



Ecosystems Strategies, Inc.

24 Davis Avenue, Poughkeepsie, NY 12603

phone 845.452.1658 | fax 845.485.7083 | ecosystemsstrategies.com

January 23, 2013

Ms. Jamie Verrigni
Project Manager
New York State Department of Environmental Conservation
Division of Environmental Remediation
625 Broadway, 11th Floor
Albany, New York 12233-7016

via e-mail: jlverrig@gw.dec.state.ny.us

RE: Implementation of Corrective Measures Work Plan for the Greyston Bakery Site,
located at 104 Alexander Street, City of Yonkers, Westchester County, New York
VCP ID: V00361
ESI File: GY99143.72

Dear Ms. Verrigni:

This Letter Report documents the corrective measures implemented at the Greyston Bakery Site (hereafter referred to as the "Site"), including a summary of detected results for new monitoring well MW-3R, in compliance with the Corrective Measure Work Plan (CMWP), dated October 18, 2013. Complete tabulated laboratory data for all monitoring wells will be provided in the revised Periodic Review Report (PRR).

Ecosystems Strategies, Inc. (ESI) prepared the CMWP on behalf of Greyston Foundation (the Volunteer) to address NYSDEC concerns regarding areas of non-compliance related to the groundwater monitoring network at the Site (letter from Jamie Verrigni, dated September 18, 2013). The areas of non-compliance included the proper decommissioning of a 1-inch monitoring point and MW-3, located upgradient in the northeastern portion of the Site, and the installation, development and sampling of new monitoring well MW-3R.

The CMWP identified the presence of two monitoring wells, MW-3 and an unknown 1-inch PVC pipe. Upon further observation it was determined that MW-3 and 1-inch PVC pipe were the same well. A Selected Site Features Map (Attachment A) displays the location of all monitoring wells at the Site.

DECOMMISSIONING OF MONITORING WELL MW-3

Well decommissioning activities were conducted on December 3, 2013 by ESI and Soil Testing Inc. Monitoring Well MW-3 was opened and screened with a photo-ionization detector (PID). A PID reading of 40 parts per million (ppm) was documented at MW-3. Black dense non-aqueous phase liquid (DNAPL) was observed on the sides and inside MW-3 at approximately 10 feet below surface grade (bsg). NYSDEC was notified of the presence of DNAPL during fieldwork activities. NYSDEC and ESI jointly determined that the sampling of the DNAPL was not necessary at the time.



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NYSDEC VCP Site ID: V00361

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The well casing of MW-3, located 3 feet southeast from 1-inch PVC, was observed to be noticeably lose from the ground. The well casing and the 1-inch PVC pipe were inspected to determine the extent of the damage to MW-3. The well casing was likely displaced by the operation of heavy equipment over the well with potential damage to the integrity of MW-3. Monitoring well MW-3 was decommissioned following procedures outlined in NYSDEC's *CP-43: Groundwater Monitoring Well Decommissioning Policy* (*CP-43*). The 1-inch PVC pipe was removed a minimum of 5 feet bsg and the ground surface was restored to pre-existing conditions (3 to 4-inch stones). Photographs of well decommissioning activities area presented in Attachment B.

INSTALLATION, DEVELOPMENT AND SAMPLING OF MONITORING WELL MW-3R

Monitoring well MW-3R was installed by Soil Testing Inc. on December 3, 2013. MW-3R was extended to a total depth of 12 feet bsg with a well diameter of 2 inches and a screening interval of 2 to 12 feet bsg (2 feet of screen above the groundwater level). A monitoring well construction log and diagram is provided as Attachment C.

ESI personnel developed monitoring well MW-3R on December 12, 2013. A PID reading of 47 ppm and a depth to groundwater (from the top of the PVC) of 4.25 feet bsg were recorded. Approximately 15 gallons of purged groundwater were generated and containerized for proper disposal during well development activities. Strong petroleum odors, significant amount of suspended solids and dark light non-aqueous phase liquid (LNAPL) foam were observed in the purged groundwater.

ESI personnel sampled monitoring well MW-3R on December 23, 2013. No PID reading was recorded for this sampling event. The depth to groundwater (from the top of the PVC) was recorded as 4.40 feet bsg. Approximately 2 to 3 gallons of purged groundwater were generated and containerized for proper disposal during well sampling activities. Mild petroleum odors and amber LANPL droplets were observed in the purged groundwater.

A groundwater sample (MW-3R) was collected and analyzed for volatile organic compounds (VOCs, USEPA Method 8260) and polycyclic aromatic hydrocarbons (PAHs, USEPA Method 8270). A trip blank sample (TB-12/23/2013) was collected and analyzed for VOCs in accordance with the Site Management Plan (SMP). Samples were submitted to York Analytical Laboratories, Inc. (NYSDOH ELAP #10854) on December 26, 2013.

LABORATORY RESULTS

A summary of detected results for VOCs and PAHs for MW-3 and MW-3R is included as Tables 1 and 2, Attachment D. Six VOCs (1,2,4-trimethylbenzene, benzene, ethylbenzene, isopropylbenzene, naphthalene, and p&m xylenes) were detected at concentrations significantly higher than previous sampling events. Two PAHs (acenaphthene and phenanthrene) were detected at concentrations significantly higher than previous sampling events. A detailed discussion of the laboratory results for MW-3R will be provided in the revised PRR. Laboratory results for samples MW-3R and TB-12/23/2013 are provided as Attachment E.



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Subsequent to receiving approval from NYSDEC on the implementation of the CMWP, the revised PRR, incorporating all activities in regard to the CMWP, will be resubmitted to NYSDEC within 14 days.

Should you have any questions please do not hesitate to contact us.

Sincerely,

ECOSYSTEMS STRATEGIES, INC.

A handwritten signature in black ink that reads "Paul H. Ciminello".

Paul H. Ciminello
President

PHC/RAM:ndc

cc: Rosaura Andújar-McNeil (ESI)
Michael Brady (Greyston Bakery)
James Candiloro (NYSDEC)
Shelley Weintraub (Greyston Foundation)

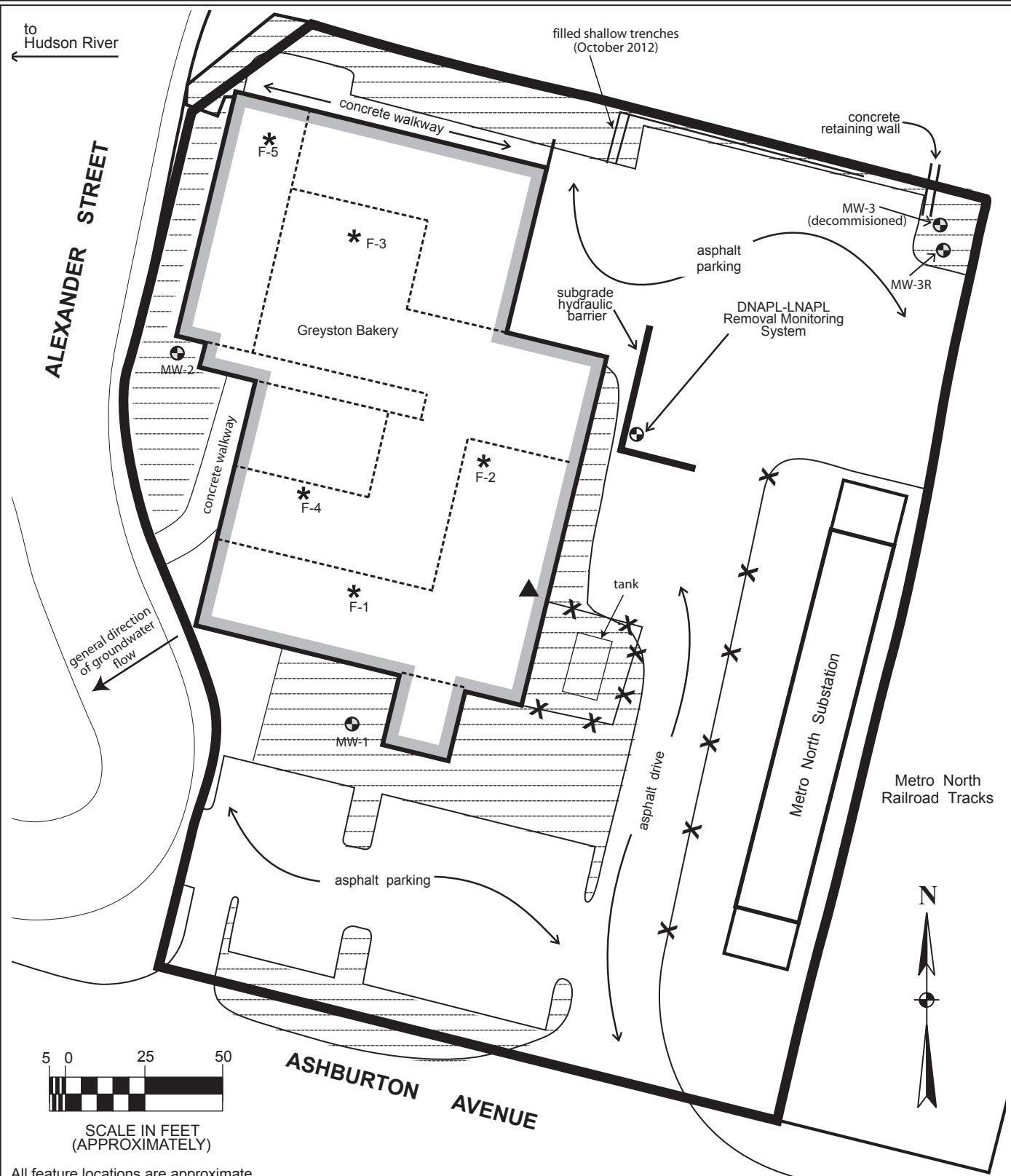
Attachments:

- A Selected Site Features Map
- B Photographs
- C Monitoring Well Construction Log
- D Summary of Detected Results – VOCs and PAHs
- E Laboratory Results



ATTACHMENT A

Selected Site Features Map



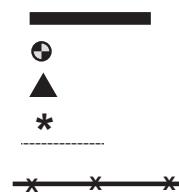
All feature locations are approximate.

Map based on "Survey" by Roland K. Link, P.L.L.C. (June 17, 1999); and "Site Plan" by Cybul & Cybul A.I.A. Architects.

Selected Site Features Map

104 Alexander Street
(formerly known as 104 Ashburton Ave.)
City of Yonkers
Westchester County, New York

Legend:
 subject property border
 monitoring wells
 VES monitoring point
 VES roof discharge point
 area of GCL barrier
 chain link fence



ESI File: GY99143.72

January 2014

Scale: 1" = 45' (approximately)

Attachment A

ATTACHMENT B

Photographs

PHOTOGRAPHS



1. One-inch PVC pipe (MW-3), located in the northeastern corner of the Site, prior to decommissioning on December 3, 2013.



