

Arnold F. Fleming, P.E.

&



*Environmental Management & Consulting*

*Sent via electronic mail (michael.maccabe@dec.ny.gov)*

May 1, 2017

Michael D. MacCabe, P.E.  
Senior Environmental Engineer  
Division of Environmental Remediation  
NYS Department of Environmental Conservation  
625 Broadway, 12th Floor  
Albany, NY 12233-7016

Re: **Semi-Annual Groundwater Monitoring Report – March 2017**  
**388 Bridge Street Site - Brooklyn, New York**  
**BCP Site #C224134**

Dear Mr. MacCabe:

Fleming-Lee Shue Inc. (FLS) presents this Semi-Annual Groundwater Monitoring Report for the 388 Bridge Street property (Site). The groundwater monitoring program was implemented to monitor natural attenuation of volatile organic compounds (VOC) in the groundwater following the downsizing of the soil vapor extraction (SVE) system. The SVE system, installed in 2013, was downsized and modified in 2016 to target the area where the bulk of the contaminant mass remains, primarily in the area of SVE well 2 (SVE-2). Selected soil vapor extraction wells were converted to monitoring wells and included in the groundwater monitoring program. The Site Location Map is included as Figure 1.

## **Background**

Results from subsurface investigations performed by FLS from 2008 to 2010 showed detections of tetrachloroethene (PCE) in both soil and groundwater. The Site was accepted into the NYSDEC Brownfields Cleanup Program (BCP) in August 2009. Remedial activities were conducted in accordance with the NYSDEC-approved Remedial Action Work Plan dated April 2012. The BCP Volunteer achieved a Track 2 remedy at the Site. After completion of the remedial work, residual contamination remained on-Site.

Therefore, institutional and engineering controls (IC/EC) were incorporated into the Site remedy to control exposure to the remaining contamination.

In June 2013, the SVE system was installed to remove VOC from soil gas beneath the building slab. The system operated from 2013 through 2016 and included six extraction points (SVE-1, SVE-2, SVE-3, SVE-4, SVE-5 and SVE-6).

In 2016, after monitoring of PCE concentrations and prior approval of NYSDEC, the 2013 SVE system was downsized to limit extraction where the bulk of the PCE mass remains (SVE#2). Each of the vapor extraction points, except for one location (SVE-2), were converted into groundwater monitoring wells (SVE-MW-1, SVE-MW-3, SVE-MW 4, SVE-MW-5 and SVE-MW-6) to monitor natural attenuation of VOCs.

In July 2016 and with the prior approval of NYSDEC (dated July 29, 2016), SVE-MW-3 and SVE-MW-6 were abandoned because they did not extend into the groundwater table and were therefore not usable as groundwater monitoring wells. Off-Site monitoring wells, MW-3 and MW-7, were destroyed during construction activities.

Once remediation is completed, extraction well SVE-2 will be converted to a groundwater monitoring well and serve as the downgradient well. Figure 2 presents the well locations and results from the March 2017 round of groundwater sampling.

## **Groundwater Monitoring Program**

The objectives of the groundwater monitoring program include the following:

- Provide a current round of groundwater analytical data from the monitoring wells;
- Evaluate the existing and time-based groundwater conditions at the Site; and
- Evaluate the time-based trends of VOCs.

The groundwater monitoring program involves the following activities:

- Measurement of groundwater field parameters including pH, dissolved oxygen, total dissolved solids, conductivity, oxidation-reduction potential, turbidity, salinity, and temperature to determine groundwater conditions (see Appendix A);
- Collection of groundwater samples for VOCs to evaluate chlorinated VOC concentration trends and monitor natural attenuation;
- Collection of groundwater samples for geochemical parameters including nitrate, nitrite, sulfate, iron (II), total organic carbon (TOC), and dissolved organic carbon (DOC) to evaluate evidence supporting natural attenuation.

On March 17, 2017, groundwater samples were collected from the existing on-Site monitoring wells (SVE-MW-1, SVE-MW 4, and SVE-MW-5).

## Summary of Analytical Results

The groundwater analytical results were compared to the NYSDEC Division of Water Technical and Operational Guidance Series 1.1.1 (TOGS) Ambient Water Quality Standards and Guidance Values (Standards) and are summarized in Table 1. Table 1 and Figure 2 include the two quarterly sampling events, in addition to the March 2017 data. The laboratory data report is provided in Appendix B.

The groundwater analytical results indicate that PCE is present in concentrations that exceed the Standard of 5 µg/L in each of the three monitoring wells sampled: SVE-MW-1 (9.7 µg/L), SVE-MW-4 (11.6 µg/L), and SVE-MW-5 (6.6 µg/L). Trichloroethene (TCE) was only detected at a concentration exceeding the Standard in SVE-MW-4 (7.2 µg/L).

## Summary and Conclusions

The only compounds detected above TOGS were PCE and its breakdown product, TCE. The concentration of PCE did not vary significantly throughout the Site and was marginally above the Standard of 5 µg/L.

The steady decrease in PCE concentrations, as compared to the last two sampling rounds, and the detection of its breakdown products (TCE and cis-1,2-Dichloroethene) indicate that natural attenuation of chlorinated VOCs continues to occur in the groundwater.

## Recommendations

FLS recommends continuing the groundwater monitoring on a semi-annual basis to further assess groundwater quality. The next groundwater monitoring event is scheduled for September 2017.

Please contact us with any comments or questions.

Sincerely,

Fleming-Lee Shue, Inc.



Camila Israel  
Sr. Project Manager

cc: Roger Fortune                      Stahl Realty  
Arnold F. Fleming, P.E.              Fleming-Lee-Shue, Inc.

enc:

Table 1	Volatile Organic Compounds in Groundwater
Figure 1	Site Location Map
Figure 2	Site Plan and Groundwater Sampling Results
Appendix A	Monitoring Well Purge Logs
Appendix B	Laboratory Analytical Data Report

# Tables

Table 1 - Volatile Organic Compounds in Groundwater  
Semi-Annual Groundwater Report  
388 Bridge Street, Brooklyn NY

