8976 Wellington Road
Manassas, VA 20109

November 9, 2016

Alex Czuhanich
Engineering Geologist
New York State Department of Environmental Conservation
Division of Environmental Remediation Bureau E
625 Broadway, 12th Floor
Albany, NY 12233-7017

Re: Transmittal of Annual Report – Soil Vapor Monitoring Through August 2016
Comprehensive Operations, Maintenance and Monitoring Program
Order on Consent Index # A7-0502-0104, Site # 704014

Dear Mr. Czuhanich:

Enclosed with this transmittal letter please find our Annual Soil Vapor Monitoring Data Report, that has been prepared in accordance with the requirements set forth in the referenced Order on Consent.

Should you have any questions concerning this submittal, please contact me at (703) 257-2582.

Sincerely,

Kevin Whalen
Program Manager

cc: B. Boyd, NYSDOH
M. Marko, NYSDEC Region 7
D. Tuohy, NYSDEC – Albany (transmittal only)
S. Britton, Broome County Health Department
C. Pelto, Huron

SANBORN HEAD
Building Trust. Engineering Success.

Mr. Kevin Whalen
IBM Corporate Environmental Affairs
8976 Wellington Road
Manassas, Virginia 20109

November 9, 2016
File No. 2755.08

Re: Annual Report
Soil Vapor Monitoring through August 2016
Comprehensive Operations, Maintenance, and Monitoring Program
Endicott, New York

Dear Mr. Whalen:

We have enclosed our report summarizing soil vapor monitoring conducted in the Village of Endicott and the Town of Union, New York, through August 2016. The monitoring is being conducted as a component of the Comprehensive Operations, Maintenance, and Monitoring Plan (COM&M Plan). The work is part of IBM's required activities under Administrative Order on Consent #A7-0502-0104 (Order) as agreed upon between IBM and the New York Department of Environmental Conservation (NYSDEC).

We understand that this report will be submitted to the NYSDEC as a part of required deliverables under the Order. Thank you for the opportunity to be of service on this important project.

Very truly yours,
SANBORN, HEAD & ASSOCIATES, INC.

Daniel B. Carr, P.E., P.G.
Senior Principal Emeritus

Erica M. Bosse, P.G.
Project Manager

EMB/DBC: emb

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SANBORN HEAD

Building Trust. Engineering Success.

Annual Report

Soil Vapor Monitoring through August 2016

Comprehensive Operations, Maintenance, and Monitoring Program
Endicott, New York

Prepared for IBM Corporate Environmental Affairs
File No. 2755.07
November 2016

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1.0 INTRODUCTION

This Annual Report for the Endicott Soil Vapor Monitoring Program (Annual Report) summarizes the findings of the routine soil vapor monitoring program that has been completed through August 2016 under IBM's Comprehensive Operations, Maintenance and Monitoring Plan (COM&M Plan). The objective of the program is to monitor for changes in the presence of certain volatile organic compounds (VOCs) that was the basis for decisions for installation of engineered systems to address potential for vapors to enter human occupied structures.

Sanborn Head & Associates, Inc. (Sanborn Head) prepared this report for IBM's submittal to the New York Department of Environmental Conservation (NYSDEC) and the New York State Department of Health (NYSDOH), collectively the "Agencies", as a component of deliverables that IBM agreed to provide under the COM&M Plan. Sanborn Head's services and this document are subject to the limitations outlined in the text and Appendix A.

1.1 Background

IBM has installed and is maintaining "ventilation systems" in buildings within certain areas of the Village of Endicott and Town of Union, New York. The limits of properties offered ventilation systems, or the geographic limits of ventilation, are shown on Figure 1. These limits were established through work conducted under an Agency approved action plan through a program of concurrent sampling of indoor air, substructure soil vapor, and ambient air at representative properties, also known as the Groundwater Vapor Project (GVP). The findings of sampling in the first four months of 2003 largely established the present limits of ventilation, which was confirmed through sampling conducted during two subsequent heating seasons. The soil vapor monitoring program began in August 2004.

Trichloroethene (TCE) is the primary VOC found in soil vapor within the largest contiguous ventilation area, and is the compound that was the basis for the bulk of ventilation decisions. Other compounds, including the chlorinated ethane 1,1,1-Trichloroethane (TCA), tetrachloroethene (PCE), and their biochemical breakdown products, were also found in this area, but at lower frequencies of detection and at generally lower concentrations that were the basis for a very small proportion of the decisions to mitigate structures.

Since July 2004, IBM substantially expanded extraction and treatment of VOC-containing groundwater, which has altered groundwater levels and flow directions and induced changes in groundwater levels and water quality, especially beneath the largest ventilation area shown on Figure 1. Re-injection of clean water into the subsurface was started in November 2008. Through June 30, 2016, about 152.3 million gallons (MG) were extracted from 12 wells situated in the central portion of the plume[1] and about 128.5 MG was then re-injected via the injection wells shown on Figure 1. Several injection wells were shut down just before or during the August sampling, as summarized in the table below.

[1] Groundwater Sciences Corporation, October 13, 2016, Semiannual Groundwater Data Summary Report (January 1, 2016 – June 30, 2016).

Injection Well	Shut-down Start Date	Shut-down End Date
EN-078T	7/25/2016	8/9/2016
EN-161T	7/17/2016	8/9/2016
EN-501T	6/4/2016	9/19/2016
EN-509T	8/10/2016	Ongoing

1.2 Scope of Work

Since the submittal of the last Annual Report[2], routine sampling has been conducted in February and August 2016, in accordance with the approved routine monitoring program. Sampling was conducted by Groundwater Sciences Corporation (GSC) of Harrisburg, Pennsylvania. A letter report submitted in April 2016[3] reported data from February 2016. The current report is intended to put into larger context the sampling results from the monitoring events in 2016.

For the August 2016 sampling of implant EN10-11D, which is a second deeper "water table-depth" implant installed after water levels dropped significantly, only a small volume of gas was able to be collected before water was drawn into the sample tubing. The sample was submitted for laboratory analysis, but results should be considered approximate.

All of the data were tabulated and reviewed, and used to prepare graphical summaries depicting groundwater and soil vapor data for TCE as presented in Appendix B.2. A tabular summary of soil vapor data recorded during the last 24 months is provided on compact disc in Appendix C.

1.3 Climatic and Groundwater Conditions during the Monitoring Period

The sampling was conducted under a variety of climatic conditions and under conditions of variable groundwater levels. Climatic and groundwater level measurements recorded during the period were reviewed as a context for the findings discussed in Section 2.0.

1.3.1 Climatic Conditions

Figure 2 depicts the deviation from average monthly precipitation as a context for the soil vapor monitoring program, acknowledging that subsurface vapor transport is influenced by soil moisture conditions, which are in turn influenced by infiltration and precipitation. As shown by the plot, below-average precipitation was recorded for several years prior to the start of the Groundwater Vapor Project in 2002. Substantially wetter than average conditions were recorded starting in late 2003 through 2006, and in 2011. Since 2011, precipitation has been generally above average. Below average precipitation has been recorded for the majority of months since mid-2015 consistent with regional drought

[2] Sanborn, Head & Associates, Inc. November 13, 2015, Annual Report – Soil Vapor Monitoring through August 2015.

[3] Sanborn, Head & Associates, Inc. April 27, 2016, Semiannual Data Report – Soil Vapor Monitoring through February 2016.

conditions. Sampling in February and August 2016 was conducted in the two months that exhibited above average precipitation. The climatologic data are included as Appendix B.1.

1.3.2 Groundwater Level Conditions

Table 1 provides the construction details for the monitoring implants along with groundwater level conditions at the time of their installation. A comparison of water levels recorded for May 2016 (prior to shut down of some injection wells) against conditions during installation indicates that about 90% of the monitoring points are near wells exhibiting water levels within 1 foot of what was recorded during installation in 2004. In general, water levels were lower in 2016 compared to 2015, by as much as 4 feet.

1.4 Quality Assurance/Quality Control (QA/QC) for the Monitoring Period

QA/QC measures include field screening of gas samples, and laboratory testing of quality assurance samples including duplicates, equipment blanks, and laboratory control samples. Data collected during the period were considered usable and generally met the project data quality objectives. A brief analysis of field duplicate relative percent difference (RPD), average reporting limit (RL), and blank detections are presented in the table below.

	February 2016	August 2016
Range of RPD (%)	0 to 64%	6.5 to 37%
Location RPD >30%	EN04-30S	EN04-9S (37%) EN04-25S (36%)
Average TCE RL	1.4 µg/m^3	1.2 µg/m^3
Equipment Blanks	ND for TCE	ND for TCE

About 70% of the duplicate analytical results exhibited RPD, or precision, within the data quality objectives established for the monitoring program.

Canisters with insufficient initial vacuum were used to collect samples from EN04-10D, EN04-11S, EN04-16S, and EN04-23S. Low initial vacuum may be attributed to leaking in shipment to the site, and the resulting reduced sample volume may result in biased sampling results or elevated reporting limits. TCE was not detected in samples collected from EN04-16S and EN04-23S, consistent with past results. Historically low TCE concentrations were observed in August in samples from EN04-10D and EN04-11S.

At several locations[4], canisters exhibited high residual vacuums after sample collection (i.e., canisters were collected with final vacuum reading above about 15 in. Hg), resulting in lower sample volumes collected from these locations and associated elevated reporting limits. Reporting limits were only slightly elevated and were within acceptable range. In samples collected from 4 of 5 locations (EN04-41, EN04-4D, and04-10S, and EN06-37D), TCE concentrations in August were consistent with past sampling results. The TCE result for the sample from EN10-11D was below what has been detected in the past, and is probably not a valid observation based on very limited sample volume collected. This vapor monitoring location has been typically found saturated with water and has not been

[4] EN04-1S, EN04-4D, EN04-10S, EN10-11D, and EN06-37D

able to be sampled since just after installation in 2010. In August, water entered the tubing at EN10-11D after less than 10% of the typical sample volume was collected. We recommend that canisters exhibiting insufficient initial vacuum or insufficient sample volume not be used or submitted to the laboratory in future sampling to remove potential for sample container contamination and sample volume inconsistencies as variables.

2.0 DATA AND FINDINGS

Overall, the data from sampling of soil vapor monitoring points continue to support the geographic limits of ventilation as conservative and protective, resulting in substantially diminished vapor intrusion potential.

A review of the groundwater quality data depicted on the graphical plots in Appendix B.2 indicates that at over 80% of the subsurface vapor monitoring locations, TCE source concentrations in groundwater have been substantially diminished under conditions of pumping and re-injection.

2.1 Graphical Comparison of TCE Vapor Concentrations – 2004 and 2016

Plan view graphics showing TCE soil vapor concentrations are included as Figure 3. Views 3A and 3B were generated based on data recorded during the first three months of sampling after vapor implants were installed in August 2004. Views 3C and 3D represent data recorded about 12 years later through August 2016.

The images continue to support an overall reduced presence of TCE in vapor both at foundation and water table depth since establishment of the limits of ventilation. The 2016 data continue to support that TCE concentrations have been reduced to the point where we believe that vapor intrusion potential has likely been largely diminished over the majority of the mitigation area.

A comparison of Figure 3 with the same figure included in the 2015 annual report suggests marginally lower TCE concentrations in the majority of samples from foundation depth, and at least marginally increased concentrations in more than one-half of the samples from near water table depth. As stated in our report in 2015, we expect diminishing rates of change in TCE concentrations in soil gas, reflecting reduced VOC mass transfer driven by diffusion and desorption of mass from vadose zone soils.

3.0 CONCLUSIONS

IBM has successfully implemented a program of soil vapor monitoring for over 12 years since establishment of the limits of ventilation. The data continue to support the limits of ventilation as conservative in that all of the monitoring locations near the ventilation limits have exhibited only trace concentrations, or a stable or declining VOC presence. Overall, the data continue to indicate a diminished VOC presence in soil vapor that that we believe is attributable to both natural processes and IBM's remediation efforts.

Although we recommend that soil vapor monitoring continue at the schedule implemented in 2016, we are considering alternative approaches to assess the continued decline in soil vapor concentrations across the limits of ventilation.

TABLE

TABLE 1
Summary of Soil Vapor Monitoring Implants Installations
Annual Report - Soil Vapor Monitoring Through August 2016
Endicott, New York

Location Designation[1]	Installation Date	Implant Type[2]		Subsurface Conditions at Installation				Completion Details	Groundwater Conditions At Installation		
		Remediation Progress Monitoring	Ventilation Perimeter Monitoring	Nearby Monitoring Well[3]	Date Recorded/ Depth to Water Table[4]	Nominal Implant Depth (ft. bgs)	Inferred Stratum Screened		Vadose Zone Between Shallow and Deep Implants[6] (ft)	Distance Above Water Table[5] (ft)	Saturated Screened Interval[7] (ft)
EN04-1S	Jul-04		X	EN-094	7/26/04 28.47	8	Fill Over Sand	0-1' Concrete Surface Seal 1-6.8 Bentonite Seal 6.8-8.5' Sand Filter Pack 8-8.5' Screened Interval	13.5	5.5	10.5
EN04-1D	Jul-04					23	Sand	0-1' Concrete Surface Seal 1-22' Bentonite Seal 22-23' Glass Bead Filter Pack 22.5-23' Screened Interval			
EN04-2S	Jul-04	X		EN-450	8/5/04 25.17	8	Fill	0-1' Concrete Surface Seal 1-7' Bentonite Seal 7-8' Glass Bead Filter Pack 7.5-8' Screened Interval	11	5.2	4.8
EN04-2D	Jul-04					20	Sand & Gravel	0-1' Concrete Surface Seal 1-19' Bentonite Seal 19-20' Glass Bead Filter Pack 19.5-20' Screened Interval			
EN04-3S	Jul-04		X	EN-203	7/26/04 24.86	8	Sand	0-1' Concrete Surface Seal 1-7' Bentonite Seal 7-8' Glass Bead Filter Pack 7.5-8' Screened Interval	10	5.9	10.1
EN04-3D	Jul-04					19	Sand	0-1' Concrete Surface Seal 1-18' Bentonite Seal 18-19' Glass Bead Filter Pack 18.5-19' Screened Interval			
EN04-4S	Jul-04		X	EN-022	8/5/04 22.98	8	Fill	0-1' Concrete Surface Seal 1-7' Bentonite Seal 7-8' Glass Bead Filter Pack 7.5-8' Screened Interval	8	6	0
EN04-4D	Jul-04					17	Gravel	0-1' Concrete Surface Seal 1-16' Bentonite Seal 16-17' Glass Bead Filter Pack 16.5-17' Screened Interval			
EN04-5S	Jul-04		X	EN-459A	8/18/04 40.01	8	Sand & Gravel	0-1' Concrete Surface Seal 1-7' Bentonite Seal 7-8' Glass Bead Filter Pack 7.5-8' Screened Interval	25	5	10
EN04-5D	Jul-04					34	Sand	0-1' Concrete Surface Seal 1-33' Bentonite Seal 33-34' Glass Bead Filter Pack 33.5-34' Screened Interval			
EN04-6S	Jul-04		X	EN-310	7/29/04 <28	8	Sand	0-1' Concrete Surface Seal 1-7' Bentonite Seal 7-8' Glass Bead Filter Pack 7.5-8' Screened Interval	18	1	0
EN04-6D	Jul-04					27	Sand & Gravel	0-1' Concrete Surface Seal 1-26' Bentonite Seal 26-27' Glass Bead Filter Pack 26.5-27' Screened Interval			
EN04-7S	Jul-04	X		EN-311	7/28/04 43.7	8	Sand Over Sand & Gravel	0-1' Concrete Surface Seal 1-7' Bentonite Seal 7-8' Glass Bead Filter Pack 7.5-8' Screened Interval	25	9.7	1.3
EN04-7D	Jul-04					34	Poorly Sorted Sand	0-1' Concrete Surface Seal 1-33' Bentonite Seal 33-34' Glass Bead Filter Pack 33.5-34' Screened Interval			
EN04-9S	Jul/Aug-02	X		EN-279	11/3/03 26.23	8	Well Sorted Sand	0-2' Concrete Surface Seal 2-7' Bentonite Seal 7-8' Glass Bead Filter Pack 7.5-8' Screened Interval	11	6	2.1
EN04-9D	Jul/Aug-02					20	Well Sorted Sand	0-2' Concrete Surface Seal 2-19' Bentonite Seal 19-20' Glass Bead Filter Pack 19.5-20' Screened Interval			

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EN04-10S	Jul/Aug-02	X		EN-077	11/3/04 26.18	8	Gravel	0-2' Concrete Surface Seal 2-6.5' Bentonite Seal 6.5-7.5' Glass Bead Filter Pack 7-7.5' Screened Interval	11.2	6.3	1.3
EN04-10D	Jul/Aug-02					20	Well Sorted Sand	0-2' Concrete Surface Seal 2-18.7' Bentonite Seal 18.7-19.7' Glass Bead Filter Pack 19.2-19.7' Screened Interval			
EN04-11S	Jul-04	X		EN-215A	7/29/04 28.17	8	Well Sorted Sand	0-1' Concrete Surface Seal 1-7' Bentonite Seal 7-8.5' Sand Filter Pack 8-8.5' Screened Interval	11.5	7.2	7.2
EN04-11D	Jul-04					21	Well Sorted Sand	0-1' Concrete Surface Seal 1-20' Bentonite Seal 20-21' Glass Bead Filter Pack 20.5-21' Screened Interval			
EN10-11D	May-10			EN-215	5/12/10 34	30	Sand & Gravel	0-1' Concrete Surface Seal 1-3' Sand 3-5' Bentonite Chips 5-10' Sand 10-18' Grout 18-25.6' Sand 25.6-29 Powdered Bentonite 29-30' Glass Bead Filter Pack 29.5-30' Screened Interval	22	4	15.2
EN04-12S	Jul-04	X		EN-214A	7/30/04 25.18	8	Sand & Gravel	0-1' Concrete Surface Seal 1-7' Bentonite Seal 7-8' Glass Bead Filter Pack 7.5-8' Screened Interval	10	6.2	11.8
EN04-12D	Jul-04					19	Sand & Gravel	0-1' Concrete Surface Seal 1-18' Bentonite Seal 18-19' Glass Bead Filter Pack 18.5-19' Screened Interval			
EN04-13S	Jul-04	X		EN-449	7/29/04 36.05	8	Well Sorted Sand	0-1' Concrete Surface Seal 1-7' Bentonite Seal 7-8' Glass Bead Filter Pack 7.5-8' Screened Interval	21	6	13.5
EN04-13D	Jul-04					30	Sand & Gravel	0-1' Concrete Surface Seal 1-29' Bentonite Seal 29-30' Glass Bead Filter Pack 29.5-30' Screened Interval			
EN04-14S	Jul-04	X		EN-462	8/5/04 40.09	8	Sand & Gravel	0-1' Concrete Surface Seal 1-7' Bentonite Seal 7-8' Glass Bead Filter Pack 7.5-8' Screened Interval	25	5	4
EN04-14D	Jul-04					34	Poorly Sorted Sand	0-1' Concrete Surface Seal 1-33' Bentonite Seal 33-34' Glass Bead Filter Pack 33.5-34' Screened Interval			
EN04-15S	Jul-04		X	EN-162	7/29/04 35.33	8	Well Sorted Sand	0-1' Concrete Surface Seal 1-7' Bentonite Seal 7-8' Glass Bead Filter Pack 7.5-8' Screened Interval	21	5.3	6.2
EN04-15D	Jul-04					30	Sand & Gravel	0-1' Concrete Surface Seal 1-29' Bentonite Seal 29-30' Glass Bead Filter Pack 29.5-30' Screened Interval			
EN04-16S	Jul-04	X		EN-206	7/27/04 39.54	8	Fill	0-1' Concrete Surface Seal 1-7.3' Bentonite Seal 7.3-8.5' Sand Filter Pack 8-8.5' Screened Interval	24.5	5.5	10.5
EN04-16D	Jul-04					34	Sand & Gravel	0-1' Concrete Surface Seal 1-33' Bentonite Seal 33-34' Glass Bead Filter Pack 33.5-34' Screened Interval			

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		Remediation Progress Monitoring	Ventilation Perimeter Monitoring	Nearby Monitoring Well[3]	Date Recorded/ Depth to Water Table[4]	Nominal Implant Depth (ft. bgs)	Inferred Stratum Screened		Vadose Zone Between Shallow and Deep Implants[6] (ft)	Distance Above Water Table[5] (ft)	Saturated Screened Interval[7] (ft)
EN04-17S	Jul-04	X		EN-401	7/29/04 35.5	8	Sand & Gravel	0-1' Concrete Surface Seal 1-7' Bentonite Seal 7-8' Glass Bead Filter Pack 7.5-8' Screened Interval	19	7.5	3.5
EN04-17D	Jul-04					28	Sand & Gravel	0-1' Concrete Surface Seal 1-27' Bentonite Seal 27-28' Glass Bead Filter Pack 27.5-28' Screened Interval			
EN10-17D	May-10				5/13/10 38	34	Sand & Gravel	0-1' Concrete Surface Seal 1-3' Sand 3-5' Bentonite Chips 5-10' Sand 10-25' Grout 25-30' Sand 30-33' Powdered Bentonite 33-34' Glass Bead Filter Pack 33.5-34' Screened Interval	26	4	1
EN04-18S	Jul-04		X	EN-217A	7/29/04 36.69	8	Sand & Gravel	0-1' Concrete Surface Seal 1-7' Bentonite Seal 7-8' Glass Bead Filter Pack 7.5-8' Screened Interval	22	5.9	5.3
EN04-18D	Jul-04					31	Sand & Gravel	0-1' Concrete Surface Seal 1-30' Bentonite Seal 30-31' Glass Bead Filter Pack 30.5-31' Screened Interval			
EN04-19S	Jul-04	X		EN-426	7/26/04 35.39	8	Sand & Gravel	0-1' Concrete Surface Seal 1-7' Bentonite Seal 7-8' Glass Bead Filter Pack 7.5-8' Screened Interval	20.5	5.9	4.6
EN04-19D	Jul-04					29.5	Sand & Gravel	0-1' Concrete Surface Seal 1-28.5' Bentonite Seal 28.5-29.5' Glass Bead Filter Pack 29-29.5' Screened Interval			
EN04-20S	Jul-04					8	Gravel	0-1' Concrete Surface Seal 1-7' Bentonite Seal 7-8' Glass Bead Filter Pack 7.5-8' Screened Interval	25.5		
EN04-20I	Jul-04		X	EN-207	7/27/04 43.2	24	Gravel	0-1' Concrete Surface Seal 1-23' Bentonite Seal 23-24' Glass Bead Filter Pack 23.5-24' Screened Interval	9.5	7.7	4.3
EN04-20D	Jul-04					36	Sand	0-1' Concrete Surface Seal 1-20' Formation Material 20-33.5' Bentonite Seal 33.5-35.5' Glass Bead Filter Pack 35-35.5' Screened Interval			
EN04-21S	Jul-04		X	EN-468	10/14/04 34.43	7.5	Sand & Gravel	0-1' Concrete Surface Seal 1-6.5' Bentonite Seal 6.5-7.5' Glass Bead Filter Pack 7-7.5' Screened Interval	14.5	12	4
EN04-21D	Jul-04					23	Sand & Gravel	0-1' Concrete Surface Seal 1-12' Formation Material 12-22' Bentonite Seal 22-23' Glass Bead Filter Pack 22.5-23' Screened Interval			
EN04-22S	Jul/Aug-02	X		EN-80* and EN-393*	7/27/04 18.75	8	Well Sorted Sand	0-2' Concrete Surface Seal 2-7.1' Bentonite Seal 7.1-7.5' Glass Bead Filter Pack 7.5-8' Screened Interval	7	2.8	6
EN04-22D	Jul/Aug-02					16	Well Sorted Sand	0-2' Concrete Surface Seal 2-15' Bentonite Seal 15-16' Glass Bead Filter Pack 15.5-16' Screened Interval			

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		Remediation Progress Monitoring	Ventilation Perimeter Monitoring	Nearby Monitoring Well[3]	Date Recorded/ Depth to Water Table[4]	Nominal Implant Depth (ft. bgs)	Inferred Stratum Screened		Vadose Zone Between Shallow and Deep Implants[6] (ft)	Distance Above Water Table[5] (ft)	Saturated Screened Interval[7] (ft)
EN04-23S	Jul-04		X	EN-174	7/30/04 26.48	8	Well Sorted Sand	0-1' Concrete Surface Seal 1-7' Bentonite Seal 7-8' Glass Bead Filter Pack 7.5-8' Screened Interval	14	3.5	4.5
EN04-23I	Jul-04					15	Well Sorted Sand	0-1' Concrete Surface Seal 1-14' Bentonite Seal 14-15' Glass Bead Filter Pack 14.5-15' Screened Interval	7		
EN04-23D	Jul-04					23	Well Sorted Sand	0-1' Concrete Surface Seal 1-22' Bentonite Seal 22-23' Glass Bead Filter Pack 22.5-23' Screened Interval			
EN04-24S	Jul-04		X	EN-65	7/29/04 22.89	8	Fill	0-1' Concrete Surface Seal 1-6.5' Bentonite Seal 6.5-8.5' Sand Filter Pack 8-8.5' Screened Interval	9.5	3.9	17.8
EN04-24D	Jul-04					19	Poorly Sorted Sand	0-1' Concrete Surface Seal 1-18' Bentonite Seal 18-19' Glass Bead Filter Pack 18.5-19' Screened Interval			
EN04-25S	Aug-04		X	EN-395	7/29/04 18.88	8	Fill	0-1' Concrete Surface Seal 1-7' Bentonite Seal 7-8' Glass Bead Filter Pack 7.5-8' Screened Interval	8.5	1.4	5
EN04-25D	Aug-04					17.5	Sand & Gravel	0-1' Concrete Surface Seal 1-16.5' Bentonite Seal 16.5-17.5' Glass Bead Filter Pack 17-17.5' Screened Interval			
EN04-26S	Jul-04	X		EN-304	7/30/04 17.39	8	Sand & Gravel	0-1' Concrete Surface Seal 1-7' Bentonite Seal 7-8' Glass Bead Filter Pack 7.5-8' Screened Interval	5	3.4	6.6
EN04-26D	Jul-04					14	Sand & Gravel	0-1' Concrete Surface Seal 1-13' Bentonite Seal 13-14' Glass Bead Filter Pack 13.5-14' Screened Interval			
EN04-27S	Jul-04		X	EN-417A	7/29/04 8.91	8	Fill	0-1' Concrete Surface Seal 1-6' Bentonite Seal 6-7' Glass Bead Filter Pack 6.5-7' Screened Interval	-	0.9	14
EN07-28S	Jun-07		X	EN-387A	6/5/2007 22	7	Well Sorted Sand	0-1' Concrete Surface Seal 1-7' Bentonite Seal 7-8' Glass Bead Filter Pack 7.5-8' Screened Interval	11	3	9.5
EN07-28I	Jun-07					10	Sand & Gravel	0-1' Concrete Surface Seal 1-9' Bentonite Seal 9-10' Glass Bead Filter Pack 9.5-10' Screened Interval			
EN07-28D	Jun-07					19	Well Sorted Sand	0-1' Concrete Surface Seal 1-18' Bentonite Seal 18-19' Glass Bead Filter Pack 18.5-19' Screened Interval			
EN05-29S	4/18/2005	X		EN-437	8/5/04 23.87	7.5	Well Sorted Sand	0-1' Concrete Surface Seal 1-5.5' Bentonite Seal 5.5-7.5' Glass Bead Filter Pack 7-7.5' Screened Interval	11	3.9	11.1
EN05-29I	4/18/2005					12.5	Well Sorted Sand	0-1' Concrete Surface Seal 1-11' Bentonite Seal 11-12.5' Glass Bead Filter Pack 12-12.5' Screened Interval			
EN04-29D	Jul-04					20	Well Sorted Sand	0-1' Concrete Surface Seal 1-19' Bentonite Seal 19-20' Glass Bead Filter Pack 19.5-20' Screened Interval			

TABLE 1
Summary of Soil Vapor Monitoring Implants Installations
Annual Report - Soil Vapor Monitoring Through August 2016
Endicott, New York

Location Designation[1]	Installation Date	Implant Type[2]		Subsurface Conditions at Installation				Completion Details	Groundwater Conditions At Installation		
		Remediation Progress Monitoring	Ventilation Perimeter Monitoring	Nearby Monitoring Well[3]	Date Recorded/ Depth to Water Table[4]	Nominal Implant Depth (ft. bgs)	Inferred Stratum Screened		Vadose Zone Between Shallow and Deep Implants[6] (ft)	Distance Above Water Table[5] (ft)	Saturated Screened Interval[7] (ft)
EN04-30S	Jul-04	X		EN-438	8/5/04 26.02	9	Well sorted Sand	0-1' Concrete Surface Seal 1-7' Bentonite Seal 7-8' Glass Bead Filter Pack 7.5-8' Screened Interval	11	6	8
EN04-30D	Jul-04					20	Well Sorted Sand	0-1' Concrete Surface Seal 1-19' Bentonite Seal 19-20' Glass Bead Filter Pack 19.5-20' Screened Interval			
EN04-31S	Aug-04		X	EN-453	8/25/04 19.48	10	Well sorted Sand	0-1' Concrete Surface Seal 1-9' Bentonite Seal 9-10 Glass Bead Filter Pack 9.5-10' Screened Interval	8	0.5	12
EN04-31D	Aug-04					19	Well Sorted Sand	0-1' Concrete Surface Seal 1-18' Bentonite Seal 18-19' Glass Bead Filter Pack 18.5-19' Screened Interval			
EN04-32S	Aug-04		X	EN-457A	8/23/04 21.36	8	Well sorted Sand	0-1' Concrete Surface Seal 1-7' Bentonite Seal 7-8' Glass Bead Filter Pack 7.5-8' Screened Interval	9	3.4	5
EN04-32D	Aug-04					18	Sand	0-1' Concrete Surface Seal 1-17' Bentonite Seal 17-18' Glass Bead Filter Pack 17.5-18' Screened Interval			
EN05-33S	Apr-05	X		EN-162	4/19/04 34.36	7.5	Well Sorted Sand	0-1' Concrete Surface Seal 1-5.8' Bentonite Seal 5.8-7.5' Glass Bead Filter Pack 7-7.5' Screened Interval	22.5	2.3	6.2
EN05-33I21	Apr-05					21.5	Well Sorted Sand	0-1' Concrete Surface Seal 1-19' Bentonite Seal 19-21.5' Glass Bead Filter Pack 21-21.5' Screened Interval			
EN05-33I29	Apr-05					29	Poorly Sorted Sand and Gravel	0-1' Concrete Surface Seal 1-27.7' Bentonite Seal 27.7-29' Glass Bead Filter Pack 28.5-29' Screened Interval			
EN05-33D	Apr-05					32	Well Sorted Sand	0-1' Concrete Surface Seal 1-30' Bentonite Seal 30-32' Glass Bead Filter Pack 31.5-32' Screened Interval			
EN05-34S	Apr-05	X		EN-304	4/18/2004 16.67	8	Well Sorted Sand	0-1' Concrete Surface Seal 1-7' Bentonite Seal 7-8' Glass Bead Filter Pack 7.5-8' Screened Interval	4	3.2	6.6
EN05-34I	Apr-05					11	Well Sorted Sand	0-1' Concrete Surface Seal 1-10' Bentonite Seal 10-11' Glass Bead Filter Pack 10.5-11' Screened Interval			
EN05-34D	Apr-05					13.5	Well Sorted Sand	0-1' Concrete Surface Seal 1-12' Bentonite Seal 12-13.5' Glass Bead Filter Pack 13-13.5' Screened Interval			
EN06-35S	Jan-06		X	EN-460A	8/11/04 40.2	8	Well Sorted Sand	0-1' Concrete Surface Seal 1-7.2' Bentonite Seal 7.2-8.5' Glass Bead Filter Pack 7.5-8' Screened Interval	25.3	6.2	10
EN06-35I16	Jan-06					16	Poorly Sorted Sand and Gravel	8.5-14.7' Bentonite Seal 14.7-16.6' Glass Bead Filter Pack 15.5-16' Screened Interval			
EN06-35I24	Jan-06					24	Well Sorted Sand	16.6-22.3' Bentonite Seal 22.3-24.3' Glass Bead Filter Pack 23.5-24' Screened Interval			
EN06-35D	Jan-06					34	Poorly Sorted Sand and Gravel	24.3-33.3' Bentonite Seal 33.3-34.3' Glass Bead Filter Pack 33.8-34.3' Screened Interval			

TABLE 1
Summary of Soil Vapor Monitoring Implants Installations
Annual Report - Soil Vapor Monitoring Through August 2016
Endicott, New York

Location Designation[1]	Installation Date	Implant Type[2]		Subsurface Conditions at Installation				Completion Details	Groundwater Conditions At Installation		
		Remediation Progress Monitoring	Ventilation Perimeter Monitoring	Nearby Monitoring Well[3]	Date Recorded/ Depth to Water Table[4]	Nominal Implant Depth (ft. bgs)	Inferred Stratum Screened		Vadose Zone Between Shallow and Deep Implants[6] (ft)	Distance Above Water Table[5] (ft)	Saturated Screened Interval[7] (ft)
EN06-36S	Jan-06		X	EN-459A	8/18/04 40.01	8	Well Sorted Sand	0-1' Concrete Surface Seal 1-6.9' Bentonite Seal 6.9-8.6' Sand Filter Pack 7.5-8.0' Screened Interval	23.8	7	10
EN06-36I12	Jan-06					12	Poorly Sorted Sand and Gravel	8.6-10.5 Bentonite Seal 10.5-11.5' Glass Bead Filter Pack 11.5-12.' Screened Interval			
EN06-36I22	Jan-06					22	Well Sorted Sand	12.5-20.9' Bentonite Seal 20.9-22.5' Glass Bead Filter Pack 21.5-22.' Screened Interval			
EN06-36D	Jan-06					33	Poorly Sorted Sand and Gravel	22.5-31.8' Bentonite Seal 31.8-34' Glass Bead Filter Pack 32.5-33' Screened Interval			
EN06-37S	Jan-06		X	EN-394	7/27/04 22.3	8	Well Sorted Sand	0-1' Concrete Surface Seal 1-7' Bentonite Seal 7-8' Glass Bead Filter Pack 7.5-8' Screened Interval	12	1.3	3.2
EN06-37I	Jan-06					12	Well Sorted Sand	0-1' Concrete Surface Seal 1-11' Bentonite Seal 11-12' Glass Bead Filter Pack 11.5-12' Screened Interval			
EN06-37D	Jan-06					21	Well Sorted Sand	0-1' Concrete Surface Seal 1-20' Bentonite Seal 20-21' Glass Bead Filter Pack 20.5-21' Screened Interval			

Notes:
1. This table is intended to summarize implant depths, subsurface conditions , completion details, and quarterly sampling schedule for routine monitoring of soil vapor implants used as part of IBM's Comprehensive Operations, Maintenance and Monitoring program in Endicott, New York.

2. Remediation Progress Monitoring implants are intended to monitor ongoing groundwater remediation activities within and on the boundary of the area where IBM is currently remediating groundwater. Ventilation Progress Perimeter Monitoring implants are intended to monitor conditions at or near the limits of the Ventilation Area.

3. The "nearby monitoring wells" field identifies the monitoring well used to characterize groundwater quality proximate to the implant location, typically within 20 feet horizontally. Entries flagged with an asterisk are well locations more remote from the implant location.

4. The "depth to water table" field is based on depth to water measurements recorded from top of well casing (TOC) as measured by SHA and GSC personnel between July 26 and August 5, 2004 and by Sanborn Head on April 18 and 19, 2005. Water levels indicated by an asterisk are nominal water levels based on monitoring wells more than approximately 20 feet from the soil vapor implant.

5. The "Distance Above Water Table" field reflects the approximate vertical distance between the deep implant and the water table at the time of implant installation and in May 2012. During implant installation, drilling depths were generally targeted to 5' above the water table based on current available information. The actual separation will vary with fluctuations in water level conditions and may be greater or less.

6. The "Vadose Zone Between Shallow and Deep Implants" field identifies the thickness of unsaturated soils between the implants and represents to the distance between the top of the glass bead filter pack of the deeper implant and the bottom of the implant screen of the shallow implant.

7. The "Saturated Screened Interval" field lists the approximate thickness of upper aquifer that the well is screened across which is based on boring and well completion logs provided by others and the depth to water table recorded around the time of implant installation and in May 2008. The actual saturated screen interval will vary with fluctuations in groundwater levels.

8. The "Difference" field calculates the change in saturated screened interval from around the time of implant installation to August 2012. A negative number indicates the water table has dropped at that location. The change in saturated thickness was used to calculate an updated distance above water table for the deep

FIGURES

Notes

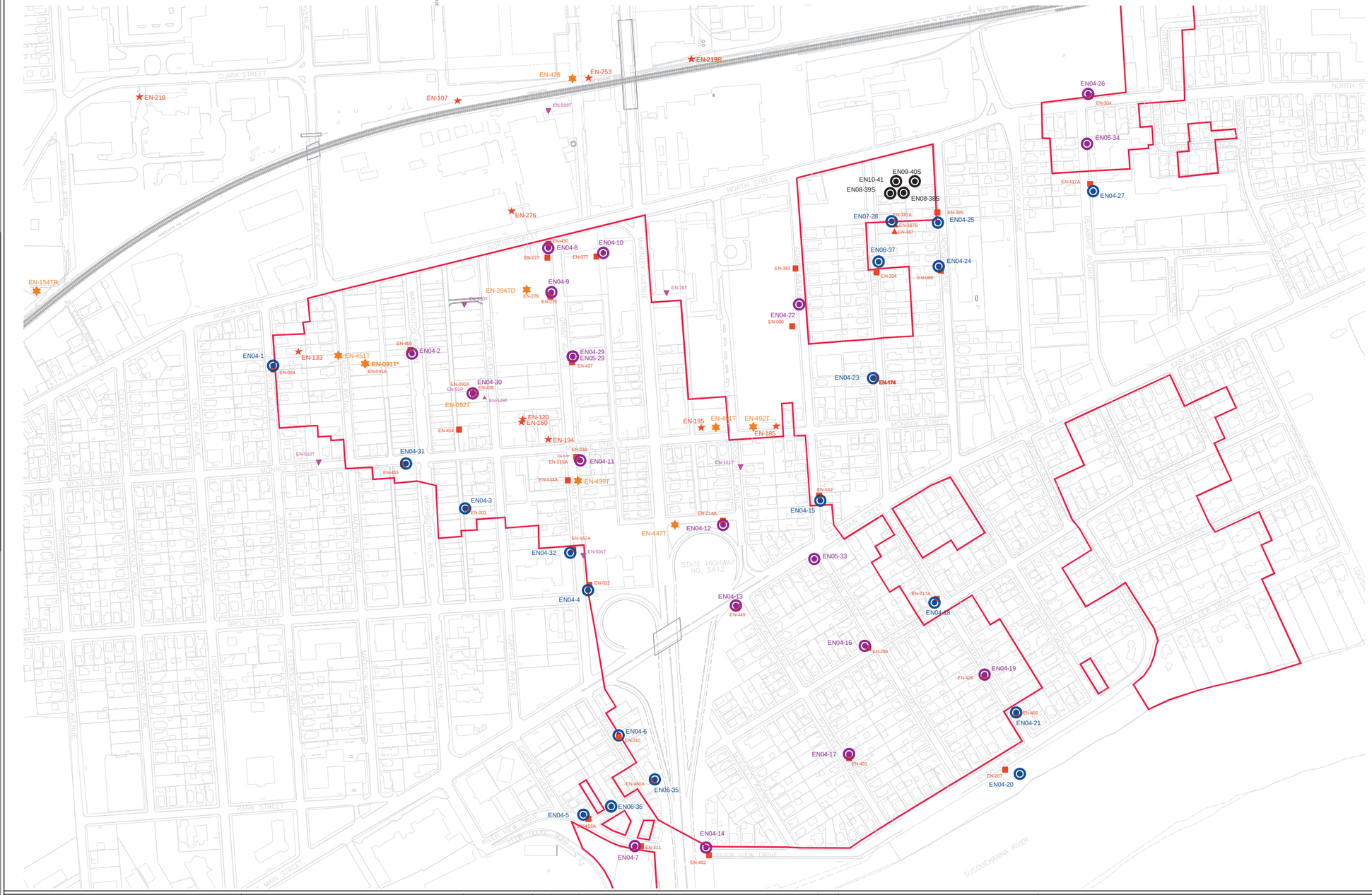
1. This figure is intended to depict soil vapor monitoring locations that have been established and maintained as part of the Comprehensive Operations, Maintenance & Monitoring Program. The locations of the soil vapor monitoring implants are based on taped measurements relative to physical features in the field and are accurate only to the degree implied by the method used.

2. The base map information presented below is adapted from four AutoCAD drawings entitled "Endicott2000.dwg", "Union2000.dwg", "Unioneast.dwg", and "Endicottplh.dwg". The drawings were provided by the Broome County mapping division and were received by Sanborn Head on October 10, 2002. The building outlines and other site features are based on an AutoCAD drawing entitled "9_03_base.dwg" provided by Groundwater Sciences Corporation (GSC) of Harrisburg, Pennsylvania to Sanborn Head in September 2003. The locations of groundwater monitoring and recovery wells are based on an AutoCAD drawing by GSC submitted to Sanborn Head on 05/17/2004 entitled "2007N006.dwg". The well locations are reportedly based on field surveys performed in 2003 and 2004. For wells installed in July and August 2004, well locations are based on northing and easting coordinates provided on draft well logs provided to Sanborn Head on 09/21/2004. Well locations installed since that time are based on drawings provided by GSC.

3. The limits of ventilation shown in red encompass properties where IBM has offered to install a ventilation system. The ventilation areas were identified under the review of the New York State Departments of Environmental Conservation and Health based on results of sampling foundation level soil vapor, substructure soil vapor, indoor air, and outdoor air completed between November 2002 and March 2005.

Legend

- Limits of Ventilation
- Mailing address, arrow indicates facing street
- EN04-1 — Soil Vapor Monitoring Location - Perimeter Monitoring
- EN04-1 — Soil Vapor Monitoring Location - Remediation Progress Monitoring
- EN08-1 — Soil Vapor Monitoring Location - OU# 4
- EN09-1 — Proposed Soil Gas Monitoring Implant
- EN-430 — Upper Aquifer Monitoring Well
- EN-428 — Upper Aquifer Interceptor Extraction Well
- EN-510T — Upper Aquifer Injection Well



SANBORN HEAD

GRAPHICAL SCALE
150' 75' 0 150' 300'

NO.	DATE	DESCRIPTION	BY

Drawn By: E. Wright
Designed By: E. Bosse
Reviewed By: D. Carr
Project Mgr: E. Bosse
Pic: D. Carr
Date: November 2016

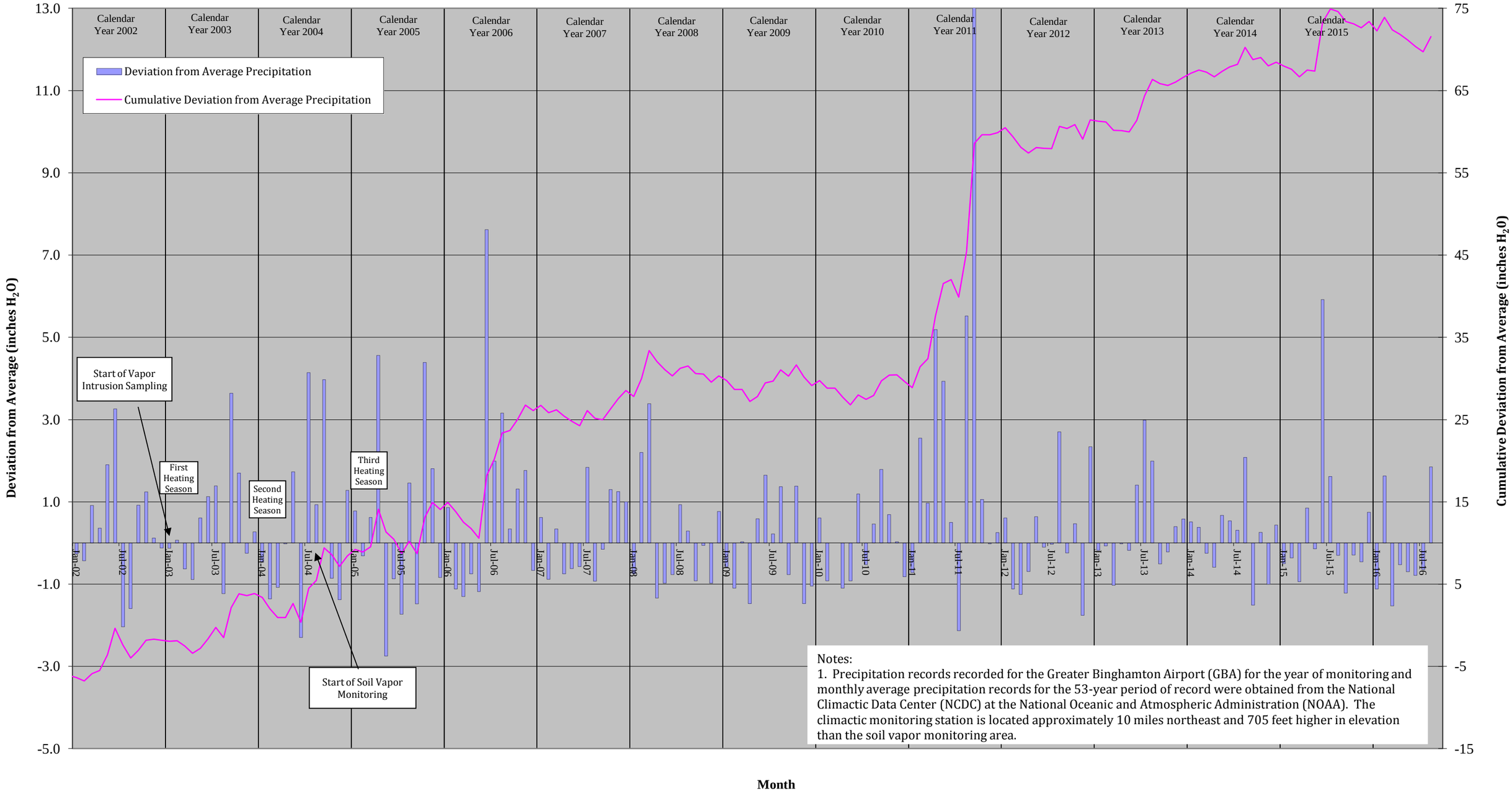
Annual Report - Soil Vapor Monitoring through August 2016
Comprehensive Operations, Maintenance & Monitoring Program
Endicott, New York

Soil Vapor Implant Location Plan

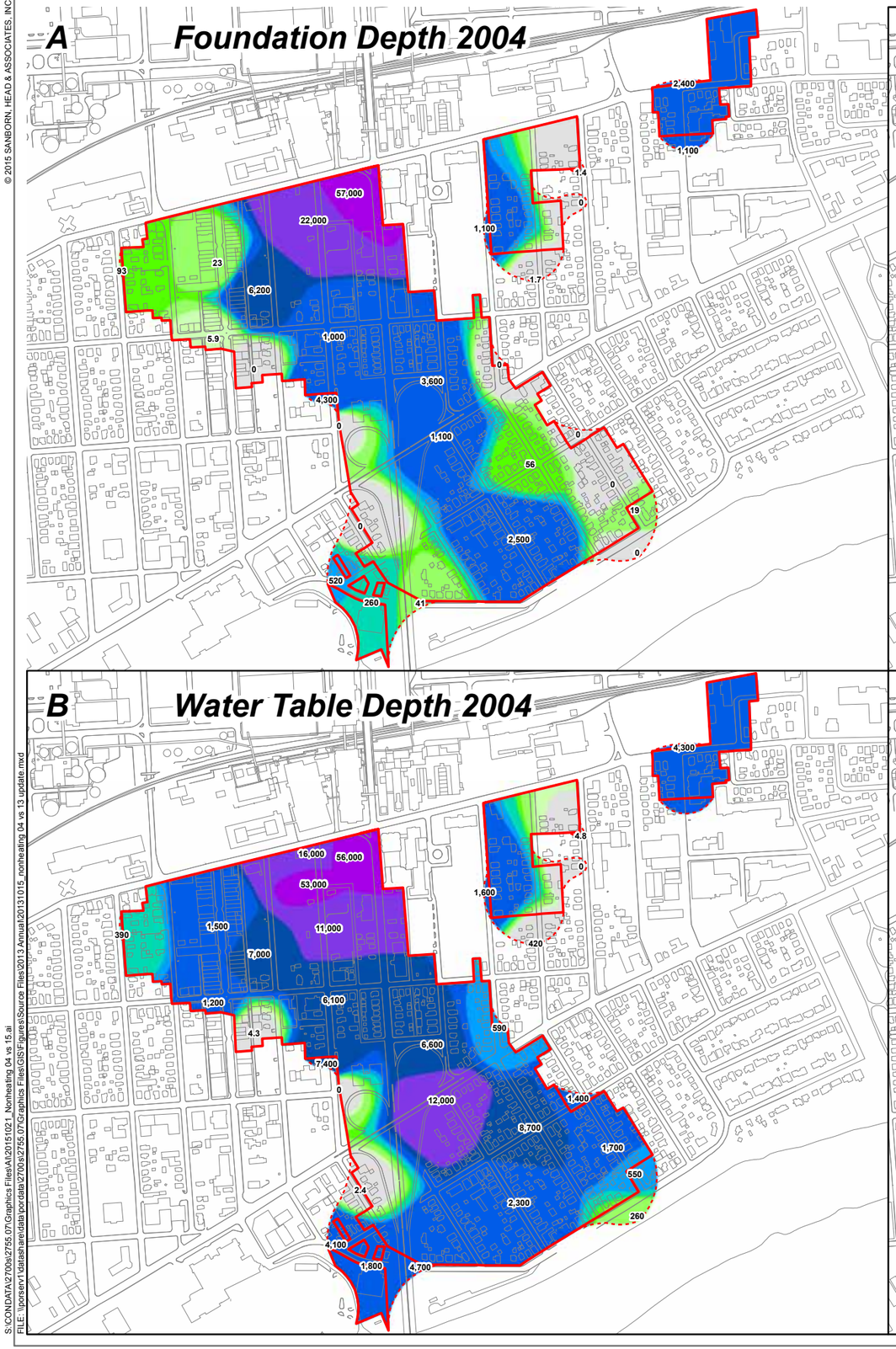
Project Number: 2755.08

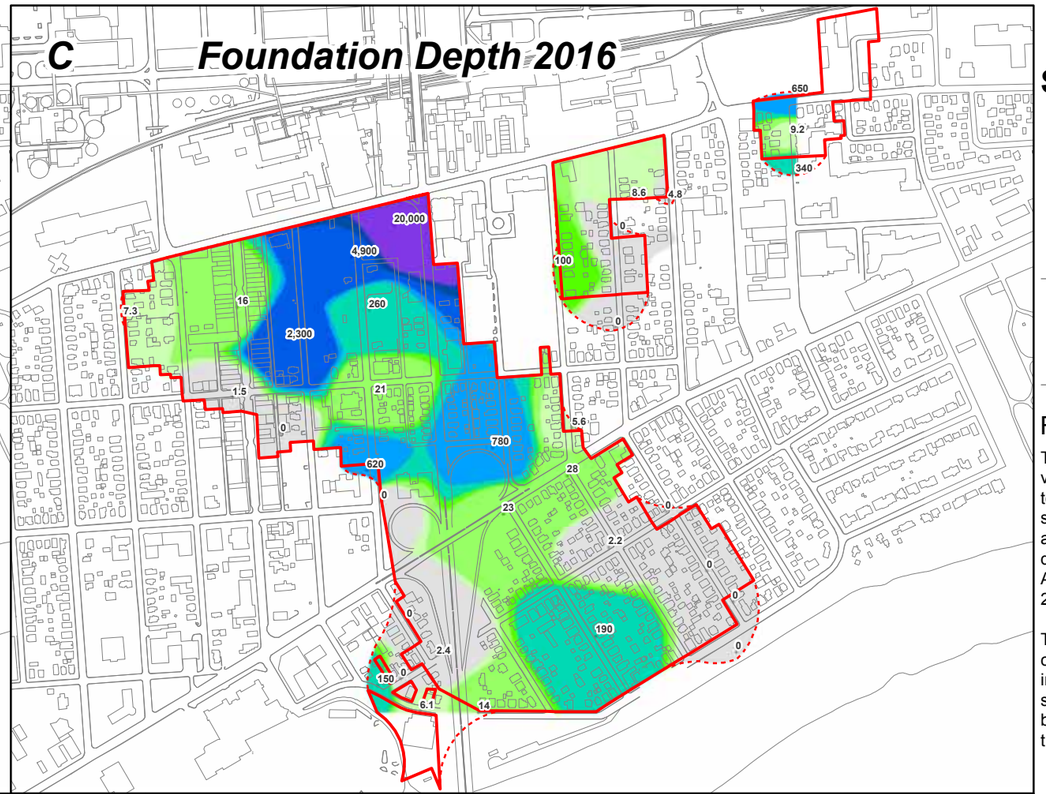
Figure Number: 1

Figure 2
Historical Precipitation Records
Annual Report - Soil Vapor Monitoring through August 2016
Endicott, New York



Notes:
1. Precipitation records recorded for the Greater Binghamton Airport (GBA) for the year of monitoring and monthly average precipitation records for the 53-year period of record were obtained from the National Climactic Data Center (NCDC) at the National Oceanic and Atmospheric Administration (NOAA). The climactic monitoring station is located approximately 10 miles northeast and 705 feet higher in elevation than the soil vapor monitoring area.





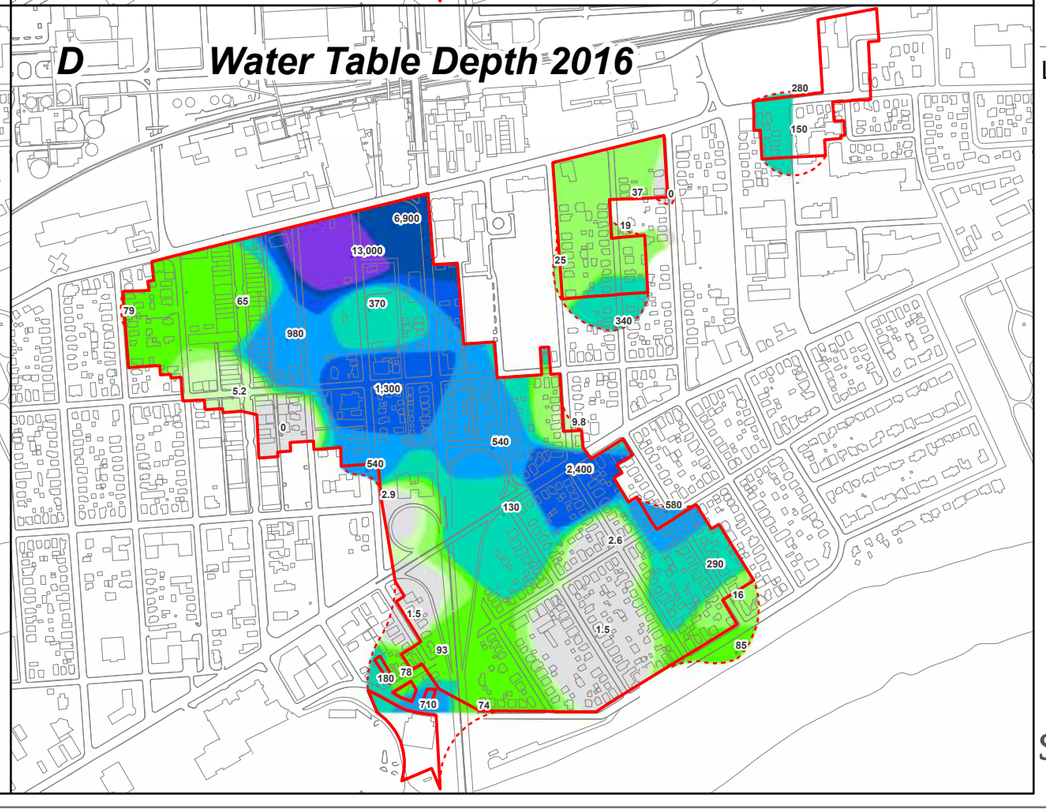


Figure 3

Comparisons of TCE Soil Vapor Concentrations Non Heating Season

Annual Report - Soil Vapor Monitoring Through August 2016

IBM

Endicott, New York

Drawn By:	C. LaVack
Designed By:	E. Bosse
Reviewed By:	D. Carr
Project No:	2755.08
Date:	November 2016

Figure Narrative

These figures depict TCE concentrations in soil vapor samples at different times and are intended to aid in communicating general temporal trends in soil vapor concentrations consistent with the available data. The non heating season images display an average of the data recorded between August and October 2004 compared to August 2016.

The images were created using uniform and consistent spatial statistical algorithms and are intended not as absolute indicators of the limits of soil vapor concentrations at a given time but a basis of comparison between data from different times.

Legend

340 — Soil Vapor Implant Location - TCE concentrations in micrograms per cubic meter (µg/m³)

Limits of Ventilation

- 0 - 5
- 5 - 10
- 10 - 50
- 50 - 100
- 100 - 500
- 500 - 1,000
- 1,000 - 5,000
- 5,000 - 10,000
- 10,000 - 50,000
- 50,000 - 100,000

µg/m³

N W E S

400 200 0 400 800 Feet

SANBORN HEAD

S:\CONDATA\2700s\2755.07\Graphics Files\A\20151021_Northeating 04 vs 15.ai
FILE: \\porserv1\datashare\data\prodata\2700s\2755.07\Graphics Files\GIS Figures\Source Files\2013 Annual\20131015_nonheating 04 vs 13 update.mxd

APPENDIX A

LIMITATIONS

APPENDIX A
LIMITATIONS

1. The conclusions described in this report are based in part on the data obtained from a finite number of soil vapor, ambient air, soil, and groundwater samples from widely spaced subsurface explorations. The nature and extent of variations between these explorations may not become evident until further investigation is initiated. If variations or other latent conditions then appear evident, it may be necessary to re-evaluate the conclusions of this report.

2. The conclusions contained in this report are based in part upon various types of chemical data as well as historical and hydrogeologic information developed by previous investigators. While Sanborn Head has reviewed that data available to us at the time the report was prepared and information as stated in this report, any of Sanborn Head's interpretations and conclusions that have relied on that information will be contingent on its validity. Sanborn Head has not performed an independent assessment of the reliability of the data; should additional chemical data, historical information, or hydrogeologic information become available in the future, such information should be reviewed by Sanborn Head and the interpretations and conclusions presented herein may be modified accordingly.

3. Sampling and quantitative laboratory testing was performed by others as part of the investigation as noted within the report. Where such analyses have been conducted by an outside laboratory, unless otherwise stated in the report, Sanborn Head has relied upon the data provided, and has not conducted an independent evaluation of the reliability of these data.

APPENDIX B

FIELD SAMPLING & LABORATORY ANALYSIS

APPENDIX B.1

CLIMATOLOGIC DATA

QUALITY CONTROLLED LOCAL CLIMATOLOGICAL DATA

(final)

NOAA, National Climatic Data Center

Month: 01/2016

Station Location: GREATER BINGHAMTON/E A LINK FIELD AP (04725)
BINGHAMTON, NY
Lat. 42.206 Lon. -75.98
Elevation(Ground): 1595 ft. above sea level

Date	Temperature (Fahrenheit)						Degree Days Base 65 Degrees		Sun		Significant Weather	Snow/Ice on Ground(In)		Precipitation (In)		Pressure(inches of Hg)		Wind: Speed=mph Dir=tens of degrees							Date
	Max.	Min.	Avg.	Dep From Normal	Avg. Dew pt.	Avg Wet Bulb	Heating	Cooling	Sunrise LST	Sunset LST		1200 UTC Depth	1800 UTC Water Equiv	2400 LST Snow Fall	2400 LST Water Equiv	Avg. Station	Avg. Sea Level	Resultant Speed	Res Dir	Avg. Speed	max 5-second Speed	max 5-second Dir	max 2-minute Speed	max 2-minute Dir	
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26
01	31	22	27	4	21	26	38	0	0733	1643	SN BR	T	M	0.3	0.01	28.21	30.00	10.5	27	11.2	29	320	21	300	01
02	28	20	24	1	19	23	41	0	0733	1643		T	M	T	T	28.20	29.98	7.9	25	8.3	24	270	20	230	02
03	31	21	26	3	22	26	39	0	0733	1644	SN	T	M	0.2	T	28.02	29.82	8.2	26	10.2	26	340	20	340	03
04	21	1	11*	-12	2	7	54	0	0733	1645	SN BR UP HZ	T	M	0.3	T	28.32	30.21	14.0	35	15.0	32	010	24	010	04
05	23	0*	12	-11	2	9	53	0	0733	1646	SN BR	T	M	T	T	28.72	30.60	1.7	34	5.2	19	350	15	360	05
06	35	12	24	1	4	18	41	0	0733	1647		T	M	0.0	0.00	28.63	30.45	5.1	20	5.5	17	220	14	220	06
07	40	18	29	7	8	23	36	0	0732	1648		T	M	0.0	0.00	28.48	30.26	1.9	12	3.6	9	220	7	080	07
08	36	19	28	6	19	26	37	0	0732	1649	SN	0	M	T	T	28.35	30.14	8.6	15	9.2	24	190	16	160	08
09	40	34	37	15	35	36	28	0	0732	1650	RA BR	0	M	T	T	28.30	30.07	10.8	15	10.9	23	170	17	140	09
10	49	27	38	16	36	39	27	0	0732	1651	RA BR	0	M	T	0.74	27.78	29.49	7.9	20	18.1	44	270	35	280	10
11	27	12	20	-2	7	16	45	0	0732	1652	SN HZ	T	M	0.2	T	28.04	29.88	11.8	27	12.4	37	270	29	280	11
12	25	14	20	-2	12	M	45	0	0731	1653	SN UP	T	M	2.1	0.11	27.97	29.75	8.4	21	11.2	40	280	26	290	12
13	19	12	16	-6	5	12	49	0	0731	1655	SN BR UP	3	M	0.7	0.02	28.07	29.90	11.8	27	12.8	39	290	24	290	13
14	27	11	19	-3	14	18	46	0	0730	1656	SN BR HZ	4	M	1.6	0.09	28.06	29.87	5.9	22	6.4	18	250	14	250	14
15	44	24	34	12	27	32	31	0	0730	1657		2	M	0.0	0.00	28.01	29.74	6.8	16	7.1	16	170	13	150	15
16	37	28	33	11	29	32	32	0	0730	1658	RA SN BR	1	M	0.3	0.27	27.78	29.56	5.2	27	7.9	23	320	17	300	16
17	28	20	24	2	20	24	41	0	0729	1659	SN BR	1	M	0.9	0.03	28.01	29.77	1.1	34	4.2	24	300	18	320	17
18	20	10	15	-7	4	11	50	0	0728	1700	SN BR	2	M	0.9	0.01	27.99	29.83	14.2	29	14.9	37	280	28	280	18
19	20	8	14	-8	7	M	51	0	0728	1702	SN BR UP BLSN	2	M	0.6	0.01	28.22	30.08	15.6	30	16.1	46	310	30	310	19
20	23	19	21	-1	15	19	44	0	0727	1703	SN BR	2	M	0.4	T	28.35	30.17	7.1	32	7.9	26	310	18	310	20
21	23	11	17	-5	13	16	48	0	0727	1704	SN BR UP	2	M	1.7	0.02	28.36	30.20	7.1	32	7.4	22	320	16	320	21
22	20	7	14	-8	6	12	51	0	0726	1705		3	M	0.0	0.00	28.43	30.24	6.8	02	7.6	22	040	15	020	22
23	23	13	18	-4	7	15	47	0	0725	1706		3	M	0.0	0.00	28.12	29.92	11.2	02	12.7	26	030	21	030	23
24	26	11	19	-3	12	17	46	0	0724	1708	SN BR	2	M	T	T	28.19	30.02	6.2	33	6.7	21	330	15	320	24
25	32	19	26	4	15	22	39	0	0724	1709		2	M	0.0	0.00	28.35	30.17	5.7	17	5.9	17	180	13	160	25
26	47	27	37	15	26	33	28	0	0723	1710		2	M	0.0	T	28.15	29.91	7.9	22	10.8	32	240	22	230	26
27	35	24	30	8	22	27	35	0	0722	1712	SN	T	M	T	T	28.25	30.04	7.8	29	8.6	37	280	24	280	27
28	34	22	28	6	17	24	37	0	0721	1713		T	M	0.0	0.00	28.06	29.80	9.1	19	9.3	24	200	17	180	28
29	31	20	26	4	18	23	39	0	0720	1714	SN	T	M	T	T	27.83	29.62	9.3	30	10.9	30	330	23	300	29
30	41	20	31	9	14	25	34	0	0719	1715		T	M	0.0	0.00	28.12	29.91	7.2	21	9.8	26	220	18	190	30
31	53*	35	44*	21	26	37	21	0	0718	1717		0	M	0.0	0.00	28.06	29.79	7.0	19	7.2	22	190	17	200	31
	31.3	17.5	24.4		15.6	22.3	40.4	0.0	<-----Monthly Averages | Totals----->				M	10.2	1.31	28.18	29.98	3.8	26	9.5	<Monthly Average				
	2.6	1.8	2.2	<----------Departure From Normal---------->											-1.14										

Degree Days

	Monthly Total	Monthly Departure	Season to Date Total	Season to Date Departure
Heating:	1253	-74	3278	-794
Cooling:	0	0	0	0

Greatest 24-hr Precipitation: 0.74 Date: 10
Greatest 24-hr Snowfall: 2.1 Date: 12
Greatest Snow Depth: 0 Date: 14

	Sea Level Pressure	Date	Time (LST)
Maximum	30.68	05	1104
Minimum	29.23	10	1453

Number of Days with -------->
Max Temp >=90: 0
Max Temp <=32: 19
Thunderstorms : 0

Min Temp <=32: 29
Min Temp <=0 : 1
Heavy Fog : 0

Precipitation >=.01 inch: 10
Precipitation >=.10 inch: 3
Snowfall >=1.0 inch : 3

Data Version:

*** EXTREME FOR THE MONTH - LAST OCCURRENCE IF MORE THAN ONE.**

QUALITY CONTROLLED LOCAL CLIMATOLOGICAL DATA

(final)

NOAA, National Climatic Data Center

Month: 02/2016

Station Location: GREATER BINGHAMTON/E A LINK FIELD AP (04725)
BINGHAMTON, NY
Lat. 42.206 Lon. -75.98
Elevation(Ground): 1595 ft. above sea level

Date	Temperature (Fahrenheit)						Degree Days Base 65 Degrees		Sun		Significant Weather	Snow/Ice on Ground(In)		Precipitation (In)		Pressure(inches of Hg)		Wind: Speed=mph Dir=tens of degrees							Date
	Max.	Min.	Avg.	Dep From Normal	Avg. Dew pt.	Avg Wet Bulb	Heating	Cooling	Sunrise LST	Sunset LST		1200 UTC Depth	1800 UTC Water Equiv	2400 LST Snow Fall	2400 LST Water Equiv	Avg. Station	Avg. Sea Level	Resultant Speed	Res Dir	Avg. Speed	max 5-second Speed	max 5-second Dir	max 2-minute Speed	max 2-minute Dir	
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26
01	49	31	40	17	29	36	25	0	0717	1718	RA	0	M	0.0	0.01	28.07	29.86	5.4	30	9.1	33	300	22	300	01
02	42	26	34	11	24	31	31	0	0716	1719		0	M	0.0	0.00	28.45	30.24	2.8	16	5.6	30	150	22	160	02
03	52	37	45	22	39	42	20	0	0715	1721	RA BR	0	M	0.0	0.77	28.17	29.90	11.4	19	12.3	36	190	24	180	03
04	48	30	39	16	28	34	26	0	0714	1722		0	M	0.0	0.00	28.23	30.04	7.1	32	8.1	25	270	17	280	04
05	32	22	27	4	18	25	38	0	0713	1723		0	M	T	T	28.40	30.22	9.3	34	10.3	31	350	22	340	05
06	39	20	30	7	17	25	35	0	0712	1724		0	M	0.0	0.00	28.45	30.25	8.4	23	8.8	29	260	20	240	06
07	43	25	34	11	19	28	31	0	0711	1726		0	M	0.0	0.00	28.30	30.06	3.9	20	5.3	14	170	10	120	07
08	38	26	32	8	19	27	33	0	0709	1727	SN BR	0	M	T	T	27.99	29.74	7.0	12	8.3	20	130	16	140	08
09	32	24	28	4	25	27	37	0	0708	1728	SN BR	1	M	2.1	0.13	27.80	29.55	4.3	17	6.8	15	150	13	150	09
10	29	16	23	-1	18	22	42	0	0707	1730	SN BR	1	M	1.3	0.04	27.83	29.62	10.1	28	10.6	28	280	21	280	10
11	16	6	11	-13	1	8	54	0	0706	1731	SN BLSN	2	M	0.3	0.01	28.08	29.94	12.5	29	12.8	35	280	26	290	11
12	17	2	10	-14	2	9	55	0	0704	1732	SN	1	M	0.1	0.01	28.23	30.03	8.8	22	9.1	23	210	17	230	12
13	12	-6	3	-21	-7	0	62	0	0703	1733	SN BR UP HZ BLSN	2	M	1.1	0.03	28.22	30.12	14.3	31	15.4	35	310	23	310	13
14	6	-18*	-6*	-31	-15	-5	71	0	0702	1735	UP HZ	2	M	T	T	28.56	30.48	2.0	36	5.2	22	350	17	340	14
15	24	-2	11	-14	4	10	54	0	0700	1736	FZRA SN BR	3	M	0.7	0.11	28.47	30.28	11.3	15	11.5	26	150	18	150	15
16	50	24	37	12	34	35	28	0	0659	1737	RA FZRA SN BR	2	M	0.1	1.55	27.91	29.67	4.7	24	13.0	33	170	23	160	16
17	30	21	26	1	22	25	39	0	0658	1739	SN BR UP	T	M	1.4	0.07	28.19	30.02	7.8	30	8.7	29	320	22	320	17
18	21	10	16	-9	6	13	49	0	0656	1740	SN BR	1	M	0.2	T	28.61	30.48	8.1	34	9.0	23	330	17	350	18
19	33	7	20	-6	6	18	45	0	0655	1741		T	M	T	0.00	28.53	30.30	10.9	17	11.3	34	180	22	170	19
20	58*	31	45*	19	27	37	20	0	0653	1742		T	M	0.0	0.00	28.04	29.79	9.5	23	12.1	37	260	24	280	20
21	42	30	36	10	30	34	29	0	0652	1744		0	M	0.0	0.00	28.17	29.94	5.9	32	6.6	19	330	14	340	21
22	36	21	29	3	17	25	36	0	0650	1745		0	M	0.0	0.00	28.35	30.16	6.0	36	7.0	27	350	15	350	22
23	40	19	30	4	22	26	35	0	0649	1746	FZRA BR	0	M	T	0.08	28.43	30.23	9.5	12	10.6	24	160	20	140	23
24	50	31	41	14	39	40	24	0	0647	1747	RA BR VCTS	0	M	0.0	0.79	28.01	29.68	14.9	14	15.1	41	230	24	230	24
25	50	24	37	10	35	36	28	0	0646	1749	RA SN BR UP VCTS	0	M	0.7	0.37	27.53	29.29	9.9	28	12.1	35	250	26	250	25
26	24	15	20	-7	10	16	45	0	0644	1750	SN BR	1	M	0.2	T	28.08	29.93	13.0	31	13.2	38	290	24	300	26
27	34	16	25	-2	16	23	40	0	0643	1751		T	M	T	0.00	28.20	29.99	9.6	24	10.2	27	250	21	250	27
28	57	29	43	15	27	37	22	0	0641	1752		0	M	0.0	0.00	28.04	29.76	11.5	22	11.8	31	200	22	220	28
29	49	28	39	11	29	37	26	0	0635	1750	RA BR	0	M	0.0	0.03	27.89	29.65	10.1	26	12.8	37	270	25	350	29
	36.3	18.8	27.6		18.7	24.9	37.2	0.0	<-----Monthly Averages | Totals----->				M	8.2	4.00	28.18	29.97	3.5	25	10.1	<Monthly Average				
	4.2	1.4	2.9	<----------Departure From Normal---------->											1.69										

Degree Days

	Monthly Total	Monthly Departure	Season to Date Total	Season to Date Departure
Heating:	1080	-47	4358	-841
Cooling:	0	0	0	0

Greatest 24-hr Precipitation: 1.66 Date: 15-16
Greatest 24-hr Snowfall: 2.1 Date: 09
Greatest Snow Depth: 0 Date: 15

Sea Level	Pressure	Date	Time (LST)
Maximum	30.59	18	1953
Minimum	29.15	25	0059

Number of Days with -------->
Max Temp >=90: 0
Max Temp <=32: 11
Thunderstorms : 0

Min Temp <=32: 28
Min Temp <=0 : 3
Heavy Fog : 0

Precipitation >=.01 inch: 14
Precipitation >=.10 inch: 6
Snowfall >=1.0 inch : 4

*** EXTREME FOR THE MONTH - LAST OCCURRENCE IF MORE THAN ONE.**

Data Version: VER3

QUALITY CONTROLLED LOCAL CLIMATOLOGICAL DATA

(final)

NOAA, National Climatic Data Center

Month: 03/2016

Station Location: GREATER BINGHAMTON/E A LINK FIELD AP (04725)
BINGHAMTON, NY
Lat. 42.206 Lon. -75.98
Elevation(Ground): 1595 ft. above sea level

Date	Temperature (Fahrenheit)						Degree Days Base 65 Degrees		Sun		Significant Weather	Snow/Ice on Ground(In)		Precipitation (In)		Pressure(inches of Hg)		Wind: Speed=mph Dir=tens of degrees							Date
	Max.	Min.	Avg.	Dep From Normal	Avg. Dew pt.	Avg Wet Bulb	Heating	Cooling	Sunrise LST	Sunset LST		1200 UTC Depth	1800 UTC Water Equiv	2400 LST Snow Fall	2400 LST Water Equiv	Avg. Station	Avg. Sea Level	Resultant Speed	Res Dir	Avg. Speed	max 5-second Speed	max 5-second Dir	max 2-minute Speed	max 2-minute Dir	
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26
01	48	17	33	5	20	28	32	0	0640	1753		0	M	0.0	0.00	28.20	29.92	5.1	15	10.9	38	160	25	160	01
02	47	17	32	4	16	23	33	0	0638	1755	RA SN	0	M	T	0.06	27.94	29.78	12.9	29	16.3	40	240	29	280	02
03	27	12*	20*	-9	6	16	45	0	0636	1756	SN	T	M	T	T	28.36	30.20	4.5	34	8.1	23	320	16	310	03
04	29	17	23	-6	16	21	42	0	0635	1757	SN BR	T	M	0.4	0.02	28.30	30.12	4.9	02	7.5	17	350	13	350	04
05	29	14	22	-7	10	19	43	0	0633	1758		T	M	0.0	0.00	28.36	30.18	2.8	01	4.5	12	100	9	360	05
06	36	20	28	-1	17	24	37	0	0631	1759	SN BR	T	M	0.2	T	28.43	30.25	0.4	17	3.9	14	260	10	230	06
07	60	30	45	15	28	37	20	0	0630	1801		0	M	0.0	0.00	28.30	30.06	6.0	24	9.4	29	250	21	250	07
08	66	41	54	24	35	45	11	0	0628	1802		0	M	0.0	T	28.33	30.08	5.4	23	6.0	17	250	13	280	08
09	72*	52	62*	32	41	51	3	0	0626	1803		0	M	0.0	T	28.28	30.02	9.6	24	10.2	31	240	21	220	09
10	63	50	57	26	51	53	8	0	0625	1804	RA BR	0	M	0.0	0.45	28.23	29.96	3.5	25	6.3	21	010	17	010	10
11	50	28	39	8	35	37	26	0	0623	1805	BR	0	M	0.0	0.04	28.41	30.23	8.3	33	9.1	26	300	18	340	11
12	61	23	42	11	29	M	23	0	0621	1807	BR	0	M	0.0	0.00	28.43	30.18	3.8	22	6.1	23	240	16	260	12
13	53	40	47	15	28	39	18	0	0620	1808	RA	0	M	0.0	T	28.30	30.04	2.4	08	6.4	24	150	18	140	13
14	43	36	40	8	35	37	25	0	0618	1809	RA BR	0	M	0.0	0.34	28.23	29.97	14.5	15	14.7	34	170	24	150	14
15	50	39	45	13	41	43	20	0	0616	1810	BR	0	M	0.0	0.00	28.09	29.83	3.5	18	7.6	26	130	18	130	15
16	62	42	52	19	45	M	13	0	0615	1811	TSRA RA BR	0	M	T	0.04	28.05	29.79	2.8	18	7.3	32	350	23	350	16
17	57	38	48	15	29	39	17	0	0613	1812		0	M	0.0	T	28.04	29.78	9.3	26	11.1	36	340	26	280	17
18	40	28	34	1	29	32	31	0	0611	1813	SN BR	0	M	T	T	28.09	29.86	10.6	29	11.5	29	260	23	280	18
19	37	19	28	-6	11	22	37	0	0609	1815		0	M	0.0	0.00	28.31	30.13	8.7	36	9.0	19	010	15	350	19
20	37	16	27	-7	10	22	38	0	0608	1816		0	M	0.0	0.00	28.29	30.06	1.2	06	4.7	12	070	10	070	20
21	36	23	30	-5	17	25	35	0	0606	1817	SN	0	M	0.4	0.02	28.11	29.90	9.4	30	10.1	32	310	23	350	21
22	48	21	35	0	21	31	30	0	0604	1818	RA	T	M	T	T	28.23	30.01	8.4	23	9.3	32	230	23	220	22
23	57	37	47	12	32	40	18	0	0603	1819	RA	0	M	0.0	0.01	28.18	29.95	2.3	34	8.5	21	260	18	350	23
24	66	35	51	15	37	44	14	0	0601	1820		0	M	0.0	0.00	28.15	29.85	11.0	15	12.7	38	170	25	160	24
25	59	28	44	8	37	41	21	0	0559	1821	RA	0	M	0.0	0.08	28.04	29.82	5.5	30	11.9	30	230	22	350	25
26	51	27	39	2	23	33	26	0	0557	1823		0	M	0.0	0.00	28.47	30.27	2.5	04	5.4	21	350	16	350	26
27	54	33	44	7	37	41	21	0	0556	1824		0	M	0.0	0.00	28.46	30.20	9.7	17	10.2	23	180	18	180	27
28	54	33	44	7	38	40	21	0	0554	1825	RA SN BR UP	0	M	T	0.34	27.94	29.65	8.6	24	16.1	45	250	32	260	28
29	39	28	34	-4	16	27	31	0	0552	1826		0	M	T	0.00	28.25	30.08	14.4	32	14.7	38	320	26	340	29
30	58	24	41	3	15	33	24	0	0551	1827		0	M	0.0	0.00	28.41	30.16	9.4	20	10.3	31	200	21	200	30
31	66	47	57	18	41	49	8	0	0549	1828		0	M	0.0	0.00	28.07	29.76	14.5	19	14.7	35	180	24	200	31
	50.2	29.5	39.8		27.3	34.2	24.9	0.0	<-----Monthly Averages | Totals----->				M	1.0	1.40	28.23	30.00	2.8	25	9.5	<Monthly Average				
	9.1	4.9	7.0	<----------Departure From Normal---------->											-1.59										