2. Detached well casing of monitoring well MW-3, located in the northeastern corner of the Site, on December 3, 2013.

PHOTOGRAPHS



3. **New monitoring well MW-3R and area of former monitoring well MW-3 (restored to pre-existing conditions) on December 3, 2013.**



ATTACHMENT C

Monitoring Well Construction Log

SOILTESTING, INC. 90 DONOVAN RD. OXFORD, CT 06478 CT (203) 262-9328 NY (914) 946-4850			CLIENT: Ecosystems Strategies						SHEET <u>1</u> OF <u>1</u> HOLE NO. MW-3R		
			PROJECT NO. E54-9591-13								
			PROJECT NAME 104 Alexander Street						BORING LOCATIONS as directed		
FOREMAN - DRILLER TP/cMc			LOCATION Yonkers, New York								
INSPECTOR			CASING HSA SS CORE BAR						OFFSET		
			TYPE						DATE START 12/3/13		
GROUND WATER OBSERVATIONS AT <u>6</u> FT AFTER <u>0</u> HOURS			SIZE I.D. 4 1/4" 1 3/8"						DATE FINISH 12/3/13		
AT <u> </u> FT AFTER <u> </u> HOURS			HAMMER WT. 140# BIT						SURFACE ELEV.		
			HAMMER FALL 30"						GROUND WATER ELEV.		
DEPTH	CASING BLOWS PER FOOT	SAMPLE				BLOWS PER 6 IN ON SAMPLER (FORCE ON TUBE) 0 - 6 6 - 12 12 - 18	CORE TIME PER FT (MIN)	DENSITY OR CONSIST	STRATA CHANGE DEPTH	FIELD IDENTIFICATION OF SOIL REMARKS INCL. COLOR, LOSS OF WASH WATER, SEAMS IN ROCK, ETC.	
		NO	Type	PEN	REC						
5	1	ss	24"	1"	6'0"	2	1				
						1	1		brn FM SAND, lit F gravel, lit silt (fill)		
	2	ss	24"	3"	8'0"	3	4		brn FM SAND, sm F gravel, tr silt (fill / oily product)		
						12	18		SAME		
10	3	ss	24"	4"	10'0"	6	8		blk gry FM SAND, sm silt, tr F gravel, tr fabric (garbage), paper material, tr organics		
						12	10		gry blk F-M SAND, lit F gravel, tr ash, silt		
	4	ss	24"	13"	12'0"	3	3				
						4	4				
	5	ss	24"	19"	14'0"	4	4				
						3	4				
15								14'0"	E.O.B. 14'0"		
20											
25											
30											
35											
40											

NOTE: Subsoil conditions revealed by this investigation represent conditions at specific locations and may not represent conditions at other locations or times.

GROUND SURFACE TO _____ FT. USED _____ CASING THEN _____ CASING TO _____ FT. **HOLE NO. MW-3R**

A = AUGER UP = UNDISTURBED PISTON T = THINWALL V = VANE TEST

WOR = WEIGHT OF RODS WOH = WEIGHT OF HAMMER & RODS

SS = SPLIT TUBE SAMPLER H.S.A. = HOLLOW STEM AUGER

PROPORTIONS USED: TRACE = 0 - 10% LITTLE = 10 - 20% SOME = 20 - 35% AND = 35 - 50%

C = COARSE

M = MEDIUM

F = FINE

Phone
(203) 262-9328

WHITE PLAINS, N.Y.
(914) 946-4850

Telefax
(203) 264-3414

SOILTESTING, INC.

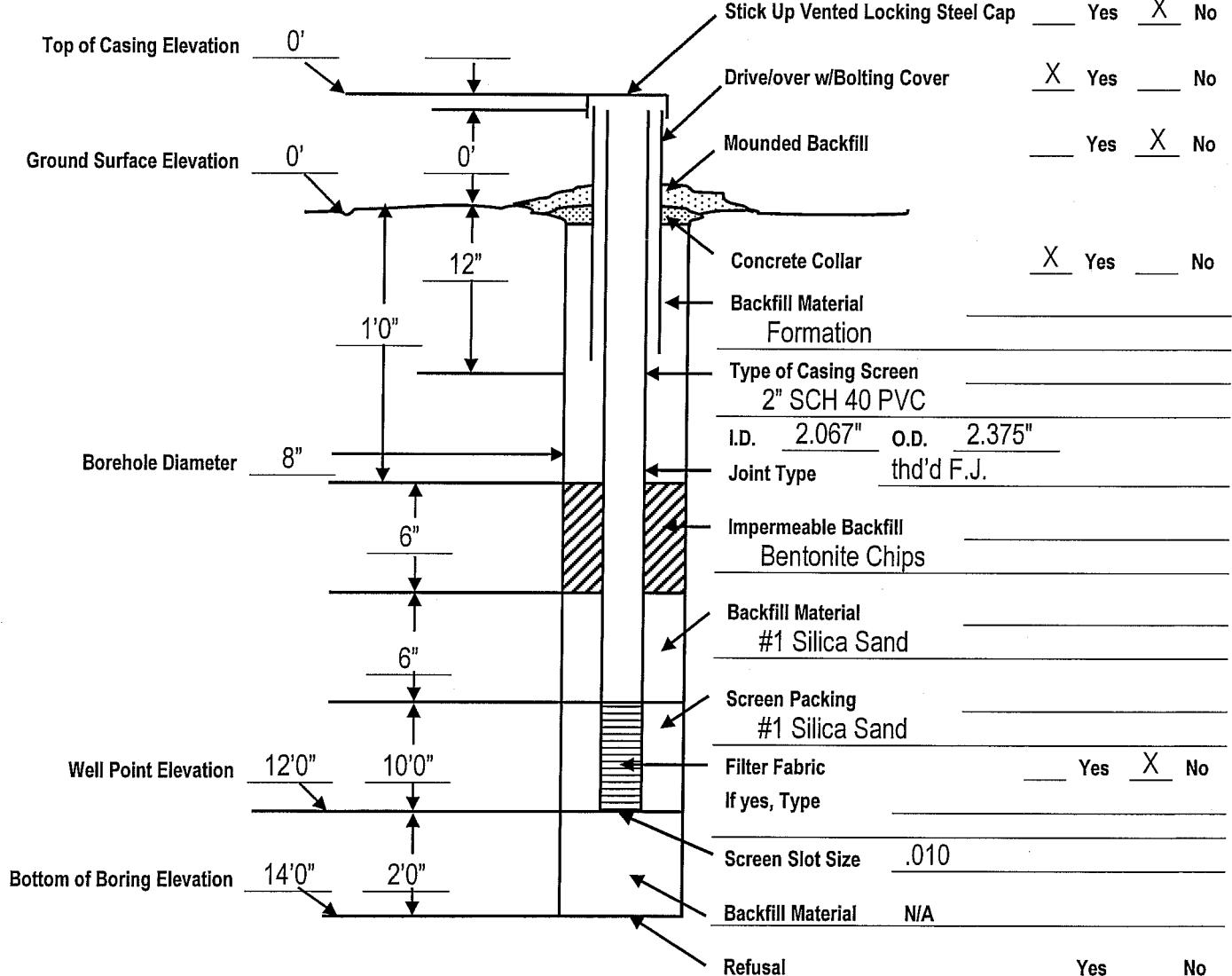
90 DONOVAN ROAD - OXFORD, CONN. 06478-1028

GEOTECHNICAL / ENVIRONMENTAL SUBSURFACE INVESTIGATIONS - Test Borings - Core Drilling
Monitoring Wells - Recovery Wells - Direct Push/Probe Sampling
UNDERPINNING - HELICAL PILES - SOIL NAILS

Monitor Well # MW3R

CLIENT: Ecosystems Strategies

JOB #: E54-9591-13



Screen 10'
Riser 5'
Plug 1
Slip Cap _____
Silica Sand 300#
Powdered Bentonite _____

Bentonite Pellets _____
Bentonite Chips $\frac{1}{2}$ bag
Concrete Mix 1 1/2 bags
Portland Cement _____

Locking Exp. Plug 1
Lock _____
D/O 1
S/U _____

ATTACHMENT D

Summary of Detected Results – VOC and PAHs

Table 1: Summary of Detected Results for VOCs in Water - ESI File: GY99143.72

All results provided in micrograms per liter ($\mu\text{g/L}$).

VOCs	Guidance Levels	Sample Identification												MW-3R	
		MW-3													
		May-05	Feb-06	May-06	Apr-07	Aug-07	Nov-07	Feb-08	Jun-08	Dec-08	Jun-09	Dec-09	Aug-10		
1,2,4-Trimethylbenzene	5	ND	NA	ND	ND	ND	16	ND	ND	ND	ND	ND	ND	34 (J)	
1,2-Dichloroethane	5	ND	ND	ND	ND	ND	ND	ND	4	ND	ND	NA	ND	ND	
Benzene	1	2	590	400	1,300	1,800	1,800	100	172	970	1,600	1,500	1,100	2,400	
Cyclohexane	NE	NA	6.4	ND	NA	ND	ND	ND	ND	ND	ND	NA	ND	NA	
Ethylbenzene	5	ND	540	140	240	220	220	ND	20	71	160	120	50	480	
Isopropylbenzene	5	ND	110	44	ND	130	130	65	10	65	89	100	68	51	
Methylene chloride	5	ND	ND	21	ND	NA	140(B)	ND							
Methyl tert-butyl ether (MTBE)	10	ND	16	13	ND	50	50	34	6	42	29	36	26	ND	
Methylcyclohexane	NE	NA	30	9.8	NA	ND	ND	ND	NA	NA	ND	NA	ND	NA	
Naphthalene	10	46	NA	ND	930	530	630	230	48	97	310	240	200	1,400	
n-Butylbenzene	5	ND	NA	ND	ND	ND	200	ND	ND	ND	ND	110	ND	ND	
n-Propylbenzene	5	ND	NA	ND	ND	ND	40	ND	ND	23	27	37 (J)	25(J)	ND	
o-Xylene	5	ND	11	6.5	ND	35 (J)									
p-&m-Xylenes	5	1	9.5	3.9	ND	320	ND	ND	ND	71	ND	13 (J)	9(J)	ND	
Styrene	5	ND	1.1	ND	NA	ND	ND								
Toluene	5	ND	3.4	1.4	ND	ND	ND	ND	2	ND	ND	NA	ND	ND	
Total	NE	49	1317.4	639.6	2470	3050	3086	429	262	1339	2215	2106	1444	4331	

Notes:

Guidance levels based on NYSDEC Division of Water TOGS 1.1.1 (June 1998) and subsequent NYSDEC Memoranda.

Results in bold and highlighted yellow exceed above-referenced guidance levels.

Results highlighted blue indicate detected concentrations.

J = Estimated concentration

NE = Not Established

NA = Not Analyzed

ND = Not Detected

Table 2: Summary of Detected Results for PAHs in Water - ESI File: GY99143.72

All results provided in micrograms per liter ($\mu\text{g/L}$).

PAHs	Guidance Levels	Sample Identification													MW-3R	
		MW-3														
		May-05	Feb-06	May-06	Apr-07	Aug-07	Nov-07	Feb-08	Jun-08	Dec-08	Jun-09	Dec-09	Aug-10	Dec-13		
2-Methylnaphthalene	NE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	218		
Acenaphthene	20	ND	90	7	ND	ND	ND	ND	ND	5	ND	5 (J)	8	75.0 (J)		
Acenaphthylene	NE	ND	53	2	ND	ND	ND	26	ND	ND	ND	ND	ND	ND		
Anthracene	50	ND	210	6	ND											
Benzo(a)anthracene	0.002	ND	340	9	ND											
Benzo(a)pyrene	NE	ND	340	10	ND											
Benzo(b)fluoranthene	0.002	ND	370	12	ND											
Benzo(g,h,i)perylene	NE	ND	110	5	ND											
Benzo(k)fluoranthene	0.002	ND	110	5	ND											
Chrysene	0.002	ND	280	9	ND											
Dibeno(a,h)anthracene	NE	ND	15 (J)	ND												
Fluoranthene	50	ND	560	15	ND	4(J)										
Fluorene	50	ND	220	9	ND	ND	ND	ND	ND	6	ND	6	9	ND		
Indeno(1,2,3-cd)pyrene	0.002	ND	150	7	ND											
Naphthalene	10	13	3,900	7	350	280	240	ND	120	26	170	68	66	1,460		
Phenanthrene	50	ND	780	16	ND	4 (J)	5(J)	ND								
Pyrene	50	ND	560	24	ND	3(J)	ND									
Totals	NE	13	8073	143	350	280	240	26	120	37	170	74	83	1460		

Notes:

Guidance levels based on NYSDEC Division of Water TOGS 1.1.1 (June 1998) and subsequent NYSDEC Memoranda.

Results in bold and highlighted yellow exceed above-referenced guidance levels.

Results highlighted blue indicate detected concentrations.

