:45	LBD
1,3,5-Trimethylbenzene	ND	1.0	µg/L	1		SW-846 8260C	9/27/13	9/27/13 13:45	LBD
m+p Xylene	ND	2.0	µg/L	1		SW-846 8260C	9/27/13	9/27/13 13:45	LBD
o-Xylene	ND	1.0	µg/L	1		SW-846 8260C	9/27/13	9/27/13 13:45	LBD

Surrogates	% Recovery	Recovery Limits	Flag/Qual
1,2-Dichloroethane-d4	109	70-130	
Toluene-d8	100	70-130	
4-Bromofluorobenzene	92.8	70-130	



**Sample Extraction Data**

**Prep Method: SW-846 5030B-SW-846 8260C**

Lab Number [Field ID]	Batch	Initial [mL]	Final [mL]	Date
13I0899-02 [MW-SE-8]	B081746	0.5	5.00	09/27/13
13I0899-04 [MW-SE-9]	B081746	2.5	5.00	09/27/13
13I0899-05 [Trip Blank]	B081746	5	5.00	09/27/13
13I0899-06 [Field Blank]	B081746	5	5.00	09/27/13

**Prep Method: SW-846 5030B-SW-846 8260C**

Lab Number [Field ID]	Batch	Initial [mL]	Final [mL]	Date
13I0899-01 [MW-SE-6]	B081895	2.5	5.00	09/30/13
13I0899-02RE1 [MW-SE-8]	B081895	0.05	5.00	09/27/13

**Prep Method: SW-846 5030B-SW-846 8260C**

Lab Number [Field ID]	Batch	Initial [mL]	Final [mL]	Date
13I0899-03 [MW-SE-7]	B081992	5	5.00	10/01/13

**Prep Method: SW-846 5030B-SW-846 8260C**

Lab Number [Field ID]	Batch	Initial [mL]	Final [mL]	Date
13I0899-03RE1 [MW-SE-7]	B082077	0.1	5.00	09/27/13