Client Sample ID:	Units	NY TOGS Class GA GW Standards (NYSDEC 6/2004)	SVE-MW-1			SVE-MW-4			SVE-MW-5		
Lab Sample ID:			JC17514-1	JC28127-3	JC39116-1	JC17514-2	JC28127-2	JC39116-2	JC17514-3	JC28127-1	JC39116-3
Date Sampled:			3/31/2016	9/20/2016	3/17/2017	3/31/2016	9/20/2016	3/17/2017	3/31/2016	9/20/2016	3/17/2017
Matrix:			Ground Water			Ground Water			Ground Water		
<b>GC/MS Volatiles (SW846 8260C)</b>											
Acetone	ug/l	-	ND (3.3)	ND (5.0)	ND (5.0)	ND (3.3)	ND (5.0)	ND (5.0)	ND (3.3)	ND (5.0)	ND (5.0)
Benzene	ug/l	1	ND (0.24)	ND (0.14)	ND (0.14)	ND (0.24)	ND (0.14)	ND (0.14)	ND (0.24)	ND (0.14)	ND (0.14)
Bromochloromethane	ug/l	5	ND (0.37)	ND (0.46)	ND (0.46)	ND (0.37)	ND (0.46)	ND (0.46)	ND (0.37)	ND (0.46)	ND (0.46)
Bromodichloromethane	ug/l	-	ND (0.23)	ND (0.55)	ND (0.55)	ND (0.23)	ND (0.55)	ND (0.55)	ND (0.23)	ND (0.55)	ND (0.55)
Bromoform	ug/l	-	ND (0.23)	ND (0.34)	ND (0.34)	ND (0.23)	ND (0.34)	ND (0.34)	ND (0.23)	ND (0.34)	ND (0.34)
Bromomethane	ug/l	5	ND (0.42)	ND (0.46)	ND (0.46)	ND (0.42)	ND (0.46)	ND (0.46)	ND (0.42)	ND (0.46)	ND (0.46)
2-Butanone (MEK)	ug/l	-	ND (5.6)	ND (1.9)	ND (1.9)	ND (5.6)	ND (1.9)	ND (1.9)	ND (5.6)	ND (1.9)	ND (1.9)
Carbon disulfide	ug/l	60	ND (0.25)	ND (0.33)	ND (0.33)	ND (0.25)	ND (0.33)	ND (0.33)	ND (0.25)	ND (0.33)	ND (0.33)
Carbon tetrachloride	ug/l	5	ND (0.22)	ND (0.54)	ND (0.54)	ND (0.22)	ND (0.54)	ND (0.54)	ND (0.22)	ND (0.54)	ND (0.54)
Chlorobenzene	ug/l	5	ND (0.19)	ND (0.17)	ND (0.17)	ND (0.19)	ND (0.17)	ND (0.17)	ND (0.19)	ND (0.17)	ND (0.17)
Chloroethane	ug/l	5	ND (0.34)	ND (0.44)	ND (0.44)	ND (0.34)	ND (0.44)	ND (0.44)	ND (0.34)	ND (0.44)	ND (0.44)
Chloroform	ug/l	7	1.7	1	1.3	0.89 J	1.3	0.93 J	0.79 J	0.85 J	0.71 J
Chloromethane	ug/l	5	ND (0.41)	ND (0.96)	ND (0.96)	ND (0.41)	ND (0.96)	ND (0.96)	ND (0.41)	ND (0.96)	ND (0.96)
Cyclohexane	ug/l	-	ND (0.28)	ND (0.73)	ND (0.73)	ND (0.28)	ND (0.73)	ND (0.73)	ND (0.28)	ND (0.73)	ND (0.73)
1,2-Dibromo-3-chloropropane	ug/l	0.04	ND (0.99)	ND (0.69)	ND (0.69)	ND (0.99)	ND (0.69)	ND (0.69)	ND (0.99)	ND (0.69)	ND (0.69)
Dibromochloromethane	ug/l	-	ND (0.15)	ND (0.23)	ND (0.23)	ND (0.15)	ND (0.23)	ND (0.23)	ND (0.15)	ND (0.23)	ND (0.23)
1,2-Dibromoethane	ug/l	0.0006	ND (0.23)	ND (0.22)	ND (0.22)	ND (0.23)	ND (0.22)	ND (0.22)	ND (0.23)	ND (0.22)	ND (0.22)
1,2-Dichlorobenzene	ug/l	3	ND (0.19)	ND (0.23)	ND (0.23)	ND (0.19)	ND (0.23)	ND (0.23)	ND (0.19)	ND (0.23)	ND (0.23)
1,3-Dichlorobenzene	ug/l	3	ND (0.23)	ND (0.19)	ND (0.19)	ND (0.23)	ND (0.19)	ND (0.19)	ND (0.23)	ND (0.19)	ND (0.19)
1,4-Dichlorobenzene	ug/l	3	ND (0.27)	ND (0.21)	ND (0.21)	ND (0.27)	ND (0.21)	ND (0.21)	ND (0.27)	ND (0.21)	ND (0.21)
Dichlorodifluoromethane	ug/l	5	ND (0.90)	ND (0.70)	ND (0.70)	ND (0.90)	ND (0.70)	ND (0.70)	ND (0.90)	ND (0.70)	ND (0.70)
1,1-Dichloroethane	ug/l	5	ND (0.17)	ND (0.21)	ND (0.21)	ND (0.17)	ND (0.21)	ND (0.21)	ND (0.17)	ND (0.21)	ND (0.21)
1,2-Dichloroethane	ug/l	0.6	ND (0.18)	ND (0.39)	ND (0.39)	ND (0.18)	ND (0.39)	ND (0.39)	ND (0.18)	ND (0.39)	ND (0.39)
1,1-Dichloroethene	ug/l	5	ND (0.51)	ND (0.20)	ND (0.20)	ND (0.51)	ND (0.20)	ND (0.20)	ND (0.51)	ND (0.20)	ND (0.20)
cis-1,2-Dichloroethene	ug/l	5	ND (0.27)	ND (0.31)	ND (0.31)	0.85 J	1.6	0.79 J	0.34 J	ND (0.31)	ND (0.31)
trans-1,2-Dichloroethene	ug/l	5	ND (0.65)	ND (0.36)	ND (0.36)	ND (0.65)	ND (0.36)	ND (0.36)	ND (0.65)	ND (0.36)	ND (0.36)
1,2-Dichloropropane	ug/l	1	ND (0.39)	ND (0.33)	ND (0.33)	ND (0.39)	ND (0.33)	ND (0.33)	ND (0.39)	ND (0.33)	ND (0.33)
cis-1,3-Dichloropropene	ug/l	-	ND (0.21)	ND (0.19)	ND (0.19)	ND (0.21)	ND (0.19)	ND (0.19)	ND (0.21)	ND (0.19)	ND (0.19)
trans-1,3-Dichloropropene	ug/l	-	ND (0.19)	ND (0.26)	ND (0.26)	ND (0.19)	ND (0.26)	ND (0.26)	ND (0.19)	ND (0.26)	ND (0.26)
1,4-Dioxane	ug/l	-	ND (41)	ND (32)	ND (32)	ND (41)	ND (32)	ND (32)	ND (41)	ND (32)	ND (32)
Ethylbenzene	ug/l	5	ND (0.27)	ND (0.20)	ND (0.20)	ND (0.27)	ND (0.20)	ND (0.20)	ND (0.27)	ND (0.20)	ND (0.20)
Freon 113	ug/l	5	ND (0.52)	ND (1.2)	ND (1.2)	ND (0.52)	ND (1.2)	ND (1.2)	ND (0.52)	ND (1.2)	ND (1.2)
2-Hexanone	ug/l	-	ND (1.7)	ND (1.5)	ND (1.5)	ND (1.7)	ND (1.5)	ND (1.5)	ND (1.7)	ND (1.5)	ND (1.5)
Isopropylbenzene	ug/l	5	ND (0.23)	ND (0.16)	ND (0.16)	ND (0.23)	ND (0.16)	ND (0.16)	ND (0.23)	ND (0.16)	ND (0.16)
Methyl Acetate	ug/l	-	ND (1.9)	ND (1.5)	ND (1.5)	ND (1.9)	ND (1.5)	ND (1.5)	ND (1.9)	ND (1.5)	ND (1.5)
Methylcyclohexane	ug/l	-	ND (0.22)	ND (0.78)	ND (0.78)	0.31 J	ND (0.78)	ND (0.78)	ND (0.22)	ND (0.78)	ND (0.78)
Methyl Tert Butyl Ether	ug/l	10	ND (0.24)	ND (0.34)	ND (0.34)	0.24 J	ND (0.34)	ND (0.34)	ND (0.24)	ND (0.34)	ND (0.34)
4-Methyl-2-pentanone(MIBK)	ug/l	-	ND (1.0)	ND (1.2)	ND (1.2)	ND (1.0)	ND (1.2)	ND (1.2)	ND (1.0)	ND (1.2)	ND (1.2)
Methylene chloride	ug/l	5	ND (0.73)	ND (1.0)	ND (1.0)	ND (0.73)	ND (1.0)	ND (1.0)	ND (0.73)	ND (1.0)	ND (1.0)
Styrene	ug/l	5	ND (0.27)	ND (0.27)	ND (0.27)	ND (0.27)	ND (0.27)	ND (0.27)	ND (0.27)	ND (0.27)	ND (0.27)
1,1,2,2-Tetrachloroethane	ug/l	5	ND (0.21)	ND (0.39)	ND (0.39)	ND (0.21)	ND (0.39)	ND (0.39)	ND (0.21)	ND (0.39)	ND (0.39)
Tetrachloroethene	ug/l	5	11.9	11.8	9.7	12.5	11.9	11.6	12.1	11.3	6.6
Toluene	ug/l	5	ND (0.16)	ND (0.23)	ND (0.23)	ND (0.16)	ND (0.23)	ND (0.23)	ND (0.16)	ND (0.23)	ND (0.23)
1,2,3-Trichlorobenzene	ug/l	5	ND (0.23)	ND (0.20)	ND (0.20)	ND (0.23)	ND (0.20)	ND (0.20)	ND (0.23)	ND (0.20)	ND (0.20)
1,2,4-Trichlorobenzene	ug/l	5	ND (0.21)	ND (0.25)	ND (0.25)	ND (0.21)	ND (0.25)	ND (0.25)	ND (0.21)	ND (0.25)	ND (0.25)
1,1,1-Trichloroethane	ug/l	5	ND (0.25)	ND (0.22)	ND (0.22)	ND (0.25)	ND (0.22)	ND (0.22)	ND (0.25)	ND (0.22)	ND (0.22)
1,1,2-Trichloroethane	ug/l	1	ND (0.21)	ND (0.28)	ND (0.28)	ND (0.21)	ND (0.28)	ND (0.28)	ND (0.21)	ND (0.28)	ND (0.28)
Trichloroethene	ug/l	5	0.49 J	0.40 J	0.46 J	7.8	8.8	7.2	3.3	2.6	1.4
Trichlorofluoromethane	ug/l	5	ND (0.43)	ND (0.58)	ND (0.58)	ND (0.43)	ND (0.58)	ND (0.58)	ND (0.43)	ND (0.58)	ND (0.58)
Vinyl chloride	ug/l	2	ND (0.15)	ND (0.33)	ND (0.33)	ND (0.15)	ND (0.33)	ND (0.33)	ND (0.15)	ND (0.33)	ND (0.33)
m,p-Xylene	ug/l	-	ND (0.38)	ND (0.42)	ND (0.42)	ND (0.38)	ND (0.42)	ND (0.42)	ND (0.38)	ND (0.42)	ND (0.42)
o-Xylene	ug/l	5	ND (0.17)	ND (0.21)	ND (0.21)	ND (0.17)	ND (0.21)	ND (0.21)	ND (0.17)	ND (0.21)	ND (0.21)
Xylene (total)	ug/l	5	ND (0.17)	ND (0.21)	ND (0.21)	ND (0.17)	ND (0.21)	ND (0.21)	ND (0.17)	ND (0.21)	ND (0.21)
<b>General Chemistry</b>											
Dissolved Organic Carbon	mg/l	-	-	<1.0	<1.0	-	<1.0	1.1	-	<1.0	1.3
Iron, Ferrous	mg/l	-	-	<0.20	<0.20	-	<0.20	<0.20	-	<0.20	<0.20
Nitrogen, Nitrate	mg/l	10	-	12.2	10.3	-	6.7	8.1	-	9.4	23.2
Nitrogen, Nitrate + Nitrite	mg/l	10	-	12.2	10.3	-	6.7	8.1	-	9.4	23.2
Nitrogen, Nitrite	mg/l	1	-	<0.010	<0.010	-	<0.010	<0.010	-	<0.010	<0.010
Sulfate	mg/l	250	-	95.7	88.3	-	94.4	96.6	-	75	108
Total Organic Carbon	mg/l	-	-	<1.0	1.2	-	1	1	-	<1.0	1.3