Degree Days

	Monthly Total	Monthly Departure	Season to Date Total	Season to Date Departure
Heating:	771	-226	5129	-1067
Cooling:	0	0	0	0

Greatest 24-hr Precipitation: 0.49 Date: 10-11
Greatest 24-hr Snowfall: 0.4 Date: 21+
Greatest Snow Depth: T Date: 22+

	Sea Level Pressure	Date	Time (LST)
Maximum	30.40	11	2153
Minimum	29.36	02	0153

Number of Days with -------->
Max Temp >=90: 0
Max Temp <=32: 3
Thunderstorms : 1
Min Temp <=32: 18
Min Temp <=0 : 0
Heavy Fog : 0
Precipitation >=.01 inch: 10
Precipitation >=.10 inch: 3
Snowfall >=1.0 inch : 0

*** EXTREME FOR THE MONTH - LAST OCCURRENCE IF MORE THAN ONE.**

Data Version:

QUALITY CONTROLLED LOCAL CLIMATOLOGICAL DATA

(final)

NOAA, National Climatic Data Center

Month: 04/2016

Station Location: GREATER BINGHAMTON/E A LINK FIELD AP (04725)
BINGHAMTON, NY
Lat. 42.206 Lon. -75.98
Elevation(Ground): 1595 ft. above sea level

Date	Temperature (Fahrenheit)						Degree Days Base 65 Degrees		Sun		Significant Weather	Snow/Ice on Ground(In)		Precipitation (In)		Pressure(inches of Hg)		Wind: Speed=mph Dir=tens of degrees							Date
	Max.	Min.	Avg.	Dep From Normal	Avg. Dew pt.	Avg Wet Bulb	Heating	Cooling	Sunrise LST	Sunset LST		1200 UTC Depth	1800 UTC Water Equiv	2400 LST Snow Fall	2400 LST Water Equiv	Avg. Station	Avg. Sea Level	Resultant Speed	Res Dir	Avg. Speed	max 5-second Speed	max 5-second Dir	max 2-minute Speed	max 2-minute Dir	
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26
01	69	43	56	17	46	51	9	0	0547	1829	RA BR	0	M	0.0	0.20	27.84	29.56	7.0	25	11.9	39	240	29	250	01
02	47	30	39	0	32	36	26	0	0545	1830	RA SN BR	0	M	1.5	0.17	27.78	29.47	4.9	30	8.7	29	360	22	350	02
03	30	19	25	-15	15	M	40	0	0544	1832	SN BR UP	3	M	3.2	0.19	27.94	29.79	13.1	31	14.9	47	310	30	300	03
04	30	17	24	-16	21	23	41	0	0542	1833	SN BR	4	M	3.3	0.28	28.10	29.92	3.7	03	10.7	25	340	21	350	04
05	27	12*	20*	-21	4	16	45	0	0540	1834		4	M	0.0	0.00	28.49	30.34	8.3	35	8.7	25	360	20	350	05
06	41	15	28	-13	14	25	37	0	0539	1835		2	M	0.0	0.00	28.33	30.08	10.5	18	10.8	36	180	23	180	06
07	47	32	40	-2	37	39	25	0	0537	1836	RA SN BR	T	M	0.3	0.80	27.77	29.47	7.0	20	9.2	28	170	20	200	07
08	32	26	29	-13	23	27	36	0	0535	1837	SN BR HZ	T	M	0.4	0.03	27.83	29.62	10.8	28	11.2	33	290	24	280	08
09	33	22	28	-14	18	24	37	0	0534	1838	SN BR	0	M	0.5	0.06	28.04	29.87	7.5	35	9.7	28	340	21	340	09
10	37	19	28	-15	15	24	37	0	0532	1839	RA SN BR	T	M	T	T	28.43	30.24	3.5	24	6.9	21	190	16	200	10
11	49	34	42	-1	36	40	23	0	0530	1841	RA BR	0	M	0.0	0.24	28.24	29.98	9.8	19	10.1	28	200	21	190	11
12	47	31	39	-5	28	34	26	0	0529	1842	RA SN BR	T	M	0.1	0.24	28.32	30.13	8.6	31	10.1	31	330	24	350	12
13	47	27	37	-7	21	31	28	0	0527	1843		0	M	0.0	0.00	28.59	30.38	5.1	36	6.4	19	020	15	030	13
14	55	29	42	-3	20	34	23	0	0525	1844		0	M	0.0	0.00	28.56	30.36	3.6	03	5.1	20	010	13	010	14
15	62	31	47	2	19	37	18	0	0524	1845		0	M	0.0	0.00	28.62	30.40	3.2	07	4.6	14	120	10	090	15
16	67	39	53	8	21	40	12	0	0522	1846		0	M	0.0	0.00	28.66	30.42	4.5	06	5.8	19	010	16	010	16
17	74*	44	59*	13	29	45	6	0	0521	1847		0	M	0.0	0.00	28.64	30.37	4.3	34	5.3	19	320	14	320	17
18	72	44	58	12	27	45	7	0	0519	1848		0	M	0.0	0.00	28.50	30.21	5.6	31	7.1	24	360	18	330	18
19	57	41	49	2	30	41	16	0	0518	1849		0	M	0.0	0.00	28.38	30.14	12.2	34	12.7	33	350	25	350	19
20	64	37	51	4	20	38	14	0	0516	1851		0	M	0.0	0.00	28.48	30.24	5.4	36	7.4	20	030	15	010	20
21	73	41	57	10	31	46	8	0	0514	1852		0	M	0.0	T	28.31	30.02	4.4	20	7.2	20	230	15	250	21
22	65	51	58	10	50	53	7	0	0513	1853	RA BR	0	M	0.0	0.10	28.17	29.89	2.1	31	5.8	19	290	15	290	22
23	54	35	45	-3	31	39	20	0	0511	1854		0	M	0.0	0.00	28.23	30.00	12.3	35	12.5	33	360	24	350	23
24	56	34	45	-4	22	36	20	0	0510	1855		0	M	0.0	0.00	28.32	30.08	5.2	34	6.7	24	310	17	350	24
25	61	42	52	3	30	41	13	0	0508	1856	RA	0	M	0.0	0.01	28.24	29.96	2.9	05	4.3	15	100	12	070	25
26	54	34	44	-5	41	43	21	0	0507	1857	RA BR	0	M	0.0	0.26	28.01	29.75	4.9	33	8.8	24	350	20	350	26
27	54	29	42	-8	26	36	23	0	0506	1858		0	M	0.0	0.00	28.17	29.94	5.5	34	7.1	22	260	17	270	27
28	52	33	43	-7	21	35	22	0	0504	1860	RA	0	M	0.0	0.00	28.26	30.02	1.5	35	4.2	18	040	13	040	28
29	51	39	45	-5	36	41	20	0	0503	1901	RA BR	0	M	0.0	0.25	28.30	30.06	4.9	14	5.8	19	190	14	140	29
30	52	39	46	-5	39	43	19	0	0501	1901	BR	0	M	0.0	0.00	28.41	30.18	2.3	16	3.1	14	160	10	170	30
	52.0	32.3	42.1		26.8	36.7	22.6	0.0	<-----Monthly Averages | Totals----->				M	9.3	2.83	28.27	30.04	2.7	32	8.1	<Monthly Average				
	-2.2	-3.6	-3.0	<----------Departure From Normal---------->											-0.60										

Degree Days

	Monthly Total	Monthly Departure	Season to Date Total	Season to Date Departure
Heating:	679	76	5808	-991
Cooling:	0	-4	0	-4

Greatest 24-hr Precipitation: 0.82 Date: 07-08
Greatest 24-hr Snowfall: 3.3 Date: 04
Greatest Snow Depth: 0 Date: 05+

Sea Level	Pressure	Date	Time (LST)
Maximum	30.46	16	0853
Minimum	29.32	07	1504

Number of Days with -------->
Max Temp >=90: 0
Max Temp <=32: 4
Thunderstorms : 0

Min Temp <=32: 14
Min Temp <=0 : 0
Heavy Fog : 0

Precipitation >=.01 inch: 13
Precipitation >=.10 inch: 10
Snowfall >=1.0 inch : 3

*** EXTREME FOR THE MONTH - LAST OCCURRENCE IF MORE THAN ONE.**

Data Version: VER3

QUALITY CONTROLLED LOCAL CLIMATOLOGICAL DATA

(final)

NOAA, National Climatic Data Center

Month: 05/2016

Station Location: GREATER BINGHAMTON/E A LINK FIELD AP (04725)
BINGHAMTON, NY
Lat. 42.206 Lon. -75.98
Elevation(Ground): 1595 ft. above sea level

Date	Temperature (Fahrenheit)						Degree Days Base 65 Degrees		Sun		Significant Weather	Snow/Ice on Ground(In)		Precipitation (In)		Pressure(inches of Hg)		Wind: Speed=mph Dir=tens of degrees							Date
	Max.	Min.	Avg.	Dep From Normal	Avg. Dew pt.	Avg Wet Bulb	Heating	Cooling	Sunrise LST	Sunset LST		1200 UTC Depth	1800 UTC Water Equiv	2400 LST Snow Fall	2400 LST Water Equiv	Avg. Station	Avg. Sea Level	Resultant Speed	Res Dir	Avg. Speed	max 5-second Speed	max 5-second Dir	max 2-minute Speed	max 2-minute Dir	
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26
01	48	38	43	-8	42	43	22	0	0500	1902	RA BR	0	M	0.0	0.36	28.30	30.05	10.2	16	10.4	31	150	22	150	01
02	53	43	48	-3	44	M	17	0	0459	1903	RA BR	0	M	0.0	0.38	28.20	29.94	1.9	31	6.8	17	290	13	310	02
03	48	41	45	-7	42	44	20	0	0457	1904	RA BR	0	M	0.0	0.03	28.12	29.86	2.2	03	3.0	12	030	9	050	03
04	52	45	49	-3	46	47	16	0	0456	1905	RA BR	0	M	0.0	0.05	28.01	29.74	4.9	14	5.1	17	140	13	110	04
05	53	42	48	-4	42	45	17	0	0455	1906		0	M	0.0	0.00	27.99	29.73	7.2	05	7.4	21	060	15	060	05
06	53	47	50	-3	45	47	15	0	0454	1907	RA BR	0	M	0.0	0.31	28.02	29.76	8.7	03	9.5	22	040	16	040	06
07	60	44	52	-1	43	47	13	0	0452	1908		0	M	0.0	T	28.01	29.73	5.3	18	6.7	19	220	14	200	07
08	54	40	47	-6	36	42	18	0	0451	1909	RA	0	M	0.0	0.16	28.00	29.76	8.7	30	11.4	33	350	24	340	08
09	58	39	49	-5	30	40	16	0	0450	1911		0	M	0.0	0.00	28.26	30.04	7.3	33	8.6	25	350	18	360	09
10	61	34	48	-6	26	40	17	0	0449	1912		0	M	0.0	0.00	28.45	30.21	2.1	30	3.6	14	260	12	250	10
11	71	36	54	0	32	46	11	0	0448	1913		0	M	0.0	0.00	28.42	30.16	2.0	05	4.0	14	030	12	030	11
12	77	45	61	6	45	54	4	0	0447	1914		0	M	0.0	0.00	28.33	30.03	6.4	16	8.7	22	200	17	150	12
13	68	53	61	6	53	56	4	0	0445	1915	RA BR	0	M	0.0	0.83	28.10	29.80	4.0	24	8.0	24	160	16	330	13
14	64	38	51	-4	44	47	14	0	0444	1916	RA BR	0	M	0.0	0.35	27.99	29.70	7.5	24	9.6	33	320	23	280	14
15	47	32	40*	-16	27	34	25	0	0443	1917		0	M	T	T	28.05	29.82	12.5	30	13.2	36	280	26	280	15
16	59	30*	45	-11	28	38	20	0	0442	1918		0	M	T	0.00	28.27	30.05	10.9	29	11.6	38	280	25	310	16
17	55	44	50	-6	37	44	15	0	0441	1919		0	M	0.0	T	28.40	30.15	5.1	27	6.9	22	290	15	270	17
18	63	39	51	-6	34	43	14	0	0441	1920		0	M	0.0	0.00	28.38	30.14	4.0	34	5.8	15	320	12	350	18
19	63	39	51	-6	36	45	14	0	0440	1921		0	M	0.0	0.00	28.38	30.15	6.6	33	7.6	21	350	16	350	19
20	70	40	55	-2	37	48	10	0	0439	1922		0	M	0.0	0.00	28.47	30.21	1.8	28	4.5	20	350	16	350	20
21	63	50	57	0	44	49	8	0	0438	1923	RA	0	M	0.0	0.05	28.33	30.04	1.6	12	4.2	17	190	14	190	21
22	64	49	57	-1	49	52	8	0	0437	1924	RA	0	M	0.0	0.15	28.16	29.90	6.5	35	6.9	19	040	14	090	22
23	74	50	62	4	45	53	3	0	0436	1925		0	M	0.0	0.00	28.22	29.94	7.5	01	8.7	27	010	20	360	23
24	76	53	65	7	39	52	0	0	0435	1926		0	M	0.0	0.00	28.22	29.95	8.6	33	9.2	28	310	18	330	24
25	83	53	68	9	46	56	0	3	0435	1927		0	M	0.0	0.00	28.33	30.06	4.7	29	6.9	26	260	17	240	25
26	80	58	69	10	53	61	0	4	0434	1928	HZ	0	M	0.0	0.00	28.35	30.06	3.5	20	4.3	16	260	13	220	26
27	84	62	73	14	62	66	0	8	0433	1928	RA BR VCTS	0	M	0.0	0.13	28.32	30.03	4.4	21	5.6	34	280	24	280	27
28	88*	63	76	17	62	67	0	11	0433	1929		0	M	0.0	0.00	28.38	30.10	2.3	27	3.7	14	280	10	280	28
29	86	65	76*	16	64	68	0	11	0432	1930	RA	0	M	0.0	0.04	28.36	30.06	4.4	22	6.7	25	320	17	320	29
30	81	60	71	11	61	64	0	6	0432	1931	RA	0	M	0.0	0.01	28.25	29.96	4.8	22	5.8	23	250	17	240	30
31	79	57	68	8	52	59	0	3	0431	1932		0	M	0.0	0.00	28.27	29.99	4.1	33	5.4	21	350	16	350	31
	65.6	46.1	55.9		43.4	49.9	10.4	1.5	<-----Monthly Averages | Totals----->				M	T	2.85	28.24	29.97	2.1	30	7.1	<Monthly Average				
	0.1	0.0	0.1	<----------Departure From Normal---------->											-0.72										

Degree Days

	Monthly Total	Monthly Departure	Season to Date Total	Season to Date Departure
Heating:	321	16	6129	-975
Cooling:	46	27	46	23

Greatest 24-hr Precipitation: 0.83 Date: 13
Greatest 24-hr Snowfall: T Date: 16+
Greatest Snow Depth: 0 Date: M

	Sea Level Pressure	Date	Time (LST)
Maximum	30.30	20	0924
Minimum	29.55	08	0453

Number of Days with -------->
Max Temp >=90: 0
Max Temp <=32: 0
Thunderstorms : 0

Min Temp <=32: 2
Min Temp <=0 : 0
Heavy Fog : 0

Precipitation >=.01 inch: 13
Precipitation >=.10 inch: 8
Snowfall >=1.0 inch : 0

Data Version:

*** EXTREME FOR THE MONTH - LAST OCCURRENCE IF MORE THAN ONE.**

QUALITY CONTROLLED LOCAL CLIMATOLOGICAL DATA

(final)

NOAA, National Climatic Data Center

Month: 06/2016

Station Location: GREATER BINGHAMTON/E A LINK FIELD AP (04725)
BINGHAMTON, NY

Lat. 42.206 Lon. -75.98

Elevation(Ground): 1595 ft. above sea level

Date	Temperature (Fahrenheit)						Degree Days Base 65 Degrees		Sun		Significant Weather	Snow/Ice on Ground(In)		Precipitation (In)		Pressure(inches of Hg)		Wind: Speed=mph Dir=tens of degrees							Date
	Max.	Min.	Avg.	Dep From Normal	Avg. Dew pt.	Avg Wet Bulb	Heating	Cooling	Sunrise LST	Sunset LST		1200 UTC Depth	1800 UTC Water Equiv	2400 LST Snow Fall	2400 LST Water Equiv	Avg. Station	Avg. Sea Level	Resultant Speed	Res Dir	Avg. Speed	max 5-second Speed	max 5-second Dir	max 2-minute Speed	max 2-minute Dir	
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26
01	81	53	67	6	53	59	0	2	0431	1933		0	M	0.0	0.00	28.35	30.08	0.6	10	4.8	17	150	13	150	01
02	75	59	67	6	57	61	0	2	0430	1933	RA	0	M	0.0	0.03	28.35	30.05	7.2	19	8.8	22	180	17	180	02
03	77	59	68	7	61	64	0	3	0430	1934	RA	0	M	0.0	0.32	28.30	30.01	2.9	23	5.0	14	220	12	240	03
04	78	56	67	5	59	62	0	2	0429	1935	RA BR	0	M	0.0	T	28.27	29.97	2.2	15	3.8	22	180	14	190	04
05	69	59	64	2	63	63	1	0	0429	1936	RA BR	0	M	0.0	1.17	28.01	29.67	6.8	19	8.3	23	180	16	270	05
06	76	55	66	4	51	57	0	1	0429	1936	RA	0	M	0.0	0.00	27.94	29.63	9.5	25	10.3	31	270	24	270	06
07	70	52	61	-1	53	56	4	0	0428	1937	VCTS	0	M	0.0	0.07	27.86	29.56	8.4	27	9.9	32	270	23	270	07
08	56	44	50*	-13	43	46	15	0	0428	1938	RA BR	0	M	0.0	0.17	27.97	29.72	9.5	30	10.0	32	280	20	310	08
09	62	42*	52	-11	36	45	13	0	0428	1938		0	M	0.0	0.00	28.15	29.89	12.1	31	12.5	36	330	24	320	09
10	67	44	56	-7	36	46	9	0	0428	1939		0	M	0.0	0.00	28.30	30.05	7.6	32	8.6	27	350	21	340	10
11	83	46	65	1	53	59	0	0	0427	1939	RA	0	M	0.0	T	28.15	29.84	7.1	25	9.6	33	280	24	270	11
12	70	50	60	-4	47	53	5	0	0427	1940	RA	0	M	0.0	T	28.06	29.78	13.6	32	14.9	35	310	25	300	12
13	59	47	53	-11	45	49	12	0	0427	1940	RA	0	M	0.0	T	28.19	29.93	10.2	32	10.8	26	330	20	350	13
14	71	45	58	-6	42	50	7	0	0427	1941		0	M	0.0	0.00	28.25	30.00	6.5	34	7.4	21	350	13	350	14
15	78	48	63	-2	48	56	2	0	0427	1941	RA	0	M	0.0	T	28.23	29.93	1.3	25	3.1	14	240	10	230	15
16	75	59	67	2	57	61	0	2	0427	1942	RA	0	M	0.0	0.04	28.09	29.79	2.7	18	4.4	21	160	14	150	16
17	78	56	67	2	46	56	0	2	0427	1942		0	M	0.0	0.00	28.23	29.98	6.3	03	6.8	27	070	18	050	17
18	82	56	69	4	48	58	0	4	0427	1942		0	M	0.0	0.00	28.47	30.21	4.1	28	5.5	16	260	13	250	18
19	85	57	71	5	52	61	0	6	0428	1943		0	M	0.0	0.00	28.55	30.27	3.3	25	4.7	18	290	14	280	19
20	85*	64	75*	9	59	65	0	10	0428	1943	TSRA	0	M	0.0	0.00	28.37	30.04	8.9	23	9.2	24	200	16	230	20
21	75	59	67	1	47	56	0	2	0428	1943	VCTS	0	M	0.0	0.04	28.15	29.85	6.7	31	8.6	28	320	21	360	21
22	73	55	64	-2	46	54	1	0	0428	1944		0	M	0.0	0.00	28.15	29.87	5.4	30	8.6	28	310	20	300	22
23	76	54	65	-1	47	55	0	0	0428	1944		0	M	0.0	0.00	28.18	29.90	2.9	02	5.3	18	010	15	360	23
24	79	52	66	-1	44	55	0	1	0429	1944		0	M	0.0	0.00	28.33	30.06	4.1	07	4.9	18	110	14	100	24
25	83	58	71	4	54	61	0	6	0429	1944		0	M	0.0	0.00	28.44	30.16	2.9	22	4.7	16	170	12	180	25
26	84	62	73	6	55	62	0	8	0429	1944		0	M	0.0	0.00	28.44	30.14	8.5	21	9.1	26	230	18	250	26
27	76	65	71	4	60	64	0	6	0430	1944	BR	0	M	0.0	T	28.29	29.98	7.8	19	8.1	18	190	14	200	27
28	82	59	71	4	63	64	0	6	0430	1944	TS TSRA RA FG+ FG BR HZ	0	M	0.0	1.20	28.20	29.90	1.4	14	7.1	31	170	22	250	28
29	73	56	65	-2	56	59	0	0	0430	1944	FG+	0	M	0.0	0.00	28.22	29.96	4.1	31	5.6	20	350	14	340	29
30	76	53	65	-3	51	58	0	0	0431	1944		0	M	0.0	0.00	28.30	30.03	3.0	25	4.6	16	220	13	240	30
	75.1	54.1	64.6		51.1	57.2	2.3	2.1	<-----Monthly Averages | Totals----->				M	0.0	3.04	28.22	29.94	3.2	28	7.5	<Monthly Average				
	1.4	-1.1	0.2	<----------Departure From Normal---------->											-1.27										

Degree Days

	Monthly Total	Monthly Departure	Season to Date Total	Season to Date Departure
Heating:	69	-22	6198	-997
Cooling:	63	-11	109	12

Greatest 24-hr Precipitation: 1.20 Date: 28
Greatest 24-hr Snowfall: 0.0 Date: M
Greatest Snow Depth: 0 Date: M

Sea Level	Pressure	Date	Time (LST)
Maximum	30.33	19	0941
Minimum	29.50	07	1253

Number of Days with -------->
Max Temp >=90: 0
Max Temp <=32: 0
Thunderstorms : 3
Min Temp <=32: 0
Min Temp <=0 : 0
Heavy Fog : 2
Precipitation >=.01 inch: 8
Precipitation >=.10 inch: 4
Snowfall >=1.0 inch : 0

*** EXTREME FOR THE MONTH - LAST OCCURRENCE IF MORE THAN ONE.**

Data Version: VER3

QUALITY CONTROLLED LOCAL CLIMATOLOGICAL DATA

(final)

NOAA, National Climatic Data Center

Month: 07/2016

Station Location: GREATER BINGHAMTON/E A LINK FIELD AP (04725)
BINGHAMTON, NY
Lat. 42.206 Lon. -75.98
Elevation(Ground): 1595 ft. above sea level

Date	Temperature (Fahrenheit)						Degree Days Base 65 Degrees		Sun		Significant Weather	Snow/Ice on Ground(In)		Precipitation (In)		Pressure(inches of Hg)		Wind: Speed=mph Dir=tens of degrees							Date
	Max.	Min.	Avg.	Dep From Normal	Avg. Dew pt.	Avg Wet Bulb	Heating	Cooling	Sunrise LST	Sunset LST		1200 UTC Depth	1800 UTC Water Equiv	2400 LST Snow Fall	2400 LST Water Equiv	Avg. Station	Avg. Sea Level	Resultant Speed	Res Dir	Avg. Speed	max 5-second Speed	max 5-second Dir	max 2-minute Speed	max 2-minute Dir	
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26
01	75	57	66	-2	56	60	0	1	0431	1944	RA VCTS	0	M	0.0	0.10	28.21	29.92	4.7	24	8.1	26	190	18	280	01
02	73	54	64	-4	47	54	1	0	0432	1944		0	M	0.0	0.00	28.29	30.02	9.8	31	10.2	31	340	22	340	02
03	75	53	64	-4	49	56	1	0	0432	1944		0	M	0.0	0.00	28.36	30.09	5.5	25	5.7	19	240	13	240	03
04	79	55	67	-1	54	60	0	2	0433	1944		0	M	0.0	0.00	28.30	30.00	4.3	20	5.2	19	130	13	190	04
05	83	65	74	6	62	66	0	9	0434	1943		0	M	0.0	0.00	28.13	29.83	3.9	29	5.0	17	290	13	280	05
06	86	64	75	7	61	66	0	10	0434	1943		0	M	0.0	0.00	28.17	29.86	3.4	24	4.5	16	220	12	220	06
07	85	70	78	10	66	69	0	13	0435	1943		0	M	0.0	0.00	28.10	29.79	2.2	29	6.4	17	350	14	360	07
08	85	64	75	6	66	68	0	10	0436	1942	RA FG BR VCTS	0	M	0.0	0.16	28.11	29.79	1.7	15	5.0	17	150	12	150	08
09	84	62	73	4	62	66	0	8	0436	1942	RA BR	0	M	0.0	0.01	28.07	29.76	6.0	27	8.6	28	300	18	280	09
10	68	59	64*	-5	57	60	1	0	0437	1942	RA BR	0	M	0.0	0.02	28.20	29.94	6.8	31	8.3	24	330	18	340	10
11	78	53	66	-3	54	59	0	1	0438	1941	BR	0	M	0.0	0.00	28.38	30.11	2.1	07	5.2	14	350	10	100	11
12	85	56	71	2	57	63	0	6	0438	1941		0	M	0.0	0.00	28.35	30.05	4.8	19	6.3	18	250	13	240	12
13	85	66	76	7	66	69	0	11	0439	1940		0	M	0.0	0.00	28.30	29.99	7.9	20	8.2	23	210	17	220	13
14	86	68	77	8	66	69	0	12	0440	1940	BR	0	M	0.0	0.12	28.16	29.84	8.5	22	9.7	39	270	32	260	14
15	87	65	76	7	60	66	0	11	0441	1939		0	M	0.0	0.05	28.17	29.88	5.2	26	7.5	29	270	22	260	15
16	79	62	71	2	59	63	0	6	0442	1938	RA VCTS	0	M	0.0	0.07	28.33	30.05	2.8	36	4.7	16	030	13	360	16
17	82	60	71	2	58	63	0	6	0442	1938	RA BR	0	M	0.0	T	28.40	30.12	3.5	26	5.9	21	260	16	260	17
18	80	65	73	4	62	66	0	8	0443	1937	TSRA RA	0	M	0.0	0.09	28.34	30.04	6.6	25	8.5	29	260	22	250	18
19	76	57	67	-2	51	58	0	2	0444	1936		0	M	0.0	0.00	28.42	30.16	7.4	33	8.0	28	300	20	300	19
20	81	52*	67	-2	49	57	0	2	0445	1936		0	M	0.0	0.00	28.50	30.22	1.5	33	3.1	17	300	13	290	20
21	87	55	71	2	49	60	0	6	0446	1935		0	M	0.0	0.00	28.40	30.10	3.7	22	4.8	25	220	14	240	21
22	93*	71	82*	13	60	67	0	17	0447	1934		0	M	0.0	0.00	28.20	29.88	7.8	28	10.0	26	290	18	300	22
23	88	66	77	8	56	65	0	12	0448	1933		0	M	0.0	0.00	28.20	29.90	8.9	31	10.1	31	290	22	300	23
24	90	65	78	9	57	65	0	13	0449	1932		0	M	0.0	0.00	28.29	29.99	2.7	06	4.7	16	280	13	280	24
25	84	65	75	6	65	67	0	10	0450	1931	TSRA RA FG VCTS	0	M	0.0	0.86	28.21	29.91	3.9	23	6.1	33	330	22	320	25
26	82	64	73	4	61	65	0	8	0451	1930	FG+ BR	0	M	0.0	0.00	28.25	29.96	6.1	32	7.2	21	360	16	350	26
27	86	60	73	4	58	64	0	8	0452	1930		0	M	0.0	0.00	28.27	29.97	2.1	28	4.3	16	270	12	330	27
28	85	63	74	5	61	66	0	9	0453	1929		0	M	0.0	0.00	28.22	29.91	1.6	03	3.3	12	300	9	020	28
29	84	65	75	6	60	65	0	10	0454	1928		0	M	0.0	0.00	28.20	29.91	7.2	01	7.7	21	360	16	350	29
30	70	61	66	-3	61	62	0	1	0455	1926	RA BR	0	M	0.0	0.52	28.32	30.03	5.5	07	6.2	19	060	15	050	30
31	75	64	70	1	66	66	0	5	0456	1925	RA BR	0	M	0.0	0.89	28.30	30.02	5.5	08	6.3	16	140	12	130	31
	81.8	61.5	71.6		58.6	63.5	0.1	7.0	<-----Monthly Averages | Totals----->				M	0.0	2.89	28.27	29.97	2.4	28	6.6	<Monthly Average				
	4.0	1.9	2.9	<----------Departure From Normal---------->											-0.81										

Degree Days

	Monthly Total	Monthly Departure	Season to Date Total	Season to Date Departure
Heating:	3	-21	3	-21
Cooling:	217	79	326	91

Greatest 24-hr Precipitation: 1.35 Date: 30-31
Greatest 24-hr Snowfall: 0.0 Date: M
Greatest Snow Depth: 0 Date: M

	Sea Level Pressure	Date	Time (LST)
Maximum	30.27	20	0842
Minimum	29.72	09	1253

Number of Days with -------->
Max Temp >=90: 2
Max Temp <=32: 0
Thunderstorms : 2

Min Temp <=32: 0
Min Temp <=0 : 0
Heavy Fog : 1

Precipitation >=.01 inch: 11
Precipitation >=.10 inch: 6
Snowfall >=1.0 inch : 0

*** EXTREME FOR THE MONTH - LAST OCCURRENCE IF MORE THAN ONE.**

Data Version:

QUALITY CONTROLLED LOCAL CLIMATOLOGICAL DATA

(final)

NOAA, National Climatic Data Center

Month: 08/2016

Station Location: GREATER BINGHAMTON/E A LINK FIELD AP (04725)
BINGHAMTON, NY
Lat. 42.206 Lon. -75.98
Elevation(Ground): 1595 ft. above sea level

Date	Temperature (Fahrenheit)						Degree Days Base 65 Degrees		Sun		Significant Weather	Snow/Ice on Ground(In)		Precipitation (In)		Pressure(inches of Hg)		Wind: Speed=mph Dir=tens of degrees							Date
	Max.	Min.	Avg.	Dep From Normal	Avg. Dew pt.	Avg Wet Bulb	Heating	Cooling	Sunrise LST	Sunset LST		1200 UTC Depth	1800 UTC Water Equiv	2400 LST Snow Fall	2400 LST Water Equiv	Avg. Station	Avg. Sea Level	Resultant Speed	Res Dir	Avg. Speed	max 5-second Speed	max 5-second Dir	max 2-minute Speed	max 2-minute Dir	
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26
01	76	62	69	0	66	66	0	4	0457	1924	RA BR	0	M	0.0	0.52	28.33	30.04	2.7	15	5.6	13	350	12	350	01
02	78	63	71	2	63	65	0	6	0458	1923	FG+ BR	0	M	0.0	0.00	28.37	30.10	2.6	10	5.6	18	140	14	100	02
03	77	59	68	-1	60	63	0	3	0459	1922	FG+ BR	0	M	0.0	0.00	28.43	30.15	6.1	16	6.5	17	180	12	150	03
04	80	59	70	1	61	64	0	5	0460	1921	RA	0	M	0.0	0.02	28.40	30.10	5.4	19	6.2	15	160	12	190	04
05	79	62	71	2	63	66	0	6	0501	1920		0	M	0.0	0.00	28.25	29.93	8.1	20	8.4	24	220	17	210	05
06	80	64	72	3	62	66	0	7	0502	1918	RA BR	0	M	0.0	0.18	28.09	29.80	6.2	29	7.8	25	300	18	350	06
07	79	58	69	0	54	60	0	4	0503	1917		0	M	0.0	0.00	28.22	29.93	7.1	32	8.1	22s	300	16	350	07
08	79	57	68	0	52	59	0	3	0504	1916		0	M	0.0	0.00	28.36	30.09	2.0	35	4.3	14	360	10	360	08
09	82	55	69	1	57	62	0	4	0505	1915		0	M	0.0	Ts	28.46	30.17	6.3	18	7.2	21	200	16	150	09
10	82	68	75	7	69	71	0	10	0506	1913	RA BR VCTS	0	M	0.0	1.36	28.41	30.12	6.4	22	6.9	17	240	13	240	10
11	85	68	77	9	70	72	0	12	0507	1912	TSRA RA FG VCTS	0	M	0.0	0.26	28.37	30.06	4.7	22	5.9	20	240	16	230	11
12	87	69	78	10	71	72	0	13	0508	1911	VCTS	0	M	0.0	0.82	28.21	29.90	7.7	24	8.2	33	300	24	280	12
13	89*	72	81*	13	71	73	0	16	0509	1909	TS RA VCTS	0	M	0.0	0.01	28.20	29.89	8.2	23	8.6	33	220	22	230	13
14	81	69	75	7	69	71	0	10	0510	1908	RA BR VCTS	0	M	0.0	0.29	28.27	29.99	5.9	25	6.8	21	270	16	270	14
15	76	66	71	3	64	66	0	6	0511	1906	RA	0	M	0.0	T	28.46	30.19	2.4	29	3.6	12	310	9	280	15
16	82	66	74	6	68	69	0	9	0512	1905	RA VCTS	0	M	0.0	0.22	28.38	30.07	8.5	19	10.3	27s	210	18	200	16
17	77	62	70	2	61	64	0	5	0513	1903		0	M	0.0	0.00	28.33	30.06	4.2	29	6.5	26	300	20	310	17
18	79	62	71	3	63	65	0	6	0514	1902		0	M	0.0	0.13	28.30	30.01	2.9	25	5.4	20	300	16	300	18
19	80	59	70	3	60	64	0	5	0515	1859	FG	0	M	0.0	0.00	28.28	29.99	0.1	23	3.4	11	310	8	320	19
20	82	60	71	4	62	66	0	6	0516	1857		0	M	0.0	0.00	28.20	29.90	7.3	17	8.1	22	200	16	190	20
21	73	60	67	0	64	65	0	2	0517	1856	RA BR	0	M	0.0	1.20	28.12	29.82	5.3	18	8.9	28	160	20	170	21
22	68	54	61*	-6	50	55	4	0	0518	1854		0	M	0.0	T	28.33	30.10	7.5	34	8.1	29	350	20	350	22
23	75	51*	63	-4	52	57	2	0	0519	1853		0	M	0.0	0.00s	28.54	30.29	5.6	24	6.0	18	260	12	250	23
24	80	57	69	2	58	63	0	4	0520	1851		0	M	0.0	T	28.50	30.21	4.8	20	5.7	24	230	15	180	24
25	77	66	72	6	67	68	0	7	0522	1850	RA BR	0	M	0.0	0.02	28.32	30.02	6.7	20	7.2	18	230	14	220	25
26	80	68	74	8	65	68	0	9	0523	1848	RA BR	0	M	0.0	0.17	28.33	30.06	5.5	32	7.2	21	290	15	340	26
27	82	62	72	6	62	65	0	7	0524	1846		0	M	0.0	0.00	28.48	30.20	1.3	24	2.6	10	240	7	220	27
28	83	64	74	8	64	67	0	9	0525	1845		0	M	0.0	0.00	28.48	30.19	7.2	21	7.8	22	220	16	220	28
29	77	60	69	4	60	64	0	4	0526	1843		0	M	0.0	0.00	28.47	30.19	7.3	35	7.9	21	350	16	360	29
30	76	54	65	0	55	59	0	0	0527	1842		0	M	0.0	0.00	28.43	30.14	0.9	21	2.7	14	260	9	280	30
31	72	63	68	3	61	63	0	3	0528	1840	RA BR	0	M	0.0	0.03	28.26	29.96	4.6	23	5.1	14	230	10	260	31
	79.1	61.9	70.5		62.1	65.1	0.2	6.0	<-----Monthly Averages | Totals----->				M	M	5.23s	28.34	30.05	3.0	23	6.5	<Monthly Average				
	2.6	3.6	3.1	<----------Departure From Normal---------->											1.78										

Degree Days

	Monthly Total	Monthly Departure	Season to Date Total	Season to Date Departure
Heating:	6	-33	9	-54
Cooling:	185	72	511	163

Greatest 24-hr Precipitation: 1.36 Date: 10
Greatest 24-hr Snowfall: M Date: M
Greatest Snow Depth: M Date: M

	Sea Level Pressure	Date	Time (LST)
Maximum	30.34	23	0821
Minimum	29.76	06	0439

Number of Days with -------->
Max Temp >=90: 0
Max Temp <=32: 0
Thunderstorms : 2

Min Temp <=32: 0
Min Temp <=0 : 0
Heavy Fog : 2

Precipitation >=.01 inch: 14
Precipitation >=.10 inch: 10
Snowfall >=1.0 inch : 0

Data Version:

*** EXTREME FOR THE MONTH - LAST OCCURRENCE IF MORE THAN ONE.**

QUALITY CONTROLLED LOCAL CLIMATOLOGICAL DATA

(may be updated)

NOAA, National Climatic Data Center

Month: 09/2016

Station Location: GREATER BINGHAMTON/E A LINK FIELD AP (04725)
BINGHAMTON, NY
Lat. 42.206 Lon. -75.98
Elevation(Ground): 1595 ft. above sea level

Date	Temperature (Fahrenheit)						Degree Days Base 65 Degrees		Sun		Significant Weather	Snow/Ice on Ground(In)		Precipitation (In)		Pressure(inches of Hg)		Wind: Speed=mph Dir=tens of degrees							Date
	Max.	Min.	Avg.	Dep From Normal	Avg. Dew pt.	Avg Wet Bulb	Heating	Cooling	Sunrise LST	Sunset LST		1200 UTC Depth	1800 UTC Water Equiv	2400 LST Snow Fall	2400 LST Water Equiv	Avg. Station	Avg. Sea Level	Resultant Speed	Res Dir	Avg. Speed	max 5-second Speed	max 5-second Dir	max 2-minute Speed	max 2-minute Dir	
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26
01	72	56	64	-1	56	59	1	0	0529	1838	BR	0	M	0.0	0.01	28.22	29.96	9.1	34	9.3	23	350	18	360	01
02	71	54	63	-1	52	56	2	0	0530	1836		0	M	0.0	0.00	28.41	30.16	7.3	36	7.7	22	350	17	350	02
03	73	50	62	-2	52	56	3	0	0531	1835		0	M	0.0	0.00	28.48	30.22	4.7	04	5.4	15	060	10	360	03
04	75	51	63	-1	53	57	2	0	0532	1833		0	M	0.0	0.00	28.53	30.27	2.5	07	3.1	11	100	8	090	04
05	80	52	66	3	56	61	0	1	0533	1831	BR	0	M	0.0	0.00	28.49	30.21	5.5	02	6.2	17	020	13	360	05
06	80	58	69	6	54	60	0	4	0534	1830		0	M	0.0	0.00	28.40	30.10	7.0	36	7.7	21	340	15	350	06
07	83	56	70	7	59	63	0	5	0535	1828	RA	0	M	0.0	T	28.33	30.03	1.2	10	2.9	13	110	9	130	07
08	86*	65	76*	13	68	69	0	11	0536	1826	RA BR	0	M	0.0	0.08	28.20	29.87	7.0	24	8.2	26	210	20	350	08
09	76	65	71	9	67	68	0	6	0537	1825	RA FG+ BR	0	M	0.0	0.01	28.24	29.96	3.1	28	3.9	13	250	12	250	09
10	83	64	74	12	67	69	0	9	0538	1823	FG BR	0	M	0.0	0.03	28.25	29.94	7.7	19	8.6	25	250	18	230	10
11	75	51	63	2	52	57	2	0	0539	1821	RA	0	M	0.0	0.01	28.30	30.05	7.2	31	10.4	33	330	22	320	11
12	72	45	59	-2	46	52	6	0	0540	1819		0	M	0.0	0.00	28.48	30.23	2.8	23	4.4	15	290	10	260	12
13	80	52	66	5	54	59	0	1	0541	1818		0	M	0.0	0.00	28.41	30.13	6.8	21	7.5	26	250	17	220	13
14	74	50	62	2	55	59	3	0	0542	1816		0	M	0.0	0.00	28.38	30.13	5.8	31	9.2	26	350	20	320	14
15	67	45	56*	-4	42	49	9	0	0544	1814		0	M	0.0	0.00	28.54	30.29	3.2	05	4.2	16	140	10	140	15
16	71	44*	58	-2	48	53	7	0	0545	1812		0	M	0.0	0.00	28.52	30.26	5.8	17	6.9	24	150	15	160	16
17	73	52	63	4	57	59	2	0	0546	1811	RA	0	M	0.0	T	28.40	30.11	9.7	19	10.2	24	200	18	220	17
18	73	64	69	10	64	65	0	4	0547	1809	RA FG BR	0	M	0.0	0.55	28.30	30.02	6.1	22	6.6	24	210	16	200	18
19	M	M	M	M	63	64	M	M	0548	1807	FG+ FG BR	M	M	M	M	M	30.05	1.2	04	M	M	M	M	M	19
20	M	M	M	M	M	M	M	M	0549	1805		M	M	M	M	M	M	M	M	M	M	M	M	M	20
21	M	M	M	M	M	M	M	M	0550	1803		M	M	M	M	M	M	M	M	M	M	M	M	M	21
22	M	M	M	M	M	M	M	M	0551	1802		M	M	M	M	M	M	M	M	M	M	M	M	M	22
23	M	M	M	M	M	M	M	M	0552	1760		M	M	M	M	M	M	M	M	M	M	M	M	M	23
24	M	M	M	M	M	M	M	M	0553	1758		M	M	M	M	M	M	M	M	M	M	M	M	M	24
25	M	M	M	M	M	M	M	M	0554	1756		M	M	M	M	M	M	M	M	M	M	M	M	M	25
26	M	M	M	M	M	M	M	M	0555	1755		M	M	M	M	M	M	M	M	M	M	M	M	M	26
27	M	M	M	M	M	M	M	M	0556	1753		M	M	M	M	M	M	M	M	M	M	M	M	M	27
28	M	M	M	M	M	M	M	M	0557	1751		M	M	M	M	M	M	M	M	M	M	M	M	M	28
29	M	M	M	M	M	M	M	M	0558	1749		M	M	M	M	M	M	M	M	M	M	M	M	M	29
30	M	M	M	M	M	M	M	M	0560	1748		M	M	M	M	M	M	M	M	M	M	M	M	M	30
	M	M	M		M	M	M	M	<-----Monthly Averages | Totals----->			M	M	M	M	M	M	M	M	<Monthly Average					
	M	M	M	<----------Departure From Normal---------->											M										

Degree Days

	Monthly Total	Monthly Departure	Season to Date Total	Season to Date Departure
Heating:	M	M	M	M
Cooling:	M	M	M	M

Greatest 24-hr Precipitation: M Date: M
Greatest 24-hr Snowfall: M Date: M
Greatest Snow Depth: M Date: M

	Sea Level Pressure	Date	Time (LST)
Maximum	M	M	M
Minimum	M	M	M

Number of Days with -------->
Max Temp >=90: M
Max Temp <=32: M
Thunderstorms : 0
Min Temp <=32: M
Min Temp <=0 : M
Heavy Fog : 0
Precipitation >=.01 inch: M
Precipitation >=.10 inch: M
Snowfall >=1.0 inch : 0

*** EXTREME FOR THE MONTH - LAST OCCURRENCE IF MORE THAN ONE.**

Data Version: VER2

APPENDIX B.2

TIME SERIES PLOTS – FIGURES B.1 THROUGH B.37

Figure B.1
TCE in Soil Vapor and Groundwater
Annual Report - Soil Vapor Monitoring through August 2016
Comprehensive Operations, Maintenance, Monitoring Program
Endicott, New York

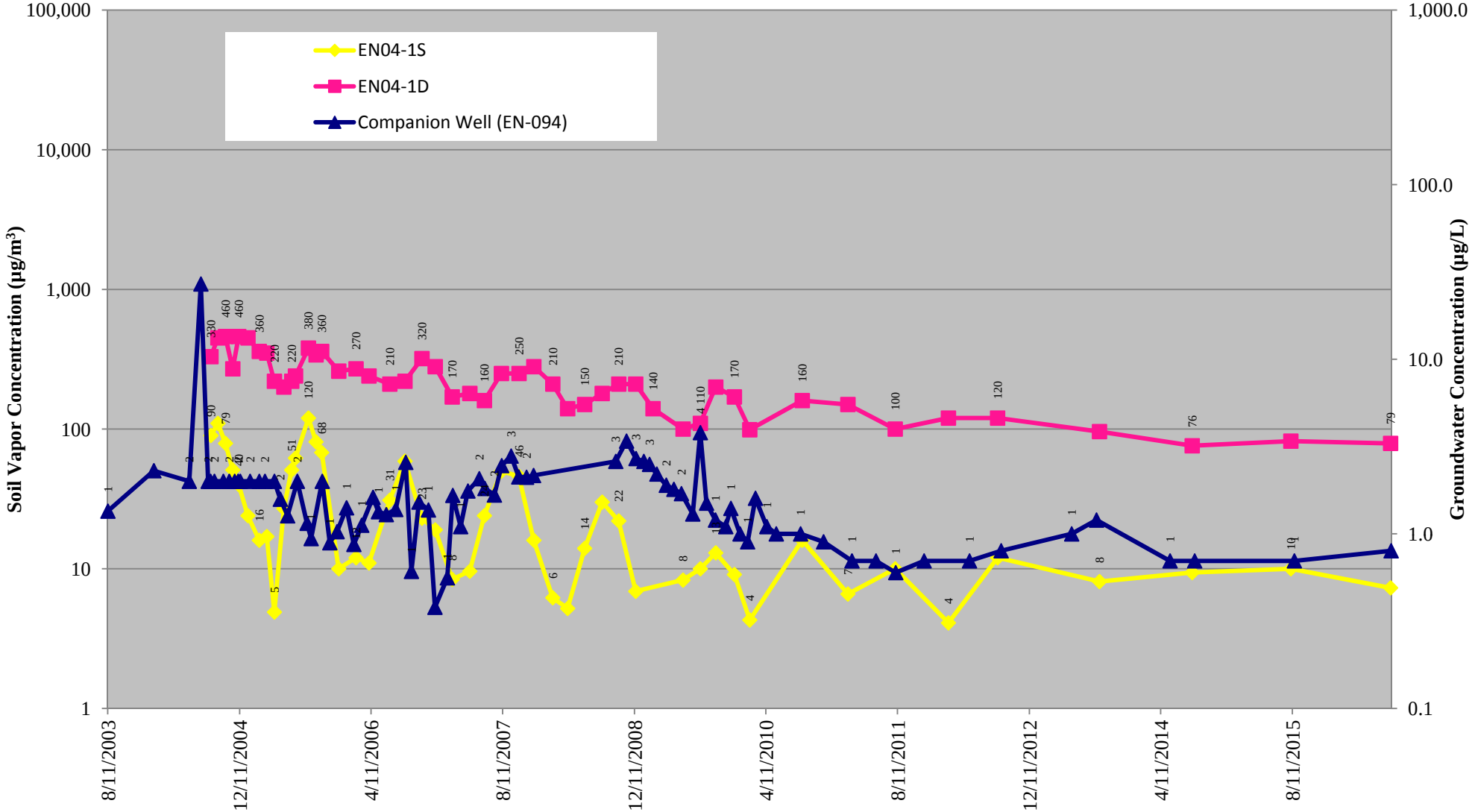


Figure B.2
TCE in Soil Vapor and Groundwater
Annual Report - Soil Vapor Monitoring through August 2016
Comprehensive Operations, Maintenance, Monitoring Program
Endicott, New York

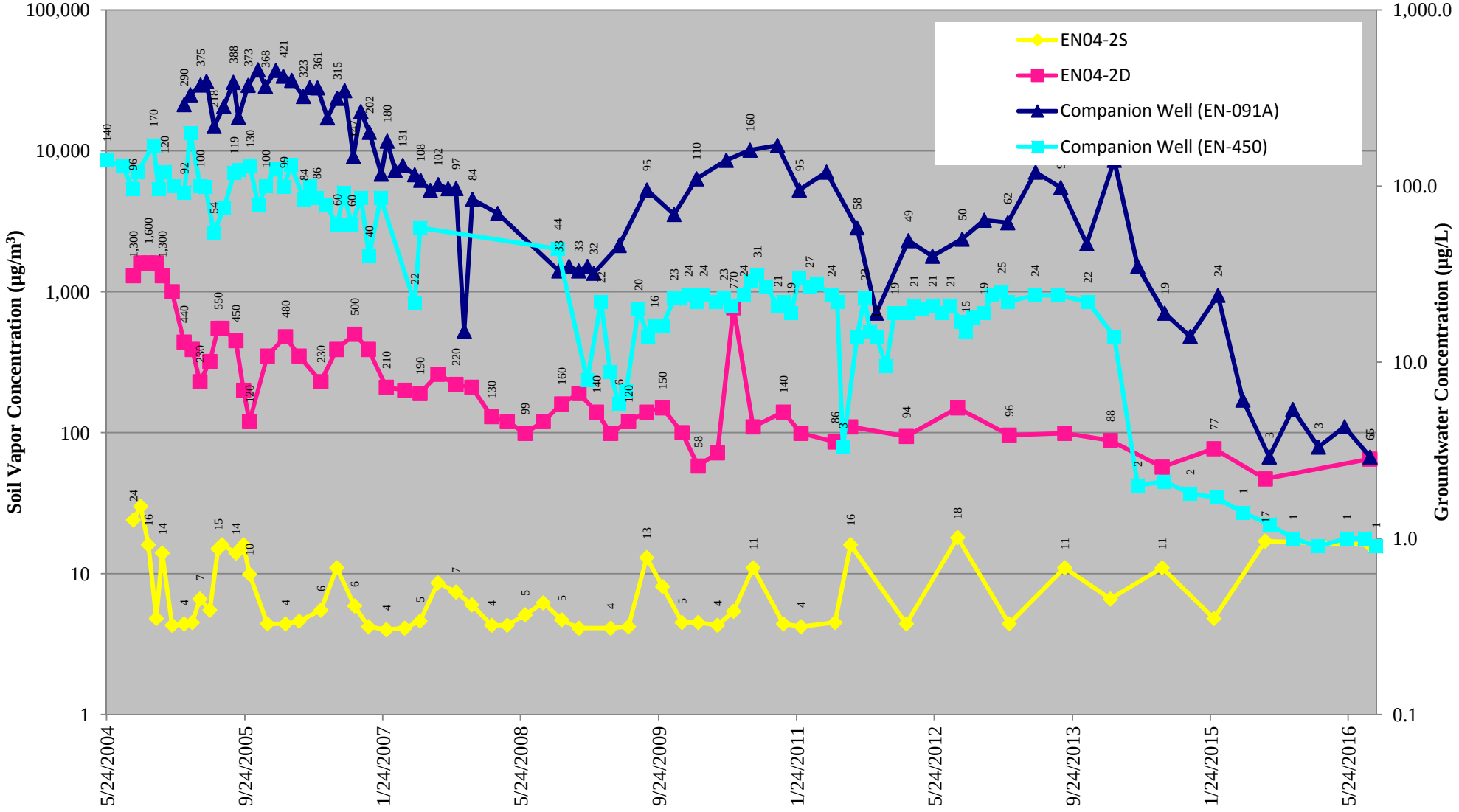


Figure B.3
TCE in Soil Vapor and Groundwater
Annual Report - Soil Vapor Monitoring through August 2016
Comprehensive Operations, Maintenance, Monitoring Program
Endicott, New York

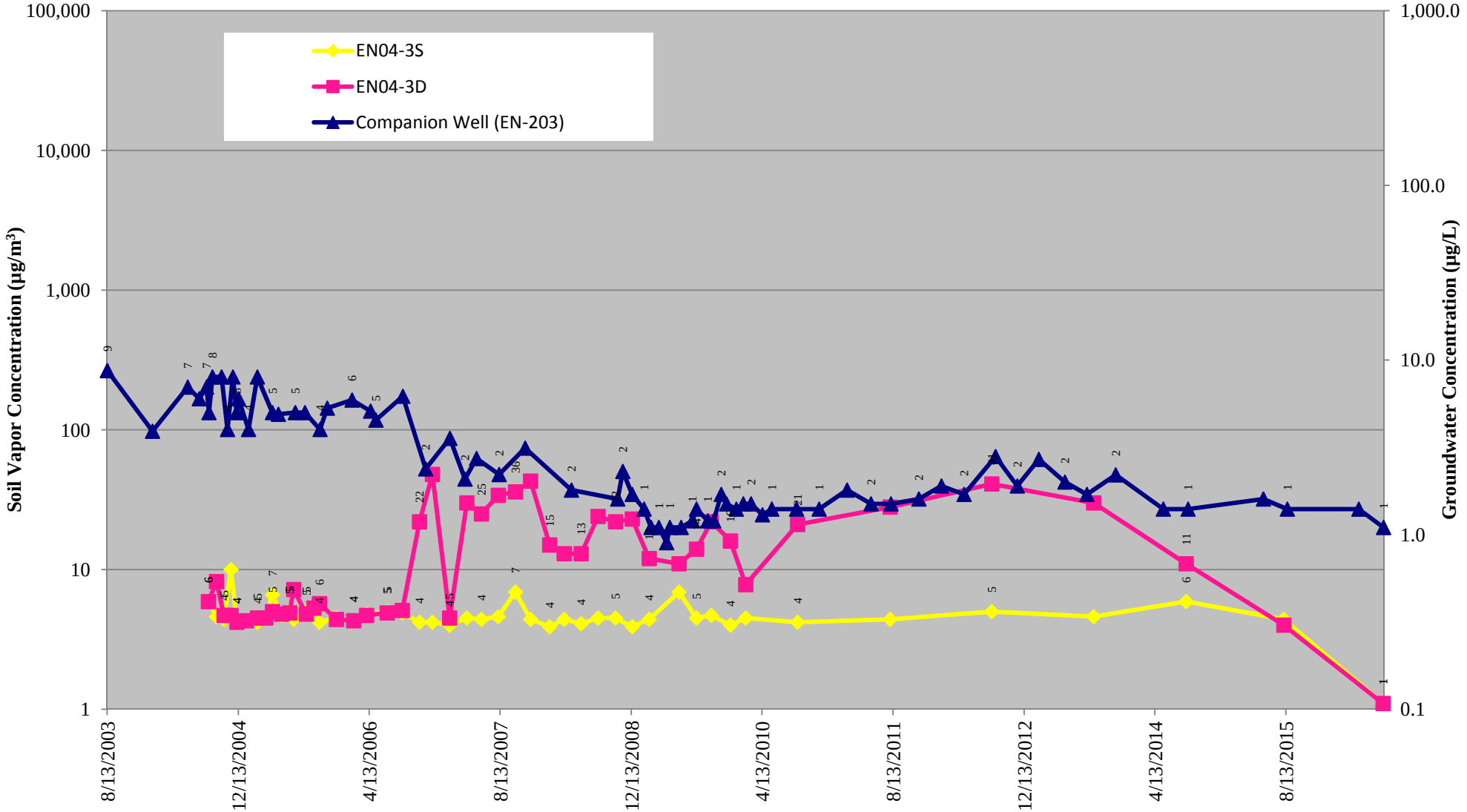


Figure B.4
TCE in Soil Vapor and Groundwater
Annual Report - Soil Vapor Monitoring through August 2016
Comprehensive Operations, Maintenance, Monitoring Program
Endicott, New York

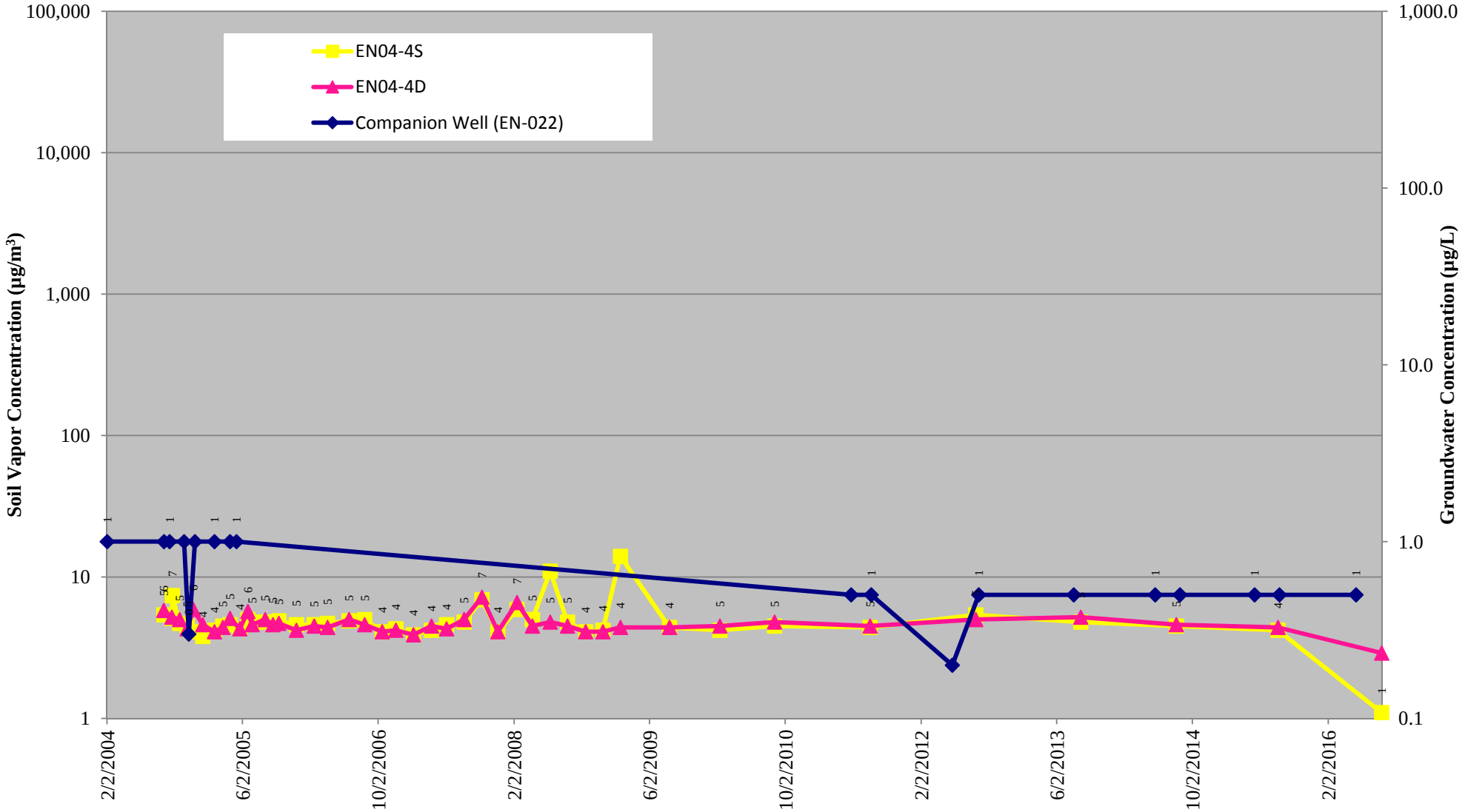


Figure B.5
TCE in Soil Vapor and Groundwater
Annual Report - Soil Vapor Monitoring through August 2016
Comprehensive Operations, Maintenance, Monitoring Program
Endicott, New York

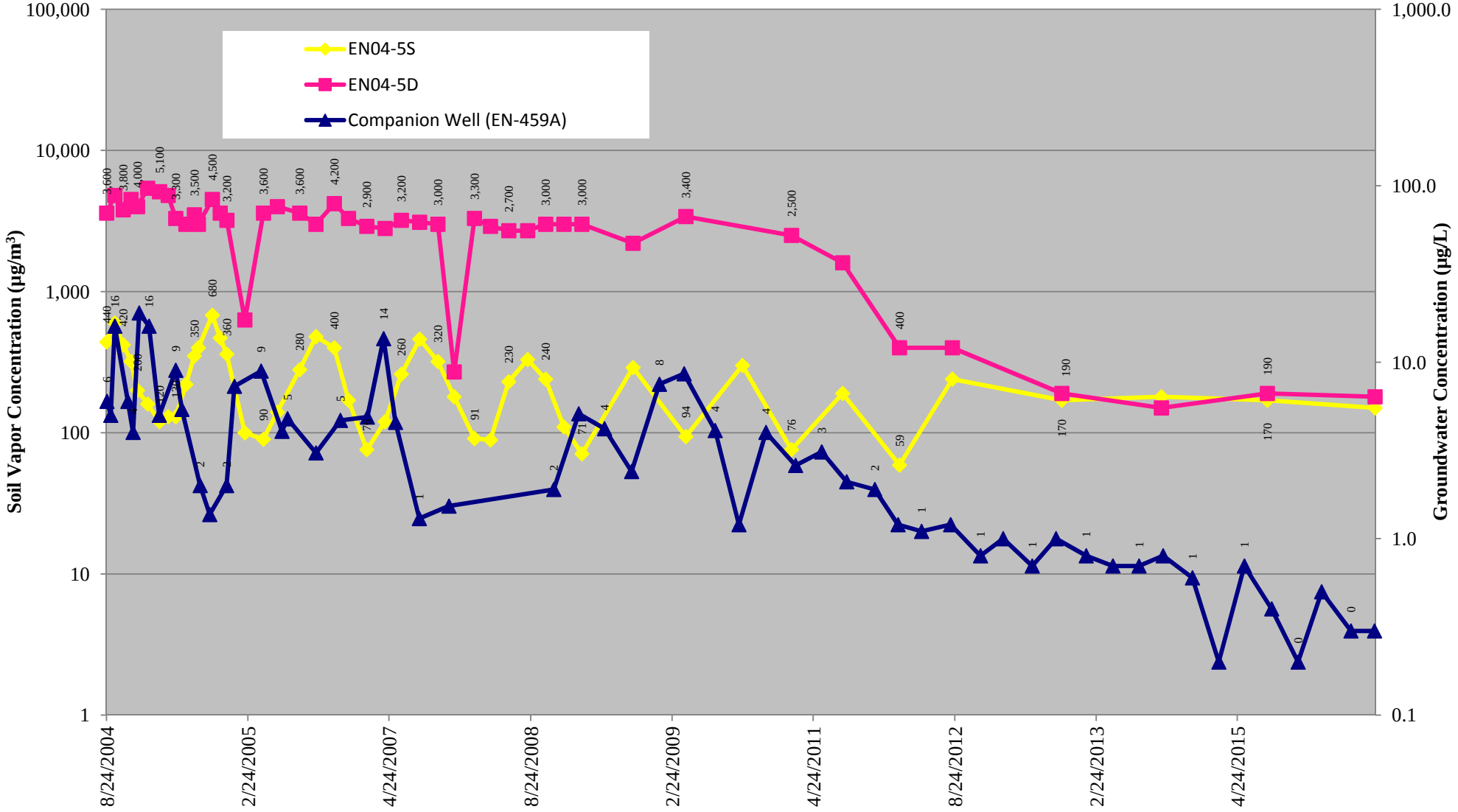


Figure B.6
TCE in Soil Vapor and Groundwater
Annual Report - Soil Vapor Monitoring through August 2016
Comprehensive Operations, Maintenance, Monitoring Program
Endicott, New York

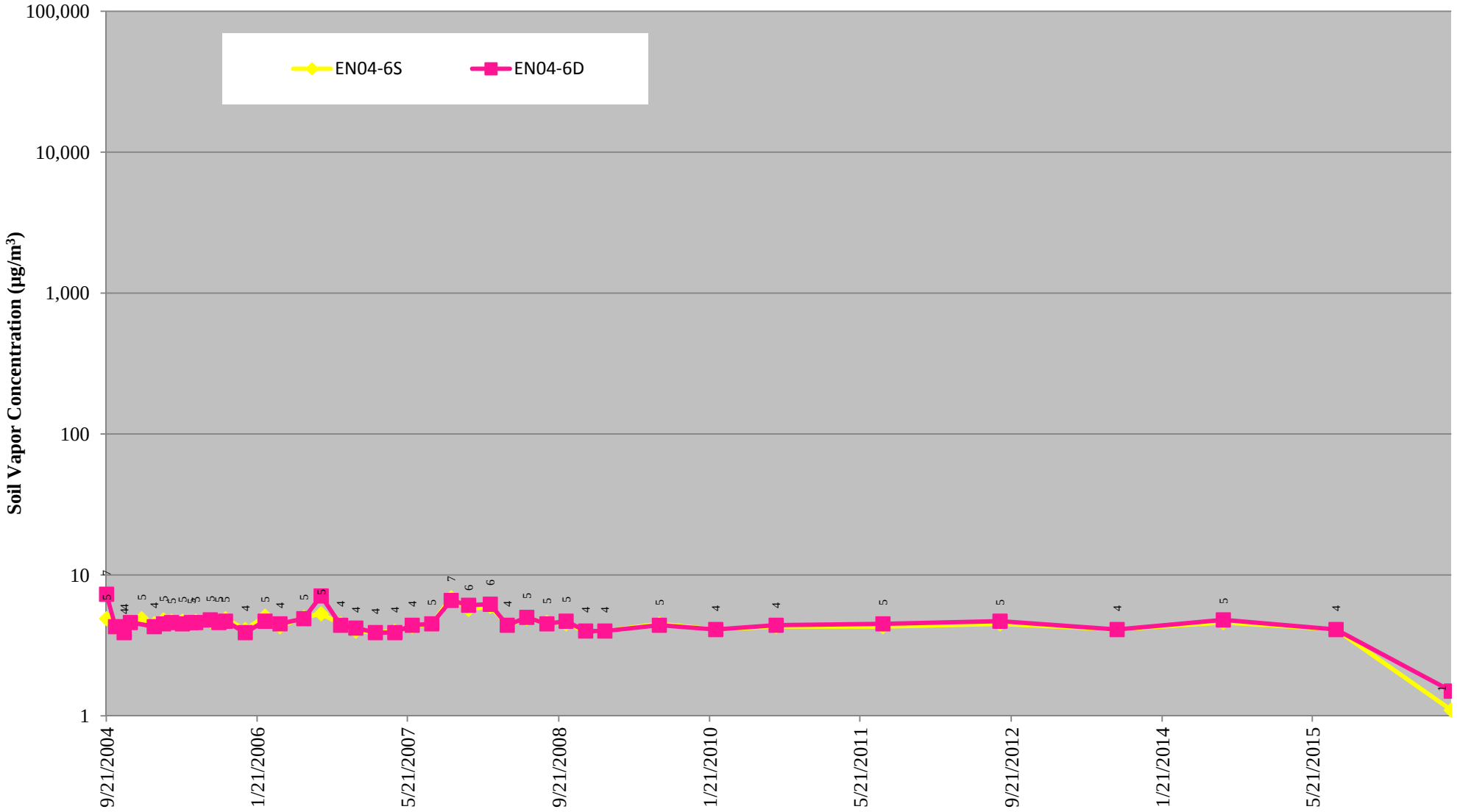


Figure B.7
TCE in Soil Vapor and Groundwater
Annual Report - Soil Vapor Monitoring through August 2016
Comprehensive Operations, Maintenance, Monitoring Program
Endicott, New York

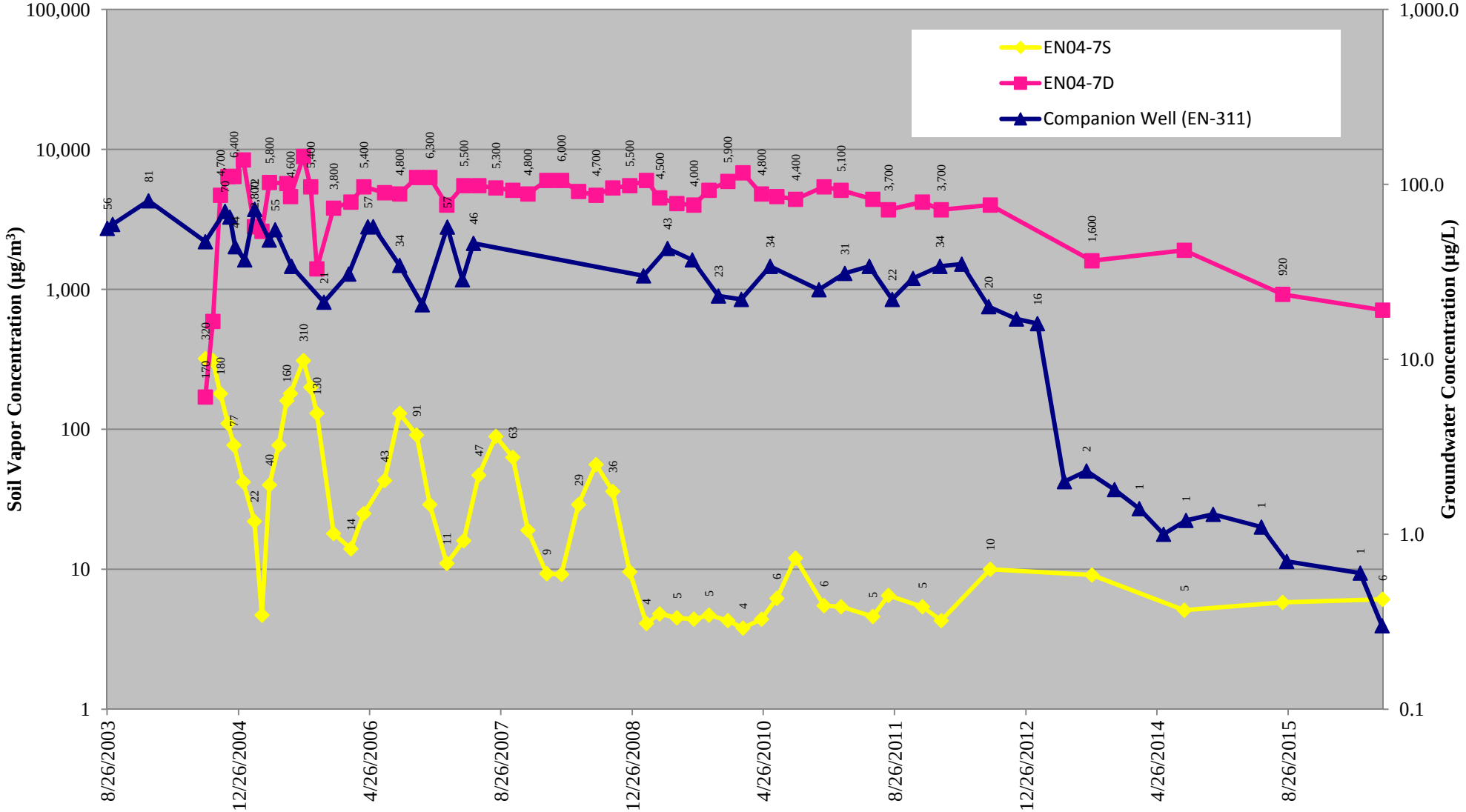


Figure B.8
TCE in Soil Vapor and Groundwater
Annual Report - Soil Vapor Monitoring through August 2016
Comprehensive Operations, Maintenance, Monitoring Program
Endicott, New York

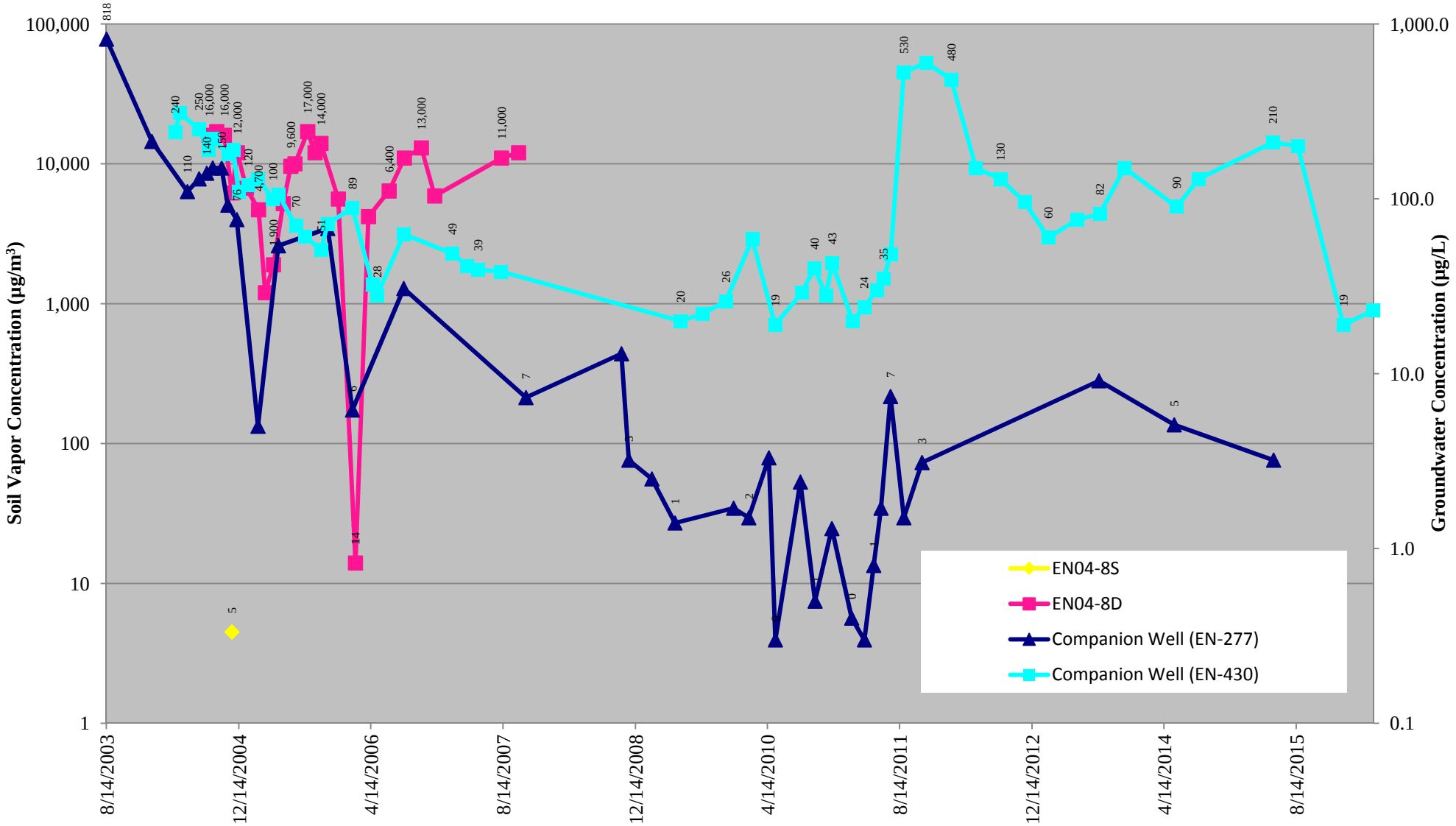


Figure B.9
TCE in Soil Vapor and Groundwater
Annual Report - Soil Vapor Monitoring through August 2016
Comprehensive Operations, Maintenance, Monitoring Program
Endicott, New York

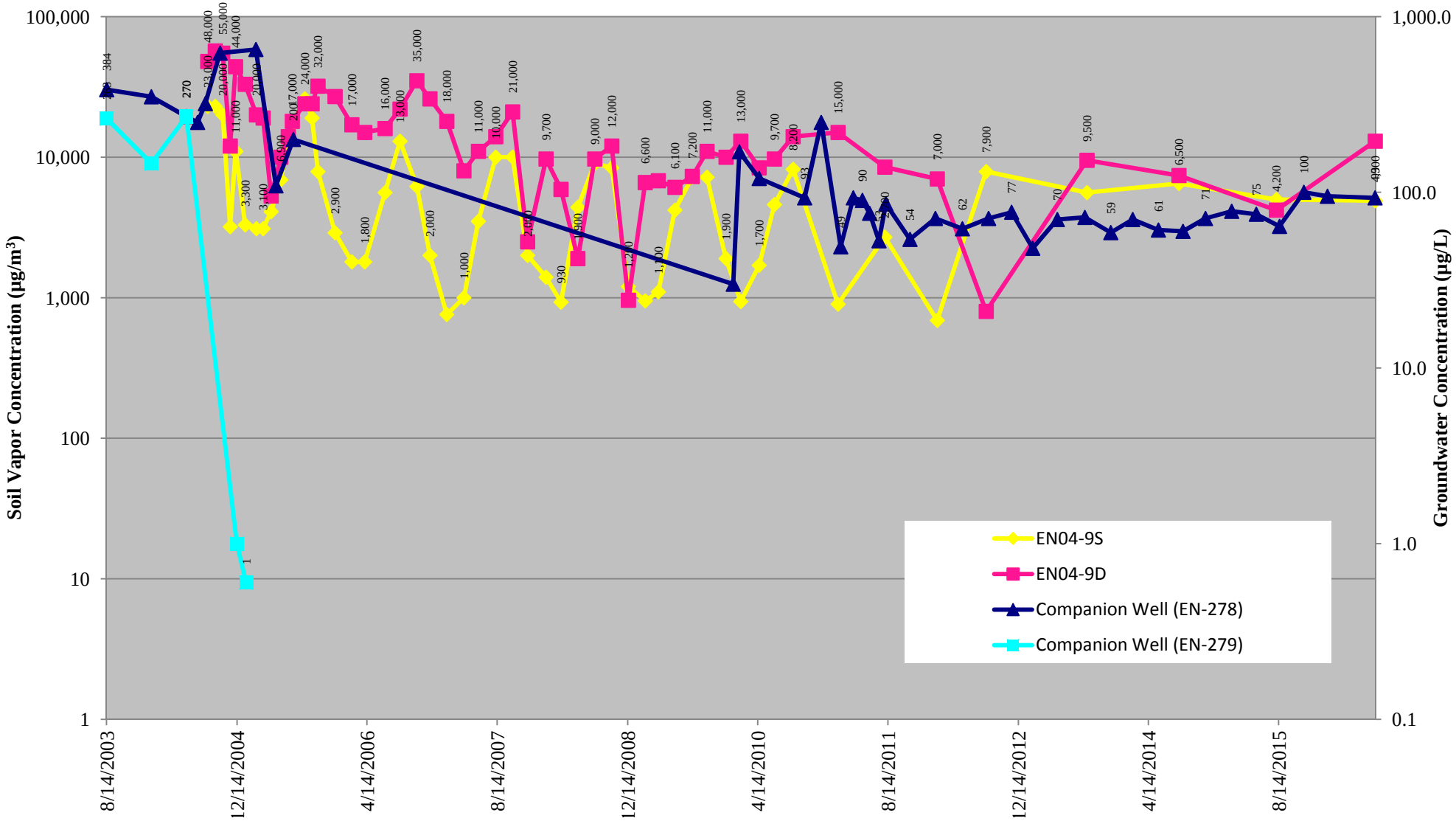


Figure B.10
TCE in Soil Vapor and Groundwater
Annual Report - Soil Vapor Monitoring through August 2016
Comprehensive Operations, Maintenance, Monitoring Program
Endicott, New York