QUALITY CONTROL

Volatile Organic Compounds by GC/MS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
<b>Batch B081746 - SW-846 5030B</b>										
<b>Blank (B081746-BLK1)</b>										
Prepared & Analyzed: 09/27/13										
Benzene	ND	1.0	µg/L							
n-Butylbenzene	ND	1.0	µg/L							
sec-Butylbenzene	ND	1.0	µg/L							
tert-Butylbenzene	ND	1.0	µg/L							
Ethylbenzene	ND	1.0	µg/L							
Isopropylbenzene (Cumene)	ND	1.0	µg/L							
p-Isopropyltoluene (p-Cymene)	ND	1.0	µg/L							
Methyl tert-Butyl Ether (MTBE)	ND	1.0	µg/L							
Naphthalene	ND	2.0	µg/L							V-05
n-Propylbenzene	ND	1.0	µg/L							
Toluene	ND	1.0	µg/L							
1,2,4-Trimethylbenzene	ND	1.0	µg/L							
1,3,5-Trimethylbenzene	ND	1.0	µg/L							
m+p Xylene	ND	2.0	µg/L							
o-Xylene	ND	1.0	µg/L							
Surrogate: 1,2-Dichloroethane-d4	26.7		µg/L	25.0		107	70-130			
Surrogate: Toluene-d8	24.7		µg/L	25.0		98.8	70-130			
Surrogate: 4-Bromofluorobenzene	23.2		µg/L	25.0		92.6	70-130			
<b>LCS (B081746-BS1)</b>										
Prepared & Analyzed: 09/27/13										
Benzene	10.4	1.0	µg/L	10.0		104	70-130			
n-Butylbenzene	10.8	1.0	µg/L	10.0		108	70-130			
sec-Butylbenzene	10.6	1.0	µg/L	10.0		106	70-130			
tert-Butylbenzene	10.1	1.0	µg/L	10.0		101	70-130			
Ethylbenzene	10.3	1.0	µg/L	10.0		103	70-130			
Isopropylbenzene (Cumene)	10.6	1.0	µg/L	10.0		106	70-130			
p-Isopropyltoluene (p-Cymene)	10.6	1.0	µg/L	10.0		106	70-130			
Methyl tert-Butyl Ether (MTBE)	10.8	1.0	µg/L	10.0		108	70-130			
Naphthalene	7.60	2.0	µg/L	10.0		76.0	40-130			V-05 †
n-Propylbenzene	10.8	1.0	µg/L	10.0		108	70-130			
Toluene	10.4	1.0	µg/L	10.0		104	70-130			
1,2,4-Trimethylbenzene	10.9	1.0	µg/L	10.0		109	70-130			
1,3,5-Trimethylbenzene	10.8	1.0	µg/L	10.0		108	70-130			
m+p Xylene	21.9	2.0	µg/L	20.0		110	70-130			
o-Xylene	10.7	1.0	µg/L	10.0		107	70-130			
Surrogate: 1,2-Dichloroethane-d4	25.6		µg/L	25.0		102	70-130			
Surrogate: Toluene-d8	25.6		µg/L	25.0		103	70-130			
Surrogate: 4-Bromofluorobenzene	24.6		µg/L	25.0		98.4	70-130			
<b>LCS Dup (B081746-BSD1)</b>										
Prepared & Analyzed: 09/27/13										
Benzene	10.0	1.0	µg/L	10.0		100	70-130	3.73	25	
n-Butylbenzene	10.3	1.0	µg/L	10.0		103	70-130	4.35	25	
sec-Butylbenzene	10.3	1.0	µg/L	10.0		103	70-130	2.98	25	
tert-Butylbenzene	9.98	1.0	µg/L	10.0		99.8	70-130	1.10	25	
Ethylbenzene	10.0	1.0	µg/L	10.0		100	70-130	2.84	25	
Isopropylbenzene (Cumene)	10.3	1.0	µg/L	10.0		103	70-130	2.39	25	
p-Isopropyltoluene (p-Cymene)	10.3	1.0	µg/L	10.0		103	70-130	3.07	25	
Methyl tert-Butyl Ether (MTBE)	10.5	1.0	µg/L	10.0		105	70-130	2.90	25	
Naphthalene	6.78	2.0	µg/L	10.0		67.8	40-130	11.4	25	V-05 †
n-Propylbenzene	10.6	1.0	µg/L	10.0		106	70-130	1.87	25	
Toluene	10.3	1.0	µg/L	10.0		103	70-130	1.74	25	
1,2,4-Trimethylbenzene	10.6	1.0	µg/L	10.0		106	70-130	2.14	25	

**QUALITY CONTROL**

**Volatile Organic Compounds by GC/MS - Quality Control**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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**Batch B081746 - SW-846 5030B**

**LCS Dup (B081746-BSD1)**

Prepared & Analyzed: 09/27/13

1,3,5-Trimethylbenzene	10.6	1.0	µg/L	10.0		106	70-130	1.41	25	
m+p Xylene	21.1	2.0	µg/L	20.0		106	70-130	3.58	25	
o-Xylene	10.6	1.0	µg/L	10.0		106	70-130	1.32	25	
Surrogate: 1,2-Dichloroethane-d4	25.0		µg/L	25.0		100	70-130			
Surrogate: Toluene-d8	25.5		µg/L	25.0		102	70-130			
Surrogate: 4-Bromofluorobenzene	25.1		µg/L	25.0		100	70-130			

**Batch B081895 - SW-846 5030B**

**Blank (B081895-BLK1)**

Prepared & Analyzed: 09/30/13

Benzene	ND	1.0	µg/L							
n-Butylbenzene	ND	1.0	µg/L							
sec-Butylbenzene	ND	1.0	µg/L							
tert-Butylbenzene	ND	1.0	µg/L							
Ethylbenzene	ND	1.0	µg/L							
Isopropylbenzene (Cumene)	ND	1.0	µg/L							
p-Isopropyltoluene (p-Cymene)	ND	1.0	µg/L							
Methyl tert-Butyl Ether (MTBE)	ND	1.0	µg/L							
Naphthalene	ND	2.0	µg/L							V-05
n-Propylbenzene	ND	1.0	µg/L							
Toluene	ND	1.0	µg/L							
1,2,4-Trimethylbenzene	ND	1.0	µg/L							
1,3,5-Trimethylbenzene	ND	1.0	µg/L							
m+p Xylene	ND	2.0	µg/L							
o-Xylene	ND	1.0	µg/L							
Surrogate: 1,2-Dichloroethane-d4	25.9		µg/L	25.0		104	70-130			
Surrogate: Toluene-d8	24.7		µg/L	25.0		98.8	70-130			
Surrogate: 4-Bromofluorobenzene	24.0		µg/L	25.0		95.9	70-130			