**Notes:**

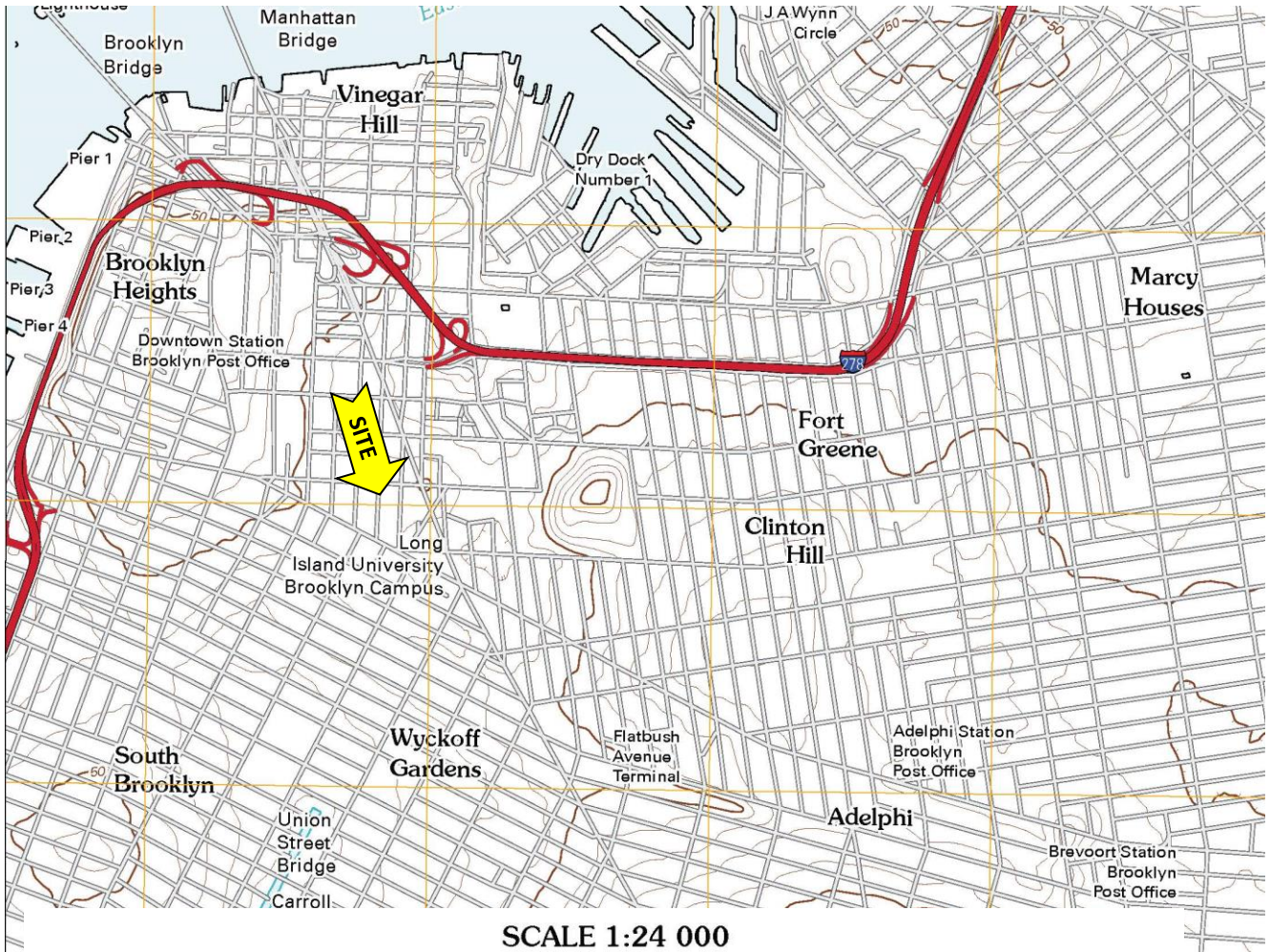
Exceedances of a standard are highlighted in yellow and **bolded**

Detection of a compound is highlighted in blue

ND - not detected

J - estimated concentration

# Figures



Site: *Brooklyn Quadrangle, New York 7.5 Minute series USGS Topographic Map (79287)*  
*Obtained from United States Geological Survey topography compiled 2010*

## FIGURE 1: SITE LOCATION MAP



SITE: 388 Bridge Street  
 Brooklyn, New York





Environmental Management & Consulting

158 West 29th Street, 9th Fl.  
New York, NY 10001

388 Bridge Street  
Brooklyn, NY  
BCP Site # C224134

**Figure 2**

**Site Plan and Chlorinated VOCs in Groundwater**

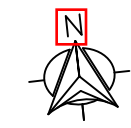
**April 2017**

Project Number  
**10149-001**

**LEGEND**

- Site Boundary
- Active SVE Well
- Groundwater Monitoring Well
- Vacuum Monitoring Point

Saint Joseph High School



Bridge St.

