8976 Wellington Road
Manassas, VA 20109

November 11, 2013

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 October 2013
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 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) 257-2587.

Sincerely,

M. E. Meyers

Mitchell E. Meyers
Program Manager

cc: K. Lynch, NYSDEC Region 7
D. Tuohy, NYSDEC - Albany
K. Anders, NYSDOH – Troy
C. Edwards, Broome County Health Department
C. Pelto, EIT

SANBORN HEAD

Building Trust. Engineering Success.

Annual Report

Soil Vapor Monitoring through October 2013

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

Prepared for IBM Corporate Environmental Affairs
File No. 2755.07
November 2013

SANBORN HEAD

Building Trust. Engineering Success.

Mr. Mitchell E. Meyers
IBM Corporate Environmental Affairs
8976 Wellington Road
Manassas, Virginia 20109

November 11, 2013
File No. 2755.07

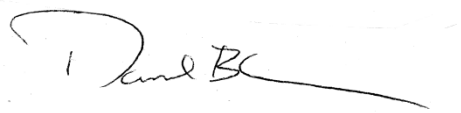
Re: Annual Report
Soil Vapor Monitoring through October 2013
Comprehensive Operations, Maintenance, and Monitoring Program
Endicott, New York

Dear Mr. Meyers:

We have enclosed our report summarizing soil vapor monitoring conducted in the Village of Endicott and the Town of Union, New York, through October 2013. 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.



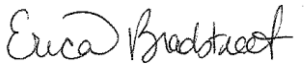


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TABLE OF CONTENTS

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 completed through August 2013 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 drove decisions for installation of ventilation systems to address potential for vapors to enter human occupied structures (vapor intrusion potential).

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. Under an Agency approved action plan, the ventilation limits were established based on a program of concurrent sampling of indoor air, substructure soil vapor, and ambient air at representative properties. 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 post-investigation soil vapor monitoring program began in August 2004.

Trichloroethylene (TCE) is the primary VOC found in soil vapor within the largest contiguous ventilation area. Other compounds including the chlorinated ethane 1,1,1-Trichloroethane (TCA), tetrachloroethylene (PCE), and their biochemical breakdown products were also found in this area, but at lower frequencies of detection and generally at lower concentrations.

Since July 2004, IBM has 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 was started in November 2008. As of June 30, 2013 about 1.35 billion gallons (BG) of groundwater have been withdrawn and treated and about 595 million gallons (MG)[1] of clean water have been introduced back into the subsurface.

[1] Groundwater Sciences Corporation, October 10, 2013, Semiannual Groundwater Data Summary Report (January 1, 2013 – June 30, 2013).

1.2 Scope of Work

Since the submittal of the last annual report[2], routine sampling has been conducted in February and August 2013, in accordance with the approved routine monitoring program. A letter report[3] submitted in April 2013 reported data from February 2013. This report is intended to put into larger context sampling results from 2013 monitoring.

Certain additional monitoring was conducted at the discretion of IBM as outlined in the table below. The monitoring was focused in areas of increased groundwater injection, and or increased depth to groundwater. Discretionary sampling included implants EN10-11D and EN10-17D. In both February and August 2013, water was drawn into the sample tubing during purging or sampling at EN10-11D and sampling could not be completed. Two implants[4] were re-sampled at IBM's discretion in October 2013 after unusually low TCE data were returned from the August 2013 sampling. The data from both sampling events are presented and reported in time series and tabular data summaries.

Sampling Round	Implants Included in Routine Monitoring	Implants where Voluntary Non-Routine Monitoring was Conducted	Rationale
February 2013	10	5	■ **EN04-2S/D:** Groundwater Injection Monitoring ■ **EN10-17D:** Secondary water table-depth implant installed after significant water level drop ■ **EN10-41S/D**: OU#4 Vapor Monitoring
August 2013	69	3	■ **EN10-17D:** Secondary water table-depth implant installed after significant water level drop ■ **EN10-41S/D:** OU#4 Vapor Monitoring
October 2013	0	2	■ **EN04-16D, EN04-21D**: To confirm findings of August 2013 monitoring, results in August were lower than recent historical sampling.

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.

[2] Sanborn, Head & Associates, Inc. November 16, 2012, Annual Report – Soil Vapor Monitoring through August 2012.

[3] Sanborn, Head & Associates, Inc. April 23, 2013, Semiannual Data Report – Soil Vapor Monitoring through February 2013.

[4] EN04-16D, EN04-21D

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 2007 and in 2011. Precipitation was near or slightly below average the first 5 months of 2013 and above average in June, July, and August of this year. 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 compared to August 2012 water levels. A review of water levels from May 2013 indicates generally similar results as those reported last year. Water levels have substantially rebounded following the start up of clean water injection in 2008. Water levels at five locations[5] are higher than 2004, including two in the extreme southern area and three in the main plume area adjacent to injection points.

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

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

	February 2013	August 2013
Range of RPD (%)	8%	3.7 to 12.5%
Location RPD >30%	N/A	N/A
Average TCE RL	4.5 µg/m^3	4.8 µg/m^3

As part of routine ongoing QA/QC the analytical results were reviewed after each sampling round for anomalies. As noted above, data for two sampling locations exhibited TCE results outside the historical range collected in August 2013, so these implants were re-sampled in October.

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. A systematic review of the groundwater quality data depicted on the graphical plots in Appendix B.2 indicates that of the 33 locations where contemporaneous groundwater and soil vapor monitoring is conducted:

[5] EN04-5, EN04-7, EN04-10, EN04-11, and EN04-30

- Twenty locations where groundwater concentrations now have been reduced by one order of magnitude (Oom) or greater;

- Five locations where TCE groundwater concentrations have been reduced by between ½ and 1 Oom; and

- Eight locations where groundwater concentrations have declined less than ½ Oom.

At approximately 75% of monitoring locations TCE source concentrations in groundwater have been substantially reduced. It is notable that groundwater concentrations at ten locations exhibit about an order of magnitude reduction in just the last year or two of monitoring. These locations including EN04-7, -12, -13, -16, -17, -18, -19, -20, -21, and EN06-36 are south of the groundwater extraction wells along Monroe Street. All but EN04-12 are south of East Main street, generally downgradient of clean water injection wells EN-162 and EN-501T and the improvement in water quality is attributed to displacement with clean water. As outlined although the vapor monitoring data indicate continued reductions in vapor concentrations the reductions in vapor concentrations have not generally kept pace with improvements in groundwater quality.

2.1 Graphical Comparison of TCE Vapor Concentrations – 2004 and 2013

Plan view graphics prepared to aid in communicating 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 9 years later through October 2013. The images support an overall lower presence of TCE in vapor both at foundation and water table depth since establishment of the limits of ventilation. A review of the images provided as Figure 3 indicates:

- TCE concentrations at foundation depth are lower by an order of magnitude or more at many locations both near and away from area of increased groundwater remediation activities as compared with 2004; and

- TCE was not detected at foundation depth at 13 locations, compared to 8 locations in 2004 and 11 locations in 2012. TCE was not detected in samples from water table implants at 5 locations, up from two in 2004.

A comparison of this Figure 3 with that included in the 2012 annual report indicates that at the majority of locations and depths, TCE vapor concentrations recorded in August 2013 are incrementally lower than those recorded a year earlier by as much as ½ order of magnitude. About 89% of foundation depth locations and 85% of water table depth locations exhibited lower concentrations in 2013 compared to 2004.

Of the ten monitoring locations where substantial improvements in water quality have been recorded in the last two years, more substantial reductions in vapor concentrations have been recorded in about half of the water table depth implants. These include EN04-7, -13,-16, -21, and EN10-17. All but EN04-13 are located east or west of the centerline of the plume of VOC-containing groundwater IBM has been remediating where the presence of

sorbed VOC mass is likely to be a less substantial source of VOC mass in vapor and groundwater.

Voluntary and routine monitoring of locations EN04-2, EN04-30, and EN04-32 continues to be performed to track the vapor response to clean water injection EN-510T, EN501T, and EN-529T, respectively. As shown on the time series plots in Appendix B.2, while groundwater concentrations in nearby monitoring wells have decreased by as much as three orders of magnitude at two of these locations, vapor concentrations have not exhibited a similar response.

2.2 Review of Other Compounds

Chlorinated ethenes PCE and cDCE and the chlorinated ethane TCA drove a very small proportion of the decisions to mitigate structures. Plan view graphics developed for these compounds are presented in Appendix B.3. The presence of PCE, cDCE, and TCA continue to generally follow patterns described in the 2012 annual report.

2.2.1 PCE

PCE data recorded at the two soil vapor implants in the OU#4 Area are summarized on Figure B.38 in Appendix B.2. PCE concentrations recorded in sampling of EN10-41 continue to be several orders of magnitude below the concentrations recorded at a similar location (EN08-39S) prior to full scale application of thermal treatment. Post-treatment sampling began in August 2010, and PCE vapor concentrations have declined from a few thousand micrograms per cubic meter ($\mu g/m^3$) to the low tens or hundreds of $\mu g/m^3$ concentrations that could be explained by equilibrium with traces of PCE in water (<1μg per liter).

As shown on Figure B.3.1, PCE is still detected beneath the northeast corner of the largest ventilation area where PCE is found in groundwater, the vicinity of the former Ideal Cleaners site to the east, and in the vicinity of non-IBM source identified at 1904 East Main Street which is reflected in the data along Adams Avenue south of East Main Street (Locations EN05-33 and EN04-18). PCE was detected at near water table depth for the first time at EN04-7, located near the southwest corner of the largest ventilation area. It has been regularly found at foundation depth, consistent with a localized source unrelated to the plume that IBM has been remediating. PCE was not detected in groundwater in companion well EN-311 in May 2013 monitoring.

2.2.2 cDCE and TCA

As shown on Figure B.3.2, cDCE is not detected in subsurface gas samples from the majority of locations either at foundation or water table depth. Most of the detections are near the reporting limit for this compound, with exceptions for EN04-9 and EN04-10, where higher concentrations are still found groundwater, and EN04-22, attributable to biochemical breakdown of PCE from of the former Ideal Cleaners site.

As shown on Figure B.3.3, TCA is detected in soil gas samples from both depths at a larger number of locations but the majority of observations are below thresholds that would be

likely to result in an indoor air presence that could be discerned from a background condition resulting from use and storage of consumer products.

3.0 CONCLUSIONS AND RECOMMENDATIONS

IBM has successfully implemented a program of soil vapor monitoring for nearly ten years since substantial 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 declining VOC presence in soil vapor that that we believe is attributable to both natural processes and IBM's remediation efforts, including suppression of subsurface vapor migration through increased soil moisture conditions driven by above-normal precipitation, biochemical degradation, groundwater extraction, treatment, and re-injection.

We recommend that soil vapor monitoring continue at the schedule implemented in 2012.

TABLES

TABLE 1
Summary of Soil Vapor Monitoring Implants Installations
Annual Report - Soil Vapor Monitoring Through October 2013
Endicott, New York

Location Designation [1]	Installation Date	Implant Type [2]		Subsurface Conditions at Installation				Completion Details	Groundwater Conditions At Installation			August 2012 Groundwater Conditions		
		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)	Distance Above Water Table [5] (ft)	Saturated Screened Interval [7] (ft)	Difference [8] (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	6.3	9.7	-0.8
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	4.7	5.3	0.5
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	5.2	10.8	0.7
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	5.6	0.4	0.4
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	8.9	6.1	-3.9
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	1	0	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						

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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)	Distance Above Water Table [5] (ft)	Saturated Screened Interval [7] (ft)	Difference [8] (ft)
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	10.2	0.8	-0.5
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	>8.1	0.0	<-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						
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	5.8	1.8	0.5
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	5.1	9.3	2.1
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	NA	19.5	4.3
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	6.57	11.4	-0.4
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						

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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)	Distance Above Water Table [5] (ft)	Saturated Screened Interval [7] (ft)	Difference [8] (ft)
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	6.2	13.3	-0.2
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	5.5	3.5	-0.5
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	5.4	6.1	-0.1
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	5.7	10.3	-0.2
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						
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	8.3	2.7	-0.8
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	NA	2.7	1.7

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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)	Distance Above Water Table [5] (ft)	Saturated Screened Interval [7] (ft)	Difference [8] (ft)
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	6.1	5.1	-0.2
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	9.3	1.3	-3.4
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		X	EN-207	7/27/04 43.2	8	Gravel	0-1' Concrete Surface Seal 1-7' Bentonite Seal 7-8' Glass Bead Filter Pack 7.5-8' Screened Interval	25.5	7.7	4.3	8.0	4.0	-0.3
EN04-20I	Jul-04					24	Gravel	0-1' Concrete Surface Seal 1-23' Bentonite Seal 23-24' Glass Bead Filter Pack 23.5-24' Screened Interval	9.5					
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	13.7	2.3	-1.7
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	3.1	5.7	-0.3
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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Annual Report - Soil Vapor Monitoring Through October 2013
Endicott, New York

Location Designation [1]	Installation Date	Implant Type [2]		Subsurface Conditions at Installation				Completion Details	Groundwater Conditions At Installation			August 2012 Groundwater Conditions		
		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)	Distance Above Water Table [5] (ft)	Saturated Screened Interval [7] (ft)	Difference [8] (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	6.1	1.9	-2.6
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	6.4	15.3	-2.5
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	2.7	3.7	-1.3
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	3.9	6.1	-0.5
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	NM	NM	NM
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	5.8	6.7	-2.8
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						

TABLE 1
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Endicott, New York

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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)	Distance Above Water Table [5] (ft)	Saturated Screened Interval [7] (ft)	Difference [8] (ft)
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	6.5	8.5	-2.6
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						
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	3.2	10.8	2.8
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	0.3	12.2	0.2
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	2.9	5.5	0.5
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	3.3	5.2	-1.0
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						

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Annual Report - Soil Vapor Monitoring Through October 2013
Endicott, New York

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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)	Distance Above Water Table [5] (ft)	Saturated Screened Interval [7] (ft)	Difference [8] (ft)
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	NM	NM	NM
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	10.0	6.2	-3.8
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						
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	10.9	6.1	-3.9
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						

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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)	Distance Above Water Table [5] (ft)	Saturated Screened Interval [7] (ft)	Difference [8] (ft)
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	2.0	2.5	-0.7
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 2008. 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 implant at each

FIGURES

Notes

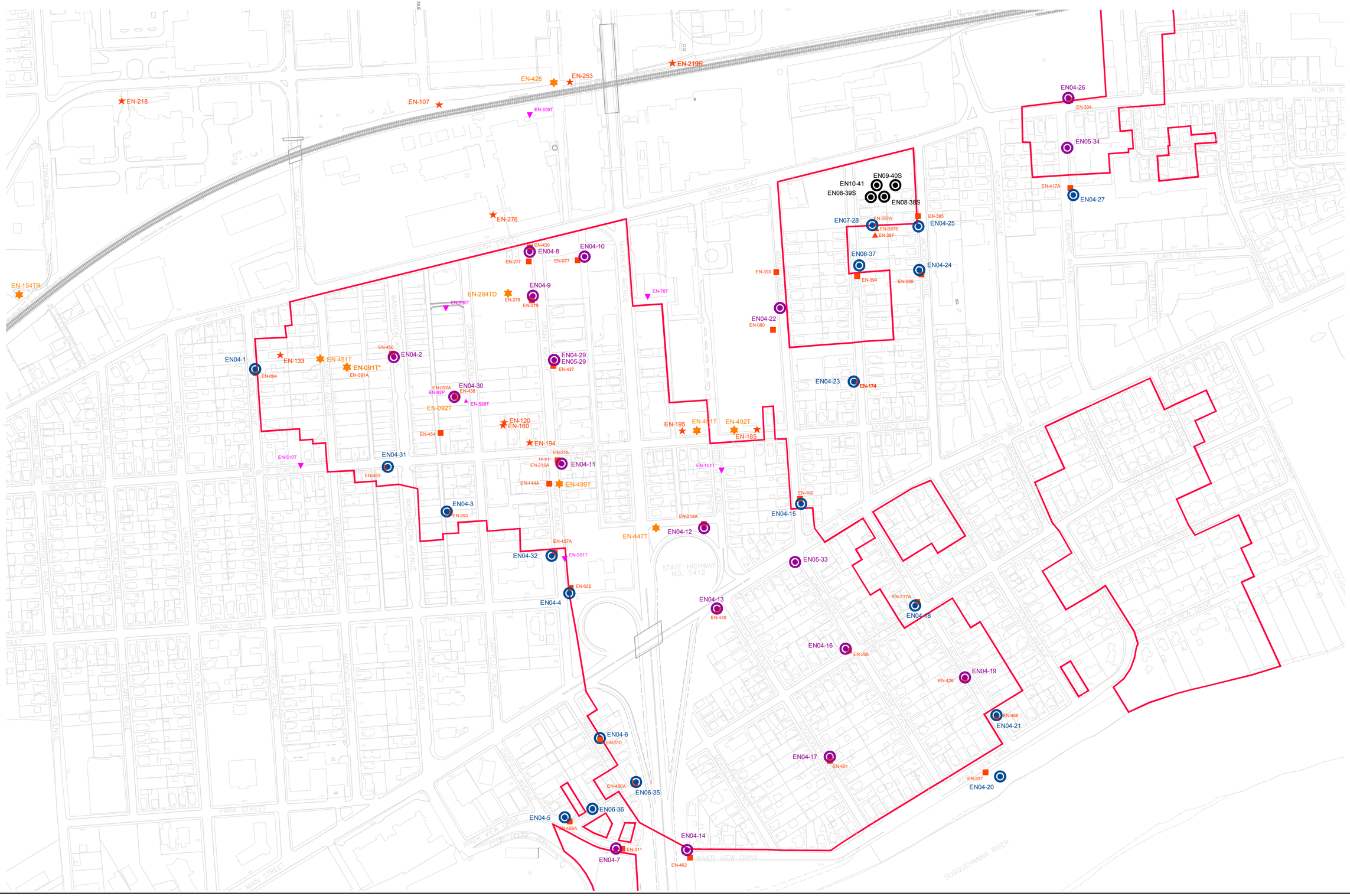
1. This figure is intended to depict soil vapor monitoring locations that have been established and maintained as part of the Comprehensive Operations, Maintenance & Monitoring Program. The locations of the soil vapor monitoring implants are based on taped measurements relative to physical features in 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 "Endicottpln.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. Bradstreet
Reviewed By: D. Carr
Project Mgr: E. Bradstreet
Pic: D. Carr
Date: November 2013

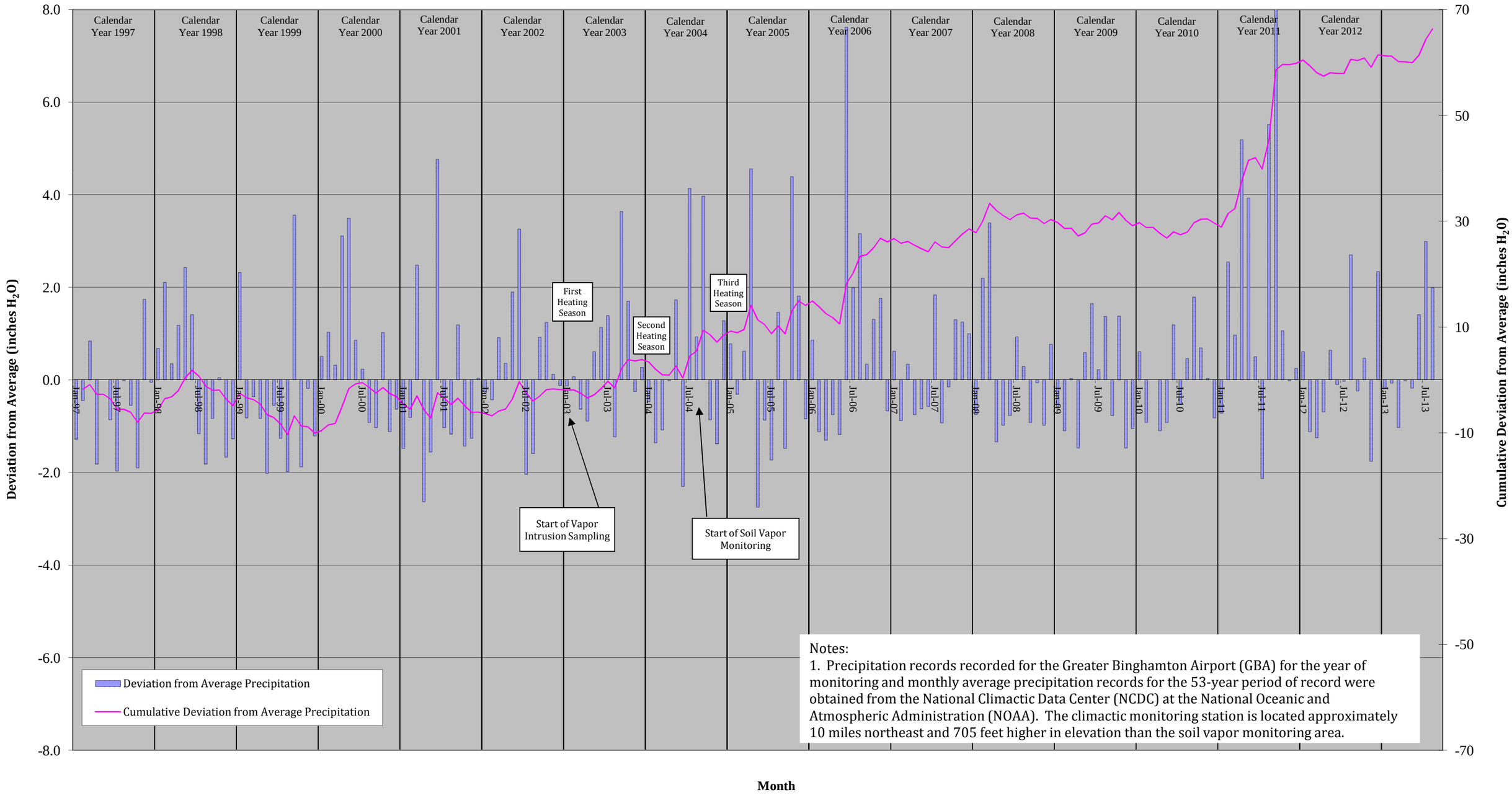
Annual Report - Soil Vapor Monitoring through August 2013
Comprehensive Operations, Maintenance & Monitoring Program
Endicott, New York