J = Estimated concentration

NA = Not Analyzed

NE = Not Established

ND = Not Detected

ATTACHMENT E

Laboratory Results



Technical Report

prepared for:

Ecosystems Strategies, Inc.
24 Davis Avenue
Poughkeepsie NY, 12603
Attention: Rosaura Andujar-McNeil

Report Date: 01/03/2014
Client Project ID: GY99143.72
York Project (SDG) No.: 13L0853

CT Cert. No. PH-0723

New Jersey Cert. No. CT-005



New York Cert. No. 10854

PA Cert. No. 68-04440

Report Date: 01/03/2014
Client Project ID: GY99143.72
York Project (SDG) No.: 13L0853

Ecosystems Strategies, Inc.
24 Davis Avenue
Poughkeepsie NY, 12603
Attention: Rosaura Andujar-McNeil

Purpose and Results

This report contains the analytical data for the sample(s) identified on the attached chain-of-custody received in our laboratory on December 26, 2013 and listed below. The project was identified as your project: **GY99143.72**.

The analyses were conducted utilizing appropriate EPA, Standard Methods, and ASTM methods as detailed in the data summary tables.

All samples were received in proper condition meeting the customary acceptance requirements for environmental samples except those indicated under the Notes section of this report.

All analyses met the method and laboratory standard operating procedure requirements except as indicated by any data flags, the meaning of which are explained in the attachment to this report, and case narrative if applicable.

The results of the analyses, which are all reported on dry weight basis (soils) unless otherwise noted, are detailed in the following pages.

Please contact Client Services at 203.325.1371 with any questions regarding this report.

York Sample ID	Client Sample ID	Matrix	Date Collected	Date Received
13L0853-01	MW-3R	Water	12/23/2013	12/26/2013
13L0853-02	TB-12/23/2013	Water	12/23/2013	12/26/2013

General Notes for York Project (SDG) No.: 13L0853

1. The RLs and MDLs (Reporting Limit and Method Detection Limit respectively) reported are adjusted for any dilution necessary due to the levels of target and/or non-target analytes and matrix interference. The RL(REPORTING LIMIT) is based upon the lowest standard utilized for the calibration where applicable.
2. Samples are retained for a period of thirty days after submittal of report, unless other arrangements are made.
3. York's liability for the above data is limited to the dollar value paid to York for the referenced project.
4. This report shall not be reproduced without the written approval of York Analytical Laboratories, Inc.
5. All samples were received in proper condition for analysis with proper documentation, unless otherwise noted.
6. All analyses conducted met method or Laboratory SOP requirements. See the Qualifiers and/or Narrative sections for further information.
7. It is noted that no analyses reported herein were subcontracted to another laboratory, unless noted in the report.
8. This report reflects results that relate only to the samples submitted on the attached chain-of-custody form(s) received by York.

Approved By:



Benjamin Gulizia
Laboratory Director

Date: 01/03/2014





Sample Information

Client Sample ID: MW-3R

York Sample ID: 13L0853-01

York Project (SDG) No.
13L0853

Client Project ID
GY99143.72

Matrix
Water

Collection Date/Time
December 23, 2013 3:00 pm

Date Received
12/26/2013

Volatile Organics, 8260 List

Sample Prepared by Method: EPA 5030B

Log-in Notes:

Sample Notes:

CAS No.	Parameter	Result	Flag	Units	MDL	RL	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
630-20-6	1,1,1,2-Tetrachloroethane	ND		ug/L	25	50	10	EPA 8260C	12/27/2013 10:16	12/27/2013 18:15	SS
71-55-6	1,1,1-Trichloroethane	ND		ug/L	25	50	10	EPA 8260C	12/27/2013 10:16	12/27/2013 18:15	SS
79-34-5	1,1,2,2-Tetrachloroethane	ND		ug/L	25	50	10	EPA 8260C	12/27/2013 10:16	12/27/2013 18:15	SS
76-13-1	,1,2-Trichloro-1,2,2-trifluoroethane (Freon 112)	ND		ug/L	25	50	10	EPA 8260C	12/27/2013 10:16	12/27/2013 18:15	SS
79-00-5	1,1,2-Trichloroethane	ND		ug/L	25	50	10	EPA 8260C	12/27/2013 10:16	12/27/2013 18:15	SS
75-34-3	1,1-Dichloroethane	ND		ug/L	25	50	10	EPA 8260C	12/27/2013 10:16	12/27/2013 18:15	SS
75-35-4	1,1-Dichloroethylene	ND		ug/L	25	50	10	EPA 8260C	12/27/2013 10:16	12/27/2013 18:15	SS
563-58-6	1,1-Dichloropropylene	ND		ug/L	25	50	10	EPA 8260C	12/27/2013 10:16	12/27/2013 18:15	SS
87-61-6	1,2,3-Trichlorobenzene	ND		ug/L	25	50	10	EPA 8260C	12/27/2013 10:16	12/27/2013 18:15	SS
96-18-4	1,2,3-Trichloropropane	ND		ug/L	25	50	10	EPA 8260C	12/27/2013 10:16	12/27/2013 18:15	SS
120-82-1	1,2,4-Trichlorobenzene	ND		ug/L	25	50	10	EPA 8260C	12/27/2013 10:16	12/27/2013 18:15	SS
95-63-6	1,2,4-Trimethylbenzene	34	J	ug/L	25	50	10	EPA 8260C	12/27/2013 10:16	12/27/2013 18:15	SS
96-12-8	1,2-Dibromo-3-chloropropane	ND		ug/L	25	50	10	EPA 8260C	12/27/2013 10:16	12/27/2013 18:15	SS
106-93-4	1,2-Dibromoethane	ND		ug/L	25	50	10	EPA 8260C	12/27/2013 10:16	12/27/2013 18:15	SS
95-50-1	1,2-Dichlorobenzene	ND		ug/L	25	50	10	EPA 8260C	12/27/2013 10:16	12/27/2013 18:15	SS
107-06-2	1,2-Dichloroethane	ND		ug/L	25	50	10	EPA 8260C	12/27/2013 10:16	12/27/2013 18:15	SS
78-87-5	1,2-Dichloropropane	ND		ug/L	25	50	10	EPA 8260C	12/27/2013 10:16	12/27/2013 18:15	SS
108-67-8	1,3,5-Trimethylbenzene	ND		ug/L	25	50	10	EPA 8260C	12/27/2013 10:16	12/27/2013 18:15	SS
541-73-1	1,3-Dichlorobenzene	ND		ug/L	25	50	10	EPA 8260C	12/27/2013 10:16	12/27/2013 18:15	SS
142-28-9	1,3-Dichloropropane	ND		ug/L	25	50	10	EPA 8260C	12/27/2013 10:16	12/27/2013 18:15	SS
106-46-7	1,4-Dichlorobenzene	ND		ug/L	25	50	10	EPA 8260C	12/27/2013 10:16	12/27/2013 18:15	SS
594-20-7	2,2-Dichloropropane	ND		ug/L	25	50	10	EPA 8260C	12/27/2013 10:16	12/27/2013 18:15	SS
78-93-3	2-Butanone	ND		ug/L	25	50	10	EPA 8260C	12/27/2013 10:16	12/27/2013 18:15	SS
95-49-8	2-Chlorotoluene	ND		ug/L	25	50	10	EPA 8260C	12/27/2013 10:16	12/27/2013 18:15	SS
106-43-4	4-Chlorotoluene	ND		ug/L	25	50	10	EPA 8260C	12/27/2013 10:16	12/27/2013 18:15	SS
67-64-1	Acetone	ND		ug/L	25	50	10	EPA 8260C	12/27/2013 10:16	12/27/2013 18:15	SS
71-43-2	Benzene	2400		ug/L	120	250	50	EPA 8260C	12/27/2013 10:16	01/03/2014 00:10	SS
108-86-1	Bromobenzene	ND		ug/L	25	50	10	EPA 8260C	12/27/2013 10:16	12/27/2013 18:15	SS
74-97-5	Bromochloromethane	ND		ug/L	25	50	10	EPA 8260C	12/27/2013 10:16	12/27/2013 18:15	SS
75-27-4	Bromodichloromethane	ND		ug/L	25	50	10	EPA 8260C	12/27/2013 10:16	12/27/2013 18:15	SS



Sample Information

Client Sample ID: MW-3R

York Sample ID: 13L0853-01

York Project (SDG) No.
13L0853

Client Project ID
GY99143.72

Matrix
Water

Collection Date/Time
December 23, 2013 3:00 pm

Date Received
12/26/2013

Volatile Organics, 8260 List

Sample Prepared by Method: EPA 5030B

Log-in Notes:

Sample Notes:

CAS No.	Parameter	Result	Flag	Units	MDL	RL	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
75-25-2	Bromoform	ND		ug/L	25	50	10	EPA 8260C	12/27/2013 10:16	12/27/2013 18:15	SS
74-83-9	Bromomethane	ND		ug/L	25	50	10	EPA 8260C	12/27/2013 10:16	12/27/2013 18:15	SS
56-23-5	Carbon tetrachloride	ND		ug/L	25	50	10	EPA 8260C	12/27/2013 10:16	12/27/2013 18:15	SS
108-90-7	Chlorobenzene	ND		ug/L	25	50	10	EPA 8260C	12/27/2013 10:16	12/27/2013 18:15	SS
75-00-3	Chloroethane	ND		ug/L	25	50	10	EPA 8260C	12/27/2013 10:16	12/27/2013 18:15	SS
67-66-3	Chloroform	ND		ug/L	25	50	10	EPA 8260C	12/27/2013 10:16	12/27/2013 18:15	SS
74-87-3	Chloromethane	ND		ug/L	25	50	10	EPA 8260C	12/27/2013 10:16	12/27/2013 18:15	SS
156-59-2	cis-1,2-Dichloroethylene	ND		ug/L	25	50	10	EPA 8260C	12/27/2013 10:16	12/27/2013 18:15	SS
10061-01-5	cis-1,3-Dichloropropylene	ND		ug/L	25	50	10	EPA 8260C	12/27/2013 10:16	12/27/2013 18:15	SS
124-48-1	Dibromochloromethane	ND		ug/L	25	50	10	EPA 8260C	12/27/2013 10:16	12/27/2013 18:15	SS
74-95-3	Dibromomethane	ND		ug/L	25	50	10	EPA 8260C	12/27/2013 10:16	12/27/2013 18:15	SS
75-71-8	Dichlorodifluoromethane	ND		ug/L	25	50	10	EPA 8260C	12/27/2013 10:16	12/27/2013 18:15	SS
100-41-4	Ethyl Benzene	480		ug/L	25	50	10	EPA 8260C	12/27/2013 10:16	12/27/2013 18:15	SS
87-68-3	Hexachlorobutadiene	ND		ug/L	25	50	10	EPA 8260C	12/27/2013 10:16	12/27/2013 18:15	SS
98-82-8	Isopropylbenzene	51		ug/L	25	50	10	EPA 8260C	12/27/2013 10:16	12/27/2013 18:15	SS
1634-04-4	Methyl tert-butyl ether (MTBE)	ND		ug/L	25	50	10	EPA 8260C	12/27/2013 10:16	12/27/2013 18:15	SS
75-09-2	Methylene chloride	ND		ug/L	25	50	10	EPA 8260C	12/27/2013 10:16	12/27/2013 18:15	SS
91-20-3	Naphthalene	1400		ug/L	120	250	50	EPA 8260C	12/27/2013 10:16	01/03/2014 00:10	SS
104-51-8	n-Butylbenzene	ND		ug/L	25	50	10	EPA 8260C	12/27/2013 10:16	12/27/2013 18:15	SS
103-65-1	n-Propylbenzene	ND		ug/L	25	50	10	EPA 8260C	12/27/2013 10:16	12/27/2013 18:15	SS
95-47-6	o-Xylene	35	J	ug/L	25	50	10	EPA 8260C	12/27/2013 10:16	12/27/2013 18:15	SS
179601-23-1	p- & m- Xylenes	ND		ug/L	50	100	10	EPA 8260C	12/27/2013 10:16	12/27/2013 18:15	SS
99-87-6	p-Isopropyltoluene	ND		ug/L	25	50	10	EPA 8260C	12/27/2013 10:16	12/27/2013 18:15	SS
135-98-8	sec-Butylbenzene	ND		ug/L	25	50	10	EPA 8260C	12/27/2013 10:16	12/27/2013 18:15	SS
100-42-5	Styrene	ND		ug/L	25	50	10	EPA 8260C	12/27/2013 10:16	12/27/2013 18:15	SS
98-06-6	tert-Butylbenzene	ND		ug/L	25	50	10	EPA 8260C	12/27/2013 10:16	12/27/2013 18:15	SS
127-18-4	Tetrachloroethylene	ND		ug/L	25	50	10	EPA 8260C	12/27/2013 10:16	12/27/2013 18:15	SS
108-88-3	Toluene	ND		ug/L	25	50	10	EPA 8260C	12/27/2013 10:16	12/27/2013 18:15	SS
156-60-5	trans-1,2-Dichloroethylene	ND		ug/L	25	50	10	EPA 8260C	12/27/2013 10:16	12/27/2013 18:15	SS
10061-02-6	trans-1,3-Dichloropropylene	ND		ug/L	25	50	10	EPA 8260C	12/27/2013 10:16	12/27/2013 18:15	SS
79-01-6	Trichloroethylene	ND		ug/L	25	50	10	EPA 8260C	12/27/2013 10:16	12/27/2013 18:15	SS
75-69-4	Trichlorofluoromethane	ND		ug/L	25	50	10	EPA 8260C	12/27/2013 10:16	12/27/2013 18:15	SS