SVE-MW-4	3/31/2016	9/20/2016	3/17/2017
Tetrachloroethene	12.5	11.9	11.6
Trichloroethene	7.8	8.8	7.2
cis-1,2-Dichloroethene	0.85 J	1.6	0.79 J

SVE-MW-6  
(Abandoned)

MP-3

CELLAR LEVEL

SUB CELLAR LEVEL

SVE-MW-3  
(Abandoned)

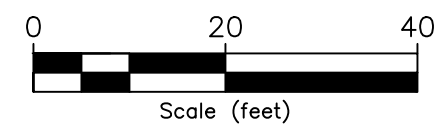
MP-6

SVE-MW-5	3/31/2016	9/20/2016	3/17/2017
Tetrachloroethene	12.1	11.3	6.6
Trichloroethene	3.3	2.6	1.4
cis-1,2-Dichloroethene	0.34 J	ND (0.31)	ND (0.31)

SVE-MW-1	3/31/2016	9/20/2016	3/17/2017
Tetrachloroethene	11.9	11.8	9.7
Trichloroethene	0.49 J	0.40 J	0.46 J
cis-1,2-Dichloroethene	ND (0.27)	ND (0.31)	ND (0.31)

Compound	TOGS
Tetrachloroethene	5
Trichloroethene	5
cis-1,2-Dichloroethene	5

Notes:  
Concentrations in ug/L (ppb)  
Exceedances in Technical and Operational Guidance Series (TOGS) standards highlighted in blue  
J - estimated concentration (detection limit)  
ND - not detected



FILE: P:\10149 - Stahl Real Estate\001 - 388 Bridge St\Figures\Groundwater Sampling\2017 March\Figure 2 - Site Plan with GW Summary.dwg DATE: 4/18/2017

# Appendix A

## Monitoring Well Purge Logs



**Well Purge Log**  
**Project: Stahl Real Estate**  
**Project Location: 388 Bridge St, Brooklyn, NY**

Monitoring Well: SVE-MW-1 Well Volume : 1.52 gal Initial Depth to Water: 17.32 ft-btc  
 Date: 3/17/2017 Total Gallons Purged: 3.0 gal Depth to Product: - ft-btc  
 Time Pump On: 9:45 Average Purge Rate: 324 mL/min Total Depth: 19.65 ft-btc  
 Time of Sample Collection: 10:20 Purge Method: Peristaltic Water Column: 2.33 ft  
 Time Pump Off: 10:30 PID Reading: 0.0 ppm Well Diameter 4 in

Time	Elapsed Time (min.)	DTW (ft-btc)	Well Volume Purged (gal)	Total Volume Purged (gal)	Temp (°C)	pH (s.u.)	ORP (mV)	Cond (mS/cm)	Turbidity (NTUs)	D.O. (mg/L)	TDS (g/l)	Sal (%)	Odor/Color
9:45	0	-	-	-	17.31	6.79	117	1.58	694	4.93	1.01	0.08	Clear, no odor
9:50	0:05	17.43	0.45	0.3	17.35	7.03	97	1.58	414	4.51	1.01	0.08	Clear, no odor
9:55	0:10	17.55	0.45	0.7	17.33	7.09	77	1.59	149	3.7	1.02	0.08	Clear, no odor
10:00	0:15	17.57	0.45	1.2	17.27	6.75	104	1.61	83.7	3.6	1.03	0.08	Clear, no odor
10:05	0:20	17.6	0.45	1.6	17.08	7.02	88	1.62	52.6	3.12	1.04	0.08	Clear, no odor
10:10	0:25	17.55	0.45	2.1	17.00	7.01	82	1.62	41.9	2.96	1.04	0.08	Clear, no odor
10:15	0:30	17.4	0.45	2.5	16.99	7.03	80	1.61	39.8	2.93	1.03	0.08	Clear, no odor
10:20	0:35	17.39	0.45	3.0	16.99	7.02	79	1.61	37.9	2.92	1.04	0.08	Clear, no odor

Allowable Fluctuations: 3% ± 0.1 ± 10 mV 3% 10% if > 5 NTU 10% if > 0.5 mg/L  
 3 rounds if < 5 NTU 3 rounds if < 0.5mg/L

**Notes:**

ppm = parts per million  
 min = minutes  
 DTW = depth to water  
 ft-btc = feet below top of casing  
 gal = gallons  
 T = temperature  
 °C = degrees celsius

s.u.=standard units  
 ORP=oxidation reduction potential  
 mV=millivolts  
 Cond=conductivity  
 mS/cm= milliSiemens per centimeter  
 NTUs=Nephelemetric Turbidity Units  
 mg/L = milligrams per liter

mL/min = milliliters per minute  
 TDS = Total Dissolved Solids  
 g/L = grams per liter  
 Sal= Salinity  
 wc = water column

Well Volume (gal) = 5.8752 \* D<sup>2</sup>\* WC, where D = well diameter (feet)  
 Well diameter

1"	2"	4"
0.041	0.163	0.653

Multiply wc by





# Appendix B

## Laboratory Analytical Data Report

### Technical Report for

**Fleming-Lee Shue, Inc.**

**388 Bridge Street, Brooklyn, NY**

**10149-001-1**

**SGS Accutest Job Number: JC39116**

**Sampling Date: 03/17/17**

#### Report to:

**Fleming-Lee Shue, Inc.**

**adam@flemingleeshue.com**

**ATTN: Adam Conti**

**Total number of pages in report: 22**



Test results contained within this data package meet the requirements of the National Environmental Laboratory Accreditation Program and/or state specific certification programs as applicable.

**Nancy Cole**  
**Laboratory Director**

**Client Service contact: Tammy McCloskey 732-329-0200**

Certifications: NJ(12129), NY(10983), CA, CT, FL, IL, IN, KS, KY, LA, MA, MD, ME, MN, NC, OH VAP (CL0056), AK (UST-103), AZ (AZ0786), PA, RI, SC, TX, UT, VA, WV, DoD ELAP (L-A-B L2248)

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Test results relate only to samples analyzed.