**LCS (B081895-BS1)**

Prepared & Analyzed: 09/30/13

Benzene	10.7	1.0	µg/L	10.0		107	70-130			
n-Butylbenzene	10.7	1.0	µg/L	10.0		107	70-130			
sec-Butylbenzene	10.6	1.0	µg/L	10.0		106	70-130			
tert-Butylbenzene	10.4	1.0	µg/L	10.0		104	70-130			
Ethylbenzene	10.5	1.0	µg/L	10.0		105	70-130			
Isopropylbenzene (Cumene)	10.9	1.0	µg/L	10.0		109	70-130			
p-Isopropyltoluene (p-Cymene)	10.4	1.0	µg/L	10.0		104	70-130			
Methyl tert-Butyl Ether (MTBE)	12.3	1.0	µg/L	10.0		123	70-130			
Naphthalene	7.64	2.0	µg/L	10.0		76.4	40-130			V-05 †
n-Propylbenzene	11.0	1.0	µg/L	10.0		110	70-130			
Toluene	10.7	1.0	µg/L	10.0		107	70-130			
1,2,4-Trimethylbenzene	10.7	1.0	µg/L	10.0		107	70-130			
1,3,5-Trimethylbenzene	11.0	1.0	µg/L	10.0		110	70-130			
m+p Xylene	22.2	2.0	µg/L	20.0		111	70-130			
o-Xylene	10.8	1.0	µg/L	10.0		108	70-130			
Surrogate: 1,2-Dichloroethane-d4	25.3		µg/L	25.0		101	70-130			
Surrogate: Toluene-d8	25.5		µg/L	25.0		102	70-130			
Surrogate: 4-Bromofluorobenzene	25.5		µg/L	25.0		102	70-130			

**QUALITY CONTROL**

**Volatile Organic Compounds by GC/MS - Quality Control**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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**Batch B081895 - SW-846 5030B**

**LCS Dup (B081895-BSD1)**

Prepared & Analyzed: 09/30/13

Benzene	10.6	1.0	µg/L	10.0		106	70-130	0.843	25	
n-Butylbenzene	10.4	1.0	µg/L	10.0		104	70-130	2.28	25	
sec-Butylbenzene	10.6	1.0	µg/L	10.0		106	70-130	0.567	25	
tert-Butylbenzene	10.2	1.0	µg/L	10.0		102	70-130	1.56	25	
Ethylbenzene	10.4	1.0	µg/L	10.0		104	70-130	0.383	25	
Isopropylbenzene (Cumene)	10.3	1.0	µg/L	10.0		103	70-130	5.27	25	
p-Isopropyltoluene (p-Cymene)	10.4	1.0	µg/L	10.0		104	70-130	0.0959	25	
Methyl tert-Butyl Ether (MTBE)	12.0	1.0	µg/L	10.0		120	70-130	2.38	25	
Naphthalene	6.82	2.0	µg/L	10.0		68.2	40-130	11.3	25	V-05 †
n-Propylbenzene	10.6	1.0	µg/L	10.0		106	70-130	4.17	25	
Toluene	10.5	1.0	µg/L	10.0		105	70-130	1.70	25	
1,2,4-Trimethylbenzene	10.6	1.0	µg/L	10.0		106	70-130	0.375	25	
1,3,5-Trimethylbenzene	10.5	1.0	µg/L	10.0		105	70-130	4.76	25	
m+p Xylene	21.5	2.0	µg/L	20.0		108	70-130	2.93	25	
o-Xylene	10.6	1.0	µg/L	10.0		106	70-130	2.61	25	
Surrogate: 1,2-Dichloroethane-d4	24.9		µg/L	25.0		99.5	70-130			
Surrogate: Toluene-d8	25.4		µg/L	25.0		101	70-130			
Surrogate: 4-Bromofluorobenzene	25.1		µg/L	25.0		100	70-130			