Soil Vapor Implant Location Plan

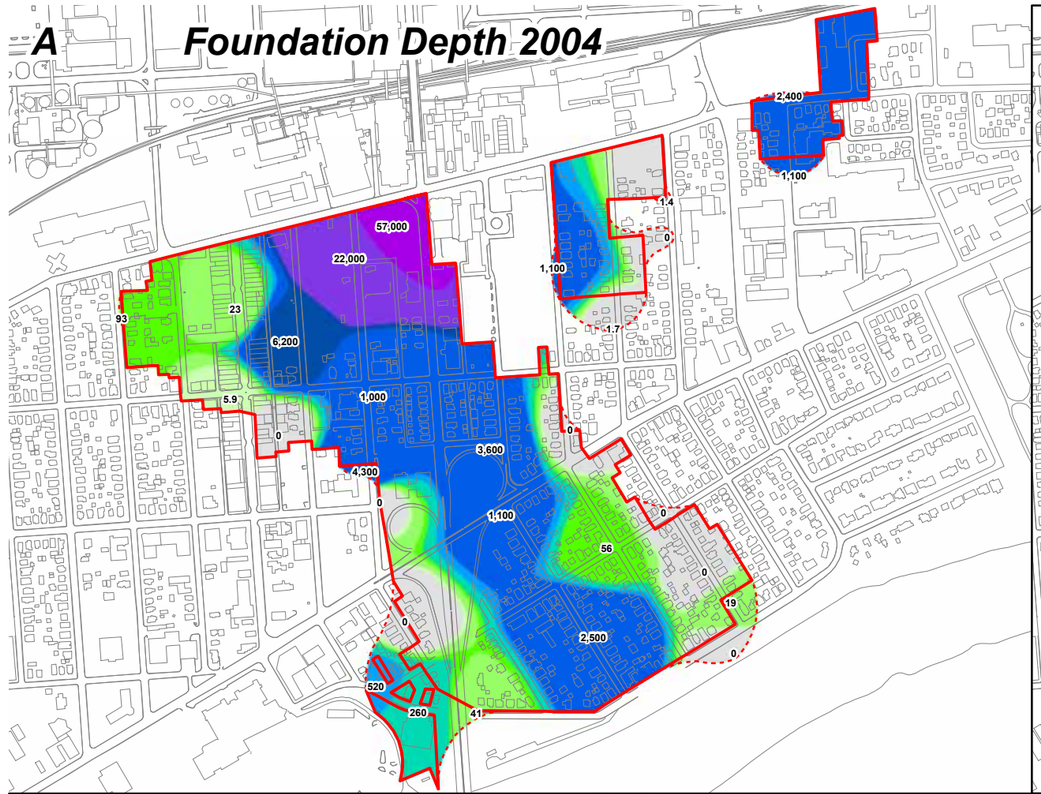
Project Number: 2755.07

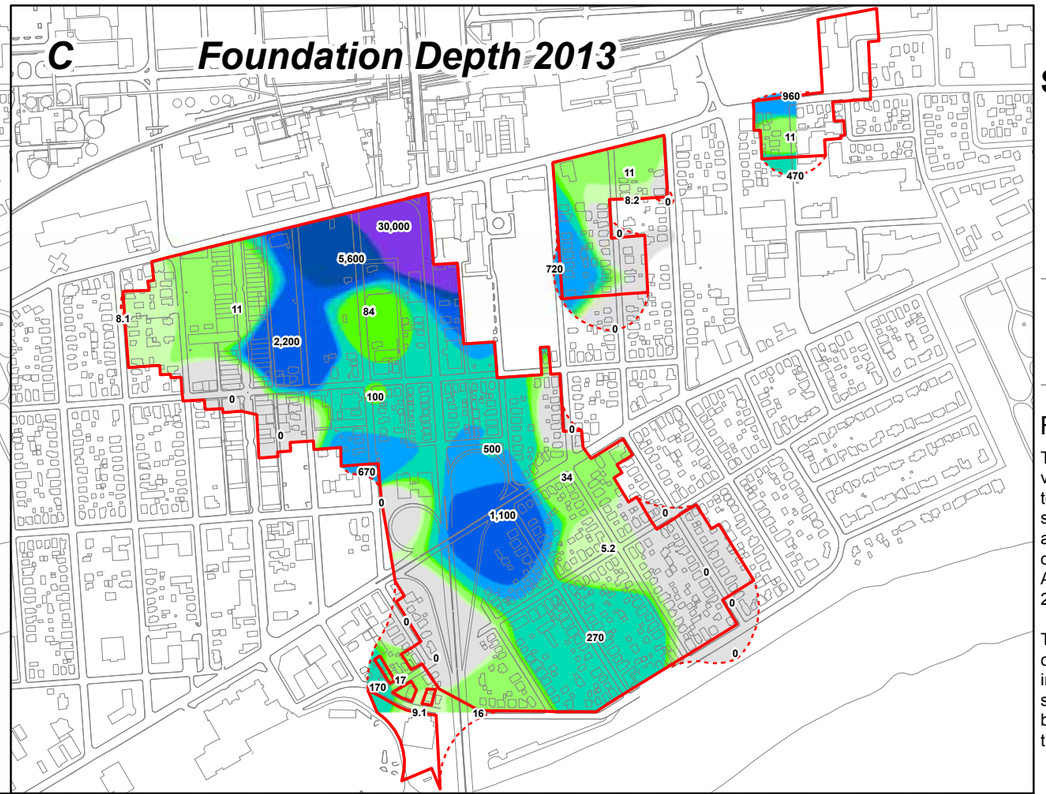
Figure Number: 1

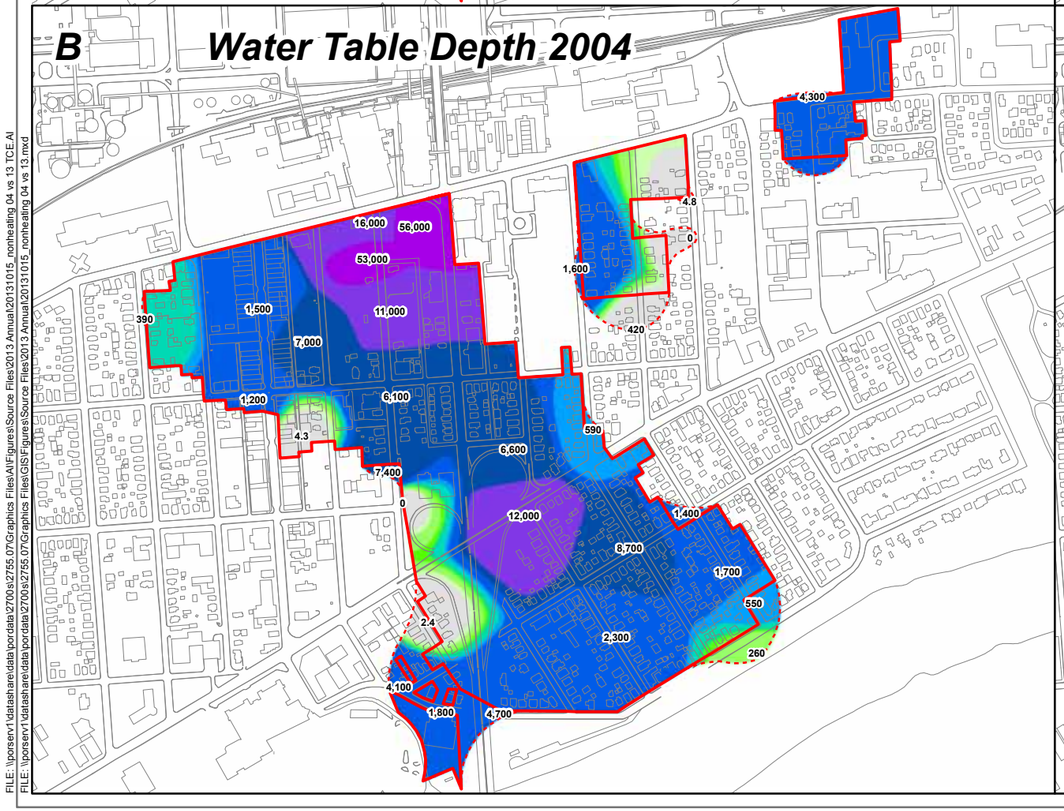
Figure 2
Historical Precipitation Records
Annual Report - Soil Vapor Monitoring through August 2013
Endicott, New York



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.







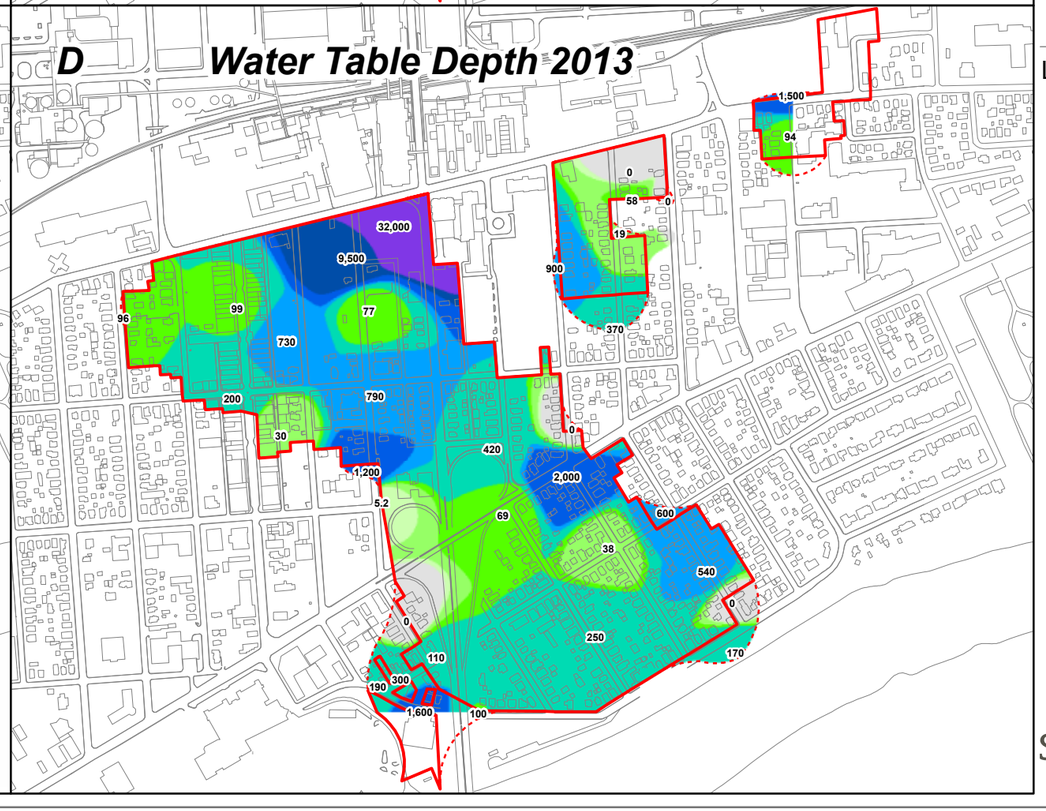


Figure 3

Comparisons of TCE Soil Vapor Concentrations Non Heating Season

Annual Report - Soil Vapor Monitoring Through August 2013

IBM

Endicott, New York

Drawn By:	S. Warner
Designed By:	E. Bradstreet
Reviewed By:	D. Carr
Project No:	2755.07
Date:	November 2013

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 2013.

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

µg/m³
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

N
W E
S

400 200 0 400 800 Feet

SANBORN HEAD

FILE: \\porserv1\datashare\data\portdata\2700s\2755.07\Graphics Files\AI\Figures\Source Files\2013 Annual\20131015_nonheating 04 vs 13 TCE.AI
FILE: \\porserv1\datashare\data\portdata\2700s\2755.07\Graphics Files\GIS Figures\Source Files\2013 Annual\20131015_nonheating 04 vs 13.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

SEPTEMBER 2012
LOCAL CLIMATOLOGICAL DATA
NOAA, National Climatic Data Center

BINGHAMTON, NY
GREATER BINGHAMTON/E A LINK FIELD AP (KBGM)
Lat:42° 12'N Long: 75° 58'W Elev (Ground) 1595 Feet
Time Zone : EASTERN WBAN: 04725 ISSN#: 0198-3563

Date	Temperature °F MAXIMUM	MINIMUM	AVERAGE	DEP FROM NORMAL	AVERAGE DEW PT	AVERAGE WET BULB	Deg Days BASE 65° HEATING	COOLING	WEATHER	SNOW/ICE ON GND(IN) 0700 LST DEPTH	1300 LST WATER-EQUIV	PRECIPITATION ON GND(IN) 2400 LST SNOW-FALL	2400 LST WATER EQUIV	PRESSURE (INCHES OF HG) AVERAGE STATION	AVERAGE SEA LEVEL	WIND SPEED = MPH DIR = TENS OF DEGREES RESULTANT SPEED	RES DIR	AVERAGE SPEED	MAXIMUM 3-SEC SPEED	3-SEC DIR	MAXIMUM 2-MIN SPEED	2-MIN DIR	Date
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
01	80	61	71	6	54	61	0	6		0		0.0	0.00	28.34	30.06	5.2	35	6.6	20	36	14	35	01
02	80	55	68	4	53	59	0	3		0		0.0	0.00	28.36	30.08	2.7	10	3.2	12	12	9	13	02
03	69	61	65	1	61	63	0	0	RA BR	0		0.0	0.07	28.38	30.09	9.8	14	10.4	24	14	16	15	03
04	78	64	71	7	66	67	0	6	TSRA RA BR VCTS	0		0.0	0.26	28.24	29.92	5.9	17	7.4	22	22	15	27	04
05	76	62	69	6	61	64	0	4	RA	0		0.0	T	28.14	29.85	5.9	34	6.1	20	28	14	35	05
06	82*	60	71*	8	62	64	0	6	TS TSRA RA BR HZ VCTS	0		0.0	0.06	28.19	29.89	3.5	24	4.3	25	20	16	24	06
07	78	60	69	6	61	64	0	4	TS BR VCTS	0		0.0	0.00	28.20	29.90	3.4	18	4.6	15	17	10	17	07
08	73	54	64	1	60	61	1	0	TS TSRA RA BR VCTS	0		0.0	0.78	27.99	29.68	7.0	20	9.2	38*	27	26	27	08
09	68	50	59	-3	50	53	6	0	RA BR	0		0.0	0.02	28.15	29.89	4.9	30	6.1	22	30	15	28	09
10	62	47	55	-7	42	48	10	0		0		0.0	0.00	28.33	30.09	7.2	33	8.0	28	35	21	35	10
11	69	41	55	-6	45	50	10	0		0		0.0	0.00	28.50	30.26	2.2	24	3.2	14	28	10	27	11
12	74	50	62	1	50	55	3	0		0		0.0	0.00	28.58	30.33	4.5	20	4.8	17	17	12	17	12
13	77	53	65	4	53	58	0	0		0		0.0	0.00	28.58	30.31	4.4	21	4.7	15	21	10	26	13
14	74	52	63	3	53	58	2	0	RA BR	0		0.0	0.36	28.45	30.18	4.6	21	6.3	32	35	26*	35	14
15	64	48	56	-4	47	51	9	0		0		0.0	0.00	28.43	30.17	5.8	31	6.6	21	33	15	30	15
16	65	48	57	-3	46	51	8	0	BR	0		0.0	0.00	28.38	30.11	3.0	28	5.0	17	34	14	34	16
17	71	50	61	2	48	53	4	0		0		0.0	0.00	28.32	30.04	5.8	20	6.4	20	20	14	19	17
18	68	50	59	0	59	60	6	0	RA BR	0		0.0	0.95	27.99	29.69	5.9	19	11.0	33	17	22	27	18
19	59	43	51	-7	41	46	14	0		0		0.0	0.00	28.29	30.07	4.2	34	6.6	20	27	15	35	19
20	65	40	53	-5	43	48	12	0		0		0.0	0.00	28.38	30.12	7.7	16	8.2	24	21	16	21	20
21	69	50	60	2	53	56	5	0	RA	0		0.0	T	28.28	30.00	7.8	16	8.3	22	16	15	17	21
22	71	48	60	3	54	56	5	0	RA BR	0		0.0	0.10	28.10	29.82	5.8	19	10.7	31	19	18	18	22
23	57	40	49	-8	41	45	16	0	RA	0		0.0	0.05	28.30	30.07	5.5	27	5.8	24	32	15	27	23
24	58	38*	48*	-8	37	43	17	0		0		0.0	0.00	28.36	30.12	5.9	23	6.7	26	26	15	25	24
25	65	43	54	-2	39	47	11	0	RA	0		0.0	0.04	28.35	30.08	8.5	20	8.8	25	22	17	22	25
26	61	53	57	1	55	56	8	0	RA	0		0.0	0.03	28.30	30.03	6.4	21	7.3	17	19	12	25	26
27	65	48	57	2	45	50	8	0	RA	0		0.0	0.02	28.43	30.17	4.0	36	6.0	18	34	14	34	27
28	57	49	53	-2			12	0	RA BR	0		0.0	0.41	28.32		2.5	01	5.6	16	10	14	34	28
29	61	46	54	0	44	48	11	0	RA BR	0		0.0	0.01	28.22	29.96	6.6	34	6.9	21	01	17	36	29
30	56	43	50	-4	45	47	15	0	RA BR	0		0.0	0.02	28.12	29.84	5.1	29	6.0	26	22	15	28	30
	68.4	50.2	59.3	¤	50.6	54.6	6.4	1.0	< MONTHLY AVERAGES | TOTALS >			0.0	3.18	28.30	30.03	2.1	22	6.7	< MONTHLY AVERAGES				
	0.0	-0.5	-0.3		<---------- DEPARTURE FROM NORMAL ---------->								-0.45	SUNSHINE, CLOUD, & VISIBILITY TABLES ON PAGE 3								

SEPTEMBER 2012
BINGHAMTON, NY

DEGREE DAYS

	MONTHLY TOTAL	MONTHLY DEPARTURE	SEASON TO DATE TOTAL	SEASON TO DATE DEPARTURE
HEATING :	193	-1	214	-43
COOLING :	29	-2	547	168

GREATEST 24-HR PRECIPITATION :	0.95	DATE :	18
GREATEST 24-HR SNOWFALL :	0.0	DATE :	
GREATEST SNOW DEPTH :	0	DATE :	

SEA LEVEL PRESSURE		DATE	TIME
MAXIMUM :	30.36	13	1051
MIMIMUM :	29.51	18	1353

NUMBER OF -> DAYS WITH

MAXIMUM TEMP >= 90 :	0	MINIMUM TEMP <= 32 :	0
MAXIMUM TEMP <= 32 :	0	MINIMUM TEMP <= 0 :	0
THUNDERSTORMS :	4	HEAVY FOG :	0
PRECIPITATION >= 0.01 INCH:	15		
PRECIPITATION >= 0.10 INCH:	6		
SNOWFALL >= 1.0 INCH :	0		

OCTOBER 2012
LOCAL CLIMATOLOGICAL DATA
NOAA, National Climatic Data Center

BINGHAMTON, NY
GREATER BINGHAMTON/E A LINK FIELD AP (KBGM)
Lat:42° 12'N Long: 75° 58'W Elev (Ground) 1595 Feet
Time Zone : EASTERN WBAN: 04725 ISSN#: 0198-3563

Date	Temperature °F MAXIMUM	MINIMUM	AVERAGE	DEP FROM NORMAL	AVERAGE DEW PT	AVERAGE WET BULB	Deg Days BASE 65° HEATING	COOLING	WEATHER	SNOW/ICE ON GND(IN) 0700 LST DEPTH	1300 LST WATER-EQUIV	PRECIPITATION ON GND(IN) 2400 LST SNOW-FALL	2400 LST WATER EQUIV	PRESSURE (INCHES OF HG) AVERAGE STATION	AVERAGE SEA LEVEL	WIND SPEED = MPH DIR = TENS OF DEGREES RESULTANT SPEED	RES DIR	AVERAGE SPEED	MAXIMUM 3-SEC SPEED	3-SEC DIR	MAXIMUM 2-MIN SPEED	2-MIN DIR	Date
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
01	62	45	54	0	46	49	11	0		0		0.0	0.00	28.14	29.89	6.0	26	6.9	22	26	15	26	01
02	59	49	54	1			11	0	RA FG+ BR	0		0.0	0.19	28.23		6.2	14	6.6	32	24	14	21	02
03	75*	57	66*	13			0	1	BR	0		0.0	0.01	28.31		1.6	22	3.9	15	22	10	23	03
04	68	56	62	10			3	0	BR	0		0.0	0.03	28.39		3.0	26	4.0	13	27	10	28	04
05	74	53	64	12	54	57	1	0	RA	0		0.0	T	28.29	30.00	5.4	23	6.1	22	26	15	26	05
06	61	40	51	-1	43	47	14	0	RA BR	0		0.0	0.20	28.14	29.88	5.8	29	8.6	22	28	17	34	06
07	49	37	43	-8	36	40	22	0	RA	0		0.0	0.07	28.29	30.06	3.9	24	4.8	20	21	14	21	07
08	48	33	41	-10	33	37	24	0	BR	0		0.0	0.00	28.44	30.23	2.9	22	4.1	24	03	9	08	08
09	57	37	47	-4	39	43	18	0	RA BR	0		0.0	T	28.41	30.16	3.0	16	4.0	26	33	14	14	09
10	56	40	48	-2	43	46	17	0	RA BR	0		0.0	0.09	28.17	29.91	6.6	24	9.0	28	25	20	30	10
11	51	33	42	-8	30	37	23	0		0		0.0	0.00	28.33	30.11	8.5	25	9.8	24	27	18	27	11
12	46	31	39	-11	28	35	26	0	RA BR	0		0.0	0.06	28.44	30.25	7.3	31	8.7	30	34	22	34	12
13	47	26*	37*	-12	24	33	28	0	RA	0		0.0	0.01	28.59	30.36	6.1	19	6.8	25	17	16	19	13
14	66	42	54	5	45	50	11	0	RA	0		0.0	0.13	28.26	29.98	10.2	19	10.3	26	19	17	20	14
15	65	47	56	7	46	51	9	0	RA	0		0.0	T	27.97	29.68	6.6	24	10.7	29	24	21	24	15
16	50	36	43	-5	32	38	22	0	RA	0		0.0	T	28.09	29.85	8.1	32	8.7	26	31	18	33	16
17	62	32	47	-1	35	41	18	0		0		0.0	0.00	28.18	29.94	3.7	18	4.0			10	16	17
18	59	43	51	3	43	48	14	0	RA BR	0		0.0	0.06	28.17	29.90	12.6	15	12.8	38	16	24	16	18
19	62	47	55	8			10	0	TS TSRA RA GS BR VCTS	0		T	1.03	28.02		1.5	12	5.4	28	28	21	26	19
20	55	41	48	1	41	45	17	0	RA BR	0		0.0	T	27.98	29.73	8.3	24	8.5	24	25	20	25	20
21	57	41	49	2	37	43	16	0		0		0.0	0.00	28.20	29.97	8.9	28	9.6	29	27	21	27	21
22	61	39	50	3	39	45	15	0		0		0.0	0.00	28.34	30.09	5.7	30	6.2	24	29	17	27	22
23	54	42	48	2			17	0	RA FG BR	0		0.0	0.61	28.33		2.3	14	2.9	10	12	8	12	23
24	60	53	57	11			8	0	RA FG+ BR	0		0.0	0.08	28.35		1.1	17	1.9	9	15	7	14	24
25	62	53	58	12			7	0	BR	0		0.0	T	28.43		8.5	16	8.8	21	18	15	16	25
26	60	55	58	13	52	55	7	0	BR	0		0.0	0.00	28.40	30.14	5.5	18	5.6	18	21	13	20	26
27	58	49	54	9	51	53	11	0	BR	0		0.0	0.00	28.28	30.00	1.6	13	4.6	14	32	10	34	27
28	50	45	48	3	44	46	17	0	RA BR	0		0.0	0.03	28.17	29.88	9.3	36	9.7	20	02	16	35	28
29	56	45	51	7	46	47	14	0	RA BR	0		0.0	0.52	27.70	29.33	17.0	02	18.5	45	02	33	01	29
30	54	38	46	2	40	42	19	0	RA BR	0		0.0	0.36	27.50	29.25	14.2	13	15.1	49*	12	33*	12	30
31	39	36	38	-6	35	36	27	0	RA BR	0		0.0	0.02	27.72	29.47	5.7	19	6.3	20	20	12	21	31
	57.5	42.6	50.1	¤			14.7	0.0	< MONTHLY AVERAGES | TOTALS >			T	3.50	28.20	29.95	2.2	22	7.5	< MONTHLY AVERAGES				
	0.7	2.5	1.6		<---------- DEPARTURE FROM NORMAL ---------->								0.17	SUNSHINE, CLOUD, & VISIBILITY TABLES ON PAGE 3									