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## Sample Summary

**Fleming-Lee Shue, Inc.**

**Job No: JC39116**

**388 Bridge Street, Brooklyn, NY**  
**Project No: 10149-001-1**

Sample Number	Collected		Received	Matrix		Client Sample ID
	Date	Time By		Code	Type	
JC39116-1	03/17/17	10:20 JG	03/17/17	AQ	Ground Water	SVE-MW-1
JC39116-1F	03/17/17	10:20 JG	03/17/17	AQ	Groundwater Filtered	SVE-MW-1
JC39116-2	03/17/17	11:25 JG	03/17/17	AQ	Ground Water	SVE-MW-4
JC39116-2F	03/17/17	11:25 JG	03/17/17	AQ	Groundwater Filtered	SVE-MW-4
JC39116-3	03/17/17	12:23 JG	03/17/17	AQ	Ground Water	SVE-MW-5
JC39116-3F	03/17/17	12:23 JG	03/17/17	AQ	Groundwater Filtered	SVE-MW-5

## CASE NARRATIVE / CONFORMANCE SUMMARY

**Client:** Fleming-Lee Shue, Inc.

**Job No** JC39116

**Site:** 388 Bridge Street, Brooklyn, NY

**Report Date** 4/3/2017 1:39:09 PM

On 03/17/2017, 6 Sample(s), 0 Trip Blank(s) and 0 Field Blank(s) were received at SGS Accutest at a maximum corrected temperature of 4.9 C. Samples were intact and chemically preserved, unless noted below. A SGS Accutest Job Number of JC39116 was assigned to the project. Laboratory sample ID, client sample ID and dates of sample collection are detailed in the report's Results Summary Section.

Specified quality control criteria were achieved for this job except as noted below. For more information, please refer to the analytical results and QC summary pages.

### Volatiles by GCMS By Method SW846 8260C

**Matrix:** AQ **Batch ID:** V2E5761

- All samples were analyzed within the recommended method holding time.
- Sample(s) JC39116-1MS, JC39116-2DUP were used as the QC samples indicated.
- All method blanks for this batch meet method specific criteria.

### Wet Chemistry By Method EPA 300/SW846 9056A

**Matrix:** AQ **Batch ID:** GP4280

- All samples were prepared within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) JC38824-4DUP, JC38824-4MS were used as the QC samples for Sulfate.

### Wet Chemistry By Method EPA 353.2/LACHAT

**Matrix:** AQ **Batch ID:** GP3985

- All samples were prepared within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) JC38896-2AMS, JC38896-2ADUP were used as the QC samples for Nitrogen, Nitrate + Nitrite.
- RPD(s) for Duplicate for Nitrogen, Nitrate + Nitrite are outside control limits for sample GP3985-D1. RPD acceptable due to low duplicate and sample concentrations.

### Wet Chemistry By Method EPA353.2/SM4500NO2B

**Matrix:** AQ **Batch ID:** R162108

- The data for EPA353.2/SM4500NO2B meets quality control requirements.
- JC39116-1 for Nitrogen, Nitrate: Calculated as: (Nitrogen, Nitrate + Nitrite) - (Nitrogen, Nitrite)

**Matrix:** AQ **Batch ID:** R162109

- The data for EPA353.2/SM4500NO2B meets quality control requirements.
- JC39116-2 for Nitrogen, Nitrate: Calculated as: (Nitrogen, Nitrate + Nitrite) - (Nitrogen, Nitrite)

**Matrix:** AQ **Batch ID:** R162110

- The data for EPA353.2/SM4500NO2B meets quality control requirements.
- JC39116-3 for Nitrogen, Nitrate: Calculated as: (Nitrogen, Nitrate + Nitrite) - (Nitrogen, Nitrite)

### Wet Chemistry By Method SM3500FE B-11

**Matrix:** AQ                      **Batch ID:** GN60972

- All method blanks for this batch meet method specific criteria.
- Sample(s) JC39116-1MS, JC39116-1MSD, JC39116-1DUP were used as the QC samples for Iron, Ferrous.
- RPD(s) for Duplicate for Iron, Ferrous are outside control limits for sample GN60972-D1. RPD acceptable due to low duplicate and sample concentrations.
- JC39116-2 for Iron, Ferrous: Field analysis required. Received out of hold time and analyzed by request.
- JC39116-3 for Iron, Ferrous: Field analysis required. Received out of hold time and analyzed by request.
- JC39116-1 for Iron, Ferrous: Field analysis required. Received out of hold time and analyzed by request.

### Wet Chemistry By Method SM4500NO2 B-11

**Matrix:** AQ                      **Batch ID:** GN60968

- All samples were analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) JC39116-1DUP, JC39116-1MS were used as the QC samples for Nitrogen, Nitrite.

### Wet Chemistry By Method SM5310 B-11

**Matrix:** AQ                      **Batch ID:** GP4167

- All samples were prepared within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) JC39013-1AMS, JC39013-1AMSD were used as the QC samples for Total Organic Carbon.

**Matrix:** AQ                      **Batch ID:** GP4214

- All samples were prepared within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) JC39116-2FMS, JC39116-2FMSD were used as the QC samples for Dissolved Organic Carbon.

SGS Accutest certifies that data reported for samples received, listed on the associated custody chain or analytical task order, were produced to specifications meeting the Quality System precision, accuracy and completeness objectives except as noted.

Estimated non-standard method measurement uncertainty data is available on request, based on quality control bias and implicit for standard methods. Acceptable uncertainty requires tested parameter quality control data to meet method criteria.

SGS Accutest is not responsible for data quality assumptions if partial reports are used and recommends that this report be used in its entirety. Data release is authorized by SGS Accutest indicated via signature on the report cover

# Summary of Hits

**Job Number:** JC39116  
**Account:** Fleming-Lee Shue, Inc.  
**Project:** 388 Bridge Street, Brooklyn, NY  
**Collected:** 03/17/17



Lab Sample ID	Client Sample ID	Result/ Qual	RL	MDL	Units	Method
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JC39116-1 SVE-MW-1

Chloroform	1.3	1.0	0.23	ug/l	SW846 8260C
Tetrachloroethene	9.7	1.0	0.23	ug/l	SW846 8260C
Trichloroethene	0.46 J	1.0	0.26	ug/l	SW846 8260C
Nitrogen, Nitrate <sup>a</sup>	10.3	0.21		mg/l	EPA353.2/SM4500NO2B
Nitrogen, Nitrate + Nitrite	10.3	0.20		mg/l	EPA 353.2/LACHAT
Sulfate	88.3	10		mg/l	EPA 300/SW846 9056A
Total Organic Carbon	1.2	1.0		mg/l	SM5310 B-11

JC39116-1F SVE-MW-1

No hits reported in this sample.

JC39116-2 SVE-MW-4

Chloroform	0.93 J	1.0	0.23	ug/l	SW846 8260C
cis-1,2-Dichloroethene	0.79 J	1.0	0.31	ug/l	SW846 8260C
Tetrachloroethene	11.6	1.0	0.23	ug/l	SW846 8260C
Trichloroethene	7.2	1.0	0.26	ug/l	SW846 8260C
Nitrogen, Nitrate <sup>a</sup>	8.1	0.21		mg/l	EPA353.2/SM4500NO2B
Nitrogen, Nitrate + Nitrite	8.1	0.20		mg/l	EPA 353.2/LACHAT
Sulfate	96.6	10		mg/l	EPA 300/SW846 9056A
Total Organic Carbon	1.0	1.0		mg/l	SM5310 B-11

JC39116-2F SVE-MW-4

Dissolved Organic Carbon	1.1	1.0		mg/l	SM5310 B-11
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JC39116-3 SVE-MW-5

Chloroform	0.71 J	1.0	0.23	ug/l	SW846 8260C
Tetrachloroethene	6.6	1.0	0.23	ug/l	SW846 8260C
Trichloroethene	1.4	1.0	0.26	ug/l	SW846 8260C
Nitrogen, Nitrate <sup>a</sup>	23.2	1.0		mg/l	EPA353.2/SM4500NO2B
Nitrogen, Nitrate + Nitrite	23.2	1.0		mg/l	EPA 353.2/LACHAT
Sulfate	108	10		mg/l	EPA 300/SW846 9056A
Total Organic Carbon	1.3	1.0		mg/l	SM5310 B-11

JC39116-3F SVE-MW-5

Dissolved Organic Carbon	1.3	1.0		mg/l	SM5310 B-11
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(a) Calculated as: (Nitrogen, Nitrate + Nitrite) - (Nitrogen, Nitrite)