**Batch B081992 - SW-846 5030B**

**Blank (B081992-BLK1)**

Prepared & Analyzed: 10/01/13

Benzene	ND	1.0	µg/L							
n-Butylbenzene	ND	1.0	µg/L							
sec-Butylbenzene	ND	1.0	µg/L							
tert-Butylbenzene	ND	1.0	µg/L							
Ethylbenzene	ND	1.0	µg/L							
Isopropylbenzene (Cumene)	ND	1.0	µg/L							
p-Isopropyltoluene (p-Cymene)	ND	1.0	µg/L							
Methyl tert-Butyl Ether (MTBE)	ND	1.0	µg/L							
Naphthalene	ND	2.0	µg/L							
n-Propylbenzene	ND	1.0	µg/L							
Toluene	ND	1.0	µg/L							
1,2,4-Trimethylbenzene	ND	1.0	µg/L							
1,3,5-Trimethylbenzene	ND	1.0	µg/L							
m+p Xylene	ND	2.0	µg/L							
o-Xylene	ND	1.0	µg/L							
Surrogate: 1,2-Dichloroethane-d4	25.4		µg/L	25.0		101	70-130			
Surrogate: Toluene-d8	25.1		µg/L	25.0		100	70-130			
Surrogate: 4-Bromofluorobenzene	24.0		µg/L	25.0		96.0	70-130			

**LCS (B081992-BS1)**

Prepared & Analyzed: 10/01/13

Benzene	10.5	1.0	µg/L	10.0		105	70-130			
n-Butylbenzene	10.4	1.0	µg/L	10.0		104	70-130			
sec-Butylbenzene	10.0	1.0	µg/L	10.0		100	70-130			
tert-Butylbenzene	9.75	1.0	µg/L	10.0		97.5	70-130			
Ethylbenzene	9.99	1.0	µg/L	10.0		99.9	70-130			
Isopropylbenzene (Cumene)	10.2	1.0	µg/L	10.0		102	70-130			
p-Isopropyltoluene (p-Cymene)	10.0	1.0	µg/L	10.0		100	70-130			
Methyl tert-Butyl Ether (MTBE)	11.4	1.0	µg/L	10.0		114	70-130			
Naphthalene	9.13	2.0	µg/L	10.0		91.3	40-130			†
n-Propylbenzene	10.5	1.0	µg/L	10.0		105	70-130			
Toluene	10.2	1.0	µg/L	10.0		102	70-130			

QUALITY CONTROL

Volatile Organic Compounds by GC/MS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch B081992 - SW-846 5030B

LCS (B081992-BS1)

Prepared & Analyzed: 10/01/13

1,2,4-Trimethylbenzene	10.2	1.0	µg/L	10.0		102	70-130			
1,3,5-Trimethylbenzene	10.4	1.0	µg/L	10.0		104	70-130			
m+p Xylene	20.9	2.0	µg/L	20.0		104	70-130			
o-Xylene	10.3	1.0	µg/L	10.0		103	70-130			
Surrogate: 1,2-Dichloroethane-d4	25.0		µg/L	25.0		99.8	70-130			
Surrogate: Toluene-d8	25.2		µg/L	25.0		101	70-130			
Surrogate: 4-Bromofluorobenzene	25.2		µg/L	25.0		101	70-130			

LCS Dup (B081992-BSD1)

Prepared & Analyzed: 10/01/13

Benzene	10.4	1.0	µg/L	10.0		104	70-130	1.15	25	
n-Butylbenzene	10.1	1.0	µg/L	10.0		101	70-130	2.73	25	
sec-Butylbenzene	10.1	1.0	µg/L	10.0		101	70-130	0.895	25	
tert-Butylbenzene	9.70	1.0	µg/L	10.0		97.0	70-130	0.514	25	
Ethylbenzene	10.0	1.0	µg/L	10.0		100	70-130	0.499	25	
Isopropylbenzene (Cumene)	9.97	1.0	µg/L	10.0		99.7	70-130	2.38	25	
p-Isopropyltoluene (p-Cymene)	9.83	1.0	µg/L	10.0		98.3	70-130	2.01	25	
Methyl tert-Butyl Ether (MTBE)	11.5	1.0	µg/L	10.0		115	70-130	0.523	25	
Naphthalene	8.39	2.0	µg/L	10.0		83.9	40-130	8.45	25	†
n-Propylbenzene	10.3	1.0	µg/L	10.0		103	70-130	2.40	25	
Toluene	10.1	1.0	µg/L	10.0		101	70-130	1.48	25	
1,2,4-Trimethylbenzene	10.2	1.0	µg/L	10.0		102	70-130	0.393	25	
1,3,5-Trimethylbenzene	10.1	1.0	µg/L	10.0		101	70-130	3.12	25	
m+p Xylene	20.8	2.0	µg/L	20.0		104	70-130	0.384	25	
o-Xylene	10.3	1.0	µg/L	10.0		103	70-130	0.679	25	
Surrogate: 1,2-Dichloroethane-d4	24.8		µg/L	25.0		99.3	70-130			
Surrogate: Toluene-d8	25.2		µg/L	25.0		101	70-130			
Surrogate: 4-Bromofluorobenzene	25.3		µg/L	25.0		101	70-130			