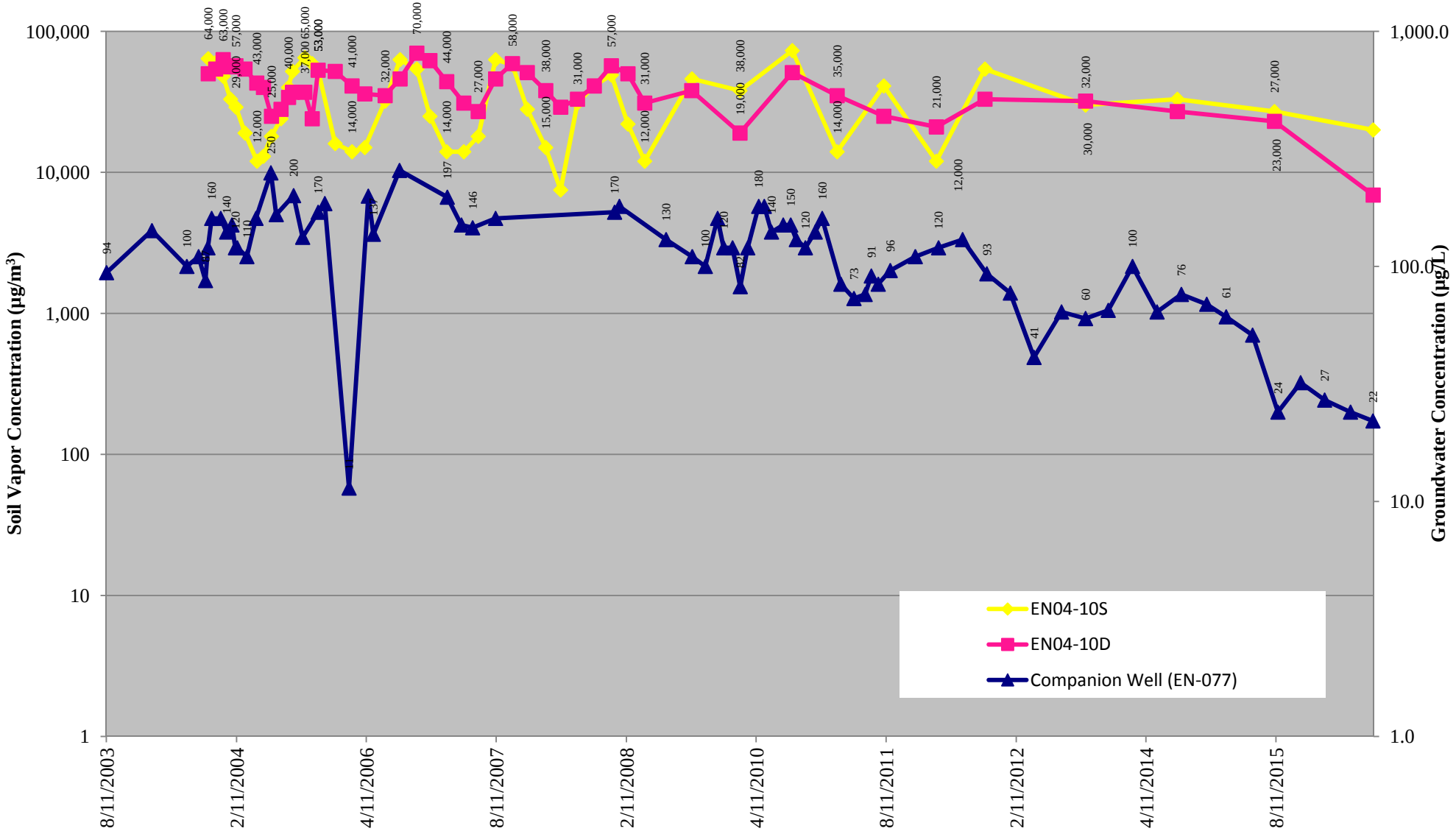


Figure B.11
TCE in Soil Vapor and Groundwater
Annual Report - Soil Vapor Monitoring through August 2016
Comprehensive Operations, Maintenance, Monitoring Program
Endicott, New York

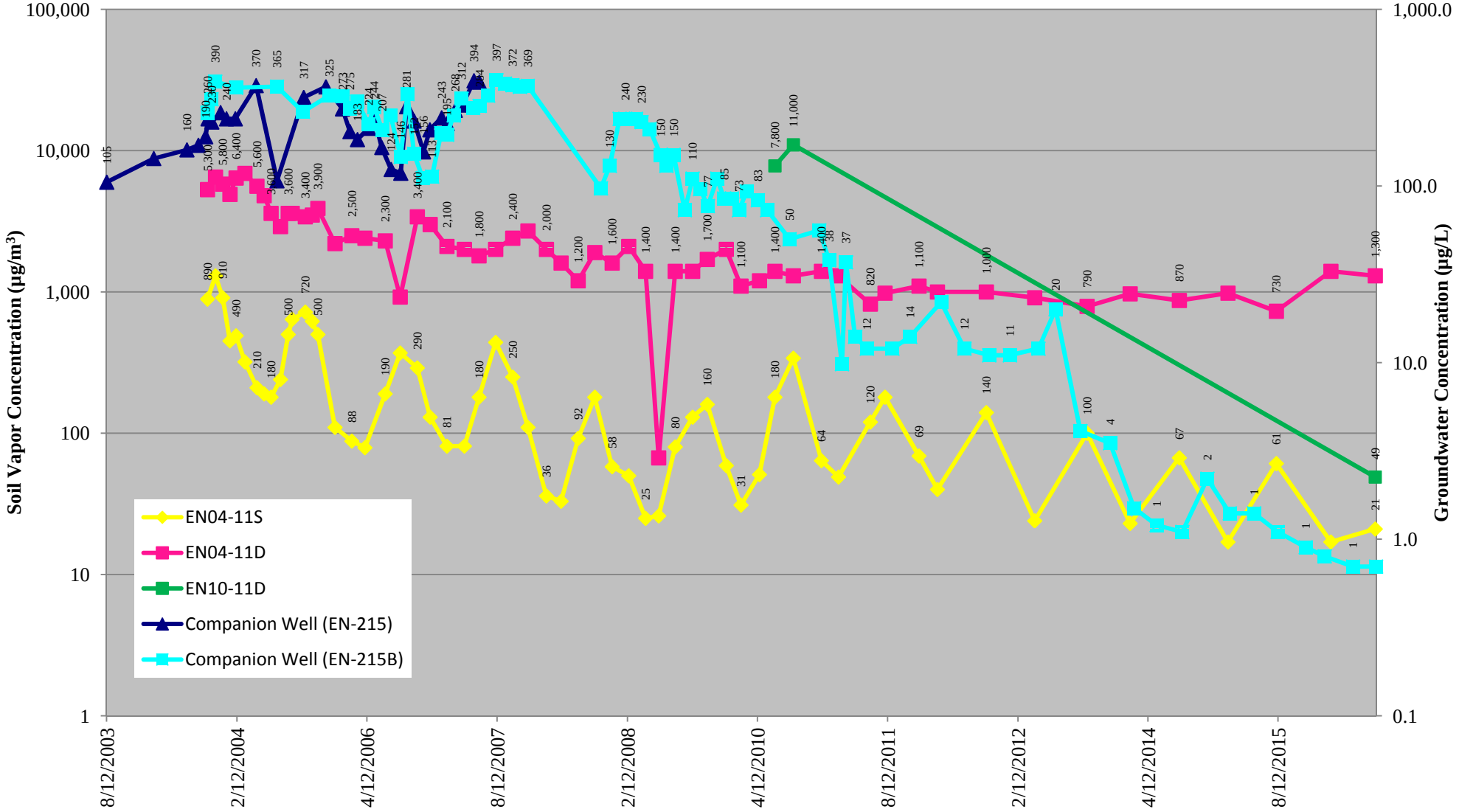


Figure B.12
TCE in Soil Vapor and Groundwater
Annual Report - Soil Vapor Monitoring through August 2016
Comprehensive Operations, Maintenance, Monitoring Program
Endicott, New York

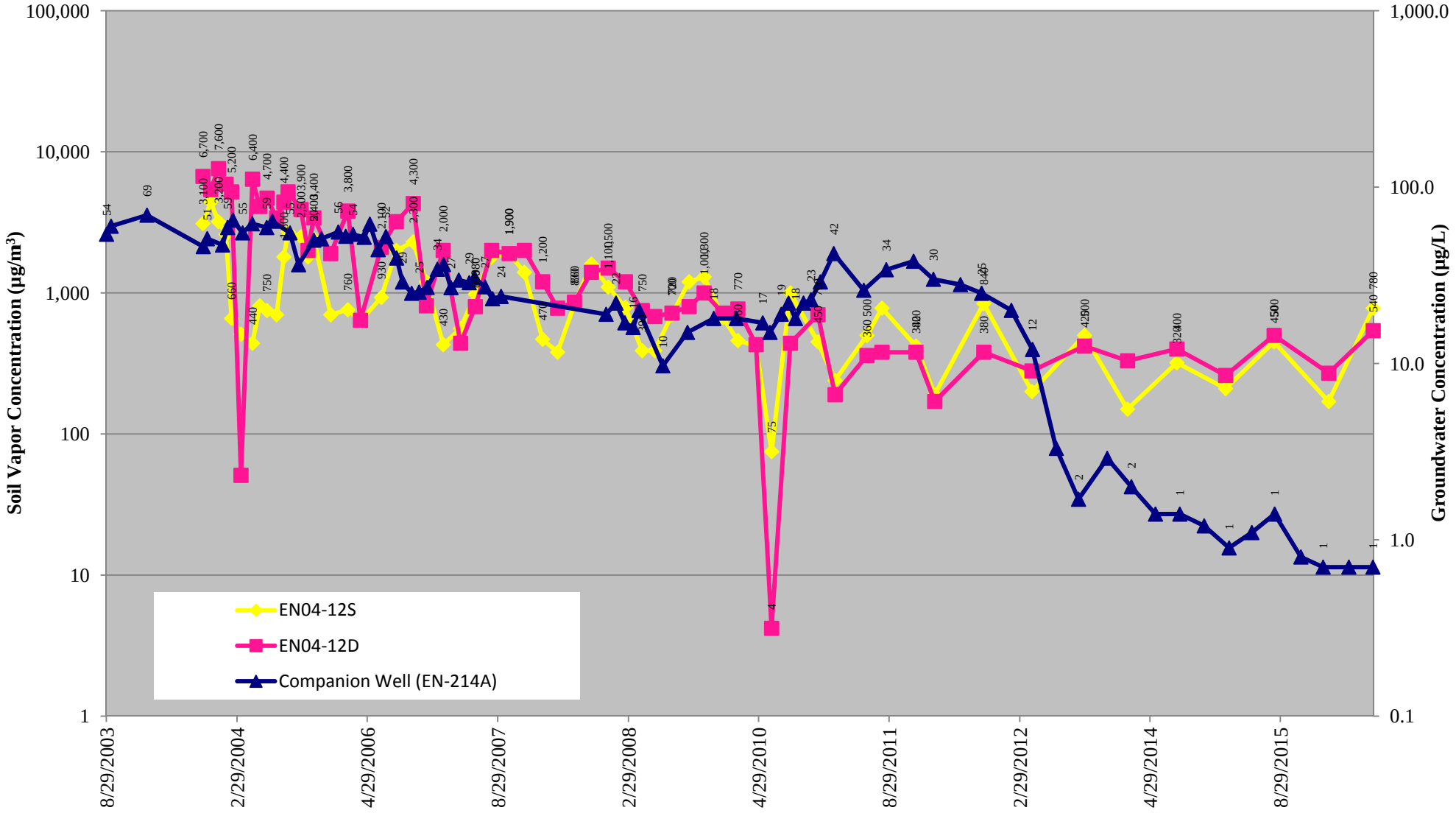


Figure B.13
TCE in Soil Vapor and Groundwater
Annual Report - Soil Vapor Monitoring through August 2016
Comprehensive Operations, Maintenance, Monitoring Program
Endicott, New York

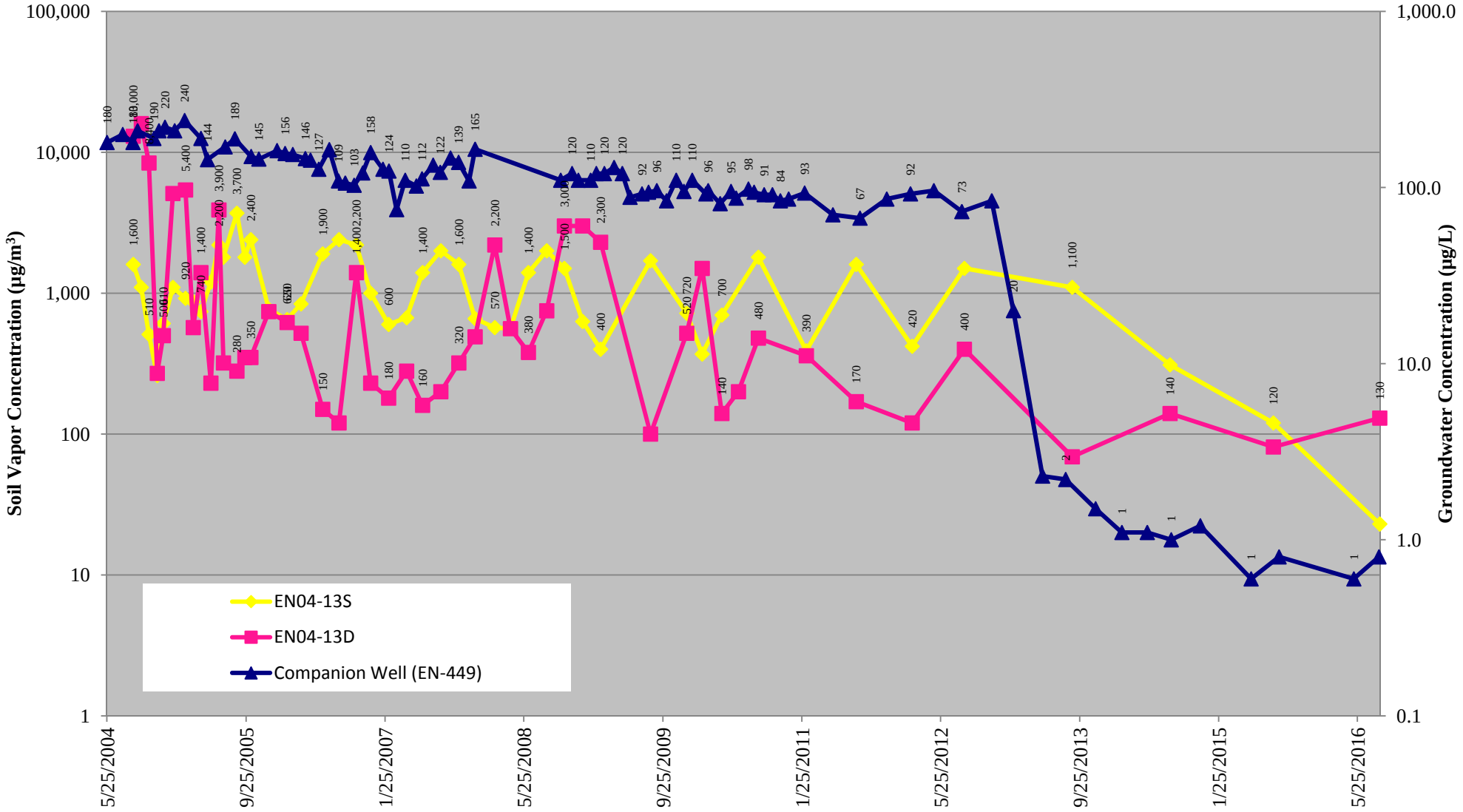


Figure B.14
TCE in Soil Vapor and Groundwater
Annual Report - Soil Vapor Monitoring through August 2016
Comprehensive Operations, Maintenance, Monitoring Program
Endicott, New York

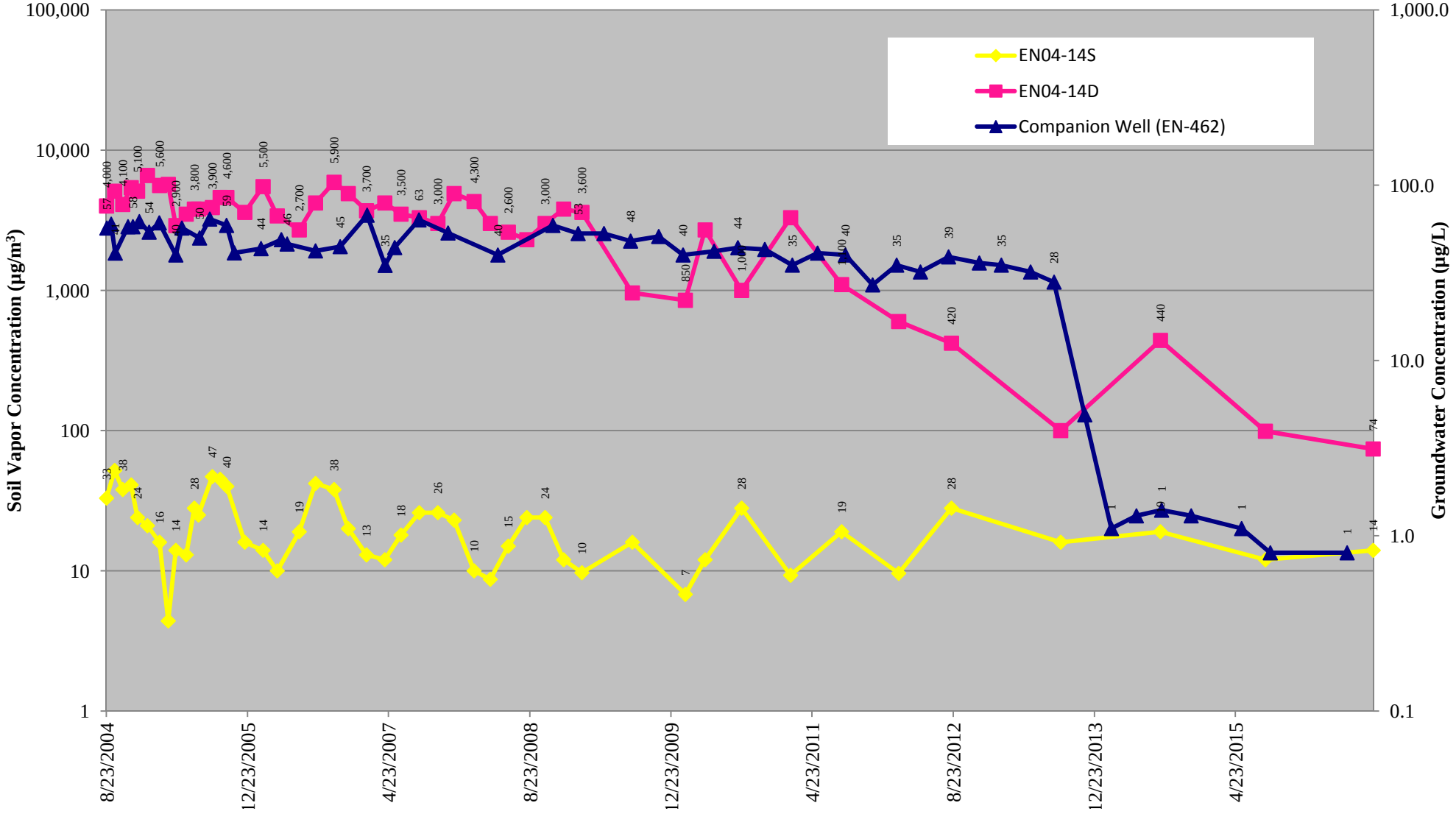


Figure B.15
TCE in Soil Vapor and Groundwater
Annual Report - Soil Vapor Monitoring through August 2016
Comprehensive Operations, Maintenance, Monitoring Program
Endicott, New York

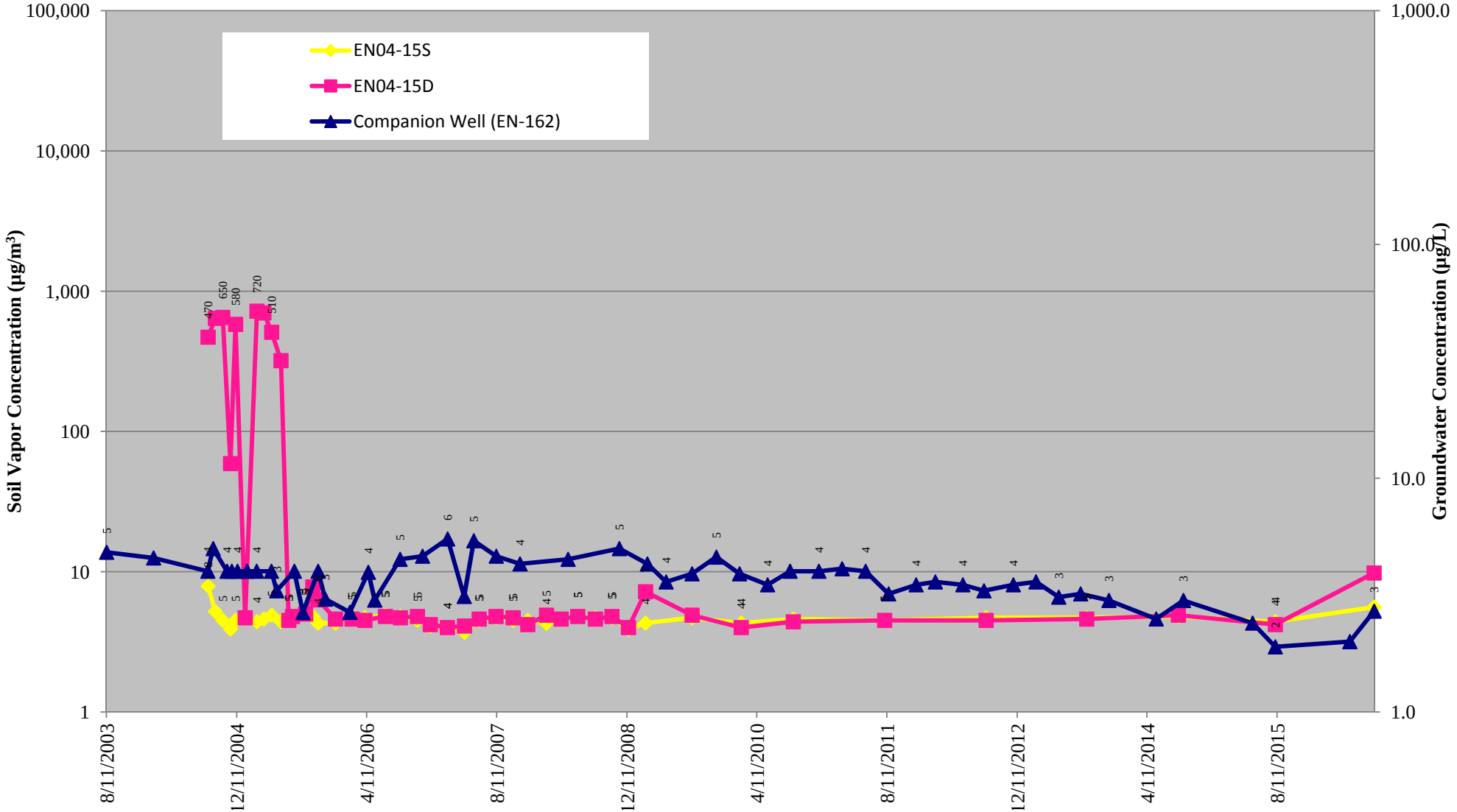


Figure B.16
TCE in Soil Vapor and Groundwater
Annual Report - Soil Vapor Monitoring through August 2016
Comprehensive Operations, Maintenance, Monitoring Program
Endicott, New York

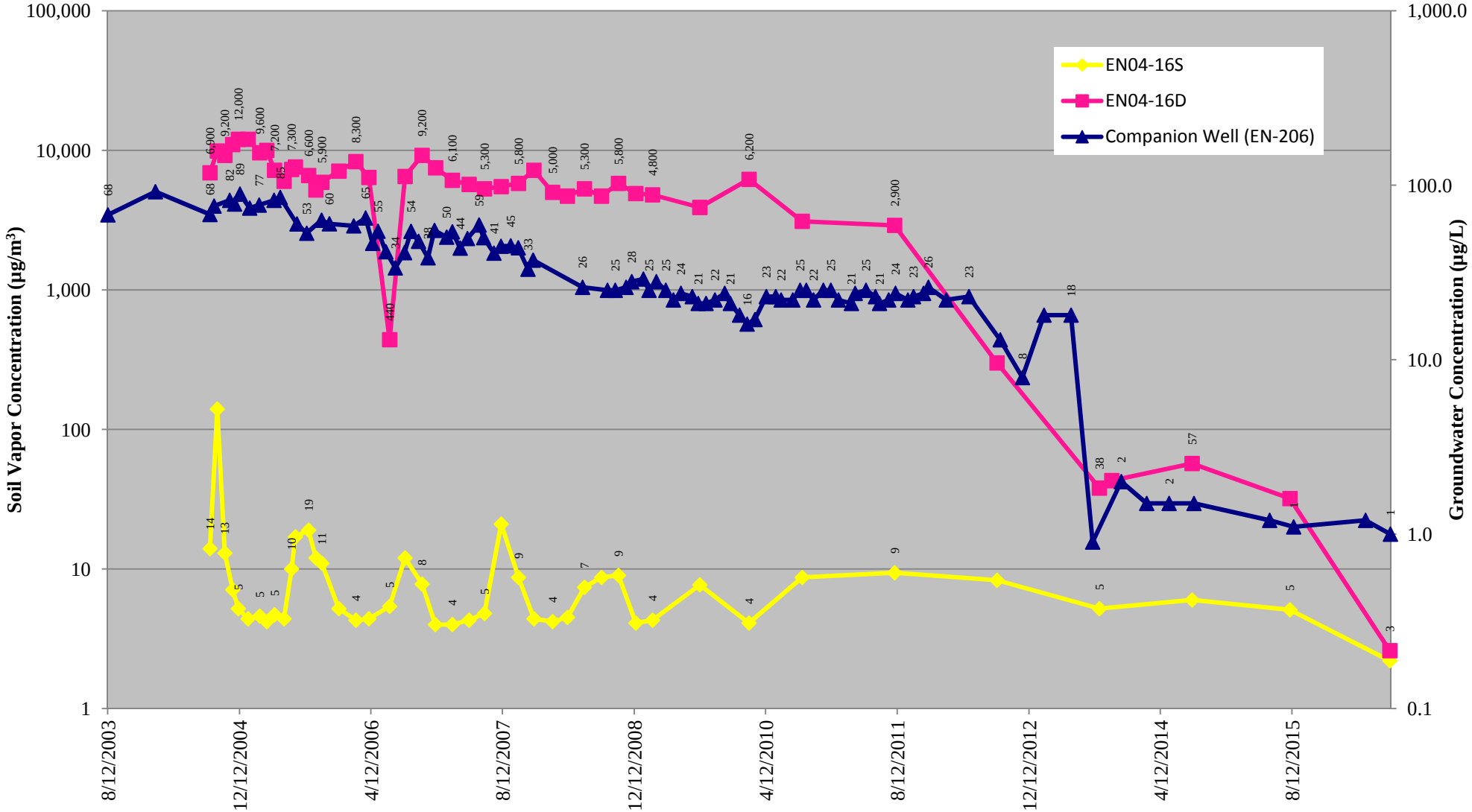


Figure B.17
TCE in Soil Vapor and Groundwater
Annual Report - Soil Vapor Monitoring through August 2016
Comprehensive Operations, Maintenance, Monitoring Program
Endicott, New York

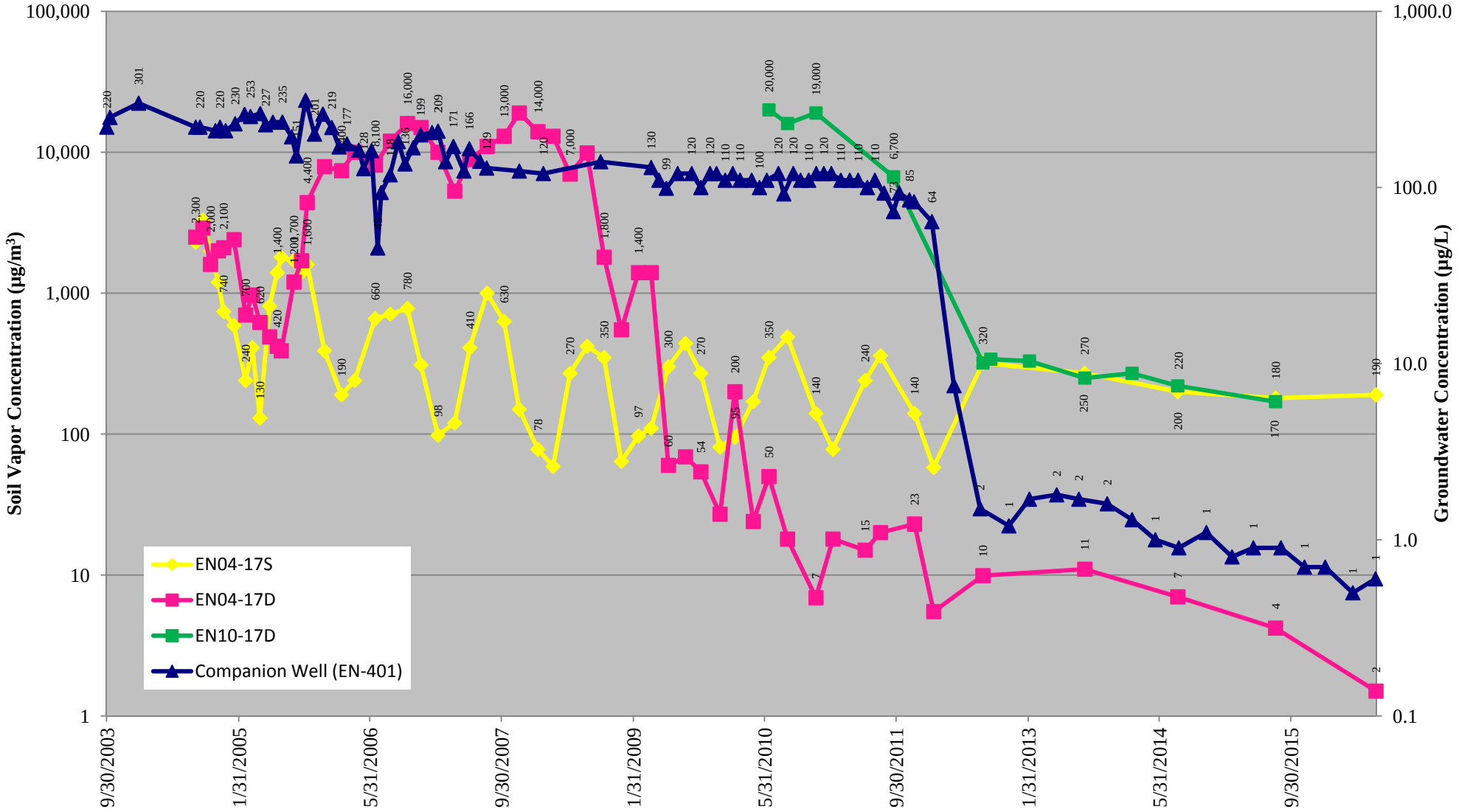


Figure B.18
TCE in Soil Vapor and Groundwater
Annual Report - Soil Vapor Monitoring through August 2016
Comprehensive Operations, Maintenance, Monitoring Program
Endicott, New York

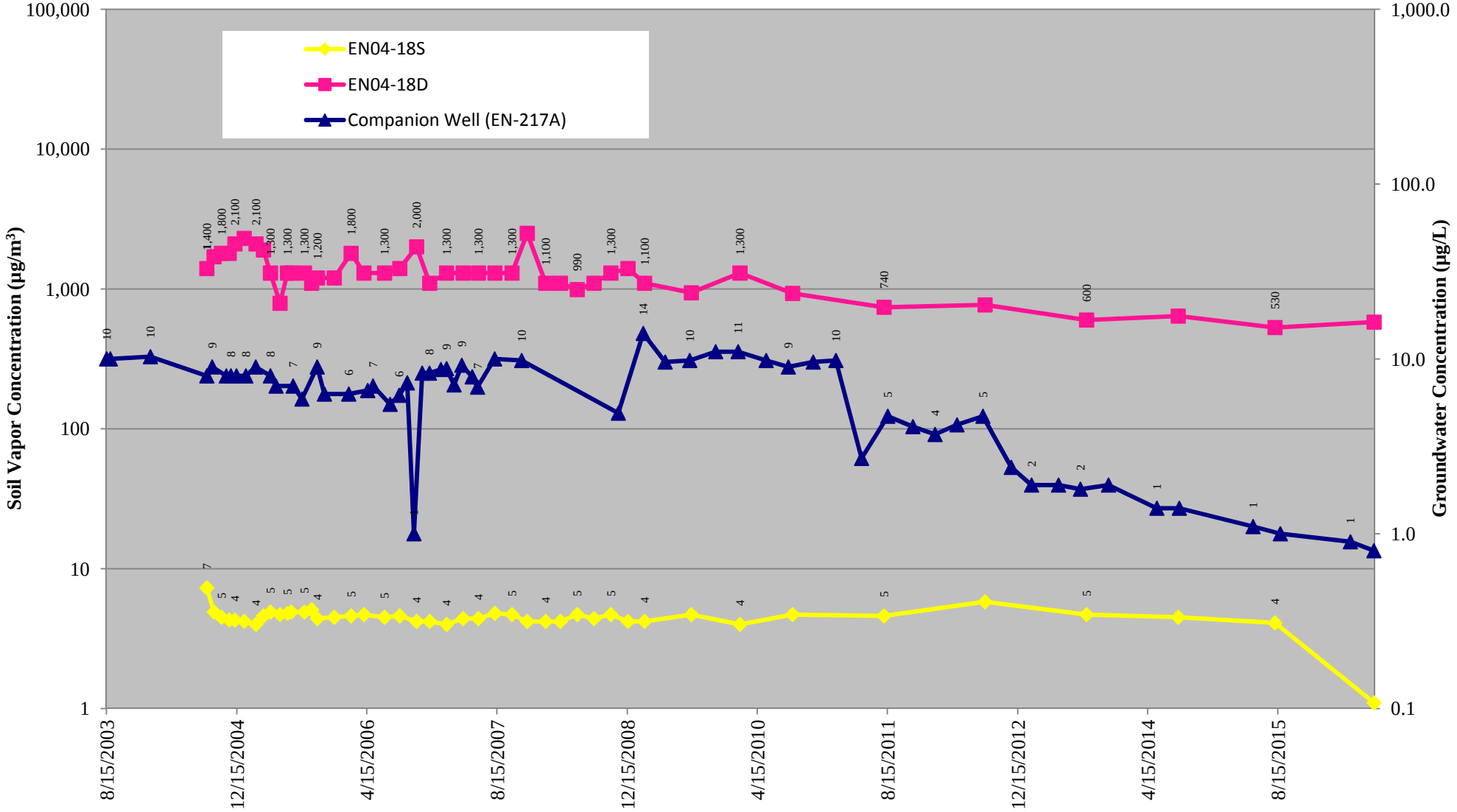


Figure B.19
TCE in Soil Vapor and Groundwater
Annual Report - Soil Vapor Monitoring through August 2016
Comprehensive Operations, Maintenance, Monitoring Program
Endicott, New York

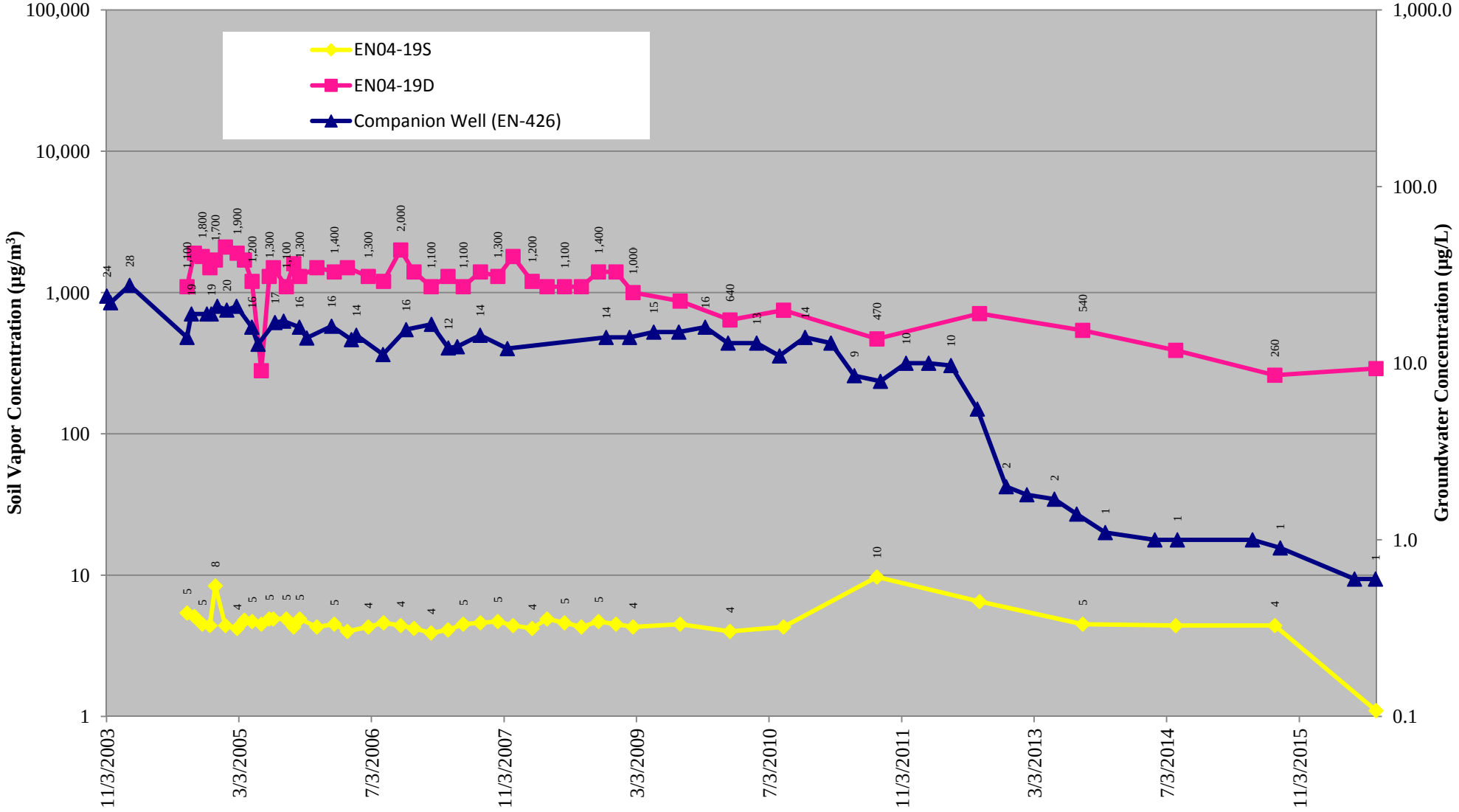


Figure B.20
TCE in Soil Vapor and Groundwater
Annual Report - Soil Vapor Monitoring through August 2016
Comprehensive Operations, Maintenance, Monitoring Program
Endicott, New York

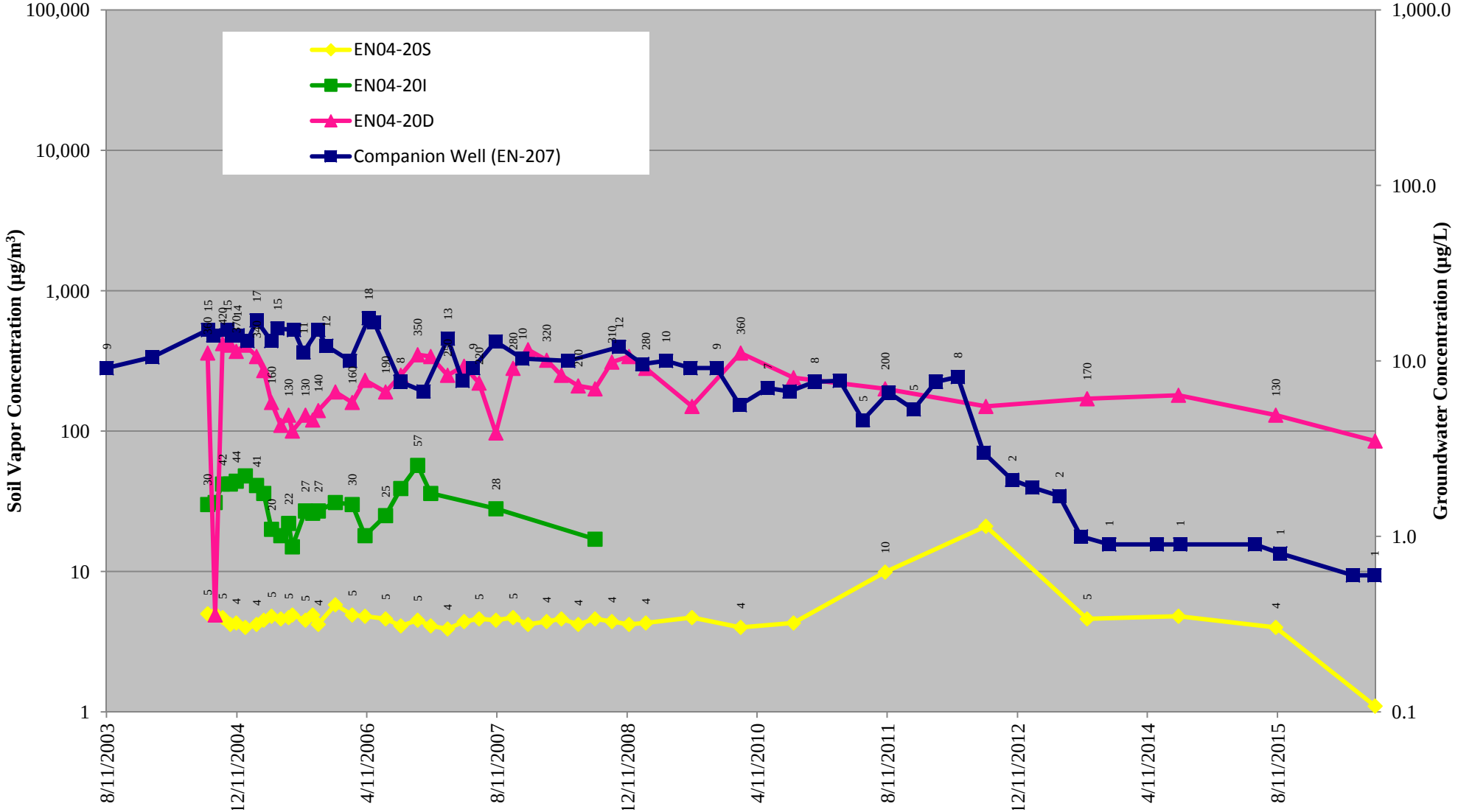


Figure B.21
TCE in Soil Vapor and Groundwater
Annual Report - Soil Vapor Monitoring through August 2016
Comprehensive Operations, Maintenance, Monitoring Program
Endicott, New York

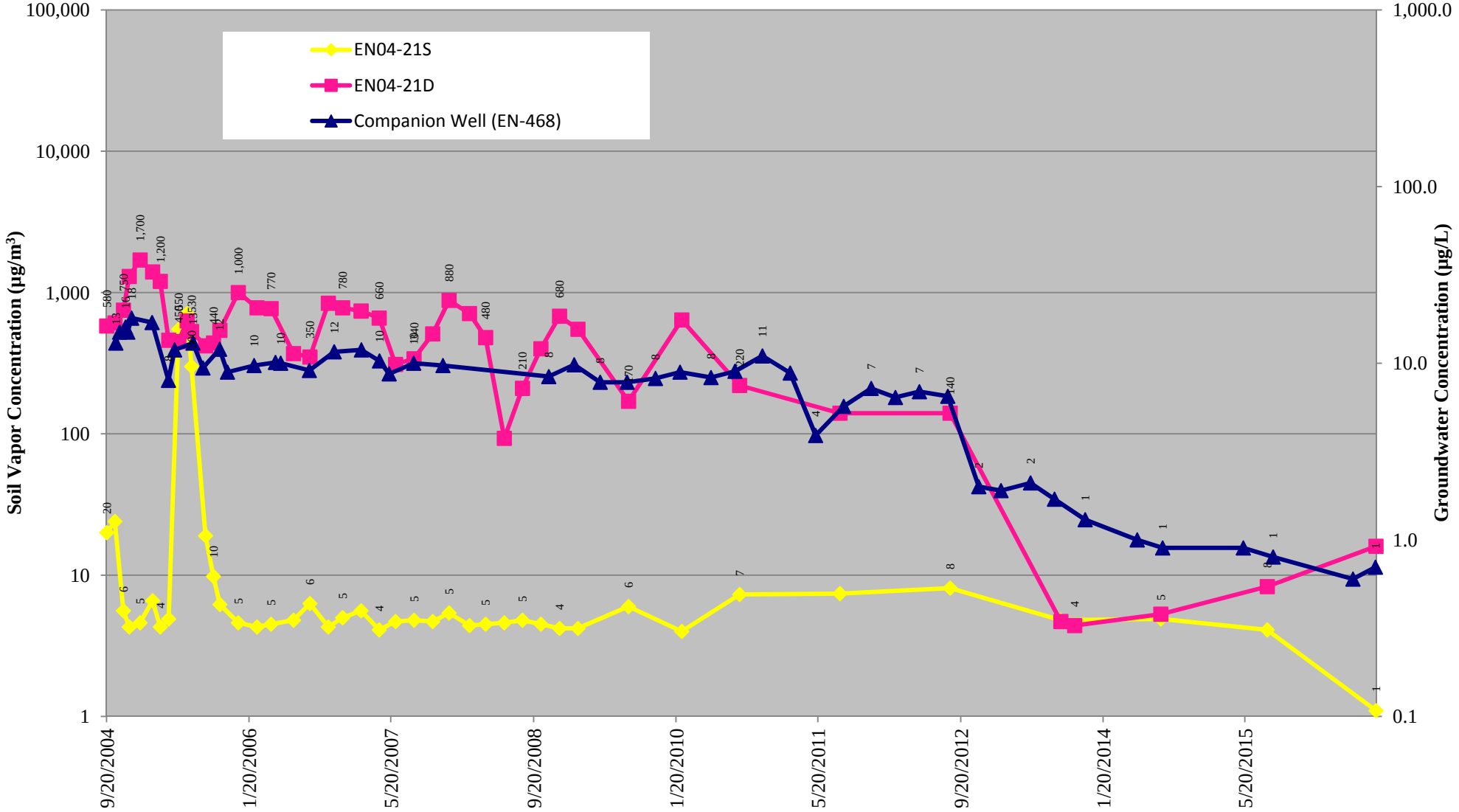


Figure B.22
TCE in Soil Vapor and Groundwater
Annual Report - Soil Vapor Monitoring through August 2016
Comprehensive Operations, Maintenance, Monitoring Program
Endicott, New York

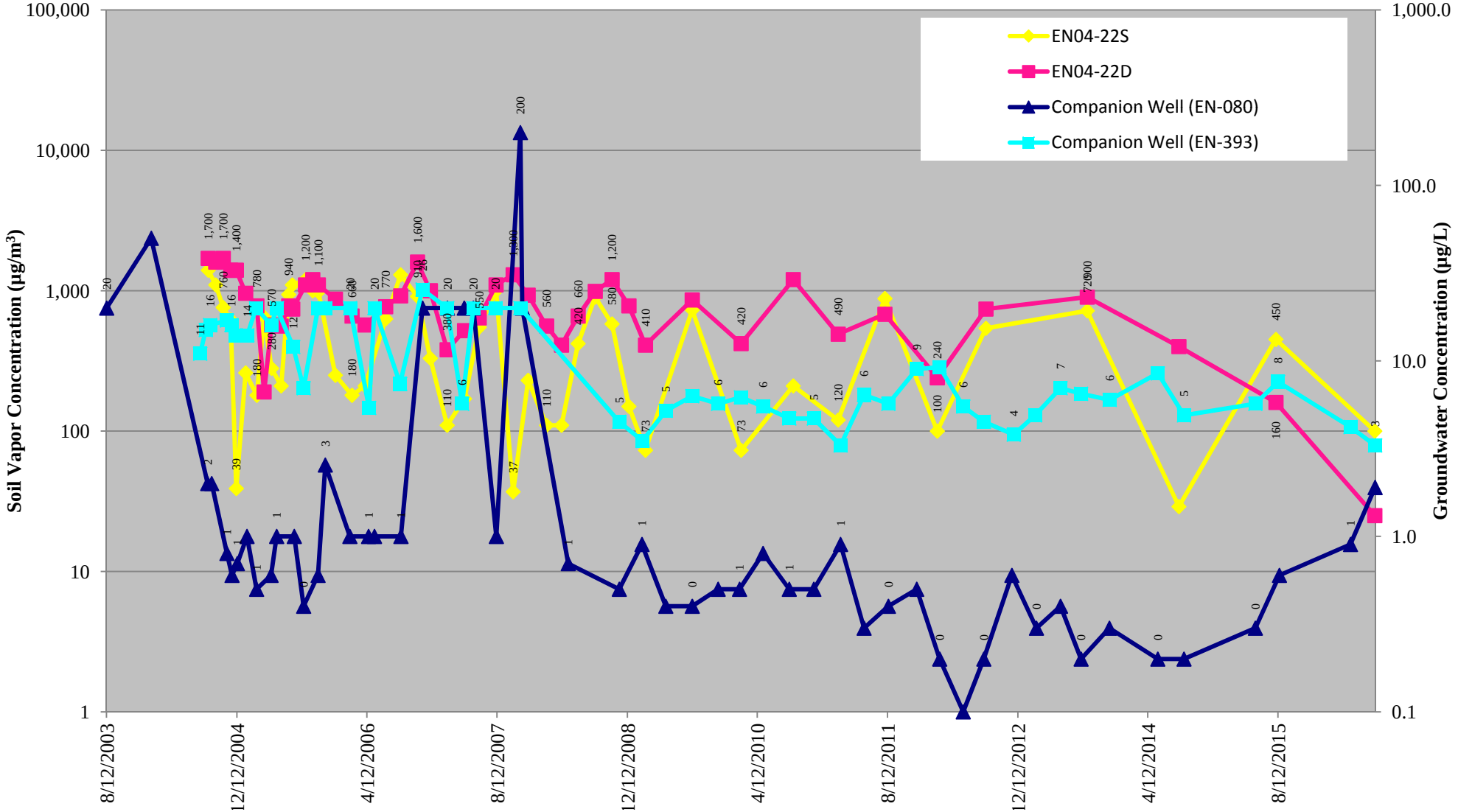


Figure B.23
TCE in Soil Vapor and Groundwater
Annual Report - Soil Vapor Monitoring through August 2016
Comprehensive Operations, Maintenance, Monitoring Program
Endicott, New York

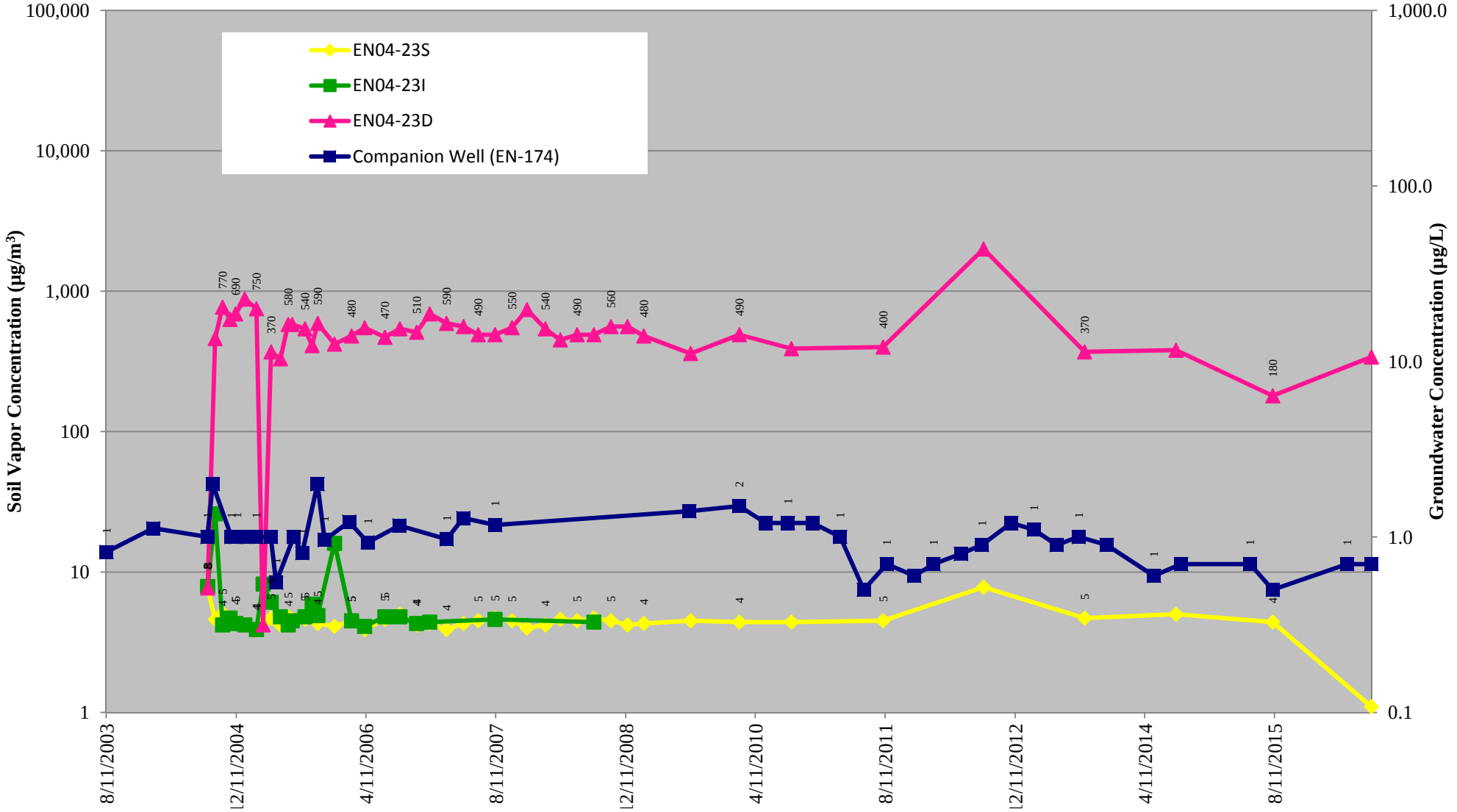


Figure B.24
TCE in Soil Vapor and Groundwater
Annual Report - Soil Vapor Monitoring through August 2016
Comprehensive Operations, Maintenance, Monitoring Program
Endicott, New York

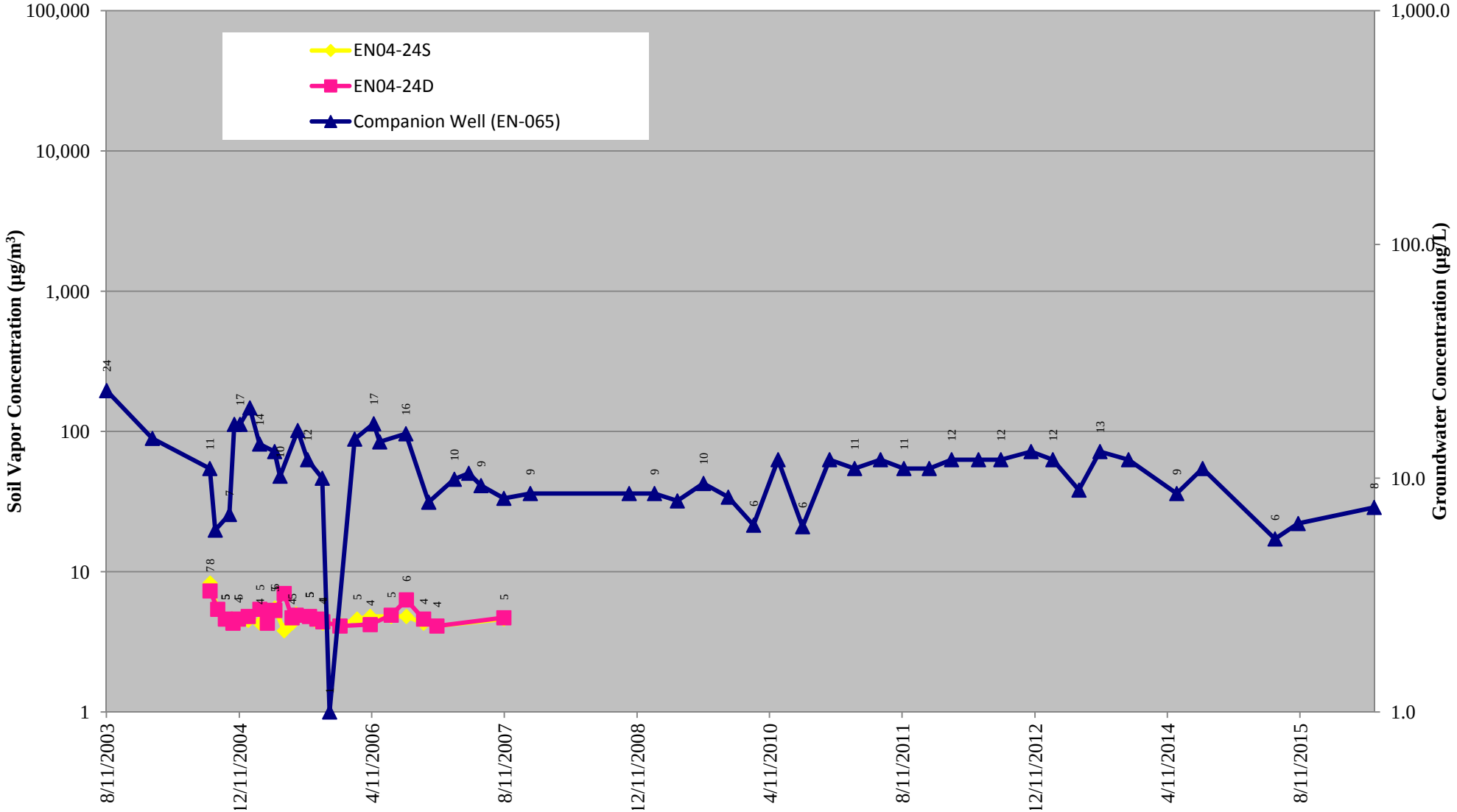


Figure B.25
TCE in Soil Vapor and Groundwater
Annual Report - Soil Vapor Monitoring through August 2016
Comprehensive Operations, Maintenance, Monitoring Program
Endicott, New York

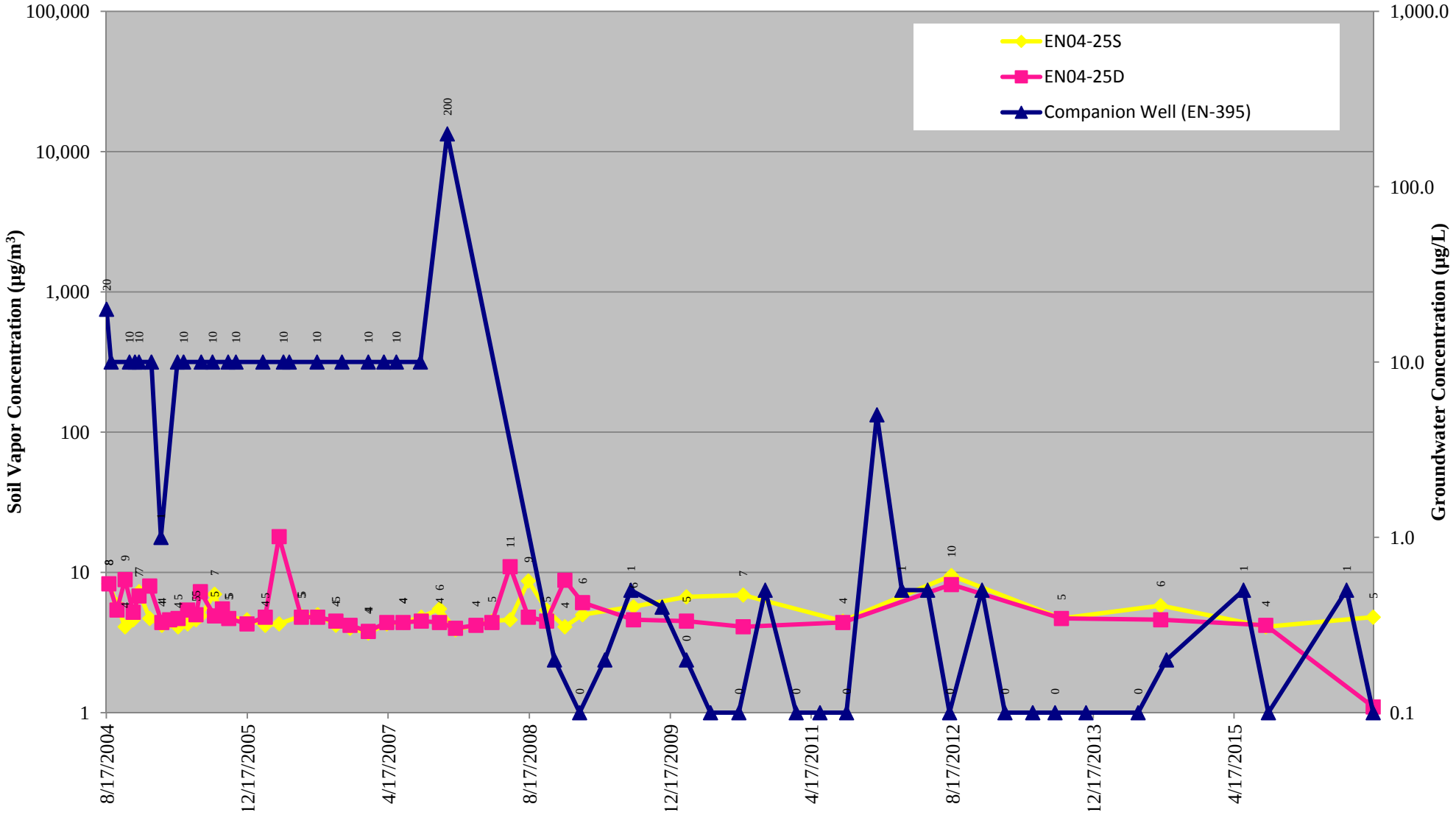


Figure B.26
TCE in Soil Vapor and Groundwater
Annual Report - Soil Vapor Monitoring through August 2016
Comprehensive Operations, Maintenance, Monitoring Program
Endicott, New York

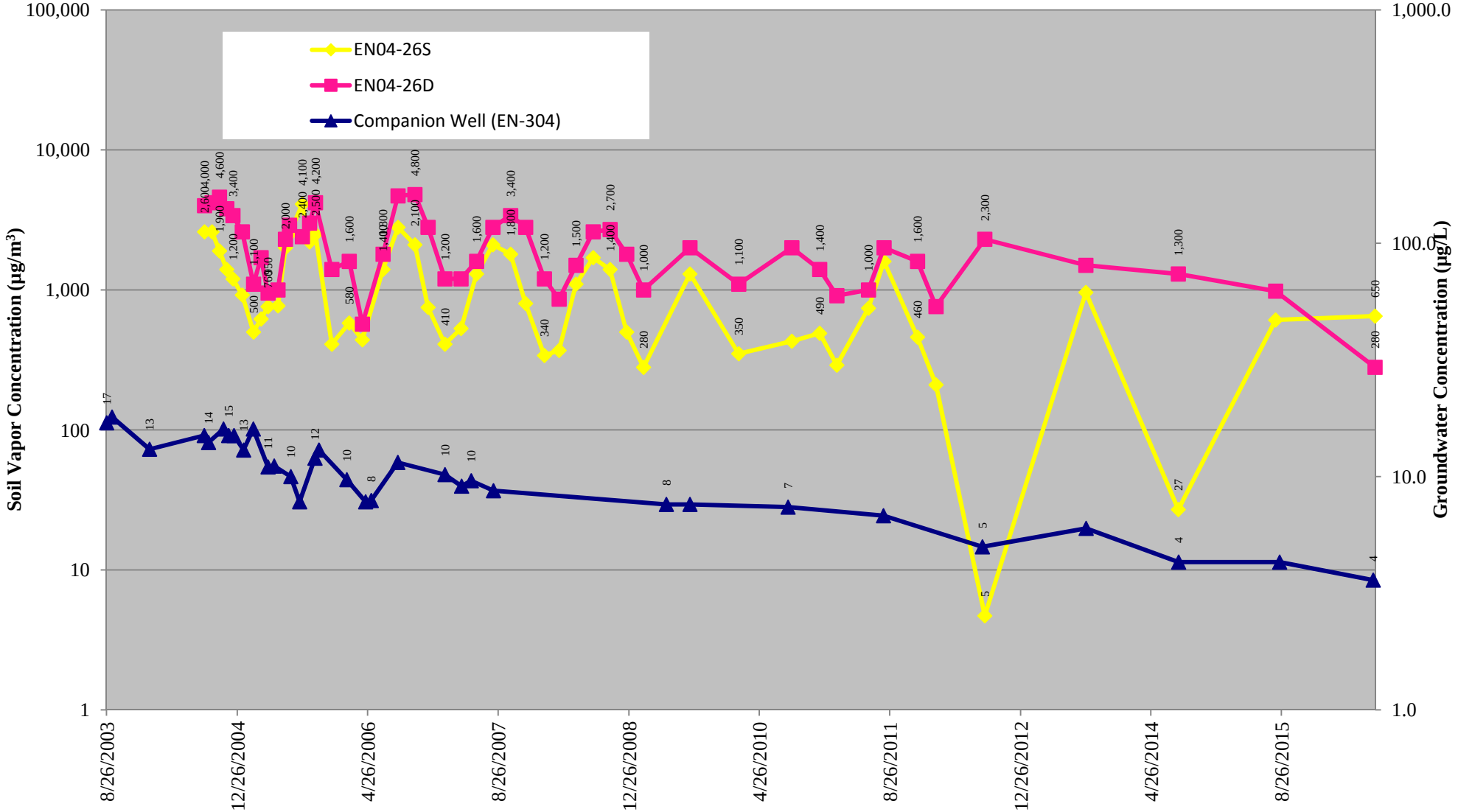


Figure B.27
TCE in Soil Vapor and Groundwater
Annual Report - Soil Vapor Monitoring through August 2016
Comprehensive Operations, Maintenance, Monitoring Program
Endicott, New York

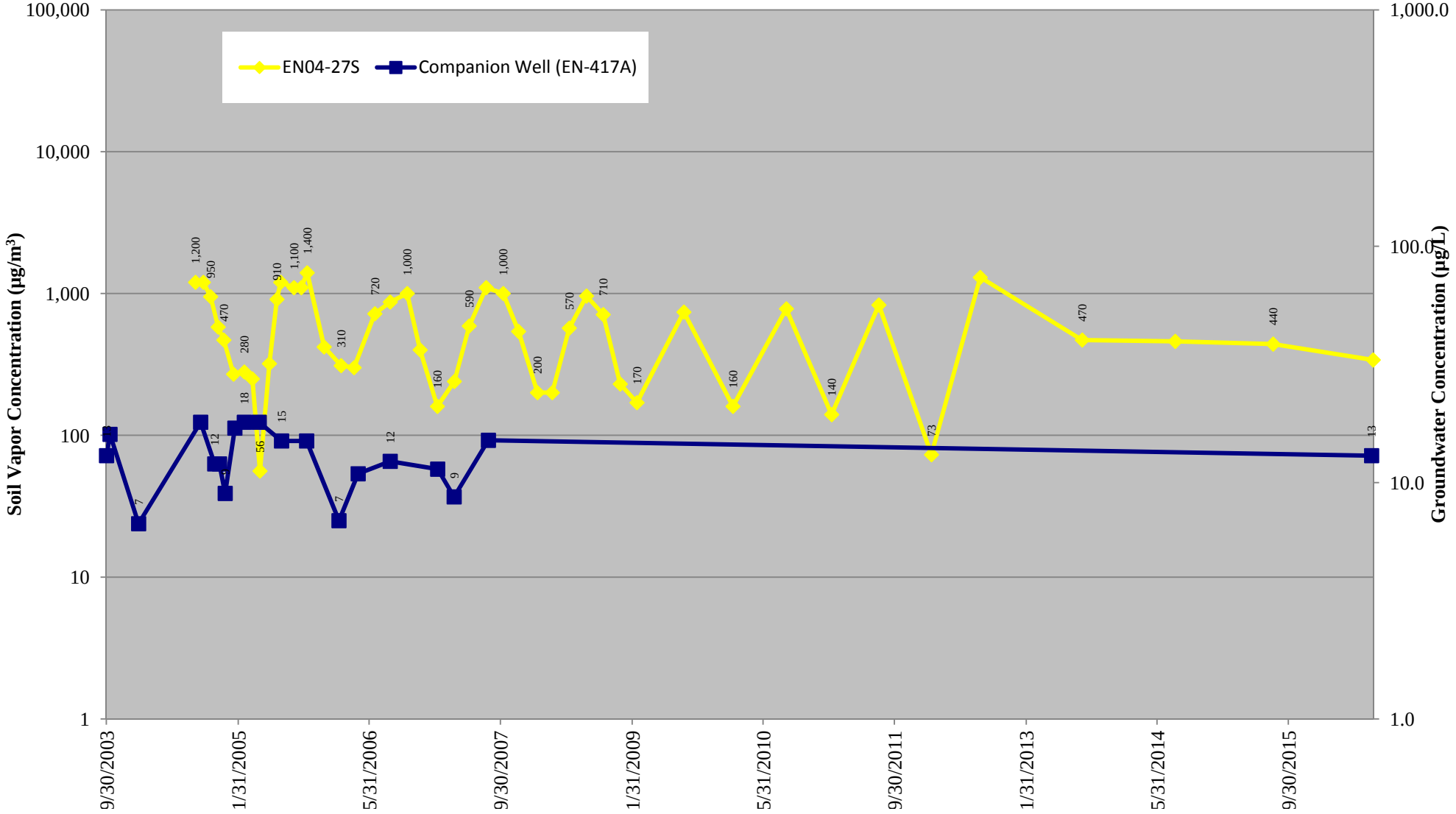


Figure B.28
TCE in Soil Vapor and Groundwater
Annual Report - Soil Vapor Monitoring through August 2016
Comprehensive Operations, Maintenance, Monitoring Program
Endicott, New York

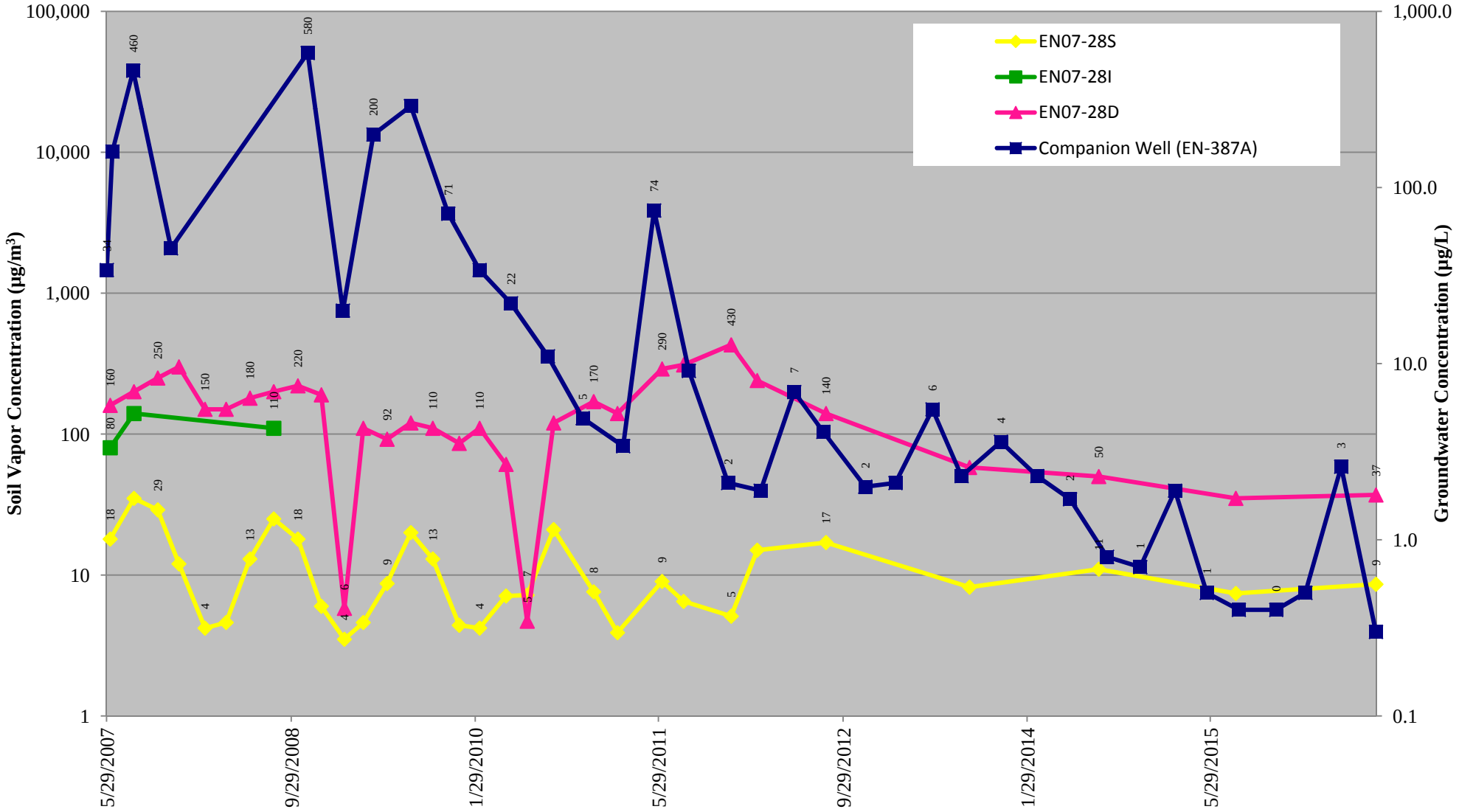


Figure B.29
TCE in Soil Vapor and Groundwater
Annual Report - Soil Vapor Monitoring through August 2016
Comprehensive Operations, Maintenance, Monitoring Program
Endicott, New York

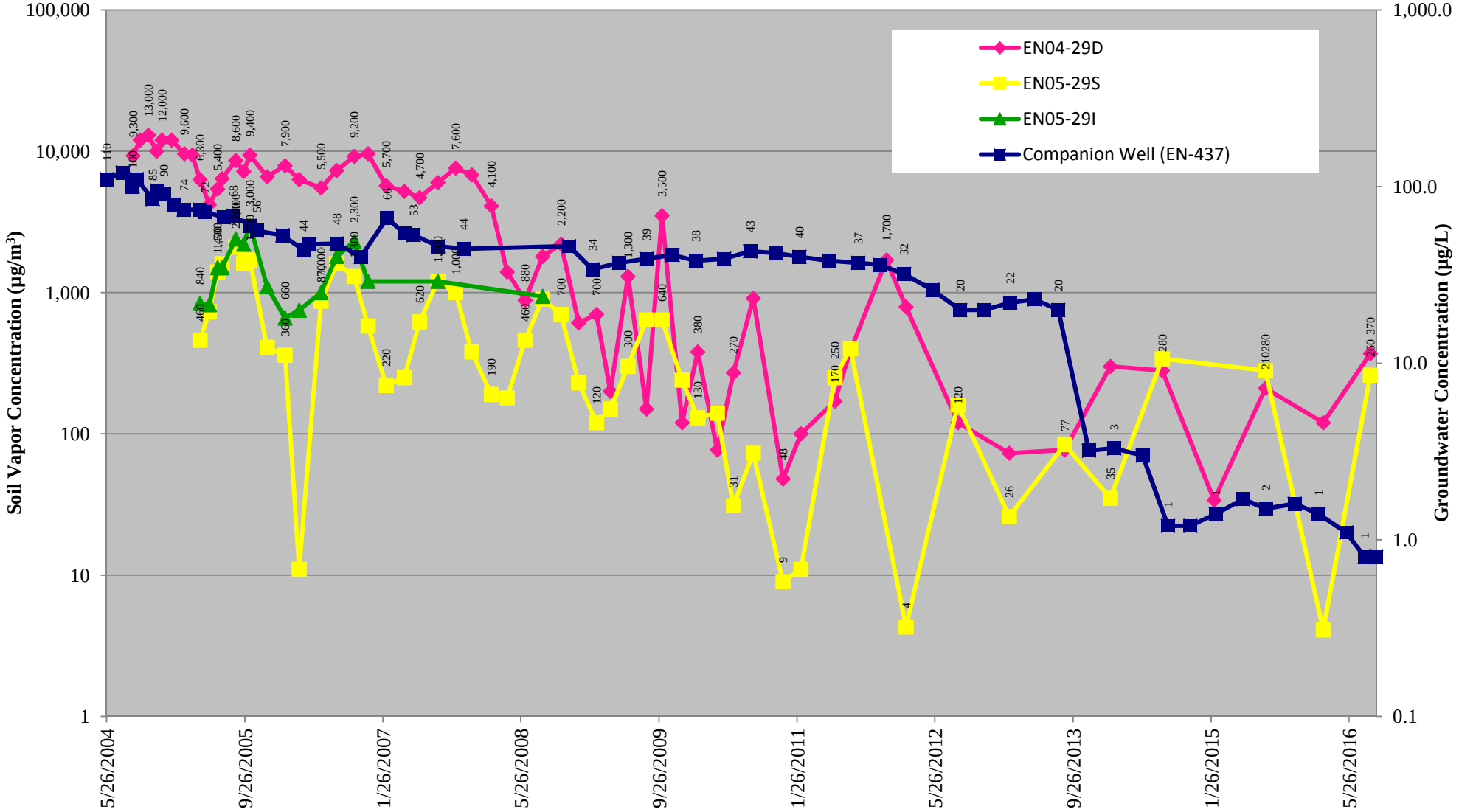


Figure B.30
TCE in Soil Vapor and Groundwater
Annual Report - Soil Vapor Monitoring through August 2016
Comprehensive Operations, Maintenance, Monitoring Program
Endicott, New York