DEGREE DAYS

	MONTHLY TOTAL	MONTHLY DEPARTURE	SEASON TO DATE TOTAL	SEASON TO DATE DEPARTURE
HEATING :	457	-58	671	-101
COOLING :	1	-1	548	167

GREATEST 24-HR PRECIPITATION : 1.08 DATE : 18-19
GREATEST 24-HR SNOWFALL : T DATE : 19
GREATEST SNOW DEPTH : 0 DATE :

SEA LEVEL PRESSURE	DATE	TIME
MAXIMUM : 30.49	13	0853
MIMIMUM : 28.90	29	2153

NUMBER OF -> DAYS WITH

MAXIMUM TEMP >= 90 : 0	MINIMUM TEMP <= 32 : 3	PRECIPITATION >= 0.01 INCH: 17
MAXIMUM TEMP <= 32 : 0	MINIMUM TEMP <= 0 : 0	PRECIPITATION >= 0.10 INCH: 7
THUNDERSTORMS : 1	HEAVY FOG : 2	SNOWFALL >= 1.0 INCH : 0

OCTOBER 2012
BINGHAMTON, NY

NOVEMBER 2012
LOCAL CLIMATOLOGICAL DATA
NOAA, National Climatic Data Center

BINGHAMTON, NY
GREATER BINGHAMTON/E A LINK FIELD AP (KBGM)
Lat:42° 12'N Long: 75° 58'W Elev (Ground) 1595 Feet
Time Zone : EASTERN WBAN: 04725 ISSN#: 0198-3563

Date	Temperature °F						Deg Days BASE 65°		WEATHER	SNOW/ICE ON GND(IN)		PRECIPITATION ON GND(IN)		PRESSURE (INCHES OF HG)		WIND SPEED = MPH DIR = TENS OF DEGREES							Date
										0700 LST	1300 LST	2400 LST	2400 LST						MAXIMUM 3-SEC		2-MIN		
	MAXIMUM	MINIMUM	AVERAGE	DEP FROM NORMAL	AVERAGE DEW PT	AVERAGE WET BULB	HEATING	COOLING		DEPTH	WATER-EQUIV	SNOW-FALL	WATER EQUIV	AVERAGE STATION	AVERAGE SEA LEVEL	RESULTANT SPEED	RES DIR	AVERAGE SPEED	SPEED	DIR	SPEED	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
01	43	37	40	-3	37	39	25	0	RA BR	0		0.0	0.14	27.78	29.54	8.5	25	9.1	18	28	14	24	01
02	39	32	36	-7	32	34	29	0	RA SN BR	0		T	0.03	27.91	29.69	8.4	29	9.0	23	30	16	31	02
03	38	32	35	-8	30	32	30	0	RA SN BR	T		T	0.06	28.12	29.92	9.4	31	9.3	30	31	20	30	03
04	35	30	33	-9	28	30	32	0	SN BR UP	T		0.2	0.02	28.24	30.03	8.0	32	8.5	21	35	15	34	04
05	34	30	32	-10	23	28	33	0	SN	0		T	T	28.30	30.09	7.2	34	7.3	18	34	15	35	05
06	38	25	32	-10	18	27	33	0		0		0.0	0.00	28.35	30.14	2.1	10	3.5	15	10	10	16	06
07	35	23*	29	-12			36	0		0		0.0	0.00	28.25		7.1	02	8.4	17	36	14	01	07
08	40	26	33	-8	21	28	32	0		0		0.0	0.00	28.19	29.98	13.2	33	13.3	35	35	28*	35	08
09	42	28	35	-6	28	33	30	0		0		0.0	0.00	28.33	30.13	6.0	31	6.5	24	32	17	33	09
10	47	37	42	2	36	40	23	0	RA BR	0		0.0	0.01	28.50	30.29	3.2	17	3.8	14	15	10	16	10
11	68*	43	56*	16	36	46	9	0		0		0.0	0.00	28.58	30.35	7.1	17	7.4	18	21	13	20	11
12	64	44	54	14	45	50	11	0	RA BR	0		0.0	0.30	28.49	30.20	11.2	18	12.2	37	31	25	32	12
13	44	31	38	-1	28	32	27	0	RA SN BR	1		1.4	0.54	28.54	30.36	6.0	32	6.5	25	32	17	30	13
14	40	28	34	-5	21	29	31	0		T		0.0	0.00	28.71	30.52	5.4	02	6.1	17	05	13	04	14
15	40	24	32	-7	21	28	33	0		T		0.0	0.00	28.59	30.38	1.5	08	2.2	10	24	8	24	15
16	43	25	34	-4	23	29	31	0		T		0.0	0.00	28.56	30.39	6.3	35	6.5	18	02	14	01	16
17	46	26	36	-2	27	32	29	0	BR	0		0.0	0.00	28.77	30.60	2.7	04	3.7	13	06	10	07	17
18	46	25	36	-1	26	32	29	0	BR	0		0.0	0.00	28.80	30.61	3.6	13	4.5	13	16	9	14	18
19	49	29	39	2	25	33	26	0		0		0.0	0.00	28.64	30.41	1.8	15	2.1	10	15	7	13	19
20	49	28	39	2	26	33	26	0		0		0.0	0.00	28.39	30.16	0.5	26	1.3	7	33	6	34	20
21	52	31	42	6	26	35	23	0		0		0.0	0.00	28.41	30.20	1.3	36	2.2	10	03	8	03	21
22	54	29	42	6	24	34	23	0		0		0.0	0.00	28.42	30.19	3.2	18	3.8	10	17	8	22	22
23	53	35	44	8	29	37	21	0	RA	0		0.0	0.03	28.10	29.82	7.1	21	9.0	30	28	22	28	23
24	36	26	31	-4	19	26	34	0	SN	0		0.1	T	27.99	29.77	13.0	29	13.2	40*	30	26	28	24
25	30	27	29	-6	19	25	36	0	SN BR	0		0.3	0.04	28.07	29.86	9.3	27	10.1	31	34	22	31	25
26	38	28	33	-1	21	28	32	0		T		T	T	28.25	30.08	7.2	26	7.6	22	27	17	28	26
27	32	28	30	-4	25	28	35	0	SN BR HZ	T		0.5	0.07	28.43	30.24	1.1	34	2.6	10	36	8	35	27
28	32	24	28*	-6	21	26	37	0	SN BR	T		0.7	0.03	28.40	30.21	5.0	26	5.9	18	26	15	25	28
29	41	26	34	1	21	28	31	0	HZ	T		0.0	0.00	28.45	30.25	9.8	26	10.0	23	24	18	27	29
30	32	28	30	-3	24	28	35	0	SN BR	T		1.4	0.07	28.53	30.34	4.1	10	6.3	14	14	12	13	30
	42.7	29.5	36.1	¤	26.2	32.1	28.7	0.0	< MONTHLY AVERAGES | TOTALS >			4.6	1.34	28.37	30.16	2.7	29	6.7	< MONTHLY AVERAGES				
	-2.4	-1.9	-2.2		<---------- DEPARTURE FROM NORMAL ---------->								-1.96	SUNSHINE, CLOUD, & VISIBILITY TABLES ON PAGE 3									

NOVEMBER 2012
BINGHAMTON, NY

DEGREE DAYS

	MONTHLY TOTAL	MONTHLY DEPARTURE	SEASON TO DATE TOTAL	SEASON TO DATE DEPARTURE
HEATING :	862	59	1533	-42
COOLING :	0	0	548	167

GREATEST 24-HR PRECIPITATION :	0.84	DATE :	12-13
GREATEST 24-HR SNOWFALL :	1.4	DATE :	30+
GREATEST SNOW DEPTH :	1	DATE :	13

SEA LEVEL PRESSURE		DATE	TIME
MAXIMUM :	30.66	18	1037
MIMIMUM :	29.49	01	0553

NUMBER OF -> DAYS WITH

MAXIMUM TEMP >= 90 :	0	MINIMUM TEMP <= 32 :	25
MAXIMUM TEMP <= 32 :	4	MINIMUM TEMP <= 0 :	0
THUNDERSTORMS :	0	HEAVY FOG :	0

PRECIPITATION >= 0.01 INCH:	12
PRECIPITATION >= 0.10 INCH:	3
SNOWFALL >= 1.0 INCH :	2

DECEMBER 2012
LOCAL CLIMATOLOGICAL DATA
NOAA, National Climatic Data Center

BINGHAMTON, NY
GREATER BINGHAMTON/E A LINK FIELD AP (KBGM)
Lat:42° 12'N Long: 75° 58'W Elev (Ground) 1595 Feet
Time Zone : EASTERN WBAN: 04725 ISSN#: 0198-3563

Date	Temperature °F						Deg Days BASE 65°		WEATHER	SNOW/ICE ON GND(IN)		PRECIPITATION ON GND(IN)		PRESSURE (INCHES OF HG)		WIND SPEED = MPH DIR = TENS OF DEGREES							Date
										0700 LST	1300 LST	2400 LST	2400 LST						MAXIMUM 3-SEC		MAXIMUM 2-MIN		
	MAXIMUM	MINIMUM	AVERAGE	DEP FROM NORMAL	AVERAGE DEW PT	AVERAGE WET BULB	HEATING	COOLING		DEPTH	WATER-EQUIV	SNOW-FALL	WATER EQUIV	AVERAGE STATION	AVERAGE SEA LEVEL	RESULTANT SPEED	RES DIR	AVERAGE SPEED	SPEED	DIR	SPEED	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
01	38	30	34	2	31	33	31	0	BR	1		0.0	0.00	28.58	30.38	9.0	16	9.2	20	16	14	16	01
02	47	38	43	11	39	41	22	0	RA BR HZ	0		0.0	0.11	28.40	30.15	8.7	19	9.3	23	18	16	19	02
03	53	42	48	16	42	44	17	0	BR	0		0.0	0.00	28.41	30.19	1.7	24	4.6	17	33	13	34	03
04	64*	46	55*	24	48	51	10	0	RA BR	0		0.0	0.15	28.33	30.06	8.5	20	10.5	29	35	24	35	04
05	46	25	36	5	27	32	29	0	RA SN BR UP	0		0.2	0.19	28.33	30.12	9.9	31	10.6	29	35	21	32	05
06	34	22	28	-2	16	24	37	0		T		0.0	0.00	28.48	30.28	1.4	10	6.4	17	34	14	35	06
07	34	28	31	1			34	0	RA FG BR UP	T		0.0	0.32	28.28		5.4	16	5.5	15	15	10	15	07
08	47	34	41	11			24	0	RA BR	0		0.0	0.15	28.13		3.2	21	6.6	21	35	14	33	08
09	39	32	36	7	29	33	29	0	RA SN	0		T	0.09	28.36	30.14	4.0	11	10.1	29	14	21	14	09
10	51	33	42	13	41	42	23	0	RA SN BR	0		0.1	0.58	27.94	29.65	5.3	20	10.1	28	35	21	34	10
11	33	26	30	1	26	29	35	0	SN BR	0		T	0.02	28.13	29.97	4.9	32	5.3	18	32	14	32	11
12	38	24	31	3	20	27	34	0		0		0.0	0.00	28.50		3.7	25	4.1	16	28	12	28	12
13	38	23	31	3	20	27	34	0		0		0.0	0.00	28.59	30.38	3.1	22	3.5	12	19	8	22	13
14	43	26	35	7	23	30	30	0		0		0.0	0.00	28.42	30.21	4.9	26	6.8	21	31	15	28	14
15	39	28	34	7	27	31	31	0	BR	0		0.0	0.00	28.44	30.22	3.3	15	4.9	18	17	14	14	15
16	40	35	38	11	34	36	27	0	RA SN BR	T		T	0.08	28.20	29.95	12.6	15	12.7	30	14	24	14	16
17	41	36	39	12	36	37	26	0	RA BR	0		0.0	0.93	28.02	29.77	8.5	14	9.2	23	14	21	13	17
18	42	35	39	13	35	37	26	0	RA BR	0		0.0	0.21	27.78	29.54	5.2	28	9.0	28	29	17	31	18
19	37	29	33	7	26	31	32	0		0		0.0	0.00	28.10	29.92	9.0	31	9.2	25	31	17	30	19
20	35	24	30	4	23	27	35	0	RA SN GS BR UP	0		0.2	0.01	28.26	30.00	9.0	14	11.2	40	14	29	15	20
21	40	29	35	9	30	32	30	0	RA SN BR	0		1.5	1.01	27.53	29.24	6.8	22	12.8	47*	14	36*	14	21
22	30	24	27	2			38	0	SN BR UP	2		1.3	0.04	27.76		17.2	30	17.3	45	30	29	31	22
23	33	26	30	5	18	25	35	0	SN	3		0.2	T	28.07	29.87	9.3	26	9.7	23	24	18	23	23
24	30	25	28	3	18	24	37	0	SN BR	2		0.7	0.06	28.20	29.99	0.7	06	6.0	22	32	16	33	24
25	28	16	22	-3	20	23	43	0	SN BR	3		1.1	0.10	28.27	30.14	5.2	33	7.1	20	36	17	36	25
26	25	13*	19*	-5			46	0	SN BR	2		5.1	0.52	28.32		8.3	06	9.5	32	06	22	08	26
27	26	20	23	-1	19	21	42	0	SN BR UP	8		1.2	0.10	27.89	29.71	11.6	33	13.7	33	31	23	31	27
28	24	20	22	-2	19	21	43	0	SN BR	7		T	T	28.23	30.06	5.5	32	6.5	32	32	22	32	28
29	25	21	23	-1			42	0	SN BR	6		6.4	0.47	28.01		1.3	05	6.9	28	33	21	32	29
30	22	18	20	-4			45	0	SN BR	12		2.2	0.05	28.16		11.1	30	11.3	33	33	23	32	30
31	30	18	24	1	17	23	41	0	SN BR	12		0.2	0.01	28.23	30.01	8.4	24	9.2	21	28	16	27	31
	37.2	27.3	32.3	¤			32.5	0.0	< MONTHLY AVERAGES | TOTALS >			20.4	5.20	28.20	29.98	2.2	25	8.7	< MONTHLY AVERAGES				
	3.9	6.1	5.0		<---------- DEPARTURE FROM NORMAL ---------->								2.37	SUNSHINE, CLOUD, & VISIBILITY TABLES ON PAGE 3									

DECEMBER 2012
BINGHAMTON, NY

DEGREE DAYS

	MONTHLY TOTAL	MONTHLY DEPARTURE	SEASON TO DATE TOTAL	SEASON TO DATE DEPARTURE
HEATING :	1008	-162	2541	-204
COOLING :	0	0	548	167

GREATEST 24-HR PRECIPITATION :	1.02	DATE :	21-22		
GREATEST 24-HR SNOWFALL :	6.4	DATE :	29		
GREATEST SNOW DEPTH :	12	DATE :	31+		

SEA LEVEL PRESSURE		DATE	TIME
MAXIMUM :	30.45	13	0853
MIMIMUM :	29.16	21	1353

NUMBER OF -> DAYS WITH

MAXIMUM TEMP >= 90 :	0	MINIMUM TEMP <= 32 :	23
MAXIMUM TEMP <= 32 :	9	MINIMUM TEMP <= 0 :	0
THUNDERSTORMS :	0	HEAVY FOG :	0

PRECIPITATION >= 0.01 INCH:	21
PRECIPITATION >= 0.10 INCH:	13
SNOWFALL >= 1.0 INCH :	7

JANUARY 2013
LOCAL CLIMATOLOGICAL DATA
NOAA, National Climatic Data Center

BINGHAMTON, NY
GREATER BINGHAMTON/E A LINK FIELD AP (KBGM)
Lat:42° 12'N Long: 75° 58'W Elev (Ground) 1595 Feet
Time Zone : EASTERN WBAN: 04725 ISSN#: 0198-3563

Date	Temperature °F						Deg Days BASE 65°		WEATHER	SNOW/ICE ON GND(IN)		PRECIPITATION ON GND(IN)		PRESSURE (INCHES OF HG)		WIND SPEED = MPH DIR = TENS OF DEGREES							Date
										0700 LST	1300 LST	2400 LST	2400 LST						MAXIMUM 3-SEC		2-MIN		
	MAXIMUM	MINIMUM	AVERAGE	DEP FROM NORMAL	AVERAGE DEW PT	AVERAGE WET BULB	HEATING	COOLING		DEPTH	WATER-EQUIV	SNOW-FALL	WATER EQUIV	AVERAGE STATION	AVERAGE SEA LEVEL	RESULTANT SPEED	RES DIR	AVERAGE SPEED	SPEED	DIR	SPEED	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
01	29	10	20	-3	16	20	45	0	SN BR	10		0.5	T	28.12	29.92	8.0	31	8.4	28	33	20	32	01
02	24	8	16	-7	10	15	49	0	SN BR	10		0.9	0.01	28.21	30.06	6.2	29	7.7	25	27	18	27	02
03	25	11	18	-5	14	17	47	0	SN BR	10		1.2	0.02	28.28	30.09	6.8	24	7.6	22	27	17	26	03
04	31	24	28	5	17	24	37	0	SN	10		T	T	28.17	29.97	12.3	25	12.4	30	26	24	25	04
05	32	25	29	6	18	25	36	0		8		0.0	0.00	28.35	30.17	6.6	28	8.2	28	29	20	28	05
06	35	26	31	8	23	28	34	0	SN BR	8		T	T	28.22	30.00	9.3	24	9.8	24	25	18	26	06
07	32	25	29	7	21	25	36	0	RA FZRA SN	8		0.1	T	28.43	30.27	4.2	29	8.4	23	33	17	33	07
08	40	24	32	10	19	27	33	0		7		0.0	0.00	28.50	30.31	5.9	21	6.2	15	20	10	24	08
09	42	27	35	13	24	31	30	0	RA	7		0.0	T	28.41	30.20	7.1	23	10.0	40	31	25	29	09
10	37	28	33	11	23	30	32	0		6		0.0	0.00	28.65	30.48	8.2	34	10.0	37	29	24	31	10
11	37	27	32	10	27	31	33	0	RA BR	5		0.0	0.14	28.47	30.23	9.4	16	9.9	26	15	23	14	11
12	46	36	41	19			24	0	FG+ BR	3		0.0	0.00	28.30		4.6	18	4.8	12	23	9	23	12
13	52	38	45	23			20	0	BR	T		0.0	0.00	28.23		7.0	17	7.5	23	19	16	19	13
14	50	28	39	17	31	35	26	0	RA BR	0		0.0	0.06	28.33	30.13	5.1	32	9.5	26	34	18	34	14
15	32	23	28	6	18	24	37	0		0		0.0	0.00	28.48	30.29	3.0	36	4.4	15	34	13	34	15
16	30	25	28	6			37	0	SN BR	2		2.6	0.28	28.19		4.9	19	6.3	16	24	12	22	16
17	30	17	24	2	19	23	41	0	SN BR	2		0.3	T	28.22	30.03	5.0	30	8.3	23	34	16	32	17
18	23	7	15	-7	6	13	50	0	SN BR HZ	2		0.8	0.01	28.43	30.29	4.4	26	8.5	23	20	16	20	18
19	43	23	33	11	15	29	32	0		2		0.0	0.00	28.25	29.99	13.6	21	13.8	35	21	23	21	19
20	42	18	30	8	15	26	35	0	SN	1		T	T	27.99	29.78	13.4	27	16.1	46	27	35	26	20
21	22	13	18	-4	9	16	47	0	SN BR	T		1.2	0.03	28.12	29.92	5.9	25	7.5	23	22	17	27	21
22	13	2	8	-14	-6	4	57	0	SN HZ	1		0.1	T	28.14	30.01	12.2	28	12.7	39	27	29	27	22
23	10	-1	5*	-17	-5	2	60	0	SN	1		T	T	28.28	30.14	6.9	28	7.8	22	30	16	31	23
24	12	-1*	6	-16	-1	4	59	0	SN	T		T	T	28.39	30.28	7.4	32	8.1	28	33	20	33	24
25	13	2	8	-14	2	7	57	0	SN BR	T		0.4	0.06	28.41	30.24	1.3	24	3.4	15	32	10	30	25
26	17	4	11	-11	4	9	54	0	SN	1		T	T	28.32	30.20	4.9	32	5.5	21	36	15	35	26
27	24	8	16	-6	8	14	49	0	SN BR	1		0.1	T	28.61	30.46	2.3	29	4.3	16	33	10	35	27
28	35	18	27	5	22	25	38	0	RA FZRA SN BR UP	2		0.7	0.26	28.36	30.13	7.3	18	8.3	20	19	14	19	28
29	46	35	41	19			24	0	RA BR	1		0.0	0.36	28.23		4.4	18	6.0	15	18	12	18	29
30	57*	44	51*	29	49	50	14	0	RA BR	0		0.0	0.59	27.91	29.54	10.7	18	11.5	32	21	22	18	30
31	51	20	36	13	21	28	29	0	RA SN BR HZ	0		0.3	0.43	27.60	29.37	18.3	27	20.3	52*	27	38*	28	31
	32.6	19.2	25.9	¤			38.8	0.0	< MONTHLY AVERAGES | TOTALS >			9.2	2.25	28.28	30.08	4.8	25	8.8	< MONTHLY AVERAGES				
	3.9	3.5	3.7		<---------- DEPARTURE FROM NORMAL ---------->								-0.20						SUNSHINE, CLOUD, & VISIBILITY TABLES ON PAGE 3				

DEGREE DAYS

	MONTHLY TOTAL	MONTHLY DEPARTURE	SEASON TO DATE TOTAL	SEASON TO DATE DEPARTURE
HEATING :	1202	-125	3743	-329
COOLING :	0	0	0	0

GREATEST 24-HR PRECIPITATION :	1.01	DATE :	30-31
GREATEST 24-HR SNOWFALL :	2.6	DATE :	16
GREATEST SNOW DEPTH :	10	DATE :	04+