Batch B082077 - SW-846 5030B

Blank (B082077-BLK1)

Prepared & Analyzed: 09/27/13

Benzene	ND	1.0	µg/L							
Surrogate: 1,2-Dichloroethane-d4	26.7		µg/L	25.0		107	70-130			
Surrogate: Toluene-d8	24.7		µg/L	25.0		98.8	70-130			
Surrogate: 4-Bromofluorobenzene	23.2		µg/L	25.0		92.6	70-130			

LCS (B082077-BS1)

Prepared & Analyzed: 09/27/13

Benzene	10.4	1.0	µg/L	10.0		104	70-130			
Surrogate: 1,2-Dichloroethane-d4	25.6		µg/L	25.0		102	70-130			
Surrogate: Toluene-d8	25.6		µg/L	25.0		103	70-130			
Surrogate: 4-Bromofluorobenzene	24.6		µg/L	25.0		98.4	70-130			

**QUALITY CONTROL**

**Volatile Organic Compounds by GC/MS - Quality Control**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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**Batch B082077 - SW-846 5030B**

**LCS Dup (B082077-BSD1)**

Prepared & Analyzed: 09/27/13

Benzene	10.0	1.0	µg/L	10.0		100	70-130	3.73	25	
Surrogate: 1,2-Dichloroethane-d4	25.0		µg/L	25.0		100	70-130			
Surrogate: Toluene-d8	25.5		µg/L	25.0		102	70-130			
Surrogate: 4-Bromofluorobenzene	25.1		µg/L	25.0		100	70-130			

**FLAG/QUALIFIER SUMMARY**

- \* QC result is outside of established limits.
  - † Wide recovery limits established for difficult compound.
  - ‡ Wide RPD limits established for difficult compound.
  - # Data exceeded client recommended or regulatory level
- Percent recoveries and relative percent differences (RPDs) are determined by the software using values in the calculation which have not been rounded.  
No results have been blank subtracted unless specified in the case narrative section.
- DL-01 Elevated reporting limits for all volatile compounds due to foaming sample matrix.
  - H-08 Reported results are estimated. Analysis performed on a previously used vial.
  - RL-01 Elevated reporting limit due to high concentration of target compounds. Requested reporting limit not met.
  - V-05 Continuing calibration did not meet method specifications and was biased on the low side for this compound. Increased uncertainty is associated with the reported value which is likely to be biased on the low side.



**CERTIFICATIONS**

**Certified Analyses included in this Report**

Analyte	Certifications
<i>SW-846 8260C in Water</i>	
Benzene	CT,NH,NY,VA
n-Butylbenzene	NY,VA
sec-Butylbenzene	NY,VA
tert-Butylbenzene	NY,VA
Ethylbenzene	CT,NH,NY,VA
Isopropylbenzene (Cumene)	NY,VA
p-Isopropyltoluene (p-Cymene)	CT,NH,NY,VA
Methyl tert-Butyl Ether (MTBE)	CT,NH,NY,VA
Naphthalene	NH,NY,VA
n-Propylbenzene	CT,NH,NY,VA
Toluene	CT,NH,NY,VA
1,2,4-Trimethylbenzene	NY,VA
1,3,5-Trimethylbenzene	NY,VA
m+p Xylene	CT,NH,NY,VA
o-Xylene	CT,NH,NY,VA

The CON-TEST Environmental Laboratory operates under the following certifications and accreditations:

Code	Description	Number	Expires
AIHA	AIHA-LAP, LLC	100033	02/1/2014
MA	Massachusetts DEP	M-MA100	06/30/2014
CT	Connecticut Department of Public Health	PH-0567	09/30/2015
NY	New York State Department of Health	10899 NELAP	04/1/2014
NH-S	New Hampshire Environmental Lab	2516 NELAP	02/5/2014
RI	Rhode Island Department of Health	LAO00112	12/30/2013
NC	North Carolina Div. of Water Quality	652	12/31/2013
NJ	New Jersey DEP	MA007 NELAP	06/30/2014
FL	Florida Department of Health	E871027 NELAP	06/30/2014
VT	Vermont Department of Health Lead Laboratory	LL015036	07/30/2014
WA	State of Washington Department of Ecology	C2065	02/23/2014
ME	State of Maine	2011028	06/9/2015
VA	Commonwealth of Virginia	460217	12/14/2013
NH-P	New Hampshire Environmental Lab	2557 NELAP	09/6/2014



**CON-test**  
ANALYTICAL LABORATORY

Phone: 413-525-2332  
Fax: 413-525-6405  
Email: info@contestlabs.com  
www.contestlabs.com

**CHAIN OF CUSTODY RECORD**

39 Spruce Street  
East Longmeadow, MA 01028

Page   1   of   1  

Company Name: Sannett Fleming (GF)  
Address: 100 Crossways Park West, Suite 303 Woodbury, NY  
Attention: Scott Varod (GF)

Telephone: 516-364-4140  
Project #: 053319

**ANALYSIS REQUESTED**

Project Location: Brooklyn NY

Client PO#: DATA DELIVERY (check all that apply)  
 FAX  EMAIL  WEBSITE

Sampled By: B.T. (GF)  
Project Proposal Provided? (for billing purposes)  
 Yes  No  
proposal date \_\_\_\_\_

Format:  PDF  EXCEL  OGIS  
 OTHER Excel & CAT B  
Email: SVAROD@sfnet.com

**Collection**

Con-Test Lab ID <small>(Laboratory Use Only)</small>	Client Sample ID / Description	Beginning Date/Time	Ending Date/Time	Composite	Grab	Matrix Date/Time	ANALYSIS REQUESTED																
							Matrix Code																
G1	MW-SE-6	9/25/13	8:34	X		GW																	
G2	MW-SE-8		7:25	X		GW																	
G3	MW-SE-7		9:49	X		GW																	
G4	MW-SE-9		10:48	X		GW																	
G5	Trip Blank			X		AG																	
G6	Field Blank		11:30	X		AG																	

# of Containers:   1    
Preservation:     
Container Code:     
Discarded Metals:     
 Field Filtered  
 Lab to Filter

\*\*\*Cont. Code:     
A=amber glass  
G=glass  
P=plastic  
ST=sterile  
V=vial  
S=summary can  
T=tedlar bag  
O=Other

\*\*\*Preservation:     
I=Iced  
H=HCL  
M= Menthanol  
N = Nitric Acid  
S = Sulfuric Acid  
B = Sodium bisulfate  
X = Na hydroxide  
T = Na thiosulfate  
O = Other

\*Matrix Code:     
GW= groundwater  
WW= wastewater  
DW= drinking water  
A = air  
S = soil/solid  
SL= sludge  
O = other

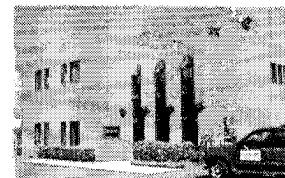
Please use the following codes to let Con-Test know if a specific sample may be high in concentration in Matrix/Conc. Code Box:  
H - High; M - Medium; L - Low; C - Clean; U - Unknown

**Standard TAT**

Retainsd by: (signature) Sigan Date/Time: 9/25/13  
Retainsd by: (signature) [Signature] Date/Time: 9/25/13  
Retainsd by: (signature) [Signature] Date/Time: 9/25/13

Received by: (signature) [Signature] Date/Time: 9/25/13 18:31  
Turnaround Time Starts At 9:00 A.M. THE DAY AFTER SAMPLE RECEIPT UNLESS THERE ARE QUESTIONS ON YOUR CHAIN. IF THIS FORM IS NOT FILLED OUT COMPLETELY OR IS INCORRECT, TURNAROUND TIME WILL NOT START UNTIL ALL QUESTIONS ARE ANSWERED BY OUR CLIENT.