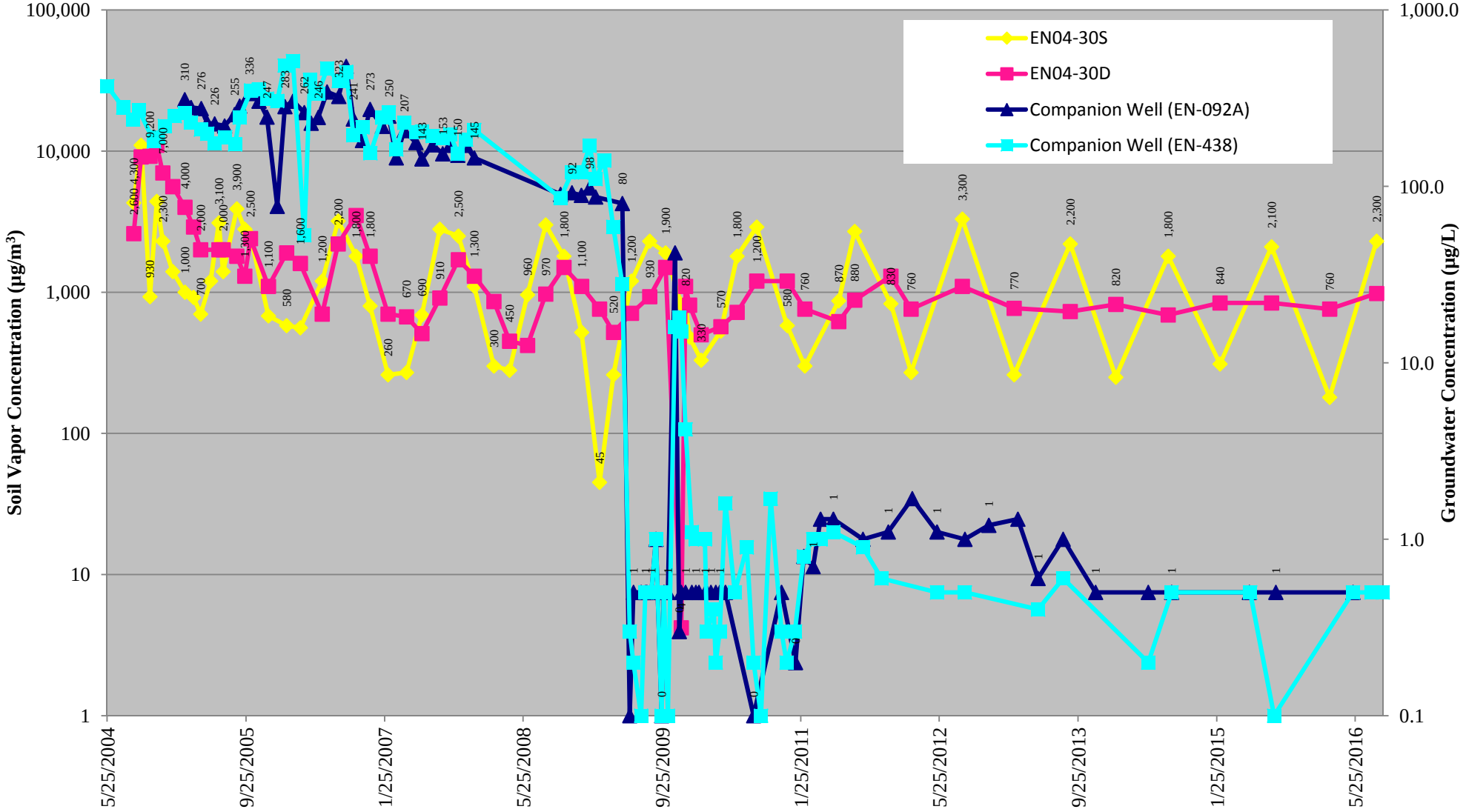


Figure B.31
TCE in Soil Vapor and Groundwater
Annual Report - Soil Vapor Monitoring through August 2016
Comprehensive Operations, Maintenance, Monitoring Program
Endicott, New York

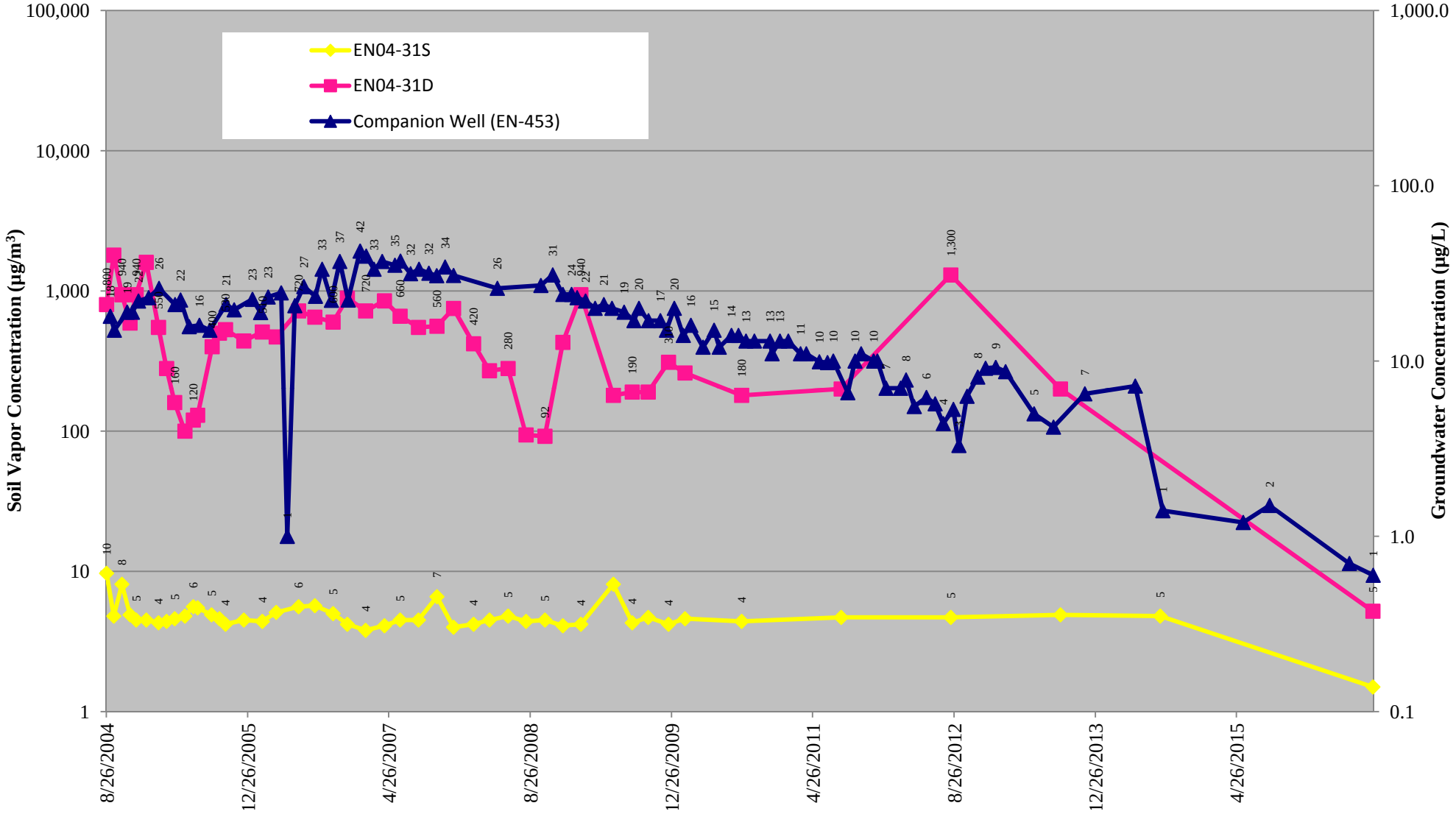


Figure B.32
TCE in Soil Vapor and Groundwater
Annual Report - Soil Vapor Monitoring through August 2016
Comprehensive Operations, Maintenance, Monitoring Program
Endicott, New York

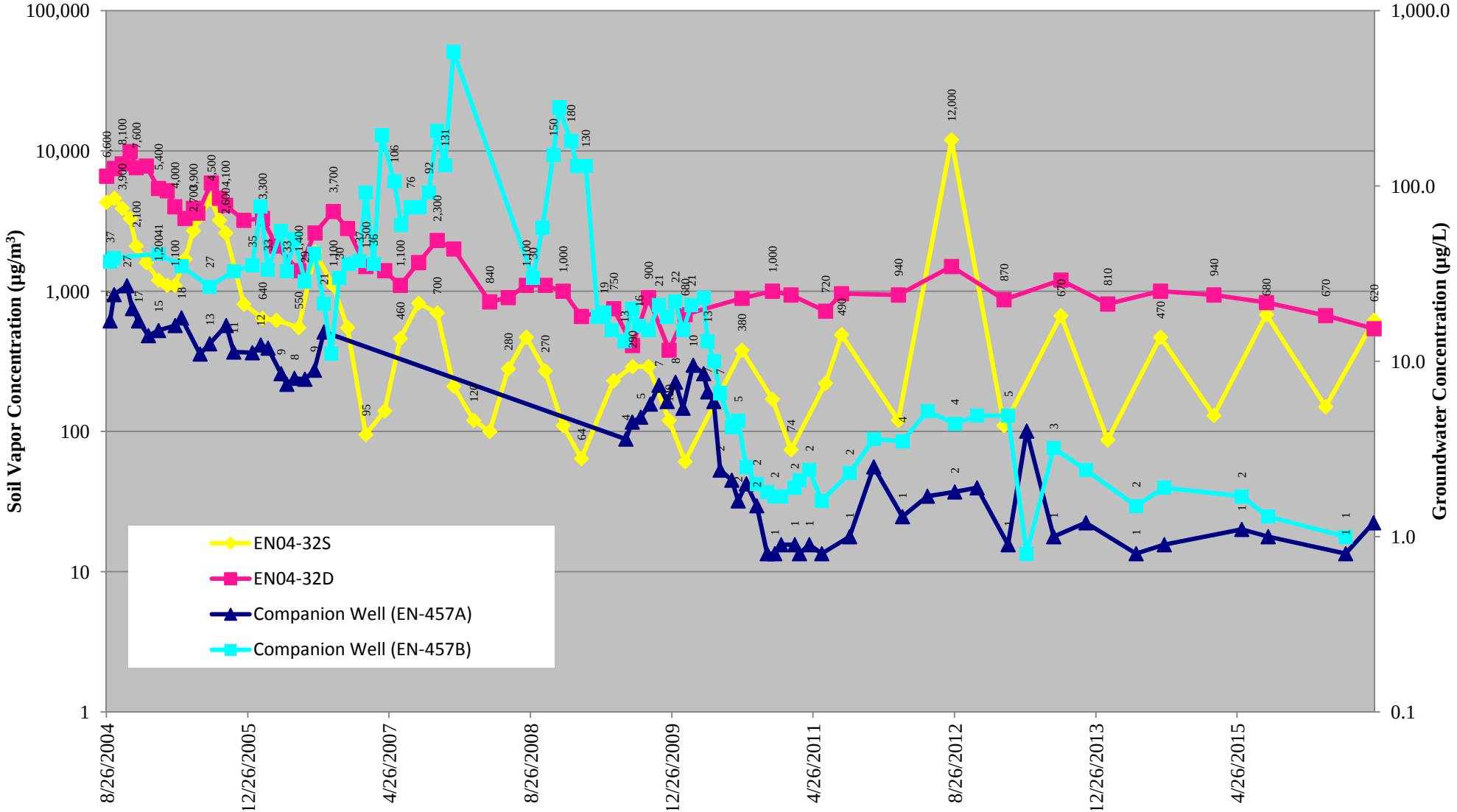


Figure B.33
TCE in Soil Vapor and Groundwater
Annual Report - Soil Vapor Monitoring through August 2016
Comprehensive Operations, Maintenance, Monitoring Program
Endicott, New York

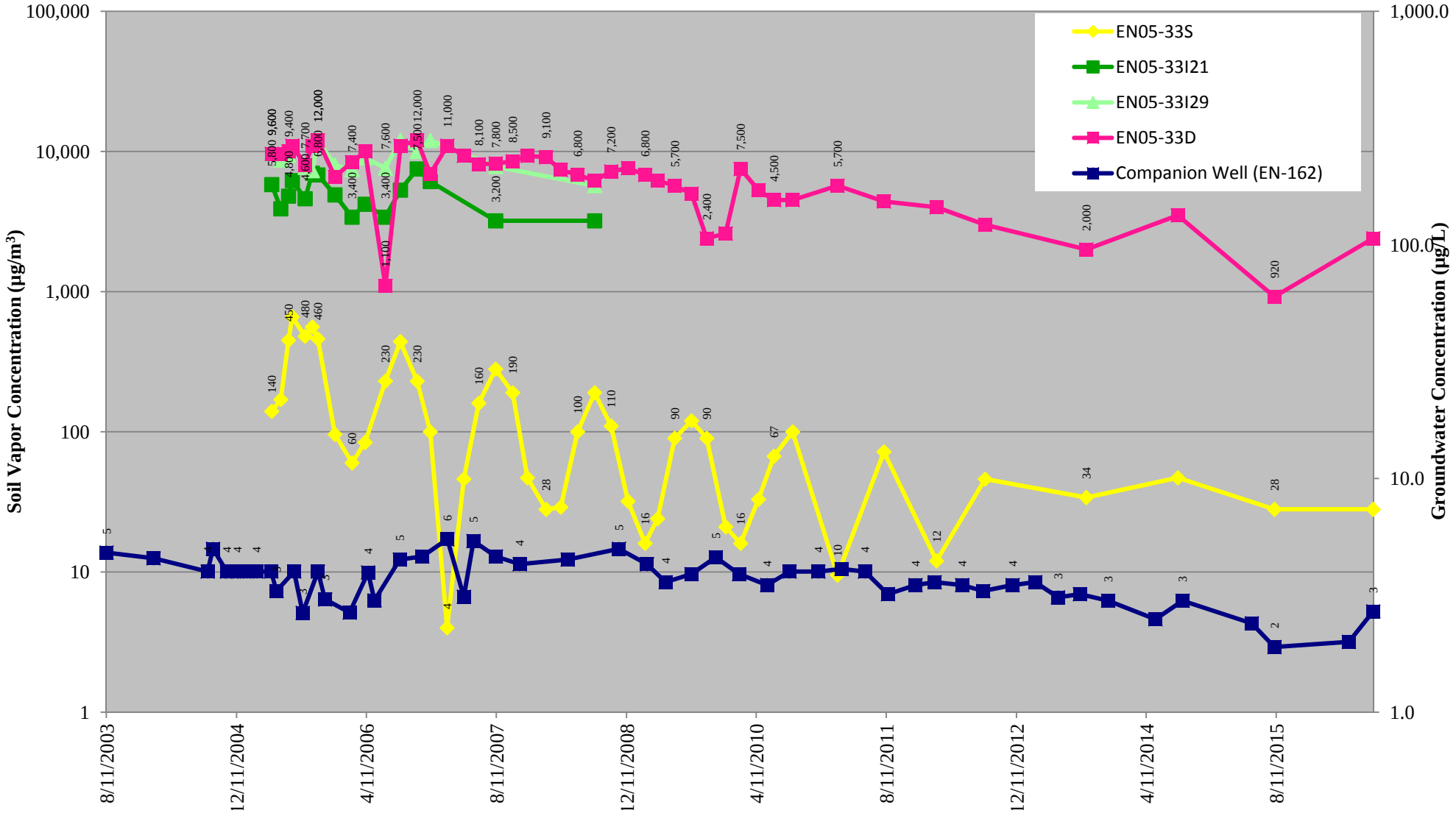


Figure B.34
TCE in Soil Vapor and Groundwater
Annual Report - Soil Vapor Monitoring through August 2016
Comprehensive Operations, Maintenance, Monitoring Program
Endicott, New York

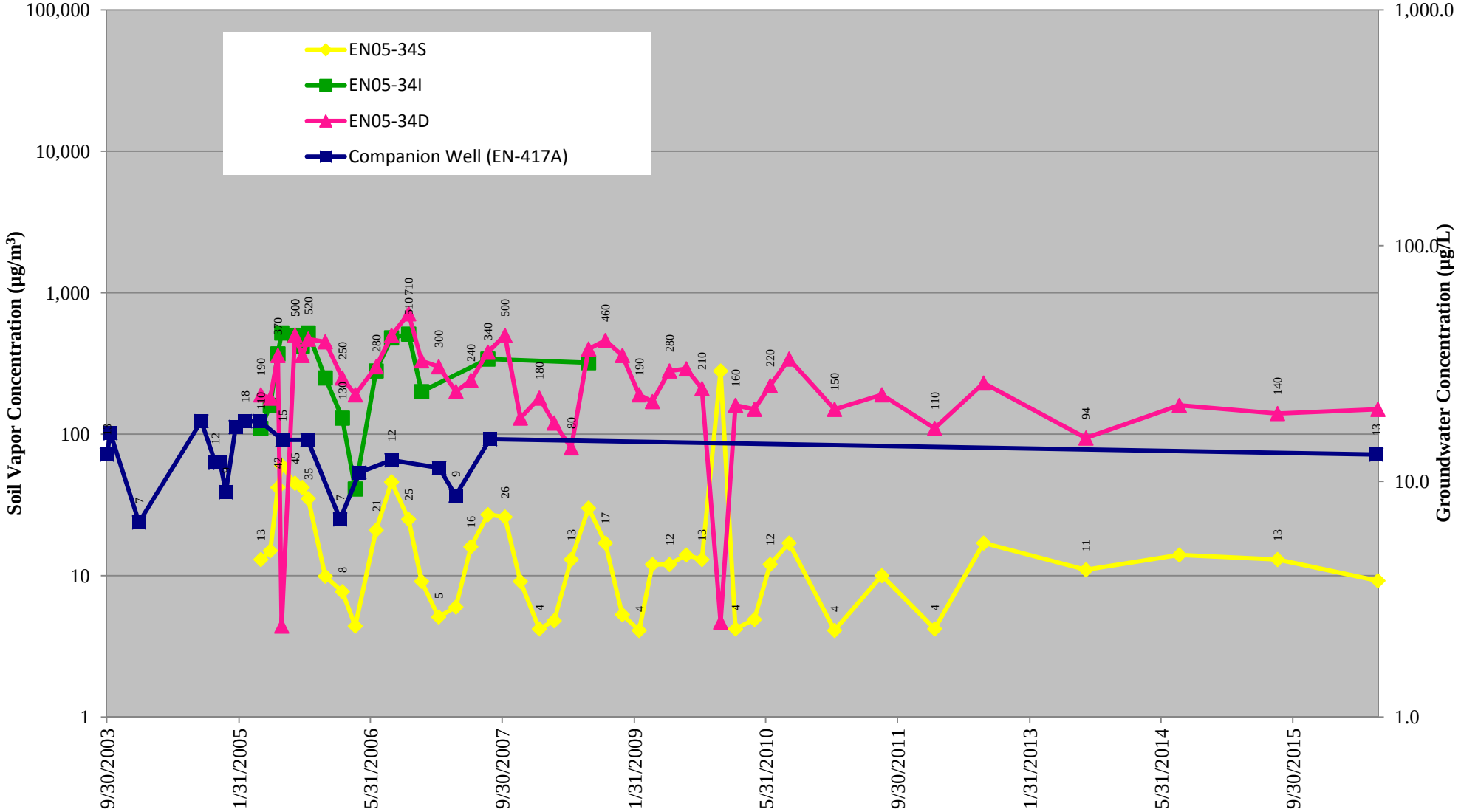


Figure B.35
TCE in Soil Vapor and Groundwater
Annual Report - Soil Vapor Monitoring through August 2016
Comprehensive Operations, Maintenance, Monitoring Program
Endicott, New York

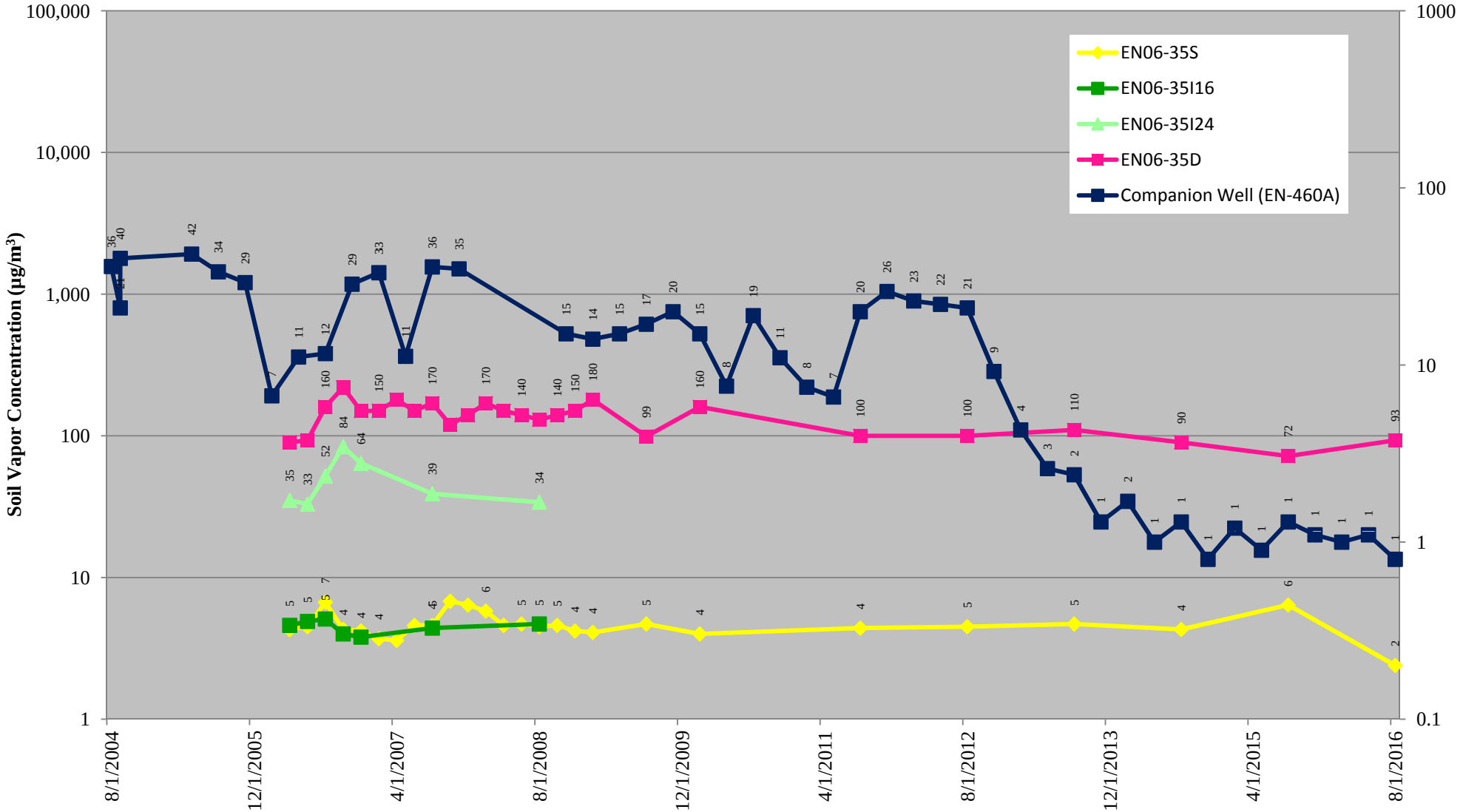


Figure B.36
TCE in Soil Vapor and Groundwater
Annual Report - Soil Vapor Monitoring through August 2016
Comprehensive Operations, Maintenance, Monitoring Program
Endicott, New York

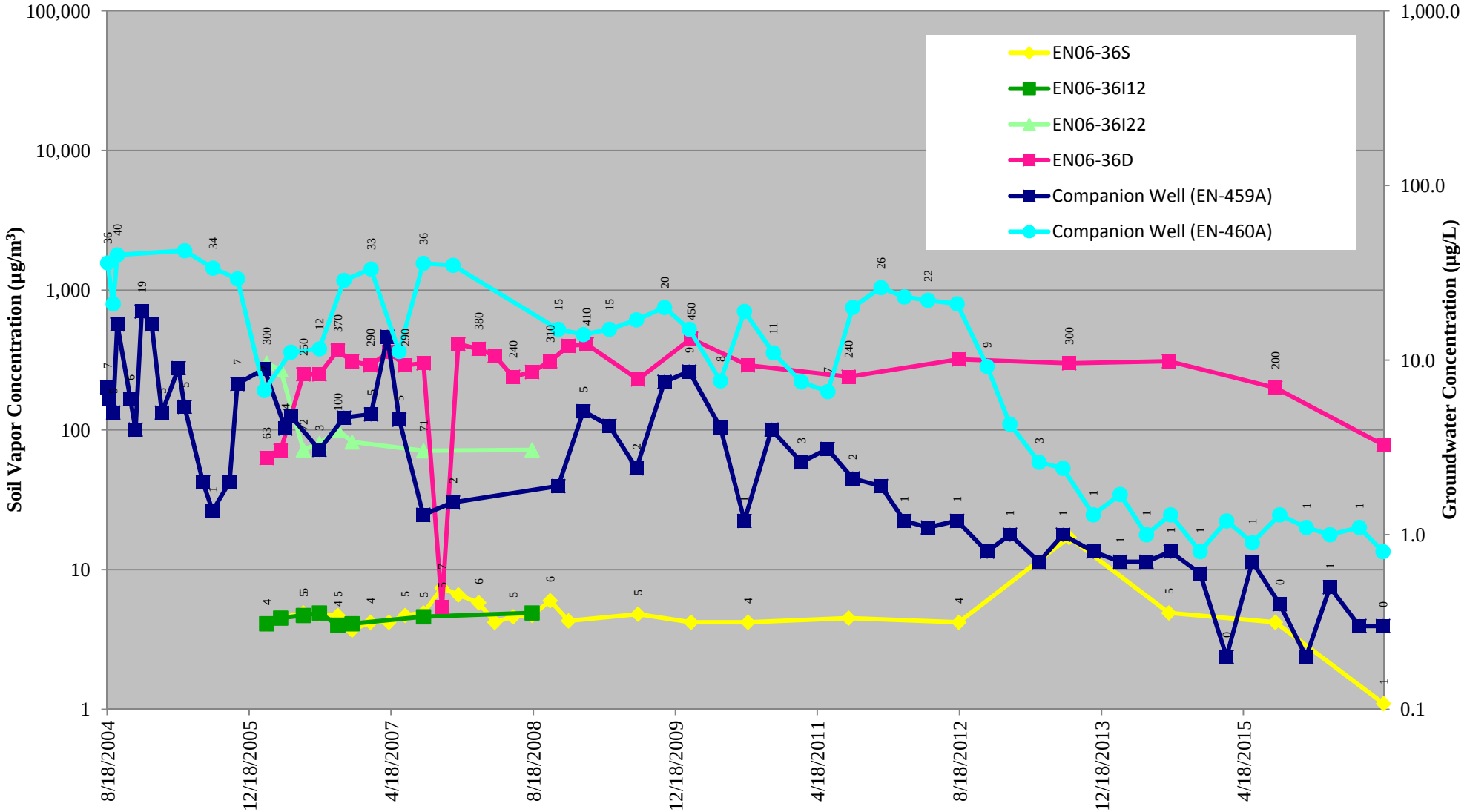
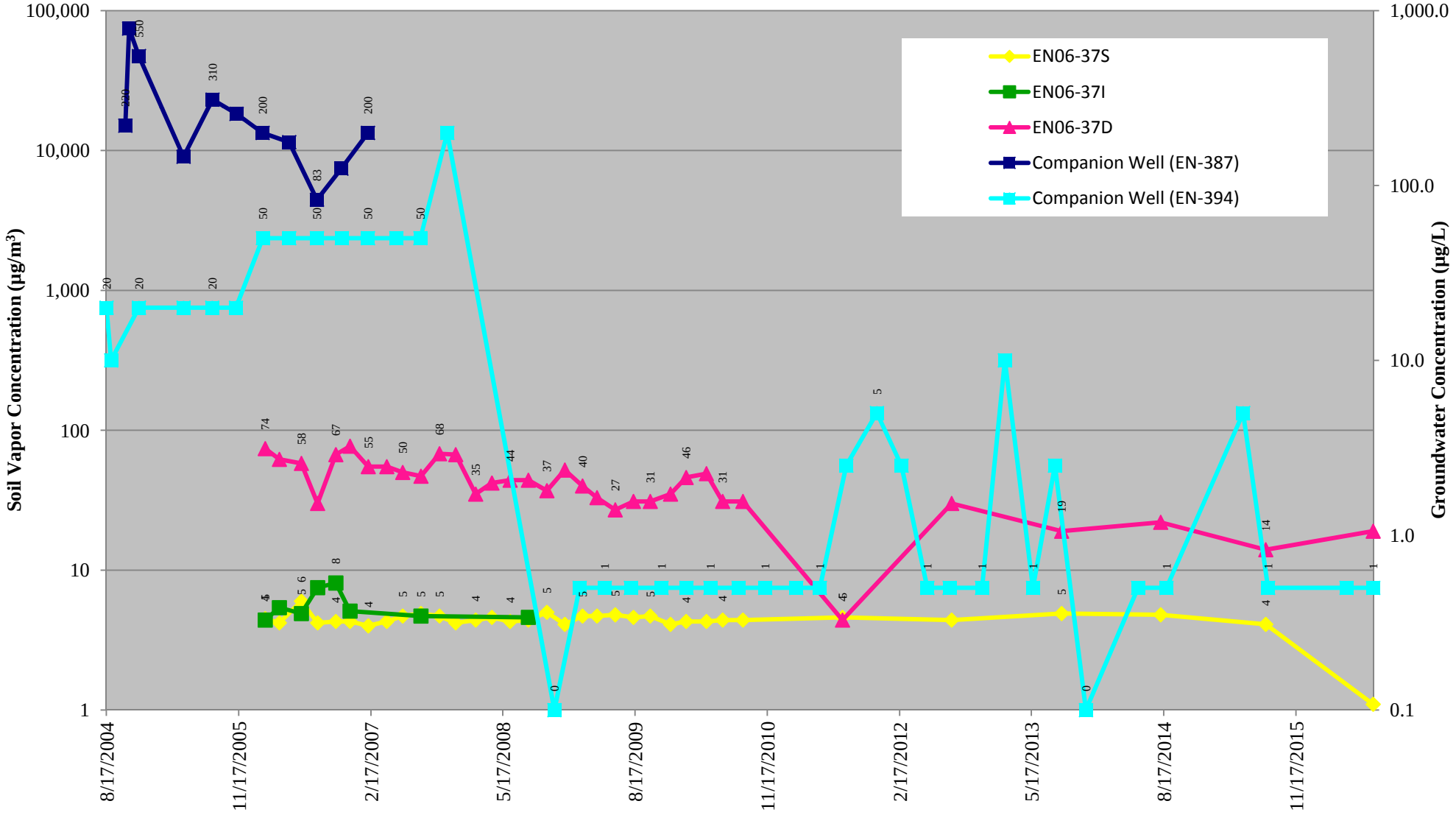


Figure B.37
TCE in Soil Vapor and Groundwater
Annual Report - Soil Vapor Monitoring through August 2016
Comprehensive Operations, Maintenance, Monitoring Program
Endicott, New York



APPENDIX C

ANALYTICAL RESULTS AND LABORATORY DATA (CD)

APPENDIX C.1

TABLE C.1 – SUMMARY OF ANALYTICAL LABORATORY DATA 2014 - 2016

Table C.1
Summary of Analytical Laboratory Data - Soil Vapor
Annual Report - Soil Vapor Monitoring through August 2016
Comprehensive Operations, Maintenance, Monitoring Program
Endicott, New York

SV Mon Point Designation	Sampling Point Designation	Sampling Depth	Sampling Date	Field Sample ID	Sample Type	O_2 (%)	CO_2 (%)	CH_4 (%)	Dilution Factor	SF_6 Applied?	He Applied?	Units of VOC Results	Tetrachloroethene	Trichloroethene	cis-1,2-Dichloroethene	trans-1,2-Dichloroethene	Vinyl chloride	1,1,1-Trichloroethane	1,1-Dichloroethene	1,1-Dichloroethane	Chloroethane	Methylene chloride	Trifluorotrichloroethane (CFC-113)
Designation **EN04-1**	EN04-1S	8	8/5/2014	EN041S08052014	Summa Canister	20.2	0.6	0	1.65	No	No	ug/m3	< 5.6 U	- 9.4 -	< 3.3 U	< 3.3 U	< 2.1 U	< 4.5 U	< 3.3 U	< 3.3 U	< 8.7 U	< 29 U	< 6.3 U
Monitoring Well **EN-094**	EN04-1S	8	8/5/2015	EN041S080515	Summa Canister	19.5	0.6	0	1.52	N	N	ug/m3	< 5.2 U	- 10 -	< 3.0 U	< 3.0 U	< 1.9 U	- 5.0 -	< 3.0 U	< 3.1 U	< 8.0 U	< 26 U	< 5.8 U
	EN04-1S	8	8/8/2016	EN041S160808	Summa Canister	19.5	0.5	0	1	N	N	ug/m3	< 1.4 U	- 7.3 -	< 0.79 U	< 0.79 U	< 0.51 U	- 2.7 J	< 0.79 U	< 0.81 U	< 0.53 U	< 0.69 U	< 3.8 U
	EN04-1D	23	8/5/2014	EN041D08052014	Summa Canister	20.3	0.4	0	1.56	No	No	ug/m3	< 5.3 U	- 76 -	< 3.1 U	< 3.1 U	< 2.0 U	- 15 -	< 3.1 U	< 3.2 U	< 8.2 U	< 27 U	< 6.0 U
	EN04-1D	23	8/5/2015	EN041D080515	Summa Canister	19.4	0.3	0	1.46	N	N	ug/m3	< 5.0 U	- 82 -	< 2.9 U	< 2.9 U	< 1.9 U	- 16 -	< 2.9 U	< 3.0 U	< 7.7 U	< 25 U	< 5.6 U
	EN04-1D	23	8/8/2016	EN041D160808	Summa Canister	19.6	0.3	0	1	N	N	ug/m3	< 1.4 U	- 79 -	< 0.79 U	< 0.79 U	< 0.51 U	- 15 -	< 0.79 U	< 0.81 U	< 0.53 U	< 0.69 U	< 3.8 U
Designation **EN04-2**	EN04-2S	8	2/4/2014	EN042S02042014	Summa Canister	20.6	0.1	0	2.46	No	No	ug/m3	< 8.3 U	< 6.6 U	< 4.9 U	< 4.9 U	< 3.1 U	< 6.7 U	< 4.9 U	< 5.0 U	< 13 U	< 43 U	< 9.4 U
Monitoring Well **EN-450;EN-091A**	EN04-2S	8	8/6/2014	EN042S08062014	Summa Canister	20	0.5	0	1.8	No	No	ug/m3	< 6.1 U	- 11 -	< 3.6 U	< 3.6 U	< 2.3 U	< 4.9 U	< 3.6 U	< 3.6 U	< 9.5 U	< 31 U	< 6.9 U
	EN04-2S	8	2/5/2015	EN042S020515	Summa Canister	20.7	0.3	0	1.79	No	No	ug/m3	< 6.1 U	< 4.8 U	< 3.5 U	< 3.5 U	< 2.3 U	< 4.9 U	< 3.5 U	< 3.6 U	< 9.4 U	< 31 U	< 6.8 U
	EN04-2S	8	8/5/2015	EN042S080515	Summa Canister	19.7	0.7	0	1.55	N	N	ug/m3	- 5.2 J	- 17 -	< 3.1 U	< 3.1 U	< 2.0 U	< 4.2 U	< 3.1 U	< 3.1 U	< 8.2 U	< 27 U	< 5.9 U
	EN04-2S	8	8/8/2016	EN042S160808	Summa Canister	19.3	0.3	0	1	N	N	ug/m3	- 3.7 J	- 16 -	< 0.79 U	< 0.79 U	< 0.51 U	- 4.5 J	< 0.79 U	< 0.81 U	< 0.53 U	< 0.69 U	< 3.8 U
	EN04-2D	20	2/4/2014	EN042D02042014	Summa Canister	20.6	0.3	0	2.22	No	No	ug/m3	- 15 -	- 88 -	< 4.4 U	< 4.4 U	< 2.8 U	- 13 -	< 4.4 U	< 4.5 U	< 12 U	< 38 U	< 8.5 U
	EN04-2D	20	8/6/2014	EN042D08062014	Summa Canister	20.6	0.3	0	1.79	No	No	ug/m3	- 16 -	- 57 -	< 3.5 U	< 3.5 U	< 2.3 U	- 9.1 -	< 3.5 U	< 3.6 U	< 9.4 U	< 31 U	< 6.8 U
	EN04-2D	20	2/5/2015	EN042D020515	Summa Canister	20.7	0.2	0	1.47	No	No	ug/m3	- 16 -	- 77 -	< 2.9 U	< 2.9 U	< 1.9 U	- 9.6 -	< 2.9 U	< 3.0 U	< 7.8 U	< 26 U	< 5.6 U
	EN04-2D	20	8/5/2015	EN042D080515	Summa Canister	20.2	0.2	0	1.57	N	N	ug/m3	- 11 -	- 47 -	< 3.1 U	< 3.1 U	< 2.0 U	- 7.3 -	< 3.1 U	< 3.2 U	< 8.3 U	< 27 U	< 6.0 U
	EN04-2D	20	8/8/2016	EN042D160808	Summa Canister	19.6	0.1	0	1	N	N	ug/m3	- 13 -	- 65 -	- 2.3 J	< 0.79 U	< 0.51 U	- 17 -	< 0.79 U	- 3 J	< 0.53 U	- 1.1 J	< 3.8 U
Designation **EN04-3**	EN04-3S	8	8/7/2014	EN043S08072014	Summa Canister	20.6	0.3	0	2.19	No	No	ug/m3	< 7.4 U	< 5.9 U	< 4.3 U	< 4.3 U	< 2.8 U	< 6.0 U	< 4.3 U	< 4.4 U	< 12 U	< 38 U	< 8.4 U
Monitoring Well **EN-203**	EN04-3S	8	8/5/2015	EN043S080515	Summa Canister	20.1	0.2	0	1.64	N	N	ug/m3	< 5.6 U	< 4.4 U	< 3.2 U	< 3.2 U	< 2.1 U	< 4.5 U	< 3.2 U	< 3.3 U	< 8.6 U	< 28 U	< 6.3 U
	EN04-3S	8	8/8/2016	EN043S160808	Summa Canister	19.6	0.3	0	1	N	N	ug/m3	- 1.4 J	< 1.1 U	< 0.79 U	< 0.79 U	< 0.51 U	< 1.1 U	< 0.79 U	< 0.81 U	- 3.5 -	- 1.7 J	< 3.8 U
	EN04-3D	19	8/7/2014	EN043D08072014	Summa Canister	20.3	0.4	0	1.7	No	No	ug/m3	< 5.8 U	- 11 -	< 3.4 U	< 3.4 U	< 2.2 U	< 4.6 U	< 3.4 U	< 3.4 U	< 9.0 U	< 30 U	< 6.5 U
	EN04-3D	19	8/5/2015	EN043D080515	Summa Canister	20.4	0.1	0	1.5	N	N	ug/m3	< 5.1 U	< 4.0 U	< 3.0 U	< 3.0 U	< 1.9 U	< 4.1 U	< 3.0 U	< 3.0 U	< 7.9 U	< 26 U	< 5.7 U
	EN04-3D	19	8/8/2016	EN043D160808	Summa Canister	19.4	0.3	0	1	N	N	ug/m3	< 1.4 U	< 1.1 U	< 0.79 U	< 0.79 U	< 0.51 U	< 1.1 U	< 0.79 U	< 0.81 U	< 0.53 U	- 2.8 J	< 3.8 U
Designation **EN04-4**	EN04-4S	8	8/5/2014	EN044S08052014	Summa Canister	18.5	1.9	0	1.69	No	No	ug/m3	< 5.7 U	< 4.5 U	< 3.4 U	< 3.4 U	< 2.2 U	< 4.6 U	< 3.4 U	< 3.4 U	< 8.9 U	< 29 U	< 6.5 U
Monitoring Well **EN-022**	EN04-4S	8	8/5/2015	EN044S080515	Summa Canister	17.7	2.4	0	1.56	N	N	ug/m3	< 5.3 U	< 4.2 U	< 3.1 U	< 3.1 U	< 2.0 U	< 4.2 U	< 3.1 U	< 3.2 U	< 8.2 U	< 27 U	< 6.0 U
	EN04-4S	8	8/11/2016	EN044S160811	Summa Canister	17.9	2.3	0	1	N	N	ug/m3	- 2.1 J	< 1.1 U	< 0.79 U	< 0.79 U	< 0.51 U	- 2.5 J	< 0.79 U	< 0.81 U	< 0.53 U	< 0.69 U	< 3.8 U
	EN04-4S Dup	8	8/11/2016	EN044SDUP160811	Summa Canister	17.9	2.3	0	1	N	N	ug/m3	- 2.3 J	< 1.1 U	< 0.79 U	< 0.79 U	< 0.51 U	- 2.4 J	< 0.79 U	< 0.81 U	< 0.53 U	< 0.69 U	< 3.8 U
	EN04-4D	17	8/5/2014	EN044D08052014	Summa Canister	18.7	1.4	0	1.7	No	No	ug/m3	< 5.8 U	< 4.6 U	< 3.4 U	< 3.4 U	< 2.2 U	< 4.6 U	< 3.4 U	< 3.4 U	< 9.0 U	< 30 U	< 6.5 U
	EN04-4D	17	8/5/2015	EN044D080515	Summa Canister	17.9	1.6	0	1.63	N	N	ug/m3	< 5.5 U	< 4.4 U	< 3.2 U	< 3.2 U	< 2.1 U	< 4.4 U	< 3.2 U	< 3.3 U	< 8.6 U	< 28 U	< 6.2 U
	EN04-4D	17	8/11/2016	EN044D160811	Summa Canister	18.6	1.9	0	2.6	N	N	ug/m3	- 4.1 J	- 2.9 J	< 2.1 U	< 2.1 U	< 1.3 U	- 3.8 J	< 2.1 U	< 2.1 U	< 1.4 U	< 1.8 U	< 10 U

Table C.1
Summary of Analytical Laboratory Data - Soil Vapor
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Endicott, New York

SV Mon Point Designation	Sampling Point Designation	Sampling Depth	Sampling Date	Field Sample ID	Sample Type	O_2 (%)	CO_2 (%)	CH_4 (%)	Dilution Factor	SF_6 Applied?	He Applied?	Units of VOC Results	Tetrachloroethene			Trichloroethene			cis-1,2-Dichloroethene			trans-1,2-Dichloroethene			Vinyl chloride			1,1,1-Trichloroethane			1,1-Dichloroethene			1,1-Dichloroethane			Chloroethane			Methylene chloride			Trifluorotrichloroethane (CFC-113)		
Designation **EN04-5**	EN04-5S	8	8/5/2014	EN045S08052014	Summa Canister	18.7	2.2	0	1.82	No	No	ug/m3	<	6.2	U	-	180	-	<	3.6	U	<	3.6	U	<	2.3	U	-	11	-	<	3.6	U	<	3.7	U	<	9.6	U	<	32	U	<	7.0	U
Monitoring Well **EN-459A**	EN04-5S Dup	8	8/5/2014	DU383108052014	Summa Canister	18.7	2.2	0	1.8	No	No	ug/m3	<	6.1	U	-	130	-	<	3.6	U	<	3.6	U	<	2.3	U	-	7.5	-	<	3.6	U	<	3.6	U	<	9.5	U	<	31	U	<	6.9	U
	EN04-5S	8	8/5/2015	EN045S080515	Summa Canister	19.7	2.7	0	1.49	N	N	ug/m3	-	5.9	-	-	170	-	<	3.0	U	<	3.0	U	<	1.9	U	-	9.9	-	<	3.0	U	<	3.0	U	<	7.9	U	<	26	U	<	5.7	U
	EN04-5S	8	8/10/2016	EN045S160810	Summa Canister	18.2	2.7	0	1	N	N	ug/m3	-	4.1	J	-	150	-	<	0.79	U	<	0.79	U	<	0.51	U	-	9.9	-	<	0.79	U	<	0.81	U	<	0.53	U	<	0.69	U	<	3.8	U
	EN04-5S Dup	8	8/10/2016	DU940160810	Summa Canister	18.2	2.7	0	1	N	N	ug/m3	-	4.3	J	-	160	-	<	0.79	U	<	0.79	U	<	0.51	U	-	9.8	-	<	0.79	U	<	0.81	U	<	0.53	U	<	0.69	U	<	3.8	U
	EN04-5D	34	8/5/2014	EN045D08052014	Summa Canister	19.8	1	0	1.7	No	No	ug/m3	<	5.8	U	-	150	-	<	3.4	U	<	3.4	U	<	2.2	U	-	47	-	<	3.4	U	<	3.4	U	<	9.0	U	<	30	U	<	6.5	U
	EN04-5D	34	8/5/2015	EN045D080515	Summa Canister	19.4	1	0	1.51	N	N	ug/m3	<	5.1	U	-	190	-	<	3.0	U	<	3.0	U	<	1.9	U	-	61	-	<	3.0	U	<	3.0	U	<	8.0	U	<	26	U	<	5.8	U
	EN04-5D	34	8/10/2016	EN045D160810	Summa Canister	19.3	1.2	0	1	N	N	ug/m3	<	1.4	U	-	180	-	<	0.79	U	<	0.79	U	<	0.51	U	-	59	-	<	0.79	U	<	0.81	U	<	0.53	U	<	0.69	U	<	3.8	U
Designation **EN04-6**	EN04-6S	8	8/6/2014	EN046S08062014	Summa Canister	19.7	0.9	0	1.73	No	No	ug/m3	<	5.9	U	<	4.6	U	<	3.4	U	<	3.4	U	<	2.2	U	<	4.7	U	<	3.4	U	<	3.5	U	<	9.1	U	<	30	U	<	6.6	U
Monitoring Well **EN-310**	EN04-6S Dup	8	8/6/2014	DU335108062014	Summa Canister	19.7	0.9	0	1.82	No	No	ug/m3	<	6.2	U	<	4.9	U	<	3.6	U	<	3.6	U	<	2.3	U	<	5.0	U	<	3.6	U	<	3.7	U	<	9.6	U	<	32	U	<	7.0	U
	EN04-6S	8	8/5/2015	EN046S080515	Summa Canister	19.4	1.9	0	1.52	N	N	ug/m3	<	5.2	U	<	4.1	U	<	3.0	U	<	3.0	U	<	1.9	U	<	4.1	U	<	3.0	U	<	3.1	U	<	8.0	U	<	26	U	<	5.8	U
	EN04-6S	8	8/11/2016	EN046S160811	Summa Canister	18.9	1.3	0	1	N	N	ug/m3	<	1.4	U	<	1.1	U	<	0.79	U	<	0.79	U	<	0.51	U	<	1.1	U	<	0.79	U	<	0.81	U	<	0.53	U	<	0.69	U	<	3.8	U
	EN04-6S Dup	8	8/11/2016	EN046SDUP160811	Summa Canister	18.9	1.3	0	1	N	N	ug/m3	<	1.4	U	<	1.1	U	<	0.79	U	<	0.79	U	<	0.51	U	<	1.1	U	<	0.79	U	<	0.81	U	<	0.53	U	<	0.69	U	<	3.8	U
	EN04-6D	27	8/6/2014	EN046D08062014	Summa Canister	20.4	0.2	0	1.78	No	No	ug/m3	<	6.0	U	<	4.8	U	<	3.5	U	<	3.5	U	<	2.3	U	<	4.8	U	<	3.5	U	<	3.6	U	<	9.4	U	<	31	U	<	6.8	U
	EN04-6D	27	8/5/2015	EN046D080515	Summa Canister	20.5	0.5	0	1.53	N	N	ug/m3	<	5.2	U	<	4.1	U	<	3.0	U	<	3.0	U	<	2.0	U	<	4.2	U	<	3.0	U	<	3.1	U	<	8.1	U	<	26	U	<	5.9	U
	EN04-6D	27	8/11/2016	EN046D160811	Summa Canister	19.8	0.9	0	1	N	N	ug/m3	<	1.4	U	-	1.5	J	-	5.1	-	<	0.79	U	<	0.51	U	<	1.1	U	<	0.79	U	<	0.81	U	<	0.53	U	<	0.69	U	<	3.8	U
Designation **EN04-7**	EN04-7S	8	8/5/2014	EN047S08052014	Summa Canister	19.5	1	0	2.48	No	No	ug/m3	-	17	-	-	1900	-	<	4.9	U	<	4.9	U	<	3.2	U	-	110	-	<	4.9	U	<	5.0	U	<	13	U	<	43	U	<	9.5	U
Monitoring Well **EN-311**	EN04-7S	8	8/5/2015	EN047S080515	Summa Canister	18.5	1.9	0	1.55	N	N	ug/m3	-	22	-	-	5.8	-	<	3.1	U	<	3.1	U	<	2.0	U	<	4.2	U	<	3.1	U	<	3.1	U	<	8.2	U	<	27	U	<	5.9	U
	EN04-7S	8	8/10/2016	EN047S160810	Summa Canister	18.9	1.2	0	1	N	N	ug/m3	-	29	-	-	6.1	-	<	0.79	U	<	0.79	U	<	0.51	U	-	2.6	J	<	0.79	U	<	0.81	U	<	0.53	U	-	2.3	J	<	3.8	U
	EN04-7D	34	8/5/2014	EN047D08052014	Summa Canister	19.6	1.1	0	1.91	No	No	ug/m3	-	21	-	<	5.1	U	<	3.8	U	<	3.8	U	<	2.4	U	<	5.2	U	<	3.8	U	<	3.9	U	<	10	U	<	33	U	<	7.3	U
	EN04-7D	34	8/5/2015	EN047D080515	Summa Canister	19.1	1	0	1.61	N	N	ug/m3	-	170	-	-	920	-	<	3.2	U	<	3.2	U	<	2.0	U	-	70	-	<	3.2	U	<	3.2	U	<	8.5	U	<	28	U	<	6.2	U
	EN04-7D	34	8/10/2016	EN047D160810	Summa Canister	19.1	1.2	0	1	N	N	ug/m3	-	7.6	-	-	710	-	-	2.1	J	<	0.79	U	<	0.51	U	-	100	-	<	0.79	U	-	1.7	J	<	0.53	U	<	0.69	U	<	3.8	U

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SV Mon Point Designation	Sampling Point Designation	Sampling Depth	Sampling Date	Field Sample ID	Sample Type	O_2 (%)	CO_2 (%)	CH_4 (%)	Dilution Factor	SF_6 Applied?	He Applied?	Units of VOC Results	Tetrachloroethene		Trichloroethene		cis-1,2-Dichloroethene		trans-1,2-Dichloroethene		Vinyl chloride		1,1,1-Trichloroethane		1,1-Dichloroethene		1,1-Dichloroethane		Chloroethane		Methylene chloride		Trifluorotrichloroethane (CFC-113)	
Designation **EN04-9**	EN04-9S	8	8/6/2014	EN049S08062014	Summa Canister	15.6	1.9	0	9.51	No	No	ug/m3	-	170	-	6500	-	< 19	U	< 19	U	< 12	U	- 290	-	< 19	U	< 19	U	< 50	U	< 160	U	< 36	U
Monitoring Well **EN-278;EN-279**	EN04-9S	8	8/5/2015	EN049S080515	Summa Canister	16.4	2.2	0	6.2	N	N	ug/m3	-	120	-	5000	-	- 31	-	< 12	U	< 7.9	U	- 200	-	< 12	U	- 13	-	< 33	U	< 110	U	- 26	
	EN04-9S	8	8/9/2016	EN049S160809	Summa Canister	8.4	3.9	0	20	N	N	ug/m3	-	220	-	4900	-	- 45	J	< 16	U	< 10	U	- 7000	-	- 1100	-	- 110	-	< 11	U	< 14	U	- 1400	
	EN04-9S Dup	8	8/9/2016	DU1324160809	Summa Canister	8.4	3.9	0	20	N	N	ug/m3	-	220	-	3400	-	- 42	J	< 16	U	< 10	U	- 6900	-	- 1100	-	- 110	-	< 11	U	< 14	U	- 1400	
	EN04-9D	20	8/6/2014	EN049D08062014	Summa Canister	11.9	3.7	0	9.19	No	No	ug/m3	-	580	-	7400	-	- 480	-	< 18	U	< 12	U	- 810	-	- 44	-	- 130	-	< 48	U	< 160	U	< 35	U
	EN04-9D	20	8/5/2015	EN049D080515	Summa Canister	13.2	3.4	0	1.75	N	N	ug/m3	< 5.9	U	< 4.7	U	< 3.5	U	< 3.5	U	< 2.2	U	< 4.8	U	< 3.5	U	< 3.5	U	< 9.2	U	< 30	U	< 6.7	U
	EN04-9D Dup	20	8/5/2015	DU3331080515	Summa Canister	13.2	3.4	0	6.69	N	N	ug/m3	-	360	-	4200	-	- 220	-	< 13	U	< 8.6	U	- 930	-	- 390	-	- 160	-	< 35	U	< 120	U	- 400	
	EN04-9D	20	8/9/2016	EN049D160809	Summa Canister	7.3	5.7	0	100	N	N	ug/m3	-	840	-	13000	-	- 2600	-	< 79	U	< 51	U	- 50000	-	- 6400	-	- 8900	-	< 53	U	- 440	-	- 1400	J
Designation **EN04-10**	EN04-10S	8	8/6/2014	EN0410S08062014	Summa Canister	15.2	4	0	60	No	No	ug/m3	-	360	-	33000	-	- 2500	-	< 120	U	< 77	U	- 4100	-	- 130	-	- 870	-	< 320	U	< 1000	U	< 230	U
Monitoring Well **EN-077**	EN04-10S	8	8/5/2015	EN0410S080515	Summa Canister	13.7	5.3	0	61.2	N	N	ug/m3	-	310	-	27000	-	- 1700	-	< 120	U	< 78	U	- 2800	-	- 250	-	- 580	-	< 320	U	< 1100	U	< 230	U
	EN04-10S	8	8/9/2016	EN0410S160809	Summa Canister	13.9	5.9	0	1.5	N	N	ug/m3	-	310	-	20000	-	- 2000	J	- 25	-	< 0.77	U	- 10000	-	- 3100	J	- 1700	J	- 3.6	J	- 30	-	- 4600	
	EN04-10D	20	8/6/2014	EN0410D08062014	Summa Canister	14.8	4.8	0	34.9	No	No	ug/m3	-	450	-	27000	-	- 3300	-	< 69	U	< 45	U	- 4200	-	- 150	-	- 960	-	< 180	U	< 610	U	< 130	U
	EN04-10D	20	8/5/2015	EN0410D080515	Summa Canister	14.5	4.2	0	52.8	N	N	ug/m3	-	480	-	23000	-	- 2600	-	< 100	U	< 67	U	- 3500	-	- 410	-	- 810	-	< 280	U	< 920	U	- 300	
	EN04-10D	20	8/9/2016	EN0410D160809	Summa Canister	14.1	5.2	0	40	N	N	ug/m3	-	130	J	- 6900	-	- 1000	-	< 32	U	< 20	U	- 9800	-	- 2400	-	- 1700	-	< 21	U	- 98	J	- 830	
Designation **EN04-11, EN10-11**	EN04-11S	8	2/4/2014	EN0411S02042014	Summa Canister	20.8	0.2	0	1.48	No	No	ug/m3	< 5.0	U	- 23	-	< 2.9	U	< 2.9	U	< 1.9	U	< 4.0	U	< 2.9	U	< 3.0	U	< 7.8	U	< 26	U	< 5.7	U
Monitoring Well **EN-215;EN-215B**	EN04-11S	8	8/7/2014	EN0411S08072014	Summa Canister	20.3	0.7	0	1.75	No	No	ug/m3	-	6.7	-	67	-	< 3.5	U	< 3.5	U	< 2.2	U	- 6.8	-	< 3.5	U	< 3.5	U	< 9.2	U	< 30	U	< 6.7	U
	EN04-11S	8	2/5/2015	EN0411S020515	Summa Canister	21	0.2	0	1.39	No	No	ug/m3	< 4.7	U	- 17	-	< 2.8	U	< 2.8	U	< 1.8	U	< 3.8	U	< 2.8	U	< 2.8	U	< 7.3	U	< 24	U	< 5.3	U
	EN04-11S	8	8/5/2015	EN0411S080515	Summa Canister	19.8	0.9	0	1.77	N	N	ug/m3	-	7.1	-	61	-	< 3.5	U	< 3.5	U	< 2.3	U	- 5.2	-	< 3.5	U	< 3.6	U	< 9.3	U	< 31	U	< 6.8	U
	EN04-11S Dup	8	8/5/2015	DU3372080515	Summa Canister	19.8	0.9	0	1.74	N	N	ug/m3	< 5.9	U	- 57	-	< 3.4	U	< 3.4	U	< 2.2	U	- 5.6	-	< 3.4	U	< 3.5	U	< 9.2	U	< 30	U	< 6.7	U
	EN04-11S	8	2/25/2016	EN0411S022516	Summa Canister	20.8	0.2	0	1	N	N	ug/m3	-	18	-	17	-	< 0.79	U	< 0.79	U	< 0.51	U	- 1.6	J	< 0.79	U	< 0.81	U	< 0.53	U	< 0.69	U	< 3.8	U
	EN04-11S	8	8/9/2016	EN0411S160809	Summa Canister	19.2	1	0	1	N	N	ug/m3	-	1.4	J	- 21	-	- 2.4	J	< 0.79	U	< 0.51	U	- 9.5	-	< 0.79	U	- 1.7	J	< 0.53	U	- 11	-	< 3.8	U
	EN04-11D	21	2/4/2014	EN0411D02042014	Summa Canister	20.8	0.6	0	1.54	No	No	ug/m3	-	30	-	970	-	- 4.8	-	< 3.0	U	< 2.0	U	- 55	-	< 3.0	U	< 3.1	U	< 8.1	U	< 27	U	< 5.9	U
	EN04-11D	21	8/7/2014	EN0411D08072014	Summa Canister	20.2	0.4	0	1.65	No	No	ug/m3	-	34	-	870	-	- 4.0	-	< 3.3	U	< 2.1	U	- 44	-	< 3.3	U	< 3.3	U	< 8.7	U	< 29	U	< 6.3	U
	EN04-11D	21	2/5/2015	EN0411D020515	Summa Canister	20.9	0.6	0	1.48	No	No	ug/m3	-	30	-	980	-	- 3.0	-	< 2.9	U	< 1.9	U	- 40	-	< 2.9	U	< 3.0	U	< 7.8	U	< 26	U	< 5.7	U
	EN04-11D	21	8/5/2015	EN0411D080515	Summa Canister	19.8	0.3	0	1.56	N	N	ug/m3	-	29	-	730	-	- 3.6	-	< 3.1	U	< 2.0	U	- 34	-	< 3.1	U	< 3.2	U	< 8.2	U	< 27	U	< 6.0	U
	EN04-11D	21	2/25/2016	EN0411D022516	Summa Canister	20.8	0.4	0	1	N	N	ug/m3	-	42	-	1400	-	- 8.3	-	< 0.79	U	< 0.51	U	- 75	-	< 0.79	U	- 1.1	J	< 0.53	U	< 0.69	U	< 3.8	U
	EN04-11D	21	8/9/2016	EN0411D160809	Summa Canister	19.6	0.5	0	10	N	N	ug/m3	-	47	J	- 1300	-	- 8.7	J	< 7.9	U	< 5.1	U	- 61	-	< 7.9	U	< 8.1	U	< 5.3	U	< 6.9	U	< 38	U
	EN10-11D	30	8/9/2016	EN1011D160809	Summa Canister	-	-	-	2.67	N	N	ug/m3	-	15	J	- 49	-	- 9.8	J	< 2.1	U	< 1.4	U	- 24	-	< 2.1	U	- 11	-	< 1.4	U	- 13	-	- 19	J

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SV Mon Point Designation	Sampling Point Designation	Sampling Depth	Sampling Date	Field Sample ID	Sample Type	O_2 (%)	CO_2 (%)	CH_4 (%)	Dilution Factor	SF_6 Applied?	He Applied?	Units of VOC Results	Tetrachloroethene			Trichloroethene			cis-1,2-Dichloroethene			trans-1,2-Dichloroethene			Vinyl chloride			1,1,1-Trichloroethane			1,1-Dichloroethene			1,1-Dichloroethane			Chloroethane			Methylene chloride			Trifluorotrichloroethane (CFC-113)		
Designation **EN04-12**	EN04-12S	8	2/4/2014	EN0412S02042014	Summa Canister	20.3	1.7	0	1.39	No	No	ug/m3	<	4.7	U	-	150	-	<	2.8	U	<	2.8	U	<	1.8	U	-	6.7	-	<	2.8	U	<	2.8	U	<	7.3	U	<	24	U	<	5.3	U
Monitoring Well **EN-214A**	EN04-12S	8	8/7/2014	EN0412S08072014	Summa Canister	19.1	2	0	1.47	No	No	ug/m3	<	5.0	U	-	320	-	<	2.9	U	<	2.9	U	<	1.9	U	-	8.6	-	<	2.9	U	<	3.0	U	<	7.8	U	<	26	U	<	5.6	U
	EN04-12S	8	2/5/2015	EN0412S020515	Summa Canister	19.8	1.2	0	1.56	No	No	ug/m3	<	5.3	U	-	210	-	<	3.1	U	<	3.1	U	<	2.0	U	-	5.5	-	<	3.1	U	<	3.2	U	<	8.2	U	<	27	U	<	6.0	U
	EN04-12S	8	8/5/2015	EN0412S080515	Summa Canister	17.3	3.3	0	1.45	N	N	ug/m3	<	4.9	U	-	450	-	<	2.9	U	<	2.9	U	<	1.8	U	-	15	-	<	2.9	U	<	2.9	U	<	7.6	U	<	25	U	<	5.6	U
	EN04-12S	8	2/25/2016	EN0412S022516	Summa Canister	19.8	1.2	0	1	N	N	ug/m3	<	1.4	U	-	170	-	<	0.79	U	<	0.79	U	<	0.51	U	-	7.7	-	<	0.79	U	<	0.81	U	<	0.53	U	<	0.69	U	<	3.8	U
	EN04-12S	8	8/9/2016	EN0412S160809	Summa Canister	17	3.1	0	1	N	N	ug/m3	-	2	J	-	780	-	-	7	-	<	0.79	U	<	0.51	U	-	38	-	-	9.8	-	-	5.1	-	<	0.53	U	<	0.69	U	<	3.8	U
	EN04-12D	19	2/4/2014	EN0412D02042014	Summa Canister	19.9	2.3	0	1.61	No	No	ug/m3	<	5.5	U	-	330	-	<	3.2	U	<	3.2	U	<	2.0	U	-	15	-	<	3.2	U	<	3.2	U	<	8.5	U	<	28	U	<	6.2	U
	EN04-12D	19	8/7/2014	EN0412D08072014	Summa Canister	19	2.4	0	1.58	No	No	ug/m3	<	5.4	U	-	400	-	<	3.1	U	<	3.1	U	<	2.0	U	-	12	-	<	3.1	U	<	3.2	U	<	8.3	U	<	27	U	<	6.0	U
	EN04-12D	19	2/5/2015	EN0412D020515	Summa Canister	19.7	1.4	0	1.54	No	No	ug/m3	<	5.2	U	-	260	-	<	3.0	U	<	3.0	U	<	2.0	U	-	7.6	-	<	3.0	U	<	3.1	U	<	8.1	U	<	27	U	<	5.9	U
	EN04-12D	19	8/5/2015	EN0412D080515	Summa Canister	17	3.4	0	1.43	N	N	ug/m3	<	4.8	U	-	500	-	<	2.8	U	<	2.8	U	<	1.8	U	-	14	-	<	2.8	U	<	2.9	U	<	7.5	U	<	25	U	<	5.5	U
	EN04-12D	19	2/25/2016	EN0412D022516	Summa Canister	19.9	1.3	0	1	N	N	ug/m3	<	1.4	U	-	270	-	<	0.79	U	<	0.79	U	<	0.51	U	-	11	-	<	0.79	U	<	0.81	U	<	0.53	U	-	2.3	J	<	3.8	U
	EN04-12D	19	8/9/2016	EN0412D160809	Summa Canister	17.8	3.2	0	1	N	N	ug/m3	-	1.8	J	-	540	-	<	0.79	U	<	0.79	U	<	0.51	U	-	15	-	<	0.79	U	<	0.81	U	<	0.53	U	-	0.96	J	<	3.8	U
Designation **EN04-13**	EN04-13S	8	8/7/2014	EN0413S08072014	Summa Canister	18	3	0	1.55	No	No	ug/m3	<	5.2	U	-	310	-	<	3.1	U	<	3.1	U	<	2.0	U	-	50	-	<	3.1	U	<	3.1	U	<	8.2	U	<	27	U	<	5.9	U
Monitoring Well **EN-449**	EN04-13S	8	8/4/2015	EN0413S080415	Summa Canister	17.5	3.4	0	1.55	N	N	ug/m3	<	5.2	U	-	120	-	<	3.1	U	<	3.1	U	<	2.0	U	-	12	-	<	3.1	U	<	3.1	U	<	8.2	U	<	27	U	<	5.9	U
	EN04-13S	8	8/11/2016	EN0413S160811	Summa Canister	18.1	3.1	0	2.5	N	N	ug/m3	<	3.4	U	-	23	-	<	2	U	<	2	U	<	1.3	U	-	4	J	<	2	U	<	2	U	<	1.3	U	<	1.7	U	<	9.6	U
	EN04-13S Dup	8	8/11/2016	EN0413SDUP160811	Summa Canister	18.1	3.1	0	2	N	N	ug/m3	<	2.7	U	-	25	-	<	1.6	U	<	1.6	U	<	1	U	-	3.7	J	<	1.6	U	<	1.6	U	<	1.1	U	<	1.4	U	<	7.7	U
	EN04-13D	30	8/7/2014	EN0413D08072014	Summa Canister	19.3	1.7	0	1.8	No	No	ug/m3	<	6.1	U	-	140	-	<	3.6	U	<	3.6	U	<	2.3	U	-	17	-	<	3.6	U	<	3.6	U	<	9.5	U	<	31	U	<	6.9	U
	EN04-13D	30	8/4/2015	EN0413D080415	Summa Canister	19.5	2.3	0	1.76	N	N	ug/m3	<	6.0	U	-	81	-	<	3.5	U	<	3.5	U	<	2.2	U	-	8.6	-	<	3.5	U	<	3.6	U	<	9.3	U	<	30	U	<	6.7	U
	EN04-13D Dup	30	8/4/2015	DU3297080415	Summa Canister	19.5	2.3	0	1.76	N	N	ug/m3	<	6.0	U	-	83	-	<	3.5	U	<	3.5	U	<	2.2	U	-	9.7	-	<	3.5	U	<	3.6	U	<	9.3	U	<	30	U	<	6.7	U
	EN04-13D	30	8/11/2016	EN0413D160811	Summa Canister	19.2	1.8	0	1	N	N	ug/m3	-	1.8	J	-	130	-	<	0.79	U	<	0.79	U	<	0.51	U	-	14	-	<	0.79	U	<	0.81	U	<	0.53	U	<	0.69	U	<	3.8	U
Designation **EN04-14**	EN04-14S	8	8/7/2014	EN0414S08072014	Summa Canister	18.9	2.2	0	1.48	No	No	ug/m3	<	5.0	U	-	19	-	<	2.9	U	<	2.9	U	<	1.9	U	-	7.1	-	<	2.9	U	<	3.0	U	<	7.8	U	<	26	U	<	5.7	U
Monitoring Well **EN-462**	EN04-14S	8	8/4/2015	EN0414S080415	Summa Canister	18.9	2.4	0	1.45	N	N	ug/m3	<	4.9	U	-	12	-	<	2.9	U	<	2.9	U	<	1.8	U	<	4.0	U	<	2.9	U	<	2.9	U	<	7.6	U	<	25	U	<	5.6	U
	EN04-14S	8	8/10/2016	EN0414S160810	Summa Canister	18.4	2.5	0	1	N	N	ug/m3	<	1.4	U	-	14	-	<	0.79	U	<	0.79	U	<	0.51	U	-	5	J	<	0.79	U	<	0.81	U	<	0.53	U	-	37	-	<	3.8	U
	EN04-14D	34	8/7/2014	EN0414D08072014	Summa Canister	19.4	1.1	0	1.44	No	No	ug/m3	-	6.3	-	-	440	-	-	2.8	-	<	2.8	U	<	1.8	U	-	24	-	<	2.8	U	<	2.9	U	<	7.6	U	<	25	U	-	7.5	
	EN04-14D	34	8/4/2015	EN0414D080415	Summa Canister	19.3	1.4	0	1.51	N	N	ug/m3	<	5.1	U	-	99	-	<	3.0	U	<	3.0	U	<	1.9	U	-	4.4	-	<	3.0	U	<	3.0	U	<	8.0	U	<	26	U	<	5.8	U
	EN04-14D	34	8/10/2016	EN0414D160810	Summa Canister	18.6	2	0	1	N	N	ug/m3	<	1.4	U	-	74	-	<	0.79	U	<	0.79	U	<	0.51	U	-	5.4	J	<	0.79	U	<	0.81	U	<	0.53	U	<	0.69	U	<	3.8	U

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SV Mon Point Designation	Sampling Point Designation	Sampling Depth	Sampling Date	Field Sample ID	Sample Type	O_2 (%)	CO_2 (%)	CH_4 (%)	Dilution Factor	SF_6 Applied?	He Applied?	Units of VOC Results	Tetrachloroethene			Trichloroethene			cis-1,2-Dichloroethene			trans-1,2-Dichloroethene			Vinyl chloride			1,1,1-Trichloroethane			1,1-Dichloroethene			1,1-Dichloroethane			Chloroethane			Methylene chloride			Trifluorotrichloroethane (CFC-113)		
Designation **EN04-15**	EN04-15S	8	8/6/2014	EN0415S08062014	Summa Canister	18.8	1.5	0	1.78	No	No	ug/m3	<	6.0	U	<	4.8	U	<	3.5	U	<	3.5	U	<	2.3	U	<	4.8	U	<	3.5	U	<	3.6	U	<	9.4	U	<	31	U	<	6.8	U
Monitoring Well **EN-162**	EN04-15S	8	8/4/2015	EN0415S080415	Summa Canister	18	1.9	0	1.62	N	N	ug/m3	<	5.5	U	<	4.4	U	<	3.2	U	<	3.2	U	<	2.1	U	<	4.4	U	<	3.2	U	<	3.3	U	<	8.5	U	<	28	U	<	6.2	U
	EN04-15S	8	8/8/2016	EN0415S160808	Summa Canister	18.9	1.7	0	1	N	N	ug/m3	-	1.8	J	-	5.6	-	-	0.82	J	<	0.79	U	<	0.51	U	-	3.4	J	<	0.79	U	<	0.81	U	<	0.53	U	-	1.7	J	<	3.8	U
	EN04-15D	30	8/6/2014	EN0415D08062014	Summa Canister	19	1.4	0	1.84	No	No	ug/m3	<	6.2	U	<	4.9	U	<	3.6	U	<	3.6	U	<	2.4	U	<	5.0	U	<	3.6	U	<	3.7	U	<	9.7	U	<	32	U	<	7.0	U
	EN04-15D	30	8/4/2015	EN0415D080415	Summa Canister	18	1.8	0	1.57	N	N	ug/m3	<	5.3	U	<	4.2	U	<	3.1	U	<	3.1	U	<	2.0	U	<	4.3	U	<	3.1	U	<	3.2	U	<	8.3	U	<	27	U	<	6.0	U
	EN04-15D	30	8/8/2016	EN0415D160808	Summa Canister	18.9	1.7	0	1	N	N	ug/m3	-	1.6	J	-	9.8	-	-	0.92	J	<	0.79	U	<	0.51	U	-	5.1	J	<	0.79	U	-	0.84	J	<	0.53	U	<	0.69	U	<	3.8	U
Designation **EN04-16**	EN04-16S	8	8/7/2014	EN0416S08072014	Summa Canister	18.6	2.2	0	1.74	No	No	ug/m3	<	5.9	U	-	6.0	-	<	3.4	U	<	3.4	U	<	2.2	U	<	4.7	U	<	3.4	U	<	3.5	U	<	9.2	U	<	30	U	<	6.7	U
Monitoring Well **EN-206**	EN04-16S	8	8/4/2015	EN0416S080415	Summa Canister	17.6	3.1	0	1.5	N	N	ug/m3	-	6.3	-	-	5.1	-	<	3.0	U	<	3.0	U	<	1.9	U	<	4.1	U	<	3.0	U	<	3.0	U	<	7.9	U	<	26	U	<	5.7	U
	EN04-16S	8	8/8/2016	EN0416S160808	Summa Canister	18.5	2.4	0	1	N	N	ug/m3	-	4	J	-	2.2	J	<	0.79	U	<	0.79	U	<	0.51	U	-	1.4	J	<	0.79	U	<	0.81	U	-	0.54	J	-	49	-	<	3.8	U
	EN04-16D	34	8/7/2014	EN0416D08072014	Summa Canister	18.1	2.7	0	1.67	No	No	ug/m3	<	5.7	U	-	57	-	<	3.3	U	<	3.3	U	<	2.1	U	-	8.6	-	<	3.3	U	<	3.4	U	<	8.8	U	<	29	U	<	6.4	U
	EN04-16D	34	8/4/2015	EN0416D080415	Summa Canister	17.5	2.9	0	1.5	N	N	ug/m3	<	5.1	U	-	32	-	<	3.0	U	<	3.0	U	<	1.9	U	-	5.6	-	<	3.0	U	<	3.0	U	<	7.9	U	<	26	U	<	5.7	U
	EN04-16D	34	8/8/2016	EN0416D160808	Summa Canister	18.3	2.7	0	1	N	N	ug/m3	<	1.4	U	-	2.6	J	<	0.79	U	<	0.79	U	<	0.51	U	-	1.3	J	<	0.79	U	<	0.81	U	<	0.53	U	<	0.69	U	<	3.8	U
Designation **EN04-17, EN10-17**	EN04-17S	8	8/7/2014	EN0417S08072014	Summa Canister	19.7	1	0	1.71	No	No	ug/m3	-	7.3	-	-	200	-	<	3.4	U	<	3.4	U	<	2.2	U	-	7.1	-	<	3.4	U	<	3.5	U	<	9.0	U	<	30	U	<	6.6	U
Monitoring Well **EN-401**	EN04-17S	8	8/4/2015	EN0417S080415	Summa Canister	19.8	1.1	0	1.5	N	N	ug/m3	-	17	-	-	180	-	<	3.0	U	<	3.0	U	<	1.9	U	-	5.9	-	<	3.0	U	<	3.0	U	<	7.9	U	<	26	U	<	5.7	U
	EN04-17S	8	8/10/2016	EN0417S160810	Summa Canister	17.2	1.8	0	1	N	N	ug/m3	<	1.4	U	-	190	-	<	0.79	U	<	0.79	U	<	0.51	U	-	6.8	-	<	0.79	U	<	0.81	U	<	0.53	U	-	24	-	<	3.8	U
	EN04-17S Dup	8	8/10/2016	DU1169160810	Summa Canister	17.2	1.8	0	2.5	N	N	ug/m3	<	3.4	U	-	210	-	<	2	U	<	2	U	<	1.3	U	-	7.6	J	<	2	U	<	2	U	<	1.3	U	<	1.7	U	<	9.6	U
	EN04-17D	28	8/7/2014	EN0417D08072014	Summa Canister	20	0.7	0	1.74	No	No	ug/m3	<	5.9	U	-	7.0	-	<	3.4	U	<	3.4	U	<	2.2	U	<	4.7	U	<	3.4	U	<	3.5	U	<	9.2	U	<	30	U	<	6.7	U
	EN04-17D	28	8/4/2015	EN0417D080415	Summa Canister	19.9	1.1	0	1.56	N	N	ug/m3	<	5.3	U	<	4.2	U	<	3.1	U	<	3.1	U	<	2.0	U	<	4.2	U	<	3.1	U	<	3.2	U	<	8.2	U	<	27	U	<	6.0	U
	EN04-17D	28	8/10/2016	EN0417D160810	Summa Canister	16.8	2.3	0	1	N	N	ug/m3	<	1.4	U	-	1.5	J	<	0.79	U	<	0.79	U	<	0.51	U	<	1.1	U	<	0.79	U	<	0.81	U	<	0.53	U	<	0.69	U	<	3.8	U
	EN10-17D		2/4/2014	EN1017D02042014	Summa Canister	20.6	1.1	0	1.5	No	No	ug/m3	<	5.1	U	-	270	-	-	15	-	<	3.0	U	<	1.9	U	-	260	-	<	3.0	U	-	3.5	-	<	7.9	U	<	26	U	<	5.7	U
	EN10-17D		8/7/2014	EN1017D08072014	Summa Canister	19.9	0.5	0	1.69	No	No	ug/m3	-	6.6	-	-	220	-	-	12	-	<	3.4	U	<	2.2	U	-	230	-	<	3.4	U	<	3.4	U	<	8.9	U	<	29	U	<	6.5	U
Designation **EN04-18**	EN04-18S	8	8/7/2014	EN0418S08072014	Summa Canister	19.2	1.1	0	1.67	No	No	ug/m3	-	27	-	<	4.5	U	<	3.3	U	<	3.3	U	<	2.1	U	<	4.6	U	<	3.3	U	<	3.4	U	<	8.8	U	<	29	U	<	6.4	U
Monitoring Well **EN-217A**	EN04-18S	8	8/4/2015	EN0418S080415	Summa Canister	18.6	1.4	0	1.53	N	N	ug/m3	<	5.2	U	<	4.1	U	<	3.0	U	<	3.0	U	<	2.0	U	<	4.2	U	<	3.0	U	<	3.1	U	<	8.1	U	<	26	U	<	5.9	U
	EN04-18S	8	8/9/2016	EN0418S160809	Summa Canister	17.3	1.8	0	1	N	N	ug/m3	-	1.6	J	<	1.1	U	<	0.79	U	<	0.79	U	<	0.51	U	<	1.1	U	<	0.79	U	<	0.81	U	<	0.53	U	-	14	-	<	3.8	U
	EN04-18D	31	8/7/2014	EN0418D08072014	Summa Canister	19.5	0.5	0	1.6	No	No	ug/m3	-	9.0	-	-	640	-	-	4.1	-	<	3.2	U	<	2.0	U	-	50	-	<	3.2	U	<	3.2	U	<	8.4	U	<	28	U	<	6.1	U
	EN04-18D	31	8/4/2015	EN0418D080415	Summa Canister	19.3	0.4	0	1.67	N	N	ug/m3	-	9.5	-	-	530	-	<	3.3	U	<	3.3	U	<	2.1	U	-	40	-	<	3.3	U	<	3.4	U	<	8.8	U	<	29	U	<	6.4	U
	EN04-18D	31	8/9/2016	EN0418D160809	Summa Canister	17.2	1.6	0	1	N	N	ug/m3	-	7.5	-	-	580	-	-	3.9	J	<	0.79	U	<	0.51	U	-	51	-	<	0.79	U	-	1.1	J	<	0.53	U	<	0.69	U	<	3.8	U