SEA LEVEL PRESSURE		DATE	TIME
MAXIMUM :	30.54	10	1953
MIMIMUM :	29.01	31	0353

NUMBER OF -> DAYS WITH

MAXIMUM TEMP >= 90 :	0	MINIMUM TEMP <= 32 :	27
MAXIMUM TEMP <= 32 :	17	MINIMUM TEMP <= 0 :	2
THUNDERSTORMS :	0	HEAVY FOG :	1
PRECIPITATION >= 0.01 INCH:	12		
PRECIPITATION >= 0.10 INCH:	6		
SNOWFALL >= 1.0 INCH :	3		

JANUARY 2013
BINGHAMTON, NY

FEBRUARY 2013
LOCAL CLIMATOLOGICAL DATA
NOAA, National Climatic Data Center

BINGHAMTON, NY
GREATER BINGHAMTON/E A LINK FIELD AP (KBGM)
Lat:42° 12'N Long: 75° 58'W Elev (Ground) 1595 Feet
Time Zone : EASTERN WBAN: 04725 ISSN#: 0198-3563

Date	Temperature °F MAXIMUM	MINIMUM	AVERAGE	DEP FROM NORMAL	AVERAGE DEW PT	AVERAGE WET BULB	Deg Days BASE 65° HEATING	COOLING	WEATHER	SNOW/ICE ON GND(IN) 0700 LST DEPTH	1300 LST WATER-EQUIV	PRECIPITATION ON GND(IN) 2400 LST SNOW-FALL	2400 LST WATER EQUIV	PRESSURE (INCHES OF HG) AVERAGE STATION	AVERAGE SEA LEVEL	WIND SPEED = MPH DIR = TENS OF DEGREES RESULTANT SPEED	RES DIR	AVERAGE SPEED	MAXIMUM 3-SEC SPEED	3-SEC DIR	MAXIMUM 2-MIN SPEED	2-MIN DIR	Date
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
01	21	14	18	-5	7	15	47	0	SN BR HZ	T		0.4	0.01	28.07	29.93	12.1	28	12.3	32	25	23	30	01
02	17	7	12	-11	5	11	53	0	SN BR	1		0.4	0.03	28.28	30.10	7.5	23	8.1	21	24	16	24	02
03	23	11	17	-6	12	16	48	0	SN BR	1		2.6	0.05	28.05	29.85	2.2	24	4.2	24	32	18	27	03
04	19	11	15	-8	8	14	50	0	SN BR UP	2		0.3	0.01	28.07	29.90	8.7	28	9.0	33	28	25	28	04
05	26	14	20	-3	14	19	45	0	SN BR	2		0.1	0.01	28.08	29.88	2.0	19	3.7	16	25	13	26	05
06	27	13	20	-3	12	19	45	0	SN BR	1		0.5	0.01	28.26	30.12	8.2	30	9.3	29	34	20	33	06
07	30	9	20	-3	8	17	45	0		1		0.0	0.00	28.53	30.35	7.1	15	7.8	24	16	18	14	07
08	31	23	27	3			38	0	SN BR	1		6.0	0.52	28.18		9.3	14	11.9	30	15	22	15	08
09	22	13	18	-6	9	14	47	0	SN BR	7		0.9	0.07	28.32	30.20	12.4	33	12.7	36	35	25*	33	09
10	35	12	24	0	8	19	41	0	SN BR	7		T	T	28.52	30.34	4.7	15	6.6	21	15	15	17	10
11	38	30	34*	10	27	31	31	0	RA FZRA SN BR	6		T	0.06	28.09	29.82	6.2	18	9.1	26	17	17	34	11
12	33	28	31	7	21	27	34	0	SN	4		T	T	28.07	29.85	11.1	28	11.3	31	28	24	28	12
13	38	27	33	9	19	27	32	0		4		0.0	0.00	28.04	29.79	1.3	31	3.5	13	01	10	36	13
14	37	22	30	5	21	27	35	0	SN BR	3		0.1	T	28.08	29.88	4.1	23	6.2	17	19	13	20	14
15	39*	25	32	7	23	29	33	0	SN BR	2		0.6	0.02	28.14	29.93	5.4	26	8.4	22	25	18	26	15
16	25	16	21	-4	10	18	44	0	SN	3		T	T	28.17	29.95	7.0	35	7.2	18	35	14	36	16
17	17	7	12*	-13	2	10	53	0	SN UP BLSN	3		0.3	T	28.05	29.89	13.0	32	13.6	43*	34	24	32	17
18	25	7*	16	-9	4	14	49	0	SN	2		0.1	T	28.34	30.17	4.8	29	8.3	30	30	21	30	18
19	34	24	29	3			36	0	SN BR	2		3.2	0.29	28.04		7.0	19	9.7	31	27	24	28	19
20	26	16	21	-5	9	16	44	0	SN HZ	6		0.5	T	28.04	29.86	14.2	28	15.3	37	28	24	28	20
21	18	13	16	-10	8	13	49	0	SN BR UP	6		0.1	T	28.28	30.16	11.3	31	12.2	35	31	22	31	21
22	32	15	24	-2	17	22	41	0	SN	6		T	T	28.47	30.28	6.7	15	8.7	26	17	17	17	22
23	36	29	33	7			32	0	RA BR	6		0.1	0.15	28.22		6.6	17	6.8	25	15	18	16	23
24	35	25	30	3	22	26	35	0	SN BR HZ	4		0.2	0.01	28.09	29.89	6.6	32	7.5	23	31	15	30	24
25	35	26	31	4	23	27	34	0	SN BR	4		0.1	T	28.33	30.15	5.3	33	6.3	16	33	14	35	25
26	37	21	29	2	23	27	36	0	SN PL BR UP	4		0.8	0.27	28.35	30.11	11.3	12	12.2	30	14	23	14	26
27	35	30	33	6	31	32	32	0	RA SN PL BR	4		1.1	0.62	27.89	29.62	2.3	09	8.4	23	11	17	10	27
28	36	30	33	5	29	31	32	0	RA SN BR UP	6		1.2	0.17	27.83	29.58	4.3	27	5.5	16	25	13	24	28
	29.5	18.5	24.0	¤			40.8	0.0	< MONTHLY AVERAGES | TOTALS >			19.6	2.30	28.17	29.97	3.0	27	8.8	< MONTHLY AVERAGES				
	-2.6	1.1	-0.7		<---------- DEPARTURE FROM NORMAL ---------->								-0.01	SUNSHINE, CLOUD, & VISIBILITY TABLES ON PAGE 3									

FEBRUARY 2013
BINGHAMTON, NY

DEGREE DAYS

	MONTHLY TOTAL	MONTHLY DEPARTURE	SEASON TO DATE TOTAL	SEASON TO DATE DEPARTURE
HEATING :	1141	14	4884	-315
COOLING :	0	0	0	0

GREATEST 24-HR PRECIPITATION :	0.88	DATE :	26-27
GREATEST 24-HR SNOWFALL :	6.0	DATE :	08
GREATEST SNOW DEPTH :	7	DATE :	10+

SEA LEVEL PRESSURE		DATE	TIME
MAXIMUM :	30.46	10	1015
MIMIMUM :	29.54	27	1531

NUMBER OF -> DAYS WITH

MAXIMUM TEMP >= 90 :	0	MINIMUM TEMP <= 32 :	28
MAXIMUM TEMP <= 32 :	15	MINIMUM TEMP <= 0 :	0
THUNDERSTORMS :	0	HEAVY FOG :	0

PRECIPITATION >= 0.01 INCH:	16
PRECIPITATION >= 0.10 INCH:	6
SNOWFALL >= 1.0 INCH :	5

MARCH 2013
LOCAL CLIMATOLOGICAL DATA
NOAA, National Climatic Data Center

BINGHAMTON, NY
GREATER BINGHAMTON/E A LINK FIELD AP (KBGM)
Lat:42° 12'N Long: 75° 58'W Elev (Ground) 1595 Feet
Time Zone : EASTERN WBAN: 04725 ISSN#: 0198-3563

Date	Temperature °F MAXIMUM	MINIMUM	AVERAGE	DEP FROM NORMAL	AVERAGE DEW PT	AVERAGE WET BULB	Deg Days BASE 65° HEATING	COOLING	WEATHER	SNOW/ICE ON GND(IN) 0700 LST DEPTH	1300 LST WATER-EQUIV	PRECIPITATION ON GND(IN) 2400 LST SNOW-FALL	2400 LST WATER EQUIV	PRESSURE (INCHES OF HG) AVERAGE STATION	AVERAGE SEA LEVEL	WIND SPEED = MPH DIR = TENS OF DEGREES RESULTANT SPEED	RES DIR	AVERAGE SPEED	MAXIMUM 3-SEC SPEED	3-SEC DIR	MAXIMUM 2-MIN SPEED	2-MIN DIR	Date
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
01	31	23	27	-1	24	26	38	0	SN BR	5		0.2	T	27.97	29.76	10.3	32	10.5	28	33	21	35	01
02	25	20	23	-5	17	21	42	0	SN BR	5		0.2	T	28.04	29.82	9.3	32	9.5	22	34	16	32	02
03	24	18	21*	-8	14	19	44	0	SN BR	5		0.7	T	28.01	29.80	9.4	32	9.6	26	36	18	33	03
04	27	19	23	-6	15	20	42	0	SN	5		T	T	28.09	29.89	11.8	31	11.4	28	31	20	32	04
05	33	21	27	-2	18	23	38	0	SN HZ	4		T	T	28.22	30.02	4.1	01	6.5	22	32	15	33	05
06	36	26	31	2	23	28	34	0		4		0.0	0.00	28.20	30.00	10.5	05	10.7	29	05	18	05	06
07	35	25	30	0	19	27	35	0	SN BR	4		0.4	0.03	28.33	30.13	10.6	01	11.7	24	03	20	35	07
08	34	24	29	-1	20	25	36	0	SN BR UP	6		1.9	0.14	28.41	30.24	14.2	34	14.2	38	34	29	34	08
09	47	24	36	6	19	29	29	0		6		0.0	0.00	28.53	30.33	4.1	36	4.9	14	01	12	36	09
10	53*	30	42	11	20	34	23	0		3		0.0	0.00	28.45	30.21	8.5	17	9.0	26	18	17	15	10
11	49	39	44*	13	30	38	21	0	RA	2		0.0	T	28.28	30.01	12.1	16	12.2	36	17	24	17	11
12	50	32	41	10	38	39	24	0	RA BR	T		T	0.70	28.06	29.80	1.5	27	9.6	35	17	23	16	12
13	38	22	30	-2	23	28	35	0	SN BR	T		0.1	T	28.09	29.86	8.2	28	8.7	32	28	25	28	13
14	30	16	23	-9	8	18	42	0	SN BR	T		0.5	0.02	28.13	29.94	14.1	30	14.4	43*	33	29*	31	14
15	32	17	25	-7	18	24	40	0	SN BR	T		0.7	0.06	28.06	29.83	7.5	27	8.9	29	31	20	31	15
16	28	18	23	-10	16	21	42	0	SN HZ	1		0.1	0.01	28.04	29.84	3.9	35	5.4	22	32	16	33	16
17	31	15	23	-10	12	19	42	0	SN BR	T		T	T	28.30	30.15	5.9	33	6.9	23	33	16	30	17
18	30	14*	22	-11			43	0	SN BR	T		3.8	0.27	28.40		10.8	13	11.5	30	14	22	14	18
19	39	24	32	-2	24	28	33	0	RA FZRA SN BR UP HZ	5		3.2	0.29	27.99	29.76	4.0	22	11.1	32	14	24	15	19
20	33	20	27	-7	15	22	38	0	SN BR	4		0.9	0.03	28.02	29.81	10.1	28	10.5	29	27	22	26	20
21	28	15	22	-13	10	18	43	0	SN BR	4		0.2	T	27.96	29.74	5.2	27	6.3	18	27	16	26	21
22	30	19	25	-10	18	23	40	0	SN BR	3		0.5	T	27.99	29.79	10.9	28	11.1	31	27	22	28	22
23	34	25	30	-5	19	25	35	0	SN BR UP	4		0.6	0.01	28.10	29.90	10.9	30	11.3	29	33	20	31	23
24	38	23	31	-5	18	26	34	0		3		0.0	0.00	28.09	29.84	4.6	01	5.9	18	01	15	01	24
25	39	28	34	-2	21	29	31	0		2		0.0	0.00	27.85	29.60	6.6	04	8.2	18	04	15	36	25
26	41	30	36	-1	23	30	29	0	SN	2		T	T	28.00	29.79	8.1	32	8.3	25	33	17	35	26
27	43	27	35	-2	26	30	30	0	SN BR	T		0.2	0.01	28.17	29.95	8.1	30	9.0	28	35	20	36	27
28	40	30	35	-2	27	31	30	0	SN BR	T		0.2	0.02	28.28	30.08	8.1	32	8.2	22	33	16	33	28
29	43	33	38	0	27	32	27	0	RA	T		0.0	T	28.36	30.15	5.4	31	5.6	20	35	14	35	29
30	50	27	39	1	21	33	26	0		0		0.0	0.00	28.35	30.13	3.4	31	5.5	20	35	15	33	30
31	48	32	40	1	29	36	25	0	RA BR	0		0.0	0.31	28.15	29.86	8.3	17	8.7	31	21	23	21	31
	36.7	23.7	30.2	¤	20.4	26.7	34.5	0.0	< MONTHLY AVERAGES | TOTALS >			14.4	1.90	28.16	29.93	4.2	31	9.2	< MONTHLY AVERAGES				
	-4.4	-0.9	-2.6		<---------- DEPARTURE FROM NORMAL ---------->								-1.09	SUNSHINE, CLOUD, & VISIBILITY TABLES ON PAGE 3									

MARCH 2013
BINGHAMTON, NY

DEGREE DAYS

	MONTHLY TOTAL	MONTHLY DEPARTURE	SEASON TO DATE TOTAL	SEASON TO DATE DEPARTURE
HEATING :	1071	74	5955	-241
COOLING :	0	0	0	0

GREATEST 24-HR PRECIPITATION :	0.70	DATE :	12
GREATEST 24-HR SNOWFALL :	3.8	DATE :	18
GREATEST SNOW DEPTH :	6	DATE :	09+

SEA LEVEL PRESSURE		DATE	TIME
MAXIMUM :	30.38	09	0853
MIMIMUM :	29.52	25	1453

NUMBER OF -> DAYS WITH

MAXIMUM TEMP >= 90 :	0	MINIMUM TEMP <= 32 :	29
MAXIMUM TEMP <= 32 :	11	MINIMUM TEMP <= 0 :	0
THUNDERSTORMS :	0	HEAVY FOG :	0
PRECIPITATION >= 0.01 INCH:	13		
PRECIPITATION >= 0.10 INCH:	5		
SNOWFALL >= 1.0 INCH :	3		

APRIL 2013
LOCAL CLIMATOLOGICAL DATA
NOAA, National Climatic Data Center

BINGHAMTON, NY
GREATER BINGHAMTON/E A LINK FIELD AP (KBGM)
Lat:42° 12'N Long: 75° 58'W Elev (Ground) 1595 Feet
Time Zone : EASTERN WBAN: 04725 ISSN#: 0198-3563

Date	Temperature °F MAXIMUM	MINIMUM	AVERAGE	DEP FROM NORMAL	AVERAGE DEW PT	AVERAGE WET BULB	Deg Days BASE 65° HEATING	COOLING	WEATHER	SNOW/ICE ON GND(IN) 0700 LST DEPTH	1300 LST WATER-EQUIV	PRECIPITATION ON GND(IN) 2400 LST SNOW-FALL	2400 LST WATER EQUIV	PRESSURE (INCHES OF HG) AVERAGE STATION	AVERAGE SEA LEVEL	WIND SPEED = MPH DIR = TENS OF DEGREES RESULTANT SPEED	RES DIR	AVERAGE SPEED	MAXIMUM 3-SEC SPEED	3-SEC DIR	MAXIMUM 2-MIN SPEED	2-MIN DIR	Date
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
01	42	23	33	-6	25	31	32	0	RA SN BR	0		0.2	0.16	27.96	29.74	8.6	28	11.6	32	33	25	28	01
02	33	19	26*	-13	12	21	39	0	SN BR	1		0.5	0.02	28.19	29.99	12.7	29	13.0	38	27	20	29	02
03	33	22	28	-12	13	23	37	0	SN	T		0.2	T	28.36	30.19	11.4	30	11.6	33	31	22	29	03
04	50	19*	35	-5	14	28	30	0		0		0.0	0.00	28.43	30.18	6.4	22	7.2	22	19	16	20	04
05	47	27	37	-4	16	29	28	0		0		0.0	0.00	28.16	29.93	8.6	31	11.0	32	35	26	34	05
06	45	23	34	-7	11	27	31	0		0		0.0	0.00	28.42	30.22	2.1	33	7.0	25	36	18	36	06
07	62	40	51	9	26	40	14	0	RA	0		0.0	T	28.23	29.98	11.3	19	13.0	32	18	23	22	07
08	64	36	50	8	34	43	15	0	TSRA RA VCTS	0		0.0	0.01	28.27	30.01	1.4	15	4.5	24	18	18	19	08
09	66	48	57*	15	41	49	8	0	TS RA BR VCTS	0		0.0	0.18	28.22	29.96	3.3	32	8.5	43*	35	35*	35	09
10	55	44	50	7	47	48	15	0	RA BR VCTS	0		0.0	0.62	28.17	29.91	2.8	36	5.9	21	35	17	34	10
11	44	34	39	-4	35	38	26	0	RA BR HZ	0		0.0	0.12	28.20	29.98	7.9	05	10.1	25	07	20	10	11
12	42	35	39	-5	35	37	26	0	RA SN BR	0		T	0.54	28.01	29.75	12.3	14	13.6	39	14	30	14	12
13	49	34	42	-2	32	37	23	0	RA BR	0		0.0	T	28.09	29.86	6.7	25	7.5	23	25	18	26	13
14	46	33	40	-5	26	33	25	0	RA SN BR UP	0		T	0.02	28.30	30.09	5.1	30	7.6	23	28	16	29	14
15	64	34	49	4	33	41	16	0		0		0.0	0.00	28.43	30.21	10.0	16	11.4	23	17	16	17	15
16	58	47	53	8	46	49	12	0	RA BR	0		0.0	0.76	28.40	30.15	8.4	20	12.1	31	21	21	34	16
17	58	36	47	1	31	40	18	0		0		0.0	0.00	28.50	30.27	5.9	36	7.5	18	36	14	36	17
18	59	42	51	5	40	46	14	0		0		0.0	0.00	28.38	30.10	13.8	16	14.2	36	18	23	17	18
19	69*	40	55	8	51	54	10	0	RA BR	0		0.0	0.45	28.01	29.70	10.3	19	14.6	41	29	26	29	19
20	46	28	37	-10	24	33	28	0	RA SN	0		T	T	28.20	30.01	10.0	29	11.0	33	27	25	25	20
21	46	27	37	-10	18	29	28	0	SN	T		T	T	28.72	30.56	5.7	01	7.7	22	36	17	36	21
22	54	31	43	-5	19	34	22	0		0		0.0	0.00	28.74	30.52	9.0	14	9.6	26	13	21	13	22
23	57	31	44	-4	30	38	21	0		0		0.0	0.00	28.51	30.25	8.4	15	9.0	24	14	17	14	23
24	68	38	53	4	43	47	12	0	RA BR	0		0.0	0.35	28.15	29.89	6.2	21	9.6	39	26	31	27	24
25	55	34	45	-4	26	37	20	0	RA	0		0.0	T	28.38	30.17	6.4	29	8.1	25	29	17	28	25
26	53	36	45	-4	28	37	20	0	RA	0		0.0	T	28.61	30.41	3.5	34	5.6	21	01	16	35	26
27	65	34	50	0	27	41	15	0		0		0.0	0.00	28.60	30.36	1.7	06	3.7	17	25	12	35	27
28	68	42	55	5	34	46	10	0	RA	0		0.0	0.11	28.45	30.19	7.0	18	8.4	28	20	18	15	28
29	52	47	50	0	43	46	15	0	RA BR	0		0.0	T	28.37	30.12	11.5	15	11.5	24	15	17	14	29
30	62	49	56	5	46	50	9	0		0		0.0	0.00	28.47	30.24	7.4	16	7.8	24	14	16	15	30
	53.7	34.4	44.1	¤	30.2	38.4	20.6	0.0	< MONTHLY AVERAGES | TOTALS >			0.9	3.34	28.33	30.10	2.4	21	9.5	< MONTHLY AVERAGES				
	-0.5	-1.5	-1.0		<---------- DEPARTURE FROM NORMAL ---------->								-0.09	SUNSHINE, CLOUD, & VISIBILITY TABLES ON PAGE 3									

APRIL 2013
BINGHAMTON, NY

DEGREE DAYS

	MONTHLY TOTAL	MONTHLY DEPARTURE	SEASON TO DATE TOTAL	SEASON TO DATE DEPARTURE
HEATING :	619	16	6574	-225
COOLING :	0	-4	0	-4

GREATEST 24-HR PRECIPITATION :	0.80	DATE :	09-10
GREATEST 24-HR SNOWFALL :	0.5	DATE :	02
GREATEST SNOW DEPTH :	1	DATE :	02

SEA LEVEL PRESSURE		DATE	TIME
MAXIMUM :	30.63	21	1048
MIMIMUM :	29.50	19	1638

NUMBER OF -> DAYS WITH

MAXIMUM TEMP >= 90 :	0	MINIMUM TEMP <= 32 :	10
MAXIMUM TEMP <= 32 :	0	MINIMUM TEMP <= 0 :	0
THUNDERSTORMS :	2	HEAVY FOG :	0
PRECIPITATION >= 0.01 INCH:	12		
PRECIPITATION >= 0.10 INCH:	9		
SNOWFALL >= 1.0 INCH :	0		

MAY 2013
LOCAL CLIMATOLOGICAL DATA
NOAA, National Climatic Data Center

BINGHAMTON, NY
GREATER BINGHAMTON/E A LINK FIELD AP (KBGM)
Lat:42° 12'N Long: 75° 58'W Elev (Ground) 1595 Feet
Time Zone : EASTERN WBAN: 04725 ISSN#: 0198-3563