**Sample Results**

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**Report of Analysis**

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## Report of Analysis

Client Sample ID: SVE-MW-1	Date Sampled: 03/17/17
Lab Sample ID: JC39116-1	Date Received: 03/17/17
Matrix: AQ - Ground Water	Percent Solids: n/a
Method: SW846 8260C	
Project: 388 Bridge Street, Brooklyn, NY	

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	2E131579.D	1	03/22/17	JP	n/a	n/a	V2E5761
Run #2							

Run #	Purge Volume
Run #1	5.0 ml
Run #2	

## VOA TCL List (SOM0 1.1)

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	10	5.0	ug/l	
71-43-2	Benzene	ND	0.50	0.14	ug/l	
74-97-5	Bromochloromethane	ND	1.0	0.46	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.55	ug/l	
75-25-2	Bromoform	ND	1.0	0.34	ug/l	
74-83-9	Bromomethane	ND	2.0	0.46	ug/l	
78-93-3	2-Butanone (MEK)	ND	10	1.9	ug/l	
75-15-0	Carbon disulfide	ND	2.0	0.33	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.54	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.17	ug/l	
75-00-3	Chloroethane	ND	1.0	0.44	ug/l	
67-66-3	Chloroform	1.3	1.0	0.23	ug/l	
74-87-3	Chloromethane	ND	1.0	0.96	ug/l	
110-82-7	Cyclohexane	ND	5.0	0.73	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	2.0	0.69	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.23	ug/l	
106-93-4	1,2-Dibromoethane	ND	1.0	0.22	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.23	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.19	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.21	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	0.70	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.21	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.39	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	0.20	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	0.31	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.36	ug/l	
78-87-5	1,2-Dichloropropane	ND	1.0	0.33	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	0.19	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	0.26	ug/l	
123-91-1	1,4-Dioxane	ND	130	32	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.20	ug/l	
76-13-1	Freon 113	ND	5.0	1.2	ug/l	

ND = Not detected

MDL = Method Detection Limit

J = Indicates an estimated value

RL = Reporting Limit

B = Indicates analyte found in associated method blank

E = Indicates value exceeds calibration range

N = Indicates presumptive evidence of a compound

### Report of Analysis

<b>Client Sample ID:</b> SVE-MW-1	
<b>Lab Sample ID:</b> JC39116-1	<b>Date Sampled:</b> 03/17/17
<b>Matrix:</b> AQ - Ground Water	<b>Date Received:</b> 03/17/17
<b>Method:</b> SW846 8260C	<b>Percent Solids:</b> n/a
<b>Project:</b> 388 Bridge Street, Brooklyn, NY	

VOA TCL List (SOM0 1.1)

CAS No.	Compound	Result	RL	MDL	Units	Q
591-78-6	2-Hexanone	ND	5.0	1.5	ug/l	
98-82-8	Isopropylbenzene	ND	1.0	0.16	ug/l	
79-20-9	Methyl Acetate	ND	5.0	1.5	ug/l	
108-87-2	Methylcyclohexane	ND	5.0	0.78	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.34	ug/l	
108-10-1	4-Methyl-2-pentanone(MIBK)	ND	5.0	1.2	ug/l	
75-09-2	Methylene chloride	ND	2.0	1.0	ug/l	
100-42-5	Styrene	ND	1.0	0.27	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	0.39	ug/l	
127-18-4	Tetrachloroethene	9.7	1.0	0.23	ug/l	
108-88-3	Toluene	ND	1.0	0.23	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	1.0	0.50	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	1.0	0.50	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.22	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.28	ug/l	
79-01-6	Trichloroethene	0.46	1.0	0.26	ug/l	J
75-69-4	Trichlorofluoromethane	ND	2.0	0.58	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.33	ug/l	
	m,p-Xylene	ND	1.0	0.42	ug/l	
95-47-6	o-Xylene	ND	1.0	0.21	ug/l	
1330-20-7	Xylene (total)	ND	1.0	0.21	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	101%		76-120%
17060-07-0	1,2-Dichloroethane-D4	100%		73-122%
2037-26-5	Toluene-D8	98%		84-119%
460-00-4	4-Bromofluorobenzene	102%		78-117%

ND = Not detected      MDL = Method Detection Limit      J = Indicates an estimated value  
 RL = Reporting Limit      B = Indicates analyte found in associated method blank  
 E = Indicates value exceeds calibration range      N = Indicates presumptive evidence of a compound

## Report of Analysis

<b>Client Sample ID:</b> SVE-MW-1	<b>Date Sampled:</b> 03/17/17
<b>Lab Sample ID:</b> JC39116-1	<b>Date Received:</b> 03/17/17
<b>Matrix:</b> AQ - Ground Water	<b>Percent Solids:</b> n/a
<b>Project:</b> 388 Bridge Street, Brooklyn, NY	

### General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Iron, Ferrous <sup>a</sup>	< 0.20	0.20	mg/l	1	03/18/17 14:54	YR	SM3500FE B-11
Nitrogen, Nitrate <sup>b</sup>	10.3	0.21	mg/l	1	03/19/17 16:09	YZ	EPA353.2/SM4500NO2B
Nitrogen, Nitrate + Nitrite	10.3	0.20	mg/l	2	03/19/17 16:09	YZ	EPA 353.2/LACHAT
Nitrogen, Nitrite	< 0.010	0.010	mg/l	1	03/18/17 13:16	YR	SM4500NO2 B-11
Sulfate	88.3	10	mg/l	1	03/31/17 21:38	TG	EPA 300/SW846 9056A
Total Organic Carbon	1.2	1.0	mg/l	1	03/27/17 18:39	CD	SM5310 B-11

(a) Field analysis required. Received out of hold time and analyzed by request.

(b) Calculated as: (Nitrogen, Nitrate + Nitrite) - (Nitrogen, Nitrite)

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RL = Reporting Limit



## Report of Analysis

<b>Client Sample ID:</b> SVE-MW-1	<b>Date Sampled:</b> 03/17/17
<b>Lab Sample ID:</b> JC39116-1F	<b>Date Received:</b> 03/17/17
<b>Matrix:</b> AQ - Groundwater Filtered	<b>Percent Solids:</b> n/a
<b>Project:</b> 388 Bridge Street, Brooklyn, NY	

### General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Dissolved Organic Carbon	< 1.0	1.0	mg/l	1	03/29/17 13:51	CD	SM5310 B-11

RL = Reporting Limit

4.2  
4

## Report of Analysis

Client Sample ID: SVE-MW-4	Date Sampled: 03/17/17
Lab Sample ID: JC39116-2	Date Received: 03/17/17
Matrix: AQ - Ground Water	Percent Solids: n/a
Method: SW846 8260C	
Project: 388 Bridge Street, Brooklyn, NY	

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	2E131580.D	1	03/22/17	JP	n/a	n/a	V2E5761
Run #2							

Run #	Purge Volume
Run #1	5.0 ml
Run #2	

## VOA TCL List (SOM0 1.1)

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	10	5.0	ug/l	
71-43-2	Benzene	ND	0.50	0.14	ug/l	
74-97-5	Bromochloromethane	ND	1.0	0.46	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.55	ug/l	
75-25-2	Bromoform	ND	1.0	0.34	ug/l	
74-83-9	Bromomethane	ND	2.0	0.46	ug/l	
78-93-3	2-Butanone (MEK)	ND	10	1.9	ug/l	
75-15-0	Carbon disulfide	ND	2.0	0.33	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.54	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.17	ug/l	
75-00-3	Chloroethane	ND	1.0	0.44	ug/l	
67-66-3	Chloroform	0.93	1.0	0.23	ug/l	J
74-87-3	Chloromethane	ND	1.0	0.96	ug/l	
110-82-7	Cyclohexane	ND	5.0	0.73	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	2.0	0.69	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.23	ug/l	
106-93-4	1,2-Dibromoethane	ND	1.0	0.22	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.23	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.19	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.21	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	0.70	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.21	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.39	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	0.20	ug/l	
156-59-2	cis-1,2-Dichloroethene	0.79	1.0	0.31	ug/l	J
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.36	ug/l	
78-87-5	1,2-Dichloropropane	ND	1.0	0.33	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	0.19	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	0.26	ug/l	
123-91-1	1,4-Dioxane	ND	130	32	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.20	ug/l	
76-13-1	Freon 113	ND	5.0	1.2	ug/l	