Sample Information

Client Sample ID: MW-3R

York Sample ID: 13L0853-01

York Project (SDG) No.
13L0853

Client Project ID
GY99143.72

Matrix
Water

Collection Date/Time
December 23, 2013 3:00 pm

Date Received
12/26/2013

Volatile Organics, 8260 List

Sample Prepared by Method: EPA 5030B

Log-in Notes:

Sample Notes:

CAS No.	Parameter	Result	Flag	Units	MDL	RL	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
75-01-4	Vinyl Chloride	ND		ug/L	25	50	10	EPA 8260C	12/27/2013 10:16	12/27/2013 18:15	SS
1330-20-7	Xylenes, Total	ND		ug/L	75	150	10	EPA 8260C	12/27/2013 10:16	12/27/2013 18:15	SS
108-05-4	Vinyl acetate	ND		ug/L	25	50	10	EPA 8260C	12/27/2013 10:16	12/27/2013 18:15	SS
Surrogate Recoveries											
17060-07-0	Surrogate: 1,2-Dichloroethane-d4	102 %			78-122						
460-00-4	Surrogate: p-Bromofluorobenzene	105 %			87-112						
2037-26-5	Surrogate: Toluene-d8	104 %			91-110						

Semi-Volatiles, PAH Target List

Sample Prepared by Method: EPA 3510C

Log-in Notes:

Sample Notes: EXT-EM

CAS No.	Parameter	Result	Flag	Units	MDL	RL	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
83-32-9	Acenaphthene	75.0	J	ug/L	44.2	125	25	EPA 625/8270D	12/30/2013 13:00	01/02/2014 12:42	SR
208-96-8	Acenaphthylene	ND		ug/L	43.5	125	25	EPA 625/8270D	12/30/2013 13:00	01/02/2014 12:42	SR
120-12-7	Anthracene	ND		ug/L	29.8	125	25	EPA 625/8270D	12/30/2013 13:00	01/02/2014 12:42	SR
56-55-3	Benzo(a)anthracene	ND		ug/L	32.8	125	25	EPA 625/8270D	12/30/2013 13:00	01/02/2014 12:42	SR
50-32-8	Benzo(a)pyrene	ND		ug/L	32.5	125	25	EPA 625/8270D	12/30/2013 13:00	01/02/2014 12:42	SR
205-99-2	Benzo(b)fluoranthene	ND		ug/L	35.2	125	25	EPA 625/8270D	12/30/2013 13:00	01/02/2014 12:42	SR
191-24-2	Benzo(g,h,i)perylene	ND		ug/L	42.8	125	25	EPA 625/8270D	12/30/2013 13:00	01/02/2014 12:42	SR
207-08-9	Benzo(k)fluoranthene	ND		ug/L	45.8	125	25	EPA 625/8270D	12/30/2013 13:00	01/02/2014 12:42	SR
218-01-9	Chrysene	ND		ug/L	36.8	125	25	EPA 625/8270D	12/30/2013 13:00	01/02/2014 12:42	SR
53-70-3	Dibenzo(a,h)anthracene	ND		ug/L	39.0	125	25	EPA 625/8270D	12/30/2013 13:00	01/02/2014 12:42	SR
206-44-0	Fluoranthene	ND		ug/L	31.0	125	25	EPA 625/8270D	12/30/2013 13:00	01/02/2014 12:42	SR
86-73-7	Fluorene	ND		ug/L	45.8	125	25	EPA 625/8270D	12/30/2013 13:00	01/02/2014 12:42	SR
193-39-5	Indeno(1,2,3-cd)pyrene	ND		ug/L	42.5	125	25	EPA 625/8270D	12/30/2013 13:00	01/02/2014 12:42	SR
91-57-6	2-Methylnaphthalene	218		ug/L	69.0	125	25	EPA 625/8270D	12/30/2013 13:00	01/02/2014 12:42	SR
91-20-3	Naphthalene	1460		ug/L	49.8	125	25	EPA 625/8270D	12/30/2013 13:00	01/02/2014 12:42	SR
85-01-8	Phenanthrene	ND		ug/L	34.2	125	25	EPA 625/8270D	12/30/2013 13:00	01/02/2014 12:42	SR
129-00-0	Pyrene	ND		ug/L	43.2	125	25	EPA 625/8270D	12/30/2013 13:00	01/02/2014 12:42	SR
Surrogate Recoveries											
4165-60-0	Surrogate: Nitrobenzene-d5	33.4 %			12-112						
321-60-8	Surrogate: 2-Fluorobiphenyl	36.5 %			14-101						
1718-51-0	Surrogate: Terphenyl-d14	46.4 %			10-151						



Sample Information

<u>Client Sample ID:</u> TB-12/23/2013	<u>York Sample ID:</u> 13L0853-02			
<u>York Project (SDG) No.</u> 13L0853	<u>Client Project ID</u> GY99143.72	<u>Matrix</u> Water	<u>Collection Date/Time</u> December 23, 2013 12:00 am	<u>Date Received</u> 12/26/2013

Volatile Organics, 8260 List

Sample Prepared by Method: EPA 5030B

Log-in Notes:

Sample Notes:

CAS No.	Parameter	Result	Flag	Units	MDL	RL	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
630-20-6	1,1,1,2-Tetrachloroethane	ND		ug/L	2.5	5.0	1	EPA 8260C	12/27/2013 10:16	12/27/2013 18:50	SS
71-55-6	1,1,1-Trichloroethane	ND		ug/L	2.5	5.0	1	EPA 8260C	12/27/2013 10:16	12/27/2013 18:50	SS
79-34-5	1,1,2,2-Tetrachloroethane	ND		ug/L	2.5	5.0	1	EPA 8260C	12/27/2013 10:16	12/27/2013 18:50	SS
76-13-1	,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	ND		ug/L	2.5	5.0	1	EPA 8260C	12/27/2013 10:16	12/27/2013 18:50	SS
79-00-5	1,1,2-Trichloroethane	ND		ug/L	2.5	5.0	1	EPA 8260C	12/27/2013 10:16	12/27/2013 18:50	SS
75-34-3	1,1-Dichloroethane	ND		ug/L	2.5	5.0	1	EPA 8260C	12/27/2013 10:16	12/27/2013 18:50	SS
75-35-4	1,1-Dichloroethylene	ND		ug/L	2.5	5.0	1	EPA 8260C	12/27/2013 10:16	12/27/2013 18:50	SS
563-58-6	1,1-Dichloropropylene	ND		ug/L	2.5	5.0	1	EPA 8260C	12/27/2013 10:16	12/27/2013 18:50	SS
87-61-6	1,2,3-Trichlorobenzene	ND		ug/L	2.5	5.0	1	EPA 8260C	12/27/2013 10:16	12/27/2013 18:50	SS
96-18-4	1,2,3-Trichloropropane	ND		ug/L	2.5	5.0	1	EPA 8260C	12/27/2013 10:16	12/27/2013 18:50	SS
120-82-1	1,2,4-Trichlorobenzene	ND		ug/L	2.5	5.0	1	EPA 8260C	12/27/2013 10:16	12/27/2013 18:50	SS
95-63-6	1,2,4-Trimethylbenzene	ND		ug/L	2.5	5.0	1	EPA 8260C	12/27/2013 10:16	12/27/2013 18:50	SS
96-12-8	1,2-Dibromo-3-chloropropane	ND		ug/L	2.5	5.0	1	EPA 8260C	12/27/2013 10:16	12/27/2013 18:50	SS
106-93-4	1,2-Dibromoethane	ND		ug/L	2.5	5.0	1	EPA 8260C	12/27/2013 10:16	12/27/2013 18:50	SS
95-50-1	1,2-Dichlorobenzene	ND		ug/L	2.5	5.0	1	EPA 8260C	12/27/2013 10:16	12/27/2013 18:50	SS
107-06-2	1,2-Dichloroethane	ND		ug/L	2.5	5.0	1	EPA 8260C	12/27/2013 10:16	12/27/2013 18:50	SS
78-87-5	1,2-Dichloropropane	ND		ug/L	2.5	5.0	1	EPA 8260C	12/27/2013 10:16	12/27/2013 18:50	SS
108-67-8	1,3,5-Trimethylbenzene	ND		ug/L	2.5	5.0	1	EPA 8260C	12/27/2013 10:16	12/27/2013 18:50	SS
541-73-1	1,3-Dichlorobenzene	ND		ug/L	2.5	5.0	1	EPA 8260C	12/27/2013 10:16	12/27/2013 18:50	SS
142-28-9	1,3-Dichloropropane	ND		ug/L	2.5	5.0	1	EPA 8260C	12/27/2013 10:16	12/27/2013 18:50	SS
106-46-7	1,4-Dichlorobenzene	ND		ug/L	2.5	5.0	1	EPA 8260C	12/27/2013 10:16	12/27/2013 18:50	SS
594-20-7	2,2-Dichloropropane	ND		ug/L	2.5	5.0	1	EPA 8260C	12/27/2013 10:16	12/27/2013 18:50	SS
78-93-3	2-Butanone	ND		ug/L	2.5	5.0	1	EPA 8260C	12/27/2013 10:16	12/27/2013 18:50	SS
95-49-8	2-Chlorotoluene	ND		ug/L	2.5	5.0	1	EPA 8260C	12/27/2013 10:16	12/27/2013 18:50	SS
106-43-4	4-Chlorotoluene	ND		ug/L	2.5	5.0	1	EPA 8260C	12/27/2013 10:16	12/27/2013 18:50	SS
67-64-1	Acetone	ND		ug/L	2.5	5.0	1	EPA 8260C	12/27/2013 10:16	12/27/2013 18:50	SS
71-43-2	Benzene	ND		ug/L	2.5	5.0	1	EPA 8260C	12/27/2013 10:16	12/27/2013 18:50	SS
108-86-1	Bromobenzene	ND		ug/L	2.5	5.0	1	EPA 8260C	12/27/2013 10:16	12/27/2013 18:50	SS
74-97-5	Bromochloromethane	ND		ug/L	2.5	5.0	1	EPA 8260C	12/27/2013 10:16	12/27/2013 18:50	SS
75-27-4	Bromodichloromethane	ND		ug/L	2.5	5.0	1	EPA 8260C	12/27/2013 10:16	12/27/2013 18:50	SS



Sample Information

Client Sample ID: TB-12/23/2013

York Sample ID: 13L0853-02

York Project (SDG) No.
13L0853

Client Project ID
GY99143.72

Matrix
Water

Collection Date/Time
December 23, 2013 12:00 am

Date Received
12/26/2013

Volatile Organics, 8260 List

Sample Prepared by Method: EPA 5030B

Log-in Notes:

Sample Notes:

CAS No.	Parameter	Result	Flag	Units	MDL	RL	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
75-25-2	Bromoform	ND		ug/L	2.5	5.0	1	EPA 8260C	12/27/2013 10:16	12/27/2013 18:50	SS
74-83-9	Bromomethane	ND		ug/L	2.5	5.0	1	EPA 8260C	12/27/2013 10:16	12/27/2013 18:50	SS
56-23-5	Carbon tetrachloride	ND		ug/L	2.5	5.0	1	EPA 8260C	12/27/2013 10:16	12/27/2013 18:50	SS
108-90-7	Chlorobenzene	ND		ug/L	2.5	5.0	1	EPA 8260C	12/27/2013 10:16	12/27/2013 18:50	SS
75-00-3	Chloroethane	ND		ug/L	2.5	5.0	1	EPA 8260C	12/27/2013 10:16	12/27/2013 18:50	SS
67-66-3	Chloroform	ND		ug/L	2.5	5.0	1	EPA 8260C	12/27/2013 10:16	12/27/2013 18:50	SS
74-87-3	Chloromethane	ND		ug/L	2.5	5.0	1	EPA 8260C	12/27/2013 10:16	12/27/2013 18:50	SS
156-59-2	cis-1,2-Dichloroethylene	ND		ug/L	2.5	5.0	1	EPA 8260C	12/27/2013 10:16	12/27/2013 18:50	SS
10061-01-5	cis-1,3-Dichloropropylene	ND		ug/L	2.5	5.0	1	EPA 8260C	12/27/2013 10:16	12/27/2013 18:50	SS
124-48-1	Dibromochloromethane	ND		ug/L	2.5	5.0	1	EPA 8260C	12/27/2013 10:16	12/27/2013 18:50	SS
74-95-3	Dibromomethane	ND		ug/L	2.5	5.0	1	EPA 8260C	12/27/2013 10:16	12/27/2013 18:50	SS
75-71-8	Dichlorodifluoromethane	ND		ug/L	2.5	5.0	1	EPA 8260C	12/27/2013 10:16	12/27/2013 18:50	SS
100-41-4	Ethyl Benzene	ND		ug/L	2.5	5.0	1	EPA 8260C	12/27/2013 10:16	12/27/2013 18:50	SS
87-68-3	Hexachlorobutadiene	ND		ug/L	2.5	5.0	1	EPA 8260C	12/27/2013 10:16	12/27/2013 18:50	SS
98-82-8	Isopropylbenzene	ND		ug/L	2.5	5.0	1	EPA 8260C	12/27/2013 10:16	12/27/2013 18:50	SS
1634-04-4	Methyl tert-butyl ether (MTBE)	ND		ug/L	2.5	5.0	1	EPA 8260C	12/27/2013 10:16	12/27/2013 18:50	SS
75-09-2	Methylene chloride	ND		ug/L	2.5	5.0	1	EPA 8260C	12/27/2013 10:16	12/27/2013 18:50	SS
91-20-3	Naphthalene	3.4	J	ug/L	2.5	5.0	1	EPA 8260C	12/27/2013 10:16	12/27/2013 18:50	SS
104-51-8	n-Butylbenzene	ND		ug/L	2.5	5.0	1	EPA 8260C	12/27/2013 10:16	12/27/2013 18:50	SS
103-65-1	n-Propylbenzene	ND		ug/L	2.5	5.0	1	EPA 8260C	12/27/2013 10:16	12/27/2013 18:50	SS
95-47-6	o-Xylene	ND		ug/L	2.5	5.0	1	EPA 8260C	12/27/2013 10:16	12/27/2013 18:50	SS
179601-23-1	p- & m- Xylenes	ND		ug/L	5.0	10	1	EPA 8260C	12/27/2013 10:16	12/27/2013 18:50	SS
99-87-6	p-Isopropyltoluene	ND		ug/L	2.5	5.0	1	EPA 8260C	12/27/2013 10:16	12/27/2013 18:50	SS
135-98-8	sec-Butylbenzene	ND		ug/L	2.5	5.0	1	EPA 8260C	12/27/2013 10:16	12/27/2013 18:50	SS
100-42-5	Styrene	ND		ug/L	2.5	5.0	1	EPA 8260C	12/27/2013 10:16	12/27/2013 18:50	SS
98-06-6	tert-Butylbenzene	ND		ug/L	2.5	5.0	1	EPA 8260C	12/27/2013 10:16	12/27/2013 18:50	SS
127-18-4	Tetrachloroethylene	ND		ug/L	2.5	5.0	1	EPA 8260C	12/27/2013 10:16	12/27/2013 18:50	SS
108-88-3	Toluene	ND		ug/L	2.5	5.0	1	EPA 8260C	12/27/2013 10:16	12/27/2013 18:50	SS
156-60-5	trans-1,2-Dichloroethylene	ND		ug/L	2.5	5.0	1	EPA 8260C	12/27/2013 10:16	12/27/2013 18:50	SS
10061-02-6	trans-1,3-Dichloropropylene	ND		ug/L	2.5	5.0	1	EPA 8260C	12/27/2013 10:16	12/27/2013 18:50	SS
79-01-6	Trichloroethylene	ND		ug/L	2.5	5.0	1	EPA 8260C	12/27/2013 10:16	12/27/2013 18:50	SS



Sample Information

Client Sample ID: TB-12/23/2013

York Sample ID:

13L0853-02

York Project (SDG) No.
13L0853

Client Project ID
GY99143.72

Matrix
Water

Collection Date/Time
December 23, 2013 12:00 am

Date Received
12/26/2013

Volatile Organics, 8260 List

Sample Prepared by Method: EPA 5030B

Log-in Notes:

Sample Notes:

CAS No.	Parameter	Result	Flag	Units	MDL	RL	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst		
75-69-4	Trichlorofluoromethane	ND		ug/L	2.5	5.0	1	EPA 8260C	12/27/2013 10:16	12/27/2013 18:50	SS		
75-01-4	Vinyl Chloride	ND		ug/L	2.5	5.0	1	EPA 8260C	12/27/2013 10:16	12/27/2013 18:50	SS		
1330-20-7	Xylenes, Total	ND		ug/L	7.5	15	1	EPA 8260C	12/27/2013 10:16	12/27/2013 18:50	SS		
108-05-4	Vinyl acetate	ND		ug/L	2.5	5.0	1	EPA 8260C	12/27/2013 10:16	12/27/2013 18:50	SS		
Surrogate Recoveries		Result	Acceptance Range										
17060-07-0	Surrogate: 1,2-Dichloroethane-d4	99.2 %			78-122								
460-00-4	Surrogate: p-Bromofluorobenzene	102 %			87-112								
2037-26-5	Surrogate: Toluene-d8	103 %			91-110								



Analytical Batch Summary

Batch ID: BA40059

Preparation Method: EPA 5030B

Prepared By: BGS

YORK Sample ID

Client Sample ID

Preparation Date

13L0853-01RE1

MW-3R

01/02/14

BA40059-BLK1

Blank

01/02/14

BA40059-BS1

LCS

01/02/14

BA40059-BSD1

LCS Dup

01/02/14

Batch ID: BL31331

Preparation Method: EPA 5030B

Prepared By: BGS

YORK Sample ID

Client Sample ID

Preparation Date

13L0853-01

MW-3R

12/27/13

13L0853-02

TB-12/23/2013

12/27/13

BL31331-BLK1

Blank

12/27/13

BL31331-BS1

LCS

12/27/13

BL31331-BSD1

LCS Dup

12/27/13

Batch ID: BL31362

Preparation Method: EPA 3510C

Prepared By: KAT

YORK Sample ID

Client Sample ID

Preparation Date

13L0853-01

MW-3R

12/30/13

BL31362-BLK1

Blank

12/30/13

BL31362-BLK2

Blank

12/30/13

BL31362-BS1

LCS

12/30/13

BL31362-BSD1

LCS Dup

12/30/13



Volatile Organic Compounds by GC/MS - Quality Control Data

York Analytical Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source* Result	%REC	%REC Limits	Flag	RPD RPD	RPD Limit	Flag
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Batch BA40059 - EPA 5030B

Blank (BA40059-BLK1)

Prepared & Analyzed: 01/02/2014

1,1,1,2-Tetrachloroethane	ND	5.0	ug/L
1,1,1-Trichloroethane	ND	5.0	"
1,1,2,2-Tetrachloroethane	ND	5.0	"
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	ND	5.0	"
1,1,2-Trichloroethane	ND	5.0	"
1,1-Dichloroethane	ND	5.0	"
1,1-Dichloroethylene	ND	5.0	"
1,1-Dichloropropylene	ND	5.0	"
1,2,3-Trichlorobenzene	ND	5.0	"
1,2,3-Trichloropropane	ND	5.0	"
1,2,4-Trichlorobenzene	ND	5.0	"
1,2,4-Trimethylbenzene	ND	5.0	"
1,2-Dibromo-3-chloropropane	ND	5.0	"
1,2-Dibromoethane	ND	5.0	"
1,2-Dichlorobenzene	ND	5.0	"
1,2-Dichloroethane	ND	5.0	"
1,2-Dichloropropane	ND	5.0	"
1,3,5-Trimethylbenzene	ND	5.0	"
1,3-Dichlorobenzene	ND	5.0	"
1,3-Dichloropropane	ND	5.0	"
1,4-Dichlorobenzene	ND	5.0	"
2,2-Dichloropropane	ND	5.0	"
2-Butanone	ND	5.0	"
2-Chlorotoluene	ND	5.0	"
4-Chlorotoluene	ND	5.0	"
Acetone	2.6	5.0	"
Benzene	ND	5.0	"
Bromobenzene	ND	5.0	"
Bromochloromethane	ND	5.0	"
Bromodichloromethane	ND	5.0	"
Bromoform	ND	5.0	"
Bromomethane	ND	5.0	"
Carbon tetrachloride	ND	5.0	"
Chlorobenzene	ND	5.0	"
Chloroethane	ND	5.0	"
Chloroform	ND	5.0	"
Chloromethane	ND	5.0	"
cis-1,2-Dichloroethylene	ND	5.0	"
cis-1,3-Dichloropropylene	ND	5.0	"
Dibromochloromethane	ND	5.0	"
Dibromomethane	ND	5.0	"
Dichlorodifluoromethane	ND	5.0	"
Ethyl Benzene	ND	5.0	"
Hexachlorobutadiene	ND	5.0	"
Isopropylbenzene	ND	5.0	"
Methyl tert-butyl ether (MTBE)	ND	5.0	"
Methylene chloride	ND	5.0	"
Naphthalene	ND	5.0	"
n-Butylbenzene	ND	5.0	"
n-Propylbenzene	ND	5.0	"
o-Xylene	ND	5.0	"



Volatile Organic Compounds by GC/MS - Quality Control Data

York Analytical Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source* Result	%REC %REC	%REC Limits	Flag	RPD RPD	RPD Limit	RPD Flag
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Batch BA40059 - EPA 5030B

Blank (BA40059-BLK1)

p- & m- Xylenes	ND	10	ug/L								
p-Isopropyltoluene	ND	5.0	"								
sec-Butylbenzene	ND	5.0	"								
Styrene	ND	5.0	"								
tert-Butylbenzene	ND	5.0	"								
Tetrachloroethylene	ND	5.0	"								
Toluene	ND	5.0	"								
trans-1,2-Dichloroethylene	ND	5.0	"								
trans-1,3-Dichloropropylene	ND	5.0	"								
Trichloroethylene	ND	5.0	"								
Trichlorofluoromethane	ND	5.0	"								
Vinyl Chloride	ND	5.0	"								
Xylenes, Total	ND	15	"								
Vinyl acetate	ND	5.0	"								
<i>Surrogate: 1,2-Dichloroethane-d4</i>	49.8	"	50.0		99.7		78-122				
<i>Surrogate: p-Bromofluorobenzene</i>	56.4	"	50.0		113		87-112				
<i>Surrogate: Toluene-d8</i>	48.5	"	50.0		96.9		91-110				

LCS (BA40059-BS1)