Date	Temperature °F MAXIMUM	MINIMUM	AVERAGE	DEP FROM NORMAL	AVERAGE DEW PT	AVERAGE WET BULB	Deg Days BASE 65° HEATING	COOLING	WEATHER	SNOW/ICE ON GND(IN) 0700 LST DEPTH	1300 LST WATER-EQUIV	PRECIPITATION ON GND(IN) 2400 LST SNOW-FALL	2400 LST WATER EQUIV	PRESSURE (INCHES OF HG) AVERAGE STATION	AVERAGE SEA LEVEL	WIND SPEED = MPH DIR = TENS OF DEGREES RESULTANT SPEED	RES DIR	AVERAGE SPEED	MAXIMUM 3-SEC SPEED	3-SEC DIR	MAXIMUM 2-MIN SPEED	2-MIN DIR	Date
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
01	71	44	58	7	27	45	7	0		0		0.0	0.00	28.61	30.37	6.6	15	7.3	23	16	15	17	01
02	74	45	60	9	35	48	5	0		0		0.0	0.00	28.63	30.36	3.4	18	5.2	20	15	14	15	02
03	70	52	61	9	34	47	4	0		0		0.0	0.00	28.58	30.32	7.6	16	8.5	22	14	17	14	03
04	72	45	59	7	34	47	6	0		0		0.0	0.00	28.51	30.24	2.8	16	3.5	18	13	13	13	04
05	74	46	60	8	32	47	5	0		0		0.0	0.00	28.45	30.18	5.2	14	6.5	20	13	15	14	05
06	72	42	57	4	38	48	8	0		0		0.0	0.00	28.41	30.15	4.0	17	5.0	17	15	13	15	06
07	75	49	62	9	46	53	3	0		0		0.0	0.00	28.36	30.09	5.4	13	6.2	21	11	14	11	07
08	62	52	57	4	53	55	8	0	RA BR	0		0.0	0.67	28.30	30.01	5.7	11	7.0	20	22	14	22	08
09	68	49	59	5	50	53	6	0	BR	0		0.0	0.00	28.20	29.93	3.3	22	5.5	15	28	13	28	09
10	69	50	60	6	52		5	0	RA BR VCTS	0		0.0	0.48	28.22		5.3	19	6.6	21	22	15	22	10
11	64	52	58	4	53		7	0	RA BR	0		0.0	0.40			4.4	24	7.4	29	26	23	26	11
12	53	38	46	-9	32	41	19	0	RA	0		0.0	0.03	28.03	29.78	10.1	28	10.8	37	27	25	27	12
13	45	32	39*	-16	25	33	26	0	RA SN	0		T	0.03	28.24	30.02	9.5	28	9.8	33	26	24	28	13
14	54	30*	42	-13	23		23	0		0		0.0	0.00			3.2	28	6.5	22	28	16	34	14
15	75	40	58	2	41	49	7	0	RA	0		0.0	0.02	28.07	29.79	5.7	20	10.3	32	20	23	22	15
16	76	51	64	8	38	50	1	0		0		0.0	0.00	28.07	29.80	8.4	30	9.3	35	35	22	29	16
17	64	42	53	-3	36	45	12	0		0		0.0	0.00	28.36	30.13	7.8	36	8.1	23	01	16	36	17
18	65	42	54	-3	42	48	11	0		0		0.0	0.00	28.50	30.25	5.4	14	6.5	22	16	16	16	18
19	62	53	58	1	52	54	7	0	RA BR	0		0.0	0.01	28.45	30.18	8.9	15	9.0	21	16	15	14	19
20	79	56	68	11	57	61	0	3	RA BR HZ	0		0.0	T	28.32	30.02	3.3	21	4.7			9	24	20
21	85	61	73	16	62	66	0	8	TS RA BR VCTS	0		0.0	T	28.19	29.87	6.6	23	8.0	28	32	20	33	21
22	83	62	73	15	62	65	0	8	TS TSRA RA BR VCTS	0		0.0	0.35	28.12	29.82	4.4	20	5.9	43*	25	29*	24	22
23	71	58	65	7	59	61	0	0	TSRA RA BR	0		0.0	0.37	28.09	29.79	5.9	21	6.8	24	18	15	21	23
24	58	37	48	-10	37	39	17	0	RA GS BR	0		T	0.31	28.19	29.98	12.1	33	12.2	29	34	22	34	24
25	51	38	45	-14	33	39	20	0	RA	0		0.0	T	28.31	30.07	15.5	33	15.9	38	32	26	33	25
26	57	38	48	-11	31	41	17	0		0		0.0	0.00	28.35	30.12	10.5	32	11.2	41	34	26	33	26
27	68	37	53	-6	33	44	12	0		0		0.0	0.00	28.46	30.21	3.6	31	6.5	28	31	16	35	27
28	55	46	51	-8			14	0	RA FG BR	0		0.0	0.61	28.40		6.9	15	7.1	18	15	14	15	28
29	80	55	68	8	61	64	0	3	TS RA BR HZ VCTS	0		0.0	0.09	28.30	30.02	6.5	23	7.0	24	23	18	24	29
30	85	63	74	14	61	66	0	9		0		0.0	0.00	28.40	30.11	3.6	25	4.7	16	22	12	25	30
31	87*	67	77*	17	60	66	0	12		0		0.0	0.00	28.36	30.05	6.0	22	6.4	20	21	14	23	31
	68.5	47.5	58.0	¤	43.3		8.1	1.4	< MONTHLY AVERAGES | TOTALS >			T	3.37	28.33	30.05	2.2	23	7.6	< MONTHLY AVERAGES				
	3.0	1.4	2.2		<---------- DEPARTURE FROM NORMAL ---------->								-0.20	SUNSHINE, CLOUD, & VISIBILITY TABLES ON PAGE 3									

MAY 2013
BINGHAMTON, NY

DEGREE DAYS

	MONTHLY TOTAL	MONTHLY DEPARTURE	SEASON TO DATE TOTAL	SEASON TO DATE DEPARTURE
HEATING :	250	-55	6824	-280
COOLING :	43	24	43	20

GREATEST 24-HR PRECIPITATION :	0.88	DATE :	10-11
GREATEST 24-HR SNOWFALL :	T	DATE :	24+
GREATEST SNOW DEPTH :	0	DATE :	

SEA LEVEL PRESSURE		DATE	TIME
MAXIMUM :	30.45	02	1021
MIMIMUM :	29.60	15	1625

NUMBER OF -> DAYS WITH

MAXIMUM TEMP >= 90 :	0	MINIMUM TEMP <= 32 :	2
MAXIMUM TEMP <= 32 :	0	MINIMUM TEMP <= 0 :	0
THUNDERSTORMS :	4	HEAVY FOG :	0
PRECIPITATION >= 0.01 INCH:	12		
PRECIPITATION >= 0.10 INCH:	7		
SNOWFALL >= 1.0 INCH :	0		

JUNE 2013
LOCAL CLIMATOLOGICAL DATA
NOAA, National Climatic Data Center

BINGHAMTON, NY
GREATER BINGHAMTON/E A LINK FIELD AP (KBGM)
Lat:42° 12'N Long: 75° 58'W Elev (Ground) 1595 Feet
Time Zone : EASTERN WBAN: 04725 ISSN#: 0198-3563

Date	Temperature °F MAXIMUM	MINIMUM	AVERAGE	DEP FROM NORMAL	AVERAGE DEW PT	AVERAGE WET BULB	Deg Days BASE 65° HEATING	COOLING	WEATHER	SNOW/ICE ON GND(IN) 0700 LST DEPTH	1300 LST WATER-EQUIV	PRECIPITATION ON GND(IN) 2400 LST SNOW-FALL	2400 LST WATER EQUIV	PRESSURE (INCHES OF HG) AVERAGE STATION	AVERAGE SEA LEVEL	WIND SPEED = MPH DIR = TENS OF DEGREES RESULTANT SPEED	RES DIR	AVERAGE SPEED	MAXIMUM 3-SEC SPEED	3-SEC DIR	MAXIMUM 2-MIN SPEED	2-MIN DIR	Date
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
01	84	65	75	14	61	66	0	10		0		0.0	0.00	28.24	29.92	8.0	22	8.4	26	22	18	23	01
02	78	64	71	10	62	65	0	6	TS RA VCTS	0		0.0	0.12	28.09	29.79	6.7	23	8.7	47*	27	33*	27	02
03	65	48	57	-4	47	52	8	0		0		0.0	0.00	28.19	29.92	6.3	33	6.9	18	28	14	33	03
04	65	44	55*	-7	36	46	10	0		0		0.0	0.00	28.33	30.09	8.0	33	8.6	25	34	21	35	04
05	71	42*	57	-5	38	48	8	0		0		0.0	0.00	28.41	30.15	1.4	08	3.7	14	15	9	06	05
06	63	53	58	-4	49	52	7	0	RA BR	0		0.0	0.59	28.30	30.01	10.0	15	10.2	24	14	17	13	06
07	59	56	58	-4	56	56	7	0	RA BR	0		0.0	0.43	28.12	29.84	7.1	13	8.5	21	14	15	14	07
08	65	55	60	-3	54	56	5	0	RA BR	0		0.0	0.02	28.17	29.95	4.9	32	5.8	17	33	13	31	08
09	73	51	62	-1	51	57	3	0	BR	0		0.0	0.00	28.42	30.16	1.0	33	4.9	16	32	12	35	09
10	63	57	60	-3	56	58	5	0	RA BR	0		0.0	0.53	28.30	29.99	10.7	13	11.0	31	13	22	14	10
11	64	57	61	-3	58	59	4	0	RA BR	0		0.0	0.21	28.01	29.72	6.4	27	9.1	28	30	17	31	11
12	71	54	63	-1	50	55	2	0		0		0.0	0.00	28.14	29.86	5.7	33	7.2	25	30	17	36	12
13	59	53	56	-8	53	54	9	0	RA BR	0		0.0	0.85	27.94	29.63	7.7	10	11.5	30	14	22	14	13
14	69	52	61	-3	52	55	4	0	RA	0		0.0	0.01	28.10	29.85	8.5	33	9.2	26	33	18	34	14
15	73	53	63	-2	47	55	2	0		0		0.0	0.00	28.27	30.00	6.3	30	6.9	22	29	15	34	15
16	71	57	64	-1	53	58	1	0	RA BR	0		0.0	0.05	28.16	29.86	8.4	24	9.9	30	21	21	21	16
17	80	57	69	4	56	60	0	4	RA VCTS	0		0.0	T	28.17	29.89	5.2	27	6.9	28	27	20	32	17
18	72	54	63	-2	54	58	2	0	RA	0		0.0	T	28.20	29.92	6.8	01	7.4	23	02	18	36	18
19	68	49	59	-7	41	50	6	0		0		0.0	0.00	28.34	30.10	7.0	36	7.7	31	34	18	36	19
20	76	46	61	-5	47	55	4	0		0		0.0	0.00	28.49	30.23	3.1	22	3.6	21	27	15	26	20
21	80	56	68	2	56	61	0	3		0		0.0	0.00	28.52	30.24	2.3	23	4.0	18	28	12	26	21
22	81	60	71	5	59	64	0	6		0		0.0	0.00	28.45	30.16	7.6	21	8.0	29	10	15	22	22
23	88*	67	78*	12	64	68	0	13	RA BR	0		0.0	0.10	28.39	30.09	6.3	24	8.2	23	35	18	35	23
24	86	65	76	9	64	66	0	11	TS RA BR VCTS	0		0.0	0.05	28.35	30.04	3.9	24	6.0	33	15	13	25	24
25	82	64	73	6	63	67	0	8	RA BR	0		0.0	0.05	28.22	29.90	7.1	26	8.1	26	28	20	27	25
26	75	64	70	3	64	66	0	5	RA BR	0		0.0	0.05	28.14	29.84	5.1	25	5.7	20	18	13	25	26
27	79	62	71	4	63	65	0	6	RA BR HZ	0		0.0	1.50	28.07	29.73	2.8	07	5.6	22	04	16	01	27
28	74	61	68	1			0	3	TS TSRA RA BR VCTS	0		0.0	0.45	27.84		3.9	28	5.4	21	36	16	01	28
29	77	58	68	1			0	3	RA BR	0		0.0	0.01	27.89		5.2	23	5.8	23	25	20	25	29
30	82	58	70	2	63	65	0	5	RA BR	0		0.0	0.22	28.10	29.82	0.7	11	3.3	18	12	15	12	30
	73.1	56.1	64.6	¤	54.2	58.5	2.9	2.8	< MONTHLY AVERAGES | TOTALS >			0.0	5.24	28.21	29.92	1.9	26	7.2	< MONTHLY AVERAGES				
	-0.6	0.9	0.2		<---------- DEPARTURE FROM NORMAL ---------->								0.93	SUNSHINE, CLOUD, & VISIBILITY TABLES ON PAGE 3									

JUNE 2013
BINGHAMTON, NY

DEGREE DAYS

	MONTHLY TOTAL	MONTHLY DEPARTURE	SEASON TO DATE TOTAL	SEASON TO DATE DEPARTURE
HEATING :	87	-4	6911	-284
COOLING :	83	9	126	29

GREATEST 24-HR PRECIPITATION : 1.90 DATE : 27-28
GREATEST 24-HR SNOWFALL : 0.0 DATE :
GREATEST SNOW DEPTH : 0 DATE :

SEA LEVEL PRESSURE	DATE	TIME
MAXIMUM :	30.29	21	0910
MIMIMUM :	29.48	28	1649

NUMBER OF -> DAYS WITH

MAXIMUM TEMP >= 90 :	0	MINIMUM TEMP <= 32 :	0
MAXIMUM TEMP <= 32 :	0	MINIMUM TEMP <= 0 :	0
THUNDERSTORMS :	3	HEAVY FOG :	0

PRECIPITATION >= 0.01 INCH:	17
PRECIPITATION >= 0.10 INCH:	10
SNOWFALL >= 1.0 INCH :	0

JULY 2013
LOCAL CLIMATOLOGICAL DATA
NOAA, National Climatic Data Center

BINGHAMTON, NY
GREATER BINGHAMTON/E A LINK FIELD AP (KBGM)
Lat:42° 12'N Long: 75° 58'W Elev (Ground) 1595 Feet
Time Zone : EASTERN WBAN: 04725 ISSN#: 0198-3563

Date	Temperature °F						Deg Days BASE 65°		WEATHER	SNOW/ICE ON GND(IN)		PRECIPITATION ON GND(IN)		PRESSURE (INCHES OF HG)		WIND SPEED = MPH DIR = TENS OF DEGREES							Date
										0700 LST	1300 LST	2400 LST	2400 LST						MAXIMUM 3-SEC		2-MIN		
	MAXIMUM	MINIMUM	AVERAGE	DEP FROM NORMAL	AVERAGE DEW PT	AVERAGE WET BULB	HEATING	COOLING		DEPTH	WATER-EQUIV	SNOW-FALL	WATER EQUIV	AVERAGE STATION	AVERAGE SEA LEVEL	RESULTANT SPEED	RES DIR	AVERAGE SPEED	SPEED	DIR	SPEED	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
01	72	66	69	1	66	67	0	4	RA BR	0		0.0	1.80	28.23	29.95	2.2	12	3.7	25	34	17	34	01
02	80	67	74	6	68	69	0	9	RA BR	0		0.0	0.13	28.35	30.08	5.4	19	5.9	18	20	14	20	02
03	81	67	74	6	67	69	0	9		0		0.0	0.00	28.46	30.18	6.8	20	7.1	18	17	13	18	03
04	84	68	76	8	67	70	0	11		0		0.0	0.00	28.48	30.18	7.4	21	7.7	21	24	15	23	04
05	87	71	79	11	67	71	0	14	RA	0		0.0	T	28.44	30.14	7.4	22	7.7	23	22	16	23	05
06	84	69	77	9	66	70	0	12		0		0.0	0.00	28.42	30.12	4.1	26	5.0	15	27	12	26	06
07	87	69	78	10	68	70	0	13	TS TSRA RA BR VCTS	0		0.0	1.71	28.33	30.02	5.0	23	6.4	31*	17	21	17	07
08	81	66	74	5	65	67	0	9	TS TSRA RA BR HZ VCTS	0		0.0	0.08	28.33	30.04	5.6	26	5.8	29	31	18	33	08
09	82	64	73	4			0	8	RA BR	0		0.0	0.41	28.33		3.8	20	4.3	29	22	22*	23	09
10	80	67	74	5	67	69	0	9	RA BR HZ	0		0.0	0.05	28.19	29.87	7.8	22	8.4	24	27	18	26	10
11	75	62	69	0	58	62	0	4	RA	0		0.0	T	28.22	29.94	5.1	33	6.7	18	36	14	33	11
12	76	59	68	-1	58	62	0	3	RA	0		0.0	T	28.36	30.10	6.4	05	6.8	18	05	12	04	12
13	78	63	71	2	64	66	0	6	RA BR	0		0.0	0.11	28.50	30.24	4.6	12	5.8	15	14	12	13	13
14	85	67	76	7	67	70	0	11	BR	0		0.0	0.00	28.59	30.31	4.7	23	5.5	16	26	12	24	14
15	86	69	78	9	67	70	0	13		0		0.0	0.00	28.56	30.27	5.0	33	6.6	22	23	13	32	15
16	87	67	77	8	64	69	0	12		0		0.0	0.00	28.54	30.25	6.4	34	7.0	18	34	14	35	16
17	89	66	78	9	68	71	0	13	BR HZ	0		0.0	0.00	28.50	30.18	3.3	27	4.3	15	26	12	36	17
18	89*	71	80*	11	69	72	0	15	TS RA BR VCTS	0		0.0	T	28.38	30.06	4.8	26	5.3	21	31	14	30	18
19	88	69	79	10	68	71	0	14	RA	0		0.0	T	28.22	29.89	8.3	23	8.8	25	26	20	25	19
20	81	65	73	4	63	67	0	8	RA HZ	0		0.0	T	28.12	29.82	5.4	28	6.8	23	25	18	26	20
21	81	60	71	2	59	64	0	6	BR	0		0.0	0.00	28.25	29.96	2.7	01	4.6	16	30	12	35	21
22	83	61	72	3	63	65	0	7	TSRA RA BR	0		0.0	1.08	28.22	29.91	3.9	08	6.6	15	14	13	36	22
23	80	64	72	3	63	66	0	7	RA BR	0		0.0	0.53	27.99	29.68	3.3	33	5.2	17	34	13	33	23
24	66	51	59*	-10	52	56	6	0	RA BR	0		0.0	0.02	28.12	29.87	7.3	33	8.5	22	33	16	32	24
25	72	47*	60	-9	47	53	5	0		0		0.0	0.00	28.34	30.08	6.8	03	7.3	22	07	16	05	25
26	76	51	64	-5	52	57	1	0		0		0.0	0.00	28.35	30.07	2.4	35	4.2	16	33	9	29	26
27	78	56	67	-2	59	62	0	2	RA BR	0		0.0	0.44	28.28	29.98	6.6	17	7.1	18	19	14	21	27
28	73	59	66	-3	61	63	0	1	RA BR	0		0.0	0.16	28.22	29.93	3.5	16	6.4	22	30	15	31	28
29	72	57	65	-4	53	58	0	0	BR	0		0.0	0.00	28.33	30.08	4.4	27	6.0	21	24	16	25	29
30	73	53	63	-6	53	57	2	0		0		0.0	0.00	28.45	30.18	4.2	29	5.3	16	34	12	35	30
31	76	54	65	-4	55	60	0	0	BR	0		0.0	0.00	28.40	30.11	2.5	21	3.5	16	23	10	26	31
	80.1	62.7	71.4	¤	62.1	65.4	0.5	7.1	< MONTHLY AVERAGES | TOTALS >			0.0	6.52	28.34	30.05	1.9	25	6.1	< MONTHLY AVERAGES				
	2.3	3.1	2.7		<---------- DEPARTURE FROM NORMAL ---------->								2.82	SUNSHINE, CLOUD, & VISIBILITY TABLES ON PAGE 3									

JULY 2013
BINGHAMTON, NY

DEGREE DAYS

	MONTHLY TOTAL	MONTHLY DEPARTURE	SEASON TO DATE TOTAL	SEASON TO DATE DEPARTURE
HEATING :	14	-10	14	-10
COOLING :	220	82	346	111

GREATEST 24-HR PRECIPITATION : 1.88 DATE : 01-02
GREATEST 24-HR SNOWFALL : 0.0 DATE :
GREATEST SNOW DEPTH : 0 DATE :

SEA LEVEL PRESSURE		DATE	TIME
MAXIMUM :	30.35	14	0843
MIMIMUM :	29.63	23	1736

NUMBER OF -> DAYS WITH

MAXIMUM TEMP >= 90 :	0	MINIMUM TEMP <= 32 :	0
MAXIMUM TEMP <= 32 :	0	MINIMUM TEMP <= 0 :	0
THUNDERSTORMS :	4	HEAVY FOG :	0

PRECIPITATION >= 0.01 INCH:	12
PRECIPITATION >= 0.10 INCH:	9
SNOWFALL >= 1.0 INCH :	0

AUGUST 2013
LOCAL CLIMATOLOGICAL DATA
NOAA, National Climatic Data Center

BINGHAMTON, NY
GREATER BINGHAMTON/E A LINK FIELD AP (KBGM)
Lat:42° 12'N Long: 75° 58'W Elev (Ground) 1595 Feet
Time Zone : EASTERN WBAN: 04725 ISSN#: 0198-3563