ND = Not detected

MDL = Method Detection Limit

J = Indicates an estimated value

RL = Reporting Limit

B = Indicates analyte found in associated method blank

E = Indicates value exceeds calibration range

N = Indicates presumptive evidence of a compound

## Report of Analysis

<b>Client Sample ID:</b> SVE-MW-4 <b>Lab Sample ID:</b> JC39116-2 <b>Matrix:</b> AQ - Ground Water <b>Method:</b> SW846 8260C <b>Project:</b> 388 Bridge Street, Brooklyn, NY	<b>Date Sampled:</b> 03/17/17 <b>Date Received:</b> 03/17/17 <b>Percent Solids:</b> n/a
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**VOA TCL List (SOM0 1.1)**

CAS No.	Compound	Result	RL	MDL	Units	Q
591-78-6	2-Hexanone	ND	5.0	1.5	ug/l	
98-82-8	Isopropylbenzene	ND	1.0	0.16	ug/l	
79-20-9	Methyl Acetate	ND	5.0	1.5	ug/l	
108-87-2	Methylcyclohexane	ND	5.0	0.78	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.34	ug/l	
108-10-1	4-Methyl-2-pentanone(MIBK)	ND	5.0	1.2	ug/l	
75-09-2	Methylene chloride	ND	2.0	1.0	ug/l	
100-42-5	Styrene	ND	1.0	0.27	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	0.39	ug/l	
127-18-4	Tetrachloroethene	11.6	1.0	0.23	ug/l	
108-88-3	Toluene	ND	1.0	0.23	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	1.0	0.50	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	1.0	0.50	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.22	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.28	ug/l	
79-01-6	Trichloroethene	7.2	1.0	0.26	ug/l	
75-69-4	Trichlorofluoromethane	ND	2.0	0.58	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.33	ug/l	
	m,p-Xylene	ND	1.0	0.42	ug/l	
95-47-6	o-Xylene	ND	1.0	0.21	ug/l	
1330-20-7	Xylene (total)	ND	1.0	0.21	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	102%		76-120%
17060-07-0	1,2-Dichloroethane-D4	101%		73-122%
2037-26-5	Toluene-D8	100%		84-119%
460-00-4	4-Bromofluorobenzene	104%		78-117%

ND = Not detected      MDL = Method Detection Limit      J = Indicates an estimated value  
 RL = Reporting Limit      B = Indicates analyte found in associated method blank  
 E = Indicates value exceeds calibration range      N = Indicates presumptive evidence of a compound

4.3  
4

## Report of Analysis

<b>Client Sample ID:</b> SVE-MW-4 <b>Lab Sample ID:</b> JC39116-2 <b>Matrix:</b> AQ - Ground Water <b>Project:</b> 388 Bridge Street, Brooklyn, NY	<b>Date Sampled:</b> 03/17/17 <b>Date Received:</b> 03/17/17 <b>Percent Solids:</b> n/a
---	---

### General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Iron, Ferrous <sup>a</sup>	< 0.20	0.20	mg/l	1	03/18/17 14:54	YR	SM3500FE B-11
Nitrogen, Nitrate <sup>b</sup>	8.1	0.21	mg/l	1	03/19/17 16:10	YZ	EPA353.2/SM4500NO2B
Nitrogen, Nitrate + Nitrite	8.1	0.20	mg/l	2	03/19/17 16:10	YZ	EPA 353.2/LACHAT
Nitrogen, Nitrite	< 0.010	0.010	mg/l	1	03/18/17 13:16	YR	SM4500NO2 B-11
Sulfate	96.6	10	mg/l	1	03/31/17 22:02	TG	EPA 300/SW846 9056A
Total Organic Carbon	1.0	1.0	mg/l	1	03/27/17 18:50	CD	SM5310 B-11

(a) Field analysis required. Received out of hold time and analyzed by request.

(b) Calculated as: (Nitrogen, Nitrate + Nitrite) - (Nitrogen, Nitrite)

---

RL = Reporting Limit

4.3  
4

## Report of Analysis

<b>Client Sample ID:</b> SVE-MW-4	<b>Date Sampled:</b> 03/17/17
<b>Lab Sample ID:</b> JC39116-2F	<b>Date Received:</b> 03/17/17
<b>Matrix:</b> AQ - Groundwater Filtered	<b>Percent Solids:</b> n/a
<b>Project:</b> 388 Bridge Street, Brooklyn, NY	

### General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Dissolved Organic Carbon	1.1	1.0	mg/l	1	03/29/17 14:23	CD	SM5310 B-11

RL = Reporting Limit

4.4  
4

## Report of Analysis

Client Sample ID: SVE-MW-5	Date Sampled: 03/17/17
Lab Sample ID: JC39116-3	Date Received: 03/17/17
Matrix: AQ - Ground Water	Percent Solids: n/a
Method: SW846 8260C	
Project: 388 Bridge Street, Brooklyn, NY	

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	2E131593.D	1	03/22/17	JP	n/a	n/a	V2E5761
Run #2							

Run #	Purge Volume
Run #1	5.0 ml
Run #2	

## VOA TCL List (SOM0 1.1)

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	10	5.0	ug/l	
71-43-2	Benzene	ND	0.50	0.14	ug/l	
74-97-5	Bromochloromethane	ND	1.0	0.46	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.55	ug/l	
75-25-2	Bromoform	ND	1.0	0.34	ug/l	
74-83-9	Bromomethane	ND	2.0	0.46	ug/l	
78-93-3	2-Butanone (MEK)	ND	10	1.9	ug/l	
75-15-0	Carbon disulfide	ND	2.0	0.33	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.54	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.17	ug/l	
75-00-3	Chloroethane	ND	1.0	0.44	ug/l	
67-66-3	Chloroform	0.71	1.0	0.23	ug/l	J
74-87-3	Chloromethane	ND	1.0	0.96	ug/l	
110-82-7	Cyclohexane	ND	5.0	0.73	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	2.0	0.69	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.23	ug/l	
106-93-4	1,2-Dibromoethane	ND	1.0	0.22	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.23	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.19	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.21	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	0.70	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.21	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.39	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	0.20	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	0.31	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.36	ug/l	
78-87-5	1,2-Dichloropropane	ND	1.0	0.33	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	0.19	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	0.26	ug/l	
123-91-1	1,4-Dioxane	ND	130	32	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.20	ug/l	
76-13-1	Freon 113	ND	5.0	1.2	ug/l	

ND = Not detected MDL = Method Detection Limit

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound

## Report of Analysis

<b>Client Sample ID:</b> SVE-MW-5 <b>Lab Sample ID:</b> JC39116-3 <b>Matrix:</b> AQ - Ground Water <b>Method:</b> SW846 8260C <b>Project:</b> 388 Bridge Street, Brooklyn, NY	<b>Date Sampled:</b> 03/17/17 <b>Date Received:</b> 03/17/17 <b>Percent Solids:</b> n/a
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VOA TCL List (SOM0 1.1)