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SV Mon Point Designation	Sampling Point Designation	Sampling Depth	Sampling Date	Field Sample ID	Sample Type	O_2 (%)	CO_2 (%)	CH_4 (%)	Dilution Factor	SF_6 Applied?	He Applied?	Units of VOC Results	Tetrachloroethene		Trichloroethene		cis-1,2-Dichloroethene		trans-1,2-Dichloroethene		Vinyl chloride		1,1,1-Trichloroethane		1,1-Dichloroethene		1,1-Dichloroethane		Chloroethane		Methylene chloride		Trifluorotrichloroethane (CFC-113)	
Designation **EN04-19**	EN04-19S	8	8/5/2014	EN0419S08052014	Summa Canister	19.3	1.4	0	1.62	No	No	ug/m3	<	5.5	U	<	4.4	U	<	3.2	U	<	3.2	U	<	2.1	U	<	4.4	U	<	3.2	U	<	3.3	U	<	8.5	U	<	28	U	<	6.2	U
Monitoring Well **EN-426**	EN04-19S	8	8/4/2015	EN0419S080415	Summa Canister	18.8	1.9	0	1.62	N	N	ug/m3	<	5.5	U	<	4.4	U	<	3.2	U	<	3.2	U	<	2.1	U	<	4.4	U	<	3.2	U	<	3.3	U	<	8.5	U	<	28	U	<	6.2	U
	EN04-19S	8	8/10/2016	EN0419S160810	Summa Canister	18.6	2.6	0	1	N	N	ug/m3	<	1.4	U	<	1.1	U	<	0.79	U	<	0.79	U	<	0.51	U	<	1.1	U	<	0.79	U	<	0.81	U	<	0.53	U	-	15	-	<	3.8	U
	EN04-19D	29.5	8/5/2014	EN0419D08052014	Summa Canister	19.1	0.8	0	1.66	No	No	ug/m3	-	7.0	-	-	390	-	-	5.4	-	<	3.3	U	<	2.1	U	-	48	-	<	3.3	U	<	3.4	U	<	8.8	U	<	29	U	<	6.4	U
	EN04-19D	29.5	8/4/2015	EN0419D080415	Summa Canister	19.1	0.8	0	1.81	N	N	ug/m3	<	6.1	U	-	260	-	-	4.0	-	<	3.6	U	<	2.3	U	-	33	-	<	3.6	U	<	3.7	U	<	9.6	U	<	31	U	<	6.9	U
	EN04-19D Dup	29.5	8/4/2015	DU3298080415	Summa Canister	19.1	0.8	0	1.77	N	N	ug/m3	<	6.0	U	-	250	-	-	5.0	-	<	3.5	U	<	2.3	U	-	27	-	<	3.5	U	<	3.6	U	<	9.3	U	<	31	U	<	6.8	U
	EN04-19D	29.5	8/10/2016	EN0419D160810	Summa Canister	18.2	2.3	0	2.5	N	N	ug/m3	-	7.7	J	-	290	-	-	5.8	J	<	2	U	<	1.3	U	-	48	-	<	2	U	<	2	U	<	1.3	U	<	1.7	U	<	9.6	U
Designation **EN04-20**	EN04-20S	8	8/5/2014	EN0420S08052014	Summa Canister	20	0.9	0	1.78	No	No	ug/m3	<	6.0	U	<	4.8	U	<	3.5	U	<	3.5	U	<	2.3	U	<	4.8	U	<	3.5	U	<	3.6	U	<	9.4	U	<	31	U	<	6.8	U
Monitoring Well **EN-207**	EN04-20S Dup	8	8/5/2014	DU383008052014	Summa Canister	20	0.9	0	1.83	No	No	ug/m3	<	6.2	U	<	4.9	U	<	3.6	U	<	3.6	U	<	2.3	U	<	5.0	U	<	3.6	U	<	3.7	U	<	9.6	U	<	32	U	<	7.0	U
	EN04-20S	8	8/4/2015	EN0420S080415	Summa Canister	19.5	1.6	0	1.48	N	N	ug/m3	<	5.0	U	<	4.0	U	<	2.9	U	<	2.9	U	<	1.9	U	<	4.0	U	<	2.9	U	<	3.0	U	<	7.8	U	<	26	U	<	5.7	U
	EN04-20S	8	8/10/2016	EN0420S160810	Summa Canister	19.2	1.8	0	1	N	N	ug/m3	<	1.4	U	<	1.1	U	<	0.79	U	<	0.79	U	<	0.51	U	<	1.1	U	<	0.79	U	<	0.81	U	<	0.53	U	-	13	-	<	3.8	U
	EN04-20D	36	8/5/2014	EN0420D08052014	Summa Canister	20.1	0.6	0	1.65	No	No	ug/m3	<	5.6	U	-	180	-	<	3.3	U	<	3.3	U	<	2.1	U	-	11	-	<	3.3	U	<	3.3	U	<	8.7	U	<	29	U	<	6.3	U
	EN04-20D	36	8/4/2015	EN0420D080415	Summa Canister	19.8	0.7	0	1.51	N	N	ug/m3	<	5.1	U	-	130	-	<	3.0	U	<	3.0	U	<	1.9	U	-	11	-	<	3.0	U	<	3.0	U	<	8.0	U	<	26	U	<	5.8	U
	EN04-20D	36	8/10/2016	EN0420D160810	Summa Canister	19.3	1.6	0	1	N	N	ug/m3	<	1.4	U	-	85	-	<	0.79	U	<	0.79	U	<	0.51	U	-	8.9	-	<	0.79	U	<	0.81	U	<	0.53	U	-	20	-	<	3.8	U
Designation **EN04-21**	EN04-21S	7.5	8/5/2014	EN0421S08052014	Summa Canister	11.2	6.1	0	1.82	No	No	ug/m3	<	6.2	U	<	4.9	U	<	3.6	U	<	3.6	U	<	2.3	U	<	5.0	U	<	3.6	U	<	3.7	U	<	9.6	U	<	32	U	<	7.0	U
Monitoring Well **EN-468**	EN04-21S	7.5	8/4/2015	EN0421S080415	Summa Canister	11.7	6.3	0	1.54	N	N	ug/m3	<	5.2	U	<	4.1	U	<	3.0	U	<	3.0	U	<	2.0	U	<	4.2	U	<	3.0	U	<	3.1	U	<	8.1	U	<	27	U	<	5.9	U
	EN04-21S	7.5	8/10/2016	EN0421S160810	Summa Canister	19.8	2.3	0	1	N	N	ug/m3	<	1.4	U	<	1.1	U	<	0.79	U	<	0.79	U	<	0.51	U	<	1.1	U	<	0.79	U	<	0.81	U	<	0.53	U	<	0.69	U	<	3.8	U
	EN04-21D	23	8/5/2014	EN0421D08052014	Summa Canister	5.3	10	6.5	1.78	No	No	ug/m3	<	6.0	U	-	5.3	-	<	3.5	U	<	3.5	U	<	2.3	U	<	4.8	U	<	3.5	U	<	3.6	U	<	9.4	U	<	31	U	<	6.8	U
	EN04-21D	23	8/4/2015	EN0421D080415	Summa Canister	2.5	13.2	2.2	1.55	N	N	ug/m3	<	5.2	U	-	8.3	-	<	3.1	U	<	3.1	U	<	2.0	U	<	4.2	U	<	3.1	U	<	3.1	U	<	8.2	U	<	27	U	<	5.9	U
	EN04-21D	23	8/10/2016	EN0421D160810	Summa Canister	19.7	2.1	0	1	N	N	ug/m3	-	22	-	-	16	-	<	0.79	U	<	0.79	U	<	0.51	U	-	5.7	-	<	0.79	U	<	0.81	U	<	0.53	U	<	0.69	U	<	3.8	U
Designation **EN04-22**	EN04-22S	8	8/6/2014	EN0422S08062014	Summa Canister	16	3.1	0	2.12	No	No	ug/m3	<	7.2	U	-	29	-	<	4.2	U	<	4.2	U	<	2.7	U	<	5.8	U	<	4.2	U	<	4.3	U	<	11	U	<	37	U	<	8.1	U
Monitoring Well **EN-080;EN-393**	EN04-22S	8	8/4/2015	EN0422S080415	Summa Canister	15.3	3.5	0	1.51	N	N	ug/m3	-	7.4	-	-	450	-	-	23	-	-	3.6	-	<	1.9	U	-	41	-	<	3.0	U	<	3.0	U	<	8.0	U	<	26	U	-	9.9	
	EN04-22S	8	8/8/2016	EN0422S160808	Summa Canister	20	0.7	0	4	N	N	ug/m3	<	5.4	U	-	100	-	-	4.1	J	<	3.2	U	<	2	U	-	9.3	J	<	3.2	U	<	3.2	U	<	2.1	U	<	2.8	U	<	15	U
	EN04-22D	16	8/6/2014	EN0422D08062014	Summa Canister	15.9	3	0	1.92	No	No	ug/m3	<	6.5	U	-	400	-	-	40	-	-	6.5	-	<	2.4	U	-	34	-	<	3.8	U	<	3.9	U	<	10	U	<	33	U	-	15	
	EN04-22D	16	8/4/2015	EN0422D080415	Summa Canister	16.5	2.6	0	1.58	N	N	ug/m3	-	6.5	-	-	160	-	-	4.2	-	<	3.1	U	<	2.0	U	-	16	-	<	3.1	U	<	3.2	U	<	8.3	U	<	27	U	-	17	
	EN04-22D	16	8/8/2016	EN0422D160808	Summa Canister	19.9	0.7	0	1	N	N	ug/m3	<	1.4	U	-	25	-	<	0.79	U	<	0.79	U	<	0.51	U	-	2.4	J	<	0.79	U	<	0.81	U	<	0.53	U	<	0.69	U	<	3.8	U

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SV Mon Point Designation	Sampling Point Designation	Sampling Depth	Sampling Date	Field Sample ID	Sample Type	O_2 (%)	CO_2 (%)	CH_4 (%)	Dilution Factor	SF_6 Applied?	He Applied?	Units of VOC Results	Tetrachloroethene		Trichloroethene		cis-1,2-Dichloroethene		trans-1,2-Dichloroethene		Vinyl chloride		1,1,1-Trichloroethane		1,1-Dichloroethene		1,1-Dichloroethane		Chloroethane		Methylene chloride		Trifluorotrichloroethane (CFC-113)	
Designation **EN04-23**	EN04-23S	8	8/6/2014	EN0423S08062014	Summa Canister	18.4	2	0	1.88	No	No	ug/m3	<	6.4	U	<	5.0	U	<	3.7	U	<	3.7	U	<	2.4	U	<	5.1	U	<	3.7	U	<	3.8	U	<	9.9	U	<	33	U	<	7.2	U
Monitoring Well **EN-174**	EN04-23S	8	8/4/2015	EN0423S080415	Summa Canister	18.3	2.8	0	1.62	N	N	ug/m3	<	5.5	U	<	4.4	U	<	3.2	U	<	3.2	U	<	2.1	U	<	4.4	U	<	3.2	U	<	3.3	U	<	8.5	U	<	28	U	<	6.2	U
	EN04-23S	8	8/8/2016	EN0423S160808	Summa Canister	19.6	1.1	0	1	N	N	ug/m3	<	1.4	U	<	1.1	U	<	0.79	U	<	0.79	U	<	0.51	U	<	1.1	U	<	0.79	U	<	0.81	U	-	3.8	-	-	39	-	<	3.8	U
	EN04-23D	23	8/6/2014	EN0423D08062014	Summa Canister	18.8	1.4	0	1.84	No	No	ug/m3	-	15	-	-	380	-	-	52	-	-	5.9	-	<	2.4	U	<	5.0	U	<	3.6	U	-	10	-	<	9.7	U	<	32	U	<	7.0	U
	EN04-23D	23	8/4/2015	EN0423D080415	Summa Canister	18.8	1.6	0	1.58	N	N	ug/m3	-	14	-	-	180	-	-	20	-	<	3.1	U	<	2.0	U	<	4.3	U	<	3.1	U	-	4.3	-	<	8.3	U	<	27	U	<	6.0	U
	EN04-23D	23	8/8/2016	EN0423D160808	Summa Canister	19.3	1.2	0	1	N	N	ug/m3	-	12	-	-	340	-	-	42	-	-	3.8	J	<	0.51	U	-	1.9	J	<	0.79	U	-	7.1	-	<	0.53	U	<	0.69	U	<	3.8	U
Designation **EN04-25**	EN04-25S	8	8/6/2014	EN0425S08062014	Summa Canister	16.2	3.3	0	2.18	No	No	ug/m3	<	7.4	U	<	5.8	U	<	4.3	U	<	4.3	U	<	2.8	U	<	5.9	U	<	4.3	U	<	4.4	U	<	12	U	<	38	U	<	8.4	U
Monitoring Well **EN-395**	EN04-25S	8	8/4/2015	EN0425S080415	Summa Canister	16	3.7	0	1.52	N	N	ug/m3	<	5.2	U	<	4.1	U	<	3.0	U	<	3.0	U	<	1.9	U	<	4.1	U	<	3.0	U	<	3.1	U	<	8.0	U	<	26	U	<	5.8	U
	EN04-25S	8	8/9/2016	EN0425S160809	Summa Canister	16.9	3.2	0	1	N	N	ug/m3	-	3.9	J	-	4.8	J	<	0.79	U	<	0.79	U	<	0.51	U	-	3.4	J	<	0.79	U	<	0.81	U	<	0.53	U	<	0.69	U	<	3.8	U
	EN04-25S Dup	8	8/9/2016	DU1314160809	Summa Canister	16.9	3.2	0	1	N	N	ug/m3	-	3.5	J	-	3.3	J	<	0.79	U	<	0.79	U	<	0.51	U	-	1.6	J	<	0.79	U	<	0.81	U	<	0.53	U	<	0.69	U	<	3.8	U
	EN04-25D	17.5	8/6/2014	EN0425D08062014	Summa Canister	20	0.6	0	1.71	No	No	ug/m3	<	5.8	U	<	4.6	U	<	3.4	U	<	3.4	U	<	2.2	U	<	4.7	U	<	3.4	U	<	3.5	U	<	9.0	U	<	30	U	<	6.6	U
	EN04-25D	17.5	8/4/2015	EN0425D080415	Summa Canister	17.8	2.7	0	1.55	N	N	ug/m3	<	5.2	U	<	4.2	U	<	3.1	U	<	3.1	U	<	2.0	U	<	4.2	U	<	3.1	U	<	3.1	U	<	8.2	U	<	27	U	<	5.9	U
	EN04-25D	17.5	8/9/2016	EN0425D160809	Summa Canister	20	0.9	0	1	N	N	ug/m3	-	2	J	<	1.1	U	<	0.79	U	<	0.79	U	<	0.51	U	<	1.1	U	<	0.79	U	<	0.81	U	<	0.53	U	<	0.69	U	<	3.8	U
Designation **EN04-26**	EN04-26S	8	8/6/2014	EN0426S08062014	Summa Canister	19.2	1.3	0	1.65	No	No	ug/m3	<	5.6	U	-	27	-	<	3.3	U	<	3.3	U	<	2.1	U	<	4.5	U	<	3.3	U	<	3.3	U	<	8.7	U	<	29	U	<	6.3	U
Monitoring Well **EN-304**	EN04-26S	8	8/4/2015	EN0426S080415	Summa Canister	18.6	1.3	0	1.49	N	N	ug/m3	-	13	-	-	610	-	<	3.0	U	<	3.0	U	<	1.9	U	-	34	-	<	3.0	U	<	3.0	U	<	7.9	U	<	26	U	<	5.7	U
	EN04-26S	8	8/9/2016	EN0426S160809	Summa Canister	19.7	0.9	0	1	N	N	ug/m3	-	11	-	-	650	-	<	0.79	U	<	0.79	U	<	0.51	U	-	32	-	<	0.79	U	<	0.81	U	<	0.53	U	-	11	-	<	3.8	U
	EN04-26D	14	8/6/2014	EN0426D08062014	Summa Canister	19.3	1	0	1.79	No	No	ug/m3	-	16	-	-	1300	-	<	3.5	U	<	3.5	U	<	2.3	U	-	68	-	<	3.5	U	<	3.6	U	<	9.4	U	<	31	U	-	7.2	
	EN04-26D	14	8/4/2015	EN0426D080415	Summa Canister	18.9	0.9	0	1.56	N	N	ug/m3	-	11	-	-	980	-	<	3.1	U	<	3.1	U	<	2.0	U	-	49	-	<	3.1	U	<	3.2	U	<	8.2	U	<	27	U	<	6.0	U
	EN04-26D	14	8/9/2016	EN0426D160809	Summa Canister	19.6	0.7	0	1	N	N	ug/m3	-	3.9	J	-	280	-	<	0.79	U	<	0.79	U	<	0.51	U	-	14	-	<	0.79	U	<	0.81	U	<	0.53	U	-	9.3	-	<	3.8	U
Designation **EN04-27**	EN04-27S	8	8/6/2014	EN0427S08062014	Summa Canister	14.6	5	0	1.66	No	No	ug/m3	-	130	-	-	460	-	<	3.3	U	<	3.3	U	<	2.1	U	-	100	-	<	3.3	U	<	3.4	U	<	8.8	U	<	29	U	<	6.4	U
Monitoring Well **EN-417A**	EN04-27S	8	8/4/2015	EN0427S080415	Summa Canister	14.5	5	0	1.4	N	N	ug/m3	-	120	-	-	440	-	<	2.8	U	<	2.8	U	<	1.8	U	-	97	-	<	2.8	U	<	2.8	U	<	7.4	U	<	24	U	<	5.4	U
	EN04-27S	8	8/9/2016	EN0427S160809	Summa Canister	14.2	4.3	0	1	N	N	ug/m3	-	91	-	-	340	-	<	0.79	U	<	0.79	U	<	0.51	U	-	84	-	<	0.79	U	<	0.81	U	<	0.53	U	<	0.69	U	<	3.8	U
Designation **EN07-28**	EN07-28S	7	8/6/2014	EN0728S08062014	Summa Canister	19.8	0.5	0	1.76	No	No	ug/m3	-	280	-	-	11	-	<	3.5	U	<	3.5	U	<	2.2	U	<	4.8	U	<	3.5	U	<	3.6	U	<	9.3	U	<	30	U	<	6.7	U
Monitoring Well **EN-387A**	EN07-28S	7	8/4/2015	EN0728S080415	Summa Canister	19.6	0.5	0	1.64	N	N	ug/m3	-	180	-	-	7.4	-	<	3.2	U	<	3.2	U	<	2.1	U	<	4.5	U	<	3.2	U	<	3.3	U	<	8.6	U	<	28	U	<	6.3	U
	EN07-28S Dup	7	8/4/2015	DU3336080415	Summa Canister	19.6	0.5	0	1.71	N	N	ug/m3	-	190	-	-	8.7	-	<	3.4	U	<	3.4	U	<	2.2	U	<	4.7	U	<	3.4	U	<	3.5	U	<	9.0	U	<	30	U	<	6.6	U
	EN07-28S	7	8/9/2016	EN0728S160809	Summa Canister	19.4	0.6	0	1	N	N	ug/m3	-	240	-	-	8.6	-	<	0.79	U	<	0.79	U	<	0.51	U	<	1.1	U	<	0.79	U	<	0.81	U	<	0.53	U	<	0.69	U	<	3.8	U
	EN07-28D	19	8/6/2014	EN0728D08062014	Summa Canister	13.4	4.7	0	1.82	No	No	ug/m3	-	1300	-	-	50	-	-	5.7	-	<	3.6	U	<	2.3	U	<	5.0	U	<	3.6	U	<	3.7	U	<	9.6	U	<	32	U	<	7.0	U
	EN07-28D	19	8/4/2015	EN0728D080415	Summa Canister	15.3	4.1	0.3	1.46	N	N	ug/m3	-	890	-	-	35	-	-	5.0	-	<	2.9	U	<	1.9	U	<	4.0	U	<	2.9	U	<	3.0	U	<	7.7	U	<	25	U	<	5.6	U
	EN07-28D	19	8/9/2016	EN0728D160809	Summa Canister	9.4	7.3	0	10	N	N	ug/m3	-	1400	-	-	37	-	-	5.5	-	<	0.79	U	<	0.51	U	<	1.1	U	<	0.79	U	<	0.81	U	<	0.53	U	<	0.69	U	<	3.8	U

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SV Mon Point Designation	Sampling Point Designation	Sampling Depth	Sampling Date	Field Sample ID	Sample Type	O_2 (%)	CO_2 (%)	CH_4 (%)	Dilution Factor	SF_6 Applied?	He Applied?	Units of VOC Results	Tetrachloroethene			Trichloroethene			cis-1,2-Dichloroethene			trans-1,2-Dichloroethene			Vinyl chloride			1,1,1-Trichloroethane			1,1-Dichloroethene			1,1-Dichloroethane			Chloroethane			Methylene chloride			Trifluorotrichloroethane (CFC-113)		
Designation **EN04-29;EN05-29**	EN05-29S	8	2/4/2014	EN0529S02042014	Summa Canister	20.8	0.8	0	1.47	No	No	ug/m3	<	5.0	U	-	35	-	<	2.9	U	<	2.9	U	<	1.9	U	-	4.0	-	<	2.9	U	<	3.0	U	<	7.8	U	<	26	U	<	5.6	U
Monitoring Well **EN-437**	EN05-29S	8	8/6/2014	EN0529S08062014	Summa Canister	18.5	2	0	1.61	No	No	ug/m3	<	5.5	U	-	340	-	<	3.2	U	<	3.2	U	<	2.0	U	-	34	-	<	3.2	U	<	3.2	U	<	8.5	U	<	28	U	<	6.2	U
	EN05-29S	8	8/5/2015	EN0429S080515	Summa Canister	16.7	2.6	0	1.54	N	N	ug/m3	<	5.2	U	-	280	-	<	3.0	U	<	3.0	U	<	2.0	U	-	31	-	<	3.0	U	<	3.1	U	<	8.1	U	<	27	U	<	5.9	U
	EN05-29S	8	2/25/2016	EN0529S022516	Summa Canister	20.1	0.6	0	1	N	N	ug/m3	-	2.6	J	-	4.1	J	<	0.79	U	<	0.79	U	<	0.51	U	-	1.5	J	<	0.79	U	<	0.81	U	<	0.53	U	-	1	J	<	3.8	U
	EN05-29S	8	8/9/2016	EN0529S160809	Summa Canister	17.8	2.6	0	1	N	N	ug/m3	-	2.6	J	-	260	-	<	0.79	U	<	0.79	U	<	0.51	U	-	35	-	<	0.79	U	<	0.81	U	-	1.3	J	<	0.69	U	<	3.8	U
	EN04-29D	20	2/4/2014	EN0429D02042014	Summa Canister	20.5	0.7	0	2.48	No	No	ug/m3	<	8.4	U	-	300	-	<	4.9	U	<	4.9	U	<	3.2	U	-	20	-	<	4.9	U	<	5.0	U	<	13	U	<	43	U	<	9.5	U
	EN04-29D	20	8/6/2014	EN0429D08062014	Summa Canister	19.2	1.1	0	1.73	No	No	ug/m3	<	5.9	U	-	280	-	<	3.4	U	<	3.4	U	<	2.2	U	-	23	-	<	3.4	U	<	3.5	U	<	9.1	U	<	30	U	<	6.6	U
	EN04-29D Dup	20	8/6/2014	DU335608062014	Summa Canister	19.2	1.1	0	1.8	No	No	ug/m3	<	6.1	U	-	260	-	<	3.6	U	<	3.6	U	<	2.3	U	-	22	-	<	3.6	U	<	3.6	U	<	9.5	U	<	31	U	<	6.9	U
	EN04-29D	20	2/5/2015	EN0429D020515	Summa Canister	20.9	0.6	0	1.63	No	No	ug/m3	<	5.5	U	-	34	-	<	3.2	U	<	3.2	U	<	2.1	U	<	4.4	U	<	3.2	U	<	3.3	U	<	8.6	U	<	28	U	<	6.2	U
	EN04-29D	20	8/5/2015	EN0429D080515	Summa Canister	17.4	2.5	0	1.6	N	N	ug/m3	<	5.4	U	-	210	-	<	3.2	U	<	3.2	U	<	2.0	U	-	19	-	<	3.2	U	<	3.2	U	<	8.4	U	<	28	U	<	6.1	U
	EN04-29D	20	2/25/2016	EN0429D022516	Summa Canister	20.3	0.7	0	1	N	N	ug/m3	<	1.4	U	-	120	-	<	0.79	U	<	0.79	U	<	0.51	U	-	14	-	<	0.79	U	<	0.81	U	<	0.53	U	<	0.69	U	<	3.8	U
	EN04-29D	20	8/9/2016	EN0429D160809	Summa Canister	17.9	2.5	0	1	N	N	ug/m3	-	2.9	J	-	370	-	<	0.79	U	<	0.79	U	<	0.51	U	-	40	-	<	0.79	U	<	0.81	U	<	0.53	U	<	0.69	U	<	3.8	U
Designation **EN04-30**	EN04-30S	9	2/4/2014	EN0430S02042014	Summa Canister	20.9	0.1	0	2.32	No	No	ug/m3	<	7.9	U	-	250	-	<	4.6	U	<	4.6	U	<	3.0	U	<	6.3	U	<	4.6	U	<	4.7	U	<	12	U	<	40	U	<	8.9	U
Monitoring Well **EN-092A;EN-438**	EN04-30S	9	8/7/2014	EN0430S08072014	Summa Canister	20	0.6	0	1.8	No	No	ug/m3	<	6.1	U	-	1800	-	<	3.6	U	<	3.6	U	<	2.3	U	-	14	-	<	3.6	U	<	3.6	U	<	9.5	U	<	31	U	<	6.9	U
	EN04-30S Dup	9	8/7/2014	DU1280708072014	Summa Canister	20	0.6	0	1.86	No	No	ug/m3	<	6.3	U	-	1800	-	<	3.7	U	<	3.7	U	<	2.4	U	-	14	-	<	3.7	U	<	3.8	U	<	9.8	U	<	32	U	<	7.1	U
	EN04-30S	9	2/5/2015	EN0430S020515	Summa Canister	21.1	0.2	0	1.66	No	No	ug/m3	<	5.6	U	-	310	-	<	3.3	U	<	3.3	U	<	2.1	U	<	4.5	U	<	3.3	U	<	3.4	U	<	8.8	U	<	29	U	<	6.4	U
	EN04-30S Dup	9	2/5/2015	DU3372020515	Summa Canister	21.1	0.2	0	1.63	No	No	ug/m3	<	5.5	U	-	300	-	<	3.2	U	<	3.2	U	<	2.1	U	<	4.4	U	<	3.2	U	<	3.3	U	<	8.6	U	<	28	U	<	6.2	U
	EN04-30S	9	8/5/2015	EN0430S080515	Summa Canister	19.6	0.5	0	2.53	N	N	ug/m3	<	8.6	U	-	2100	-	<	5.0	U	<	5.0	U	<	3.2	U	-	19	-	<	5.0	U	<	5.1	U	<	13	U	<	44	U	<	9.7	U
	EN04-30S	9	2/25/2016	EN0430S022516	Summa Canister	20.8	0.2	0	1	N	N	ug/m3	<	1.4	U	-	180	-	-	1.1	J	<	0.79	U	<	0.51	U	-	3.7	J	<	0.79	U	<	0.81	U	<	0.53	U	-	1.1	J	<	3.8	U
	EN04-30S Dup	9	2/25/2016	DU1331022516	Summa Canister	20.8	0.2	0	1	N	N	ug/m3	-	1.6	J	-	350	-	-	1.1	J	<	0.79	U	<	0.51	U	-	4.1	J	<	0.79	U	<	0.81	U	<	0.53	U	<	0.69	U	<	3.8	U
	EN04-30S	9	8/8/2016	EN0430S160808	Summa Canister	19.4	0.3	0	10	N	N	ug/m3	<	14	U	-	2300	-	<	7.9	U	<	7.9	U	<	5.1	U	-	39	J	<	7.9	U	<	8.1	U	<	5.3	U	<	6.9	U	<	38	U
	EN04-30D	20	2/4/2014	EN0430D02042014	Summa Canister	20.5	0.5	0	1.57	No	No	ug/m3	-	25	-	-	820	-	-	4.7	-	<	3.1	U	<	2.0	U	-	49	-	<	3.1	U	<	3.2	U	<	8.3	U	<	27	U	<	6.0	U
	EN04-30D	20	8/7/2014	EN0430D08072014	Summa Canister	19.6	0.9	0	1.66	No	No	ug/m3	-	30	-	-	690	-	-	3.8	-	<	3.3	U	<	2.1	U	-	82	-	<	3.3	U	-	5.7	-	<	8.8	U	<	29	U	<	6.4	U
	EN04-30D	20	2/5/2015	EN0430D020515	Summa Canister	20.3	0.6	0	1.45	No	No	ug/m3	-	28	-	-	840	-	-	3.0	-	<	2.9	U	<	1.8	U	-	37	-	<	2.9	U	-	18	-	<	7.6	U	<	25	U	<	5.6	U
	EN04-30D	20	8/5/2015	EN0430D080515	Summa Canister	18.3	0.9	0	2	N	N	ug/m3	-	60	-	-	840	-	-	5.9	-	<	4.0	U	<	2.6	U	-	100	-	<	4.0	U	-	17	-	<	10	U	<	35	U	<	7.7	U
	EN04-30D Dup	20	8/5/2015	DU3463080515	Summa Canister	18.3	0.9	0	1.5	N	N	ug/m3	<	5.1	U	<	4.0	U	<	3.0	U	<	3.0	U	<	1.9	U	<	4.1	U	<	3.0	U	<	3.0	U	<	7.9	U	<	26	U	<	5.7	U
	EN04-30D	20	2/25/2016	EN0430D022516	Summa Canister	20.2	0.5	0	1	N	N	ug/m3	-	28	-	-	760	-	-	6.6	-	<	0.79	U	<	0.51	U	-	61	-	<	0.79	U	-	18	-	<	0.53	U	<	0.69	U	<	3.8	U
	EN04-30D	20	8/8/2016	EN0430D160808	Summa Canister	19.4	0.2	0	10	N	N	ug/m3	-	51	J	-	980	-	-	9.6	J	<	7.9	U	<	5.1	U	-	120	-	<	7.9	U	-	15	J	<	5.3	U	<	6.9	U	<	38	U

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SV Mon Point Designation	Sampling Point Designation	Sampling Depth	Sampling Date	Field Sample ID	Sample Type	O_2 (%)	CO_2 (%)	CH_4 (%)	Dilution Factor	SF_6 Applied?	He Applied?	Units of VOC Results	Tetrachloroethene			Trichloroethene			cis-1,2-Dichloroethene			trans-1,2-Dichloroethene			Vinyl chloride			1,1,1-Trichloroethane			1,1-Dichloroethene			1,1-Dichloroethane			Chloroethane			Methylene chloride			Trifluorotrichloroethane (CFC-113)		
Designation **EN04-31**	EN04-31S	10	8/6/2014	EN0431S08062014	Summa Canister	20.9	0.1	0	1.77	No	No	ug/m3	<	6.0	U	<	4.8	U	<	3.5	U	<	3.5	U	<	2.3	U	<	4.8	U	<	3.5	U	<	3.6	U	<	9.3	U	<	31	U	<	6.8	U
Monitoring Well **EN-453**	EN04-31S	10	10/1/2015	EN0431S100115	Summa Canister	-	-	-	1.51	No	No	ug/m3	<	5.1	U	<	4.0	U	-	3.3	-	<	3.0	U	<	1.9	U	<	4.1	U	<	3.0	U	<	3.0	U	<	8.0	U	<	26	U	<	5.8	U
	EN04-31S	10	8/8/2016	EN0431S160808	Summa Canister	19.3	0.1	0	1	N	N	ug/m3	-	30	-	-	1.5	J	<	0.79	U	<	0.79	U	<	0.51	U	<	1.1	U	<	0.79	U	<	0.81	U	-	0.78	J	-	5.2	-	<	3.8	U
	EN04-31D	19	8/8/2016	EN0431D160808	Summa Canister	19.2	0.2	0	1	N	N	ug/m3	<	1.4	U	-	5.2	J	<	0.79	U	<	0.79	U	<	0.51	U	<	1.1	U	<	0.79	U	<	0.81	U	<	0.53	U	<	0.69	U	<	3.8	U
Designation **EN04-32**	EN04-32S	8	2/4/2014	EN0432S02042014	Summa Canister	20.6	0.6	0	1.62	No	No	ug/m3	<	5.5	U	-	87	-	<	3.2	U	<	3.2	U	<	2.1	U	-	5.5	-	<	3.2	U	<	3.3	U	<	8.5	U	<	28	U	<	6.2	U
Monitoring Well **EN-457A;EN-457B**	EN04-32S Dup	8	2/4/2014	DU336102042014	Summa Canister	20.6	0.6	0	1.75	No	No	ug/m3	<	5.9	U	-	100	-	<	3.5	U	<	3.5	U	<	2.2	U	-	5.8	-	<	3.5	U	<	3.5	U	<	9.2	U	<	30	U	<	6.7	U
	EN04-32S	8	8/5/2014	EN0432S08052014	Summa Canister	19.1	1	0	1.7	No	No	ug/m3	<	5.8	U	-	470	-	<	3.4	U	<	3.4	U	<	2.2	U	-	32	-	<	3.4	U	<	3.4	U	<	9.0	U	<	30	U	<	6.5	U
	EN04-32S	8	2/5/2015	EN0432S020515	Summa Canister	20.9	0.7	0	1.65	No	No	ug/m3	<	5.6	U	-	130	-	<	3.3	U	<	3.3	U	<	2.1	U	-	7.4	-	<	3.3	U	<	3.3	U	<	8.7	U	<	29	U	<	6.3	U
	EN04-32S	8	8/5/2015	EN0432S080515	Summa Canister	18.9	1.1	0	1.56	N	N	ug/m3	-	6.9	-	-	680	-	<	3.1	U	<	3.1	U	<	2.0	U	-	46	-	<	3.1	U	<	3.2	U	<	8.2	U	<	27	U	<	6.0	U
	EN04-32S	8	2/25/2016	EN0432S022516	Summa Canister	20.5	0.5	0	1	N	N	ug/m3	<	1.4	U	-	150	-	<	0.79	U	<	0.79	U	<	0.51	U	-	12	-	<	0.79	U	<	0.81	U	<	0.53	U	<	0.69	U	<	3.8	U
	EN04-32S	8	8/10/2016	EN0432S160810	Summa Canister	18.8	1.5	0	1	N	N	ug/m3	-	4.7	J	-	620	-	<	0.79	U	<	0.79	U	<	0.51	U	-	35	-	<	0.79	U	<	0.81	U	<	0.53	U	-	1.3	J	<	3.8	U
	EN04-32D	18	2/4/2014	EN0432D02042014	Summa Canister	19.9	1.1	0	1.65	No	No	ug/m3	<	5.6	U	-	810	-	<	3.3	U	<	3.3	U	<	2.1	U	-	50	-	<	3.3	U	<	3.3	U	<	8.7	U	<	29	U	<	6.3	U
	EN04-32D	18	8/5/2014	EN0432D08052014	Summa Canister	19.2	0.8	0	1.8	No	No	ug/m3	<	6.1	U	-	1000	-	<	3.6	U	<	3.6	U	<	2.3	U	-	67	-	<	3.6	U	-	4.0	-	<	9.5	U	<	31	U	<	6.9	U
	EN04-32D Dup	18	8/5/2014	DU333108052014	Summa Canister	19.2	0.8	0	1.73	No	No	ug/m3	<	5.9	U	-	1000	-	<	3.4	U	<	3.4	U	<	2.2	U	-	87	-	<	3.4	U	-	3.7	-	<	9.1	U	<	30	U	<	6.6	U
	EN04-32D	18	2/5/2015	EN0432D020515	Summa Canister	20.7	0.8	0	1.58	No	No	ug/m3	<	5.4	U	-	940	-	<	3.1	U	<	3.1	U	<	2.0	U	-	44	-	<	3.1	U	<	3.2	U	<	8.3	U	<	27	U	<	6.0	U
	EN04-32D	18	8/5/2015	EN0432D080515	Summa Canister	19	0.9	0	1.52	N	N	ug/m3	<	5.2	U	-	830	-	<	3.0	U	<	3.0	U	<	1.9	U	-	53	-	<	3.0	U	-	3.6	-	<	8.0	U	<	26	U	<	5.8	U
	EN04-32D	18	2/25/2016	EN0432D022516	Summa Canister	20.4	0.8	0	1	N	N	ug/m3	-	2.5	J	-	670	-	-	1.6	J	<	0.79	U	<	0.51	U	-	51	-	<	0.79	U	-	3.2	J	<	0.53	U	<	0.69	U	<	3.8	U
	EN04-32D	18	8/10/2016	EN0432D160810	Summa Canister	19.1	1.1	0	1	N	N	ug/m3	-	2.8	J	-	540	-	-	1.2	J	<	0.79	U	<	0.51	U	-	63	-	<	0.79	U	-	3.2	J	<	0.53	U	<	0.69	U	<	3.8	U
Designation **EN05-33**	EN05-33S	7.5	8/7/2014	EN0533S08072014	Summa Canister	19.3	0.7	0	1.53	No	No	ug/m3	-	17	-	-	47	-	<	3.0	U	<	3.0	U	<	2.0	U	-	4.7	-	<	3.0	U	<	3.1	U	<	8.1	U	<	26	U	<	5.9	U
Monitoring Well **EN-162**	EN05-33S	7.5	8/4/2015	EN0533S080415	Summa Canister	19.4	0.7	0	1.52	N	N	ug/m3	-	13	-	-	28	-	<	3.0	U	<	3.0	U	<	1.9	U	-	4.5	-	<	3.0	U	<	3.1	U	<	8.0	U	<	26	U	<	5.8	U
	EN05-33S	7.5	8/8/2016	EN0533S160808	Summa Canister	19.1	1.1	0	1	N	N	ug/m3	-	22	-	-	28	-	<	0.79	U	<	0.79	U	<	0.51	U	-	4.8	J	<	0.79	U	<	0.81	U	<	0.53	U	<	0.69	U	<	3.8	U
	EN05-33D	32	8/7/2014	EN0533D08072014	Summa Canister	19.6	0.5	0	4.05	No	No	ug/m3	-	200	-	-	3500	-	<	8.0	U	<	8.0	U	<	5.2	U	-	130	-	<	8.0	U	<	8.2	U	<	21	U	<	70	U	<	16	U
	EN05-33D	32	8/4/2015	EN0533D080415	Summa Canister	19.3	0.4	0	1.64	N	N	ug/m3	-	44	-	-	920	-	<	3.2	U	<	3.2	U	<	2.1	U	-	39	-	<	3.2	U	<	3.3	U	<	8.6	U	<	28	U	<	6.3	U
	EN05-33D	32	8/8/2016	EN0533D160808	Summa Canister	19.8	0.6	0	10	N	N	ug/m3	-	160	-	-	2400	-	<	7.9	U	<	7.9	U	<	5.1	U	-	110	-	<	7.9	U	<	8.1	U	<	5.3	U	<	6.9	U	<	38	U

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SV Mon Point Designation	Sampling Point Designation	Sampling Depth	Sampling Date	Field Sample ID	Sample Type	O_2 (%)	CO_2 (%)	CH_4 (%)	Dilution Factor	SF_6 Applied?	He Applied?	Units of VOC Results	Tetrachloroethene			Trichloroethene			cis-1,2-Dichloroethene			trans-1,2-Dichloroethene			Vinyl chloride			1,1,1-Trichloroethane			1,1-Dichloroethene			1,1-Dichloroethane			Chloroethane			Methylene chloride			Trifluorotrichloroethane (CFC-113)		
Designation **EN05-34**	EN05-34S	8	8/6/2014	EN0534S08062014	Summa Canister	19.1	1.2	0	1.8	No	No	ug/m3	<	6.1	U	-	14	-	<	3.6	U	<	3.6	U	<	2.3	U	<	4.9	U	<	3.6	U	<	3.6	U	<	9.5	U	<	31	U	<	6.9	U
Monitoring Well **EN-417A**	EN05-34S	8	8/4/2015	EN0534S080415	Summa Canister	17.7	2.6	0	1.79	N	N	ug/m3	<	6.1	U	-	13	-	<	3.5	U	<	3.5	U	<	2.3	U	<	4.9	U	<	3.5	U	<	3.6	U	<	9.4	U	<	31	U	<	6.8	U
	EN05-34S Dup	8	8/4/2015	DU3829080415	Summa Canister	17.7	2.6	0	1.78	N	N	ug/m3	<	6.0	U	<	4.8	U	<	3.5	U	<	3.5	U	<	2.3	U	<	4.8	U	<	3.5	U	<	3.6	U	<	9.4	U	<	31	U	<	6.8	U
	EN05-34S	8	8/9/2016	EN0534S160809	Summa Canister	18.6	1.6	0	1	N	N	ug/m3	-	3.3	J	-	9.2	-	<	0.79	U	<	0.79	U	<	0.51	U	-	2.5	J	<	0.79	U	<	0.81	U	<	0.53	U	-	69	-	<	3.8	U
	EN05-34D	13.5	8/6/2014	EN0534D08062014	Summa Canister	18.9	1.2	0	1.8	No	No	ug/m3	-	27	-	-	160	-	<	3.6	U	<	3.6	U	<	2.3	U	-	19	-	<	3.6	U	<	3.6	U	<	9.5	U	<	31	U	-	9.0	
	EN05-34D	13.5	8/4/2015	EN0534D080415	Summa Canister	18.3	1.4	0	1.55	N	N	ug/m3	-	24	-	-	140	-	<	3.1	U	<	3.1	U	<	2.0	U	-	17	-	<	3.1	U	<	3.1	U	<	8.2	U	<	27	U	<	5.9	U
	EN05-34D	13.5	8/9/2016	EN0534D160809	Summa Canister	18.7	1.4	0	1	N	N	ug/m3	-	26	-	-	150	-	<	0.79	U	<	0.79	U	<	0.51	U	-	23	-	<	0.79	U	<	0.81	U	<	0.53	U	-	4.9	-	-	26	
Designation **EN06-35**	EN06-35S	8	8/6/2014	EN0635S08062014	Summa Canister	19.8	1	0	1.61	No	No	ug/m3	<	5.5	U	<	4.3	U	<	3.2	U	<	3.2	U	<	2.0	U	<	4.4	U	<	3.2	U	<	3.2	U	<	8.5	U	<	28	U	<	6.2	U
Monitoring Well **EN-460**	EN06-35S Dup	8	8/6/2014	DU336108062014	Summa Canister	19.8	1	0	1.77	No	No	ug/m3	<	6.0	U	<	4.8	U	<	3.5	U	<	3.5	U	<	2.3	U	<	4.8	U	<	3.5	U	<	3.6	U	<	9.3	U	<	31	U	<	6.8	U
	EN06-35S	8	8/5/2015	EN0635S080515	Summa Canister	19.5	1.7	0	2.38	N	N	ug/m3	<	8.1	U	<	6.4	U	<	4.7	U	<	4.7	U	<	3.0	U	<	6.5	U	<	4.7	U	<	4.8	U	<	12	U	<	41	U	<	9.1	U
	EN06-35S Dup	8	8/5/2015	DU3352080515	Summa Canister	19.5	1.7	0	1.63	N	N	ug/m3	<	5.5	U	<	4.4	U	<	3.2	U	<	3.2	U	<	2.1	U	<	4.4	U	<	3.2	U	<	3.3	U	<	8.6	U	<	28	U	<	6.2	U
	EN06-35S	8	8/10/2016	EN0635S160810	Summa Canister	19.4	1.5	0	1	N	N	ug/m3	<	1.4	U	-	2.4	J	<	0.79	U	<	0.79	U	<	0.51	U	-	1.6	J	<	0.79	U	<	0.81	U	<	0.53	U	<	0.69	U	<	3.8	U
	EN06-35D	34	8/6/2014	EN0635D08062014	Summa Canister	19.4	0.8	0	1.64	No	No	ug/m3	<	5.6	U	-	90	-	<	3.2	U	<	3.2	U	<	2.1	U	-	12	-	<	3.2	U	<	3.3	U	<	8.6	U	<	28	U	<	6.3	U
	EN06-35D	34	8/5/2015	EN0635D080515	Summa Canister	19.6	1.2	0	1.52	N	N	ug/m3	<	5.2	U	-	72	-	<	3.0	U	<	3.0	U	<	1.9	U	-	15	-	<	3.0	U	<	3.1	U	<	8.0	U	<	26	U	<	5.8	U
	EN06-35D	34	8/10/2016	EN0635D160810	Summa Canister	19.2	1.2	0	1	N	N	ug/m3	<	1.4	U	-	93	-	<	0.79	U	<	0.79	U	<	0.51	U	-	20	-	<	0.79	U	<	0.81	U	<	0.53	U	<	0.69	U	<	3.8	U
Designation **EN06-36**	EN06-36S	8	8/5/2014	EN0636S08052014	Summa Canister	19.5	1.3	0	1.82	No	No	ug/m3	-	9.2	-	<	4.9	U	<	3.6	U	<	3.6	U	<	2.3	U	-	9.9	-	<	3.6	U	<	3.7	U	<	9.6	U	<	32	U	<	7.0	U
Monitoring Well **EN-459A;EN-460A**	EN06-36S	8	8/5/2015	EN0636S080515	Summa Canister	18.6	1.7	0	1.58	N	N	ug/m3	<	5.4	U	<	4.2	U	<	3.1	U	<	3.1	U	<	2.0	U	-	6.7	-	<	3.1	U	<	3.2	U	<	8.3	U	<	27	U	<	6.0	U
	EN06-36S	8	8/10/2016	EN0636S160810	Summa Canister	19.5	1.5	0	1	N	N	ug/m3	-	2.3	J	<	1.1	U	<	0.79	U	<	0.79	U	<	0.51	U	-	11	-	<	0.79	U	<	0.81	U	<	0.53	U	<	0.69	U	<	3.8	U
	EN06-36D	33	8/5/2014	EN0636D08052014	Summa Canister	19.9	1	0	1.71	No	No	ug/m3	<	5.8	U	-	310	-	<	3.4	U	<	3.4	U	<	2.2	U	-	270	-	<	3.4	U	<	3.5	U	<	9.0	U	<	30	U	<	6.6	U
	EN06-36D	33	8/5/2015	EN0636D080515	Summa Canister	19.5	1.1	0	1.55	N	N	ug/m3	<	5.2	U	-	200	-	<	3.1	U	<	3.1	U	<	2.0	U	-	160	-	<	3.1	U	<	3.1	U	<	8.2	U	<	27	U	<	5.9	U
	EN06-36D	33	8/10/2016	EN0636D160810	Summa Canister	20	0.6	0	1	N	N	ug/m3	<	1.4	U	-	78	-	<	0.79	U	<	0.79	U	<	0.51	U	-	67	-	<	0.79	U	<	0.81	U	<	0.53	U	<	0.69	U	<	3.8	U
Designation **EN06-37**	EN06-37S	8	8/6/2014	EN0637S08062014	Summa Canister	18.5	1.7	0	1.8	No	No	ug/m3	<	6.1	U	<	4.8	U	<	3.6	U	<	3.6	U	<	2.3	U	<	4.9	U	<	3.6	U	<	3.6	U	<	9.5	U	<	31	U	<	6.9	U
Monitoring Well **EN-387;EN-394**	EN06-37S	8	8/4/2015	EN0637S080415	Summa Canister	18.4	2.7	0	1.52	N	N	ug/m3	<	5.2	U	<	4.1	U	<	3.0	U	<	3.0	U	<	1.9	U	<	4.1	U	<	3.0	U	<	3.1	U	<	8.0	U	<	26	U	<	5.8	U
	EN06-37S	8	8/9/2016	EN0637S160809	Summa Canister	17.4	2.8	0	1	N	N	ug/m3	<	1.4	U	<	1.1	U	<	0.79	U	<	0.79	U	<	0.51	U	<	1.1	U	<	0.79	U	<	0.81	U	<	0.53	U	<	0.69	U	<	3.8	U
	EN06-37D	21	8/6/2014	EN0637D08062014	Summa Canister	17.1	2.4	0	1.73	No	No	ug/m3	-	16	-	-	22	-	<	3.4	U	<	3.4	U	<	2.2	U	<	4.7	U	<	3.4	U	<	3.5	U	<	9.1	U	<	30	U	<	6.6	U
	EN06-37D	21	8/4/2015	EN0637D080415	Summa Canister	17.3	2.9	0	1.36	N	N	ug/m3	-	10	-	-	14	-	<	2.7	U	<	2.7	U	<	1.7	U	<	3.7	U	<	2.7	U	<	2.8	U	<	7.2	U	<	24	U	<	5.2	U
	EN06-37D	21	8/9/2016	EN0637D160809	Summa Canister	17.6	3.2	0	1	N	N	ug/m3	-	16	-	-	19	-	-	2.2	J	<	0.79	U	<	0.51	U	<	1.1	U	<	0.79	U	<	0.81	U	<	0.53	U	-	1.3	J	<	3.8	U

Table C.1
Summary of Analytical Laboratory Data - Soil Vapor
Annual Report - Soil Vapor Monitoring through August 2016
Comprehensive Operations, Maintenance, Monitoring Program
Endicott, New York

SV Mon Point Designation	Sampling Point Designation	Sampling Depth	Sampling Date	Field Sample ID	Sample Type	O_2 (%)	CO_2 (%)	CH_4 (%)	Dilution Factor	SF_6 Applied?	He Applied?	Units of VOC Results	Tetrachloroethene			Trichloroethene			cis-1,2-Dichloroethene			trans-1,2-Dichloroethene			Vinyl chloride			1,1,1-Trichloroethane			1,1-Dichloroethene			1,1-Dichloroethane			Chloroethane			Methylene chloride			Trifluorotrichloroethane (CFC-113)		
Designation **EN10-41**	EN10-41S	8	2/5/2014	EN1041S02052014	Summa Canister	15.7	2.4	0	1.57	No	No	ug/m3	-	30	-	<	4.2	U	<	3.1	U	<	3.1	U	<	2.0	U	<	4.3	U	<	3.1	U	<	3.2	U	<	8.3	U	<	27	U	<	6.0	U
	EN10-41S	8	8/6/2014	EN1041S08062014	Summa Canister	11.6	3.8	0	1.76	No	No	ug/m3	-	220	-	-	13	-	<	3.5	U	<	3.5	U	<	2.2	U	<	4.8	U	<	3.5	U	<	3.6	U	<	9.3	U	<	30	U	<	6.7	U
	EN10-41S	8	8/4/2015	EN1041S080415	Summa Canister	12.4	4.4	0.3	1.51	No	No	ug/m3	<	5.1	U	<	4.0	U	<	3.0	U	<	3.0	U	<	1.9	U	<	4.1	U	<	3.0	U	<	3.0	U	<	8.0	U	<	26	U	<	5.8	U
	EN10-41D	23.5	2/5/2014	EN1041D02052014	Summa Canister	18.3	2.2	0	1.68	No	No	ug/m3	-	21	-	-	8.6	-	<	3.3	U	<	3.3	U	<	2.1	U	<	4.6	U	<	3.3	U	<	3.4	U	<	8.9	U	<	29	U	<	6.4	U
	EN10-41D	23.5	8/6/2014	EN1041D08062014	Summa Canister	8.6	3.6	0	1.82	No	No	ug/m3	-	35	-	-	13	-	<	3.6	U	<	3.6	U	<	2.3	U	<	5.0	U	<	3.6	U	<	3.7	U	<	9.6	U	<	32	U	<	7.0	U
	EN10-41D	23.5	10/1/2015	EN1041D100215	Summa Canister	-	-	-	1.45	No	No	ug/m3	-	32	-	-	9.0	-	<	2.9	U	<	2.9	U	<	1.8	U	<	4.0	U	<	2.9	U	<	2.9	U	<	7.6	U	<	25	U	<	5.6	U

Notes:
1. This table is a summary of the findings of the program of long-term soil vapor monitoring conducted as part of the Comprehensive Operations, Management, and Monitoring Program associated with IBM's activities in Endicott, New York. The work is being conducted as a required component of Administrative Order on Consent executed by IBM and the State of New York on August 4, 2004. The long-term soil vapor monitoring program is being conducted in accordance with SHA's "Soil Vapor Monitoring Plan", of September 2004. Refer to the report text for additional details.

2. The vapor samples were collected on the dates noted using evacuated canisters. Samples collected prior to 2016 were collected by Sanborn Head and were analyzed by Eurofins Air Toxics LTD., of Folsom, California for the project-specific list of VOCs using EPA Compendium Method TO-15 standard (full-scan) methods at dilution factors noted. Samples collected in 2016 were collected by Groundwater Sciences Corporation of Harrisburg, Pennsyvania and analyzed by Eurofins Lancaster Laboratories ofLancaster, Pennsylvania for the same list of compouds using EPA TO-15 method. The data are reported by the laboratory with the following flags: B= analyte detected in the associated laboratory method blank, J=denotes an estimated value indicating that the compound was detected, but below the limit of quantitation. U = compound was not detected at the specified limit of quantitation.

3. This table is an abbreviated summary of the soil vapor monitoring. Data reported were collected in routine monitoring events during the 2014 to 2016 calendar years.

APPENDIX C.2

ANALYTICAL LABORATORY REPORTS

ANALYTICAL RESULTS

Prepared by:

Eurofins Lancaster Laboratories Environmental
2425 New Holland Pike
Lancaster, PA 17601

Prepared for:

IBM
8976 Wellington Road
Manassas VA 20109

Report Date: August 24, 2016

Project: IBM

Submittal Date: 08/12/2016
Group Number: 1694945
PO Number: 5004872019
Release Number: NON-ROUTINE
State of Sample Origin: NY

Client Sample Description	Lancaster Labs (LL) #
EN043S160808 Air	8526495
EQB11436160808 Air	8526496
EN043D160808 Air	8526497
EN0431S160808 Air	8526498
EN0534S160809 Air	8526499
EN0534D160809 Air	8526500
EN0426S160809 Air	8526501
EN0427S160809 Air	8526502
EN0426D160809 Air	8526503
EN0416D160808 Air	8526504
EN0429D160809 Air	8526505
EN041D160808 Air	8526506
EN042D160808 Air	8526507
EN049D160809 Air	8526508
EN0410S160809 Air	8526509
EN0412S160809 Air	8526510
EN0411S160809 Air	8526511
EN0415D160808 Air	8526512
DU1324160809 Air	8526513
EN0415S160808 Air	8526514

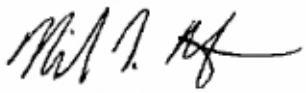
The specific methodologies used in obtaining the enclosed analytical results are indicated on the Laboratory Sample Analysis Record.

Regulatory agencies do not accredit laboratories for all methods, analytes, and matrices. Our scopes of accreditation can be viewed at http://www.eurofinsus.com/environment-testing/laboratories/eurofins-lancaster-laboratories-environmental/resources/certifications/ .

Electronic Copy To GSC Attn: Scott Morgan

2425 New Holland Pike, Lancaster, PA 17601 • 717-656-2300 • Fax: 717-656-2681 • www.LancasterLabs.com

Respectfully Submitted,



Nicole L. Maljovec
Manager

(717) 556-7259

Sample Description: EN043S160808 Air
Summa Can# 994
IBM

LL Sample # AQ 8526495
LL Group # 1694945
Account # 12618

Project Name: IBM

Collected: 08/08/2016 16:11 by KF
through 08/08/2016 17:11
Submitted: 08/12/2016 14:10
Reported: 08/24/2016 11:59

IBM
8976 Wellington Road
Manassas VA 20109

CAT No.	Analysis Name	CAS Number	Final Result		MDL	Final Result		MDL	DF
Volatiles in Air EPA TO-15			ppb(v)		ppb(v)	ug/m3		ug/m3	
05298	Chloroethane	75-00-3	1.3		0.20	3.5		0.53	1
05298	1,1-Dichloroethane	75-34-3	N.D.		0.20	N.D.		0.81	1
05298	1,1-Dichloroethene	75-35-4	N.D.		0.20	N.D.		0.79	1
05298	cis-1,2-Dichloroethene	156-59-2	N.D.		0.20	N.D.		0.79	1
05298	trans-1,2-Dichloroethene	156-60-5	N.D.		0.20	N.D.		0.79	1
05298	Freon 113	76-13-1	N.D.		0.50	N.D.		3.8	1
05298	Methylene Chloride	75-09-2	0.48	J	0.20	1.7	J	0.69	1
05298	Tetrachloroethene	127-18-4	0.21	J	0.20	1.4	J	1.4	1
05298	1,1,1-Trichloroethane	71-55-6	N.D.		0.20	N.D.		1.1	1
05298	1,1,2-Trichloroethane	79-00-5	N.D.		0.20	N.D.		1.1	1
05298	Trichloroethene	79-01-6	N.D.		0.20	N.D.		1.1	1
05298	Vinyl Chloride	75-01-4	N.D.		0.20	N.D.		0.51	1

MDL = Method Detection Limit

Sample Comments

State of New York Certification No. 10670

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
05298	IBM Selected VOCs List-PA	EPA TO-15	1	E1623030AA	08/17/2016 23:23	Jacob E Bailey	1

Sample Description: EQB11436160808 Air
Summa Can# 1143
IBM

LL Sample # AQ 8526496
LL Group # 1694945
Account # 12618

Project Name: IBM

Collected: 08/08/2016 10:34 by KF
through 08/08/2016 11:34
Submitted: 08/12/2016 14:10
Reported: 08/24/2016 11:59

IBM
8976 Wellington Road
Manassas VA 20109

CAT No.	Analysis Name	CAS Number	Final Result		MDL	Final Result		MDL	DF
Volatiles in Air EPA TO-15			ppb(v)		ppb(v)	ug/m3		ug/m3	
05298	Chloroethane	75-00-3	N.D.		0.20	N.D.		0.53	1
05298	1,1-Dichloroethane	75-34-3	N.D.		0.20	N.D.		0.81	1
05298	1,1-Dichloroethene	75-35-4	N.D.		0.20	N.D.		0.79	1
05298	cis-1,2-Dichloroethene	156-59-2	N.D.		0.20	N.D.		0.79	1
05298	trans-1,2-Dichloroethene	156-60-5	N.D.		0.20	N.D.		0.79	1
05298	Freon 113	76-13-1	N.D.		0.50	N.D.		3.8	1
05298	Methylene Chloride	75-09-2	1.0	J	0.20	3.5	J	0.69	1
05298	Tetrachloroethene	127-18-4	N.D.		0.20	N.D.		1.4	1
05298	1,1,1-Trichloroethane	71-55-6	N.D.		0.20	N.D.		1.1	1
05298	1,1,2-Trichloroethane	79-00-5	N.D.		0.20	N.D.		1.1	1
05298	Trichloroethene	79-01-6	N.D.		0.20	N.D.		1.1	1
05298	Vinyl Chloride	75-01-4	N.D.		0.20	N.D.		0.51	1

MDL = Method Detection Limit

Sample Comments

State of New York Certification No. 10670

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
05298	IBM Selected VOCs List-PA	EPA TO-15	1	E1623030AA	08/17/2016 23:55	Jacob E Bailey	1

Sample Description: EN043D160808 Air
Summa Can# 1205
IBM

LL Sample # AQ 8526497
LL Group # 1694945
Account # 12618

Project Name: IBM

Collected: 08/08/2016 16:12 by KF
through 08/08/2016 17:12
Submitted: 08/12/2016 14:10
Reported: 08/24/2016 11:59

IBM
8976 Wellington Road
Manassas VA 20109

CAT No.	Analysis Name	CAS Number	Final Result		MDL	Final Result		MDL	DF
Volatiles in Air EPA TO-15			ppb(v)		ppb(v)	ug/m3		ug/m3	
05298	Chloroethane	75-00-3	N.D.		0.20	N.D.		0.53	1
05298	1,1-Dichloroethane	75-34-3	N.D.		0.20	N.D.		0.81	1
05298	1,1-Dichloroethene	75-35-4	N.D.		0.20	N.D.		0.79	1
05298	cis-1,2-Dichloroethene	156-59-2	N.D.		0.20	N.D.		0.79	1
05298	trans-1,2-Dichloroethene	156-60-5	N.D.		0.20	N.D.		0.79	1
05298	Freon 113	76-13-1	N.D.		0.50	N.D.		3.8	1
05298	Methylene Chloride	75-09-2	0.80	J	0.20	2.8	J	0.69	1
05298	Tetrachloroethene	127-18-4	N.D.		0.20	N.D.		1.4	1
05298	1,1,1-Trichloroethane	71-55-6	N.D.		0.20	N.D.		1.1	1
05298	1,1,2-Trichloroethane	79-00-5	N.D.		0.20	N.D.		1.1	1
05298	Trichloroethene	79-01-6	N.D.		0.20	N.D.		1.1	1
05298	Vinyl Chloride	75-01-4	N.D.		0.20	N.D.		0.51	1

MDL = Method Detection Limit

Sample Comments

State of New York Certification No. 10670

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
05298	IBM Selected VOCs List-PA	EPA TO-15	1	E1623030AA	08/18/2016 00:27	Jacob E Bailey	1

Sample Description: EN0431S160808 Air
Summa Can# 982
IBM

LL Sample # AQ 8526498
LL Group # 1694945
Account # 12618

Project Name: IBM

Collected: 08/08/2016 17:47 by KF
through 08/08/2016 18:47
Submitted: 08/12/2016 14:10
Reported: 08/24/2016 11:59

IBM
8976 Wellington Road
Manassas VA 20109

CAT No.	Analysis Name	CAS Number	Final Result		MDL	Final Result		MDL	DF
Volatiles in Air EPA TO-15			ppb(v)		ppb(v)	ug/m3		ug/m3	
05298	Chloroethane	75-00-3	0.30	J	0.20	0.78	J	0.53	1
05298	1,1-Dichloroethane	75-34-3	N.D.		0.20	N.D.		0.81	1
05298	1,1-Dichloroethene	75-35-4	N.D.		0.20	N.D.		0.79	1
05298	cis-1,2-Dichloroethene	156-59-2	N.D.		0.20	N.D.		0.79	1
05298	trans-1,2-Dichloroethene	156-60-5	N.D.		0.20	N.D.		0.79	1
05298	Freon 113	76-13-1	N.D.		0.50	N.D.		3.8	1
05298	Methylene Chloride	75-09-2	1.5		0.20	5.2		0.69	1
05298	Tetrachloroethene	127-18-4	4.4		0.20	30		1.4	1
05298	1,1,1-Trichloroethane	71-55-6	N.D.		0.20	N.D.		1.1	1
05298	1,1,2-Trichloroethane	79-00-5	N.D.		0.20	N.D.		1.1	1
05298	Trichloroethene	79-01-6	0.29	J	0.20	1.5	J	1.1	1
05298	Vinyl Chloride	75-01-4	N.D.		0.20	N.D.		0.51	1

MDL = Method Detection Limit

Sample Comments

State of New York Certification No. 10670

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
05298	IBM Selected VOCs List-PA	EPA TO-15	1	E1623030AA	08/18/2016 00:59	Jacob E Bailey	1

Sample Description: EN0534S160809 Air
Summa Can# 1315
IBM

LL Sample # AQ 8526499
LL Group # 1694945
Account # 12618

Project Name: IBM

Collected: 08/09/2016 12:28 by KF
through 08/09/2016 13:28
Submitted: 08/12/2016 14:10
Reported: 08/24/2016 11:59

IBM
8976 Wellington Road
Manassas VA 20109

CAT No.	Analysis Name	CAS Number	Final Result		MDL	Final Result		MDL	DF
Volatiles in Air EPA TO-15			ppb(v)		ppb(v)	ug/m3		ug/m3	
05298	Chloroethane	75-00-3	N.D.		0.20	N.D.		0.53	1
05298	1,1-Dichloroethane	75-34-3	N.D.		0.20	N.D.		0.81	1
05298	1,1-Dichloroethene	75-35-4	N.D.		0.20	N.D.		0.79	1
05298	cis-1,2-Dichloroethene	156-59-2	N.D.		0.20	N.D.		0.79	1
05298	trans-1,2-Dichloroethene	156-60-5	N.D.		0.20	N.D.		0.79	1
05298	Freon 113	76-13-1	N.D.		0.50	N.D.		3.8	1
05298	Methylene Chloride	75-09-2	20		0.20	69		0.69	1
05298	Tetrachloroethene	127-18-4	0.48	J	0.20	3.3	J	1.4	1
05298	1,1,1-Trichloroethane	71-55-6	0.46	J	0.20	2.5	J	1.1	1
05298	1,1,2-Trichloroethane	79-00-5	N.D.		0.20	N.D.		1.1	1
05298	Trichloroethene	79-01-6	1.7		0.20	9.2		1.1	1
05298	Vinyl Chloride	75-01-4	N.D.		0.20	N.D.		0.51	1

MDL = Method Detection Limit

Sample Comments

State of New York Certification No. 10670

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
05298	IBM Selected VOCs List-PA	EPA TO-15	1	E1623130AA	08/18/2016 21:13	Jacob E Bailey	1

Sample Description: EN0534D160809 Air
Summa Can# 1161
IBM

LL Sample # AQ 8526500
LL Group # 1694945
Account # 12618

Project Name: IBM

Collected: 08/09/2016 12:30 by KF
through 08/09/2016 13:30
Submitted: 08/12/2016 14:10
Reported: 08/24/2016 11:59

IBM
8976 Wellington Road
Manassas VA 20109

CAT No.	Analysis Name	CAS Number	Final Result	MDL	Final Result	MDL	DF
Volatiles in Air EPA TO-15			ppb(v)	ppb(v)	ug/m3	ug/m3	
05298	Chloroethane	75-00-3	N.D.	0.20	N.D.	0.53	1
05298	1,1-Dichloroethane	75-34-3	N.D.	0.20	N.D.	0.81	1
05298	1,1-Dichloroethene	75-35-4	N.D.	0.20	N.D.	0.79	1
05298	cis-1,2-Dichloroethene	156-59-2	N.D.	0.20	N.D.	0.79	1
05298	trans-1,2-Dichloroethene	156-60-5	N.D.	0.20	N.D.	0.79	1
05298	Freon 113	76-13-1	3.5	0.50	26	3.8	1
05298	Methylene Chloride	75-09-2	1.4	0.20	4.9	0.69	1
05298	Tetrachloroethene	127-18-4	3.9	0.20	26	1.4	1
05298	1,1,1-Trichloroethane	71-55-6	4.3	0.20	23	1.1	1
05298	1,1,2-Trichloroethane	79-00-5	N.D.	0.20	N.D.	1.1	1
05298	Trichloroethene	79-01-6	29	0.20	150	1.1	1
05298	Vinyl Chloride	75-01-4	N.D.	0.20	N.D.	0.51	1

MDL = Method Detection Limit

Sample Comments

State of New York Certification No. 10670

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
05298	IBM Selected VOCs List-PA	EPA TO-15	1	E1623130AA	08/18/2016 21:48	Jacob E Bailey	1

Sample Description: EN0426S160809 Air
Summa Can# 954
IBM

LL Sample # AQ 8526501
LL Group # 1694945
Account # 12618

Project Name: IBM

Collected: 08/09/2016 14:12 by KF
through 08/09/2016 15:12
Submitted: 08/12/2016 14:10
Reported: 08/24/2016 11:59

IBM
8976 Wellington Road
Manassas VA 20109

CAT No.	Analysis Name	CAS Number	Final Result	MDL	Final Result	MDL	DF
Volatiles in Air	**EPA TO-15**		ppb(v)	ppb(v)	ug/m3	ug/m3	
05298	Chloroethane	75-00-3	N.D.	0.20	N.D.	0.53	1
05298	1,1-Dichloroethane	75-34-3	N.D.	0.20	N.D.	0.81	1
05298	1,1-Dichloroethene	75-35-4	N.D.	0.20	N.D.	0.79	1
05298	cis-1,2-Dichloroethene	156-59-2	N.D.	0.20	N.D.	0.79	1
05298	trans-1,2-Dichloroethene	156-60-5	N.D.	0.20	N.D.	0.79	1
05298	Freon 113	76-13-1	N.D.	0.50	N.D.	3.8	1
05298	Methylene Chloride	75-09-2	3.2	0.20	11	0.69	1
05298	Tetrachloroethene	127-18-4	1.7	0.20	11	1.4	1
05298	1,1,1-Trichloroethane	71-55-6	5.8	0.20	32	1.1	1
05298	1,1,2-Trichloroethane	79-00-5	N.D.	0.20	N.D.	1.1	1
05298	Trichloroethene	79-01-6	120	2.0	650	11	10
05298	Vinyl Chloride	75-01-4	N.D.	0.20	N.D.	0.51	1

MDL = Method Detection Limit

Sample Comments

State of New York Certification No. 10670

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
05298	IBM Selected VOCs List-PA	EPA TO-15	1	E1623130AA	08/18/2016 22:26	Jacob E Bailey	1
05298	IBM Selected VOCs List-PA	EPA TO-15	1	E1623230AA	08/19/2016 16:06	Jacob E Bailey	10

Sample Description: EN0427S160809 Air
Summa Can# 1204
IBM

LL Sample # AQ 8526502
LL Group # 1694945
Account # 12618

Project Name: IBM

Collected: 08/09/2016 12:41 by KF
through 08/09/2016 13:41
Submitted: 08/12/2016 14:10
Reported: 08/24/2016 11:59

IBM
8976 Wellington Road
Manassas VA 20109

CAT No.	Analysis Name	CAS Number	Final Result	MDL	Final Result	MDL	DF
Volatiles in Air EPA TO-15			ppb(v)	ppb(v)	ug/m3	ug/m3	
05298	Chloroethane	75-00-3	N.D.	0.20	N.D.	0.53	1
05298	1,1-Dichloroethane	75-34-3	N.D.	0.20	N.D.	0.81	1
05298	1,1-Dichloroethene	75-35-4	N.D.	0.20	N.D.	0.79	1
05298	cis-1,2-Dichloroethene	156-59-2	N.D.	0.20	N.D.	0.79	1
05298	trans-1,2-Dichloroethene	156-60-5	N.D.	0.20	N.D.	0.79	1
05298	Freon 113	76-13-1	N.D.	0.50	N.D.	3.8	1
05298	Methylene Chloride	75-09-2	N.D.	0.20	N.D.	0.69	1
05298	Tetrachloroethene	127-18-4	13	0.20	91	1.4	1
05298	1,1,1-Trichloroethane	71-55-6	15	0.20	84	1.1	1
05298	1,1,2-Trichloroethane	79-00-5	N.D.	0.20	N.D.	1.1	1
05298	Trichloroethene	79-01-6	63	0.20	340	1.1	1
05298	Vinyl Chloride	75-01-4	N.D.	0.20	N.D.	0.51	1

MDL = Method Detection Limit

Sample Comments

State of New York Certification No. 10670

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
05298	IBM Selected VOCs List-PA	EPA TO-15	1	E1623130AA	08/18/2016 22:58	Jacob E Bailey	1

Sample Description: EN0426D160809 Air
Summa Can# 1019
IBM

LL Sample # AQ 8526503
LL Group # 1694945
Account # 12618

Project Name: IBM

Collected: 08/09/2016 14:13 by KF
through 08/09/2016 14:43
Submitted: 08/12/2016 14:10
Reported: 08/24/2016 11:59

IBM
8976 Wellington Road
Manassas VA 20109

CAT No.	Analysis Name	CAS Number	Final Result		MDL	Final Result		MDL	DF
Volatiles in Air EPA TO-15			ppb(v)		ppb(v)	ug/m3		ug/m3	
05298	Chloroethane	75-00-3	N.D.		0.20	N.D.		0.53	1
05298	1,1-Dichloroethane	75-34-3	N.D.		0.20	N.D.		0.81	1
05298	1,1-Dichloroethene	75-35-4	N.D.		0.20	N.D.		0.79	1
05298	cis-1,2-Dichloroethene	156-59-2	N.D.		0.20	N.D.		0.79	1
05298	trans-1,2-Dichloroethene	156-60-5	N.D.		0.20	N.D.		0.79	1
05298	Freon 113	76-13-1	N.D.		0.50	N.D.		3.8	1
05298	Methylene Chloride	75-09-2	2.7		0.20	9.3		0.69	1
05298	Tetrachloroethene	127-18-4	0.57	J	0.20	3.9	J	1.4	1
05298	1,1,1-Trichloroethane	71-55-6	2.6		0.20	14		1.1	1
05298	1,1,2-Trichloroethane	79-00-5	N.D.		0.20	N.D.		1.1	1
05298	Trichloroethene	79-01-6	52		0.20	280		1.1	1
05298	Vinyl Chloride	75-01-4	N.D.		0.20	N.D.		0.51	1

MDL = Method Detection Limit

Sample Comments

State of New York Certification No. 10670

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
05298	IBM Selected VOCs List-PA	EPA TO-15	1	E1623130AA	08/18/2016 23:30	Jacob E Bailey	1

Sample Description: EN0416D160808 Air
Summa Can# 1092
IBM

LL Sample # AQ 8526504
LL Group # 1694945
Account # 12618

Project Name: IBM

Collected: 08/08/2016 18:05 by KF
through 08/08/2016 19:05
Submitted: 08/12/2016 14:10
Reported: 08/24/2016 11:59

IBM
8976 Wellington Road
Manassas VA 20109

CAT No.	Analysis Name	CAS Number	Final Result		MDL	Final Result		MDL	DF
Volatiles in Air EPA TO-15			ppb(v)		ppb(v)	ug/m3		ug/m3	
05298	Chloroethane	75-00-3	N.D.		0.20	N.D.		0.53	1
05298	1,1-Dichloroethane	75-34-3	N.D.		0.20	N.D.		0.81	1
05298	1,1-Dichloroethene	75-35-4	N.D.		0.20	N.D.		0.79	1
05298	cis-1,2-Dichloroethene	156-59-2	N.D.		0.20	N.D.		0.79	1
05298	trans-1,2-Dichloroethene	156-60-5	N.D.		0.20	N.D.		0.79	1
05298	Freon 113	76-13-1	N.D.		0.50	N.D.		3.8	1
05298	Methylene Chloride	75-09-2	N.D.		0.20	N.D.		0.69	1
05298	Tetrachloroethene	127-18-4	N.D.		0.20	N.D.		1.4	1
05298	1,1,1-Trichloroethane	71-55-6	0.23	J	0.20	1.3	J	1.1	1
05298	1,1,2-Trichloroethane	79-00-5	N.D.		0.20	N.D.		1.1	1
05298	Trichloroethene	79-01-6	0.49	J	0.20	2.6	J	1.1	1
05298	Vinyl Chloride	75-01-4	N.D.		0.20	N.D.		0.51	1

MDL = Method Detection Limit

Sample Comments

State of New York Certification No. 10670

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
05298	IBM Selected VOCs List-PA	EPA TO-15	1	E1623130AA	08/19/2016 00:02	Jacob E Bailey	1

Sample Description: EN0429D160809 Air
Summa Can# 1334
IBM

LL Sample # AQ 8526505
LL Group # 1694945
Account # 12618

Project Name: IBM

Collected: 08/09/2016 13:59 by KF
through 08/09/2016 14:59
Submitted: 08/12/2016 14:10
Reported: 08/24/2016 11:59

IBM
8976 Wellington Road
Manassas VA 20109

CAT No.	Analysis Name	CAS Number	Final Result		MDL	Final Result		MDL	DF
Volatiles in Air EPA TO-15			ppb(v)		ppb(v)	ug/m3		ug/m3	
05298	Chloroethane	75-00-3	N.D.		0.20	N.D.		0.53	1
05298	1,1-Dichloroethane	75-34-3	N.D.		0.20	N.D.		0.81	1
05298	1,1-Dichloroethene	75-35-4	N.D.		0.20	N.D.		0.79	1
05298	cis-1,2-Dichloroethene	156-59-2	N.D.		0.20	N.D.		0.79	1
05298	trans-1,2-Dichloroethene	156-60-5	N.D.		0.20	N.D.		0.79	1
05298	Freon 113	76-13-1	N.D.		0.50	N.D.		3.8	1
05298	Methylene Chloride	75-09-2	N.D.		0.20	N.D.		0.69	1
05298	Tetrachloroethene	127-18-4	0.43	J	0.20	2.9	J	1.4	1
05298	1,1,1-Trichloroethane	71-55-6	7.3		0.20	40		1.1	1
05298	1,1,2-Trichloroethane	79-00-5	N.D.		0.20	N.D.		1.1	1
05298	Trichloroethene	79-01-6	69		0.20	370		1.1	1
05298	Vinyl Chloride	75-01-4	N.D.		0.20	N.D.		0.51	1

MDL = Method Detection Limit

Sample Comments

State of New York Certification No. 10670

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
05298	IBM Selected VOCs List-PA	EPA TO-15	1	E1623130AA	08/19/2016 00:33	Jacob E Bailey	1

Sample Description: EN041D160808 Air
Summa Can# 1213
IBM

LL Sample # AQ 8526506
LL Group # 1694945
Account # 12618

Project Name: IBM

Collected: 08/08/2016 09:42 by KF
through 08/08/2016 10:42
Submitted: 08/12/2016 14:10
Reported: 08/24/2016 11:59

IBM
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Manassas VA 20109

CAT No.	Analysis Name	CAS Number	Final Result	MDL	Final Result	MDL	DF
Volatiles in Air	**EPA TO-15**		ppb(v)	ppb(v)	ug/m3	ug/m3	
05298	Chloroethane	75-00-3	N.D.	0.20	N.D.	0.53	1
05298	1,1-Dichloroethane	75-34-3	N.D.	0.20	N.D.	0.81	1
05298	1,1-Dichloroethene	75-35-4	N.D.	0.20	N.D.	0.79	1
05298	cis-1,2-Dichloroethene	156-59-2	N.D.	0.20	N.D.	0.79	1
05298	trans-1,2-Dichloroethene	156-60-5	N.D.	0.20	N.D.	0.79	1
05298	Freon 113	76-13-1	N.D.	0.50	N.D.	3.8	1
05298	Methylene Chloride	75-09-2	N.D.	0.20	N.D.	0.69	1
05298	Tetrachloroethene	127-18-4	N.D.	0.20	N.D.	1.4	1
05298	1,1,1-Trichloroethane	71-55-6	2.8	0.20	15	1.1	1
05298	1,1,2-Trichloroethane	79-00-5	N.D.	0.20	N.D.	1.1	1
05298	Trichloroethene	79-01-6	15	0.20	79	1.1	1
05298	Vinyl Chloride	75-01-4	N.D.	0.20	N.D.	0.51	1

MDL = Method Detection Limit

Sample Comments

State of New York Certification No. 10670

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
05298	IBM Selected VOCs List-PA	EPA TO-15	1	E1623130AA	08/19/2016 01:06	Jacob E Bailey	1

Sample Description: EN042D160808 Air
Summa Can# 1090
IBM

LL Sample # AQ 8526507
LL Group # 1694945
Account # 12618

Project Name: IBM

Collected: 08/08/2016 12:35 by KF
through 08/08/2016 13:35
Submitted: 08/12/2016 14:10
Reported: 08/24/2016 11:59

IBM
8976 Wellington Road
Manassas VA 20109

CAT No.	Analysis Name	CAS Number	Final Result		MDL	Final Result		MDL	DF
Volatiles in Air EPA TO-15			ppb(v)		ppb(v)	ug/m3		ug/m3	
05298	Chloroethane	75-00-3	N.D.		0.20	N.D.		0.53	1
05298	1,1-Dichloroethane	75-34-3	0.74	J	0.20	3.0	J	0.81	1
05298	1,1-Dichloroethene	75-35-4	N.D.		0.20	N.D.		0.79	1
05298	cis-1,2-Dichloroethene	156-59-2	0.59	J	0.20	2.3	J	0.79	1
05298	trans-1,2-Dichloroethene	156-60-5	N.D.		0.20	N.D.		0.79	1
05298	Freon 113	76-13-1	N.D.		0.50	N.D.		3.8	1
05298	Methylene Chloride	75-09-2	0.32	J	0.20	1.1	J	0.69	1
05298	Tetrachloroethene	127-18-4	2.0		0.20	13		1.4	1
05298	1,1,1-Trichloroethane	71-55-6	3.1		0.20	17		1.1	1
05298	1,1,2-Trichloroethane	79-00-5	N.D.		0.20	N.D.		1.1	1
05298	Trichloroethene	79-01-6	12		0.20	65		1.1	1
05298	Vinyl Chloride	75-01-4	N.D.		0.20	N.D.		0.51	1

MDL = Method Detection Limit

Sample Comments

State of New York Certification No. 10670

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
05298	IBM Selected VOCs List-PA	EPA TO-15	1	E1623130AA	08/19/2016 01:38	Jacob E Bailey	1

Sample Description: EN049D160809 Air
Summa Can# 1001
IBM

LL Sample # AQ 8526508
LL Group # 1694945
Account # 12618

Project Name: IBM

Collected: 08/09/2016 08:34 by KF
through 08/09/2016 09:34
Submitted: 08/12/2016 14:10
Reported: 08/24/2016 11:59