Date	Temperature °F MAXIMUM	MINIMUM	AVERAGE	DEP FROM NORMAL	AVERAGE DEW PT	AVERAGE WET BULB	Deg Days BASE 65° HEATING	COOLING	WEATHER	SNOW/ICE ON GND(IN) 0700 LST DEPTH	1300 LST WATER-EQUIV	PRECIPITATION ON GND(IN) 2400 LST SNOW-FALL	2400 LST WATER EQUIV	PRESSURE (INCHES OF HG) AVERAGE STATION	AVERAGE SEA LEVEL	WIND SPEED = MPH DIR = TENS OF DEGREES RESULTANT SPEED	RES DIR	AVERAGE SPEED	MAXIMUM 3-SEC SPEED	3-SEC DIR	MAXIMUM 2-MIN SPEED	2-MIN DIR	Date
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
01	75	60	68	-1	62	63	0	3	RA BR	0		0.0	0.20	28.19	29.88	3.7	17	6.1	23	01	18	01	01
02	73	59	66	-3			0	1	TS RA BR VCTS	0		0.0	0.18	28.18		2.2	24	5.0	29	35	20	36	02
03	75	57	66	-3	53	59	0	1		0		0.0	0.00	28.18	29.90	6.3	29	7.9	21	29	15	33	03
04	69	53	61	-8	51	55	4	0	RA	0		0.0	0.01	28.24	29.97	7.8	31	8.3	28	29	21	34	04
05	70	51	61	-8	48	54	4	0		0		0.0	0.00	28.34	30.08	4.1	32	5.1	21	34	17	34	05
06	71	51	61	-8	53	57	4	0		0		0.0	0.00	28.35	30.09	4.6	16	5.1	17	34	10	14	06
07	69	59	64	-5	61	62	1	0		0		0.0	0.00	28.34	30.06	7.8	17	8.1	22	17	14	18	07
08	79	64	72	4	65	67	0	7	TS TSRA RA BR VCTS	0		0.0	2.03	28.29	29.99	5.7	20	6.8	21	29	15	23	08
09	77	63	70	2	66	67	0	5	TS TSRA RA BR HZ VCTS	0		0.0	0.84	28.19	29.88	3.5	32	5.3	16	32	12	34	09
10	73	56	65	-3	53	58	0	0	BR	0		0.0	0.00	28.32	30.04	5.9	31	7.4	21	31	16	32	10
11	74	51	63	-5	51	57	2	0		0		0.0	0.00	28.38	30.10	3.3	28	4.6	18	28	13	26	11
12	76	57	67	-1	56	60	0	2		0		0.0	0.00	28.30	30.00	2.9	24	3.5	16	23	13	25	12
13	75	53	64	-4	57	60	1	0	TSRA RA BR	0		0.0	0.57	28.10	29.80	3.8	29	7.1	39*	28	26*	34	13
14	65	48	57*	-11	46	51	8	0	RA BR HZ	0		0.0	0.01	28.20	29.95	8.0	29	8.5	26	33	18	31	14
15	69	48*	59	-9	48	53	6	0		0		0.0	0.00	28.38	30.13	4.2	28	5.4	17	30	12	26	15
16	72	54	63	-5	50	55	2	0		0		0.0	0.00	28.45	30.19	3.3	29	4.4	17	31	13	27	16
17	75	50	63	-5	51	57	2	0		0		0.0	0.00	28.54	30.28	0.9	07	1.5	13	15	9	14	17
18	72	57	65	-3	56	59	0	0	RA	0		0.0	T	28.51	30.23	1.1	25	1.9	10	24	8	23	18
19	74	58	66	-1	58	61	0	1		0		0.0	0.00	28.38	30.10	5.3	24	5.5	15	23	10	23	19
20	79	60	70	3	58	62	0	5	BR	0		0.0	0.00	28.40	30.14	2.9	27	3.4	15	24	12	26	20
21	82	59	71	4	58	63	0	6	BR	0		0.0	0.00	28.44	30.14	3.2	25	3.6	24	21	14	24	21
22	82	64	73	6	62	66	0	8	TS RA BR HZ VCTS	0		0.0	0.42	28.29	29.98	4.6	26	5.9	29	35	23	34	22
23	73	56	65	-2	55	59	0	0	BR	0		0.0	0.00	28.34	30.08	8.9	35	9.2	22	35	16	01	23
24	74	52	63	-4	50	56	2	0		0		0.0	0.00	28.56	30.32	2.3	05	3.9	14	36	10	36	24
25	76	52	64	-2	53	58	1	0	RA	0		0.0	T	28.59	30.31	5.2	22	5.7	18	22	13	25	25
26	77	63	70	4	61	64	0	5	TS TSRA RA BR VCTS	0		0.0	0.69	28.36	30.06	6.4	24	7.4	28	33	20	33	26
27	80	63	72	6	64	67	0	7	RA BR	0		0.0	T	28.23	29.94	1.3	33	3.7	15	33	12	34	27
28	82	63	73	7	65	67	0	8	TS TSRA RA BR VCTS	0		0.0	0.28	28.19	29.89	3.0	13	4.1	26	07	18	13	28
29	81	60	71	6			0	6	BR HZ	0		0.0	0.00	28.30		2.9	33	3.6	20	36	15	35	29
30	82	60	71	6			0	6	BR	0		0.0	0.00	28.25		3.5	22	4.1	15	32	10	23	30
31	83*	67	75*	10	66	68	0	10	TS TSRA RA BR VCTS	0		0.0	0.14	28.10	29.81	4.7	21	5.5	18	22	14	27	31
	75.3	57.0	66.2	¤	56.3	60.2	1.2	2.6	< MONTHLY AVERAGES | TOTALS >			0.0	5.37	28.32	30.05	2.4	26	5.4	< MONTHLY AVERAGES				
	-1.2	-1.3	-1.2		<---------- DEPARTURE FROM NORMAL ---------->								1.92	SUNSHINE, CLOUD, & VISIBILITY TABLES ON PAGE 3									

DEGREE DAYS

	MONTHLY TOTAL	MONTHLY DEPARTURE	SEASON TO DATE TOTAL	SEASON TO DATE DEPARTURE
HEATING :	37	-2	51	-12
COOLING :	81	-32	427	79

GREATEST 24-HR PRECIPITATION : 2.74 DATE : 08-09
GREATEST 24-HR SNOWFALL : 0.0 DATE :
GREATEST SNOW DEPTH : 0 DATE :

SEA LEVEL PRESSURE	DATE	TIME
MAXIMUM :	30.40	25	0757
MIMIMUM :	29.72	13	1457

NUMBER OF -> DAYS WITH

MAXIMUM TEMP >= 90 :	0	MINIMUM TEMP <= 32 :	0
MAXIMUM TEMP <= 32 :	0	MINIMUM TEMP <= 0 :	0
THUNDERSTORMS :	8	HEAVY FOG :	0

PRECIPITATION >= 0.01 INCH:	11
PRECIPITATION >= 0.10 INCH:	9
SNOWFALL >= 1.0 INCH :	0

AUGUST 2013
BINGHAMTON, NY

APPENDIX B.2

TIME SERIES PLOTS – FIGURES B.1 THROUGH B.38

Figure B.1
TCE in Soil Vapor and Groundwater
Annual Report - Soil Vapor Monitoring through October 2013
Comprehensive Operations, Maintenance, Monitoring Program
Endicott, New York

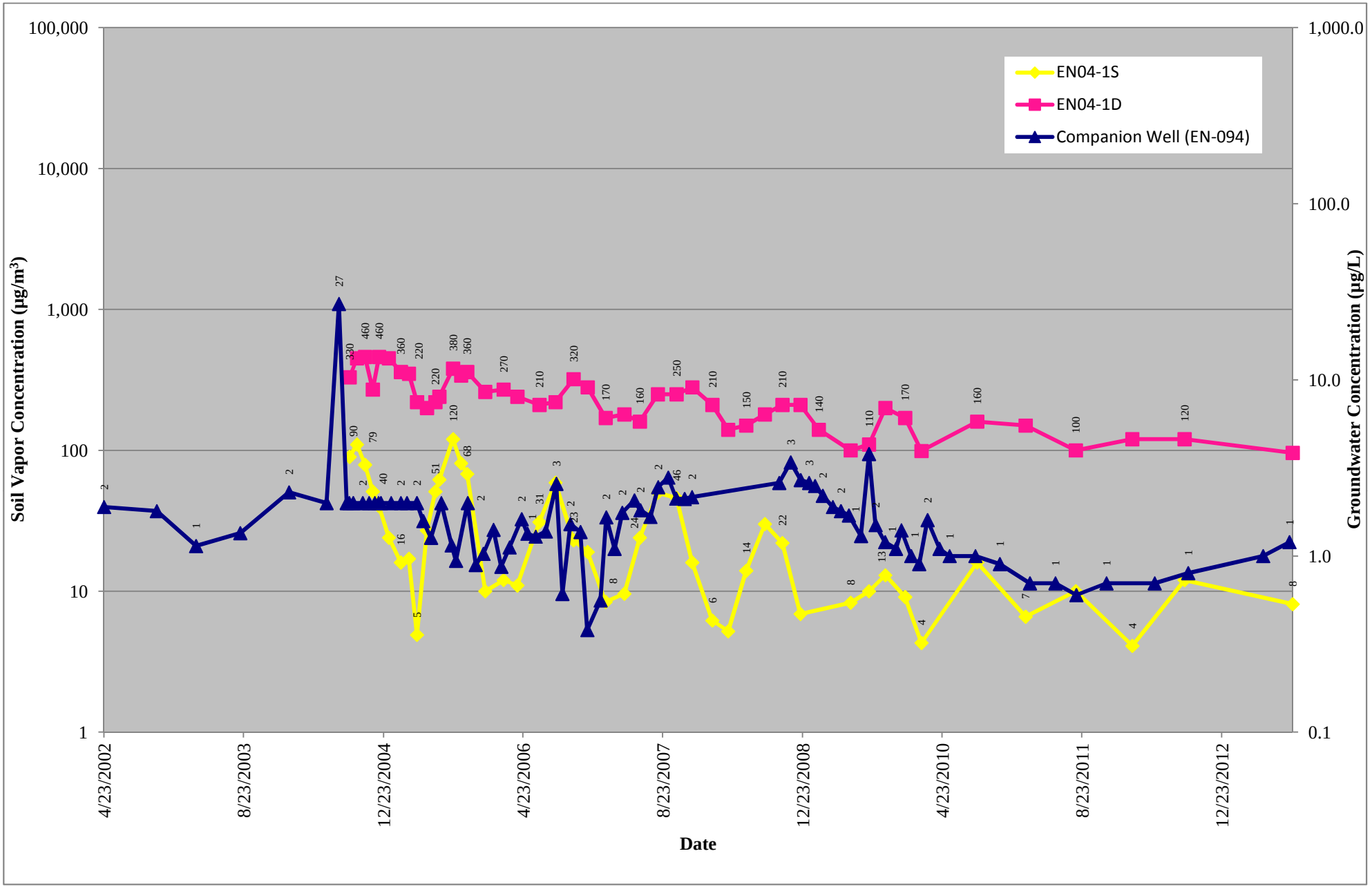


Figure B.2
TCE in Soil Vapor and Groundwater
Annual Report - Soil Vapor Monitoring through October 2013
Comprehensive Operations, Maintenance, Monitoring Program
Endicott, New York

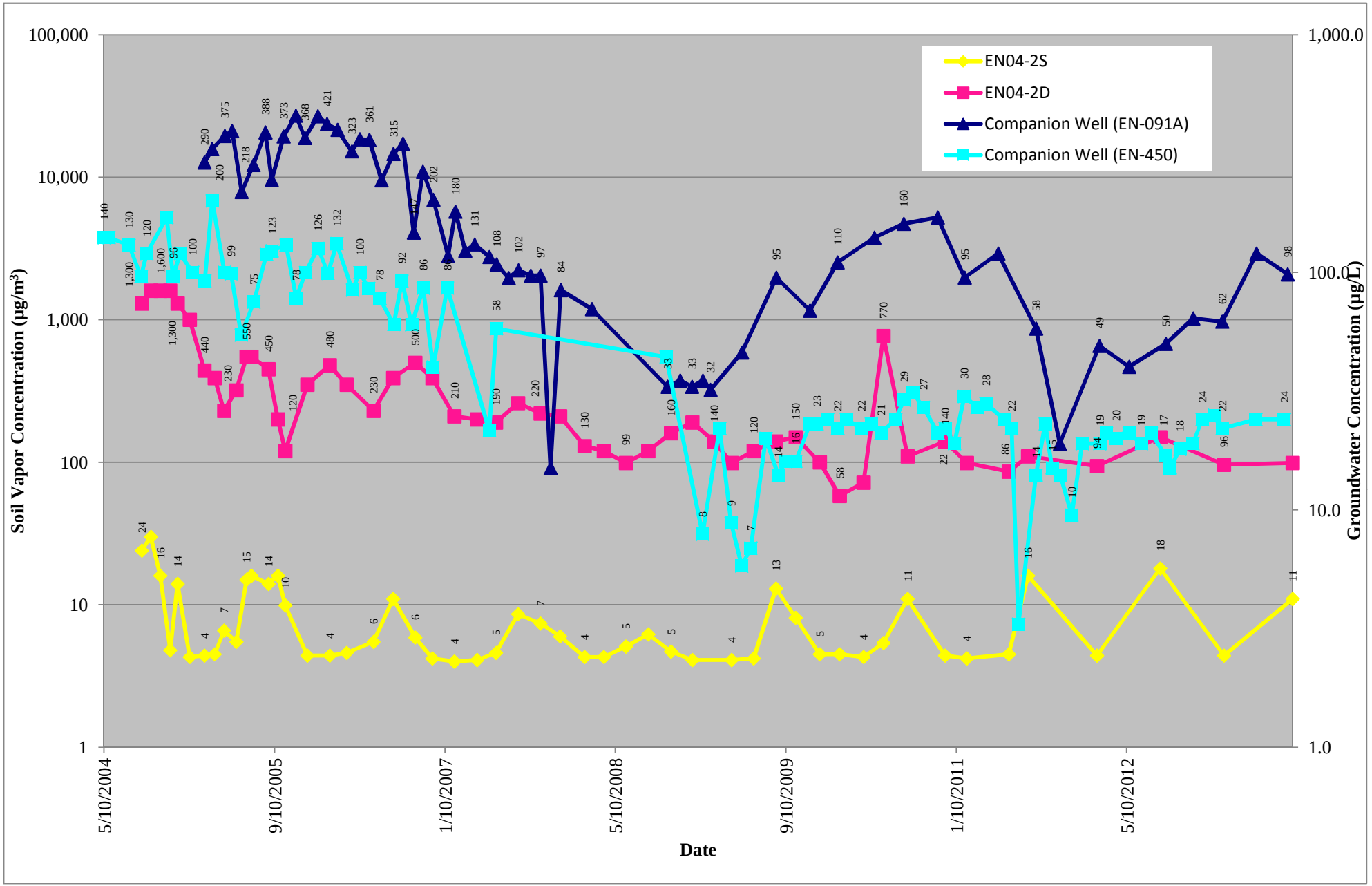


Figure B.3
TCE in Soil Vapor and Groundwater
Annual Report - Soil Vapor Monitoring through October 2013
Comprehensive Operations, Maintenance, Monitoring Program
Endicott, New York

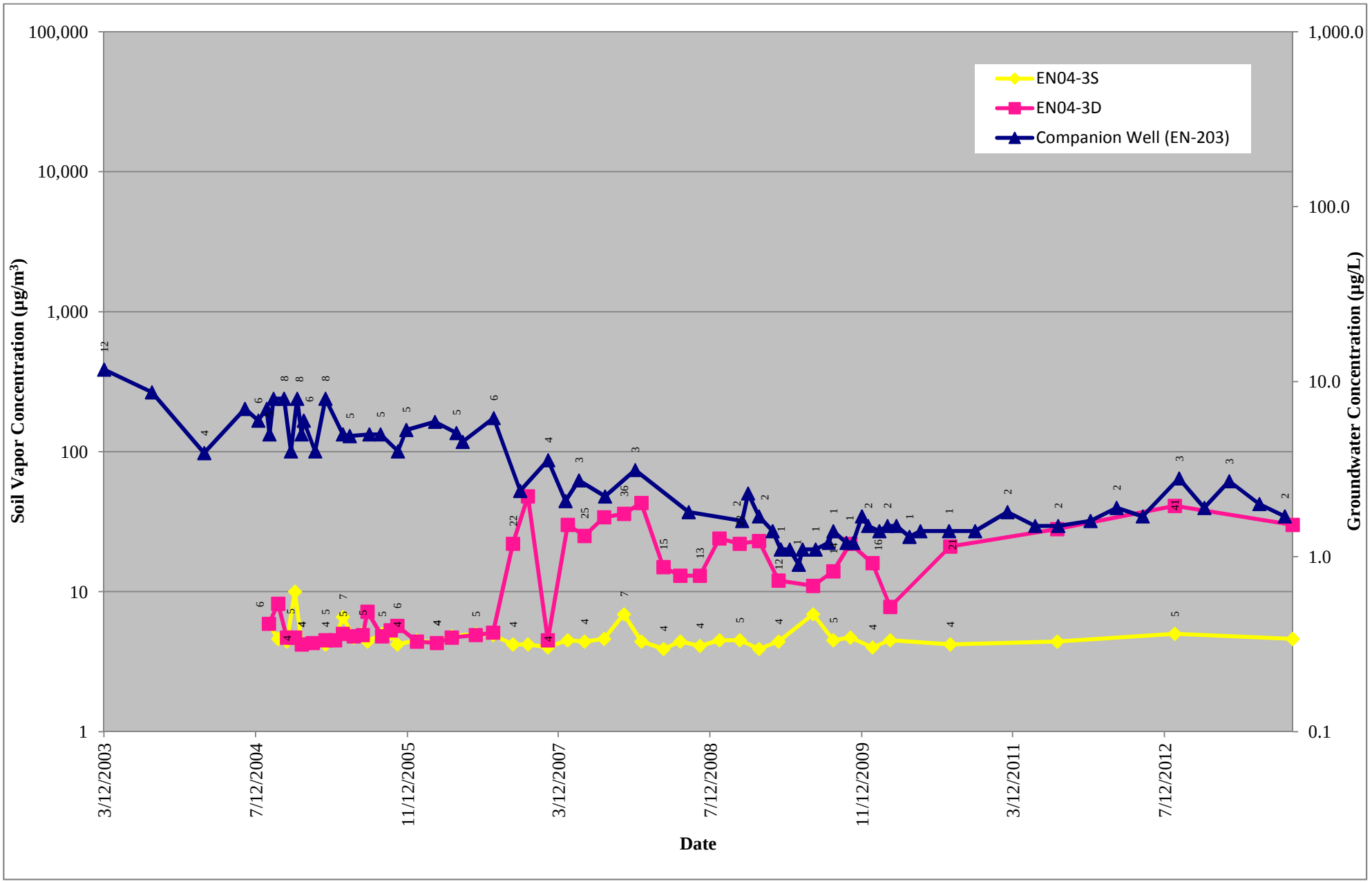


Figure B.4
TCE in Soil Vapor and Groundwater
Annual Report - Soil Vapor Monitoring through October 2013
Comprehensive Operations, Maintenance, Monitoring Program
Endicott, New York

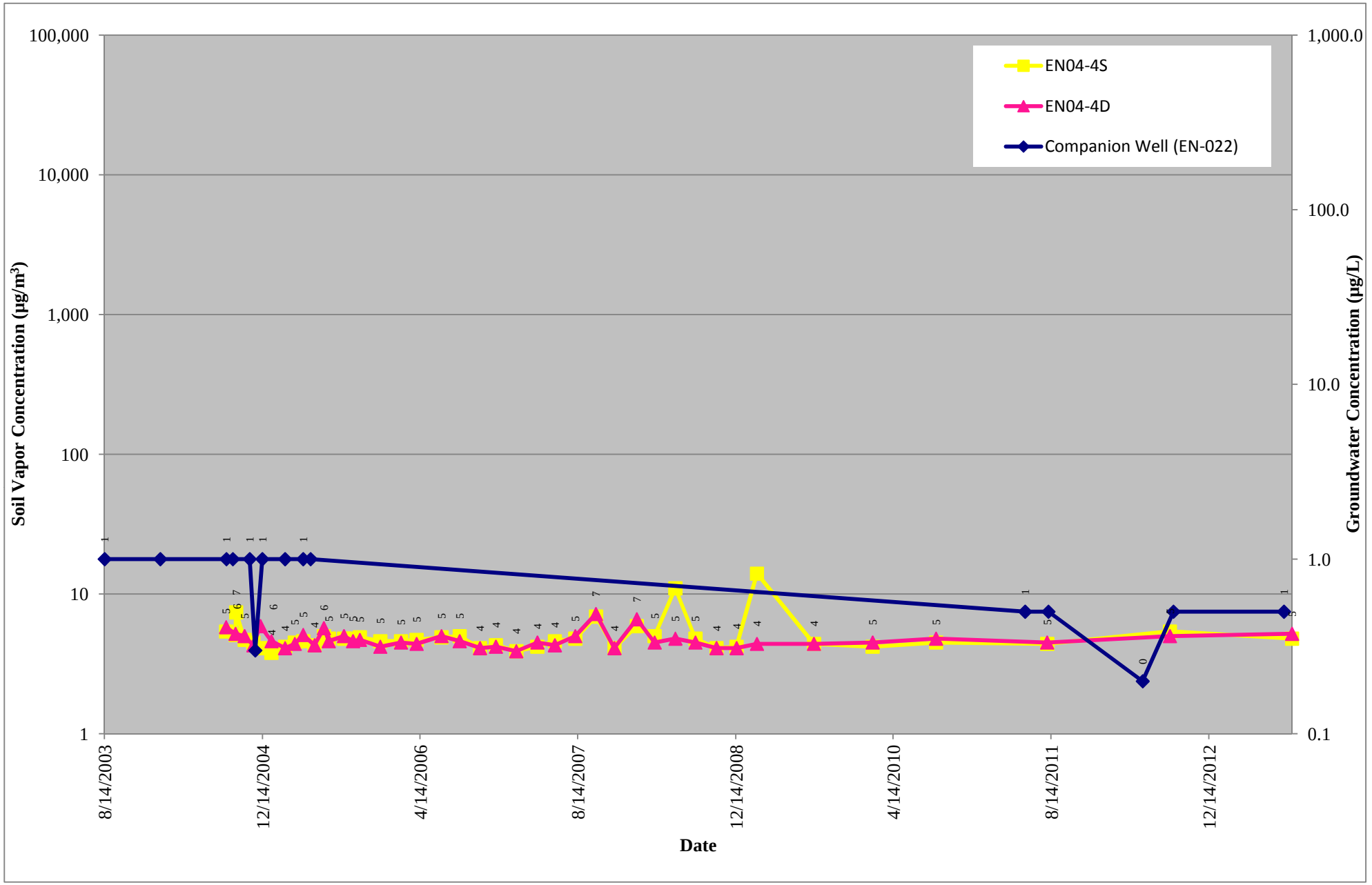


Figure B.5
TCE in Soil Vapor and Groundwater
Annual Report - Soil Vapor Monitoring through October 2013
Comprehensive Operations, Maintenance, Monitoring Program
Endicott, New York