1,1,1,2-Tetrachloroethane	48	ug/L	50.0		95.5		90-116				
1,1,1-Trichloroethane	51	"	50.0		103		83-125				
1,1,2,2-Tetrachloroethane	44	"	50.0		88.1		84-122				
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	51	"	50.0		102		66-141				
1,1,2-Trichloroethane	50	"	50.0		99.8		83-116				
1,1-Dichloroethane	53	"	50.0		106		82-121				
1,1-Dichloroethylene	54	"	50.0		108		59-135				
1,1-Dichloropropylene	52	"	50.0		103		81-112				
1,2,3-Trichlorobenzene	45	"	50.0		89.2		74-132				
1,2,3-Trichloropropane	47	"	50.0		93.2		83-118				
1,2,4-Trichlorobenzene	45	"	50.0		90.6		72-133				
1,2,4-Trimethylbenzene	54	"	50.0		107		82-119				
1,2-Dibromo-3-chloropropane	39	"	50.0		78.9		69-134				
1,2-Dibromoethane	49	"	50.0		97.7		85-118				
1,2-Dichlorobenzene	48	"	50.0		95.4		87-116				
1,2-Dichloroethane	51	"	50.0		101		79-125				
1,2-Dichloropropane	49	"	50.0		97.8		82-119				
1,3,5-Trimethylbenzene	49	"	50.0		98.3		84-120				
1,3-Dichlorobenzene	47	"	50.0		94.4		85-116				
1,3-Dichloropropane	50	"	50.0		99.1		86-114				
1,4-Dichlorobenzene	49	"	50.0		98.3		84-116				
2,2-Dichloropropane	51	"	50.0		102		56-138				
2-Butanone	45	"	50.0		90.1		59-127				
2-Chlorotoluene	46	"	50.0		91.8		82-117				
4-Chlorotoluene	49	"	50.0		97.1		84-118				
Acetone	45	"	50.0		89.6		30-112				
Benzene	52	"	50.0		105		88-113				
Bromobenzene	51	"	50.0		102		85-117				
Bromochloromethane	53	"	50.0		105		80-120				
Bromodichloromethane	51	"	50.0		101		87-122				
Bromoform	45	"	50.0		90.7		83-127				
Bromomethane	46	"	50.0		91.5		36-135				
Carbon tetrachloride	51	"	50.0		102		82-128				



Volatile Organic Compounds by GC/MS - Quality Control Data

York Analytical Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source* Result	%REC	%REC Limits	Flag	RPD	RPD Limit	Flag
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Batch BA40059 - EPA 5030B

LCS (BA40059-BS1)

Prepared & Analyzed: 01/02/2014

Chlorobenzene	50	ug/L	50.0		99.4	90-111					
Chloroethane	53	"	50.0		107	60-132					
Chloroform	53	"	50.0		107	89-116					
Chloromethane	49	"	50.0		97.4	39-131					
cis-1,2-Dichloroethylene	52	"	50.0		104	90-112					
cis-1,3-Dichloropropylene	49	"	50.0		98.3	89-124					
Dibromochloromethane	45	"	50.0		90.7	82-132					
Dibromomethane	51	"	50.0		101	83-124					
Dichlorodifluoromethane	54	"	50.0		108	10-143					
Ethyl Benzene	48	"	50.0		96.8	91-117					
Hexachlorobutadiene	45	"	50.0		90.8	83-129					
Isopropylbenzene	49	"	50.0		98.8	82-122					
Methyl tert-butyl ether (MTBE)	52	"	50.0		103	59-135					
Methylene chloride	52	"	50.0		104	51-136					
Naphthalene	41	"	50.0		82.6	61-147					
n-Butylbenzene	53	"	50.0		105	79-122					
n-Propylbenzene	51	"	50.0		102	80-123					
o-Xylene	49	"	50.0		98.6	91-110					
p- & m- Xylenes	98	"	100		97.9	86-118					
p-Isopropyltoluene	53	"	50.0		107	83-125					
sec-Butylbenzene	52	"	50.0		104	82-127					
Styrene	50	"	50.0		101	88-121					
tert-Butylbenzene	50	"	50.0		100	70-130					
Tetrachloroethylene	52	"	50.0		103	67-138					
Toluene	49	"	50.0		98.6	88-113					
trans-1,2-Dichloroethylene	53	"	50.0		106	73-123					
trans-1,3-Dichloropropylene	48	"	50.0		96.9	85-123					
Trichloroethylene	52	"	50.0		103	83-120					
Trichlorofluoromethane	51	"	50.0		101	62-138					
Vinyl Chloride	51	"	50.0		102	49-127					
Vinyl acetate	50	"	50.0		100	21-90	High Bias				
<i>Surrogate: 1,2-Dichloroethane-d4</i>	51.4	"	50.0		103	78-122					
<i>Surrogate: p-Bromofluorobenzene</i>	49.3	"	50.0		98.5	87-112					
<i>Surrogate: Toluene-d8</i>	48.8	"	50.0		97.7	91-110					



Volatile Organic Compounds by GC/MS - Quality Control Data

York Analytical Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source* Result	%REC	%REC Limits	Flag	RPD	RPD Limit	Flag
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Batch BA40059 - EPA 5030B

LCS Dup (BA40059-BSD1)								Prepared & Analyzed: 01/02/2014			
1,1,1,2-Tetrachloroethane	49		ug/L	50.0	97.1	90-116			1.74	30	
1,1,1-Trichloroethane	54		"	50.0	107	83-125			4.15	30	
1,1,2,2-Tetrachloroethane	47		"	50.0	94.1	84-122			6.50	30	
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	53		"	50.0	106	66-141			3.36	30	
1,1,2-Trichloroethane	50		"	50.0	99.9	83-116			0.120	30	
1,1-Dichloroethane	54		"	50.0	109	82-121			2.24	30	
1,1-Dichloroethylene	53		"	50.0	106	59-135			2.24	30	
1,1-Dichloropropylene	53		"	50.0	106	81-112			2.81	30	
1,2,3-Trichlorobenzene	50		"	50.0	100	74-132			11.8	30	
1,2,3-Trichloropropane	45		"	50.0	90.7	83-118			2.63	30	
1,2,4-Trichlorobenzene	51		"	50.0	101	72-133			11.1	30	
1,2,4-Trimethylbenzene	54		"	50.0	107	82-119			0.280	30	
1,2-Dibromo-3-chloropropane	45		"	50.0	90.9	69-134			14.2	30	
1,2-Dibromoethane	51		"	50.0	102	85-118			3.91	30	
1,2-Dichlorobenzene	49		"	50.0	97.2	87-116			1.93	30	
1,2-Dichloroethane	53		"	50.0	106	79-125			4.02	30	
1,2-Dichloropropane	49		"	50.0	98.8	82-119			0.997	30	
1,3,5-Trimethylbenzene	49		"	50.0	98.6	84-120			0.264	30	
1,3-Dichlorobenzene	49		"	50.0	98.7	85-116			4.37	30	
1,3-Dichloropropane	51		"	50.0	102	86-114			3.22	30	
1,4-Dichlorobenzene	49		"	50.0	98.4	84-116			0.0813	30	
2,2-Dichloropropane	51		"	50.0	102	56-138			0.295	30	
2-Butanone	46		"	50.0	92.7	59-127			2.85	30	
2-Chlorotoluene	47		"	50.0	93.5	82-117			1.88	30	
4-Chlorotoluene	48		"	50.0	96.6	84-118			0.558	30	
Acetone	43		"	50.0	85.5	30-112			4.73	30	
Benzene	55		"	50.0	110	88-113			4.65	30	
Bromobenzene	52		"	50.0	104	85-117			1.77	30	
Bromochloromethane	54		"	50.0	108	80-120			2.94	30	
Bromodichloromethane	51		"	50.0	102	87-122			0.946	30	
Bromoform	46		"	50.0	92.8	83-127			2.33	30	
Bromomethane	46		"	50.0	91.7	36-135			0.284	30	
Carbon tetrachloride	53		"	50.0	105	82-128			2.51	30	
Chlorobenzene	50		"	50.0	101	90-111			1.26	30	
Chloroethane	54		"	50.0	108	60-132			1.73	30	
Chloroform	53		"	50.0	105	89-116			1.70	30	
Chloromethane	47		"	50.0	93.2	39-131			4.43	30	
cis-1,2-Dichloroethylene	51		"	50.0	103	90-112			0.931	30	
cis-1,3-Dichloropropylene	52		"	50.0	103	89-124			4.96	30	
Dibromochloromethane	40		"	50.0	79.8	82-132	Low Bias		12.8	30	
Dibromomethane	51		"	50.0	102	83-124			0.845	30	
Dichlorodifluoromethane	53		"	50.0	105	10-143			2.68	30	
Ethyl Benzene	49		"	50.0	97.8	91-117			1.01	30	
Hexachlorobutadiene	47		"	50.0	93.2	83-129			2.67	30	
Isopropylbenzene	49		"	50.0	98.9	82-122			0.0405	30	
Methyl tert-butyl ether (MTBE)	52		"	50.0	105	59-135			1.85	30	
Methylene chloride	53		"	50.0	105	51-136			1.47	30	
Naphthalene	49		"	50.0	97.8	61-147			16.9	30	
n-Butylbenzene	54		"	50.0	109	79-122			2.86	30	
n-Propylbenzene	51		"	50.0	101	80-123			1.00	30	
o-Xylene	50		"	50.0	100	91-110			1.75	30	



Volatile Organic Compounds by GC/MS - Quality Control Data

York Analytical Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source* Result	%REC	%REC Limits	Flag	RPD	RPD Limit	Flag
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Batch BA40059 - EPA 5030B

LCS Dup (BA40059-BSD1)								Prepared & Analyzed: 01/02/2014		
p- & m-Xylenes	100		ug/L	100	100	86-118		2.43	30	
p-Isopropyltoluene	54		"	50.0	108	83-125		1.02	30	
sec-Butylbenzene	51		"	50.0	103	82-127		1.04	30	
Styrene	52		"	50.0	104	88-121		3.36	30	
tert-Butylbenzene	50		"	50.0	100	70-130		0.0200	30	
Tetrachloroethylene	52		"	50.0	103	67-138		0.0581	30	
Toluene	50		"	50.0	101	88-113		1.99	30	
trans-1,2-Dichloroethylene	54		"	50.0	109	73-123		2.66	30	
trans-1,3-Dichloropropylene	50		"	50.0	99.3	85-123		2.45	30	
Trichloroethylene	53		"	50.0	106	83-120		2.30	30	
Trichlorofluoromethane	51		"	50.0	101	62-138		0.316	30	
Vinyl Chloride	52		"	50.0	105	49-127		2.79	30	
Vinyl acetate	52		"	50.0	104	21-90	High Bias	3.06	30	
<i>Surrogate: 1,2-Dichloroethane-d4</i>	50.8		"	50.0	102	78-122				
<i>Surrogate: p-Bromofluorobenzene</i>	49.6		"	50.0	99.2	87-112				
<i>Surrogate: Toluene-d8</i>	48.8		"	50.0	97.7	91-110				

Batch BL31331 - EPA 5030B

Blank (BL31331-BLK1)				Prepared & Analyzed: 12/27/2013				
1,1,1,2-Tetrachloroethane	ND	5.0	ug/L					
1,1,1-Trichloroethane	ND	5.0	"					
1,1,2,2-Tetrachloroethane	ND	5.0	"					
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	ND	5.0	"					
1,1,2-Trichloroethane	ND	5.0	"					
1,1-Dichloroethane	ND	5.0	"					
1,1-Dichloroethylene	ND	5.0	"					
1,1-Dichloropropylene	ND	5.0	"					
1,2,3-Trichlorobenzene	ND	5.0	"					
1,2,3-Trichloropropane	ND	5.0	"					
1,2,4-Trichlorobenzene	ND	5.0	"					
1,2,4-Trimethylbenzene	ND	5.0	"					
1,2-Dibromo-3-chloropropane	ND	5.0	"					
1,2-Dibromoethane	ND	5.0	"					
1,2-Dichlorobenzene	ND	5.0	"					
1,2-Dichloroethane	ND	5.0	"					
1,2-Dichloropropane	ND	5.0	"					
1,3,5-Trimethylbenzene	ND	5.0	"					
1,3-Dichlorobenzene	ND	5.0	"					
1,3-Dichloropropane	ND	5.0	"					
1,4-Dichlorobenzene	ND	5.0	"					
2,2-Dichloropropane	ND	5.0	"					
2-Butanone	ND	5.0	"					
2-Chlorotoluene	ND	5.0	"					
4-Chlorotoluene	ND	5.0	"					
Acetone	ND	5.0	"					
Benzene	ND	5.0	"					
Bromobenzene	ND	5.0	"					
Bromochloromethane	ND	5.0	"					
Bromodichloromethane	ND	5.0	"					
Bromoform	ND	5.0	"					
Bromomethane	ND	5.0	"					