IBM
8976 Wellington Road
Manassas VA 20109

CAT No.	Analysis Name	CAS Number	Final Result		MDL	Final Result		MDL	DF
Volatiles in Air EPA TO-15			ppb(v)		ppb(v)	ug/m3		ug/m3	
05298	Chloroethane	75-00-3	N.D.		20	N.D.		53	100
05298	1,1-Dichloroethane	75-34-3	2,200		20	8,900		81	100
05298	1,1-Dichloroethene	75-35-4	1,600		20	6,400		79	100
05298	cis-1,2-Dichloroethene	156-59-2	660		20	2,600		79	100
05298	trans-1,2-Dichloroethene	156-60-5	N.D.		20	N.D.		79	100
05298	Freon 113	76-13-1	180	J	50	1,400	J	380	100
05298	Methylene Chloride	75-09-2	130		20	440		69	100
05298	Tetrachloroethene	127-18-4	120		20	840		140	100
05298	1,1,1-Trichloroethane	71-55-6	9,300		200	50,000		1,100	1000
05298	1,1,2-Trichloroethane	79-00-5	N.D.		20	N.D.		110	100
05298	Trichloroethene	79-01-6	2,500		20	13,000		110	100
05298	Vinyl Chloride	75-01-4	N.D.		20	N.D.		51	100

MDL = Method Detection Limit

Sample Comments

State of New York Certification No. 10670

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
05298	IBM Selected VOCs List-PA	EPA TO-15	1	E1623130AA	08/19/2016 02:10	Jacob E Bailey	100
05298	IBM Selected VOCs List-PA	EPA TO-15	1	E1623230AA	08/19/2016 16:36	Jacob E Bailey	1000

Sample Description: EN0410S160809 Air
Summa Can# 1310
IBM

LL Sample # AQ 8526509
LL Group # 1694945
Account # 12618

Project Name: IBM

Collected: 08/09/2016 07:57 by KF
through 08/09/2016 08:57
Submitted: 08/12/2016 14:10
Reported: 08/24/2016 11:59

IBM
8976 Wellington Road
Manassas VA 20109

CAT No.	Analysis Name	CAS Number	Final Result		MDL	Final Result		MDL	DF
Volatiles in Air EPA TO-15			ppb(v)		ppb(v)	ug/m3		ug/m3	
05298	Chloroethane	75-00-3	1.4	J	0.30	3.6	J	0.79	1.5
05298	1,1-Dichloroethane	75-34-3	410	J	240	1,700	J	970	1200
05298	1,1-Dichloroethene	75-35-4	780	J	240	3,100	J	950	1200
05298	cis-1,2-Dichloroethene	156-59-2	500	J	240	2,000	J	950	1200
05298	trans-1,2-Dichloroethene	156-60-5	6.2		0.30	25		1.2	1.5
05298	Freon 113	76-13-1	590		7.5	4,600		57	15
05298	Methylene Chloride	75-09-2	8.6		0.30	30		1.0	1.5
05298	Tetrachloroethene	127-18-4	46		0.30	310		2.0	1.5
05298	1,1,1-Trichloroethane	71-55-6	1,900		240	10,000		1,300	1200
05298	1,1,2-Trichloroethane	79-00-5	N.D.		0.30	N.D.		1.6	1.5
05298	Trichloroethene	79-01-6	3,700		240	20,000		1,300	1200
05298	Vinyl Chloride	75-01-4	N.D.		0.30	N.D.		0.77	1.5

MDL = Method Detection Limit

Sample Comments

State of New York Certification No. 10670

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
05298	IBM Selected VOCs List-PA	EPA TO-15	1	E1623130AA	08/19/2016 02:42	Jacob E Bailey	1.5
05298	IBM Selected VOCs List-PA	EPA TO-15	1	E1623230AA	08/19/2016 17:16	Jacob E Bailey	15
05298	IBM Selected VOCs List-PA	EPA TO-15	1	E1623530AA	08/22/2016 15:21	Jacob E Bailey	1200

Sample Description: EN0412S160809 Air
Summa Can# 1323
IBM

LL Sample # AQ 8526510
LL Group # 1694945
Account # 12618

Project Name: IBM

Collected: 08/09/2016 11:05 by KF
through 08/09/2016 12:05
Submitted: 08/12/2016 14:10
Reported: 08/24/2016 11:59

IBM
8976 Wellington Road
Manassas VA 20109

CAT No.	Analysis Name	CAS Number	Final Result		MDL	Final Result		MDL	DF
Volatiles in Air EPA TO-15			ppb(v)		ppb(v)	ug/m3		ug/m3	
05298	Chloroethane	75-00-3	N.D.		0.20	N.D.		0.53	1
05298	1,1-Dichloroethane	75-34-3	1.3		0.20	5.1		0.81	1
05298	1,1-Dichloroethene	75-35-4	2.5		0.20	9.8		0.79	1
05298	cis-1,2-Dichloroethene	156-59-2	1.8		0.20	7.0		0.79	1
05298	trans-1,2-Dichloroethene	156-60-5	N.D.		0.20	N.D.		0.79	1
05298	Freon 113	76-13-1	N.D.		0.50	N.D.		3.8	1
05298	Methylene Chloride	75-09-2	N.D.		0.20	N.D.		0.69	1
05298	Tetrachloroethene	127-18-4	0.29	J	0.20	2.0	J	1.4	1
05298	1,1,1-Trichloroethane	71-55-6	6.9		0.20	38		1.1	1
05298	1,1,2-Trichloroethane	79-00-5	N.D.		0.20	N.D.		1.1	1
05298	Trichloroethene	79-01-6	150		2.0	780		11	10
05298	Vinyl Chloride	75-01-4	N.D.		0.20	N.D.		0.51	1

MDL = Method Detection Limit

Sample Comments

State of New York Certification No. 10670

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
05298	IBM Selected VOCs List-PA	EPA TO-15	1	E1623130AA	08/19/2016 03:17	Jacob E Bailey	1
05298	IBM Selected VOCs List-PA	EPA TO-15	1	E1623230AA	08/19/2016 17:51	Jacob E Bailey	10

Sample Description: EN0411S160809 Air
Summa Can# 1330
IBM

LL Sample # AQ 8526511
LL Group # 1694945
Account # 12618

Project Name: IBM

Collected: 08/09/2016 13:27 by KF
through 08/09/2016 14:10
Submitted: 08/12/2016 14:10
Reported: 08/24/2016 11:59

IBM
8976 Wellington Road
Manassas VA 20109

CAT No.	Analysis Name	CAS Number	Final Result		MDL	Final Result		MDL	DF
Volatiles in Air EPA TO-15			ppb(v)		ppb(v)	ug/m3		ug/m3	
05298	Chloroethane	75-00-3	N.D.		0.20	N.D.		0.53	1
05298	1,1-Dichloroethane	75-34-3	0.43	J	0.20	1.7	J	0.81	1
05298	1,1-Dichloroethene	75-35-4	N.D.		0.20	N.D.		0.79	1
05298	cis-1,2-Dichloroethene	156-59-2	0.60	J	0.20	2.4	J	0.79	1
05298	trans-1,2-Dichloroethene	156-60-5	N.D.		0.20	N.D.		0.79	1
05298	Freon 113	76-13-1	N.D.		0.50	N.D.		3.8	1
05298	Methylene Chloride	75-09-2	3.3		0.20	11		0.69	1
05298	Tetrachloroethene	127-18-4	0.20	J	0.20	1.4	J	1.4	1
05298	1,1,1-Trichloroethane	71-55-6	1.7		0.20	9.5		1.1	1
05298	1,1,2-Trichloroethane	79-00-5	N.D.		0.20	N.D.		1.1	1
05298	Trichloroethene	79-01-6	3.9		0.20	21		1.1	1
05298	Vinyl Chloride	75-01-4	N.D.		0.20	N.D.		0.51	1

MDL = Method Detection Limit

Sample Comments

State of New York Certification No. 10670

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
05298	IBM Selected VOCs List-PA	EPA TO-15	1	E1623130AA	08/19/2016 03:50	Jacob E Bailey	1

Sample Description: EN0415D160808 Air
Summa Can# 1309
IBM

LL Sample # AQ 8526512
LL Group # 1694945
Account # 12618

Project Name: IBM

Collected: 08/08/2016 10:44 by KF
through 08/08/2016 11:47
Submitted: 08/12/2016 14:10
Reported: 08/24/2016 11:59

IBM
8976 Wellington Road
Manassas VA 20109

CAT No.	Analysis Name	CAS Number	Final Result		MDL	Final Result		MDL	DF
Volatiles in Air EPA TO-15			ppb(v)		ppb(v)	ug/m3		ug/m3	
05298	Chloroethane	75-00-3	N.D.		0.20	N.D.		0.53	1
05298	1,1-Dichloroethane	75-34-3	0.21	J	0.20	0.84	J	0.81	1
05298	1,1-Dichloroethene	75-35-4	N.D.		0.20	N.D.		0.79	1
05298	cis-1,2-Dichloroethene	156-59-2	0.23	J	0.20	0.92	J	0.79	1
05298	trans-1,2-Dichloroethene	156-60-5	N.D.		0.20	N.D.		0.79	1
05298	Freon 113	76-13-1	N.D.		0.50	N.D.		3.8	1
05298	Methylene Chloride	75-09-2	N.D.		0.20	N.D.		0.69	1
05298	Tetrachloroethene	127-18-4	0.24	J	0.20	1.6	J	1.4	1
05298	1,1,1-Trichloroethane	71-55-6	0.94	J	0.20	5.1	J	1.1	1
05298	1,1,2-Trichloroethane	79-00-5	N.D.		0.20	N.D.		1.1	1
05298	Trichloroethene	79-01-6	1.8		0.20	9.8		1.1	1
05298	Vinyl Chloride	75-01-4	N.D.		0.20	N.D.		0.51	1

MDL = Method Detection Limit

Sample Comments

State of New York Certification No. 10670

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
05298	IBM Selected VOCs List-PA	EPA TO-15	1	E1623130AA	08/19/2016 04:22	Jacob E Bailey	1

Sample Description: DU1324160809 Air
Summa Can# 1324
IBM

LL Sample # AQ 8526513
LL Group # 1694945
Account # 12618

Project Name: IBM

Collected: 08/09/2016 08:24 by KF
through 08/09/2016 10:24
Submitted: 08/12/2016 14:10
Reported: 08/24/2016 11:59

IBM
8976 Wellington Road
Manassas VA 20109

CAT No.	Analysis Name	CAS Number	Final Result		MDL	Final Result		MDL	DF
Volatiles in Air EPA TO-15			ppb(v)		ppb(v)	ug/m3		ug/m3	
05298	Chloroethane	75-00-3	N.D.		4.0	N.D.		11	20
05298	1,1-Dichloroethane	75-34-3	28		4.0	110		16	20
05298	1,1-Dichloroethene	75-35-4	280		4.0	1,100		16	20
05298	cis-1,2-Dichloroethene	156-59-2	11	J	4.0	42	J	16	20
05298	trans-1,2-Dichloroethene	156-60-5	N.D.		4.0	N.D.		16	20
05298	Freon 113	76-13-1	180		10	1,400		77	20
05298	Methylene Chloride	75-09-2	N.D.		4.0	N.D.		14	20
05298	Tetrachloroethene	127-18-4	33		4.0	220		27	20
05298	1,1,1-Trichloroethane	71-55-6	1,300		4.0	6,900		22	20
05298	1,1,2-Trichloroethane	79-00-5	N.D.		4.0	N.D.		22	20
05298	Trichloroethene	79-01-6	640		20	3,400		110	100
05298	Vinyl Chloride	75-01-4	N.D.		4.0	N.D.		10	20

MDL = Method Detection Limit

Sample Comments

State of New York Certification No. 10670

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
05298	IBM Selected VOCs List-PA	EPA TO-15	1	E1623130AA	08/19/2016 04:47	Jacob E Bailey	20
05298	IBM Selected VOCs List-PA	EPA TO-15	1	E1623230AA	08/19/2016 18:23	Jacob E Bailey	100

Sample Description: EN0415S160808 Air
Summa Can# 1006
IBM

LL Sample # AQ 8526514
LL Group # 1694945
Account # 12618

Project Name: IBM

Collected: 08/08/2016 10:28 by KF
through 08/08/2016 12:31
Submitted: 08/12/2016 14:10
Reported: 08/24/2016 11:59

IBM
8976 Wellington Road
Manassas VA 20109

CAT No.	Analysis Name	CAS Number	Final Result		MDL	Final Result		MDL	DF
Volatiles in Air EPA TO-15			ppb(v)		ppb(v)	ug/m3		ug/m3	
05298	Chloroethane	75-00-3	N.D.		0.20	N.D.		0.53	1
05298	1,1-Dichloroethane	75-34-3	N.D.		0.20	N.D.		0.81	1
05298	1,1-Dichloroethene	75-35-4	N.D.		0.20	N.D.		0.79	1
05298	cis-1,2-Dichloroethene	156-59-2	0.21	J	0.20	0.82	J	0.79	1
05298	trans-1,2-Dichloroethene	156-60-5	N.D.		0.20	N.D.		0.79	1
05298	Freon 113	76-13-1	N.D.		0.50	N.D.		3.8	1
05298	Methylene Chloride	75-09-2	0.49	J	0.20	1.7	J	0.69	1
05298	Tetrachloroethene	127-18-4	0.27	J	0.20	1.8	J	1.4	1
05298	1,1,1-Trichloroethane	71-55-6	0.62	J	0.20	3.4	J	1.1	1
05298	1,1,2-Trichloroethane	79-00-5	N.D.		0.20	N.D.		1.1	1
05298	Trichloroethene	79-01-6	1.0		0.20	5.6		1.1	1
05298	Vinyl Chloride	75-01-4	N.D.		0.20	N.D.		0.51	1

MDL = Method Detection Limit

Sample Comments

State of New York Certification No. 10670

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
05298	IBM Selected VOCs List-PA	EPA TO-15	1	E1623230AA	08/19/2016 19:02	Jacob E Bailey	1

Quality Control Summary

Client Name: IBM
Reported: 08/24/2016 11:59

Group Number: 1694945

Matrix QC may not be reported if insufficient sample or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD was performed, unless otherwise specified in the method.

All Inorganic Initial Calibration and Continuing Calibration Blanks met acceptable method criteria unless otherwise noted on the Analysis Report.

Method Blank

Analysis Name	Result ppb(v)	MDL ppb(v)	Result ug/m3	MDL ug/m3
Batch number: E1623030AA	Sample number(s): 8526495-8526498			
Chloroethane	N.D.	0.20	N.D.	0.53
1,1-Dichloroethane	N.D.	0.20	N.D.	0.81
1,1-Dichloroethene	N.D.	0.20	N.D.	0.79
cis-1,2-Dichloroethene	N.D.	0.20	N.D.	0.79
trans-1,2-Dichloroethene	N.D.	0.20	N.D.	0.79
Freon 113	N.D.	0.50	N.D.	3.8
Methylene Chloride	N.D.	0.20	N.D.	0.69
Tetrachloroethene	N.D.	0.20	N.D.	1.4
1,1,1-Trichloroethane	N.D.	0.20	N.D.	1.1
1,1,2-Trichloroethane	N.D.	0.20	N.D.	1.1
Trichloroethene	N.D.	0.20	N.D.	1.1
Vinyl Chloride	N.D.	0.20	N.D.	0.51
Batch number: E1623130AA	Sample number(s): 8526499-8526513			
Chloroethane	N.D.	0.20	N.D.	0.53
1,1-Dichloroethane	N.D.	0.20	N.D.	0.81
1,1-Dichloroethene	N.D.	0.20	N.D.	0.79
cis-1,2-Dichloroethene	N.D.	0.20	N.D.	0.79
trans-1,2-Dichloroethene	N.D.	0.20	N.D.	0.79
Freon 113	N.D.	0.50	N.D.	3.8
Methylene Chloride	N.D.	0.20	N.D.	0.69
Tetrachloroethene	N.D.	0.20	N.D.	1.4
1,1,1-Trichloroethane	N.D.	0.20	N.D.	1.1
1,1,2-Trichloroethane	N.D.	0.20	N.D.	1.1
Trichloroethene	N.D.	0.20	N.D.	1.1
Vinyl Chloride	N.D.	0.20	N.D.	0.51
Batch number: E1623230AA	Sample number(s): 8526501,8526508-8526510,8526513-8526514			
Chloroethane	N.D.	0.20	N.D.	0.53
1,1-Dichloroethane	N.D.	0.20	N.D.	0.81
1,1-Dichloroethene	N.D.	0.20	N.D.	0.79
cis-1,2-Dichloroethene	N.D.	0.20	N.D.	0.79
trans-1,2-Dichloroethene	N.D.	0.20	N.D.	0.79
Freon 113	N.D.	0.50	N.D.	3.8
Methylene Chloride	N.D.	0.20	N.D.	0.69
Tetrachloroethene	N.D.	0.20	N.D.	1.4
1,1,1-Trichloroethane	N.D.	0.20	N.D.	1.1
1,1,2-Trichloroethane	N.D.	0.20	N.D.	1.1
Trichloroethene	N.D.	0.20	N.D.	1.1
Vinyl Chloride	N.D.	0.20	N.D.	0.51
Batch number: E1623530AA	Sample number(s): 8526509			
1,1-Dichloroethane	N.D.	0.20	N.D.	0.81
1,1-Dichloroethene	N.D.	0.20	N.D.	0.79

*- Outside of specification
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.
P###### is indicative of a Background or Unspiked sample that is batch matrix QC and was not performed using a sample from this submission group.

Quality Control Summary

Client Name: IBM
Reported: 08/24/2016 11:59

Group Number: 1694945

Method Blank (continued)

Analysis Name	Result ppb(v)	MDL ppb(v)	Result ug/m3	MDL ug/m3
cis-1,2-Dichloroethene	N.D.	0.20	N.D.	0.79
1,1,1-Trichloroethane	N.D.	0.20	N.D.	1.1
Trichloroethene	N.D.	0.20	N.D.	1.1

LCS/LCSD

Analysis Name	LCS Spike Added ppb(v)	LCS Conc ppb(v)	LCSD Spike Added ppb(v)	LCSD Conc ppb(v)	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
Batch number: E1623030AA	Sample number(s): 8526495-8526498								
Chloroethane	10	10.45	10	10.28	104	103	63-119	2	25
1,1-Dichloroethane	10	10.41	10	10.14	104	101	67-124	3	25
1,1-Dichloroethene	10	10.43	10	10.26	104	103	61-128	2	25
cis-1,2-Dichloroethene	10	10.24	10	10.13	102	101	65-121	1	25
trans-1,2-Dichloroethene	10	10.27	10	10.11	103	101	66-121	2	25
Freon 113	10	9.85	10	9.86	98	99	63-114	0	25
Methylene Chloride	10	10.01	10	10.17	100	102	70-130	2	25
Tetrachloroethene	10	9.48	10	9.43	95	94	70-130	1	25
1,1,1-Trichloroethane	10	9.87	10	9.93	99	99	70-130	1	25
1,1,2-Trichloroethane	10	10.15	10	9.60	102	96	59-131	6	25
Trichloroethene	10	9.86	10	9.77	99	98	70-130	1	25
Vinyl Chloride	10	10.61	10	10.36	106	104	70-130	2	25
Batch number: E1623130AA	Sample number(s): 8526499-8526513								
Chloroethane	10	11.12	10	10.91	111	109	63-119	2	25
1,1-Dichloroethane	10	10.96	10	10.58	110	106	67-124	3	25
1,1-Dichloroethene	10	10.8	10	10.7	108	107	61-128	1	25
cis-1,2-Dichloroethene	10	10.67	10	10.44	107	104	65-121	2	25
trans-1,2-Dichloroethene	10	10.65	10	10.53	107	105	66-121	1	25
Freon 113	10	10.1	10	10.14	101	101	63-114	0	25
Methylene Chloride	10	10.75	10	10.33	108	103	70-130	4	25
Tetrachloroethene	10	10.14	10	9.68	101	97	70-130	5	25
1,1,1-Trichloroethane	10	10.54	10	10.15	105	102	70-130	4	25
1,1,2-Trichloroethane	10	10.59	10	10.16	106	102	59-131	4	25
Trichloroethene	10	10.12	10	9.94	101	99	70-130	2	25
Vinyl Chloride	10	11.24	10	10.95	112	109	70-130	3	25
Batch number: E1623230AA	Sample number(s): 8526501,8526508-8526510,8526513-8526514								
Chloroethane	10	11.09	10	11.33	111	113	63-119	2	25
1,1-Dichloroethane	10	10.84	10	11.2	108	112	67-124	3	25
1,1-Dichloroethene	10	10.37	10	10.9	104	109	61-128	5	25
cis-1,2-Dichloroethene	10	10.18	10	10.63	102	106	65-121	4	25
trans-1,2-Dichloroethene	10	10.47	10	11.01	105	110	66-121	5	25
Freon 113	10	10.35	10	10.42	103	104	63-114	1	25
Methylene Chloride	10	10.59	10	10.74	106	107	70-130	1	25
Tetrachloroethene	10	10.31	10	10.17	103	102	70-130	1	25
1,1,1-Trichloroethane	10	10.41	10	10.83	104	108	70-130	4	25
1,1,2-Trichloroethane	10	11.18	10	10.99	112	110	59-131	2	25

*- Outside of specification
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.
P###### is indicative of a Background or Unspiked sample that is batch matrix QC and was not performed using a sample from this submission group.

Quality Control Summary

Client Name: IBM
Group Number: 1694945
Reported: 08/24/2016 11:59

LCS/LCSD (continued)

Analysis Name	LCS Spike Added ppb(v)	LCS Conc ppb(v)	LCSD Spike Added ppb(v)	LCSD Conc ppb(v)	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
Trichloroethene	10	10.3	10	10.39	103	104	70-130	1	25
Vinyl Chloride	10	10.68	10	11.13	107	111	70-130	4	25
Batch number: E1623530AA	Sample number(s): 8526509								
1,1-Dichloroethane	10	11.71	10	10.93	117	109	67-124	7	25
1,1-Dichloroethene	10	11.71	10	11.16	117	112	61-128	5	25
cis-1,2-Dichloroethene	10	11.63	10	10.66	116	107	65-121	9	25
1,1,1-Trichloroethane	10	11.42	10	10.78	114	108	70-130	6	25
Trichloroethene	10	10.89	10	10.39	109	104	70-130	5	25

*- Outside of specification
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.
P###### is indicative of a Background or Unspiked sample that is batch matrix QC and was not performed using a sample from this submission group.

Summa Canister Field Test Data/Chain of Custody

eurofins | Lancaster Laboratories Environmental

Acct. # 12618 Group # 1694945 Sample # 8536495-514 Bottle Order (SCR) # _____

For Eurofins Lancaster Laboratories Environmental use only

Client Information

Client: Groundwater Sciences Corp. Account #:

Project Name/#: IBM

Project Manager: Scott Morgan P.O. #:

Sampler: Kait Fleming & Kelly Devine Quote #:

Name of state where samples were collected: New York

Turnaround Time Requested (TAT) (circle one)

(Standard) Rush (specify) _____

Data Package Required? (Yes) No

EDD Required? (Yes) No

	Temperature (F)		Pressure ("Hg)	
	Start	Stop	Start	Stop
Ambient	80	80	30.12	30.08
Maximum	90	90	30.15	30.12
Minimum	70	70	30.09	30.03

Analyses Requested

EPA TO-15 See Comments for List | EPA 18 | ☐ MTBE ☐ BTEX | EPA 25 (select range below) | Helium as tracer | O2/CO2 | Library Search

Sample Identification	Start Date/Time (24-hour clock)	Stop Date/Time (24-hour clock)	Canister Pressure in Field ("Hg) (Start)	Canister Pressure in Field ("Hg) (Stop)	Ext Temp. (F) (Start)	Ext Temp. (F) (Stop)	Flow Reg. ID	Can ID	Can Size (L)	Controller Flowrate (mL/min)	TO-15	18	MTBE/BTEX	25	Helium	O2/CO2	Library
EN0435160808	8/8 1611	8/8 1711	-29	-12	~90	~90	484610	994	1	14.4	X						
EQB11436160808	8/8 1034	8/8 1134	-28	-5.5	~90	~90	958101	1143	1	14.4	X						
EN043D1608808	8/8 1612	8/8 1712	-29	-2	~90	~90	824848	1205	1	14.6	X						
EN0431S1608808	8/8 1747	8/8 1847	-28	-3.5	~90	~90	252243	982	1	14.5	X						
EN0534S1608809	8/9 1228	8/9 1328	-29.5	-7.5	~90	~90	710597	1315	1	14.0	X						
EN0534D1608809	8/9 1230	8/9 1330	-29	-11	~90	~90	710593	1161	1	14.7	X						
EN0426S1608809	8/9 1412	8/9 1512	-26	-3	~90	~90	675035	954	1	14.6	X						
EN0427S1608809	8/9 1241	8/9 1341	-30	-3	~90	~90	316959	1204	1	14.6	X						
EN0426D1608809	8/9 1413	8/9 1443	-27	-1.5	~90	~90	710598	1619	1	14.7	X						
EN0416D1608808	8/9 1805	8/8 1905	-30	-7	~90	~90	824858	1092	1	14.2	X						
EN0429D1608809	8/9 1359	8/9 1459	-30	-6.5	~90	~90	139038	1334	1	14.5	X						

Instructions/QC Requirements & Comments

Analytical List: PCE, TCE, 1,1-DCE, Cis 1,2-DCE, Trans 1,2-DCE, VC, TCA, 1,1-DCA, Chloroethane, MeCl, Freon 113

EPA 25 (check one) ☐ C1 - C4 ☐ C2 - C10 ☐ C1 - C10 ☐ C4 - C10 (GRO) ☐ C2 - C4

Canisters Shipped by:	Date/Time: 8/4/16	Canisters Received by:	Date/Time: 8/10/16 1240	Relinquished by:	Date/Time:	Received by:	Date/Time:
Relinquished by:	Date/Time:	Received by:	Date/Time:	Relinquished by:	Date/Time:	Received by:	Date/Time:
Relinquished by:	Date/Time:	Received by:	Date/Time:	Relinquished by:	Date/Time: 8/12/16 1410	Received by:	Date/Time: 8-12-16 1410

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The white copy should accompany samples to Eurofins Lancaster Laboratories Environmental. The yellow copy should be retained by the client.

7056 1015

Summa Canister Field Test Data/Chain of Custody

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Acct. # 12618 Group # 1694945 Sample # 8526495-514 Bottle Order (SCR) # _____

For Eurofins Lancaster Laboratories Environmental use only

Client Information

Client: GROUNDWATER SCIENCES CORP. Account #:

Project Name/#: IBM

Project Manager: SCOTT MORGAN P.O. #:

Sampler: KAIT FLEMING & KELLY DEVINE Quote #:

Name of state where samples were collected: NEW YORK

Turnaround Time Requested (TAT) (circle one)

(Standard) Rush (specify) _____

Data Package Required? (Yes) No

EDD Required? (Yes) No

	Temperature (F)		Pressure ("Hg)	
	Start	Stop	Start	Stop
Ambient	80	80	30.12	30.08
Maximum	90	90	30.15	30.12
Minimum	70	~~90~~	30.09	30.03

Analyses Requested

EPA TO-15 See Comments for List | EPA 18 | ☐ MTBE | ☐ BTEX | EPA 25 (select range below) | Helium as tracer | O2/CO2 | Library Search

Sample Identification	Start Date/Time (24-hour clock)	Stop Date/Time (24-hour clock)	Canister Pressure in Field ("Hg) (Start)	Canister Pressure in Field ("Hg) (Stop)	~~Interior~~ Ext Temp. (F) (Start)	~~Interior~~ Ext Temp. (F) (Stop)	Flow Reg. ID	Can ID	Can Size (L)	Controller Flowrate (mL/min)	EPA TO-15	EPA 18	MTBE	BTEX	EPA 25	Helium	O2/CO2	Library Search
EN041D160808	8/8 0942	8/8 1042	-30	-8	~90	~90	958031	1213	1	14.6	X							
EN042D160808	8/8 1235	8/8 1335	-30	-6.5	~90	~90	645837	1010	1	14.5	X							
EN049D160809	8/9 0834	8/9 0934	-29	-6	~90	~90	339183	1001	1	14.4	X							
EN041S160809	8/9 0757	8/9 0857	-26	-17.5	~90	~90	254100	1310	1	14.1	X							
EN0412S160809	8/9 1105	8/9 1205	-30	-8	~90	~90	~~848467~~	1323	1	14.4	X							
EN0411S160809	8/9 1327	8/9 1410	-5	-0.5	~90	~90	344378	1330	1	14.3	X							
EN0415D160808	8/8 1044	8/8 1147	-29	-18	~90	~90	244935	1309	1	14.3	X							
~~DU1041160808~~	~~8/8 0930~~	~~8/8 1132~~	~~-30~~	~~-14.5~~	~~~90~~	~~~90~~	~~848446~~	~~1041~~	~~1~~	~~6.9~~	X							
DU1324160809	8/9 0824	8/9 1024	-30	-10	~90	~90	710582	1324	1	7.1	X							
							~~848466~~	~~1331~~	~~1~~	~~7.0~~								
EN0415S160808	8/8 1028	8/8 1231	-29	-13	~90	~90	338043	1006	1	7.0	X							

Instructions/QC Requirements & Comments

ANALYTICAL LIST: PCE, TCE, 1,1-DCE, Cis 1,2-DCE, TRANS 1,2-DCE, VC, TCA, 1,1-DCA, CHLOROETHANE, MeCl, FREON 113

EPA 25 (check one) ☐ C1 - C4 ☐ C2 - C10 ☐ C1 - C10 ☐ C4 - C10 (GRO) ☐ C2 - C4

Canisters Shipped by:	Date/Time: 8/14/16	Canisters Received by:	Date/Time: 8/12/16 1240	Relinquished by:	Date/Time:	Received by:	Date/Time:
Relinquished by:	Date/Time:	Received by:	Date/Time:	Relinquished by:	Date/Time:	Received by:	Date/Time:
Relinquished by:	Date/Time:	Received by:	Date/Time:	Relinquished by:	Date/Time: 8/12/16 1410	Received by:	Date/Time: 8-12-16 1410

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Sample Administration Receipt Documentation Log

Doc Log ID: 158237

Group Number(s): 1694945

Client: GWS

Delivery and Receipt Information

Delivery Method:	ELLE Courier	Arrival Timestamp:	08/12/2016 14:10
Number of Packages:	13	Number of Projects:	1
State/Province of Origin:	NY		

Arrival Condition Summary

Shipping Container Sealed:	Yes	Sample IDs on COC match Containers:	Yes
Custody Seal Present:	No	Sample Date/Times match COC:	Yes
Samples Chilled:	N/A	VOA Vial Headspace ≥ 6mm:	N/A
Paperwork Enclosed:	Yes	Total Trip Blank Qty:	0
Samples Intact:	Yes	Air Quality Samples Present:	Yes
Missing Samples:	No	Air Quality Flow Controllers Present:	Yes
Extra Samples:	No	Flow Controller Quantity:	70
Discrepancy in Container Qty on COC:	No	Air Quality Returns:	Yes
		Summa Canisters:	1331,1093

Unpacked by Melvin Sanchez (8943) at 16:14 on 08/12/2016

2425 New Holland Pike
Lancaster, PA 17605-2425
T | 717-656-2300
F | 717-656-2681
www.LancasterLabs.com

Explanation of Symbols and Abbreviations

The following defines common symbols and abbreviations used in reporting technical data:

RL	Reporting Limit	**BMQL**	Below Minimum Quantitation Level
N.D.	none detected	**MPN**	Most Probable Number
TNTC	Too Numerous To Count	**CP Units**	cobalt-chloroplatinate units
IU	International Units	**NTU**	nephelometric turbidity units
umhos/cm	micromhos/cm	**ng**	nanogram(s)
C	degrees Celsius	**F**	degrees Fahrenheit
meq	milliequivalents	**lb.**	pound(s)
g	gram(s)	**kg**	kilogram(s)
µg	microgram(s)	**mg**	milligram(s)
mL	milliliter(s)	**L**	liter(s)
m3	cubic meter(s)	**µL**	microliter(s)
		pg/L	picogram/liter

<	less than
>	greater than
ppm	parts per million - One ppm is equivalent to one milligram per kilogram (mg/kg) or one gram per million grams. For aqueous liquids, ppm is usually taken to be equivalent to milligrams per liter (mg/l), because one liter of water has a weight very close to a kilogram. For gases or vapors, one ppm is equivalent to one microliter per liter of gas.
ppb	parts per billion
Dry weight basis	Results printed under this heading have been adjusted for moisture content. This increases the analyte weight concentration to approximate the value present in a similar sample without moisture. All other results are reported on an as-received basis.

Laboratory Data Qualifiers:

B - Analyte detected in the blank
C - Result confirmed by reanalysis
E - Concentration exceeds the calibration range
J (or G, I, X) - estimated value ≥ the Method Detection Limit (MDL or DL) and < the Limit of Quantitation (LOQ or RL)
P - Concentration difference between the primary and confirmation column >40%. The lower result is reported.
U - Analyte was not detected at the value indicated
V - Concentration difference between the primary and confirmation column >100%. The reporting limit is raised due to this disparity and evident interference…

Additional Organic and Inorganic CLP qualifiers may be used with Form 1 reports as defined by the CLP methods.
Qualifiers specific to Dioxin/Furans and PCB Congeners are detailed on the individual Analysis Report.

Analytical test results meet all requirements of the associated regulatory program (i.e., NELAC (TNI), DoD, and ISO 17025) unless otherwise noted under the individual analysis.

Measurement uncertainty values, as applicable, are available upon request.

Tests results relate only to the sample tested. Clients should be aware that a critical step in a chemical or microbiological analysis is the collection of the sample. Unless the sample analyzed is truly representative of the bulk of material involved, the test results will be meaningless. If you have questions regarding the proper techniques of collecting samples, please contact us. We cannot be held responsible for sample integrity, however, unless sampling has been performed by a member of our staff.

This report shall not be reproduced except in full, without the written approval of the laboratory.

Times are local to the area of activity. Parameters listed in the 40 CFR Part 136 Table II as “analyze immediately” are not performed within 15 minutes.

WARRANTY AND LIMITS OF LIABILITY - In accepting analytical work, we warrant the accuracy of test results for the sample as submitted. THE FOREGOING EXPRESS WARRANTY IS EXCLUSIVE AND IS GIVEN IN LIEU OF ALL OTHER WARRANTIES, EXPRESSED OR IMPLIED. WE DISCLAIM ANY OTHER WARRANTIES, EXPRESSED OR IMPLIED, INCLUDING A WARRANTY OF FITNESS FOR PARTICULAR PURPOSE AND WARRANTY OF MERCHANTABILITY. IN NO EVENT SHALL EUROFINS LANCASTER LABORATORIES ENVIRONMENTAL, LLC BE LIABLE FOR INDIRECT, SPECIAL, CONSEQUENTIAL, OR INCIDENTAL DAMAGES INCLUDING, BUT NOT LIMITED TO, DAMAGES FOR LOSS OF PROFIT OR GOODWILL REGARDLESS OF (A) THE NEGLIGENCE (EITHER SOLE OR CONCURRENT) OF EUROFINS LANCASTER LABORATORIES ENVIRONMENTAL AND (B) WHETHER EUROFINS LANCASTER LABORATORIES ENVIRONMENTAL HAS BEEN INFORMED OF THE POSSIBILITY OF SUCH DAMAGES. We accept no legal responsibility for the purposes for which the client uses the test results. No purchase order or other order for work shall be accepted by Eurofins Lancaster Laboratories Environmental which includes any conditions that vary from the Standard Terms and Conditions, and Eurofins Lancaster Laboratories Environmental hereby objects to any conflicting terms contained in any acceptance or order submitted by client.

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Analysis Report

ANALYTICAL RESULTS

Prepared by:

Eurofins Lancaster Laboratories Environmental
2425 New Holland Pike
Lancaster, PA 17601

Prepared for:

IBM
8976 Wellington Road
Manassas VA 20109

Report Date: August 24, 2016

Project: IBM

Submittal Date: 08/12/2016
Group Number: 1694952
PO Number: 5004872019
Release Number: NON-ROUTINE
State of Sample Origin: NY

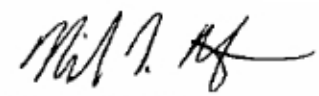
Client Sample Description	Lancaster Labs (LL) #
DU1314160809 Air	8526531
EN049S160809 Air	8526532
EN0425S160809 Air	8526533
EN0635S160810 Air	8526534
EN0414S160810 Air	8526535
EN045S160810 Air	8526536
DU940160810 Air	8526537
EN045D160810 Air	8526538
EN0635D160810 Air	8526539
EN0414D160810 Air	8526540
EN0533S160808 Air	8526541
EN0529S160809 Air	8526542
EN0533D160808 Air	8526543
EN0425D160809 Air	8526544
EN0411D160809 Air	8526545
EN0410D160809 Air	8526546
EN0412D160809 Air	8526547
EN1011D160809 Air	8526548
EN0430S160808 Air	8526549
EN042S160808 Air	8526550
EN0430D160808 Air	8526551

The specific methodologies used in obtaining the enclosed analytical results are indicated on the Laboratory Sample Analysis Record.

Regulatory agencies do not accredit laboratories for all methods, analytes, and matrices. Our scopes of accreditation can be viewed at http://www.eurofinsus.com/environment-testing/laboratories/eurofins-lancaster-laboratories-environmental/resources/certifications/ .

Electronic Copy To GSC Attn: Scott Morgan

Respectfully Submitted,



Nicole L. Maljovec
Manager

(717) 556-7259

Sample Description: DU1314160809 Air
Summa Can# 1314
IBM

LL Sample # AQ 8526531
LL Group # 1694952
Account # 12618

Project Name: IBM

Collected: 08/09/2016 08:00 by KF
through 08/09/2016 10:00
Submitted: 08/12/2016 14:10
Reported: 08/24/2016 16:17

IBM
8976 Wellington Road
Manassas VA 20109

CAT No.	Analysis Name	CAS Number	Final Result		MDL	Final Result		MDL	DF
Volatiles in Air EPA TO-15			ppb(v)		ppb(v)	ug/m3		ug/m3	
05298	Chloroethane	75-00-3	N.D.		0.20	N.D.		0.53	1
05298	1,1-Dichloroethane	75-34-3	N.D.		0.20	N.D.		0.81	1
05298	1,1-Dichloroethene	75-35-4	N.D.		0.20	N.D.		0.79	1
05298	cis-1,2-Dichloroethene	156-59-2	N.D.		0.20	N.D.		0.79	1
05298	trans-1,2-Dichloroethene	156-60-5	N.D.		0.20	N.D.		0.79	1
05298	Freon 113	76-13-1	N.D.		0.50	N.D.		3.8	1
05298	Methylene Chloride	75-09-2	N.D.		0.20	N.D.		0.69	1
05298	Tetrachloroethene	127-18-4	0.52	J	0.20	3.5	J	1.4	1
05298	1,1,1-Trichloroethane	71-55-6	0.30	J	0.20	1.6	J	1.1	1
05298	1,1,2-Trichloroethane	79-00-5	N.D.		0.20	N.D.		1.1	1
05298	Trichloroethene	79-01-6	0.61	J	0.20	3.3	J	1.1	1
05298	Vinyl Chloride	75-01-4	N.D.		0.20	N.D.		0.51	1

MDL = Method Detection Limit

Sample Comments

State of New York Certification No. 10670

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
05298	IBM Selected VOCs List-PA	EPA TO-15	1	E1623230AA	08/19/2016 19:34	Jacob E Bailey	1

Sample Description: EN049S160809 Air
Summa Can# 1045
IBM

LL Sample # AQ 8526532
LL Group # 1694952
Account # 12618

Project Name: IBM

Collected: 08/09/2016 08:24 by KF
through 08/09/2016 10:24
Submitted: 08/12/2016 14:10
Reported: 08/24/2016 16:17

IBM
8976 Wellington Road
Manassas VA 20109

CAT No.	Analysis Name	CAS Number	Final Result		MDL	Final Result		MDL	DF
Volatiles in Air EPA TO-15			ppb(v)		ppb(v)	ug/m3		ug/m3	
05298	Chloroethane	75-00-3	N.D.		4.0	N.D.		11	20
05298	1,1-Dichloroethane	75-34-3	28		4.0	110		16	20
05298	1,1-Dichloroethene	75-35-4	290		4.0	1,100		16	20
05298	cis-1,2-Dichloroethene	156-59-2	11	J	4.0	45	J	16	20
05298	trans-1,2-Dichloroethene	156-60-5	N.D.		4.0	N.D.		16	20
05298	Freon 113	76-13-1	180		10	1,400		77	20
05298	Methylene Chloride	75-09-2	N.D.		4.0	N.D.		14	20
05298	Tetrachloroethene	127-18-4	33		4.0	220		27	20
05298	1,1,1-Trichloroethane	71-55-6	1,300		4.0	7,000		22	20
05298	1,1,2-Trichloroethane	79-00-5	N.D.		4.0	N.D.		22	20
05298	Trichloroethene	79-01-6	910		40	4,900		210	200
05298	Vinyl Chloride	75-01-4	N.D.		4.0	N.D.		10	20

MDL = Method Detection Limit

Sample Comments

State of New York Certification No. 10670

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
05298	IBM Selected VOCs List-PA	EPA TO-15	1	E1623230AA	08/19/2016 19:59	Jacob E Bailey	20
05298	IBM Selected VOCs List-PA	EPA TO-15	1	E1623530AA	08/22/2016 15:53	Jacob E Bailey	200

Sample Description: EN0425S160809 Air
Summa Can# 1165
IBM

LL Sample # AQ 8526533
LL Group # 1694952
Account # 12618

Project Name: IBM

Collected: 08/09/2016 08:00 by KF
through 08/09/2016 10:00
Submitted: 08/12/2016 14:10
Reported: 08/24/2016 16:17

IBM
8976 Wellington Road
Manassas VA 20109

CAT No.	Analysis Name	CAS Number	Final Result		MDL	Final Result		MDL	DF
Volatiles in Air EPA TO-15			ppb(v)		ppb(v)	ug/m3		ug/m3	
05298	Chloroethane	75-00-3	N.D.		0.20	N.D.		0.53	1
05298	1,1-Dichloroethane	75-34-3	N.D.		0.20	N.D.		0.81	1
05298	1,1-Dichloroethene	75-35-4	N.D.		0.20	N.D.		0.79	1
05298	cis-1,2-Dichloroethene	156-59-2	N.D.		0.20	N.D.		0.79	1
05298	trans-1,2-Dichloroethene	156-60-5	N.D.		0.20	N.D.		0.79	1
05298	Freon 113	76-13-1	N.D.		0.50	N.D.		3.8	1
05298	Methylene Chloride	75-09-2	N.D.		0.20	N.D.		0.69	1
05298	Tetrachloroethene	127-18-4	0.58	J	0.20	3.9	J	1.4	1
05298	1,1,1-Trichloroethane	71-55-6	0.62	J	0.20	3.4	J	1.1	1
05298	1,1,2-Trichloroethane	79-00-5	N.D.		0.20	N.D.		1.1	1
05298	Trichloroethene	79-01-6	0.88	J	0.20	4.8	J	1.1	1
05298	Vinyl Chloride	75-01-4	N.D.		0.20	N.D.		0.51	1

MDL = Method Detection Limit

Sample Comments

State of New York Certification No. 10670

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
05298	IBM Selected VOCs List-PA	EPA TO-15	1	E1623230AA	08/19/2016 20:56	Jacob E Bailey	1

Sample Description: EN0635S160810 Air
Summa Can# 1043
IBM

LL Sample # AQ 8526534
LL Group # 1694952
Account # 12618

Project Name: IBM

Collected: 08/10/2016 07:38 by KF
through 08/10/2016 08:38
Submitted: 08/12/2016 14:10
Reported: 08/24/2016 16:17

IBM
8976 Wellington Road
Manassas VA 20109

CAT No.	Analysis Name	CAS Number	Final Result		MDL	Final Result		MDL	DF
Volatiles in Air EPA TO-15			ppb(v)		ppb(v)	ug/m3		ug/m3	
05298	Chloroethane	75-00-3	N.D.		0.20	N.D.		0.53	1
05298	1,1-Dichloroethane	75-34-3	N.D.		0.20	N.D.		0.81	1
05298	1,1-Dichloroethene	75-35-4	N.D.		0.20	N.D.		0.79	1
05298	cis-1,2-Dichloroethene	156-59-2	N.D.		0.20	N.D.		0.79	1
05298	trans-1,2-Dichloroethene	156-60-5	N.D.		0.20	N.D.		0.79	1
05298	Freon 113	76-13-1	N.D.		0.50	N.D.		3.8	1
05298	Methylene Chloride	75-09-2	N.D.		0.20	N.D.		0.69	1
05298	Tetrachloroethene	127-18-4	N.D.		0.20	N.D.		1.4	1
05298	1,1,1-Trichloroethane	71-55-6	0.29	J	0.20	1.6	J	1.1	1
05298	1,1,2-Trichloroethane	79-00-5	N.D.		0.20	N.D.		1.1	1
05298	Trichloroethene	79-01-6	0.45	J	0.20	2.4	J	1.1	1
05298	Vinyl Chloride	75-01-4	N.D.		0.20	N.D.		0.51	1

MDL = Method Detection Limit

Sample Comments

State of New York Certification No. 10670

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
05298	IBM Selected VOCs List-PA	EPA TO-15	1	E1623230AA	08/19/2016 21:27	Jacob E Bailey	1

Sample Description: EN0414S160810 Air
Summa Can# 958
IBM

LL Sample # AQ 8526535
LL Group # 1694952
Account # 12618

Project Name: IBM

Collected: 08/10/2016 12:52 by KF
through 08/10/2016 13:52
Submitted: 08/12/2016 14:10
Reported: 08/24/2016 16:17

IBM
8976 Wellington Road
Manassas VA 20109

CAT No.	Analysis Name	CAS Number	Final Result		MDL	Final Result		MDL	DF
Volatiles in Air EPA TO-15			ppb(v)		ppb(v)	ug/m3		ug/m3	
05298	Chloroethane	75-00-3	N.D.		0.20	N.D.		0.53	1
05298	1,1-Dichloroethane	75-34-3	N.D.		0.20	N.D.		0.81	1
05298	1,1-Dichloroethene	75-35-4	N.D.		0.20	N.D.		0.79	1
05298	cis-1,2-Dichloroethene	156-59-2	N.D.		0.20	N.D.		0.79	1
05298	trans-1,2-Dichloroethene	156-60-5	N.D.		0.20	N.D.		0.79	1
05298	Freon 113	76-13-1	N.D.		0.50	N.D.		3.8	1
05298	Methylene Chloride	75-09-2	11		0.20	37		0.69	1
05298	Tetrachloroethene	127-18-4	N.D.		0.20	N.D.		1.4	1
05298	1,1,1-Trichloroethane	71-55-6	0.92	J	0.20	5.0	J	1.1	1
05298	1,1,2-Trichloroethane	79-00-5	N.D.		0.20	N.D.		1.1	1
05298	Trichloroethene	79-01-6	2.6		0.20	14		1.1	1
05298	Vinyl Chloride	75-01-4	N.D.		0.20	N.D.		0.51	1

MDL = Method Detection Limit

Sample Comments

State of New York Certification No. 10670

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
05298	IBM Selected VOCs List-PA	EPA TO-15	1	E1623230AA	08/19/2016 22:01	Jacob E Bailey	1

Sample Description: EN045S160810 Air
Summa Can# 1321
IBM

LL Sample # AQ 8526536
LL Group # 1694952
Account # 12618

Project Name: IBM

Collected: 08/10/2016 07:58 by KF
through 08/10/2016 09:58
Submitted: 08/12/2016 14:10
Reported: 08/24/2016 16:17

IBM
8976 Wellington Road
Manassas VA 20109

CAT No.	Analysis Name	CAS Number	Final Result		MDL	Final Result		MDL	DF
Volatiles in Air EPA TO-15			ppb(v)		ppb(v)	ug/m3		ug/m3	
05298	Chloroethane	75-00-3	N.D.		0.20	N.D.		0.53	1
05298	1,1-Dichloroethane	75-34-3	N.D.		0.20	N.D.		0.81	1
05298	1,1-Dichloroethene	75-35-4	N.D.		0.20	N.D.		0.79	1
05298	cis-1,2-Dichloroethene	156-59-2	N.D.		0.20	N.D.		0.79	1
05298	trans-1,2-Dichloroethene	156-60-5	N.D.		0.20	N.D.		0.79	1
05298	Freon 113	76-13-1	N.D.		0.50	N.D.		3.8	1
05298	Methylene Chloride	75-09-2	N.D.		0.20	N.D.		0.69	1
05298	Tetrachloroethene	127-18-4	0.60	J	0.20	4.1	J	1.4	1
05298	1,1,1-Trichloroethane	71-55-6	1.8		0.20	9.9		1.1	1
05298	1,1,2-Trichloroethane	79-00-5	N.D.		0.20	N.D.		1.1	1
05298	Trichloroethene	79-01-6	29		0.20	150		1.1	1
05298	Vinyl Chloride	75-01-4	N.D.		0.20	N.D.		0.51	1

MDL = Method Detection Limit

Sample Comments

State of New York Certification No. 10670

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
05298	IBM Selected VOCs List-PA	EPA TO-15	1	E1623230AA	08/19/2016 22:34	Jacob E Bailey	1

Sample Description: DU940160810 Air
Summa Can# 940
IBM

LL Sample # AQ 8526537
LL Group # 1694952
Account # 12618

Project Name: IBM

Collected: 08/10/2016 07:58 by KF
through 08/10/2016 09:58
Submitted: 08/12/2016 14:10
Reported: 08/24/2016 16:17

IBM
8976 Wellington Road
Manassas VA 20109

CAT No.	Analysis Name	CAS Number	Final Result		MDL	Final Result		MDL	DF
Volatiles in Air EPA TO-15			ppb(v)		ppb(v)	ug/m3		ug/m3	
05298	Chloroethane	75-00-3	N.D.		0.20	N.D.		0.53	1
05298	1,1-Dichloroethane	75-34-3	N.D.		0.20	N.D.		0.81	1
05298	1,1-Dichloroethene	75-35-4	N.D.		0.20	N.D.		0.79	1
05298	cis-1,2-Dichloroethene	156-59-2	N.D.		0.20	N.D.		0.79	1
05298	trans-1,2-Dichloroethene	156-60-5	N.D.		0.20	N.D.		0.79	1
05298	Freon 113	76-13-1	N.D.		0.50	N.D.		3.8	1
05298	Methylene Chloride	75-09-2	N.D.		0.20	N.D.		0.69	1
05298	Tetrachloroethene	127-18-4	0.63	J	0.20	4.3	J	1.4	1
05298	1,1,1-Trichloroethane	71-55-6	1.8		0.20	9.8		1.1	1
05298	1,1,2-Trichloroethane	79-00-5	N.D.		0.20	N.D.		1.1	1
05298	Trichloroethene	79-01-6	30		0.20	160		1.1	1
05298	Vinyl Chloride	75-01-4	N.D.		0.20	N.D.		0.51	1

MDL = Method Detection Limit

Sample Comments

State of New York Certification No. 10670

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
05298	IBM Selected VOCs List-PA	EPA TO-15	1	E1623230AA	08/19/2016 23:05	Jacob E Bailey	1

Sample Description: EN045D160810 Air
Summa Can# 1335
IBM

LL Sample # AQ 8526538
LL Group # 1694952
Account # 12618

Project Name: IBM

Collected: 08/10/2016 08:15 by KF
through 08/10/2016 09:15
Submitted: 08/12/2016 14:10
Reported: 08/24/2016 16:17

IBM
8976 Wellington Road
Manassas VA 20109

CAT No.	Analysis Name	CAS Number	Final Result	MDL	Final Result	MDL	DF
Volatiles in Air	**EPA TO-15**		ppb(v)	ppb(v)	ug/m3	ug/m3	
05298	Chloroethane	75-00-3	N.D.	0.20	N.D.	0.53	1
05298	1,1-Dichloroethane	75-34-3	N.D.	0.20	N.D.	0.81	1
05298	1,1-Dichloroethene	75-35-4	N.D.	0.20	N.D.	0.79	1
05298	cis-1,2-Dichloroethene	156-59-2	N.D.	0.20	N.D.	0.79	1
05298	trans-1,2-Dichloroethene	156-60-5	N.D.	0.20	N.D.	0.79	1
05298	Freon 113	76-13-1	N.D.	0.50	N.D.	3.8	1
05298	Methylene Chloride	75-09-2	N.D.	0.20	N.D.	0.69	1
05298	Tetrachloroethene	127-18-4	N.D.	0.20	N.D.	1.4	1
05298	1,1,1-Trichloroethane	71-55-6	11	0.20	59	1.1	1
05298	1,1,2-Trichloroethane	79-00-5	N.D.	0.20	N.D.	1.1	1
05298	Trichloroethene	79-01-6	34	0.20	180	1.1	1
05298	Vinyl Chloride	75-01-4	N.D.	0.20	N.D.	0.51	1

MDL = Method Detection Limit

Sample Comments

State of New York Certification No. 10670

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
05298	IBM Selected VOCs List-PA	EPA TO-15	1	E1623230AA	08/19/2016 23:37	Jacob E Bailey	1

Sample Description: EN0635D160810 Air
Summa Can# 951
IBM

LL Sample # AQ 8526539
LL Group # 1694952
Account # 12618

Project Name: IBM

Collected: 08/10/2016 07:45 by KF
through 08/10/2016 08:45
Submitted: 08/12/2016 14:10
Reported: 08/24/2016 16:17

IBM
8976 Wellington Road
Manassas VA 20109

CAT No.	Analysis Name	CAS Number	Final Result	MDL	Final Result	MDL	DF
Volatiles in Air EPA TO-15			ppb(v)	ppb(v)	ug/m3	ug/m3	
05298	Chloroethane	75-00-3	N.D.	0.20	N.D.	0.53	1
05298	1,1-Dichloroethane	75-34-3	N.D.	0.20	N.D.	0.81	1
05298	1,1-Dichloroethene	75-35-4	N.D.	0.20	N.D.	0.79	1
05298	cis-1,2-Dichloroethene	156-59-2	N.D.	0.20	N.D.	0.79	1
05298	trans-1,2-Dichloroethene	156-60-5	N.D.	0.20	N.D.	0.79	1
05298	Freon 113	76-13-1	N.D.	0.50	N.D.	3.8	1
05298	Methylene Chloride	75-09-2	N.D.	0.20	N.D.	0.69	1
05298	Tetrachloroethene	127-18-4	N.D.	0.20	N.D.	1.4	1
05298	1,1,1-Trichloroethane	71-55-6	3.7	0.20	20	1.1	1
05298	1,1,2-Trichloroethane	79-00-5	N.D.	0.20	N.D.	1.1	1
05298	Trichloroethene	79-01-6	17	0.20	93	1.1	1
05298	Vinyl Chloride	75-01-4	N.D.	0.20	N.D.	0.51	1

MDL = Method Detection Limit

Sample Comments

State of New York Certification No. 10670

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
05298	IBM Selected VOCs List-PA	EPA TO-15	1	E1623530AA	08/22/2016 16:25	Jacob E Bailey	1

Sample Description: EN0414D160810 Air
Summa Can# 913
IBM

LL Sample # AQ 8526540
LL Group # 1694952
Account # 12618

Project Name: IBM

Collected: 08/10/2016 12:57 by KF
through 08/10/2016 13:57
Submitted: 08/12/2016 14:10
Reported: 08/24/2016 16:17

IBM
8976 Wellington Road
Manassas VA 20109

CAT No.	Analysis Name	CAS Number	Final Result	MDL	Final Result	MDL	DF
Volatiles in Air EPA TO-15			ppb(v)	ppb(v)	ug/m3	ug/m3	
05298	Chloroethane	75-00-3	N.D.	0.20	N.D.	0.53	1
05298	1,1-Dichloroethane	75-34-3	N.D.	0.20	N.D.	0.81	1
05298	1,1-Dichloroethene	75-35-4	N.D.	0.20	N.D.	0.79	1
05298	cis-1,2-Dichloroethene	156-59-2	N.D.	0.20	N.D.	0.79	1
05298	trans-1,2-Dichloroethene	156-60-5	N.D.	0.20	N.D.	0.79	1
05298	Freon 113	76-13-1	N.D.	0.50	N.D.	3.8	1
05298	Methylene Chloride	75-09-2	N.D.	0.20	N.D.	0.69	1
05298	Tetrachloroethene	127-18-4	N.D.	0.20	N.D.	1.4	1
05298	1,1,1-Trichloroethane	71-55-6	0.99 J	0.20	5.4 J	1.1	1
05298	1,1,2-Trichloroethane	79-00-5	N.D.	0.20	N.D.	1.1	1
05298	Trichloroethene	79-01-6	14	0.20	74	1.1	1
05298	Vinyl Chloride	75-01-4	N.D.	0.20	N.D.	0.51	1

MDL = Method Detection Limit

Sample Comments

State of New York Certification No. 10670

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
05298	IBM Selected VOCs List-PA	EPA TO-15	1	E1623530AA	08/22/2016 16:57	Jacob E Bailey	1

Sample Description: EN0533S160808 Air
Summa Can# 967
IBM

LL Sample # AQ 8526541
LL Group # 1694952
Account # 12618

Project Name: IBM

Collected: 08/08/2016 19:40 by KF
through 08/08/2016 20:40
Submitted: 08/12/2016 14:10
Reported: 08/24/2016 16:17

IBM
8976 Wellington Road
Manassas VA 20109

CAT No.	Analysis Name	CAS Number	Final Result		MDL	Final Result		MDL	DF
Volatiles in Air EPA TO-15			ppb(v)		ppb(v)	ug/m3		ug/m3	
05298	Chloroethane	75-00-3	N.D.		0.20	N.D.		0.53	1
05298	1,1-Dichloroethane	75-34-3	N.D.		0.20	N.D.		0.81	1
05298	1,1-Dichloroethene	75-35-4	N.D.		0.20	N.D.		0.79	1
05298	cis-1,2-Dichloroethene	156-59-2	N.D.		0.20	N.D.		0.79	1
05298	trans-1,2-Dichloroethene	156-60-5	N.D.		0.20	N.D.		0.79	1
05298	Freon 113	76-13-1	N.D.		0.50	N.D.		3.8	1
05298	Methylene Chloride	75-09-2	N.D.		0.20	N.D.		0.69	1
05298	Tetrachloroethene	127-18-4	3.2		0.20	22		1.4	1
05298	1,1,1-Trichloroethane	71-55-6	0.88	J	0.20	4.8	J	1.1	1
05298	1,1,2-Trichloroethane	79-00-5	N.D.		0.20	N.D.		1.1	1
05298	Trichloroethene	79-01-6	5.1		0.20	28		1.1	1
05298	Vinyl Chloride	75-01-4	N.D.		0.20	N.D.		0.51	1

MDL = Method Detection Limit

Sample Comments

State of New York Certification No. 10670

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
05298	IBM Selected VOCs List-PA	EPA TO-15	1	E1623530AA	08/22/2016 17:29	Jacob E Bailey	1

Sample Description: EN0529S160809 Air
Summa Can# 929
IBM

LL Sample # AQ 8526542
LL Group # 1694952
Account # 12618

Project Name: IBM

Collected: 08/09/2016 13:49 by KF
through 08/09/2016 14:49
Submitted: 08/12/2016 14:10
Reported: 08/24/2016 16:17

IBM
8976 Wellington Road
Manassas VA 20109

CAT No.	Analysis Name	CAS Number	Final Result		MDL	Final Result		MDL	DF
Volatiles in Air EPA TO-15			ppb(v)		ppb(v)	ug/m3		ug/m3	
05298	Chloroethane	75-00-3	0.49	J	0.20	1.3	J	0.53	1
05298	1,1-Dichloroethane	75-34-3	N.D.		0.20	N.D.		0.81	1
05298	1,1-Dichloroethene	75-35-4	N.D.		0.20	N.D.		0.79	1
05298	cis-1,2-Dichloroethene	156-59-2	N.D.		0.20	N.D.		0.79	1
05298	trans-1,2-Dichloroethene	156-60-5	N.D.		0.20	N.D.		0.79	1
05298	Freon 113	76-13-1	N.D.		0.50	N.D.		3.8	1
05298	Methylene Chloride	75-09-2	N.D.		0.20	N.D.		0.69	1
05298	Tetrachloroethene	127-18-4	0.39	J	0.20	2.6	J	1.4	1
05298	1,1,1-Trichloroethane	71-55-6	6.4		0.20	35		1.1	1
05298	1,1,2-Trichloroethane	79-00-5	N.D.		0.20	N.D.		1.1	1
05298	Trichloroethene	79-01-6	48		0.20	260		1.1	1
05298	Vinyl Chloride	75-01-4	N.D.		0.20	N.D.		0.51	1

MDL = Method Detection Limit

Sample Comments

State of New York Certification No. 10670

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
05298	IBM Selected VOCs List-PA	EPA TO-15	1	E1623530AA	08/22/2016 18:01	Jacob E Bailey	1

Sample Description: EN0533D160808 Air
Summa Can# 1002
IBM

LL Sample # AQ 8526543
LL Group # 1694952
Account # 12618

Project Name: IBM

Collected: 08/08/2016 07:43 by KF
through 08/08/2016 08:43
Submitted: 08/12/2016 14:10
Reported: 08/24/2016 16:17

IBM
8976 Wellington Road
Manassas VA 20109

CAT No.	Analysis Name	CAS Number	Final Result	MDL	Final Result	MDL	DF
Volatiles in Air	**EPA TO-15**		ppb(v)	ppb(v)	ug/m3	ug/m3	
05298	Chloroethane	75-00-3	N.D.	2.0	N.D.	5.3	10
05298	1,1-Dichloroethane	75-34-3	N.D.	2.0	N.D.	8.1	10
05298	1,1-Dichloroethene	75-35-4	N.D.	2.0	N.D.	7.9	10
05298	cis-1,2-Dichloroethene	156-59-2	N.D.	2.0	N.D.	7.9	10
05298	trans-1,2-Dichloroethene	156-60-5	N.D.	2.0	N.D.	7.9	10
05298	Freon 113	76-13-1	N.D.	5.0	N.D.	38	10
05298	Methylene Chloride	75-09-2	N.D.	2.0	N.D.	6.9	10
05298	Tetrachloroethene	127-18-4	24	2.0	160	14	10
05298	1,1,1-Trichloroethane	71-55-6	20	2.0	110	11	10
05298	1,1,2-Trichloroethane	79-00-5	N.D.	2.0	N.D.	11	10
05298	Trichloroethene	79-01-6	450	2.0	2,400	11	10
05298	Vinyl Chloride	75-01-4	N.D.	2.0	N.D.	5.1	10

MDL = Method Detection Limit

Sample Comments

State of New York Certification No. 10670

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
05298	IBM Selected VOCs List-PA	EPA TO-15	1	E1623530AA	08/22/2016 18:34	Jacob E Bailey	10

Sample Description: EN0425D160809 Air
Summa Can# 968
IBM

LL Sample # AQ 8526544
LL Group # 1694952
Account # 12618

Project Name: IBM

Collected: 08/09/2016 08:05 by KF
through 08/09/2016 09:05
Submitted: 08/12/2016 14:10
Reported: 08/24/2016 16:17

IBM
8976 Wellington Road
Manassas VA 20109

CAT No.	Analysis Name	CAS Number	Final Result		MDL	Final Result		MDL	DF
Volatiles in Air EPA TO-15			ppb(v)		ppb(v)	ug/m3		ug/m3	
05298	Chloroethane	75-00-3	N.D.		0.20	N.D.		0.53	1
05298	1,1-Dichloroethane	75-34-3	N.D.		0.20	N.D.		0.81	1
05298	1,1-Dichloroethene	75-35-4	N.D.		0.20	N.D.		0.79	1
05298	cis-1,2-Dichloroethene	156-59-2	N.D.		0.20	N.D.		0.79	1
05298	trans-1,2-Dichloroethene	156-60-5	N.D.		0.20	N.D.		0.79	1
05298	Freon 113	76-13-1	N.D.		0.50	N.D.		3.8	1
05298	Methylene Chloride	75-09-2	N.D.		0.20	N.D.		0.69	1
05298	Tetrachloroethene	127-18-4	0.29	J	0.20	2.0	J	1.4	1
05298	1,1,1-Trichloroethane	71-55-6	N.D.		0.20	N.D.		1.1	1
05298	1,1,2-Trichloroethane	79-00-5	N.D.		0.20	N.D.		1.1	1
05298	Trichloroethene	79-01-6	N.D.		0.20	N.D.		1.1	1
05298	Vinyl Chloride	75-01-4	N.D.		0.20	N.D.		0.51	1

MDL = Method Detection Limit

Sample Comments

State of New York Certification No. 10670

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
05298	IBM Selected VOCs List-PA	EPA TO-15	1	E1623530AA	08/22/2016 19:06	Jacob E Bailey	1

Sample Description: EN0411D160809 Air
Summa Can# 1319
IBM

LL Sample # AQ 8526545
LL Group # 1694952
Account # 12618

Project Name: IBM

Collected: 08/09/2016 14:12 by KF
through 08/09/2016 15:12
Submitted: 08/12/2016 14:10
Reported: 08/24/2016 16:17

IBM
8976 Wellington Road
Manassas VA 20109

CAT No.	Analysis Name	CAS Number	Final Result		MDL	Final Result		MDL	DF
Volatiles in Air EPA TO-15			ppb(v)		ppb(v)	ug/m3		ug/m3	
05298	Chloroethane	75-00-3	N.D.		2.0	N.D.		5.3	10
05298	1,1-Dichloroethane	75-34-3	N.D.		2.0	N.D.		8.1	10
05298	1,1-Dichloroethene	75-35-4	N.D.		2.0	N.D.		7.9	10
05298	cis-1,2-Dichloroethene	156-59-2	2.2	J	2.0	8.7	J	7.9	10
05298	trans-1,2-Dichloroethene	156-60-5	N.D.		2.0	N.D.		7.9	10
05298	Freon 113	76-13-1	N.D.		5.0	N.D.		38	10
05298	Methylene Chloride	75-09-2	N.D.		2.0	N.D.		6.9	10
05298	Tetrachloroethene	127-18-4	6.9	J	2.0	47	J	14	10
05298	1,1,1-Trichloroethane	71-55-6	11		2.0	61		11	10
05298	1,1,2-Trichloroethane	79-00-5	N.D.		2.0	N.D.		11	10
05298	Trichloroethene	79-01-6	240		2.0	1,300		11	10
05298	Vinyl Chloride	75-01-4	N.D.		2.0	N.D.		5.1	10

MDL = Method Detection Limit

Sample Comments

State of New York Certification No. 10670

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
05298	IBM Selected VOCs List-PA	EPA TO-15	1	E1623530AA	08/22/2016 19:32	Jacob E Bailey	10

Sample Description: EN0410D160809 Air
Summa Can# 1210
IBM

LL Sample # AQ 8526546
LL Group # 1694952
Account # 12618

Project Name: IBM

Collected: 08/09/2016 08:05 by KF
through 08/09/2016 09:05
Submitted: 08/12/2016 14:10
Reported: 08/24/2016 16:17

IBM
8976 Wellington Road
Manassas VA 20109

CAT No.	Analysis Name	CAS Number	Final Result		MDL	Final Result		MDL	DF
Volatiles in Air EPA TO-15			ppb(v)		ppb(v)	ug/m3		ug/m3	
05298	Chloroethane	75-00-3	N.D.		8.0	N.D.		21	40
05298	1,1-Dichloroethane	75-34-3	430		8.0	1,700		32	40
05298	1,1-Dichloroethene	75-35-4	600		8.0	2,400		32	40
05298	cis-1,2-Dichloroethene	156-59-2	260		8.0	1,000		32	40
05298	trans-1,2-Dichloroethene	156-60-5	N.D.		8.0	N.D.		32	40
05298	Freon 113	76-13-1	110		20	830		150	40
05298	Methylene Chloride	75-09-2	28	J	8.0	98	J	28	40
05298	Tetrachloroethene	127-18-4	19	J	8.0	130	J	54	40
05298	1,1,1-Trichloroethane	71-55-6	1,800		8.0	9,800		44	40
05298	1,1,2-Trichloroethane	79-00-5	N.D.		8.0	N.D.		44	40
05298	Trichloroethene	79-01-6	1,300		8.0	6,900		43	40
05298	Vinyl Chloride	75-01-4	N.D.		8.0	N.D.		20	40

MDL = Method Detection Limit

Sample Comments

State of New York Certification No. 10670

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
05298	IBM Selected VOCs List-PA	EPA TO-15	1	E1623530AA	08/23/2016 02:29	Jacob E Bailey	40

Sample Description: EN0412D160809 Air
Summa Can# 980
IBM

LL Sample # AQ 8526547
LL Group # 1694952
Account # 12618

Project Name: IBM

Collected: 08/09/2016 11:13 by KF
through 08/09/2016 12:13
Submitted: 08/12/2016 14:10
Reported: 08/24/2016 16:17

IBM
8976 Wellington Road
Manassas VA 20109

CAT No.	Analysis Name	CAS Number	Final Result		MDL	Final Result		MDL	DF
Volatiles in Air EPA TO-15			ppb(v)		ppb(v)	ug/m3		ug/m3	
05298	Chloroethane	75-00-3	N.D.		0.20	N.D.		0.53	1
05298	1,1-Dichloroethane	75-34-3	N.D.		0.20	N.D.		0.81	1
05298	1,1-Dichloroethene	75-35-4	N.D.		0.20	N.D.		0.79	1
05298	cis-1,2-Dichloroethene	156-59-2	N.D.		0.20	N.D.		0.79	1
05298	trans-1,2-Dichloroethene	156-60-5	N.D.		0.20	N.D.		0.79	1
05298	Freon 113	76-13-1	N.D.		0.50	N.D.		3.8	1
05298	Methylene Chloride	75-09-2	0.28	J	0.20	0.96	J	0.69	1
05298	Tetrachloroethene	127-18-4	0.27	J	0.20	1.8	J	1.4	1
05298	1,1,1-Trichloroethane	71-55-6	2.7		0.20	15		1.1	1
05298	1,1,2-Trichloroethane	79-00-5	N.D.		0.20	N.D.		1.1	1
05298	Trichloroethene	79-01-6	100		2.0	540		11	10
05298	Vinyl Chloride	75-01-4	N.D.		0.20	N.D.		0.51	1

MDL = Method Detection Limit

Sample Comments

State of New York Certification No. 10670

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
05298	IBM Selected VOCs List-PA	EPA TO-15	1	E1623530AA	08/22/2016 21:10	Jacob E Bailey	1
05298	IBM Selected VOCs List-PA	EPA TO-15	1	E1623630AA	08/23/2016 17:37	Jacob E Bailey	10

Sample Description: EN1011D160809 Air
Summa Can# 1326
IBM

LL Sample # AQ 8526548
LL Group # 1694952
Account # 12618

Project Name: IBM

Collected: 08/09/2016 15:24 by KF
through 08/09/2016 16:20
Submitted: 08/12/2016 14:10
Reported: 08/24/2016 16:17

IBM
8976 Wellington Road
Manassas VA 20109

CAT No.	Analysis Name	CAS Number	Final Result		MDL	Final Result		MDL	DF
Volatiles in Air EPA TO-15			ppb(v)		ppb(v)	ug/m3		ug/m3	
05298	Chloroethane	75-00-3	N.D.		0.53	N.D.		1.4	2.67
05298	1,1-Dichloroethane	75-34-3	2.7		0.53	11		2.2	2.67
05298	1,1-Dichloroethene	75-35-4	N.D.		0.53	N.D.		2.1	2.67
05298	cis-1,2-Dichloroethene	156-59-2	2.5	J	0.53	9.8	J	2.1	2.67
05298	trans-1,2-Dichloroethene	156-60-5	N.D.		0.53	N.D.		2.1	2.67
05298	Freon 113	76-13-1	2.5	J	1.3	19	J	10	2.67
05298	Methylene Chloride	75-09-2	3.8		0.53	13		1.9	2.67
05298	Tetrachloroethene	127-18-4	2.2	J	0.53	15	J	3.6	2.67
05298	1,1,1-Trichloroethane	71-55-6	4.3		0.53	24		2.9	2.67
05298	1,1,2-Trichloroethane	79-00-5	N.D.		0.53	N.D.		2.9	2.67
05298	Trichloroethene	79-01-6	9.2		0.53	49		2.9	2.67
05298	Vinyl Chloride	75-01-4	N.D.		0.53	N.D.		1.4	2.67

The recovery for a target analyte(s) in the Laboratory Control Spike(s) is outside the QC acceptance limits as noted on the QC Summary. Since the recovery is high and the target analyte(s) was not detected in the sample, the data is reported.

The reporting limits were raised due to the pressure of the summa canister upon receipt at the laboratory.

MDL = Method Detection Limit

Sample Comments

State of New York Certification No. 10670

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
05298	IBM Selected VOCs List-PA	EPA TO-15	1	E1623630AA	08/23/2016 19:57	Jacob E Bailey	2.67

Sample Description: EN0430S160808 Air
Summa Can# 995
IBM

LL Sample # AQ 8526549
LL Group # 1694952
Account # 12618

Project Name: IBM

Collected: 08/08/2016 14:32 by KF
through 08/08/2016 15:32
Submitted: 08/12/2016 14:10
Reported: 08/24/2016 16:17

IBM
8976 Wellington Road
Manassas VA 20109

CAT No.	Analysis Name	CAS Number	Final Result		MDL	Final Result		MDL	DF
Volatiles in Air EPA TO-15			ppb(v)		ppb(v)	ug/m3		ug/m3	
05298	Chloroethane	75-00-3	N.D.		2.0	N.D.		5.3	10
05298	1,1-Dichloroethane	75-34-3	N.D.		2.0	N.D.		8.1	10
05298	1,1-Dichloroethene	75-35-4	N.D.		2.0	N.D.		7.9	10
05298	cis-1,2-Dichloroethene	156-59-2	N.D.		2.0	N.D.		7.9	10
05298	trans-1,2-Dichloroethene	156-60-5	N.D.		2.0	N.D.		7.9	10
05298	Freon 113	76-13-1	N.D.		5.0	N.D.		38	10
05298	Methylene Chloride	75-09-2	N.D.		2.0	N.D.		6.9	10
05298	Tetrachloroethene	127-18-4	N.D.		2.0	N.D.		14	10
05298	1,1,1-Trichloroethane	71-55-6	7.2	J	2.0	39	J	11	10
05298	1,1,2-Trichloroethane	79-00-5	N.D.		2.0	N.D.		11	10
05298	Trichloroethene	79-01-6	440		2.0	2,300		11	10
05298	Vinyl Chloride	75-01-4	N.D.		2.0	N.D.		5.1	10

MDL = Method Detection Limit

Sample Comments

State of New York Certification No. 10670

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
05298	IBM Selected VOCs List-PA	EPA TO-15	1	E1623530AA	08/22/2016 21:38	Jacob E Bailey	10

Sample Description: EN042S160808 Air
Summa Can# 969
IBM

LL Sample # AQ 8526550
LL Group # 1694952
Account # 12618

Project Name: IBM

Collected: 08/08/2016 12:35 by KF
through 08/08/2016 13:35
Submitted: 08/12/2016 14:10
Reported: 08/24/2016 16:17

IBM
8976 Wellington Road
Manassas VA 20109

CAT No.	Analysis Name	CAS Number	Final Result		MDL	Final Result		MDL	DF
Volatiles in Air EPA TO-15			ppb(v)		ppb(v)	ug/m3		ug/m3	
05298	Chloroethane	75-00-3	N.D.		0.20	N.D.		0.53	1
05298	1,1-Dichloroethane	75-34-3	N.D.		0.20	N.D.		0.81	1
05298	1,1-Dichloroethene	75-35-4	N.D.		0.20	N.D.		0.79	1
05298	cis-1,2-Dichloroethene	156-59-2	N.D.		0.20	N.D.		0.79	1
05298	trans-1,2-Dichloroethene	156-60-5	N.D.		0.20	N.D.		0.79	1
05298	Freon 113	76-13-1	N.D.		0.50	N.D.		3.8	1
05298	Methylene Chloride	75-09-2	N.D.		0.20	N.D.		0.69	1
05298	Tetrachloroethene	127-18-4	0.55	J	0.20	3.7	J	1.4	1
05298	1,1,1-Trichloroethane	71-55-6	0.82	J	0.20	4.5	J	1.1	1
05298	1,1,2-Trichloroethane	79-00-5	N.D.		0.20	N.D.		1.1	1
05298	Trichloroethene	79-01-6	3.0		0.20	16		1.1	1
05298	Vinyl Chloride	75-01-4	N.D.		0.20	N.D.		0.51	1

MDL = Method Detection Limit

Sample Comments

State of New York Certification No. 10670

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
05298	IBM Selected VOCs List-PA	EPA TO-15	1	E1623530AA	08/22/2016 22:10	Jacob E Bailey	1

Sample Description: EN0430D160808 Air
Summa Can# 1327
IBM

LL Sample # AQ 8526551
LL Group # 1694952
Account # 12618

Project Name: IBM

Collected: 08/08/2016 14:33 by KF
through 08/08/2016 15:33
Submitted: 08/12/2016 14:10
Reported: 08/24/2016 16:17

IBM
8976 Wellington Road
Manassas VA 20109

CAT No.	Analysis Name	CAS Number	Final Result		MDL	Final Result		MDL	DF
Volatiles in Air EPA TO-15			ppb(v)		ppb(v)	ug/m3		ug/m3	
05298	Chloroethane	75-00-3	N.D.		2.0	N.D.		5.3	10
05298	1,1-Dichloroethane	75-34-3	3.8	J	2.0	15	J	8.1	10
05298	1,1-Dichloroethene	75-35-4	N.D.		2.0	N.D.		7.9	10
05298	cis-1,2-Dichloroethene	156-59-2	2.4	J	2.0	9.6	J	7.9	10
05298	trans-1,2-Dichloroethene	156-60-5	N.D.		2.0	N.D.		7.9	10
05298	Freon 113	76-13-1	N.D.		5.0	N.D.		38	10
05298	Methylene Chloride	75-09-2	N.D.		2.0	N.D.		6.9	10
05298	Tetrachloroethene	127-18-4	7.5	J	2.0	51	J	14	10
05298	1,1,1-Trichloroethane	71-55-6	22		2.0	120		11	10
05298	1,1,2-Trichloroethane	79-00-5	N.D.		2.0	N.D.		11	10
05298	Trichloroethene	79-01-6	180		2.0	980		11	10
05298	Vinyl Chloride	75-01-4	N.D.		2.0	N.D.		5.1	10

MDL = Method Detection Limit

Sample Comments

State of New York Certification No. 10670

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
05298	IBM Selected VOCs List-PA	EPA TO-15	1	E1623530AA	08/22/2016 22:36	Jacob E Bailey	10

Quality Control Summary

Client Name: IBM
Reported: 08/24/2016 16:17

Group Number: 1694952

Matrix QC may not be reported if insufficient sample or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD was performed, unless otherwise specified in the method.

All Inorganic Initial Calibration and Continuing Calibration Blanks met acceptable method criteria unless otherwise noted on the Analysis Report.