CAS No.	Compound	Result	RL	MDL	Units	Q
591-78-6	2-Hexanone	ND	5.0	1.5	ug/l	
98-82-8	Isopropylbenzene	ND	1.0	0.16	ug/l	
79-20-9	Methyl Acetate	ND	5.0	1.5	ug/l	
108-87-2	Methylcyclohexane	ND	5.0	0.78	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.34	ug/l	
108-10-1	4-Methyl-2-pentanone(MIBK)	ND	5.0	1.2	ug/l	
75-09-2	Methylene chloride	ND	2.0	1.0	ug/l	
100-42-5	Styrene	ND	1.0	0.27	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	0.39	ug/l	
127-18-4	Tetrachloroethene	6.6	1.0	0.23	ug/l	
108-88-3	Toluene	ND	1.0	0.23	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	1.0	0.50	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	1.0	0.50	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.22	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.28	ug/l	
79-01-6	Trichloroethene	1.4	1.0	0.26	ug/l	
75-69-4	Trichlorofluoromethane	ND	2.0	0.58	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.33	ug/l	
	m,p-Xylene	ND	1.0	0.42	ug/l	
95-47-6	o-Xylene	ND	1.0	0.21	ug/l	
1330-20-7	Xylene (total)	ND	1.0	0.21	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	102%		76-120%
17060-07-0	1,2-Dichloroethane-D4	101%		73-122%
2037-26-5	Toluene-D8	98%		84-119%
460-00-4	4-Bromofluorobenzene	101%		78-117%

ND = Not detected      MDL = Method Detection Limit      J = Indicates an estimated value  
 RL = Reporting Limit      B = Indicates analyte found in associated method blank  
 E = Indicates value exceeds calibration range      N = Indicates presumptive evidence of a compound

4.5  
4

## Report of Analysis

<b>Client Sample ID:</b> SVE-MW-5 <b>Lab Sample ID:</b> JC39116-3 <b>Matrix:</b> AQ - Ground Water <b>Project:</b> 388 Bridge Street, Brooklyn, NY	<b>Date Sampled:</b> 03/17/17 <b>Date Received:</b> 03/17/17 <b>Percent Solids:</b> n/a
---	---

### General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Iron, Ferrous <sup>a</sup>	< 0.20	0.20	mg/l	1	03/18/17 14:54	YR	SM3500FE B-11
Nitrogen, Nitrate <sup>b</sup>	23.2	1.0	mg/l	1	03/19/17 16:12	YZ	EPA353.2/SM4500NO2B
Nitrogen, Nitrate + Nitrite	23.2	1.0	mg/l	10	03/19/17 16:12	YZ	EPA 353.2/LACHAT
Nitrogen, Nitrite	< 0.010	0.010	mg/l	1	03/18/17 13:16	YR	SM4500NO2 B-11
Sulfate	108	10	mg/l	1	03/31/17 22:26	TG	EPA 300/SW846 9056A
Total Organic Carbon	1.3	1.0	mg/l	1	03/27/17 19:02	CD	SM5310 B-11

(a) Field analysis required. Received out of hold time and analyzed by request.

(b) Calculated as: (Nitrogen, Nitrate + Nitrite) - (Nitrogen, Nitrite)

---

RL = Reporting Limit

4.5  
4



## Report of Analysis

<b>Client Sample ID:</b> SVE-MW-5	<b>Date Sampled:</b> 03/17/17
<b>Lab Sample ID:</b> JC39116-3F	<b>Date Received:</b> 03/17/17
<b>Matrix:</b> AQ - Groundwater Filtered	<b>Percent Solids:</b> n/a
<b>Project:</b> 388 Bridge Street, Brooklyn, NY	

### General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Dissolved Organic Carbon	1.3	1.0	mg/l	1	03/29/17 15:27	CD	SM5310 B-11

RL = Reporting Limit

4.6  
4

**Misc. Forms**

**Custody Documents and Other Forms**

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**Includes the following where applicable:**

- Chain of Custody



ACCUTEST

CHAIN OF CUSTODY

SGS Accutest - Dayton
2235 Route 130, Dayton, NJ 08810
TEL: 732-329-0200 FAX: 732-329-3499/3480
www.accutest.com

Form containing Client/Reporting Information, Project Information, Requested Analysis, Matrix Codes, Collection table, Turnaround Time, and Sample Custody sections.

5.1 5

SM088-01C Rev. Date: 9/13/16

## SGS Accutest Sample Receipt Summary

Job Number: JC39116

Client: \_\_\_\_\_

Project: \_\_\_\_\_

Date / Time Received: 3/17/2017 5:10:00 PM

Delivery Method: \_\_\_\_\_

Airbill #'s: \_\_\_\_\_

Cooler Temps (Raw Measured) °C: Cooler 1: (3.5);

Cooler Temps (Corrected) °C: Cooler 1: (4.9);

**Cooler Security**

Y or N

Y or N

- |                           |                                     |                          |                       |                                     |                          |
|---------------------------|-------------------------------------|--------------------------|-----------------------|-------------------------------------|--------------------------|
| 1. Custody Seals Present: | <input checked="" type="checkbox"/> | <input type="checkbox"/> | 3. COC Present:       | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| 2. Custody Seals Intact:  | <input checked="" type="checkbox"/> | <input type="checkbox"/> | 4. Smpl Dates/Time OK | <input checked="" type="checkbox"/> | <input type="checkbox"/> |

**Cooler Temperature**

Y or N

- |                              |                                     |                          |
|------------------------------|-------------------------------------|--------------------------|
| 1. Temp criteria achieved:   | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| 2. Cooler temp verification: | IR Gun                              |                          |
| 3. Cooler media:             | Ice (Bag)                           |                          |
| 4. No. Coolers:              | 1                                   |                          |

**Quality Control Preservation**

Y or N

N/A

- |                                 |                                     |                                     |                          |
|---------------------------------|-------------------------------------|-------------------------------------|--------------------------|
| 1. Trip Blank present / cooler: | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| 2. Trip Blank listed on COC:    | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| 3. Samples preserved properly:  | <input checked="" type="checkbox"/> | <input type="checkbox"/>            |                          |
| 4. VOCs headspace free:         | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/> |

**Sample Integrity - Documentation**

Y or N

- |  |                                     |                          |
|--|-------------------------------------|--------------------------|
| 1. Sample labels present on bottles:   | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| 2. Container labeling complete:        | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| 3. Sample container label / COC agree: | <input checked="" type="checkbox"/> | <input type="checkbox"/> |

**Sample Integrity - Condition**

Y or N

- |                                  |                                     |                          |
|----------------------------------|-------------------------------------|--------------------------|
| 1. Sample recvd within HT:       | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| 2. All containers accounted for: | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| 3. Condition of sample:          | Intact                              |                          |

**Sample Integrity - Instructions**

Y or N

N/A

- |   |                                     |                                     |                                     |
|---|-------------------------------------|-------------------------------------|-------------------------------------|
| 1. Analysis requested is clear:           | <input checked="" type="checkbox"/> | <input type="checkbox"/>            |                                     |
| 2. Bottles received for unspecified tests | <input type="checkbox"/>            | <input checked="" type="checkbox"/> |                                     |
| 3. Sufficient volume recvd for analysis:  | <input checked="" type="checkbox"/> | <input type="checkbox"/>            |                                     |
| 4. Compositing instructions clear:        | <input type="checkbox"/>            | <input type="checkbox"/>            | <input checked="" type="checkbox"/> |
| 5. Filtering instructions clear:          | <input type="checkbox"/>            | <input type="checkbox"/>            | <input checked="" type="checkbox"/> |

Comments

SM089-02  
Rev. Date 12/1/16

JC39116: Chain of Custody

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