Volatile Organic Compounds by GC/MS - Quality Control Data

York Analytical Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source* Result	%REC	%REC Limits	Flag	RPD	RPD Limit	Flag
Batch BL31331 - EPA 5030B											
Blank (BL31331-BLK1)											
Carbon tetrachloride	ND	5.0	ug/L								
Chlorobenzene	ND	5.0	"								
Chloroethane	ND	5.0	"								
Chloroform	ND	5.0	"								
Chloromethane	ND	5.0	"								
cis-1,2-Dichloroethylene	ND	5.0	"								
cis-1,3-Dichloropropylene	ND	5.0	"								
Dibromochloromethane	ND	5.0	"								
Dibromomethane	ND	5.0	"								
Dichlorodifluoromethane	ND	5.0	"								
Ethyl Benzene	ND	5.0	"								
Hexachlorobutadiene	ND	5.0	"								
Isopropylbenzene	ND	5.0	"								
Methyl tert-butyl ether (MTBE)	ND	5.0	"								
Methylene chloride	ND	5.0	"								
Naphthalene	ND	5.0	"								
n-Butylbenzene	ND	5.0	"								
n-Propylbenzene	ND	5.0	"								
o-Xylene	ND	5.0	"								
p- & m- Xylenes	ND	10	"								
p-Isopropyltoluene	ND	5.0	"								
sec-Butylbenzene	ND	5.0	"								
Styrene	ND	5.0	"								
tert-Butylbenzene	ND	5.0	"								
Tetrachloroethylene	ND	5.0	"								
Toluene	ND	5.0	"								
trans-1,2-Dichloroethylene	ND	5.0	"								
trans-1,3-Dichloropropylene	ND	5.0	"								
Trichloroethylene	ND	5.0	"								
Trichlorofluoromethane	ND	5.0	"								
Vinyl Chloride	ND	5.0	"								
Xylenes, Total	ND	15	"								
Vinyl acetate	ND	5.0	"								
<i>Surrogate: 1,2-Dichloroethane-d4</i>	47.3	"	50.0		94.5	78-122					
<i>Surrogate: p-Bromofluorobenzene</i>	51.4	"	50.0		103	87-112					
<i>Surrogate: Toluene-d8</i>	50.9	"	50.0		102	91-110					



Volatile Organic Compounds by GC/MS - Quality Control Data

York Analytical Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source* Result	%REC	%REC Limits	Flag	RPD	RPD Limit	Flag
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Batch BL31331 - EPA 5030B

LCS (BL31331-BS1) Prepared & Analyzed: 12/27/2013

1,1,1,2-Tetrachloroethane	46	ug/L	50.0		92.0	90-116					
1,1,1-Trichloroethane	45	"	50.0		89.4	83-125					
1,1,2,2-Tetrachloroethane	48	"	50.0		96.7	84-122					
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	45	"	50.0		90.4	66-141					
1,1,2-Trichloroethane	48	"	50.0		95.7	83-116					
1,1-Dichloroethane	48	"	50.0		97.0	82-121					
1,1-Dichloroethylene	47	"	50.0		94.5	59-135					
1,1-Dichloropropylene	47	"	50.0		93.4	81-112					
1,2,3-Trichlorobenzene	49	"	50.0		98.3	74-132					
1,2,3-Trichloropropane	51	"	50.0		102	83-118					
1,2,4-Trichlorobenzene	50	"	50.0		101	72-133					
1,2,4-Trimethylbenzene	50	"	50.0		99.3	82-119					
1,2-Dibromo-3-chloropropane	50	"	50.0		101	69-134					
1,2-Dibromoethane	48	"	50.0		95.8	85-118					
1,2-Dichlorobenzene	48	"	50.0		96.8	87-116					
1,2-Dichloroethane	43	"	50.0		86.8	79-125					
1,2-Dichloropropane	51	"	50.0		102	82-119					
1,3,5-Trimethylbenzene	53	"	50.0		107	84-120					
1,3-Dichlorobenzene	48	"	50.0		95.6	85-116					
1,3-Dichloropropane	48	"	50.0		96.3	86-114					
1,4-Dichlorobenzene	51	"	50.0		103	84-116					
2,2-Dichloropropane	46	"	50.0		91.1	56-138					
2-Butanone	44	"	50.0		88.5	59-127					
2-Chlorotoluene	51	"	50.0		102	82-117					
4-Chlorotoluene	53	"	50.0		107	84-118					
Acetone	44	"	50.0		88.9	30-112					
Benzene	47	"	50.0		93.7	88-113					
Bromobenzene	51	"	50.0		102	85-117					
Bromochloromethane	43	"	50.0		85.1	80-120					
Bromodichloromethane	47	"	50.0		94.5	87-122					
Bromoform	50	"	50.0		99.9	83-127					
Bromomethane	50	"	50.0		100	36-135					
Carbon tetrachloride	46	"	50.0		91.2	82-128					
Chlorobenzene	49	"	50.0		98.6	90-111					
Chloroethane	51	"	50.0		101	60-132					
Chloroform	43	"	50.0		85.1	89-116	Low Bias				
Chloromethane	48	"	50.0		96.1	39-131					
cis-1,2-Dichloroethylene	45	"	50.0		90.8	90-112					
cis-1,3-Dichloropropylene	49	"	50.0		98.0	89-124					
Dibromochloromethane	48	"	50.0		96.3	82-132					
Dibromomethane	46	"	50.0		92.2	83-124					
Dichlorodifluoromethane	53	"	50.0		105	10-143					
Ethyl Benzene	47	"	50.0		93.9	91-117					
Hexachlorobutadiene	50	"	50.0		101	83-129					
Isopropylbenzene	53	"	50.0		106	82-122					
Methyl tert-butyl ether (MTBE)	45	"	50.0		90.0	59-135					
Methylene chloride	45	"	50.0		90.2	51-136					
Naphthalene	48	"	50.0		96.8	61-147					
n-Butylbenzene	51	"	50.0		102	79-122					
n-Propylbenzene	52	"	50.0		103	80-123					
o-Xylene	47	"	50.0		94.8	91-110					



Volatile Organic Compounds by GC/MS - Quality Control Data

York Analytical Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source* Result	%REC	%REC Limits	Flag	RPD	RPD Limit	Flag
Batch BL31331 - EPA 5030B											
LCS (BL31331-BS1)											
Prepared & Analyzed: 12/27/2013											
p- & m- Xylenes	92		ug/L	100	91.8	86-118					
p-Isopropyltoluene	51		"	50.0	102	83-125					
sec-Butylbenzene	53		"	50.0	106	82-127					
Styrene	48		"	50.0	95.8	88-121					
tert-Butylbenzene	53		"	50.0	106	70-130					
Tetrachloroethylene	48		"	50.0	96.2	67-138					
Toluene	47		"	50.0	94.4	88-113					
trans-1,2-Dichloroethylene	48		"	50.0	95.7	73-123					
trans-1,3-Dichloropropylene	48		"	50.0	95.3	85-123					
Trichloroethylene	49		"	50.0	98.2	83-120					
Trichlorofluoromethane	48		"	50.0	96.1	62-138					
Vinyl Chloride	54		"	50.0	108	49-127					
Vinyl acetate	47		"	50.0	93.4	21-90	High Bias				
<i>Surrogate: 1,2-Dichloroethane-d4</i>	44.9		"	50.0	89.8	78-122					
<i>Surrogate: p-Bromofluorobenzene</i>	54.0		"	50.0	108	87-112					
<i>Surrogate: Toluene-d8</i>	49.8		"	50.0	99.6	91-110					
LCS Dup (BL31331-BSD1)											
Prepared & Analyzed: 12/27/2013											
1,1,1,2-Tetrachloroethane	46		ug/L	50.0	91.8	90-116			0.261	30	
1,1,1-Trichloroethane	47		"	50.0	93.8	83-125			4.78	30	
1,1,2,2-Tetrachloroethane	47		"	50.0	94.6	84-122			2.26	30	
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	48		"	50.0	96.3	66-141			6.32	30	
1,1,2-Trichloroethane	46		"	50.0	92.2	83-116			3.79	30	
1,1-Dichloroethane	49		"	50.0	98.3	82-121			1.35	30	
1,1-Dichloroethylene	48		"	50.0	96.4	59-135			1.91	30	
1,1-Dichloropropylene	48		"	50.0	95.4	81-112			2.10	30	
1,2,3-Trichlorobenzene	51		"	50.0	101	74-132			2.91	30	
1,2,3-Trichloropropane	46		"	50.0	91.9	83-118			10.7	30	
1,2,4-Trichlorobenzene	51		"	50.0	102	72-133			1.76	30	
1,2,4-Trimethylbenzene	51		"	50.0	102	82-119			3.17	30	
1,2-Dibromo-3-chloropropane	49		"	50.0	97.2	69-134			3.80	30	
1,2-Dibromoethane	46		"	50.0	92.3	85-118			3.72	30	
1,2-Dichlorobenzene	49		"	50.0	98.3	87-116			1.60	30	
1,2-Dichloroethane	44		"	50.0	87.7	79-125			1.05	30	
1,2-Dichloropropane	50		"	50.0	99.1	82-119			3.37	30	
1,3,5-Trimethylbenzene	52		"	50.0	104	84-120			3.17	30	
1,3-Dichlorobenzene	49		"	50.0	98.8	85-116			3.37	30	
1,3-Dichloropropane	47		"	50.0	94.6	86-114			1.78	30	
1,4-Dichlorobenzene	52		"	50.0	103	84-116			0.854	30	
2,2-Dichloropropane	48		"	50.0	95.4	56-138			4.68	30	
2-Butanone	44		"	50.0	87.0	59-127			1.62	30	
2-Chlorotoluene	51		"	50.0	103	82-117			0.861	30	
4-Chlorotoluene	54		"	50.0	108	84-118			0.578	30	
Acetone	47		"	50.0	93.9	30-112			5.43	30	
Benzene	48		"	50.0	95.4	88-113			1.82	30	
Bromobenzene	50		"	50.0	99.7	85-117			2.52	30	
Bromochloromethane	43		"	50.0	86.7	80-120			1.86	30	
Bromodichloromethane	46		"	50.0	91.6	87-122			3.07	30	
Bromoform	47		"	50.0	94.8	83-127			5.30	30	
Bromomethane	52		"	50.0	105	36-135			4.78	30	
Carbon tetrachloride	47		"	50.0	93.9	82-128			2.90	30	
Chlorobenzene	49		"	50.0	98.4	90-111			0.162	30	