Method Blank

Analysis Name	Result ppb(v)	MDL ppb(v)	Result ug/m3	MDL ug/m3
Batch number: E1623230AA	Sample number(s): 8526531-8526538			
Chloroethane	N.D.	0.20	N.D.	0.53
1,1-Dichloroethane	N.D.	0.20	N.D.	0.81
1,1-Dichloroethene	N.D.	0.20	N.D.	0.79
cis-1,2-Dichloroethene	N.D.	0.20	N.D.	0.79
trans-1,2-Dichloroethene	N.D.	0.20	N.D.	0.79
Freon 113	N.D.	0.50	N.D.	3.8
Methylene Chloride	N.D.	0.20	N.D.	0.69
Tetrachloroethene	N.D.	0.20	N.D.	1.4
1,1,1-Trichloroethane	N.D.	0.20	N.D.	1.1
1,1,2-Trichloroethane	N.D.	0.20	N.D.	1.1
Trichloroethene	N.D.	0.20	N.D.	1.1
Vinyl Chloride	N.D.	0.20	N.D.	0.51
Batch number: E1623530AA	Sample number(s): 8526532,8526539-8526547,8526549-8526551			
Chloroethane	N.D.	0.20	N.D.	0.53
1,1-Dichloroethane	N.D.	0.20	N.D.	0.81
1,1-Dichloroethene	N.D.	0.20	N.D.	0.79
cis-1,2-Dichloroethene	N.D.	0.20	N.D.	0.79
trans-1,2-Dichloroethene	N.D.	0.20	N.D.	0.79
Freon 113	N.D.	0.50	N.D.	3.8
Methylene Chloride	N.D.	0.20	N.D.	0.69
Tetrachloroethene	N.D.	0.20	N.D.	1.4
1,1,1-Trichloroethane	N.D.	0.20	N.D.	1.1
1,1,2-Trichloroethane	N.D.	0.20	N.D.	1.1
Trichloroethene	N.D.	0.20	N.D.	1.1
Vinyl Chloride	N.D.	0.20	N.D.	0.51
Batch number: E1623630AA	Sample number(s): 8526547-8526548			
Chloroethane	N.D.	0.20	N.D.	0.53
1,1-Dichloroethane	N.D.	0.20	N.D.	0.81
1,1-Dichloroethene	N.D.	0.20	N.D.	0.79
cis-1,2-Dichloroethene	N.D.	0.20	N.D.	0.79
trans-1,2-Dichloroethene	N.D.	0.20	N.D.	0.79
Freon 113	N.D.	0.50	N.D.	3.8
Methylene Chloride	N.D.	0.20	N.D.	0.69
Tetrachloroethene	N.D.	0.20	N.D.	1.4
1,1,1-Trichloroethane	N.D.	0.20	N.D.	1.1
1,1,2-Trichloroethane	N.D.	0.20	N.D.	1.1
Trichloroethene	N.D.	0.20	N.D.	1.1
Vinyl Chloride	N.D.	0.20	N.D.	0.51

*- Outside of specification
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.
P###### is indicative of a Background or Unspiked sample that is batch matrix QC and was not performed using a sample from this submission group.

Quality Control Summary

Client Name: IBM
Reported: 08/24/2016 16:17

Group Number: 1694952

LCS/LCSD

Analysis Name	LCS Spike Added ppb(v)	LCS Conc ppb(v)	LCSD Spike Added ppb(v)	LCSD Conc ppb(v)	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
Batch number: E1623230AA	Sample number(s): 8526531-8526538								
Chloroethane	10	11.09	10	11.33	111	113	63-119	2	25
1,1-Dichloroethane	10	10.84	10	11.2	108	112	67-124	3	25
1,1-Dichloroethene	10	10.37	10	10.9	104	109	61-128	5	25
cis-1,2-Dichloroethene	10	10.18	10	10.63	102	106	65-121	4	25
trans-1,2-Dichloroethene	10	10.47	10	11.01	105	110	66-121	5	25
Freon 113	10	10.35	10	10.42	103	104	63-114	1	25
Methylene Chloride	10	10.59	10	10.74	106	107	70-130	1	25
Tetrachloroethene	10	10.31	10	10.17	103	102	70-130	1	25
1,1,1-Trichloroethane	10	10.41	10	10.83	104	108	70-130	4	25
1,1,2-Trichloroethane	10	11.18	10	10.99	112	110	59-131	2	25
Trichloroethene	10	10.3	10	10.39	103	104	70-130	1	25
Vinyl Chloride	10	10.68	10	11.13	107	111	70-130	4	25
Batch number: E1623530AA	Sample number(s): 8526532,8526539-8526547,8526549-8526551								
Chloroethane	10	11.75	10	11.41	117	114	63-119	3	25
1,1-Dichloroethane	10	11.71	10	10.93	117	109	67-124	7	25
1,1-Dichloroethene	10	11.71	10	11.16	117	112	61-128	5	25
cis-1,2-Dichloroethene	10	11.63	10	10.66	116	107	65-121	9	25
trans-1,2-Dichloroethene	10	11.46	10	10.87	115	109	66-121	5	25
Freon 113	10	11.09	10	10.41	111	104	63-114	6	25
Methylene Chloride	10	11.33	10	10.93	113	109	70-130	4	25
Tetrachloroethene	10	10.68	10	9.94	107	99	70-130	7	25
1,1,1-Trichloroethane	10	11.42	10	10.78	114	108	70-130	6	25
1,1,2-Trichloroethane	10	10.89	10	10.57	109	106	59-131	3	25
Trichloroethene	10	10.89	10	10.39	109	104	70-130	5	25
Vinyl Chloride	10	11.74	10	11.3	117	113	70-130	4	25
Batch number: E1623630AA	Sample number(s): 8526547-8526548								
Chloroethane	10	11.6	10	12.14	116	121*	63-119	5	25
1,1-Dichloroethane	10	11.18	10	11.6	112	116	67-124	4	25
1,1-Dichloroethene	10	11.04	10	11.65	110	117	61-128	5	25
cis-1,2-Dichloroethene	10	10.95	10	11.31	110	113	65-121	3	25
trans-1,2-Dichloroethene	10	11.18	10	11.65	112	117	66-121	4	25
Freon 113	10	10.4	10	11.17	104	112	63-114	7	25
Methylene Chloride	10	10.93	10	11.78	109	118	70-130	7	25
Tetrachloroethene	10	10.47	10	10.21	105	102	70-130	3	25
1,1,1-Trichloroethane	10	10.91	10	11.42	109	114	70-130	5	25
1,1,2-Trichloroethane	10	11	10	11.21	110	112	59-131	2	25
Trichloroethene	10	10.68	10	10.74	107	107	70-130	1	25
Vinyl Chloride	10	11.46	10	11.88	115	119	70-130	4	25

*- Outside of specification
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.
P###### is indicative of a Background or Unspiked sample that is batch matrix QC and was not performed using a sample from this submission group.

Quality Control Summary

Client Name: IBM

Group Number: 1694952

Reported: 08/24/2016 16:17

*- Outside of specification
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.
P###### is indicative of a Background or Unspiked sample that is batch matrix QC and was not performed using a sample from this submission group.

Summa Canister Field Test Data/Chain of Custody

eurofins | Lancaster Laboratories Environmental

Acct. # 12618 Group # 1694952 Sample # 852653 1-51 Bottle Order (SCR) # _____

For Eurofins Lancaster Laboratories Environmental use only

Client Information

Client: GROUNDWATER SCIENCES CORP. Account #:

Project Name/#: IBM

Project Manager: SCOTT MORGAN P.O. #:

Sampler: KAITLYN FLEMING & KELLY DEVINE Quote #:

Name of state where samples were collected: NEW YORK

Turnaround Time Requested (TAT) (circle one)

(Standard) Rush (specify) _____

Data Package Required? (Yes) No

EDD Required? (Yes) No

	Temperature (F)		Pressure ("Hg)	
	Start	Stop	Start	Stop
Ambient	80	80	30.12	30.08
Maximum	90	90	30.15	30.12
Minimum	70	70	30.09	30.03

Analyses Requested

EPA TO - 15 See Comments for List; EPA 18 ☐ MTBE ☐ BTEX; EPA 25 (select range below); Helium as tracer; O2/CO2; Library Search

Sample Identification	Start Date/Time (24-hour clock)	Stop Date/Time (24-hour clock)	Canister Pressure in Field ("Hg) (Start)	Canister Pressure in Field ("Hg) (Stop)	~~Ext. Interior~~ Temp. (F) (Start)	~~Ext. Interior~~ Temp. (F) (Stop)	Flow Reg. ID	Can ID	Can Size (L)	Controller Flowrate (mL/min)	TO-15	18	MTBE	BTEX	25	Helium	O2/CO2	Library
DU 1314 16Ø8Ø9	8/9 0800	8/9 1000	-29	-7	~90	~90	329354	1314	1	7.0	X							
ENØ495 16Ø8Ø9	8/9 0824	8/9 1024	-30	-8	~90	~90	341965	1043	1	7.1	X							
ENØ425 16Ø8Ø9	8/9 0800	8/9 1000	-29	-8	~90	~90	301070	1165	1	7.1	X							
~~ENØ415 16Ø8Ø8~~	~~8/8 0930~~	~~8/8 1107~~	~~-30~~	~~Ø~~	~~~90~~	~~~90~~	~~958114~~	~~1043~~	~~1~~	~~7.2~~	X							
ENØ635 16Ø81Ø	8/10 Ø738	8/10 Ø838	-30	-7	~9Ø	~9Ø	958114	1043	1	14.1	X							
ENØ414 16Ø81Ø	8/10 1252	8/10 1352	-26.5	-9	~9Ø	~9Ø	836392	958	1	14.2	X							
ENØ455 16Ø81Ø	8/10 Ø758	8/10 Ø958	-30	-10	~9Ø	~9Ø	185474	1321	1	7.1	X							
DU 940 16Ø81Ø	8/10 Ø758	8/10 Ø958	-30	-7	~90	~90	303421	940	1	7.0	X							
ENØ45D 160810	8/10 Ø815	8/10 Ø915	-30	-5	~90	~90	303934	1335	1	14.2	X							
ENØ635D 160810	8/10 Ø745	8/10 Ø845	-30	-7	~90	~90	236978	951	1	14.2	X							
ENØ414D 160810	8/10 1257	8/10 1357	-30	-9	~90	~90	848498	913	1	14.3	X							

Instructions/QC Requirements & Comments

ANALYTICAL LIST: PCE, TCE, 1,1-DCE, Cis 1,2-DCE, TRANS 1,2-DCE, VC, TCA, 1,1-DCA, CHLOROETHANE, MeCl, FREON 113

EPA 25 (check one) ☐ C1 - C4 ☐ C2 - C10 ☐ C1 - C10 ☐ C4 - C10 (GRO) ☐ C2 - C4

Canisters Shipped by:	Date/Time: 8/11/16	Canisters Received by:	Date/Time: 8/12/16 1240	Relinquished by:	Date/Time:	Received by:	Date/Time:
Relinquished by:	Date/Time:	Received by:	Date/Time:	Relinquished by:	Date/Time:	Received by:	Date/Time:
Relinquished by:	Date/Time:	Received by:	Date/Time:	Relinquished by:	Date/Time: 8/10/16 1410	Received by:	Date/Time: 8-12-16 1440

Summa Canister Field Test Data/Chain of Custody

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Acct. # 12618 Group # 169495 Sample # 8526531-51 Bottle Order (SCR) # _____

For Eurofins Lancaster Laboratories Environmental use only

Client Information

Client: GROUNDWATER SCIENCES CORP. Account #:

Project Name/#: IBM

Project Manager: SCOTT MORGAN P.O. #:

Sampler: KAIT FLEMING & KELLY DEVINE Quote #:

Name of state where samples were collected: NEW YORK

Turnaround Time Requested (TAT) (circle one)

(Standard) Rush (specify) _____

Data Package Required? (Yes) No

EDD Required? (Yes) No

	Temperature (F)		Pressure ("Hg)	
	Start	Stop	Start	Stop
Ambient	80	80	30.12	30.09
Maximum	90	90	30.15	30.12
Minimum	70	70	30.09	30.03

Analyses Requested

EPA TO-15 (See Comments for List) | EPA 18 ☐ MTBE ☐ BTEX | EPA 25 (select range below) | Helium as tracer | O2/CO2 | Library Search

Sample Identification	Start Date/Time (24-hour clock)	Stop Date/Time (24-hour clock)	Canister Pressure in Field ("Hg) (Start)	Canister Pressure in Field ("Hg) (Stop)	~~Interior~~ EXT Temp. (F) (Start)	~~Interior~~ EXT Temp. (F) (Stop)	Flow Reg. ID	Can ID	Can Size (L)	Controller Flowrate (mL/min)	EPA TO-15	EPA 18	EPA 25	Helium as tracer	O2/CO2	Library Search	
EN05335 160808	8/8 1940	8/8 2040	-29	-6.5	~90	~90	958124	967	1	14.5	X						
EN05295 160809	8/9 1349	8/9 1449	-30	-7	~90	~90	930645	929	1	14.1	X						
EN0533D 160808	8/8 0743	8/8 0843	-29.5	-9	~90	~90	548487	1002	1	14.7	X						
EN0425D 160809	8/9 0805	8/9 0905	-30	-6	~90	~90	824834	968	1	14.6	X						
EN0411D 160809	8/9 1412	8/9 1512	-30	-7	~90	~90	708827	1319	1	14.2	X						
EN0410D 160809	8/9 0805	8/9 0905	-9	-3.5	~90	~90	958072	1210	1	14.5	X						
EN0412D 160809	8/9 1113	8/9 1213	-30	-7	~90	~90	710535	980	1	14.3	X						
EN1011D 160809	8/9 1524	8/9 1620	-30	-28	~90	~90	710557	1326	1	14.2	X						
EN0430S 160808	8/8 1432	8/8 1532	-29	-9	~90	~90	337703	995	1	14.5	X						
EN0425 160808	8/8 1235	8/8 1335	-29	-5.5	~90	~90	204636	969	1	14.1	X						
EN0433D 160808	8/8 1433	8/8 1533	-30	-6	~90	~90	824837	1327	1	14.6	X						

Instructions/QC Requirements & Comments

ANALYTICAL LIST: PCE, TCE, 1,1-DCE, CIS 1,2-DCE, TRANS 1,2-DCE, VC, TCA, 1,1-DCA, CHLOROETHANE, MeCl, FREON 113

EPA 25 (check one) ☐ C1 - C4 ☐ C2 - C10 ☐ C1 - C10 ☐ C4 - C10 (GRO) ☐ C2 - C4

Canisters Shipped by:	Date/Time:	Canisters Received by:	Date/Time:	Relinquished by:	Date/Time:	Received by:	Date/Time:
	8/4/16		8/10/16 1240				
Relinquished by:	Date/Time:	Received by:	Date/Time:	Relinquished by:	Date/Time:	Received by:	Date/Time:
Relinquished by:	Date/Time:	Received by:	Date/Time:	Relinquished by:	Date/Time:	Received by:	Date/Time:
					8/10/16 1410		8-12-16 1410

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Sample Administration Receipt Documentation Log

Doc Log ID: 158237

Group Number(s): 1694952

Client: GWS

Delivery and Receipt Information

Delivery Method:	ELLE Courier	Arrival Timestamp:	08/12/2016 14:10
Number of Packages:	13	Number of Projects:	1
State/Province of Origin:	NY		

Arrival Condition Summary

Shipping Container Sealed:	Yes	Sample IDs on COC match Containers:	Yes
Custody Seal Present:	No	Sample Date/Times match COC:	Yes
Samples Chilled:	N/A	VOA Vial Headspace ≥ 6mm:	N/A
Paperwork Enclosed:	Yes	Total Trip Blank Qty:	0
Samples Intact:	Yes	Air Quality Samples Present:	Yes
Missing Samples:	No	Air Quality Flow Controllers Present:	Yes
Extra Samples:	No	Flow Controller Quantity:	70
Discrepancy in Container Qty on COC:	No	Air Quality Returns:	Yes
		Summa Canisters:	1331,1093

Unpacked by Melvin Sanchez (8943) at 16:14 on 08/12/2016

2425 New Holland Pike
Lancaster, PA 17605-2425
T | 717-656-2300
F | 717-656-2681
www.LancasterLabs.com

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Explanation of Symbols and Abbreviations

The following defines common symbols and abbreviations used in reporting technical data:

RL	Reporting Limit	**BMQL**	Below Minimum Quantitation Level
N.D.	none detected	**MPN**	Most Probable Number
TNTC	Too Numerous To Count	**CP Units**	cobalt-chloroplatinate units
IU	International Units	**NTU**	nephelometric turbidity units
umhos/cm	micromhos/cm	**ng**	nanogram(s)
C	degrees Celsius	**F**	degrees Fahrenheit
meq	milliequivalents	**lb.**	pound(s)
g	gram(s)	**kg**	kilogram(s)
µg	microgram(s)	**mg**	milligram(s)
mL	milliliter(s)	**L**	liter(s)
m3	cubic meter(s)	**µL**	microliter(s)
		pg/L	picogram/liter

<	less than
>	greater than
ppm	parts per million - One ppm is equivalent to one milligram per kilogram (mg/kg) or one gram per million grams. For aqueous liquids, ppm is usually taken to be equivalent to milligrams per liter (mg/l), because one liter of water has a weight very close to a kilogram. For gases or vapors, one ppm is equivalent to one microliter per liter of gas.
ppb	parts per billion
Dry weight basis	Results printed under this heading have been adjusted for moisture content. This increases the analyte weight concentration to approximate the value present in a similar sample without moisture. All other results are reported on an as-received basis.

Laboratory Data Qualifiers:

B - Analyte detected in the blank
C - Result confirmed by reanalysis
E - Concentration exceeds the calibration range
J (or G, I, X) - estimated value ≥ the Method Detection Limit (MDL or DL) and < the Limit of Quantitation (LOQ or RL)
P - Concentration difference between the primary and confirmation column >40%. The lower result is reported.
U - Analyte was not detected at the value indicated
V - Concentration difference between the primary and confirmation column >100%. The reporting limit is raised due to this disparity and evident interference…

Additional Organic and Inorganic CLP qualifiers may be used with Form 1 reports as defined by the CLP methods.
Qualifiers specific to Dioxin/Furans and PCB Congeners are detailed on the individual Analysis Report.

Analytical test results meet all requirements of the associated regulatory program (i.e., NELAC (TNI), DoD, and ISO 17025) unless otherwise noted under the individual analysis.

Measurement uncertainty values, as applicable, are available upon request.

Tests results relate only to the sample tested. Clients should be aware that a critical step in a chemical or microbiological analysis is the collection of the sample. Unless the sample analyzed is truly representative of the bulk of material involved, the test results will be meaningless. If you have questions regarding the proper techniques of collecting samples, please contact us. We cannot be held responsible for sample integrity, however, unless sampling has been performed by a member of our staff.

This report shall not be reproduced except in full, without the written approval of the laboratory.

Times are local to the area of activity. Parameters listed in the 40 CFR Part 136 Table II as “analyze immediately” are not performed within 15 minutes.

WARRANTY AND LIMITS OF LIABILITY - In accepting analytical work, we warrant the accuracy of test results for the sample as submitted. THE FOREGOING EXPRESS WARRANTY IS EXCLUSIVE AND IS GIVEN IN LIEU OF ALL OTHER WARRANTIES, EXPRESSED OR IMPLIED. WE DISCLAIM ANY OTHER WARRANTIES, EXPRESSED OR IMPLIED, INCLUDING A WARRANTY OF FITNESS FOR PARTICULAR PURPOSE AND WARRANTY OF MERCHANTABILITY. IN NO EVENT SHALL EUROFINS LANCASTER LABORATORIES ENVIRONMENTAL, LLC BE LIABLE FOR INDIRECT, SPECIAL, CONSEQUENTIAL, OR INCIDENTAL DAMAGES INCLUDING, BUT NOT LIMITED TO, DAMAGES FOR LOSS OF PROFIT OR GOODWILL REGARDLESS OF (A) THE NEGLIGENCE (EITHER SOLE OR CONCURRENT) OF EUROFINS LANCASTER LABORATORIES ENVIRONMENTAL AND (B) WHETHER EUROFINS LANCASTER LABORATORIES ENVIRONMENTAL HAS BEEN INFORMED OF THE POSSIBILITY OF SUCH DAMAGES. We accept no legal responsibility for the purposes for which the client uses the test results. No purchase order or other order for work shall be accepted by Eurofins Lancaster Laboratories Environmental which includes any conditions that vary from the Standard Terms and Conditions, and Eurofins Lancaster Laboratories Environmental hereby objects to any conflicting terms contained in any acceptance or order submitted by client.

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Analysis Report

ANALYTICAL RESULTS

Prepared by:

Eurofins Lancaster Laboratories Environmental
2425 New Holland Pike
Lancaster, PA 17601

Prepared for:

IBM
8976 Wellington Road
Manassas VA 20109

Report Date: August 24, 2016

Project: IBM

Submittal Date: 08/12/2016
Group Number: 1694957
PO Number: 5004872019
Release Number: NON-ROUTINE
State of Sample Origin: NY

Client Sample Description	Lancaster Labs (LL) #
EN0728S160809 Air	8526560
EN0637D160809 Air	8526561
EQB992160809 Air	8526562
EN0637S160809 Air	8526563
EN0728D160809 Air	8526564
EN0416S160808 Air	8526565
EN0422S160808 Air	8526566
EN0423S160808 Air	8526567
EN0422D160808 Air	8526568
EN0423D160808 Air	8526569
EN0431D160808 Air	8526570
EN041S160808 Air	8526571
EN0636D160810 Air	8526572
EN047D160810 Air	8526573
EN047S160810 Air	8526574
EN0636S160810 Air	8526575
EN0421D160810 Air	8526576

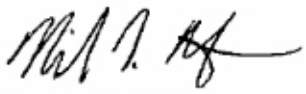
The specific methodologies used in obtaining the enclosed analytical results are indicated on the Laboratory Sample Analysis Record.

Regulatory agencies do not accredit laboratories for all methods, analytes, and matrices. Our scopes of accreditation can be viewed at http://www.eurofinsus.com/environment-testing/laboratories/eurofins-lancaster-laboratories-environmental/resources/certifications/ .

Electronic Copy To GSC Attn: Scott Morgan

2425 New Holland Pike, Lancaster, PA 17601 • 717-656-2300 • Fax: 717-656-2681 • www.LancasterLabs.com

Respectfully Submitted,



Nicole L. Maljovec
Manager

(717) 556-7259

Sample Description: EN0728S160809 Air
Summa Can# 947
IBM

LL Sample # AQ 8526560
LL Group # 1694957
Account # 12618

Project Name: IBM

Collected: 08/09/2016 10:36 by KF
through 08/09/2016 11:36
Submitted: 08/12/2016 14:10
Reported: 08/24/2016 16:53

IBM
8976 Wellington Road
Manassas VA 20109

CAT No.	Analysis Name	CAS Number	Final Result	MDL	Final Result	MDL	DF
Volatiles in Air	**EPA TO-15**		ppb(v)	ppb(v)	ug/m3	ug/m3	
05298	Chloroethane	75-00-3	N.D.	0.20	N.D.	0.53	1
05298	1,1-Dichloroethane	75-34-3	N.D.	0.20	N.D.	0.81	1
05298	1,1-Dichloroethene	75-35-4	N.D.	0.20	N.D.	0.79	1
05298	cis-1,2-Dichloroethene	156-59-2	N.D.	0.20	N.D.	0.79	1
05298	trans-1,2-Dichloroethene	156-60-5	N.D.	0.20	N.D.	0.79	1
05298	Freon 113	76-13-1	N.D.	0.50	N.D.	3.8	1
05298	Methylene Chloride	75-09-2	N.D.	0.20	N.D.	0.69	1
05298	Tetrachloroethene	127-18-4	36	0.20	240	1.4	1
05298	1,1,1-Trichloroethane	71-55-6	N.D.	0.20	N.D.	1.1	1
05298	1,1,2-Trichloroethane	79-00-5	N.D.	0.20	N.D.	1.1	1
05298	Trichloroethene	79-01-6	1.6	0.20	8.6	1.1	1
05298	Vinyl Chloride	75-01-4	N.D.	0.20	N.D.	0.51	1

MDL = Method Detection Limit

Sample Comments

State of New York Certification No. 10670

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
05298	IBM Selected VOCs List-PA	EPA TO-15	1	E1623530AA	08/22/2016 23:08	Jacob E Bailey	1

Sample Description: EN0637D160809 Air
Summa Can# 985
IBM

LL Sample # AQ 8526561
LL Group # 1694957
Account # 12618

Project Name: IBM

Collected: 08/09/2016 10:43 by KF
through 08/09/2016 11:43
Submitted: 08/12/2016 14:10
Reported: 08/24/2016 16:53

IBM
8976 Wellington Road
Manassas VA 20109

CAT No.	Analysis Name	CAS Number	Final Result	MDL	Final Result	MDL	DF
Volatiles in Air EPA TO-15			ppb(v)	ppb(v)	ug/m3	ug/m3	
05298	Chloroethane	75-00-3	N.D.	0.20	N.D.	0.53	1
05298	1,1-Dichloroethane	75-34-3	N.D.	0.20	N.D.	0.81	1
05298	1,1-Dichloroethene	75-35-4	N.D.	0.20	N.D.	0.79	1
05298	cis-1,2-Dichloroethene	156-59-2	0.55 J	0.20	2.2 J	0.79	1
05298	trans-1,2-Dichloroethene	156-60-5	N.D.	0.20	N.D.	0.79	1
05298	Freon 113	76-13-1	N.D.	0.50	N.D.	3.8	1
05298	Methylene Chloride	75-09-2	0.36 J	0.20	1.3 J	0.69	1
05298	Tetrachloroethene	127-18-4	2.3	0.20	16	1.4	1
05298	1,1,1-Trichloroethane	71-55-6	N.D.	0.20	N.D.	1.1	1
05298	1,1,2-Trichloroethane	79-00-5	N.D.	0.20	N.D.	1.1	1
05298	Trichloroethene	79-01-6	3.5	0.20	19	1.1	1
05298	Vinyl Chloride	75-01-4	N.D.	0.20	N.D.	0.51	1

MDL = Method Detection Limit

Sample Comments

State of New York Certification No. 10670

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
05298	IBM Selected VOCs List-PA	EPA TO-15	1	E1623530AA	08/22/2016 23:54	Jacob E Bailey	1

Sample Description: EQB992160809 Air
Summa Can# 992
IBM

LL Sample # AQ 8526562
LL Group # 1694957
Account # 12618

Project Name: IBM

Collected: 08/09/2016 08:15 by KF
through 08/09/2016 09:15
Submitted: 08/12/2016 14:10
Reported: 08/24/2016 16:53

IBM
8976 Wellington Road
Manassas VA 20109

CAT No.	Analysis Name	CAS Number	Final Result	MDL	Final Result	MDL	DF
Volatiles in Air	**EPA TO-15**		ppb(v)	ppb(v)	ug/m3	ug/m3	
05298	Chloroethane	75-00-3	N.D.	0.20	N.D.	0.53	1
05298	1,1-Dichloroethane	75-34-3	N.D.	0.20	N.D.	0.81	1
05298	1,1-Dichloroethene	75-35-4	N.D.	0.20	N.D.	0.79	1
05298	cis-1,2-Dichloroethene	156-59-2	N.D.	0.20	N.D.	0.79	1
05298	trans-1,2-Dichloroethene	156-60-5	N.D.	0.20	N.D.	0.79	1
05298	Freon 113	76-13-1	N.D.	0.50	N.D.	3.8	1
05298	Methylene Chloride	75-09-2	N.D.	0.20	N.D.	0.69	1
05298	Tetrachloroethene	127-18-4	N.D.	0.20	N.D.	1.4	1
05298	1,1,1-Trichloroethane	71-55-6	N.D.	0.20	N.D.	1.1	1
05298	1,1,2-Trichloroethane	79-00-5	N.D.	0.20	N.D.	1.1	1
05298	Trichloroethene	79-01-6	N.D.	0.20	N.D.	1.1	1
05298	Vinyl Chloride	75-01-4	N.D.	0.20	N.D.	0.51	1

MDL = Method Detection Limit

Sample Comments

State of New York Certification No. 10670

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
05298	IBM Selected VOCs List-PA	EPA TO-15	1	E1623530AA	08/23/2016 00:26	Jacob E Bailey	1

Sample Description: EN0637S160809 Air
Summa Can# 1163
IBM

LL Sample # AQ 8526563
LL Group # 1694957
Account # 12618

Project Name: IBM

Collected: 08/09/2016 10:40 by KF
through 08/09/2016 11:40
Submitted: 08/12/2016 14:10
Reported: 08/24/2016 16:53

IBM
8976 Wellington Road
Manassas VA 20109

CAT No.	Analysis Name	CAS Number	Final Result	MDL	Final Result	MDL	DF
Volatiles in Air	**EPA TO-15**		ppb(v)	ppb(v)	ug/m3	ug/m3	
05298	Chloroethane	75-00-3	N.D.	0.20	N.D.	0.53	1
05298	1,1-Dichloroethane	75-34-3	N.D.	0.20	N.D.	0.81	1
05298	1,1-Dichloroethene	75-35-4	N.D.	0.20	N.D.	0.79	1
05298	cis-1,2-Dichloroethene	156-59-2	N.D.	0.20	N.D.	0.79	1
05298	trans-1,2-Dichloroethene	156-60-5	N.D.	0.20	N.D.	0.79	1
05298	Freon 113	76-13-1	N.D.	0.50	N.D.	3.8	1
05298	Methylene Chloride	75-09-2	N.D.	0.20	N.D.	0.69	1
05298	Tetrachloroethene	127-18-4	N.D.	0.20	N.D.	1.4	1
05298	1,1,1-Trichloroethane	71-55-6	N.D.	0.20	N.D.	1.1	1
05298	1,1,2-Trichloroethane	79-00-5	N.D.	0.20	N.D.	1.1	1
05298	Trichloroethene	79-01-6	N.D.	0.20	N.D.	1.1	1
05298	Vinyl Chloride	75-01-4	N.D.	0.20	N.D.	0.51	1

MDL = Method Detection Limit

Sample Comments

State of New York Certification No. 10670

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
05298	IBM Selected VOCs List-PA	EPA TO-15	1	E1623530AA	08/23/2016 00:58	Jacob E Bailey	1

Sample Description: EN0728D160809 Air
Summa Can# 984
IBM

LL Sample # AQ 8526564
LL Group # 1694957
Account # 12618

Project Name: IBM

Collected: 08/09/2016 10:33 by KF
through 08/09/2016 11:33
Submitted: 08/12/2016 14:10
Reported: 08/24/2016 16:53

IBM
8976 Wellington Road
Manassas VA 20109

CAT No.	Analysis Name	CAS Number	Final Result	MDL	Final Result	MDL	DF
Volatiles in Air	**EPA TO-15**		ppb(v)	ppb(v)	ug/m3	ug/m3	
05298	Chloroethane	75-00-3	N.D.	0.20	N.D.	0.53	1
05298	1,1-Dichloroethane	75-34-3	N.D.	0.20	N.D.	0.81	1
05298	1,1-Dichloroethene	75-35-4	N.D.	0.20	N.D.	0.79	1
05298	cis-1,2-Dichloroethene	156-59-2	1.4	0.20	5.5	0.79	1
05298	trans-1,2-Dichloroethene	156-60-5	N.D.	0.20	N.D.	0.79	1
05298	Freon 113	76-13-1	N.D.	0.50	N.D.	3.8	1
05298	Methylene Chloride	75-09-2	N.D.	0.20	N.D.	0.69	1
05298	Tetrachloroethene	127-18-4	200	2.0	1,400	14	10
05298	1,1,1-Trichloroethane	71-55-6	N.D.	0.20	N.D.	1.1	1
05298	1,1,2-Trichloroethane	79-00-5	N.D.	0.20	N.D.	1.1	1
05298	Trichloroethene	79-01-6	6.9	0.20	37	1.1	1
05298	Vinyl Chloride	75-01-4	N.D.	0.20	N.D.	0.51	1

MDL = Method Detection Limit

Sample Comments

State of New York Certification No. 10670

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
05298	IBM Selected VOCs List-PA	EPA TO-15	1	E1623530AA	08/23/2016 01:29	Jacob E Bailey	1
05298	IBM Selected VOCs List-PA	EPA TO-15	1	E1623630AA	08/23/2016 18:08	Jacob E Bailey	10

Sample Description: EN0416S160808 Air
Summa Can# 914
IBM

LL Sample # AQ 8526565
LL Group # 1694957
Account # 12618

Project Name: IBM

Collected: 08/08/2016 17:55 by KF
through 08/08/2016 18:55
Submitted: 08/12/2016 14:10
Reported: 08/24/2016 16:53

IBM
8976 Wellington Road
Manassas VA 20109

CAT No.	Analysis Name	CAS Number	Final Result		MDL	Final Result		MDL	DF
Volatiles in Air EPA TO-15			ppb(v)		ppb(v)	ug/m3		ug/m3	
05298	Chloroethane	75-00-3	0.21	J	0.20	0.54	J	0.53	1
05298	1,1-Dichloroethane	75-34-3	N.D.		0.20	N.D.		0.81	1
05298	1,1-Dichloroethene	75-35-4	N.D.		0.20	N.D.		0.79	1
05298	cis-1,2-Dichloroethene	156-59-2	N.D.		0.20	N.D.		0.79	1
05298	trans-1,2-Dichloroethene	156-60-5	N.D.		0.20	N.D.		0.79	1
05298	Freon 113	76-13-1	N.D.		0.50	N.D.		3.8	1
05298	Methylene Chloride	75-09-2	14		0.20	49		0.69	1
05298	Tetrachloroethene	127-18-4	0.58	J	0.20	4.0	J	1.4	1
05298	1,1,1-Trichloroethane	71-55-6	0.26	J	0.20	1.4	J	1.1	1
05298	1,1,2-Trichloroethane	79-00-5	N.D.		0.20	N.D.		1.1	1
05298	Trichloroethene	79-01-6	0.41	J	0.20	2.2	J	1.1	1
05298	Vinyl Chloride	75-01-4	N.D.		0.20	N.D.		0.51	1

MDL = Method Detection Limit

Sample Comments

State of New York Certification No. 10670

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
05298	IBM Selected VOCs List-PA	EPA TO-15	1	E1623530AA	08/23/2016 02:04	Jacob E Bailey	1

Sample Description: EN0422S160808 Air
Summa Can# 1303
IBM

LL Sample # AQ 8526566
LL Group # 1694957
Account # 12618

Project Name: IBM

Collected: 08/08/2016 16:06 by KF
through 08/08/2016 17:06
Submitted: 08/12/2016 14:10
Reported: 08/24/2016 16:53

IBM
8976 Wellington Road
Manassas VA 20109

CAT No.	Analysis Name	CAS Number	Final Result		MDL	Final Result		MDL	DF
Volatiles in Air EPA TO-15			ppb(v)		ppb(v)	ug/m3		ug/m3	
05298	Chloroethane	75-00-3	N.D.		0.80	N.D.		2.1	4
05298	1,1-Dichloroethane	75-34-3	N.D.		0.80	N.D.		3.2	4
05298	1,1-Dichloroethene	75-35-4	N.D.		0.80	N.D.		3.2	4
05298	cis-1,2-Dichloroethene	156-59-2	1.0	J	0.80	4.1	J	3.2	4
05298	trans-1,2-Dichloroethene	156-60-5	N.D.		0.80	N.D.		3.2	4
05298	Freon 113	76-13-1	N.D.		2.0	N.D.		15	4
05298	Methylene Chloride	75-09-2	N.D.		0.80	N.D.		2.8	4
05298	Tetrachloroethene	127-18-4	N.D.		0.80	N.D.		5.4	4
05298	1,1,1-Trichloroethane	71-55-6	1.7	J	0.80	9.3	J	4.4	4
05298	1,1,2-Trichloroethane	79-00-5	N.D.		0.80	N.D.		4.4	4
05298	Trichloroethene	79-01-6	19		0.80	100		4.3	4
05298	Vinyl Chloride	75-01-4	N.D.		0.80	N.D.		2.0	4

The recovery for a target analyte(s) in the Laboratory Control Spike(s) is outside the QC acceptance limits as noted on the QC Summary. Since the recovery is high and the target analyte(s) was not detected in the sample, the data is reported.

MDL = Method Detection Limit

Sample Comments

State of New York Certification No. 10670

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
05298	IBM Selected VOCs List-PA	EPA TO-15	1	E1623630AA	08/24/2016 05:02	Jacob E Bailey	4

Sample Description: EN0423S160808 Air
Summa Can# 1049
IBM

LL Sample # AQ 8526567
LL Group # 1694957
Account # 12618

Project Name: IBM

Collected: 08/08/2016 14:23 by KF
through 08/08/2016 15:23
Submitted: 08/12/2016 14:10
Reported: 08/24/2016 16:53

IBM
8976 Wellington Road
Manassas VA 20109

CAT No.	Analysis Name	CAS Number	Final Result	MDL	Final Result	MDL	DF
Volatiles in Air EPA TO-15			ppb(v)	ppb(v)	ug/m3	ug/m3	
05298	Chloroethane	75-00-3	1.4	0.20	3.8	0.53	1
05298	1,1-Dichloroethane	75-34-3	N.D.	0.20	N.D.	0.81	1
05298	1,1-Dichloroethene	75-35-4	N.D.	0.20	N.D.	0.79	1
05298	cis-1,2-Dichloroethene	156-59-2	N.D.	0.20	N.D.	0.79	1
05298	trans-1,2-Dichloroethene	156-60-5	N.D.	0.20	N.D.	0.79	1
05298	Freon 113	76-13-1	N.D.	0.50	N.D.	3.8	1
05298	Methylene Chloride	75-09-2	11	0.20	39	0.69	1
05298	Tetrachloroethene	127-18-4	N.D.	0.20	N.D.	1.4	1
05298	1,1,1-Trichloroethane	71-55-6	N.D.	0.20	N.D.	1.1	1
05298	1,1,2-Trichloroethane	79-00-5	N.D.	0.20	N.D.	1.1	1
05298	Trichloroethene	79-01-6	N.D.	0.20	N.D.	1.1	1
05298	Vinyl Chloride	75-01-4	N.D.	0.20	N.D.	0.51	1

The LCS and/or LCSD recoveries are outside the stated QC window but within the marginal exceedance allowance of +/- 4 standard deviations as defined in the NELAC/DoD Standards. The following analytes are accepted based on this allowance: Chloroethane

MDL = Method Detection Limit

Sample Comments

State of New York Certification No. 10670

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
05298	IBM Selected VOCs List-PA	EPA TO-15	1	E1623630AA	08/23/2016 21:15	Jacob E Bailey	1

Sample Description: EN0422D160808 Air
Summa Can# 941
IBM

LL Sample # AQ 8526568
LL Group # 1694957
Account # 12618

Project Name: IBM

Collected: 08/08/2016 16:12 by KF
through 08/08/2016 17:12
Submitted: 08/12/2016 14:10
Reported: 08/24/2016 16:53

IBM
8976 Wellington Road
Manassas VA 20109

CAT No.	Analysis Name	CAS Number	Final Result	MDL	Final Result	MDL	DF
Volatiles in Air EPA TO-15			ppb(v)	ppb(v)	ug/m3	ug/m3	
05298	Chloroethane	75-00-3	N.D.	0.20	N.D.	0.53	1
05298	1,1-Dichloroethane	75-34-3	N.D.	0.20	N.D.	0.81	1
05298	1,1-Dichloroethene	75-35-4	N.D.	0.20	N.D.	0.79	1
05298	cis-1,2-Dichloroethene	156-59-2	N.D.	0.20	N.D.	0.79	1
05298	trans-1,2-Dichloroethene	156-60-5	N.D.	0.20	N.D.	0.79	1
05298	Freon 113	76-13-1	N.D.	0.50	N.D.	3.8	1
05298	Methylene Chloride	75-09-2	N.D.	0.20	N.D.	0.69	1
05298	Tetrachloroethene	127-18-4	N.D.	0.20	N.D.	1.4	1
05298	1,1,1-Trichloroethane	71-55-6	0.44 J	0.20	2.4 J	1.1	1
05298	1,1,2-Trichloroethane	79-00-5	N.D.	0.20	N.D.	1.1	1
05298	Trichloroethene	79-01-6	4.6	0.20	25	1.1	1
05298	Vinyl Chloride	75-01-4	N.D.	0.20	N.D.	0.51	1

The recovery for a target analyte(s) in the Laboratory Control Spike(s) is outside the QC acceptance limits as noted on the QC Summary. Since the recovery is high and the target analyte(s) was not detected in the sample, the data is reported.

MDL = Method Detection Limit

Sample Comments

State of New York Certification No. 10670

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
05298	IBM Selected VOCs List-PA	EPA TO-15	1	E1623630AA	08/23/2016 21:51	Jacob E Bailey	1

Sample Description: EN0423D160808 Air
Summa Can# 1146
IBM

LL Sample # AQ 8526569
LL Group # 1694957
Account # 12618

Project Name: IBM

Collected: 08/08/2016 14:32 by KF
through 08/08/2016 15:32
Submitted: 08/12/2016 14:10
Reported: 08/24/2016 16:53

IBM
8976 Wellington Road
Manassas VA 20109

CAT No.	Analysis Name	CAS Number	Final Result		MDL	Final Result		MDL	DF
Volatiles in Air EPA TO-15			ppb(v)		ppb(v)	ug/m3		ug/m3	
05298	Chloroethane	75-00-3	N.D.		0.20	N.D.		0.53	1
05298	1,1-Dichloroethane	75-34-3	1.8		0.20	7.1		0.81	1
05298	1,1-Dichloroethene	75-35-4	N.D.		0.20	N.D.		0.79	1
05298	cis-1,2-Dichloroethene	156-59-2	11		0.20	42		0.79	1
05298	trans-1,2-Dichloroethene	156-60-5	0.96	J	0.20	3.8	J	0.79	1
05298	Freon 113	76-13-1	N.D.		0.50	N.D.		3.8	1
05298	Methylene Chloride	75-09-2	N.D.		0.20	N.D.		0.69	1
05298	Tetrachloroethene	127-18-4	1.8		0.20	12		1.4	1
05298	1,1,1-Trichloroethane	71-55-6	0.35	J	0.20	1.9	J	1.1	1
05298	1,1,2-Trichloroethane	79-00-5	N.D.		0.20	N.D.		1.1	1
05298	Trichloroethene	79-01-6	63		0.20	340		1.1	1
05298	Vinyl Chloride	75-01-4	N.D.		0.20	N.D.		0.51	1

The recovery for a target analyte(s) in the Laboratory Control Spike(s) is outside the QC acceptance limits as noted on the QC Summary. Since the recovery is high and the target analyte(s) was not detected in the sample, the data is reported.

MDL = Method Detection Limit

Sample Comments

State of New York Certification No. 10670

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
05298	IBM Selected VOCs List-PA	EPA TO-15	1	E1623630AA	08/23/2016 22:23	Jacob E Bailey	1

Sample Description: EN0431D160808 Air
Summa Can# 1164
IBM

LL Sample # AQ 8526570
LL Group # 1694957
Account # 12618

Project Name: IBM

Collected: 08/08/2016 17:48 by KF
through 08/08/2016 18:48
Submitted: 08/12/2016 14:10
Reported: 08/24/2016 16:53

IBM
8976 Wellington Road
Manassas VA 20109

CAT No.	Analysis Name	CAS Number	Final Result	MDL	Final Result	MDL	DF
Volatiles in Air EPA TO-15			ppb(v)	ppb(v)	ug/m3	ug/m3	
05298	Chloroethane	75-00-3	N.D.	0.20	N.D.	0.53	1
05298	1,1-Dichloroethane	75-34-3	N.D.	0.20	N.D.	0.81	1
05298	1,1-Dichloroethene	75-35-4	N.D.	0.20	N.D.	0.79	1
05298	cis-1,2-Dichloroethene	156-59-2	N.D.	0.20	N.D.	0.79	1
05298	trans-1,2-Dichloroethene	156-60-5	N.D.	0.20	N.D.	0.79	1
05298	Freon 113	76-13-1	N.D.	0.50	N.D.	3.8	1
05298	Methylene Chloride	75-09-2	N.D.	0.20	N.D.	0.69	1
05298	Tetrachloroethene	127-18-4	N.D.	0.20	N.D.	1.4	1
05298	1,1,1-Trichloroethane	71-55-6	N.D.	0.20	N.D.	1.1	1
05298	1,1,2-Trichloroethane	79-00-5	N.D.	0.20	N.D.	1.1	1
05298	Trichloroethene	79-01-6	0.97 J	0.20	5.2 J	1.1	1
05298	Vinyl Chloride	75-01-4	N.D.	0.20	N.D.	0.51	1

The recovery for a target analyte(s) in the Laboratory Control Spike(s) is outside the QC acceptance limits as noted on the QC Summary. Since the recovery is high and the target analyte(s) was not detected in the sample, the data is reported.

MDL = Method Detection Limit

Sample Comments

State of New York Certification No. 10670

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
05298	IBM Selected VOCs List-PA	EPA TO-15	1	E1623630AA	08/23/2016 22:57	Jacob E Bailey	1

Sample Description: EN041S160808 Air
Summa Can# 1041
IBM

LL Sample # AQ 8526571
LL Group # 1694957
Account # 12618

Project Name: IBM

Collected: 08/08/2016 09:30 by KF
through 08/08/2016 11:32
Submitted: 08/12/2016 14:10
Reported: 08/24/2016 16:53

IBM
8976 Wellington Road
Manassas VA 20109

CAT No.	Analysis Name	CAS Number	Final Result	MDL	Final Result	MDL	DF
Volatiles in Air EPA TO-15			ppb(v)	ppb(v)	ug/m3	ug/m3	
05298	Chloroethane	75-00-3	N.D.	0.20	N.D.	0.53	1
05298	1,1-Dichloroethane	75-34-3	N.D.	0.20	N.D.	0.81	1
05298	1,1-Dichloroethene	75-35-4	N.D.	0.20	N.D.	0.79	1
05298	cis-1,2-Dichloroethene	156-59-2	N.D.	0.20	N.D.	0.79	1
05298	trans-1,2-Dichloroethene	156-60-5	N.D.	0.20	N.D.	0.79	1
05298	Freon 113	76-13-1	N.D.	0.50	N.D.	3.8	1
05298	Methylene Chloride	75-09-2	N.D.	0.20	N.D.	0.69	1
05298	Tetrachloroethene	127-18-4	N.D.	0.20	N.D.	1.4	1
05298	1,1,1-Trichloroethane	71-55-6	0.49 J	0.20	2.7 J	1.1	1
05298	1,1,2-Trichloroethane	79-00-5	N.D.	0.20	N.D.	1.1	1
05298	Trichloroethene	79-01-6	1.4	0.20	7.3	1.1	1
05298	Vinyl Chloride	75-01-4	N.D.	0.20	N.D.	0.51	1

The recovery for a target analyte(s) in the Laboratory Control Spike(s) is outside the QC acceptance limits as noted on the QC Summary. Since the recovery is high and the target analyte(s) was not detected in the sample, the data is reported.

MDL = Method Detection Limit

Sample Comments

State of New York Certification No. 10670

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
05298	IBM Selected VOCs List-PA	EPA TO-15	1	E1623630AA	08/23/2016 23:33	Jacob E Bailey	1

Sample Description: EN0636D160810 Air
Summa Can# 924
IBM

LL Sample # AQ 8526572
LL Group # 1694957
Account # 12618

Project Name: IBM

Collected: 08/10/2016 09:45 by KF
through 08/10/2016 10:45
Submitted: 08/12/2016 14:10
Reported: 08/24/2016 16:53

IBM
8976 Wellington Road
Manassas VA 20109

CAT No.	Analysis Name	CAS Number	Final Result	MDL	Final Result	MDL	DF
Volatiles in Air EPA TO-15			ppb(v)	ppb(v)	ug/m3	ug/m3	
05298	Chloroethane	75-00-3	N.D.	0.20	N.D.	0.53	1
05298	1,1-Dichloroethane	75-34-3	N.D.	0.20	N.D.	0.81	1
05298	1,1-Dichloroethene	75-35-4	N.D.	0.20	N.D.	0.79	1
05298	cis-1,2-Dichloroethene	156-59-2	N.D.	0.20	N.D.	0.79	1
05298	trans-1,2-Dichloroethene	156-60-5	N.D.	0.20	N.D.	0.79	1
05298	Freon 113	76-13-1	N.D.	0.50	N.D.	3.8	1
05298	Methylene Chloride	75-09-2	N.D.	0.20	N.D.	0.69	1
05298	Tetrachloroethene	127-18-4	N.D.	0.20	N.D.	1.4	1
05298	1,1,1-Trichloroethane	71-55-6	12	0.20	67	1.1	1
05298	1,1,2-Trichloroethane	79-00-5	N.D.	0.20	N.D.	1.1	1
05298	Trichloroethene	79-01-6	15	0.20	78	1.1	1
05298	Vinyl Chloride	75-01-4	N.D.	0.20	N.D.	0.51	1

The recovery for a target analyte(s) in the Laboratory Control Spike(s) is outside the QC acceptance limits as noted on the QC Summary. Since the recovery is high and the target analyte(s) was not detected in the sample, the data is reported.

MDL = Method Detection Limit

Sample Comments

State of New York Certification No. 10670

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
05298	IBM Selected VOCs List-PA	EPA TO-15	1	E1623630AA	08/24/2016 00:04	Jacob E Bailey	1

Sample Description: EN047D160810 Air
Summa Can# 1044
IBM

LL Sample # AQ 8526573
LL Group # 1694957
Account # 12618

Project Name: IBM

Collected: 08/10/2016 10:33 by KF
through 08/10/2016 11:33
Submitted: 08/12/2016 14:10
Reported: 08/24/2016 16:53

IBM
8976 Wellington Road
Manassas VA 20109

CAT No.	Analysis Name	CAS Number	Final Result		MDL	Final Result		MDL	DF
Volatiles in Air EPA TO-15			ppb(v)		ppb(v)	ug/m3		ug/m3	
05298	Chloroethane	75-00-3	N.D.		0.20	N.D.		0.53	1
05298	1,1-Dichloroethane	75-34-3	0.42	J	0.20	1.7	J	0.81	1
05298	1,1-Dichloroethene	75-35-4	N.D.		0.20	N.D.		0.79	1
05298	cis-1,2-Dichloroethene	156-59-2	0.53	J	0.20	2.1	J	0.79	1
05298	trans-1,2-Dichloroethene	156-60-5	N.D.		0.20	N.D.		0.79	1
05298	Freon 113	76-13-1	N.D.		0.50	N.D.		3.8	1
05298	Methylene Chloride	75-09-2	N.D.		0.20	N.D.		0.69	1
05298	Tetrachloroethene	127-18-4	1.1		0.20	7.6		1.4	1
05298	1,1,1-Trichloroethane	71-55-6	19		0.20	100		1.1	1
05298	1,1,2-Trichloroethane	79-00-5	N.D.		0.20	N.D.		1.1	1
05298	Trichloroethene	79-01-6	130		4.0	710		21	20
05298	Vinyl Chloride	75-01-4	N.D.		0.20	N.D.		0.51	1

MDL = Method Detection Limit

Sample Comments

State of New York Certification No. 10670

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
05298	IBM Selected VOCs List-PA	EPA TO-15	1	D1623630AA	08/23/2016 18:59	Jacob E Bailey	1
05298	IBM Selected VOCs List-PA	EPA TO-15	1	D1623630AA	08/24/2016 08:39	Jacob E Bailey	20

Sample Description: EN047S160810 Air
Summa Can# 1166
IBM

LL Sample # AQ 8526574
LL Group # 1694957
Account # 12618

Project Name: IBM

Collected: 08/10/2016 10:27 by KF
through 08/10/2016 11:27
Submitted: 08/12/2016 14:10
Reported: 08/24/2016 16:53

IBM
8976 Wellington Road
Manassas VA 20109

CAT No.	Analysis Name	CAS Number	Final Result		MDL	Final Result		MDL	DF
Volatiles in Air EPA TO-15			ppb(v)		ppb(v)	ug/m3		ug/m3	
05298	Chloroethane	75-00-3	N.D.		0.20	N.D.		0.53	1
05298	1,1-Dichloroethane	75-34-3	N.D.		0.20	N.D.		0.81	1
05298	1,1-Dichloroethene	75-35-4	N.D.		0.20	N.D.		0.79	1
05298	cis-1,2-Dichloroethene	156-59-2	N.D.		0.20	N.D.		0.79	1
05298	trans-1,2-Dichloroethene	156-60-5	N.D.		0.20	N.D.		0.79	1
05298	Freon 113	76-13-1	N.D.		0.50	N.D.		3.8	1
05298	Methylene Chloride	75-09-2	0.65	J	0.20	2.3	J	0.69	1
05298	Tetrachloroethene	127-18-4	4.2		0.20	29		1.4	1
05298	1,1,1-Trichloroethane	71-55-6	0.48	J	0.20	2.6	J	1.1	1
05298	1,1,2-Trichloroethane	79-00-5	N.D.		0.20	N.D.		1.1	1
05298	Trichloroethene	79-01-6	1.1		0.20	6.1		1.1	1
05298	Vinyl Chloride	75-01-4	N.D.		0.20	N.D.		0.51	1

MDL = Method Detection Limit

Sample Comments

State of New York Certification No. 10670

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
05298	IBM Selected VOCs List-PA	EPA TO-15	1	D1623630AA	08/23/2016 19:31	Jacob E Bailey	1

Sample Description: EN0636S160810 Air
Summa Can# 1311
IBM

LL Sample # AQ 8526575
LL Group # 1694957
Account # 12618

Project Name: IBM

Collected: 08/10/2016 09:39 by KF
through 08/10/2016 10:39
Submitted: 08/12/2016 14:10
Reported: 08/24/2016 16:53

IBM
8976 Wellington Road
Manassas VA 20109

CAT No.	Analysis Name	CAS Number	Final Result		MDL	Final Result		MDL	DF
Volatiles in Air EPA TO-15			ppb(v)		ppb(v)	ug/m3		ug/m3	
05298	Chloroethane	75-00-3	N.D.		0.20	N.D.		0.53	1
05298	1,1-Dichloroethane	75-34-3	N.D.		0.20	N.D.		0.81	1
05298	1,1-Dichloroethene	75-35-4	N.D.		0.20	N.D.		0.79	1
05298	cis-1,2-Dichloroethene	156-59-2	N.D.		0.20	N.D.		0.79	1
05298	trans-1,2-Dichloroethene	156-60-5	N.D.		0.20	N.D.		0.79	1
05298	Freon 113	76-13-1	N.D.		0.50	N.D.		3.8	1
05298	Methylene Chloride	75-09-2	N.D.		0.20	N.D.		0.69	1
05298	Tetrachloroethene	127-18-4	0.34	J	0.20	2.3	J	1.4	1
05298	1,1,1-Trichloroethane	71-55-6	2.0		0.20	11		1.1	1
05298	1,1,2-Trichloroethane	79-00-5	N.D.		0.20	N.D.		1.1	1
05298	Trichloroethene	79-01-6	N.D.		0.20	N.D.		1.1	1
05298	Vinyl Chloride	75-01-4	N.D.		0.20	N.D.		0.51	1

MDL = Method Detection Limit

Sample Comments

State of New York Certification No. 10670

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
05298	IBM Selected VOCs List-PA	EPA TO-15	1	D1623630AA	08/23/2016 19:59	Jacob E Bailey	1

Sample Description: EN0421D160810 Air
Summa Can# 986
IBM

LL Sample # AQ 8526576
LL Group # 1694957
Account # 12618

Project Name: IBM

Collected: 08/10/2016 12:13 by KF
through 08/10/2016 13:13
Submitted: 08/12/2016 14:10
Reported: 08/24/2016 16:53

IBM
8976 Wellington Road
Manassas VA 20109

CAT No.	Analysis Name	CAS Number	Final Result	MDL	Final Result	MDL	DF
Volatiles in Air EPA TO-15			ppb(v)	ppb(v)	ug/m3	ug/m3	
05298	Chloroethane	75-00-3	N.D.	0.20	N.D.	0.53	1
05298	1,1-Dichloroethane	75-34-3	N.D.	0.20	N.D.	0.81	1
05298	1,1-Dichloroethene	75-35-4	N.D.	0.20	N.D.	0.79	1
05298	cis-1,2-Dichloroethene	156-59-2	N.D.	0.20	N.D.	0.79	1
05298	trans-1,2-Dichloroethene	156-60-5	N.D.	0.20	N.D.	0.79	1
05298	Freon 113	76-13-1	N.D.	0.50	N.D.	3.8	1
05298	Methylene Chloride	75-09-2	N.D.	0.20	N.D.	0.69	1
05298	Tetrachloroethene	127-18-4	3.2	0.20	22	1.4	1
05298	1,1,1-Trichloroethane	71-55-6	1.0	0.20	5.7	1.1	1
05298	1,1,2-Trichloroethane	79-00-5	N.D.	0.20	N.D.	1.1	1
05298	Trichloroethene	79-01-6	2.9	0.20	16	1.1	1
05298	Vinyl Chloride	75-01-4	N.D.	0.20	N.D.	0.51	1

MDL = Method Detection Limit

Sample Comments

State of New York Certification No. 10670

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
05298	IBM Selected VOCs List-PA	EPA TO-15	1	D1623630AA	08/23/2016 20:58	Jacob E Bailey	1

Quality Control Summary

Client Name: IBM
Reported: 08/24/2016 16:53

Group Number: 1694957

Matrix QC may not be reported if insufficient sample or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD was performed, unless otherwise specified in the method.

All Inorganic Initial Calibration and Continuing Calibration Blanks met acceptable method criteria unless otherwise noted on the Analysis Report.

Method Blank

Analysis Name	Result ppb(v)	MDL ppb(v)	Result ug/m3	MDL ug/m3
Batch number: D1623630AA	Sample number(s): 8526573-8526576			
Chloroethane	N.D.	0.20	N.D.	0.53
1,1-Dichloroethane	N.D.	0.20	N.D.	0.81
1,1-Dichloroethene	N.D.	0.20	N.D.	0.79
cis-1,2-Dichloroethene	N.D.	0.20	N.D.	0.79
trans-1,2-Dichloroethene	N.D.	0.20	N.D.	0.79
Freon 113	N.D.	0.50	N.D.	3.8
Methylene Chloride	N.D.	0.20	N.D.	0.69
Tetrachloroethene	N.D.	0.20	N.D.	1.4
1,1,1-Trichloroethane	N.D.	0.20	N.D.	1.1
1,1,2-Trichloroethane	N.D.	0.20	N.D.	1.1
Trichloroethene	N.D.	0.20	N.D.	1.1
Vinyl Chloride	N.D.	0.20	N.D.	0.51
Batch number: E1623530AA	Sample number(s): 8526560-8526565			
Chloroethane	N.D.	0.20	N.D.	0.53
1,1-Dichloroethane	N.D.	0.20	N.D.	0.81
1,1-Dichloroethene	N.D.	0.20	N.D.	0.79
cis-1,2-Dichloroethene	N.D.	0.20	N.D.	0.79
trans-1,2-Dichloroethene	N.D.	0.20	N.D.	0.79
Freon 113	N.D.	0.50	N.D.	3.8
Methylene Chloride	N.D.	0.20	N.D.	0.69
Tetrachloroethene	N.D.	0.20	N.D.	1.4
1,1,1-Trichloroethane	N.D.	0.20	N.D.	1.1
1,1,2-Trichloroethane	N.D.	0.20	N.D.	1.1
Trichloroethene	N.D.	0.20	N.D.	1.1
Vinyl Chloride	N.D.	0.20	N.D.	0.51
Batch number: E1623630AA	Sample number(s): 8526564,8526566-8526572			
Chloroethane	N.D.	0.20	N.D.	0.53
1,1-Dichloroethane	N.D.	0.20	N.D.	0.81
1,1-Dichloroethene	N.D.	0.20	N.D.	0.79
cis-1,2-Dichloroethene	N.D.	0.20	N.D.	0.79
trans-1,2-Dichloroethene	N.D.	0.20	N.D.	0.79
Freon 113	N.D.	0.50	N.D.	3.8
Methylene Chloride	N.D.	0.20	N.D.	0.69
Tetrachloroethene	N.D.	0.20	N.D.	1.4
1,1,1-Trichloroethane	N.D.	0.20	N.D.	1.1
1,1,2-Trichloroethane	N.D.	0.20	N.D.	1.1
Trichloroethene	N.D.	0.20	N.D.	1.1
Vinyl Chloride	N.D.	0.20	N.D.	0.51

*- Outside of specification
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.
P###### is indicative of a Background or Unspiked sample that is batch matrix QC and was not performed using a sample from this submission group.

Quality Control Summary

Client Name: IBM
Reported: 08/24/2016 16:53

Group Number: 1694957

LCS/LCSD

Analysis Name	LCS Spike Added ppb(v)	LCS Conc ppb(v)	LCSD Spike Added ppb(v)	LCSD Conc ppb(v)	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
Batch number: D1623630AA	Sample number(s): 8526573-8526576								
Chloroethane	10	10.5	10	11.3	105	113	63-119	7	25
1,1-Dichloroethane	10	10.67	10	11.14	107	111	67-124	4	25
1,1-Dichloroethene	10	10.95	10	11.74	110	117	61-128	7	25
cis-1,2-Dichloroethene	10	11.08	10	11.61	111	116	65-121	5	25
trans-1,2-Dichloroethene	10	10.96	10	11.44	110	114	66-121	4	25
Freon 113	10	9.69	10	10.13	97	101	63-114	4	25
Methylene Chloride	10	10.26	10	10.38	103	104	70-130	1	25
Tetrachloroethene	10	10.8	10	10.67	108	107	70-130	1	25
1,1,1-Trichloroethane	10	10.27	10	10.45	103	104	70-130	2	25
1,1,2-Trichloroethane	10	10.16	10	9.89	102	99	59-131	3	25
Trichloroethene	10	10.54	10	10.69	105	107	70-130	1	25
Vinyl Chloride	10	10.33	10	11.07	103	111	70-130	7	25
Batch number: E1623530AA	Sample number(s): 8526560-8526565								
Chloroethane	10	11.75	10	11.41	117	114	63-119	3	25
1,1-Dichloroethane	10	11.71	10	10.93	117	109	67-124	7	25
1,1-Dichloroethene	10	11.71	10	11.16	117	112	61-128	5	25
cis-1,2-Dichloroethene	10	11.63	10	10.66	116	107	65-121	9	25
trans-1,2-Dichloroethene	10	11.46	10	10.87	115	109	66-121	5	25
Freon 113	10	11.09	10	10.41	111	104	63-114	6	25
Methylene Chloride	10	11.33	10	10.93	113	109	70-130	4	25
Tetrachloroethene	10	10.68	10	9.94	107	99	70-130	7	25
1,1,1-Trichloroethane	10	11.42	10	10.78	114	108	70-130	6	25
1,1,2-Trichloroethane	10	10.89	10	10.57	109	106	59-131	3	25
Trichloroethene	10	10.89	10	10.39	109	104	70-130	5	25
Vinyl Chloride	10	11.74	10	11.3	117	113	70-130	4	25
Batch number: E1623630AA	Sample number(s): 8526564,8526566-8526572								
Chloroethane	10	11.6	10	12.14	116	121*	63-119	5	25
1,1-Dichloroethane	10	11.18	10	11.6	112	116	67-124	4	25
1,1-Dichloroethene	10	11.04	10	11.65	110	117	61-128	5	25
cis-1,2-Dichloroethene	10	10.95	10	11.31	110	113	65-121	3	25
trans-1,2-Dichloroethene	10	11.18	10	11.65	112	117	66-121	4	25
Freon 113	10	10.4	10	11.17	104	112	63-114	7	25
Methylene Chloride	10	10.93	10	11.78	109	118	70-130	7	25
Tetrachloroethene	10	10.47	10	10.21	105	102	70-130	3	25
1,1,1-Trichloroethane	10	10.91	10	11.42	109	114	70-130	5	25
1,1,2-Trichloroethane	10	11	10	11.21	110	112	59-131	2	25
Trichloroethene	10	10.68	10	10.74	107	107	70-130	1	25
Vinyl Chloride	10	11.46	10	11.88	115	119	70-130	4	25

*- Outside of specification
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.
P###### is indicative of a Background or Unspiked sample that is batch matrix QC and was not performed using a sample from this submission group.

Quality Control Summary

Client Name: IBM
Group Number: 1694957
Reported: 08/24/2016 16:53

*- Outside of specification
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.
P###### is indicative of a Background or Unspiked sample that is batch matrix QC and was not performed using a sample from this submission group.

Summa Canister Field Test Data/Chain of Custody

eurofins | Lancaster Laboratories Environmental

Acct. # 12618 Group # 1694957 For Eurofins Lancaster Laboratories Environmental use only Sample # 6526560-76 Bottle Order (SCR) # _____

Client Information

Client: GROUNDWATER SCIENCES CORP. Account #:

Project Name/#: IBM

Project Manager: SCOTT MORGAN P.O. #:

Sampler: ~~[redacted]~~ KAIT FLEMING & KELLY DEVINE Quote #:

Name of state where samples were collected: NEW YORK

Turnaround Time Requested (TAT) (circle one)

(Standard) Rush (specify) _____

Data Package Required? (Yes) No

EDD Required? (Yes) No

	Temperature (F)		Pressure ("Hg)	
	Start	Stop	Start	Stop
Ambient	80	80	30.12	30.08
Maximum	90	90	30.15	30.12
Minimum	70	70	30.09	30.03

Analyses Requested

EPA TO - 15 See Comments for List; EPA 18 ☐ MTBE; ☐ BTEX; EPA 25 (select range below); Helium as tracer; O2/CO2; Library Search

Sample Identification	Start Date/Time (24-hour clock)	Stop Date/Time (24-hour clock)	Canister Pressure in Field ("Hg) (Start)	Canister Pressure in Field ("Hg) (Stop)	~~Interior~~ Ext Temp. (F) (Start)	~~Interior~~ Ext Temp. (F) (Stop)	Flow Reg. ID	Can ID	Can Size (L)	Controller Flowrate (mL/min)	EPA TO - 15 See Comments for List	EPA 18 ☐ MTBE	☐ BTEX EPA 25 (select range below)	Helium as tracer	O2/CO2	Library Search
EN0728S16080909	8/9 1036	8/9 1136	-29	-2	~90	~90	339246	947	1	13.7	X					
EN0637D16080909	8/9 1043	8/9 1143	-30	-16	~90	~90	252295	985	1	14.1	X					
EQB992160809 09	8/9 0815	8/9 0915	-30	-8	~90	~90	710621	992	1	14.2	X					
EN0637S16080909	8/9 1040	8/9 1140	-30	-5.5	~90	~90	958084	1163	1	14.3	X					
EN0728D16080909	8/9 1033	8/9 1133	-30	-6	~90	~90	958115	984	1	14.3	X					
EN0416S16080808	8/8 1755	8/8 1855	-20.5	-13	~90	~90	339286	914	1	14.5	X					
EN0422S16080808	8/8 1606	8/8 1706	-30	-1	~90	~90	824856	1303	1	14.5	X					
EN0423S16080808	8/8 1423	8/8 1523	-20	-1	~90	~90	710584	1049	1	14.3	X					
EN0422D16080808	8/8 1612	8/8 1712	-30	-6	~90	~90	958074	941	1	14.2	X					
EN0423D16080808	8/8 1432	8/8 1532	-29	-7	~90	~90	548486	1146	1	14.4	X					
EN0431D16080808	8/8 1748	8/8 1848	-29	-1.5	~90	~90	301144	1164	1	14.0	X					

Instructions/QC Requirements & Comments

ANALYTICAL LIST: PCE, TCE, 1,1-DCE, CIS 12DCE, TRANS 1,2-DCE, VC, TCA, 1,1-DCA, CHLOROETHANE, MeCl, FREON 113

EPA 25 (check one) ☐ C1 - C4 ☐ C2 - C10 ☐ C1 - C10 ☐ C4 - C10 (GRO) ☐ C2 - C4

Canisters Shipped by:	Date/Time: 5/4/16	Canisters Received by:	Date/Time: 8/12/16 1240	Relinquished by:	Date/Time:	Received by:	Date/Time:
Relinquished by:	Date/Time:	Received by:	Date/Time:	Relinquished by:	Date/Time:	Received by:	Date/Time:
Relinquished by:	Date/Time:	Received by:	Date/Time:	Relinquished by:	Date/Time: 8/12/16 1410	Received by:	Date/Time: 8-12-16 14[illegible]

Summa Canister Field Test Data/Chain of Custody

eurofins | Lancaster Laboratories Environmental

Acct. # 12618 Group # 1694957 Sample # 8526560-76 Bottle Order (SCR) # _____

For Eurofins Lancaster Laboratories Environmental use only

Client Information

Client: GROUNDWATER SCIENCES CORP Account #:

Project Name/#: IBM

Project Manager: SCOTT MORGAN P.O. #:

Sampler: KAIT FLEMING & KELLY DEVINE Quote #:

Name of state where samples were collected: NEW YORK

Turnaround Time Requested (TAT) (circle one)

(Standard) Rush (specify) _____

Data Package Required? (Yes) No

EDD Required? (Yes) No

	Temperature (F)		Pressure ("Hg)	
	Start	Stop	Start	Stop
Ambient	80	80	30.12	30.08
Maximum	90	90	30.15	30.12
Minimum	70	70	30.09	30.03

Analyses Requested

See Comments for List

Sample Identification	Start Date/Time (24-hour clock)	Stop Date/Time (24-hour clock)	Canister Pressure in Field ("Hg) (Start)	Canister Pressure in Field ("Hg) (Stop)	Interior Temp. (F) (Start)	Interior Temp. (F) (Stop)	Flow Reg. ID	Can ID	Can Size (L)	Controller Flowrate (mL/min)	EPA TO-15	EPA 18 ☐ MTBE ☐ BTEX	EPA 25 (select range below)	Helium as tracer	O2/CO2	Library Search	
EN041516080	8/8 0930	8/8 1132	-30	-14.5	~90	~90	848496	1041	1	6.9	X						
							~~303421~~	~~9408~~	~~1~~	~~7.0~~	~~X~~						
EN0636D160810	8/10 0945	8/10 1045	-28.5	-5	~90	~90	105010	924	1	14.1	X						
EN0647D160810	8/10 1033	8/10 1133	-29	-5	~90	~90	336709	1044	1	14.2	X						
EN0475 160810	8/10 1027	8/10 1127	-30	-5	~90	~90	339290	1166	1	14.2	X						
EN0636S160810	8/10 0939	8/10 1039	-30	-7.5	~90	~90	316846	1311	1	13.8	X						
EN0421D 160810	8/10 1213	8/10 1313	-30	-6	~90	~90	824840	986	1	14.1	X						

Instructions/QC Requirements & Comments

Analytical List: PCE, TCE, 1,1-DCE, Cis 1,2-DCE, Trans 1,2-DCE, VC, TCA, 1,1-DCA, Chloroethane, MeCl, Freon 113

EPA 25 (check one) ☐ C1 - C4 ☐ C2 - C10 ☐ C1 - C10 ☐ C4 - C10 (GRO) ☐ C2 - C4

Canisters Shipped by:	Date/Time:	Canisters Received by:	Date/Time:	Relinquished by:	Date/Time:	Received by:	Date/Time:
	8/12/16		8/10/16 1245				
Relinquished by:	Date/Time:	Received by:	Date/Time:	Relinquished by:	Date/Time:	Received by:	Date/Time:
Relinquished by:	Date/Time:	Received by:	Date/Time:	Relinquished by:	Date/Time: 8/12/16 1410	Received by:	Date/Time: 8-12-16 1410

eurofins | Lancaster Laboratories Environmental

Sample Administration Receipt Documentation Log

Doc Log ID: 158237

Group Number(s): 1694957

Client: GWS

Delivery and Receipt Information

Delivery Method:	ELLE Courier	Arrival Timestamp:	08/12/2016 14:10
Number of Packages:	13	Number of Projects:	1
State/Province of Origin:	NY		

Arrival Condition Summary

Shipping Container Sealed:	Yes	Sample IDs on COC match Containers:	Yes
Custody Seal Present:	No	Sample Date/Times match COC:	Yes
Samples Chilled:	N/A	VOA Vial Headspace ≥ 6mm:	N/A
Paperwork Enclosed:	Yes	Total Trip Blank Qty:	0
Samples Intact:	Yes	Air Quality Samples Present:	Yes
Missing Samples:	No	Air Quality Flow Controllers Present:	Yes
Extra Samples:	No	Flow Controller Quantity:	70
Discrepancy in Container Qty on COC:	No	Air Quality Returns:	Yes
		Summa Canisters:	1331,1093

Unpacked by Melvin Sanchez (8943) at 16:14 on 08/12/2016

2425 New Holland Pike
Lancaster, PA 17605-2425

T | 717-656-2300
F | 717-656-2681
www.LancasterLabs.com

Explanation of Symbols and Abbreviations

The following defines common symbols and abbreviations used in reporting technical data:

RL	Reporting Limit	**BMQL**	Below Minimum Quantitation Level
N.D.	none detected	**MPN**	Most Probable Number
TNTC	Too Numerous To Count	**CP Units**	cobalt-chloroplatinate units
IU	International Units	**NTU**	nephelometric turbidity units
umhos/cm	micromhos/cm	**ng**	nanogram(s)
C	degrees Celsius	**F**	degrees Fahrenheit
meq	milliequivalents	**lb.**	pound(s)
g	gram(s)	**kg**	kilogram(s)
µg	microgram(s)	**mg**	milligram(s)
mL	milliliter(s)	**L**	liter(s)
m3	cubic meter(s)	**µL**	microliter(s)
		pg/L	picogram/liter

<	less than
>	greater than
ppm	parts per million - One ppm is equivalent to one milligram per kilogram (mg/kg) or one gram per million grams. For aqueous liquids, ppm is usually taken to be equivalent to milligrams per liter (mg/l), because one liter of water has a weight very close to a kilogram. For gases or vapors, one ppm is equivalent to one microliter per liter of gas.
ppb	parts per billion
Dry weight basis	Results printed under this heading have been adjusted for moisture content. This increases the analyte weight concentration to approximate the value present in a similar sample without moisture. All other results are reported on an as-received basis.

Laboratory Data Qualifiers:

B - Analyte detected in the blank
C - Result confirmed by reanalysis
E - Concentration exceeds the calibration range
J (or G, I, X) - estimated value ≥ the Method Detection Limit (MDL or DL) and < the Limit of Quantitation (LOQ or RL)
P - Concentration difference between the primary and confirmation column >40%. The lower result is reported.
U - Analyte was not detected at the value indicated
V - Concentration difference between the primary and confirmation column >100%. The reporting limit is raised due to this disparity and evident interference…

Additional Organic and Inorganic CLP qualifiers may be used with Form 1 reports as defined by the CLP methods.
Qualifiers specific to Dioxin/Furans and PCB Congeners are detailed on the individual Analysis Report.

Analytical test results meet all requirements of the associated regulatory program (i.e., NELAC (TNI), DoD, and ISO 17025) unless otherwise noted under the individual analysis.

Measurement uncertainty values, as applicable, are available upon request.

Tests results relate only to the sample tested. Clients should be aware that a critical step in a chemical or microbiological analysis is the collection of the sample. Unless the sample analyzed is truly representative of the bulk of material involved, the test results will be meaningless. If you have questions regarding the proper techniques of collecting samples, please contact us. We cannot be held responsible for sample integrity, however, unless sampling has been performed by a member of our staff.

This report shall not be reproduced except in full, without the written approval of the laboratory.

Times are local to the area of activity. Parameters listed in the 40 CFR Part 136 Table II as “analyze immediately” are not performed within 15 minutes.

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Analysis Report

ANALYTICAL RESULTS

Prepared by:

Eurofins Lancaster Laboratories Environmental
2425 New Holland Pike
Lancaster, PA 17601

Prepared for:

IBM
8976 Wellington Road
Manassas VA 20109

Report Date: August 24, 2016

Project: IBM

Submittal Date: 08/12/2016
Group Number: 1694959
PO Number: 5004872019
Release Number: NON-ROUTINE
State of Sample Origin: NY

Client Sample Description	Lancaster Labs (LL) #
EN0418S160809 Air	8526580
EN0418D160809 Air	8526581
EN0419D160810 Air	8526582
EN0419S160810 Air	8526583
EN0421S160810 Air	8526584
EN0417S160810 Air	8526585
EQB1333160810 Air	8526586
EN0417D160810 Air	8526587
EN0420S160810 Air	8526588
EN0420D160810 Air	8526589
DU1169160810 Air	8526590

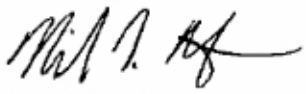
The specific methodologies used in obtaining the enclosed analytical results are indicated on the Laboratory Sample Analysis Record.

Regulatory agencies do not accredit laboratories for all methods, analytes, and matrices. Our scopes of accreditation can be viewed at http://www.eurofinsus.com/environment-testing/laboratories/eurofins-lancaster-laboratories-environmental/resources/certifications/ .