39 Spruce St.  
 East Longmeadow, MA. 01028  
 P: 413-525-2332  
 F: 413-525-6405  
 www.contestlabs.com



### Sample Receipt Checklist

CLIENT NAME: Gannett Fleming RECEIVED BY: KOB DATE: 9-25-13

- 1) Was the chain(s) of custody relinquished and signed? Yes  No  No CoC Included
- 2) Does the chain agree with the samples? Yes  No   
 If not, explain: \_\_\_\_\_
- 3) Are all the samples in good condition? Yes  No   
 If not, explain: \_\_\_\_\_

4) How were the samples received:  
 On Ice  Direct from Sampling  Ambient  In Cooler(s)

Were the samples received in Temperature Compliance of (2-6°C)? Yes  No  N/A  
 Temperature °C by Temp blank \_\_\_\_\_ Temperature °C by Temp gun 3.0C

5) Are there Dissolved samples for the lab to filter? Yes  No   
 Who was notified \_\_\_\_\_ Date \_\_\_\_\_ Time \_\_\_\_\_

6) Are there any RUSH or SHORT HOLDING TIME samples? Yes  No   
 Who was notified \_\_\_\_\_ Date \_\_\_\_\_ Time \_\_\_\_\_

7) Location where samples are stored: 19  
 Permission to subcontract samples? Yes No  
 (Walk-in clients only) if not already approved  
 Client Signature: \_\_\_\_\_

8) Do all samples have the proper Acid pH: Yes No N/A

9) Do all samples have the proper Base pH: Yes No N/A

10) Was the PC notified of any discrepancies with the CoC vs the samples: Yes No N/A

### Containers received at Con-Test

	# of containers		# of containers
1 Liter Amber		8 oz amber/clear jar	
500 mL Amber		4 oz amber/clear jar	
250 mL Amber (8oz amber)		2 oz amber/clear jar	
1 Liter Plastic		Plastic Bag / Ziploc	
500 mL Plastic		SOC Kit	
250 mL plastic		Non-ConTest Container	
40 mL Vial - type listed below	13	Perchlorate Kit	
Colisure / bacteria bottle		Flashpoint bottle	
Dissolved Oxygen bottle		Other glass jar	
Encore		Other	

Laboratory Comments:  
 \_\_\_\_\_  
 \_\_\_\_\_

40 mL vials: # HCl 13 # Methanol \_\_\_\_\_  
 # Bisulfate \_\_\_\_\_ # DI Water \_\_\_\_\_  
 # Thiosulfate \_\_\_\_\_ # Unpreserved \_\_\_\_\_

Time and Date Frozen: \_\_\_\_\_

Doc# 277  
 Rev. 4 August 2013

**Login Sample Receipt Checklist**  
 (Rejection Criteria Listing - Using Sample Acceptance Policy)  
 Any False statement will be brought to the attention of Client

Question	Answer (True/False)	Comment
	T/F/NA	
1) The cooler's custody seal, if present, is intact.	NA	
2) The cooler or samples do not appear to have been compromised or tampered with.	T	
3) Samples were received on ice.	T	
4) Cooler Temperature is acceptable.	T	
5) Cooler Temperature is recorded.	T	
6) COC is filled out in ink and legible.	T	
7) COC is filled out with all pertinent information.	T	
8) Field Sampler's name present on COC.	T	
9) There are no discrepancies between the sample IDs on the container and the COC.	T	
10) Samples are received within Holding Time.	T	
11) Sample containers have legible labels.	T	
12) Containers are not broken or leaking.	T	
13) Air Cassettes are not broken/open.	NA	
14) Sample collection date/times are provided.	T	
15) Appropriate sample containers are used.	T	
16) Proper collection media used.	T	
17) No headspace sample bottles are completely filled.	T	
18) There is sufficient volume for all requested analyses, including any requested MS/MSDs.	T	
19) Trip blanks provided if applicable.	T	
20) VOA sample vials do not have head space or bubble is <6mm (1/4") in diameter.	T	
21) Samples do not require splitting or compositing.	T	

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Who notified of False statements?  
 Log-In Technician Initials: KOIB

Date/Time:  
 Date/Time: 9-25-13 1831