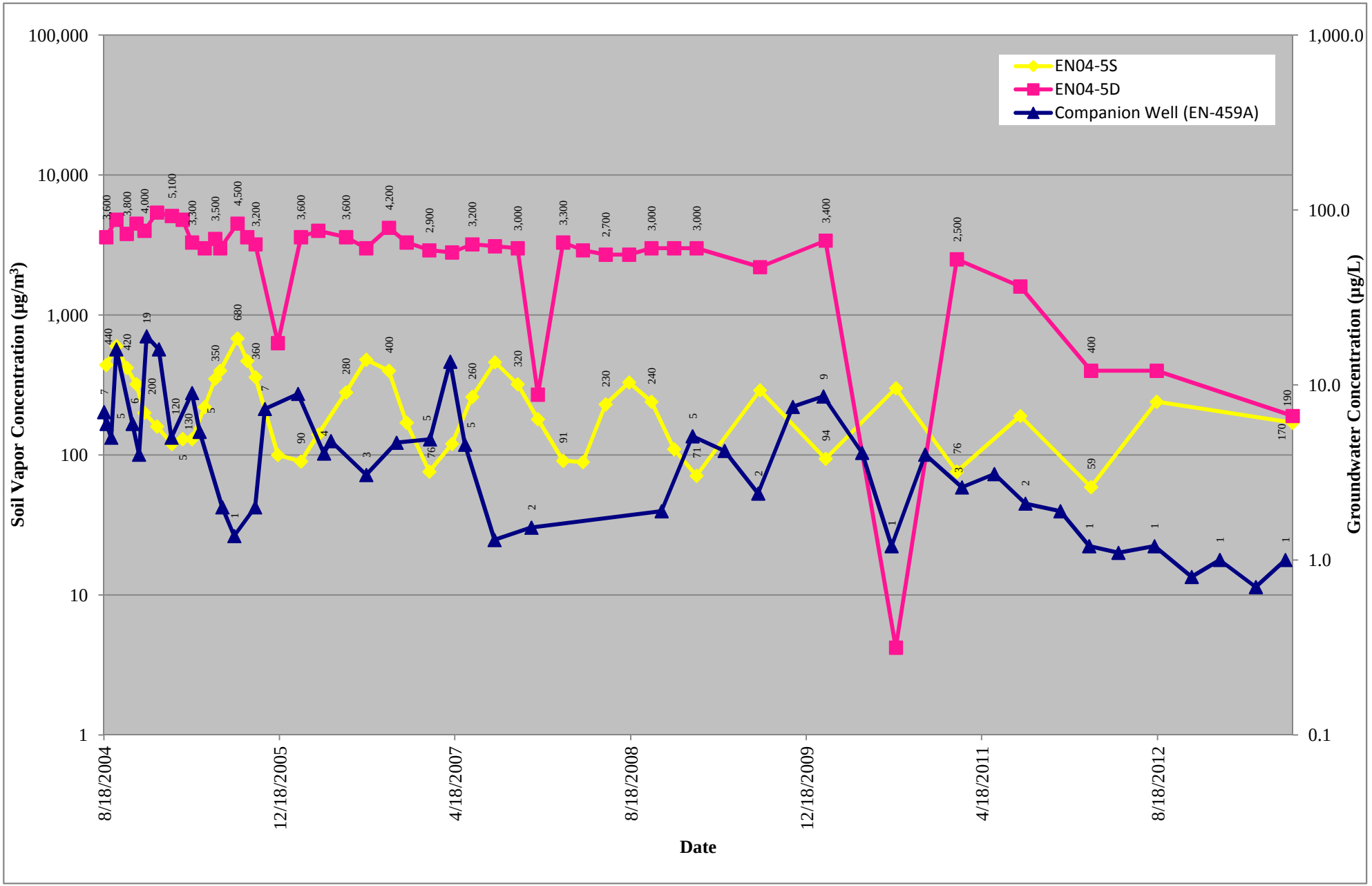


Figure B.6
TCE in Soil Vapor and Groundwater
Annual Report - Soil Vapor Monitoring through October 2013
Comprehensive Operations, Maintenance, Monitoring Program
Endicott, New York

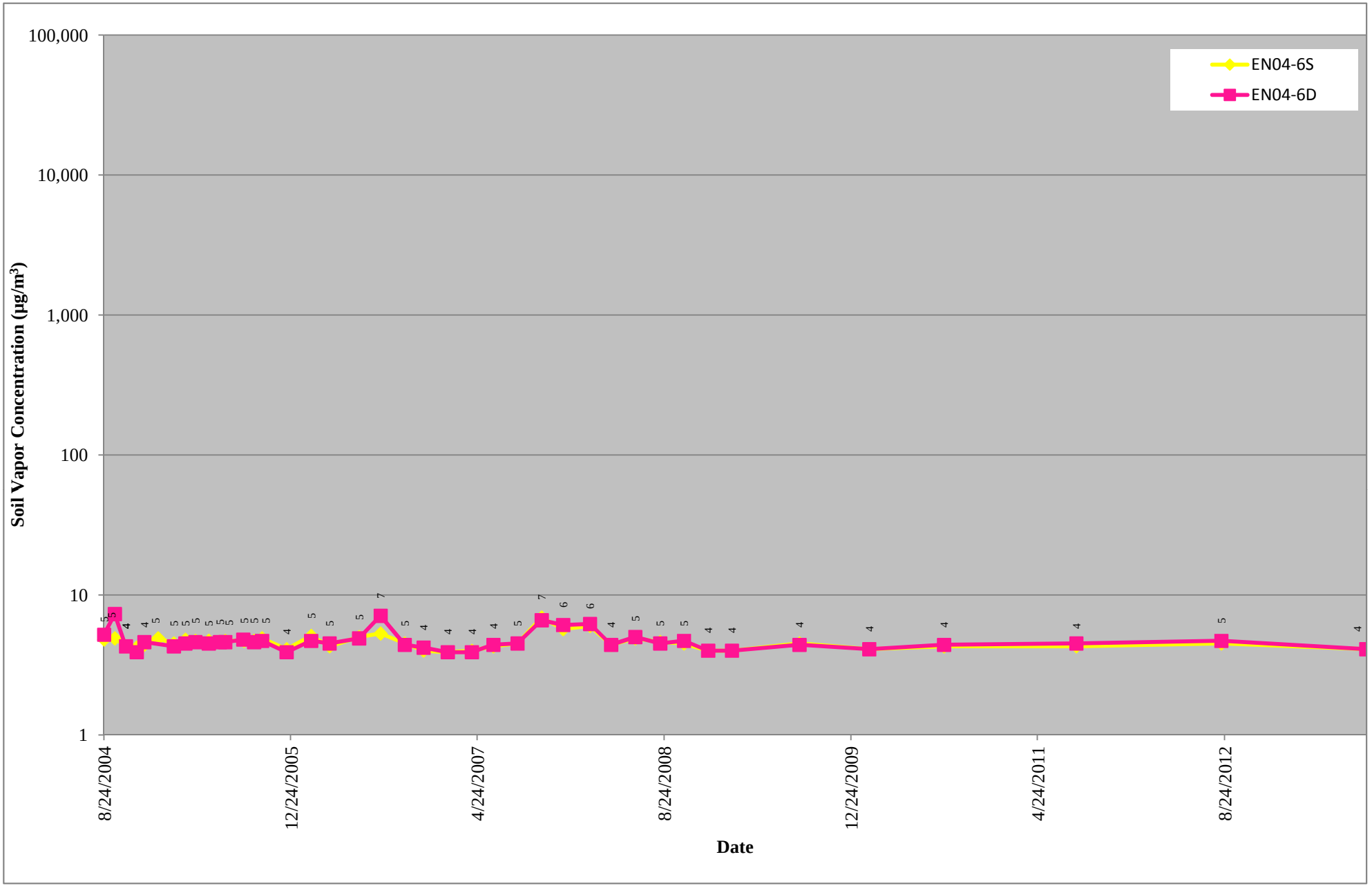


Figure B.7
TCE in Soil Vapor and Groundwater
Annual Report - Soil Vapor Monitoring through October 2013
Comprehensive Operations, Maintenance, Monitoring Program
Endicott, New York

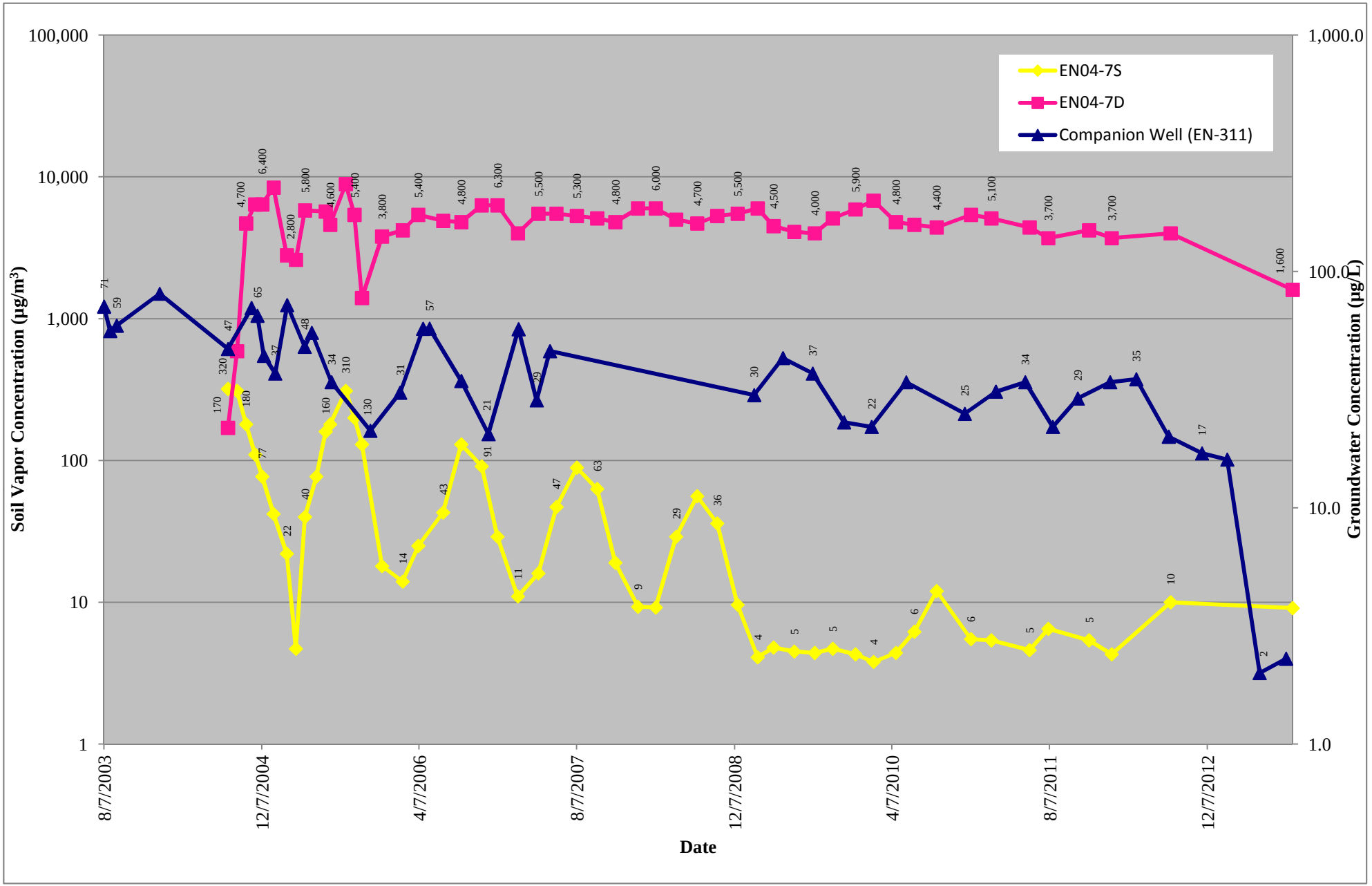
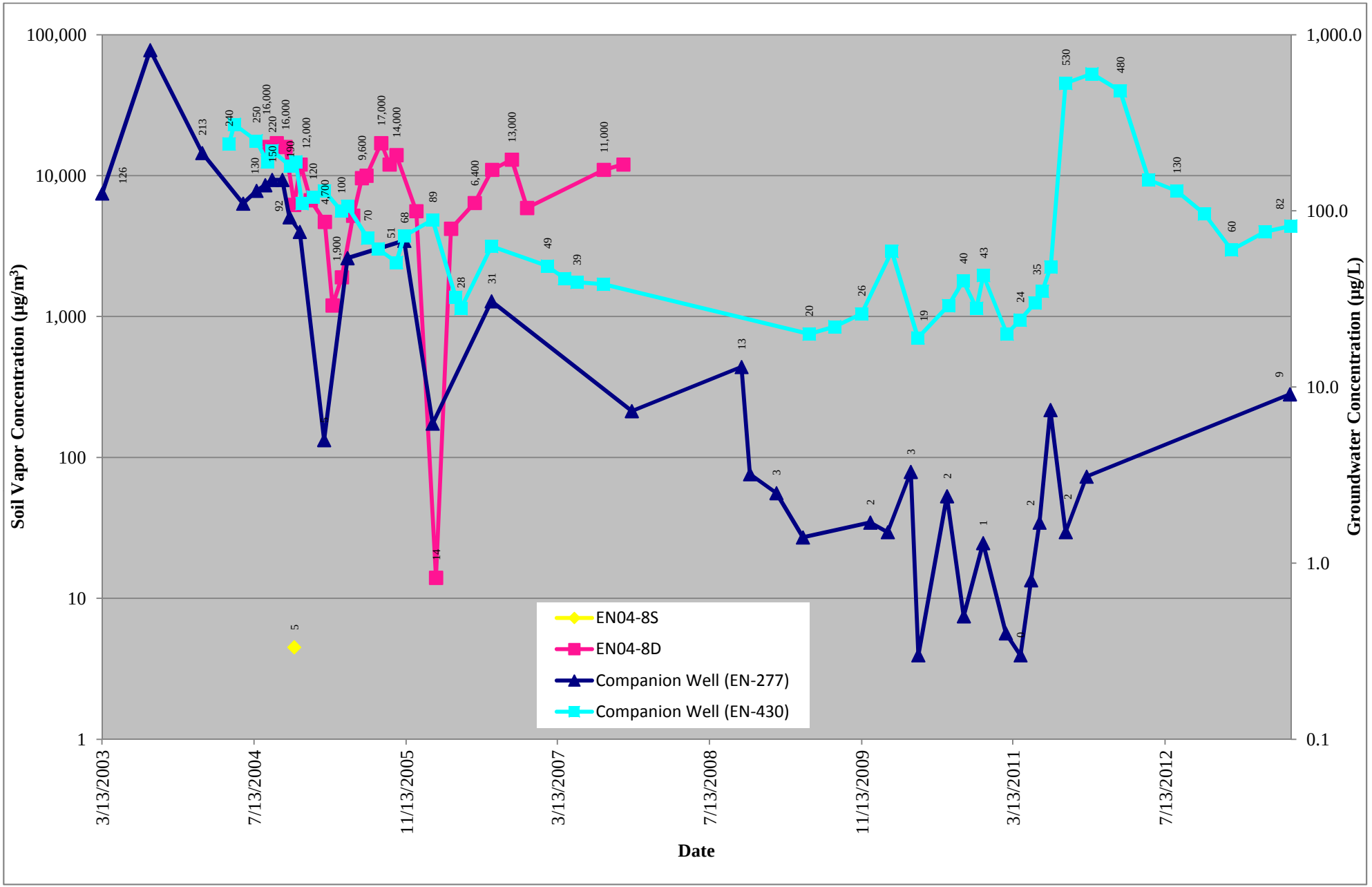


Figure B.8
TCE in Soil Vapor and Groundwater
Annual Report - Soil Vapor Monitoring through October 2013
Comprehensive Operations, Maintenance, Monitoring Program
Endicott, New York



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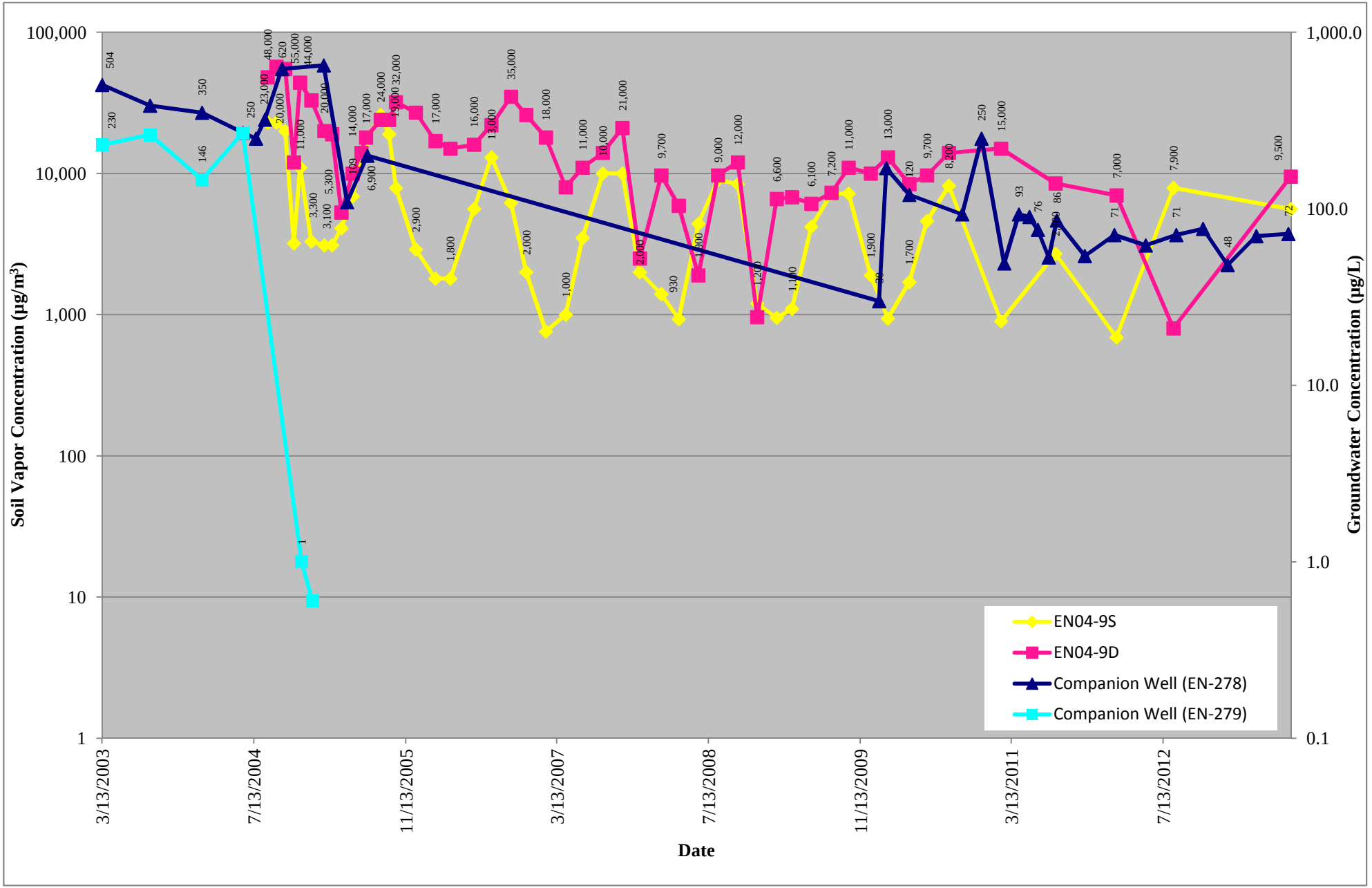
TCE in Soil Vapor and Groundwater
Annual Report - Soil Vapor Monitoring through October 2013
Comprehensive Operations, Maintenance, Monitoring Program
Endicott, New York



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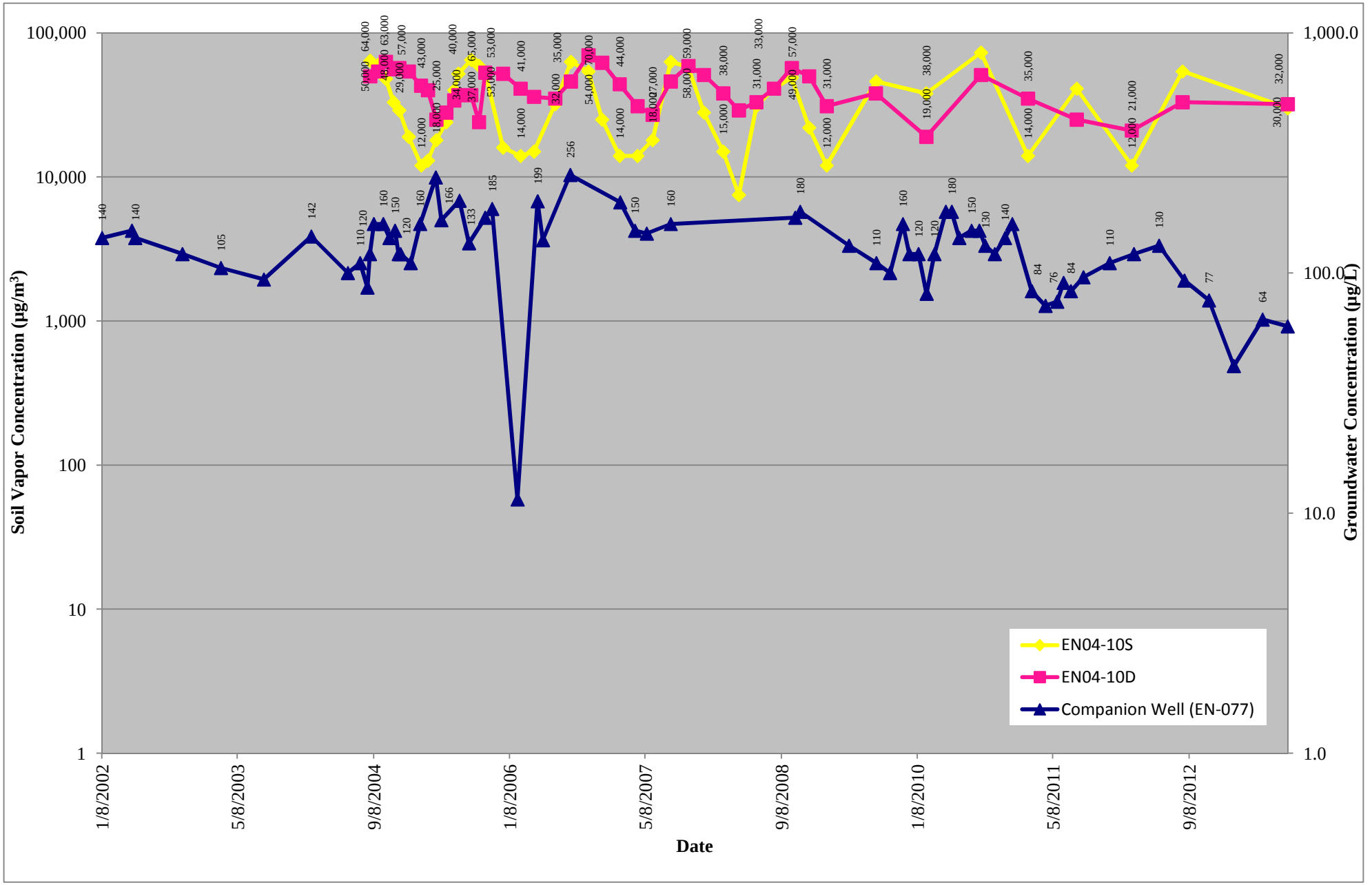
Annual Report - Soil Vapor Monitoring through October 2013
Comprehensive Operations, Maintenance, Monitoring Program
Endicott, New York