Electronic Copy To GSC Attn: Scott Morgan

2425 New Holland Pike, Lancaster, PA 17601 • 717-656-2300 • Fax: 717-656-2681 • www.LancasterLabs.com

Respectfully Submitted,



Nicole L. Maljovec
Manager

(717) 556-7259

Sample Description: EN0418S160809 Air
Summa Can# 1099
IBM

LL Sample # AQ 8526580
LL Group # 1694959
Account # 12618

Project Name: IBM

Collected: 08/09/2016 15:56 by KF
through 08/09/2016 16:56
Submitted: 08/12/2016 14:10
Reported: 08/24/2016 16:56

IBM
8976 Wellington Road
Manassas VA 20109

CAT No.	Analysis Name	CAS Number	Final Result		MDL	Final Result		MDL	DF
Volatiles in Air EPA TO-15			ppb(v)		ppb(v)	ug/m3		ug/m3	
05298	Chloroethane	75-00-3	N.D.		0.20	N.D.		0.53	1
05298	1,1-Dichloroethane	75-34-3	N.D.		0.20	N.D.		0.81	1
05298	1,1-Dichloroethene	75-35-4	N.D.		0.20	N.D.		0.79	1
05298	cis-1,2-Dichloroethene	156-59-2	N.D.		0.20	N.D.		0.79	1
05298	trans-1,2-Dichloroethene	156-60-5	N.D.		0.20	N.D.		0.79	1
05298	Freon 113	76-13-1	N.D.		0.50	N.D.		3.8	1
05298	Methylene Chloride	75-09-2	4.0		0.20	14		0.69	1
05298	Tetrachloroethene	127-18-4	0.24	J	0.20	1.6	J	1.4	1
05298	1,1,1-Trichloroethane	71-55-6	N.D.		0.20	N.D.		1.1	1
05298	1,1,2-Trichloroethane	79-00-5	N.D.		0.20	N.D.		1.1	1
05298	Trichloroethene	79-01-6	N.D.		0.20	N.D.		1.1	1
05298	Vinyl Chloride	75-01-4	N.D.		0.20	N.D.		0.51	1

MDL = Method Detection Limit

Sample Comments

State of New York Certification No. 10670

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
05298	IBM Selected VOCs List-PA	EPA TO-15	1	D1623630AA	08/23/2016 21:34	Jacob E Bailey	1

Sample Description: EN0418D160809 Air
Summa Can# 1302
IBM

LL Sample # AQ 8526581
LL Group # 1694959
Account # 12618

Project Name: IBM

Collected: 08/09/2016 15:58 by KF
through 08/09/2016 16:58
Submitted: 08/12/2016 14:10
Reported: 08/24/2016 16:56

IBM
8976 Wellington Road
Manassas VA 20109

CAT No.	Analysis Name	CAS Number	Final Result		MDL	Final Result		MDL	DF
Volatiles in Air EPA TO-15			ppb(v)		ppb(v)	ug/m3		ug/m3	
05298	Chloroethane	75-00-3	N.D.		0.20	N.D.		0.53	1
05298	1,1-Dichloroethane	75-34-3	0.28	J	0.20	1.1	J	0.81	1
05298	1,1-Dichloroethene	75-35-4	N.D.		0.20	N.D.		0.79	1
05298	cis-1,2-Dichloroethene	156-59-2	0.99	J	0.20	3.9	J	0.79	1
05298	trans-1,2-Dichloroethene	156-60-5	N.D.		0.20	N.D.		0.79	1
05298	Freon 113	76-13-1	N.D.		0.50	N.D.		3.8	1
05298	Methylene Chloride	75-09-2	N.D.		0.20	N.D.		0.69	1
05298	Tetrachloroethene	127-18-4	1.1		0.20	7.5		1.4	1
05298	1,1,1-Trichloroethane	71-55-6	9.4		0.20	51		1.1	1
05298	1,1,2-Trichloroethane	79-00-5	N.D.		0.20	N.D.		1.1	1
05298	Trichloroethene	79-01-6	110		4.0	580		21	20
05298	Vinyl Chloride	75-01-4	N.D.		0.20	N.D.		0.51	1

MDL = Method Detection Limit

Sample Comments

State of New York Certification No. 10670

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
05298	IBM Selected VOCs List-PA	EPA TO-15	1	D1623630AA	08/23/2016 22:03	Jacob E Bailey	1
05298	IBM Selected VOCs List-PA	EPA TO-15	1	D1623630AA	08/24/2016 09:03	Jacob E Bailey	20

Sample Description: EN0419D160810 Air
Summa Can# 997
IBM

LL Sample # AQ 8526582
LL Group # 1694959
Account # 12618

Project Name: IBM

Collected: 08/10/2016 12:24 by KF
through 08/10/2016 13:24
Submitted: 08/12/2016 14:10
Reported: 08/24/2016 16:56

IBM
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Manassas VA 20109

CAT No.	Analysis Name	CAS Number	Final Result		MDL	Final Result		MDL	DF
Volatiles in Air EPA TO-15			ppb(v)		ppb(v)	ug/m3		ug/m3	
05298	Chloroethane	75-00-3	N.D.		0.50	N.D.		1.3	2.5
05298	1,1-Dichloroethane	75-34-3	N.D.		0.50	N.D.		2.0	2.5
05298	1,1-Dichloroethene	75-35-4	N.D.		0.50	N.D.		2.0	2.5
05298	cis-1,2-Dichloroethene	156-59-2	1.5	J	0.50	5.8	J	2.0	2.5
05298	trans-1,2-Dichloroethene	156-60-5	N.D.		0.50	N.D.		2.0	2.5
05298	Freon 113	76-13-1	N.D.		1.3	N.D.		9.6	2.5
05298	Methylene Chloride	75-09-2	N.D.		0.50	N.D.		1.7	2.5
05298	Tetrachloroethene	127-18-4	1.1	J	0.50	7.7	J	3.4	2.5
05298	1,1,1-Trichloroethane	71-55-6	8.8		0.50	48		2.7	2.5
05298	1,1,2-Trichloroethane	79-00-5	N.D.		0.50	N.D.		2.7	2.5
05298	Trichloroethene	79-01-6	54		0.50	290		2.7	2.5
05298	Vinyl Chloride	75-01-4	N.D.		0.50	N.D.		1.3	2.5

MDL = Method Detection Limit

Sample Comments

State of New York Certification No. 10670

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Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
05298	IBM Selected VOCs List-PA	EPA TO-15	1	D1623630AA	08/24/2016 10:35	Jacob E Bailey	2.5

Sample Description: EN0419S160810 Air
Summa Can# 921
IBM

LL Sample # AQ 8526583
LL Group # 1694959
Account # 12618

Project Name: IBM

Collected: 08/10/2016 12:17 by KF
through 08/10/2016 13:17
Submitted: 08/12/2016 14:10
Reported: 08/24/2016 16:56

IBM
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Manassas VA 20109

CAT No.	Analysis Name	CAS Number	Final Result	MDL	Final Result	MDL	DF
Volatiles in Air	**EPA TO-15**		ppb(v)	ppb(v)	ug/m3	ug/m3	
05298	Chloroethane	75-00-3	N.D.	0.20	N.D.	0.53	1
05298	1,1-Dichloroethane	75-34-3	N.D.	0.20	N.D.	0.81	1
05298	1,1-Dichloroethene	75-35-4	N.D.	0.20	N.D.	0.79	1
05298	cis-1,2-Dichloroethene	156-59-2	N.D.	0.20	N.D.	0.79	1
05298	trans-1,2-Dichloroethene	156-60-5	N.D.	0.20	N.D.	0.79	1
05298	Freon 113	76-13-1	N.D.	0.50	N.D.	3.8	1
05298	Methylene Chloride	75-09-2	4.3	0.20	15	0.69	1
05298	Tetrachloroethene	127-18-4	N.D.	0.20	N.D.	1.4	1
05298	1,1,1-Trichloroethane	71-55-6	N.D.	0.20	N.D.	1.1	1
05298	1,1,2-Trichloroethane	79-00-5	N.D.	0.20	N.D.	1.1	1
05298	Trichloroethene	79-01-6	N.D.	0.20	N.D.	1.1	1
05298	Vinyl Chloride	75-01-4	N.D.	0.20	N.D.	0.51	1

The GC/MS internal standard peak areas were outside of the QC limits for both the initial injection and the re-injection. The values here are from the initial injection of the sample.

MDL = Method Detection Limit

Sample Comments

State of New York Certification No. 10670

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Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
05298	IBM Selected VOCs List-PA	EPA TO-15	1	D1623630AA	08/23/2016 23:18	Jacob E Bailey	1

Sample Description: EN0421S160810 Air
Summa Can# 1325
IBM

LL Sample # AQ 8526584
LL Group # 1694959
Account # 12618

Project Name: IBM

Collected: 08/10/2016 12:12 by KF
through 08/10/2016 13:12
Submitted: 08/12/2016 14:10
Reported: 08/24/2016 16:56

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Manassas VA 20109

CAT No.	Analysis Name	CAS Number	Final Result	MDL	Final Result	MDL	DF
Volatiles in Air EPA TO-15			ppb(v)	ppb(v)	ug/m3	ug/m3	
05298	Chloroethane	75-00-3	N.D.	0.20	N.D.	0.53	1
05298	1,1-Dichloroethane	75-34-3	N.D.	0.20	N.D.	0.81	1
05298	1,1-Dichloroethene	75-35-4	N.D.	0.20	N.D.	0.79	1
05298	cis-1,2-Dichloroethene	156-59-2	N.D.	0.20	N.D.	0.79	1
05298	trans-1,2-Dichloroethene	156-60-5	N.D.	0.20	N.D.	0.79	1
05298	Freon 113	76-13-1	N.D.	0.50	N.D.	3.8	1
05298	Methylene Chloride	75-09-2	N.D.	0.20	N.D.	0.69	1
05298	Tetrachloroethene	127-18-4	N.D.	0.20	N.D.	1.4	1
05298	1,1,1-Trichloroethane	71-55-6	N.D.	0.20	N.D.	1.1	1
05298	1,1,2-Trichloroethane	79-00-5	N.D.	0.20	N.D.	1.1	1
05298	Trichloroethene	79-01-6	N.D.	0.20	N.D.	1.1	1
05298	Vinyl Chloride	75-01-4	N.D.	0.20	N.D.	0.51	1

MDL = Method Detection Limit

Sample Comments

State of New York Certification No. 10670

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
05298	IBM Selected VOCs List-PA	EPA TO-15	1	D1623630AA	08/23/2016 23:46	Jacob E Bailey	1

Sample Description: EN0417S160810 Air
Summa Can# 1058
IBM

LL Sample # AQ 8526585
LL Group # 1694959
Account # 12618

Project Name: IBM

Collected: 08/10/2016 07:45 by KF
through 08/10/2016 09:45
Submitted: 08/12/2016 14:10
Reported: 08/24/2016 16:56

IBM
8976 Wellington Road
Manassas VA 20109

CAT No.	Analysis Name	CAS Number	Final Result	MDL	Final Result	MDL	DF
Volatiles in Air EPA TO-15			ppb(v)	ppb(v)	ug/m3	ug/m3	
05298	Chloroethane	75-00-3	N.D.	0.20	N.D.	0.53	1
05298	1,1-Dichloroethane	75-34-3	N.D.	0.20	N.D.	0.81	1
05298	1,1-Dichloroethene	75-35-4	N.D.	0.20	N.D.	0.79	1
05298	cis-1,2-Dichloroethene	156-59-2	N.D.	0.20	N.D.	0.79	1
05298	trans-1,2-Dichloroethene	156-60-5	N.D.	0.20	N.D.	0.79	1
05298	Freon 113	76-13-1	N.D.	0.50	N.D.	3.8	1
05298	Methylene Chloride	75-09-2	6.8	0.20	24	0.69	1
05298	Tetrachloroethene	127-18-4	N.D.	0.20	N.D.	1.4	1
05298	1,1,1-Trichloroethane	71-55-6	1.2	0.20	6.8	1.1	1
05298	1,1,2-Trichloroethane	79-00-5	N.D.	0.20	N.D.	1.1	1
05298	Trichloroethene	79-01-6	35	1.0	190	5.4	5
05298	Vinyl Chloride	75-01-4	N.D.	0.20	N.D.	0.51	1

MDL = Method Detection Limit

Sample Comments

State of New York Certification No. 10670

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
05298	IBM Selected VOCs List-PA	EPA TO-15	1	D1623630AA	08/24/2016 00:14	Jacob E Bailey	1
05298	IBM Selected VOCs List-PA	EPA TO-15	1	D1623630AA	08/24/2016 09:38	Jacob E Bailey	5

Sample Description: EQB1333160810 Air
Summa Can# 1333
IBM

LL Sample # AQ 8526586
LL Group # 1694959
Account # 12618

Project Name: IBM

Collected: 08/10/2016 07:56 by KF
through 08/10/2016 08:56
Submitted: 08/12/2016 14:10
Reported: 08/24/2016 16:56

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CAT No.	Analysis Name	CAS Number	Final Result	MDL	Final Result	MDL	DF
Volatiles in Air EPA TO-15			ppb(v)	ppb(v)	ug/m3	ug/m3	
05298	Chloroethane	75-00-3	N.D.	0.20	N.D.	0.53	1
05298	1,1-Dichloroethane	75-34-3	N.D.	0.20	N.D.	0.81	1
05298	1,1-Dichloroethene	75-35-4	N.D.	0.20	N.D.	0.79	1
05298	cis-1,2-Dichloroethene	156-59-2	N.D.	0.20	N.D.	0.79	1
05298	trans-1,2-Dichloroethene	156-60-5	N.D.	0.20	N.D.	0.79	1
05298	Freon 113	76-13-1	N.D.	0.50	N.D.	3.8	1
05298	Methylene Chloride	75-09-2	0.91 J	0.20	3.2 J	0.69	1
05298	Tetrachloroethene	127-18-4	N.D.	0.20	N.D.	1.4	1
05298	1,1,1-Trichloroethane	71-55-6	N.D.	0.20	N.D.	1.1	1
05298	1,1,2-Trichloroethane	79-00-5	N.D.	0.20	N.D.	1.1	1
05298	Trichloroethene	79-01-6	N.D.	0.20	N.D.	1.1	1
05298	Vinyl Chloride	75-01-4	N.D.	0.20	N.D.	0.51	1

MDL = Method Detection Limit

Sample Comments

State of New York Certification No. 10670

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
05298	IBM Selected VOCs List-PA	EPA TO-15	1	D1623630AA	08/24/2016 00:46	Jacob E Bailey	1

Sample Description: EN0417D160810 Air
Summa Can# 988
IBM

LL Sample # AQ 8526587
LL Group # 1694959
Account # 12618

Project Name: IBM

Collected: 08/10/2016 07:55 by KF
through 08/10/2016 08:55
Submitted: 08/12/2016 14:10
Reported: 08/24/2016 16:56

IBM
8976 Wellington Road
Manassas VA 20109

CAT No.	Analysis Name	CAS Number	Final Result		MDL	Final Result		MDL	DF
Volatiles in Air EPA TO-15			ppb(v)		ppb(v)	ug/m3		ug/m3	
05298	Chloroethane	75-00-3	N.D.		0.20	N.D.		0.53	1
05298	1,1-Dichloroethane	75-34-3	N.D.		0.20	N.D.		0.81	1
05298	1,1-Dichloroethene	75-35-4	N.D.		0.20	N.D.		0.79	1
05298	cis-1,2-Dichloroethene	156-59-2	N.D.		0.20	N.D.		0.79	1
05298	trans-1,2-Dichloroethene	156-60-5	N.D.		0.20	N.D.		0.79	1
05298	Freon 113	76-13-1	N.D.		0.50	N.D.		3.8	1
05298	Methylene Chloride	75-09-2	N.D.		0.20	N.D.		0.69	1
05298	Tetrachloroethene	127-18-4	N.D.		0.20	N.D.		1.4	1
05298	1,1,1-Trichloroethane	71-55-6	N.D.		0.20	N.D.		1.1	1
05298	1,1,2-Trichloroethane	79-00-5	N.D.		0.20	N.D.		1.1	1
05298	Trichloroethene	79-01-6	0.29	J	0.20	1.5	J	1.1	1
05298	Vinyl Chloride	75-01-4	N.D.		0.20	N.D.		0.51	1

MDL = Method Detection Limit

Sample Comments

State of New York Certification No. 10670

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
05298	IBM Selected VOCs List-PA	EPA TO-15	1	D1623630AA	08/24/2016 01:13	Jacob E Bailey	1

Sample Description: EN0420S160810 Air
Summa Can# 1012
IBM

LL Sample # AQ 8526588
LL Group # 1694959
Account # 12618

Project Name: IBM

Collected: 08/10/2016 10:08 by KF
through 08/10/2016 11:08
Submitted: 08/12/2016 14:10
Reported: 08/24/2016 16:56

IBM
8976 Wellington Road
Manassas VA 20109

CAT No.	Analysis Name	CAS Number	Final Result	MDL	Final Result	MDL	DF
Volatiles in Air EPA TO-15			ppb(v)	ppb(v)	ug/m3	ug/m3	
05298	Chloroethane	75-00-3	N.D.	0.20	N.D.	0.53	1
05298	1,1-Dichloroethane	75-34-3	N.D.	0.20	N.D.	0.81	1
05298	1,1-Dichloroethene	75-35-4	N.D.	0.20	N.D.	0.79	1
05298	cis-1,2-Dichloroethene	156-59-2	N.D.	0.20	N.D.	0.79	1
05298	trans-1,2-Dichloroethene	156-60-5	N.D.	0.20	N.D.	0.79	1
05298	Freon 113	76-13-1	N.D.	0.50	N.D.	3.8	1
05298	Methylene Chloride	75-09-2	3.7	0.20	13	0.69	1
05298	Tetrachloroethene	127-18-4	N.D.	0.20	N.D.	1.4	1
05298	1,1,1-Trichloroethane	71-55-6	N.D.	0.20	N.D.	1.1	1
05298	1,1,2-Trichloroethane	79-00-5	N.D.	0.20	N.D.	1.1	1
05298	Trichloroethene	79-01-6	N.D.	0.20	N.D.	1.1	1
05298	Vinyl Chloride	75-01-4	N.D.	0.20	N.D.	0.51	1

MDL = Method Detection Limit

Sample Comments

State of New York Certification No. 10670

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
05298	IBM Selected VOCs List-PA	EPA TO-15	1	D1623630AA	08/24/2016 01:41	Jacob E Bailey	1

Sample Description: EN0420D160810 Air
Summa Can# 1057
IBM

LL Sample # AQ 8526589
LL Group # 1694959
Account # 12618

Project Name: IBM

Collected: 08/10/2016 10:11 by KF
through 08/10/2016 11:11
Submitted: 08/12/2016 14:10
Reported: 08/24/2016 16:56

IBM
8976 Wellington Road
Manassas VA 20109

CAT No.	Analysis Name	CAS Number	Final Result	MDL	Final Result	MDL	DF
Volatiles in Air EPA TO-15			ppb(v)	ppb(v)	ug/m3	ug/m3	
05298	Chloroethane	75-00-3	N.D.	0.20	N.D.	0.53	1
05298	1,1-Dichloroethane	75-34-3	N.D.	0.20	N.D.	0.81	1
05298	1,1-Dichloroethene	75-35-4	N.D.	0.20	N.D.	0.79	1
05298	cis-1,2-Dichloroethene	156-59-2	N.D.	0.20	N.D.	0.79	1
05298	trans-1,2-Dichloroethene	156-60-5	N.D.	0.20	N.D.	0.79	1
05298	Freon 113	76-13-1	N.D.	0.50	N.D.	3.8	1
05298	Methylene Chloride	75-09-2	5.7	0.20	20	0.69	1
05298	Tetrachloroethene	127-18-4	N.D.	0.20	N.D.	1.4	1
05298	1,1,1-Trichloroethane	71-55-6	1.6	0.20	8.9	1.1	1
05298	1,1,2-Trichloroethane	79-00-5	N.D.	0.20	N.D.	1.1	1
05298	Trichloroethene	79-01-6	16	0.20	85	1.1	1
05298	Vinyl Chloride	75-01-4	N.D.	0.20	N.D.	0.51	1

MDL = Method Detection Limit

Sample Comments

State of New York Certification No. 10670

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
05298	IBM Selected VOCs List-PA	EPA TO-15	1	D1623630AA	08/24/2016 02:14	Jacob E Bailey	1

Sample Description: DU1169160810 Air
Summa Can# 1169
IBM

LL Sample # AQ 8526590
LL Group # 1694959
Account # 12618

Project Name: IBM

Collected: 08/10/2016 07:45 by KF
through 08/10/2016 09:45
Submitted: 08/12/2016 14:10
Reported: 08/24/2016 16:56

IBM
8976 Wellington Road
Manassas VA 20109

CAT No.	Analysis Name	CAS Number	Final Result		MDL	Final Result		MDL	DF
Volatiles in Air EPA TO-15			ppb(v)		ppb(v)	ug/m3		ug/m3	
05298	Chloroethane	75-00-3	N.D.		0.50	N.D.		1.3	2.5
05298	1,1-Dichloroethane	75-34-3	N.D.		0.50	N.D.		2.0	2.5
05298	1,1-Dichloroethene	75-35-4	N.D.		0.50	N.D.		2.0	2.5
05298	cis-1,2-Dichloroethene	156-59-2	N.D.		0.50	N.D.		2.0	2.5
05298	trans-1,2-Dichloroethene	156-60-5	N.D.		0.50	N.D.		2.0	2.5
05298	Freon 113	76-13-1	N.D.		1.3	N.D.		9.6	2.5
05298	Methylene Chloride	75-09-2	N.D.		0.50	N.D.		1.7	2.5
05298	Tetrachloroethene	127-18-4	N.D.		0.50	N.D.		3.4	2.5
05298	1,1,1-Trichloroethane	71-55-6	1.4	J	0.50	7.6	J	2.7	2.5
05298	1,1,2-Trichloroethane	79-00-5	N.D.		0.50	N.D.		2.7	2.5
05298	Trichloroethene	79-01-6	38		0.50	210		2.7	2.5
05298	Vinyl Chloride	75-01-4	N.D.		0.50	N.D.		1.3	2.5

The GC/MS internal standard peak areas were outside of the QC limits for both the initial injection and the re-injection. The values here are from the re-injection of the sample.

MDL = Method Detection Limit

Sample Comments

State of New York Certification No. 10670

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
05298	IBM Selected VOCs List-PA	EPA TO-15	1	D1623630AA	08/24/2016 10:08	Jacob E Bailey	2.5

Quality Control Summary

Client Name: IBM
Reported: 08/24/2016 16:56

Group Number: 1694959

Matrix QC may not be reported if insufficient sample or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD was performed, unless otherwise specified in the method.

All Inorganic Initial Calibration and Continuing Calibration Blanks met acceptable method criteria unless otherwise noted on the Analysis Report.

Method Blank

Analysis Name	Result ppb(v)	MDL ppb(v)	Result ug/m3	MDL ug/m3
Batch number: D1623630AA	Sample number(s): 8526580-8526590			
Chloroethane	N.D.	0.20	N.D.	0.53
1,1-Dichloroethane	N.D.	0.20	N.D.	0.81
1,1-Dichloroethene	N.D.	0.20	N.D.	0.79
cis-1,2-Dichloroethene	N.D.	0.20	N.D.	0.79
trans-1,2-Dichloroethene	N.D.	0.20	N.D.	0.79
Freon 113	N.D.	0.50	N.D.	3.8
Methylene Chloride	N.D.	0.20	N.D.	0.69
Tetrachloroethene	N.D.	0.20	N.D.	1.4
1,1,1-Trichloroethane	N.D.	0.20	N.D.	1.1
1,1,2-Trichloroethane	N.D.	0.20	N.D.	1.1
Trichloroethene	N.D.	0.20	N.D.	1.1
Vinyl Chloride	N.D.	0.20	N.D.	0.51

LCS/LCSD

Analysis Name	LCS Spike Added ppb(v)	LCS Conc ppb(v)	LCSD Spike Added ppb(v)	LCSD Conc ppb(v)	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
Batch number: D1623630AA	Sample number(s): 8526580-8526590								
Chloroethane	10	10.5	10	11.3	105	113	63-119	7	25
1,1-Dichloroethane	10	10.67	10	11.14	107	111	67-124	4	25
1,1-Dichloroethene	10	10.95	10	11.74	110	117	61-128	7	25
cis-1,2-Dichloroethene	10	11.08	10	11.61	111	116	65-121	5	25
trans-1,2-Dichloroethene	10	10.96	10	11.44	110	114	66-121	4	25
Freon 113	10	9.69	10	10.13	97	101	63-114	4	25
Methylene Chloride	10	10.26	10	10.38	103	104	70-130	1	25
Tetrachloroethene	10	10.8	10	10.67	108	107	70-130	1	25
1,1,1-Trichloroethane	10	10.27	10	10.45	103	104	70-130	2	25
1,1,2-Trichloroethane	10	10.16	10	9.89	102	99	59-131	3	25
Trichloroethene	10	10.54	10	10.69	105	107	70-130	1	25
Vinyl Chloride	10	10.33	10	11.07	103	111	70-130	7	25

*- Outside of specification
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.
P###### is indicative of a Background or Unspiked sample that is batch matrix QC and was not performed using a sample from this submission group.

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Quality Control Summary

Client Name: IBM Group Number: 1694959
Reported: 08/24/2016 16:56

*- Outside of specification
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.
P###### is indicative of a Background or Unspiked sample that is batch matrix QC and was not performed using a sample from this submission group.

Summa Canister Field Test Data/Chain of Custody

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For Eurofins Lancaster Laboratories Environmental use only: Acct. # 12618 Group # 1694959 Sample # 8526580-90 Bottle Order (SCR) # _____

Client Information

Client: GROUNDWATER SCIENCES CORP. Account #:

Project Name/#: IBM

Project Manager: SCOTT MORGAN P.O. #:

Sampler: KAIT FLEMING & KELLY DEVINE Quote #:

Name of state where samples were collected: NEW YORK

Turnaround Time Requested (TAT) (circle one)

(Standard) Rush (specify) _____

Data Package Required? (Yes) No

EDD Required? (Yes) No

	Temperature (F)		Pressure ("Hg)	
	Start	Stop	Start	Stop
Ambient	80	80	30.12	30.08
Maximum	90	90	30.15	30.12
Minimum	70	70	30.09	30.63

Analyses Requested

Sample Identification	Start Date/Time (24-hour clock)	Stop Date/Time (24-hour clock)	Canister Pressure in Field ("Hg) (Start)	Canister Pressure in Field ("Hg) (Stop)	~~Interior~~ Ext. Temp. (F) (Start)	~~Interior~~ Ext. Temp. (F) (Stop)	Flow Reg. ID	Can ID	Can Size (L)	Controller Flowrate (mL/min)	EPA TO - 15 See Comm'ts for List	EPA 18 ☐ MTBE	EPA 25 (select range below) ☐ BTEX	Helium as tracer	O2/CO2	Library Search	
EN0418S160809	8/9 1556	8/9 1656	-30	-9	~90	~90	153310	1099	1	14.1	X						
EN0418D160809	8/9 1558	8/9 1658	-30	-11	~90	~90	958043	1302	1	14.0	X						
EN0419D160810	8/10 1224	8/10 1324	-29.5	-5	~90	~90	824851	997	1	14.2	X						
EN0419S160810	8/10 1217	8/10 1317	-29	-5	~90	~90	301068	921	1	14.0	X						
EN0421S160810	8/10 1212	8/10 1312	-29	-2	~90	~90	958169	1325	1	14.3	X						
EN0417S160810	8/10 0745	8/10 0945	-29	-6.5	~90	~90	958053	1058	1	7.1	X						
EQB133316 0810	8/10 0756	8/10 0856	-29	-2	~90	~90	399349	1333	1	13.9	X						
EN0417D160810	8/10 0755	8/10 0855	-30	-5	~90	~90	824841	988	1	14.5	X						
EN0420S160810	8/10 1008	8/10 1108	-29	-5	~90	~90	710582	1012	1	14.5	X						
EN0420D160810	8/10 1011	8/10 1111	-25	-4	~90	~90	344002	1057	1	14.0	X						
DU116916 0810	8/10 0745	8/10 0945	-30	-10	~90	~90	958076	1169	1	7.1	X						

Instructions/QC Requirements & Comments

ANALYTICAL LIST: PCE, TCE, 1,1-DCE, CIS 1,2-DCE, TRANS 1,2-DCE, VC, TCA, 1,1-DCA, CHLOROETHANE, MeCl, FREON 113

EPA 25 (check one) ☐ C1 - C4 ☐ C2 - C10 ☐ C1 - C10 ☐ C4 - C10 (GRO) ☐ C2 - C4

Canisters Shipped by:	Date/Time:	Canisters Received by:	Date/Time:	Relinquished by:	Date/Time:	Received by:	Date/Time:
	8/12/16		8/13/16 1240				
Relinquished by:	Date/Time:	Received by:	Date/Time:	Relinquished by:	Date/Time:	Received by:	Date/Time:
Relinquished by:	Date/Time:	Received by:	Date/Time:	Relinquished by:	Date/Time: 8/13/16 1410	Received by: E Sanchez	Date/Time: 8-13-16 1410

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Sample Administration Receipt Documentation Log

Doc Log ID: 158237

Group Number(s): 1694959

Client: GWS

Delivery and Receipt Information

Delivery Method:	ELLE Courier	Arrival Timestamp:	08/12/2016 14:10
Number of Packages:	13	Number of Projects:	1
State/Province of Origin:	NY		

Arrival Condition Summary

Shipping Container Sealed:	Yes	Sample IDs on COC match Containers:	Yes
Custody Seal Present:	No	Sample Date/Times match COC:	Yes
Samples Chilled:	N/A	VOA Vial Headspace ≥ 6mm:	N/A
Paperwork Enclosed:	Yes	Total Trip Blank Qty:	0
Samples Intact:	Yes	Air Quality Samples Present:	Yes
Missing Samples:	No	Air Quality Flow Controllers Present:	Yes
Extra Samples:	No	Flow Controller Quantity:	70
Discrepancy in Container Qty on COC:	No	Air Quality Returns:	Yes
		Summa Canisters:	1331,1093

Unpacked by Melvin Sanchez (8943) at 16:14 on 08/12/2016

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Explanation of Symbols and Abbreviations

The following defines common symbols and abbreviations used in reporting technical data:

RL	Reporting Limit	**BMQL**	Below Minimum Quantitation Level
N.D.	none detected	**MPN**	Most Probable Number
TNTC	Too Numerous To Count	**CP Units**	cobalt-chloroplatinate units
IU	International Units	**NTU**	nephelometric turbidity units
umhos/cm	micromhos/cm	**ng**	nanogram(s)
C	degrees Celsius	**F**	degrees Fahrenheit
meq	milliequivalents	**lb.**	pound(s)
g	gram(s)	**kg**	kilogram(s)
µg	microgram(s)	**mg**	milligram(s)
mL	milliliter(s)	**L**	liter(s)
m3	cubic meter(s)	**µL**	microliter(s)
		pg/L	picogram/liter

<	less than
>	greater than
ppm	parts per million - One ppm is equivalent to one milligram per kilogram (mg/kg) or one gram per million grams. For aqueous liquids, ppm is usually taken to be equivalent to milligrams per liter (mg/l), because one liter of water has a weight very close to a kilogram. For gases or vapors, one ppm is equivalent to one microliter per liter of gas.
ppb	parts per billion
Dry weight basis	Results printed under this heading have been adjusted for moisture content. This increases the analyte weight concentration to approximate the value present in a similar sample without moisture. All other results are reported on an as-received basis.

Laboratory Data Qualifiers:

B - Analyte detected in the blank
C - Result confirmed by reanalysis
E - Concentration exceeds the calibration range
J (or G, I, X) - estimated value ≥ the Method Detection Limit (MDL or DL) and < the Limit of Quantitation (LOQ or RL)
P - Concentration difference between the primary and confirmation column >40%. The lower result is reported.
U - Analyte was not detected at the value indicated
V - Concentration difference between the primary and confirmation column >100%. The reporting limit is raised due to this disparity and evident interference…

Additional Organic and Inorganic CLP qualifiers may be used with Form 1 reports as defined by the CLP methods. Qualifiers specific to Dioxin/Furans and PCB Congeners are detailed on the individual Analysis Report.

Analytical test results meet all requirements of the associated regulatory program (i.e., NELAC (TNI), DoD, and ISO 17025) unless otherwise noted under the individual analysis.

Measurement uncertainty values, as applicable, are available upon request.

Tests results relate only to the sample tested. Clients should be aware that a critical step in a chemical or microbiological analysis is the collection of the sample. Unless the sample analyzed is truly representative of the bulk of material involved, the test results will be meaningless. If you have questions regarding the proper techniques of collecting samples, please contact us. We cannot be held responsible for sample integrity, however, unless sampling has been performed by a member of our staff.

Times are local to the area of activity. Parameters listed in the 40 CFR Part 136 Table II as “analyze immediately” are not performed within 15 minutes.

WARRANTY AND LIMITS OF LIABILITY - In accepting analytical work, we warrant the accuracy of test results for the sample as submitted. THE FOREGOING EXPRESS WARRANTY IS EXCLUSIVE AND IS GIVEN IN LIEU OF ALL OTHER WARRANTIES, EXPRESSED OR IMPLIED. WE DISCLAIM ANY OTHER WARRANTIES, EXPRESSED OR IMPLIED, INCLUDING A WARRANTY OF FITNESS FOR PARTICULAR PURPOSE AND WARRANTY OF MERCHANTABILITY. IN NO EVENT SHALL EUROFINS LANCASTER LABORATORIES ENVIRONMENTAL, LLC BE LIABLE FOR INDIRECT, SPECIAL, CONSEQUENTIAL, OR INCIDENTAL DAMAGES INCLUDING, BUT NOT LIMITED TO, DAMAGES FOR LOSS OF PROFIT OR GOODWILL REGARDLESS OF (A) THE NEGLIGENCE (EITHER SOLE OR CONCURRENT) OF EUROFINS LANCASTER LABORATORIES ENVIRONMENTAL AND (B) WHETHER EUROFINS LANCASTER LABORATORIES ENVIRONMENTAL HAS BEEN INFORMED OF THE POSSIBILITY OF SUCH DAMAGES. We accept no legal responsibility for the purposes for which the client uses the test results. No purchase order or other order for work shall be accepted by Eurofins Lancaster Laboratories Environmental which includes any conditions that vary from the Standard Terms and Conditions, and Eurofins Lancaster Laboratories Environmental hereby objects to any conflicting terms contained in any acceptance or order submitted by client.

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Analysis Report

ANALYTICAL RESULTS

Prepared by:

Eurofins Lancaster Laboratories Environmental
2425 New Holland Pike
Lancaster, PA 17601

Prepared for:

IBM
8976 Wellington Road
Manassas VA 20109

Report Date: August 25, 2016

Project: IBM

Submittal Date: 08/15/2016
Group Number: 1695051
PO Number: 5004872019
Release Number: NON-ROUTINE
State of Sample Origin: NY

Client Sample Description	Lancaster Labs (LL) #
EN0413SDUP160811 Air	8527424
EN0413S160811 Air	8527425
EN0432D160810 Air	8527426
EN0432S160810 Air	8527427
EQB160811 Air	8527428
EN046SDUP160811 Air	8527429
EN044S160811 Air	8527430
EN046S160811 Air	8527431
EN044SDUP160811 Air	8527432
EN0413D160811 Air	8527433
EN046D160811 Air	8527434
EN044D160811 Air	8527435

The specific methodologies used in obtaining the enclosed analytical results are indicated on the Laboratory Sample Analysis Record.

Regulatory agencies do not accredit laboratories for all methods, analytes, and matrices. Our scopes of accreditation can be viewed at http://www.eurofinsus.com/environment-testing/laboratories/eurofins-lancaster-laboratories-environmental/resources/certifications/ .

Electronic Copy To GSC Attn: Scott Morgan

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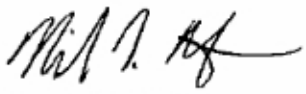
Respectfully Submitted,



Nicole L. Maljovec
Manager

(717) 556-7259

Sample Description: EN0413SDUP160811 Air
SummaCan# 1060
IBM

LL Sample # AQ 8527424
LL Group # 1695051
Account # 12618

Project Name: IBM

Collected: 08/11/2016 07:31 by KD
through 08/11/2016 09:31
Submitted: 08/15/2016 13:30
Reported: 08/25/2016 16:12

IBM
8976 Wellington Road
Manassas VA 20109

CAT No.	Analysis Name	CAS Number	Final Result		MDL	Final Result		MDL	DF
Volatiles in Air EPA TO-15			ppb(v)		ppb(v)	ug/m3		ug/m3	
05298	Chloroethane	75-00-3	N.D.		0.40	N.D.		1.1	2
05298	1,1-Dichloroethane	75-34-3	N.D.		0.40	N.D.		1.6	2
05298	1,1-Dichloroethene	75-35-4	N.D.		0.40	N.D.		1.6	2
05298	cis-1,2-Dichloroethene	156-59-2	N.D.		0.40	N.D.		1.6	2
05298	trans-1,2-Dichloroethene	156-60-5	N.D.		0.40	N.D.		1.6	2
05298	Freon 113	76-13-1	N.D.		1.0	N.D.		7.7	2
05298	Methylene Chloride	75-09-2	N.D.		0.40	N.D.		1.4	2
05298	Tetrachloroethene	127-18-4	N.D.		0.40	N.D.		2.7	2
05298	1,1,1-Trichloroethane	71-55-6	0.69	J	0.40	3.7	J	2.2	2
05298	1,1,2-Trichloroethane	79-00-5	N.D.		0.40	N.D.		2.2	2
05298	Trichloroethene	79-01-6	4.7		0.40	25		2.1	2
05298	Vinyl Chloride	75-01-4	N.D.		0.40	N.D.		1.0	2

MDL = Method Detection Limit

Sample Comments

State of New York Certification No. 10670

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
05298	IBM Selected VOCs List-PA	EPA TO-15	1	D1623730AA	08/24/2016 16:24	Jacob E Bailey	2

Sample Description: EN0413S160811 Air
SummaCan# 1317
IBM

LL Sample # AQ 8527425
LL Group # 1695051
Account # 12618

Project Name: IBM

Collected: 08/11/2016 07:31 by KD
through 08/11/2016 09:31
Submitted: 08/15/2016 13:30
Reported: 08/25/2016 16:12

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Manassas VA 20109

CAT No.	Analysis Name	CAS Number	Final Result		MDL	Final Result		MDL	DF
Volatiles in Air EPA TO-15			ppb(v)		ppb(v)	ug/m3		ug/m3	
05298	Chloroethane	75-00-3	N.D.		0.50	N.D.		1.3	2.5
05298	1,1-Dichloroethane	75-34-3	N.D.		0.50	N.D.		2.0	2.5
05298	1,1-Dichloroethene	75-35-4	N.D.		0.50	N.D.		2.0	2.5
05298	cis-1,2-Dichloroethene	156-59-2	N.D.		0.50	N.D.		2.0	2.5
05298	trans-1,2-Dichloroethene	156-60-5	N.D.		0.50	N.D.		2.0	2.5
05298	Freon 113	76-13-1	N.D.		1.3	N.D.		9.6	2.5
05298	Methylene Chloride	75-09-2	N.D.		0.50	N.D.		1.7	2.5
05298	Tetrachloroethene	127-18-4	N.D.		0.50	N.D.		3.4	2.5
05298	1,1,1-Trichloroethane	71-55-6	0.73	J	0.50	4.0	J	2.7	2.5
05298	1,1,2-Trichloroethane	79-00-5	N.D.		0.50	N.D.		2.7	2.5
05298	Trichloroethene	79-01-6	4.3		0.50	23		2.7	2.5
05298	Vinyl Chloride	75-01-4	N.D.		0.50	N.D.		1.3	2.5

MDL = Method Detection Limit

Sample Comments

State of New York Certification No. 10670

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
05298	IBM Selected VOCs List-PA	EPA TO-15	1	D1623730AA	08/24/2016 16:53	Jacob E Bailey	2.5

Sample Description: EN0432D160810 Air
SummaCan# 1005
IBM

LL Sample # AQ 8527426
LL Group # 1695051
Account # 12618

Project Name: IBM

Collected: 08/10/2016 15:16 by KD
through 08/10/2016 16:16
Submitted: 08/15/2016 13:30
Reported: 08/25/2016 16:12

IBM
8976 Wellington Road
Manassas VA 20109

CAT No.	Analysis Name	CAS Number	Final Result		MDL	Final Result		MDL	DF
Volatiles in Air EPA TO-15			ppb(v)		ppb(v)	ug/m3		ug/m3	
05298	Chloroethane	75-00-3	N.D.		0.20	N.D.		0.53	1
05298	1,1-Dichloroethane	75-34-3	0.79	J	0.20	3.2	J	0.81	1
05298	1,1-Dichloroethene	75-35-4	N.D.		0.20	N.D.		0.79	1
05298	cis-1,2-Dichloroethene	156-59-2	0.31	J	0.20	1.2	J	0.79	1
05298	trans-1,2-Dichloroethene	156-60-5	N.D.		0.20	N.D.		0.79	1
05298	Freon 113	76-13-1	N.D.		0.50	N.D.		3.8	1
05298	Methylene Chloride	75-09-2	N.D.		0.20	N.D.		0.69	1
05298	Tetrachloroethene	127-18-4	0.41	J	0.20	2.8	J	1.4	1
05298	1,1,1-Trichloroethane	71-55-6	11		0.20	63		1.1	1
05298	1,1,2-Trichloroethane	79-00-5	N.D.		0.20	N.D.		1.1	1
05298	Trichloroethene	79-01-6	100		7.5	540		40	37.5
05298	Vinyl Chloride	75-01-4	N.D.		0.20	N.D.		0.51	1

MDL = Method Detection Limit

Sample Comments

State of New York Certification No. 10670

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
05298	IBM Selected VOCs List-PA	EPA TO-15	1	D1623630AA	08/24/2016 04:20	Jacob E Bailey	1
05298	IBM Selected VOCs List-PA	EPA TO-15	1	D1623730AA	08/24/2016 17:16	Jacob E Bailey	37.5

Sample Description: EN0432S160810 Air
SummaCan# 1328
IBM

LL Sample # AQ 8527427
LL Group # 1695051
Account # 12618

Project Name: IBM

Collected: 08/10/2016 15:09 by KD
through 08/10/2016 16:09
Submitted: 08/15/2016 13:30
Reported: 08/25/2016 16:12

IBM
8976 Wellington Road
Manassas VA 20109

CAT No.	Analysis Name	CAS Number	Final Result		MDL	Final Result		MDL	DF
Volatiles in Air EPA TO-15			ppb(v)		ppb(v)	ug/m3		ug/m3	
05298	Chloroethane	75-00-3	N.D.		0.20	N.D.		0.53	1
05298	1,1-Dichloroethane	75-34-3	N.D.		0.20	N.D.		0.81	1
05298	1,1-Dichloroethene	75-35-4	N.D.		0.20	N.D.		0.79	1
05298	cis-1,2-Dichloroethene	156-59-2	N.D.		0.20	N.D.		0.79	1
05298	trans-1,2-Dichloroethene	156-60-5	N.D.		0.20	N.D.		0.79	1
05298	Freon 113	76-13-1	N.D.		0.50	N.D.		3.8	1
05298	Methylene Chloride	75-09-2	0.37	J	0.20	1.3	J	0.69	1
05298	Tetrachloroethene	127-18-4	0.69	J	0.20	4.7	J	1.4	1
05298	1,1,1-Trichloroethane	71-55-6	6.5		0.20	35		1.1	1
05298	1,1,2-Trichloroethane	79-00-5	N.D.		0.20	N.D.		1.1	1
05298	Trichloroethene	79-01-6	120		4.0	620		21	20
05298	Vinyl Chloride	75-01-4	N.D.		0.20	N.D.		0.51	1

MDL = Method Detection Limit

Sample Comments

State of New York Certification No. 10670

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
05298	IBM Selected VOCs List-PA	EPA TO-15	1	D1623630AA	08/24/2016 04:50	Jacob E Bailey	1
05298	IBM Selected VOCs List-PA	EPA TO-15	1	D1623730AA	08/24/2016 17:39	Jacob E Bailey	20

Sample Description: EQB160811 Air
SummaCan# 1008
IBM

LL Sample # AQ 8527428
LL Group # 1695051
Account # 12618

Project Name: IBM

Collected: 08/11/2016 09:47 by KD
through 08/11/2016 10:47
Submitted: 08/15/2016 13:30
Reported: 08/25/2016 16:12

IBM
8976 Wellington Road
Manassas VA 20109

CAT No.	Analysis Name	CAS Number	Final Result		MDL	Final Result		MDL	DF
Volatiles in Air EPA TO-15			ppb(v)		ppb(v)	ug/m3		ug/m3	
05298	Chloroethane	75-00-3	N.D.		0.40	N.D.		1.1	2
05298	1,1-Dichloroethane	75-34-3	N.D.		0.40	N.D.		1.6	2
05298	1,1-Dichloroethene	75-35-4	N.D.		0.40	N.D.		1.6	2
05298	cis-1,2-Dichloroethene	156-59-2	N.D.		0.40	N.D.		1.6	2
05298	trans-1,2-Dichloroethene	156-60-5	N.D.		0.40	N.D.		1.6	2
05298	Freon 113	76-13-1	N.D.		1.0	N.D.		7.7	2
05298	Methylene Chloride	75-09-2	1.0	J	0.40	3.5	J	1.4	2
05298	Tetrachloroethene	127-18-4	N.D.		0.40	N.D.		2.7	2
05298	1,1,1-Trichloroethane	71-55-6	N.D.		0.40	N.D.		2.2	2
05298	1,1,2-Trichloroethane	79-00-5	N.D.		0.40	N.D.		2.2	2
05298	Trichloroethene	79-01-6	N.D.		0.40	N.D.		2.1	2
05298	Vinyl Chloride	75-01-4	N.D.		0.40	N.D.		1.0	2

The GC/MS internal standard peak areas were outside of the QC limits for both the initial injection and the re-injection. The values here are from the re- injection of the sample.

MDL = Method Detection Limit

Sample Comments

State of New York Certification No. 10670

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
05298	IBM Selected VOCs List-PA	EPA TO-15	1	D1623730AA	08/24/2016 18:08	Jacob E Bailey	2

Sample Description: EN046SDUP160811 Air
SummaCan# 530
IBM

LL Sample # AQ 8527429
LL Group # 1695051
Account # 12618

Project Name: IBM

Collected: 08/11/2016 10:32 by KD
through 08/11/2016 12:32
Submitted: 08/15/2016 13:30
Reported: 08/25/2016 16:12

IBM
8976 Wellington Road
Manassas VA 20109

CAT No.	Analysis Name	CAS Number	Final Result	MDL	Final Result	MDL	DF
Volatiles in Air EPA TO-15			ppb(v)	ppb(v)	ug/m3	ug/m3	
05298	Chloroethane	75-00-3	N.D.	0.20	N.D.	0.53	1
05298	1,1-Dichloroethane	75-34-3	N.D.	0.20	N.D.	0.81	1
05298	1,1-Dichloroethene	75-35-4	N.D.	0.20	N.D.	0.79	1
05298	cis-1,2-Dichloroethene	156-59-2	N.D.	0.20	N.D.	0.79	1
05298	trans-1,2-Dichloroethene	156-60-5	N.D.	0.20	N.D.	0.79	1
05298	Freon 113	76-13-1	N.D.	0.50	N.D.	3.8	1
05298	Methylene Chloride	75-09-2	N.D.	0.20	N.D.	0.69	1
05298	Tetrachloroethene	127-18-4	N.D.	0.20	N.D.	1.4	1
05298	1,1,1-Trichloroethane	71-55-6	N.D.	0.20	N.D.	1.1	1
05298	1,1,2-Trichloroethane	79-00-5	N.D.	0.20	N.D.	1.1	1
05298	Trichloroethene	79-01-6	N.D.	0.20	N.D.	1.1	1
05298	Vinyl Chloride	75-01-4	N.D.	0.20	N.D.	0.51	1

MDL = Method Detection Limit

Sample Comments

State of New York Certification No. 10670

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
05298	IBM Selected VOCs List-PA	EPA TO-15	1	D1623730AA	08/24/2016 18:44	Jacob E Bailey	1

Sample Description: EN044S160811 Air
SummaCan# 1024
IBM

LL Sample # AQ 8527430
LL Group # 1695051
Account # 12618

Project Name: IBM

Collected: 08/11/2016 11:13 by KD
through 08/11/2016 13:13
Submitted: 08/15/2016 13:30
Reported: 08/25/2016 16:12

IBM
8976 Wellington Road
Manassas VA 20109

CAT No.	Analysis Name	CAS Number	Final Result		MDL	Final Result		MDL	DF
Volatiles in Air EPA TO-15			ppb(v)		ppb(v)	ug/m3		ug/m3	
05298	Chloroethane	75-00-3	N.D.		0.20	N.D.		0.53	1
05298	1,1-Dichloroethane	75-34-3	N.D.		0.20	N.D.		0.81	1
05298	1,1-Dichloroethene	75-35-4	N.D.		0.20	N.D.		0.79	1
05298	cis-1,2-Dichloroethene	156-59-2	N.D.		0.20	N.D.		0.79	1
05298	trans-1,2-Dichloroethene	156-60-5	N.D.		0.20	N.D.		0.79	1
05298	Freon 113	76-13-1	N.D.		0.50	N.D.		3.8	1
05298	Methylene Chloride	75-09-2	N.D.		0.20	N.D.		0.69	1
05298	Tetrachloroethene	127-18-4	0.31	J	0.20	2.1	J	1.4	1
05298	1,1,1-Trichloroethane	71-55-6	0.46	J	0.20	2.5	J	1.1	1
05298	1,1,2-Trichloroethane	79-00-5	N.D.		0.20	N.D.		1.1	1
05298	Trichloroethene	79-01-6	N.D.		0.20	N.D.		1.1	1
05298	Vinyl Chloride	75-01-4	N.D.		0.20	N.D.		0.51	1

MDL = Method Detection Limit

Sample Comments

State of New York Certification No. 10670

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
05298	IBM Selected VOCs List-PA	EPA TO-15	1	D1623730AA	08/24/2016 19:39	Jacob E Bailey	1

Sample Description: EN046S160811 Air
SummaCan# 1359
IBM

LL Sample # AQ 8527431
LL Group # 1695051
Account # 12618

Project Name: IBM

Collected: 08/11/2016 10:32 by KD
through 08/11/2016 12:32
Submitted: 08/15/2016 13:30
Reported: 08/25/2016 16:12

IBM
8976 Wellington Road
Manassas VA 20109

CAT No.	Analysis Name	CAS Number	Final Result	MDL	Final Result	MDL	DF
Volatiles in Air EPA TO-15			ppb(v)	ppb(v)	ug/m3	ug/m3	
05298	Chloroethane	75-00-3	N.D.	0.20	N.D.	0.53	1
05298	1,1-Dichloroethane	75-34-3	N.D.	0.20	N.D.	0.81	1
05298	1,1-Dichloroethene	75-35-4	N.D.	0.20	N.D.	0.79	1
05298	cis-1,2-Dichloroethene	156-59-2	N.D.	0.20	N.D.	0.79	1
05298	trans-1,2-Dichloroethene	156-60-5	N.D.	0.20	N.D.	0.79	1
05298	Freon 113	76-13-1	N.D.	0.50	N.D.	3.8	1
05298	Methylene Chloride	75-09-2	N.D.	0.20	N.D.	0.69	1
05298	Tetrachloroethene	127-18-4	N.D.	0.20	N.D.	1.4	1
05298	1,1,1-Trichloroethane	71-55-6	N.D.	0.20	N.D.	1.1	1
05298	1,1,2-Trichloroethane	79-00-5	N.D.	0.20	N.D.	1.1	1
05298	Trichloroethene	79-01-6	N.D.	0.20	N.D.	1.1	1
05298	Vinyl Chloride	75-01-4	N.D.	0.20	N.D.	0.51	1

MDL = Method Detection Limit

Sample Comments

State of New York Certification No. 10670

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
05298	IBM Selected VOCs List-PA	EPA TO-15	1	D1623730AA	08/24/2016 20:07	Jacob E Bailey	1

Sample Description: EN044SDUP160811 Air
SummaCan# 894
IBM

LL Sample # AQ 8527432
LL Group # 1695051
Account # 12618

Project Name: IBM

Collected: 08/11/2016 11:13 by KD
through 08/11/2016 13:13
Submitted: 08/15/2016 13:30
Reported: 08/25/2016 16:12

IBM
8976 Wellington Road
Manassas VA 20109

CAT No.	Analysis Name	CAS Number	Final Result		MDL	Final Result		MDL	DF
Volatiles in Air EPA TO-15			ppb(v)		ppb(v)	ug/m3		ug/m3	
05298	Chloroethane	75-00-3	N.D.		0.20	N.D.		0.53	1
05298	1,1-Dichloroethane	75-34-3	N.D.		0.20	N.D.		0.81	1
05298	1,1-Dichloroethene	75-35-4	N.D.		0.20	N.D.		0.79	1
05298	cis-1,2-Dichloroethene	156-59-2	N.D.		0.20	N.D.		0.79	1
05298	trans-1,2-Dichloroethene	156-60-5	N.D.		0.20	N.D.		0.79	1
05298	Freon 113	76-13-1	N.D.		0.50	N.D.		3.8	1
05298	Methylene Chloride	75-09-2	N.D.		0.20	N.D.		0.69	1
05298	Tetrachloroethene	127-18-4	0.34	J	0.20	2.3	J	1.4	1
05298	1,1,1-Trichloroethane	71-55-6	0.44	J	0.20	2.4	J	1.1	1
05298	1,1,2-Trichloroethane	79-00-5	N.D.		0.20	N.D.		1.1	1
05298	Trichloroethene	79-01-6	N.D.		0.20	N.D.		1.1	1
05298	Vinyl Chloride	75-01-4	N.D.		0.20	N.D.		0.51	1

MDL = Method Detection Limit

Sample Comments

State of New York Certification No. 10670

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
05298	IBM Selected VOCs List-PA	EPA TO-15	1	D1623730AA	08/24/2016 20:34	Jacob E Bailey	1

Sample Description: EN0413D160811 Air
SummaCan# 996
IBM

LL Sample # AQ 8527433
LL Group # 1695051
Account # 12618

Project Name: IBM

Collected: 08/11/2016 07:38 by KD
through 08/11/2016 08:38
Submitted: 08/15/2016 13:30
Reported: 08/25/2016 16:12

IBM
8976 Wellington Road
Manassas VA 20109

CAT No.	Analysis Name	CAS Number	Final Result		MDL	Final Result		MDL	DF
Volatiles in Air EPA TO-15			ppb(v)		ppb(v)	ug/m3		ug/m3	
05298	Chloroethane	75-00-3	N.D.		0.20	N.D.		0.53	1
05298	1,1-Dichloroethane	75-34-3	N.D.		0.20	N.D.		0.81	1
05298	1,1-Dichloroethene	75-35-4	N.D.		0.20	N.D.		0.79	1
05298	cis-1,2-Dichloroethene	156-59-2	N.D.		0.20	N.D.		0.79	1
05298	trans-1,2-Dichloroethene	156-60-5	N.D.		0.20	N.D.		0.79	1
05298	Freon 113	76-13-1	N.D.		0.50	N.D.		3.8	1
05298	Methylene Chloride	75-09-2	N.D.		0.20	N.D.		0.69	1
05298	Tetrachloroethene	127-18-4	0.27	J	0.20	1.8	J	1.4	1
05298	1,1,1-Trichloroethane	71-55-6	2.6		0.20	14		1.1	1
05298	1,1,2-Trichloroethane	79-00-5	N.D.		0.20	N.D.		1.1	1
05298	Trichloroethene	79-01-6	25		0.20	130		1.1	1
05298	Vinyl Chloride	75-01-4	N.D.		0.20	N.D.		0.51	1

MDL = Method Detection Limit

Sample Comments

State of New York Certification No. 10670

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
05298	IBM Selected VOCs List-PA	EPA TO-15	1	D1623730AA	08/24/2016 21:02	Jacob E Bailey	1

Sample Description: EN046D160811 Air
SummaCan# 912
IBM

LL Sample # AQ 8527434
LL Group # 1695051
Account # 12618

Project Name: IBM

Collected: 08/11/2016 09:20 by KD
through 08/11/2016 10:20
Submitted: 08/15/2016 13:30
Reported: 08/25/2016 16:12

IBM
8976 Wellington Road
Manassas VA 20109

CAT No.	Analysis Name	CAS Number	Final Result		MDL	Final Result		MDL	DF
Volatiles in Air EPA TO-15			ppb(v)		ppb(v)	ug/m3		ug/m3	
05298	Chloroethane	75-00-3	N.D.		0.20	N.D.		0.53	1
05298	1,1-Dichloroethane	75-34-3	N.D.		0.20	N.D.		0.81	1
05298	1,1-Dichloroethene	75-35-4	N.D.		0.20	N.D.		0.79	1
05298	cis-1,2-Dichloroethene	156-59-2	1.3		0.20	5.1		0.79	1
05298	trans-1,2-Dichloroethene	156-60-5	N.D.		0.20	N.D.		0.79	1
05298	Freon 113	76-13-1	N.D.		0.50	N.D.		3.8	1
05298	Methylene Chloride	75-09-2	N.D.		0.20	N.D.		0.69	1
05298	Tetrachloroethene	127-18-4	N.D.		0.20	N.D.		1.4	1
05298	1,1,1-Trichloroethane	71-55-6	N.D.		0.20	N.D.		1.1	1
05298	1,1,2-Trichloroethane	79-00-5	N.D.		0.20	N.D.		1.1	1
05298	Trichloroethene	79-01-6	0.27	J	0.20	1.5	J	1.1	1
05298	Vinyl Chloride	75-01-4	N.D.		0.20	N.D.		0.51	1

MDL = Method Detection Limit

Sample Comments

State of New York Certification No. 10670

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
05298	IBM Selected VOCs List-PA	EPA TO-15	1	D1623730AA	08/24/2016 21:34	Jacob E Bailey	1

Sample Description: EN044D160811 Air
SummaCan# 930
IBM

LL Sample # AQ 8527435
LL Group # 1695051
Account # 12618

Project Name: IBM

Collected: 08/11/2016 08:03 by KD
through 08/11/2016 09:03
Submitted: 08/15/2016 13:30
Reported: 08/25/2016 16:12

IBM
8976 Wellington Road
Manassas VA 20109

CAT No.	Analysis Name	CAS Number	Final Result		MDL	Final Result		MDL	DF
Volatiles in Air EPA TO-15			ppb(v)		ppb(v)	ug/m3		ug/m3	
05298	Chloroethane	75-00-3	N.D.		0.52	N.D.		1.4	2.6
05298	1,1-Dichloroethane	75-34-3	N.D.		0.52	N.D.		2.1	2.6
05298	1,1-Dichloroethene	75-35-4	N.D.		0.52	N.D.		2.1	2.6
05298	cis-1,2-Dichloroethene	156-59-2	N.D.		0.52	N.D.		2.1	2.6
05298	trans-1,2-Dichloroethene	156-60-5	N.D.		0.52	N.D.		2.1	2.6
05298	Freon 113	76-13-1	N.D.		1.3	N.D.		10	2.6
05298	Methylene Chloride	75-09-2	N.D.		0.52	N.D.		1.8	2.6
05298	Tetrachloroethene	127-18-4	0.61	J	0.52	4.1	J	3.5	2.6
05298	1,1,1-Trichloroethane	71-55-6	0.69	J	0.52	3.8	J	2.8	2.6
05298	1,1,2-Trichloroethane	79-00-5	N.D.		0.52	N.D.		2.8	2.6
05298	Trichloroethene	79-01-6	0.54	J	0.52	2.9	J	2.8	2.6
05298	Vinyl Chloride	75-01-4	N.D.		0.52	N.D.		1.3	2.6

The reporting limits were raised due to the pressure of the summa canister upon receipt at the laboratory.

The GC/MS internal standard peak areas were outside of the QC limits for both the initial injection and the re-injection. The values here are from the initial injection of the sample.

MDL = Method Detection Limit

Sample Comments

State of New York Certification No. 10670

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
05298	IBM Selected VOCs List-PA	EPA TO-15	1	D1623730AA	08/24/2016 22:04	Jacob E Bailey	2.6

Quality Control Summary

Client Name: IBM
Reported: 08/25/2016 16:12

Group Number: 1695051

Matrix QC may not be reported if insufficient sample or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD was performed, unless otherwise specified in the method.

All Inorganic Initial Calibration and Continuing Calibration Blanks met acceptable method criteria unless otherwise noted on the Analysis Report.

Method Blank

Analysis Name	Result ppb(v)	MDL ppb(v)	Result ug/m3	MDL ug/m3
Batch number: D1623630AA	Sample number(s): 8527426-8527427			
Chloroethane	N.D.	0.20	N.D.	0.53
1,1-Dichloroethane	N.D.	0.20	N.D.	0.81
1,1-Dichloroethene	N.D.	0.20	N.D.	0.79
cis-1,2-Dichloroethene	N.D.	0.20	N.D.	0.79
trans-1,2-Dichloroethene	N.D.	0.20	N.D.	0.79
Freon 113	N.D.	0.50	N.D.	3.8
Methylene Chloride	N.D.	0.20	N.D.	0.69
Tetrachloroethene	N.D.	0.20	N.D.	1.4
1,1,1-Trichloroethane	N.D.	0.20	N.D.	1.1
1,1,2-Trichloroethane	N.D.	0.20	N.D.	1.1
Vinyl Chloride	N.D.	0.20	N.D.	0.51
Batch number: D1623730AA	Sample number(s): 8527424-8527435			
Chloroethane	N.D.	0.25	N.D.	0.66
1,1-Dichloroethane	N.D.	0.25	N.D.	1.0
1,1-Dichloroethene	N.D.	0.25	N.D.	0.99
cis-1,2-Dichloroethene	N.D.	0.25	N.D.	0.99
trans-1,2-Dichloroethene	N.D.	0.25	N.D.	0.99
Freon 113	N.D.	0.63	N.D.	4.8
Methylene Chloride	N.D.	0.25	N.D.	0.87
Tetrachloroethene	N.D.	0.25	N.D.	1.7
1,1,1-Trichloroethane	N.D.	0.25	N.D.	1.4
1,1,2-Trichloroethane	N.D.	0.25	N.D.	1.4
Trichloroethene	N.D.	0.25	N.D.	1.3
Vinyl Chloride	N.D.	0.25	N.D.	0.64

LCS/LCSD

Analysis Name	LCS Spike Added ppb(v)	LCS Conc ppb(v)	LCSD Spike Added ppb(v)	LCSD Conc ppb(v)	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
Batch number: D1623630AA	Sample number(s): 8527426-8527427								
Chloroethane	10	10.5	10	11.3	105	113	63-119	7	25
1,1-Dichloroethane	10	10.67	10	11.14	107	111	67-124	4	25
1,1-Dichloroethene	10	10.95	10	11.74	110	117	61-128	7	25
cis-1,2-Dichloroethene	10	11.08	10	11.61	111	116	65-121	5	25
trans-1,2-Dichloroethene	10	10.96	10	11.44	110	114	66-121	4	25
Freon 113	10	9.69	10	10.13	97	101	63-114	4	25
Methylene Chloride	10	10.26	10	10.38	103	104	70-130	1	25
Tetrachloroethene	10	10.8	10	10.67	108	107	70-130	1	25

*- Outside of specification
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.
P###### is indicative of a Background or Unspiked sample that is batch matrix QC and was not performed using a sample from this submission group.

Quality Control Summary

Client Name: IBM
Reported: 08/25/2016 16:12

Group Number: 1695051

LCS/LCSD (continued)

Analysis Name	LCS Spike Added ppb(v)	LCS Conc ppb(v)	LCSD Spike Added ppb(v)	LCSD Conc ppb(v)	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
1,1,1-Trichloroethane	10	10.27	10	10.45	103	104	70-130	2	25
1,1,2-Trichloroethane	10	10.16	10	9.89	102	99	59-131	3	25
Vinyl Chloride	10	10.33	10	11.07	103	111	70-130	7	25
Batch number: D1623730AA	Sample number(s): 8527424-8527435								
Chloroethane	10	10.95	10	11.18	110	112	63-119	2	25
1,1-Dichloroethane	10	11.04	10	10.97	110	110	67-124	1	25
1,1-Dichloroethene	10	11.35	10	11.54	114	115	61-128	2	25
cis-1,2-Dichloroethene	10	11.23	10	11.15	112	112	65-121	1	25
trans-1,2-Dichloroethene	10	11.33	10	11.28	113	113	66-121	0	25
Freon 113	10	10.05	10	10.05	101	100	63-114	0	25
Methylene Chloride	10	10.57	10	10.43	106	104	70-130	1	25
Tetrachloroethene	10	12.11	10	11.95	121	119	70-130	1	25
1,1,1-Trichloroethane	10	10.78	10	10.42	108	104	70-130	3	25
1,1,2-Trichloroethane	10	11.06	10	10.45	111	105	59-131	6	25
Trichloroethene	10	10.68	10	10.37	107	104	70-130	3	25
Vinyl Chloride	10	11.15	10	11.6	112	116	70-130	4	25

*- Outside of specification
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.
P###### is indicative of a Background or Unspiked sample that is batch matrix QC and was not performed using a sample from this submission group.

Summa Canister Field Test Data/Chain of Custody

eurofins | Lancaster Laboratories Environmental

Acct. # 12618 Group # 1695051 Sample # 8527424-35 Bottle Order (SCR) # _____

For Eurofins Lancaster Laboratories Environmental use only

Client Information

Client: Groundwater Sciences Corp Account #:

Project Name/#: IBM

Project Manager: Scott Morgan P.O. #:

Sampler: Kelly Devine Quote #:

Name of state where samples were collected: NY

Turnaround Time Requested (TAT) (circle one)

(Standard) Rush (specify) _____

Data Package Required? (Yes) No

EDD Required? (Yes) No

	Temperature (F)		Pressure ("Hg)	
	Start	Stop	Start	Stop
Ambient	80	80	30.12	30.03
Maximum	90	90	30.15	30.12
Minimum	70	70	30.09	30.03

Analyses Requested

Sample Identification	Start Date/Time (24-hour clock)	Stop Date/Time (24-hour clock)	Canister Pressure in Field ("Hg) (Start)	Canister Pressure in Field ("Hg) (Stop)	Interior Temp. (F) (Start)	Interior Temp. (F) (Stop)	Flow Reg. ID	Can ID	Can Size (L)	Controller Flowrate (mL/min)	EPA TO - 15 Secondary	EPA 18 ☐ MTBE	EPA 25 (select range below) ☐ BTEX	Helium as tracer	O2/CO2	Library Search	
							31646	1311	1	13.8	X						
							10500	624	1	14.1							
							349349	1333	1	13.9							
EN04135DUP160811	7:31	9:31	-29	-4.5	90F	90	32928	1060	1	7.4							
							958055	1054	1	7.1							
							303421	640	1	7.0							
EN04135160811	7:31	9:31	-29	-7	90	90	958045	1317	1	7.1							
							5,58076	1165	1	7.1							
							185474	1321	1	7.1							

Instructions/QC Requirements & Comments

PCE, TCE 1,1DCE, Cis 1,2 DCE Trans 1,2 DCE, VC, TCA, 1,1DCA

Chloroethane, MeCl Freon 113

EPA 25 (check one)

☐ C1 - C4 ☐ C2 - C10

☐ C1 - C10 ☐ C4 - C10 (GRO)

☐ C2 - C4

Canisters Shipped by:	Date/Time:	Canisters Received by:	Date/Time:	Relinquished by:	Date/Time:	Received by:	Date/Time:
[signature] 15:41	8/8/11	[signature]	8-9-11 9am	[signature]	8-11-11 14:45		
Relinquished by:	Date/Time:	Received by:	Date/Time:	Relinquished by:	Date/Time:	Received by:	Date/Time:
Relinquished by:	Date/Time:	Received by:	Date/Time:	Relinquished by:	Date/Time:	Received by:	Date/Time:
						[signature]	8.15.11 1330

Summa Canister Field Test Data/Chain of Custody

eurofins | Lancaster Laboratories Environmental

Acct. # 12018 Group # 1695051 For Eurofins Lancaster Laboratories Environmental use only Sample # 8527424-35 Bottle Order (SCR) # _____

Client Information

Client: Groundwater Science Corp Account #:

Project Name/#: IBM

Project Manager: Scott Morgan P.O. #:

Sampler: Kelly Devine Quote #:

Name of state where samples were collected: NY

Turnaround Time Requested (TAT) (circle one)

(Standard) Rush (specify) _____

Data Package Required? (Yes) No

EDD Required? (Yes) No

	Temperature (F) Start	Temperature (F) Stop	Pressure ("Hg) Start	Pressure ("Hg) Stop
Ambient	80	80		
Maximum	90	95		
Minimum	70	70		

Analyses Requested

EPA TO - 15 (see comments) | EPA 18 | ☐ MTBE | ☐ BTEX | EPA 25 (select range below) | Helium as tracer | O2/CO2 | Library Search

Sample Identification	Start Date/Time (24-hour clock)	Stop Date/Time (24-hour clock)	Canister Pressure in Field ("Hg) (Start)	Canister Pressure in Field ("Hg) (Stop)	~~Interior~~ exterior Temp. (F) (Start)	~~Interior~~ exterior Temp. (F) (Stop)	Flow Reg. ID	Can ID	Can Size (L)	Controller Flowrate (mL/min)	EPA TO - 15	EPA 18	MTBE	BTEX	EPA 25	Helium as tracer	O2/CO2	Library Search
							344007	1057	1	14.0	X							
ENV43201608 10	15:16	16:16	-26.5	-12	90	90	738037	1003	1	14.1								
							301068	921	1	14.0								
							836392	958	1	14.2								
ENV4325/60810	15:09	16:09	-29	-5	90	90	710554	1328	1	14.2								
							736078	551	1	14.2								
							824960	926	1	14.1								
							336704	1044	1	14.2								
							824851	967	1	14.2								
							363934	1335	1	14.2								
EQB16.0811	~~9:47~~	10:47	-2.0	-1	92	92	710538	1004	1	14.2	+							

Instructions/QC Requirements & Comments

PCE, TCE, 1,1 DCE cis 1,2-DCE, Trans 1,2-DCE VC TCA 1,1 DCA

Chloroethane, MeCl, Freon 113

EPA 25 (check one) ☐ C1 - C4 ☐ C2 - C10 ☐ C1 - C10 ☐ C4 - C10 (GRO) ☐ C2 - C4

Canisters Shipped by: 15:41	Date/Time: 8/16/16	Canisters Received by:	Date/Time: 8-17-16 13:30	Relinquished by:	Date/Time: 8-17-16 1430	Received by:	Date/Time:
Relinquished by:	Date/Time:	Received by:	Date/Time:	Relinquished by:	Date/Time:	Received by:	Date/Time:
Relinquished by:	Date/Time:	Received by:	Date/Time:	Relinquished by:	Date/Time:	Received by:	Date/Time: 8-18-16 1330

Summa Canister Field Test Data/Chain of Custody

eurofins | Lancaster Laboratories Environmental

Acct. # 12618 Group # 1695051 Sample # 852742435 Bottle Order (SCR) # _____

For Eurofins Lancaster Laboratories Environmental use only

Client Information

Client: Groundwater Science Corp Account #:

Project Name/#: IBM

Project Manager: Scott Morgan P.O. #:

Sampler: Kelly DeWire Quote #:

Name of state where samples were collected: NY

Turnaround Time Requested (TAT) (circle one)

(Standard) Rush (specify) _____

Data Package Required? (Yes) No

EDD Required? (Yes) No

	Temperature (F)		Pressure ("Hg)	
	Start	Stop	Start	Stop
Ambient	80	80	30.12	30.08
Maximum	80	90	30.15	30.12
Minimum	70	70	30.12	30.03

Analyses Requested

EPA TO - 15 (See Comments) | EPA 18 ☐ MTBE ☐ BTEX | EPA 25 (select range below) | Helium as tracer | O2/CO2 | Library Search

Sample Identification	Start Date/Time (24-hour clock)	Stop Date/Time (24-hour clock)	Canister Pressure in Field ("Hg) (Start)	Canister Pressure in Field ("Hg) (Stop)	~~Interior~~ Ext Temp. (F) (Start)	~~Interior~~ Ext Temp. (F) (Stop)	Flow Reg. ID	Can ID	Can Size (L)	Controller Flowrate (mL/min)	EPA TO - 15
							338065	910	1	14.2	X
							858167	999	1	14.1	
							399405	1209	1	14.2	
EN04651160811	10:32	12:32	-30	-5	90	90	930842	530	6	42.4	
EN04451160811	11:13	13:13	-30	-0	90	90	338048	1024	6	42.0	
EN04651160811	10:32	12:32	-30	-5	90	90	848482	1359	6	41.7	
EN04451160811	11:13	13:13	-30	-6.5	90	90	958127	894	6	41.5	X
~~EN04651160811~~	~~9:47~~	~~10:47~~	~~-30~~	~~-4~~	~~90~~	~~90~~					

Instructions/QC Requirements & Comments

PCE, TCE, 1,1-DCE, Cis 1,2-DCE, Trans 1,2-DCE, VC, TCA, 1,1 DCA

Chloroethane MeCl, Freon 113

EPA 25 (check one)

☐ C1 - C4 ☐ C2 - C10

☐ C1 - C10 ☐ C4 - C10 (GRO)

☐ C2 - C4

Canisters Shipped by:	Date/Time:	Canisters Received by:	Date/Time:	Relinquished by:	Date/Time:	Received by:	Date/Time:
[illegible] 16:00	8/10/16	[illegible]	8-11-16 10:30	[illegible]	8/11/16 14:30		
Relinquished by:	Date/Time:	Received by:	Date/Time:	Relinquished by:	Date/Time:	Received by:	Date/Time:
Relinquished by:	Date/Time:	Received by:	Date/Time:	Relinquished by:	Date/Time:	Received by:	Date/Time:
							8-15-16 1220

Summa Canister Field Test Data/Chain of Custody

eurofins | Lancaster Laboratories Environmental

Acct. # 12618 Group # 1695051 Sample # 8527424-35 Bottle Order (SCR) # _____

For Eurofins Lancaster Laboratories Environmental use only

Client Information

Client: Groundwater Science Corp Account #:

Project Name/#: IBM

Project Manager: Scott Morgan P.O. #:

Sampler: Kelly Devine Quote #:

Name of state where samples were collected: NY

Turnaround Time Requested (TAT) (circle one)

(Standard) Rush (specify) _____

Data Package Required? (Yes) No

EDD Required? (Yes) No

	Temperature (F)		Pressure ("Hg)	
	Start	Stop	Start	Stop
Ambient	83	83	30.12	30.08
Maximum	93	90	30.15	30.12
Minimum	72	70	30.09	30.03

Analyses Requested

EPA TO - 15 (See comments) | EPA 18 | ☐ MTBE | ☐ BTEX | EPA 25 (select range below) | Helium as tracer | O2/CO2 | Library Search

Sample Identification	Start Date/Time (24-hour clock)	Stop Date/Time (24-hour clock)	Canister Pressure in Field ("Hg) (Start)	Canister Pressure in Field ("Hg) (Stop)	~~Interior~~ Temp. (F) (Start)	~~Interior~~ Temp. (F) (Stop)	Flow Reg. ID	Can ID	Can Size (L)	Controller Flowrate (mL/min)	EPA TO - 15 (See comments)
ENV4130160811	7:38	8:38	-30	-5.5	90	90	958134	986	1	14.1	X
							958043	1302	1	14.0	
ENV4160160811	9:20	10:20	-30	-8	90	90	236751	912	1	13.8	
							153310	1056	1	14.1	
ENV4401608 11	8:03	9:03	-29.5	-26	90	90	236812	930	1	14.2	
							958114	1043	1	14.1	
							334240	1766	1	14.2	
							958164	1325	1	14.3	
							824841	988	1	14.5	
							958148	913	1	14.3	
							710542	1012	1	14.5	

Instructions/QC Requirements & Comments

PCE, 1,1DCE, TCE, Cis 1,2-DCE, Trans 1,2-DCE, VC, TCA, 1,1DCA

Chloroethane, MeCl, Freon 113

EPA 25 (check one)

☐ C1 - C4 ☐ C2 - C10

☐ C1 - C10 ☐ C4 - C10 (GRO)

☐ C2 - C4

Canisters Shipped by:	Date/Time:	Canisters Received by:	Date/Time:	Relinquished by:	Date/Time:	Received by:	Date/Time:
15:41	8/8/16		8-9-16 1000		8-9-16 1420		
Relinquished by:	Date/Time:	Received by:	Date/Time:	Relinquished by:	Date/Time:	Received by:	Date/Time:
Relinquished by:	Date/Time:	Received by:	Date/Time:	Relinquished by:	Date/Time:	Received by:	Date/Time:
							8-10-16 1330

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Sample Administration Receipt Documentation Log

Doc Log ID: 158402

Group Number(s): 1695051

Client: Groundwater Science

Delivery and Receipt Information

Delivery Method:	Fed Ex	Arrival Timestamp:	08/15/2016 13:30
Number of Packages:	4	Number of Projects:	1
State/Province of Origin:	NY		

Arrival Condition Summary

Shipping Container Sealed:	Yes	Sample IDs on COC match Containers:	Yes
Custody Seal Present:	No	Sample Date/Times match COC:	Yes
Samples Chilled:	N/A	VOA Vial Headspace ≥ 6mm:	N/A
Paperwork Enclosed:	Yes	Total Trip Blank Qty:	0
Samples Intact:	Yes	Air Quality Samples Present:	Yes
Missing Samples:	No	Air Quality Flow Controllers Present:	Yes
Extra Samples:	No	Flow Controller Quantity:	15
Discrepancy in Container Qty on COC:	No	Air Quality Returns:	Yes
		Summa Canisters:	See Below

Summa Canister Returns: 910,999,1209

Unpacked by Timothy Cubberley (6520) at 13:46 on 08/15/2016

General Comments: Rec'd 2 bags of summa parts.

2425 New Holland Pike
Lancaster, PA 17605-2425

T | 717-656-2300
F | 717-656-2681
www.LancasterLabs.com

Explanation of Symbols and Abbreviations

The following defines common symbols and abbreviations used in reporting technical data:

RL	Reporting Limit	**BMQL**	Below Minimum Quantitation Level
N.D.	none detected	**MPN**	Most Probable Number
TNTC	Too Numerous To Count	**CP Units**	cobalt-chloroplatinate units
IU	International Units	**NTU**	nephelometric turbidity units
umhos/cm	micromhos/cm	**ng**	nanogram(s)
C	degrees Celsius	**F**	degrees Fahrenheit
meq	milliequivalents	**lb.**	pound(s)
g	gram(s)	**kg**	kilogram(s)
µg	microgram(s)	**mg**	milligram(s)
mL	milliliter(s)	**L**	liter(s)
m3	cubic meter(s)	**µL**	microliter(s)
		pg/L	picogram/liter

<	less than
>	greater than
ppm	parts per million - One ppm is equivalent to one milligram per kilogram (mg/kg) or one gram per million grams. For aqueous liquids, ppm is usually taken to be equivalent to milligrams per liter (mg/l), because one liter of water has a weight very close to a kilogram. For gases or vapors, one ppm is equivalent to one microliter per liter of gas.
ppb	parts per billion
Dry weight basis	Results printed under this heading have been adjusted for moisture content. This increases the analyte weight concentration to approximate the value present in a similar sample without moisture. All other results are reported on an as-received basis.

Laboratory Data Qualifiers:

B - Analyte detected in the blank
C - Result confirmed by reanalysis
E - Concentration exceeds the calibration range
J (or G, I, X) - estimated value ≥ the Method Detection Limit (MDL or DL) and < the Limit of Quantitation (LOQ or RL)
P - Concentration difference between the primary and confirmation column >40%. The lower result is reported.
U - Analyte was not detected at the value indicated
V - Concentration difference between the primary and confirmation column >100%. The reporting limit is raised due to this disparity and evident interference…

Additional Organic and Inorganic CLP qualifiers may be used with Form 1 reports as defined by the CLP methods. Qualifiers specific to Dioxin/Furans and PCB Congeners are detailed on the individual Analysis Report.

Analytical test results meet all requirements of the associated regulatory program (i.e., NELAC (TNI), DoD, and ISO 17025) unless otherwise noted under the individual analysis.

Measurement uncertainty values, as applicable, are available upon request.

Tests results relate only to the sample tested. Clients should be aware that a critical step in a chemical or microbiological analysis is the collection of the sample. Unless the sample analyzed is truly representative of the bulk of material involved, the test results will be meaningless. If you have questions regarding the proper techniques of collecting samples, please contact us. We cannot be held responsible for sample integrity, however, unless sampling has been performed by a member of our staff.

Times are local to the area of activity. Parameters listed in the 40 CFR Part 136 Table II as “analyze immediately” are not performed within 15 minutes.

WARRANTY AND LIMITS OF LIABILITY - In accepting analytical work, we warrant the accuracy of test results for the sample as submitted. THE FOREGOING EXPRESS WARRANTY IS EXCLUSIVE AND IS GIVEN IN LIEU OF ALL OTHER WARRANTIES, EXPRESSED OR IMPLIED. WE DISCLAIM ANY OTHER WARRANTIES, EXPRESSED OR IMPLIED, INCLUDING A WARRANTY OF FITNESS FOR PARTICULAR PURPOSE AND WARRANTY OF MERCHANTABILITY. IN NO EVENT SHALL EUROFINS LANCASTER LABORATORIES ENVIRONMENTAL, LLC BE LIABLE FOR INDIRECT, SPECIAL, CONSEQUENTIAL, OR INCIDENTAL DAMAGES INCLUDING, BUT NOT LIMITED TO, DAMAGES FOR LOSS OF PROFIT OR GOODWILL REGARDLESS OF (A) THE NEGLIGENCE (EITHER SOLE OR CONCURRENT) OF EUROFINS LANCASTER LABORATORIES ENVIRONMENTAL AND (B) WHETHER EUROFINS LANCASTER LABORATORIES ENVIRONMENTAL HAS BEEN INFORMED OF THE POSSIBILITY OF SUCH DAMAGES. We accept no legal responsibility for the purposes for which the client uses the test results. No purchase order or other order for work shall be accepted by Eurofins Lancaster Laboratories Environmental which includes any conditions that vary from the Standard Terms and Conditions, and Eurofins Lancaster Laboratories Environmental hereby objects to any conflicting terms contained in any acceptance or order submitted by client.