Volatile Organic Compounds by GC/MS - Quality Control Data

York Analytical Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source* Result	%REC	%REC Limits	Flag	RPD	RPD Limit	Flag
Batch BL31331 - EPA 5030B											
LCS Dup (BL31331-BSD1)											
Prepared & Analyzed: 12/27/2013											
Chloroethane	52		ug/L	50.0	104	60-132			2.90	30	
Chloroform	45		"	50.0	90.3	89-116			5.93	30	
Chloromethane	51		"	50.0	102	39-131			6.04	30	
cis-1,2-Dichloroethylene	47		"	50.0	93.7	90-112			3.21	30	
cis-1,3-Dichloropropylene	48		"	50.0	96.2	89-124			1.85	30	
Dibromochloromethane	47		"	50.0	93.2	82-132			3.27	30	
Dibromomethane	45		"	50.0	89.7	83-124			2.73	30	
Dichlorodifluoromethane	54		"	50.0	107	10-143			1.94	30	
Ethyl Benzene	48		"	50.0	95.0	91-117			1.12	30	
Hexachlorobutadiene	51		"	50.0	102	83-129			1.06	30	
Isopropylbenzene	53		"	50.0	105	82-122			0.984	30	
Methyl tert-butyl ether (MTBE)	45		"	50.0	90.3	59-135			0.355	30	
Methylene chloride	46		"	50.0	92.2	51-136			2.19	30	
Naphthalene	49		"	50.0	98.3	61-147			1.56	30	
n-Butylbenzene	52		"	50.0	103	79-122			0.917	30	
n-Propylbenzene	51		"	50.0	101	80-123			1.96	30	
o-Xylene	47		"	50.0	94.8	91-110			0.00	30	
p- & m- Xylenes	95		"	100	94.9	86-118			3.37	30	
p-Isopropyltoluene	53		"	50.0	105	83-125			3.37	30	
sec-Butylbenzene	55		"	50.0	109	82-127			2.97	30	
Styrene	49		"	50.0	97.4	88-121			1.66	30	
tert-Butylbenzene	52		"	50.0	104	70-130			2.07	30	
Tetrachloroethylene	47		"	50.0	94.8	67-138			1.44	30	
Toluene	47		"	50.0	93.0	88-113			1.49	30	
trans-1,2-Dichloroethylene	48		"	50.0	95.8	73-123			0.104	30	
trans-1,3-Dichloropropylene	48		"	50.0	95.7	85-123			0.377	30	
Trichloroethylene	48		"	50.0	95.2	83-120			3.06	30	
Trichlorofluoromethane	49		"	50.0	98.5	62-138			2.49	30	
Vinyl Chloride	53		"	50.0	105	49-127			2.05	30	
Vinyl acetate	45		"	50.0	90.5	21-90	High Bias		3.16	30	
<i>Surrogate: 1,2-Dichloroethane-d4</i>	45.2		"	50.0	90.4	78-122					
<i>Surrogate: p-Bromofluorobenzene</i>	49.9		"	50.0	99.8	87-112					
<i>Surrogate: Toluene-d8</i>	48.3		"	50.0	96.6	91-110					



Semivolatile Organic Compounds by GC/MS - Quality Control Data

York Analytical Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source* Result	%REC	%REC Limits	Flag	RPD	RPD Limit	Flag
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Batch BL31362 - EPA 3510C

Blank (BL31362-BLK1)

Prepared & Analyzed: 12/30/2013

Acenaphthene	ND	5.00	ug/L								
Acenaphthylene	ND	5.00	"								
Anthracene	ND	5.00	"								
Benzo(a)anthracene	ND	5.00	"								
Benzo(a)pyrene	ND	5.00	"								
Benzo(b)fluoranthene	ND	5.00	"								
Benzo(g,h,i)perylene	ND	5.00	"								
Benzo(k)fluoranthene	ND	5.00	"								
Chrysene	ND	5.00	"								
Dibenzo(a,h)anthracene	ND	5.00	"								
Fluoranthene	ND	5.00	"								
Fluorene	ND	5.00	"								
Indeno(1,2,3-cd)pyrene	ND	5.00	"								
2-Methylnaphthalene	ND	5.00	"								
Naphthalene	ND	5.00	"								
Phenanthrene	ND	5.00	"								
Pyrene	ND	5.00	"								
Surrogate: Nitrobenzene-d5	37.0		"	50.2		73.7		12-112			
Surrogate: 2-Fluorobiphenyl	26.9		"	50.0		53.7		14-101			
Surrogate: Terphenyl-d14	36.3		"	50.1		72.5		10-151			

Blank (BL31362-BLK2)

Prepared & Analyzed: 12/30/2013

Acenaphthene	ND	6.45	ug/L								
Acenaphthylene	ND	6.45	"								
Anthracene	ND	6.45	"								
Benzo(a)anthracene	ND	6.45	"								
Benzo(a)pyrene	ND	6.45	"								
Benzo(b)fluoranthene	ND	6.45	"								
Benzo(g,h,i)perylene	ND	6.45	"								
Benzo(k)fluoranthene	ND	6.45	"								
Chrysene	ND	6.45	"								
Dibenzo(a,h)anthracene	ND	6.45	"								
Fluoranthene	ND	6.45	"								
Fluorene	ND	6.45	"								
Indeno(1,2,3-cd)pyrene	ND	6.45	"								
2-Methylnaphthalene	ND	6.45	"								
Naphthalene	ND	6.45	"								
Phenanthrene	ND	6.45	"								
Pyrene	ND	6.45	"								
Surrogate: Nitrobenzene-d5	42.1		"	64.8		64.9		12-112			
Surrogate: 2-Fluorobiphenyl	31.5		"	64.5		48.9		14-101			
Surrogate: Terphenyl-d14	39.7		"	64.6		61.4		10-151			



Semivolatile Organic Compounds by GC/MS - Quality Control Data

York Analytical Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source* Result	%REC	%REC Limits	Flag	RPD	RPD Limit	Flag
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Batch BL31362 - EPA 3510C

LCS (BL31362-BS1)							Prepared & Analyzed: 12/30/2013			
Acenaphthene	31.6	5.00	ug/L	50.0	63.3	31-101				
Acenaphthylene	30.7	5.00	"	50.0	61.5	29-98				
Anthracene	30.5	5.00	"	50.0	61.1	24-108				
Benzo(a)anthracene	35.8	5.00	"	50.0	71.6	28-117				
Benzo(a)pyrene	39.7	5.00	"	50.0	79.4	24-131				
Benzo(b)fluoranthene	40.7	5.00	"	50.0	81.3	11-145				
Benzo(g,h,i)perylene	28.7	5.00	"	50.0	57.5	10-110				
Benzo(k)fluoranthene	43.5	5.00	"	50.0	86.9	10-161				
Chrysene	32.7	5.00	"	50.0	65.4	26-112				
Dibenzo(a,h)anthracene	30.3	5.00	"	50.0	60.6	12-104				
Fluoranthene	31.4	5.00	"	50.0	62.9	27-110				
Fluorene	32.4	5.00	"	50.0	64.8	32-107				
Indeno(1,2,3-cd)pyrene	31.8	5.00	"	50.0	63.6	10-107				
2-Methylnaphthalene	32.7	5.00	"	50.0	65.4	27-97				
Naphthalene	27.7	5.00	"	50.0	55.4	27-95				
Phenanthrene	31.7	5.00	"	50.0	63.4	26-109				
Pyrene	34.1	5.00	"	50.0	68.1	23-126				
<i>Surrogate: Nitrobenzene-d5</i>	32.6		"	50.2	64.9	12-112				
<i>Surrogate: 2-Fluorobiphenyl</i>	27.3		"	50.0	54.6	14-101				
<i>Surrogate: Terphenyl-d14</i>	33.2		"	50.1	66.2	10-151				

LCS Dup (BL31362-BSD1)							Prepared & Analyzed: 12/30/2013			
Acenaphthene	33.3	5.00	ug/L	50.0	66.6	31-101		5.08	20	
Acenaphthylene	31.7	5.00	"	50.0	63.4	29-98		3.14	20	
Anthracene	31.3	5.00	"	50.0	62.6	24-108		2.46	20	
Benzo(a)anthracene	37.9	5.00	"	50.0	75.8	28-117		5.78	20	
Benzo(a)pyrene	40.9	5.00	"	50.0	81.8	24-131		2.95	20	
Benzo(b)fluoranthene	42.9	5.00	"	50.0	85.8	11-145		5.29	20	
Benzo(g,h,i)perylene	28.3	5.00	"	50.0	56.6	10-110		1.51	20	
Benzo(k)fluoranthene	34.7	5.00	"	50.0	69.5	10-161		22.3	20	Non-dir.
Chrysene	35.0	5.00	"	50.0	70.0	26-112		6.71	20	
Dibenzo(a,h)anthracene	31.0	5.00	"	50.0	61.9	12-104		2.12	20	
Fluoranthene	32.4	5.00	"	50.0	64.8	27-110		3.10	20	
Fluorene	34.4	5.00	"	50.0	68.7	32-107		5.78	20	
Indeno(1,2,3-cd)pyrene	32.8	5.00	"	50.0	65.6	10-107		3.00	20	
2-Methylnaphthalene	35.8	5.00	"	50.0	71.5	27-97		8.91	20	
Naphthalene	29.2	5.00	"	50.0	58.5	27-95		5.41	20	
Phenanthrene	32.4	5.00	"	50.0	64.9	26-109		2.25	20	
Pyrene	35.4	5.00	"	50.0	70.8	23-126		3.91	20	
<i>Surrogate: Nitrobenzene-d5</i>	34.3		"	50.2	68.3	12-112				
<i>Surrogate: 2-Fluorobiphenyl</i>	28.4		"	50.0	56.9	14-101				
<i>Surrogate: Terphenyl-d14</i>	34.3		"	50.1	68.4	10-151				



Volatile Analysis Sample Containers

Lab ID	Client Sample ID	Volatile Sample Container
13L0853-01	MW-3R	40mL Clear Vial (pre-pres.) HCl; Cool to 4° C
13L0853-02	TB-12/23/2013	40mL Clear Vial (pre-pres.) HCl; Cool to 4° C

Notes and Definitions

S-HI	Surrogate recovery is above acceptance limits. No target compound is detected in sample.
QL-02	This LCS analyte is outside Laboratory Recovery limits due the analyte behavior using the referenced method. The reference method has certain limitations with respect to analytes of this nature.
J	Detected below the Reporting Limit but greater than or equal to the Method Detection Limit (MDL/LOD) or in the case of a TIC, the result is an estimated concentration.
EXT-EM	The sample exhibited emulsion formation during the extraction process. This may affect surrogate recoveries.
B	Analyte is found in the associated analysis batch blank. For volatiles, methylene chloride and acetone are common lab contaminants. Data users should consider anything <10x the blank value as artifact.

ND	Analyte NOT DETECTED at the stated Reporting Limit (RL) or above.
RL	REPORTING LIMIT - the minimum reportable value based upon the lowest point in the analyte calibration curve.
MDL	METHOD DETECTION LIMIT - the minimum concentration that can be measured and reported with a 99% confidence that the concentration is greater than zero. If requested or required, a value reported below the RL and above the MDL is considered estimated and is noted with a "J" flag.
NR	Not reported
RPD	Relative Percent Difference
Wet	The data has been reported on an as-received (wet weight) basis
Low Bias	Low Bias flag indicates that the recovery of the flagged analyte is below the laboratory or regulatory lower control limit. The data user should take note that this analyte may be biased low but should evaluate multiple lines of evidence including the LCS and site-specific MS/MSD data to draw bias conclusions. In cases where no site-specific MS/MSD was requested, only the LCS data can be used to evaluate such bias.
High Bias	High Bias flag indicates that the recovery of the flagged analyte is above the laboratory or regulatory upper control limit. The data user should take note that this analyte may be biased high but should evaluate multiple lines of evidence including the LCS and site-specific MS/MSD data to draw bias conclusions. In cases where no site-specific MS/MSD was requested, only the LCS data can be used to evaluate such bias.
Non-Dir.	Non-dir. flag (Non-Directional Bias) indicates that the Relative Percent Difference (RPD) (a measure of precision) among the MS and MSD data is outside the laboratory or regulatory control limit. This alerts the data user where the MS and MSD are from site-specific samples that the RPD is high due to either non-homogeneous distribution of target analyte between the MS/MSD or indicates poor reproducibility for other reasons.

If EPA SW-846 method 8270 is included herein it is noted that the target compound N-nitrosodiphenylamine (NDPA) decomposes in the gas chromatographic inlet and cannot be separated from diphenylamine (DPA). These results could actually represent 100% DPA, 100% NDPA or some combination of the two. For this reason, York reports the combined result for n-nitrosodiphenylamine and diphenylamine for either of these compounds as a combined concentration as Diphenylamine.

If Total PCBs are detected and the target aroclors reported are "Not detected", the Total PCB value is reported due to the presence of either or both Aroclors 1262 and 1268 which are non-target aroclors for some regulatory lists.

2-chloroethylvinyl ether readily breaks down under acidic conditions. Samples that are acid preserved, including standards will exhibit breakdown. The data user should take note.

Certification for pH is no longer offered by NYDOH ELAP.

Semi-Volatile and Volatile analyses are reported down to the MDL, with values between the MDL and the RL being "J" flagged as estimated results.