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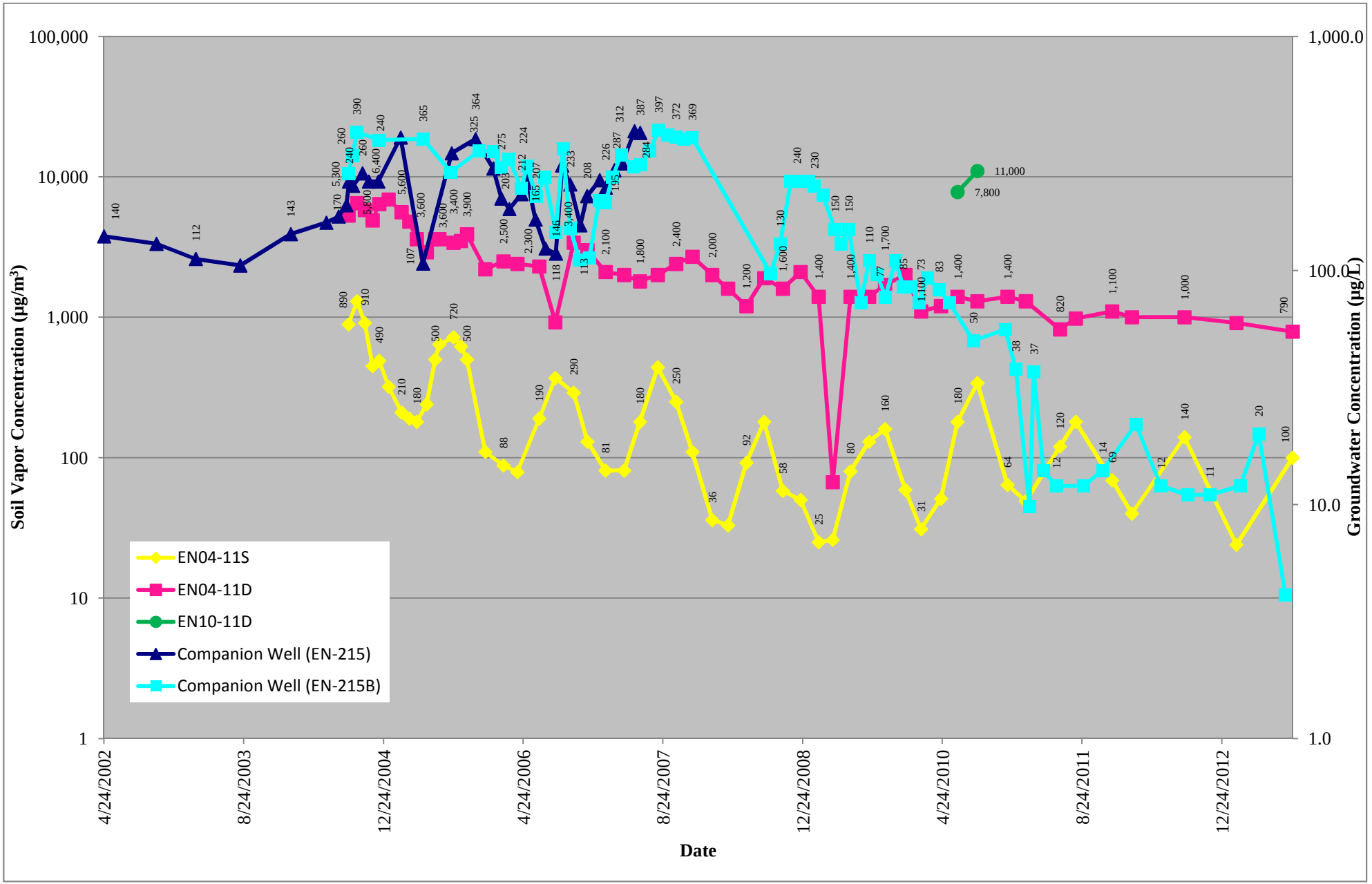
TCE in Soil Vapor and Groundwater
Annual Report - Soil Vapor Monitoring through October 2013
Comprehensive Operations, Maintenance, Monitoring Program
Endicott, New York



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Annual Report - Soil Vapor Monitoring through October 2013
Comprehensive Operations, Maintenance, Monitoring Program
Endicott, New York

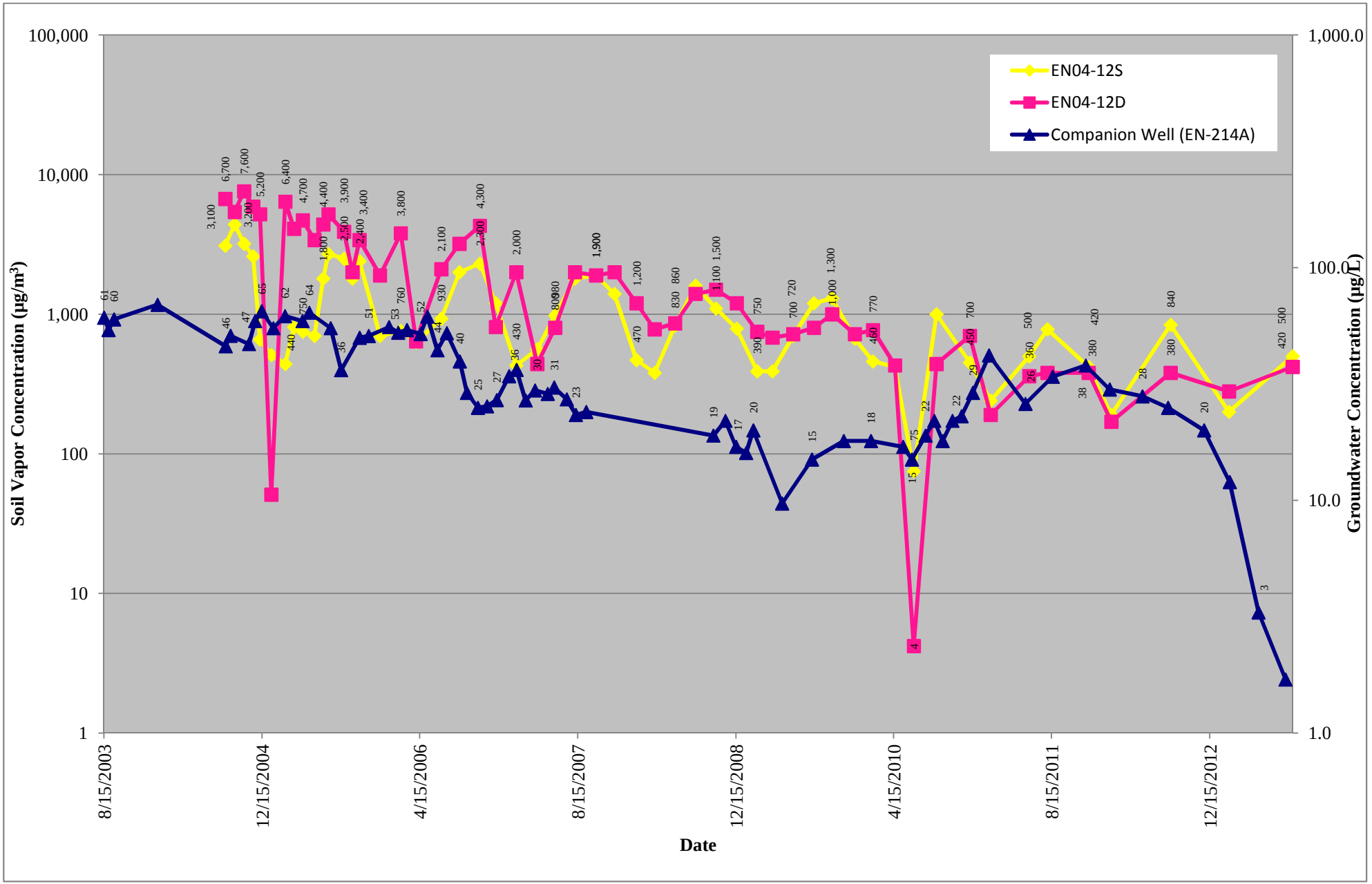
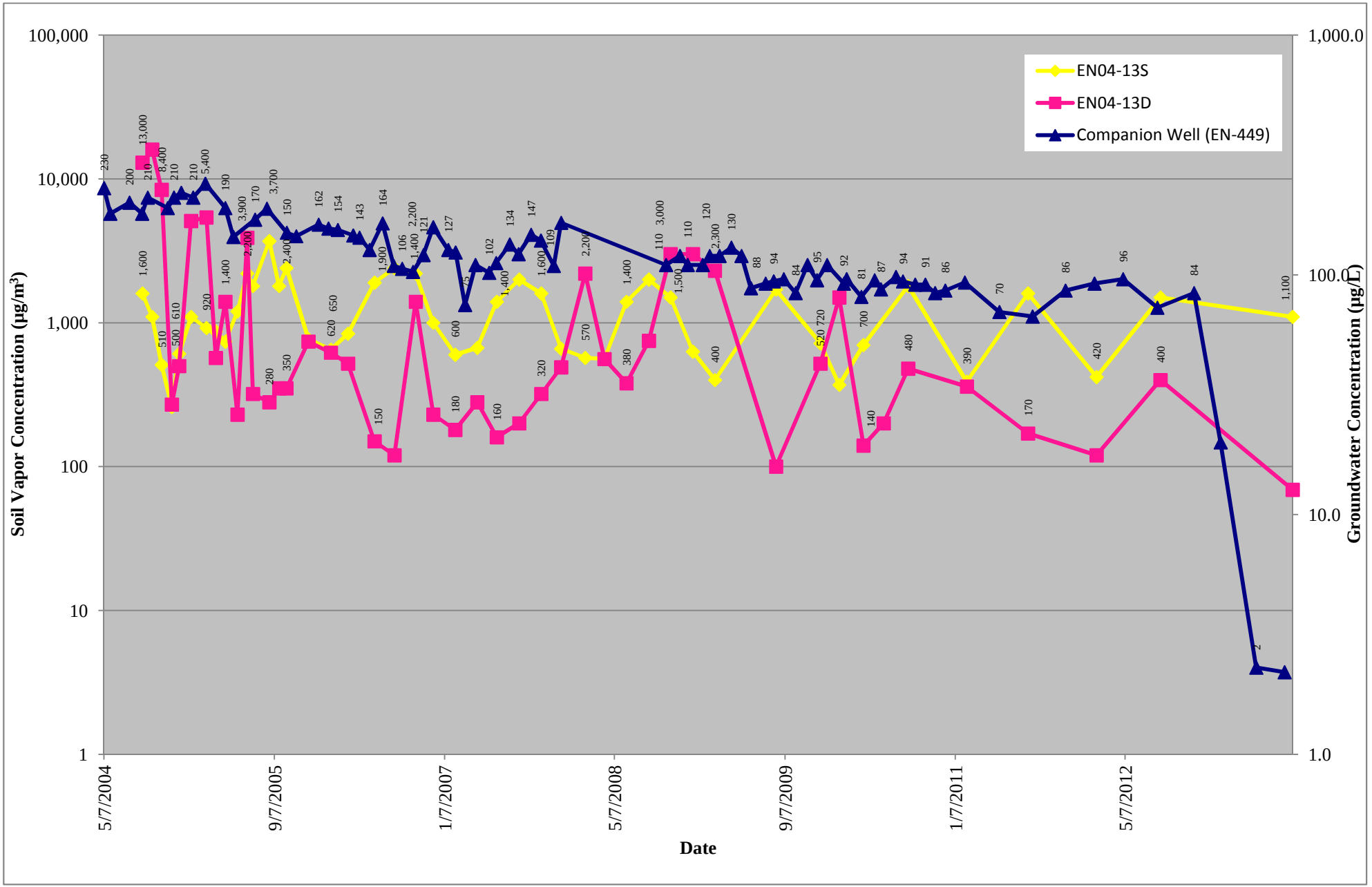


Figure B.13
TCE in Soil Vapor and Groundwater
Annual Report - Soil Vapor Monitoring through October 2013
Comprehensive Operations, Maintenance, Monitoring Program
Endicott, New York



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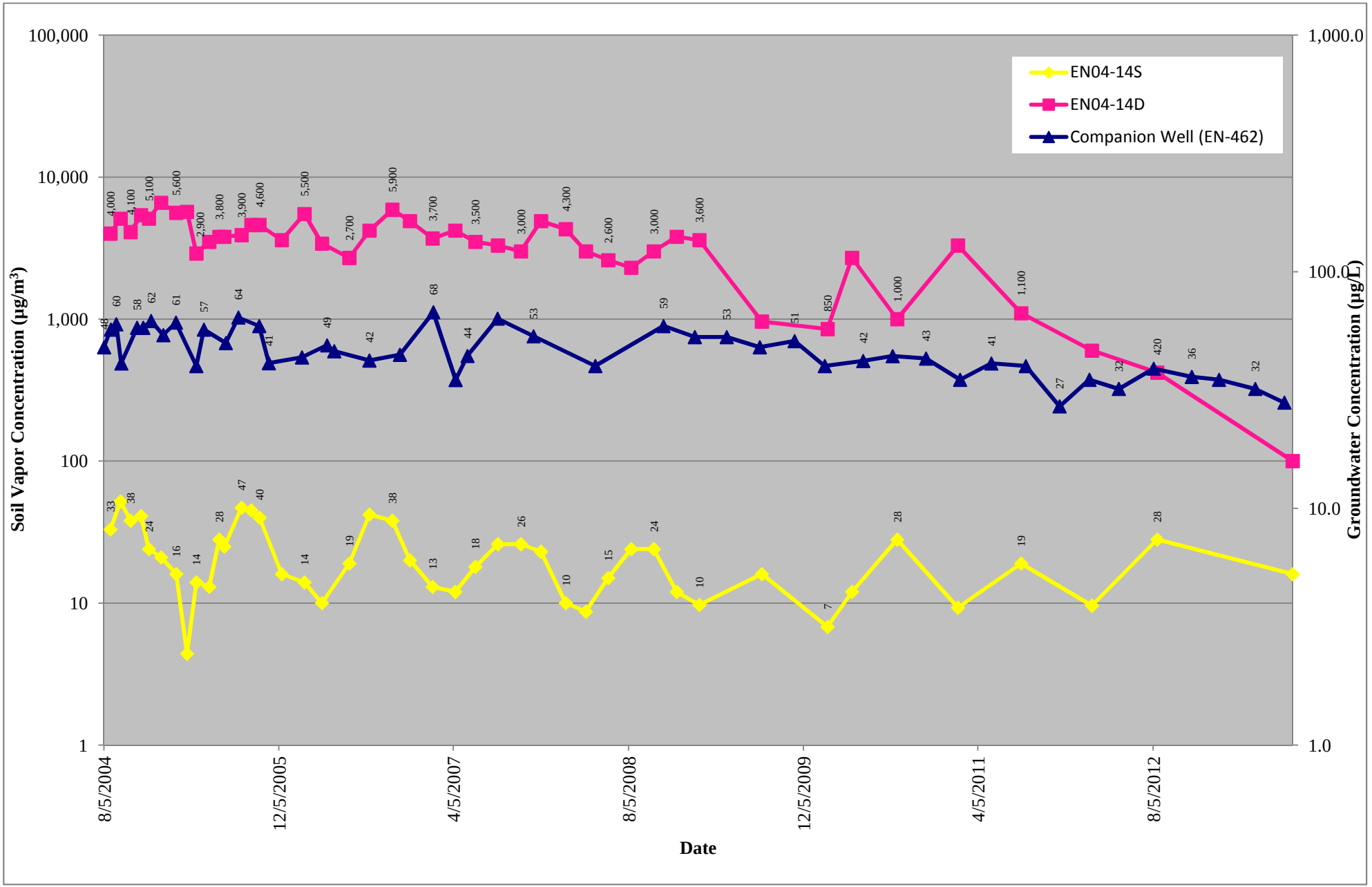
TCE in Soil Vapor and Groundwater
Annual Report - Soil Vapor Monitoring through October 2013
Comprehensive Operations, Maintenance, Monitoring Program
Endicott, New York



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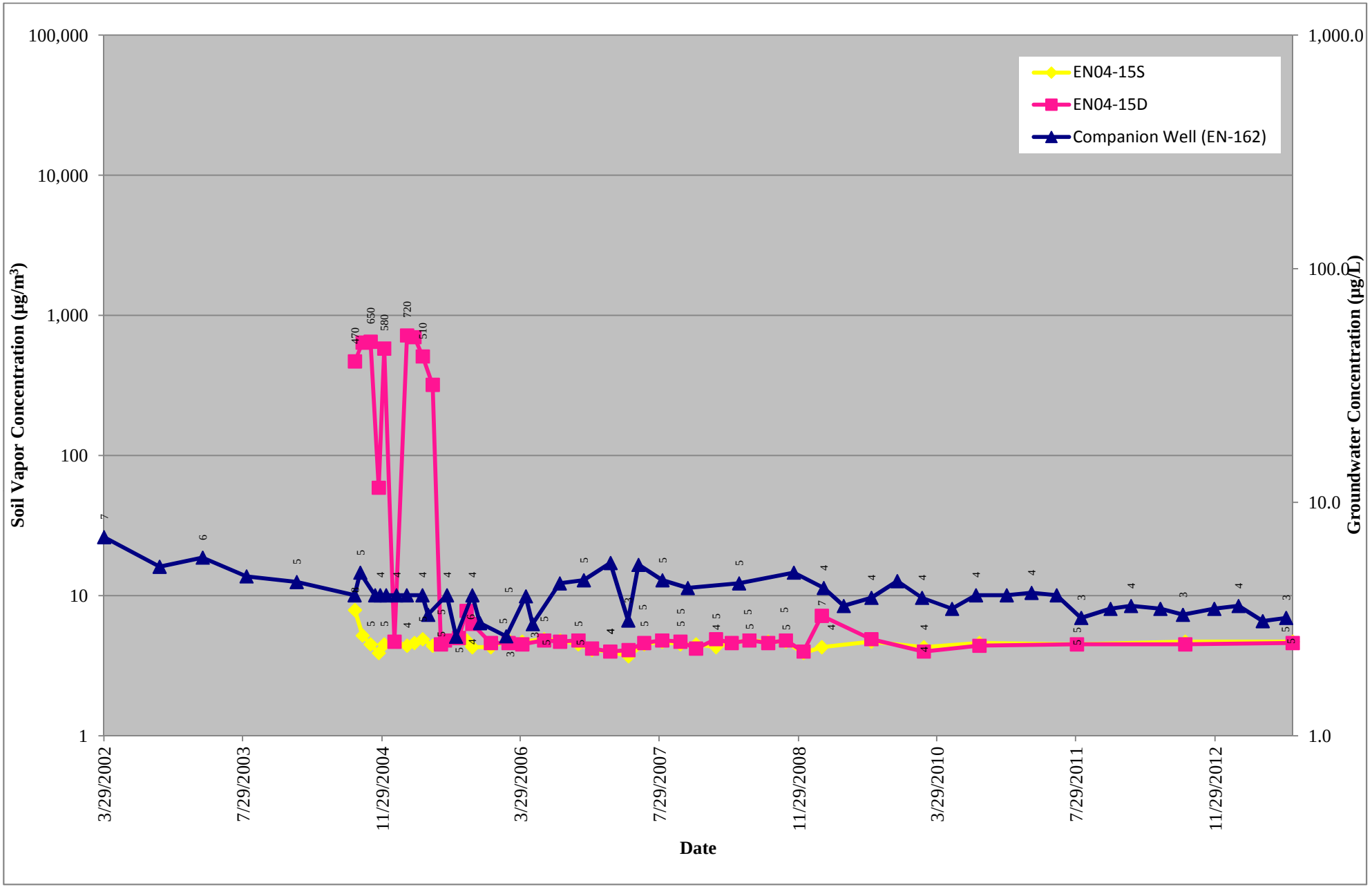
TCE in Soil Vapor and Groundwater
Annual Report - Soil Vapor Monitoring through October 2013
Comprehensive Operations, Maintenance, Monitoring Program
Endicott, New York



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TCE in Soil Vapor and Groundwater
Annual Report - Soil Vapor Monitoring through October 2013
Comprehensive Operations, Maintenance, Monitoring Program
Endicott, New York

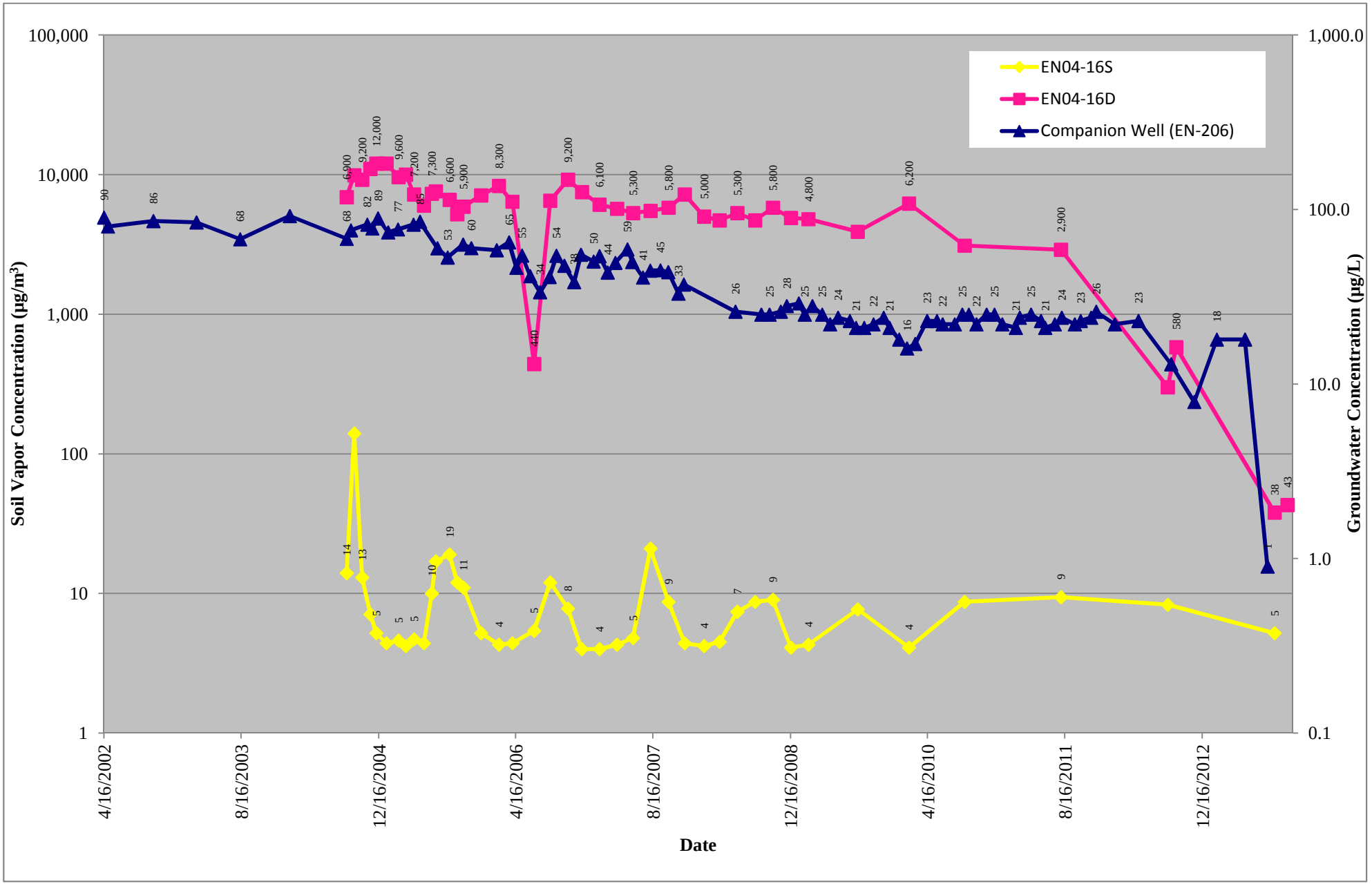
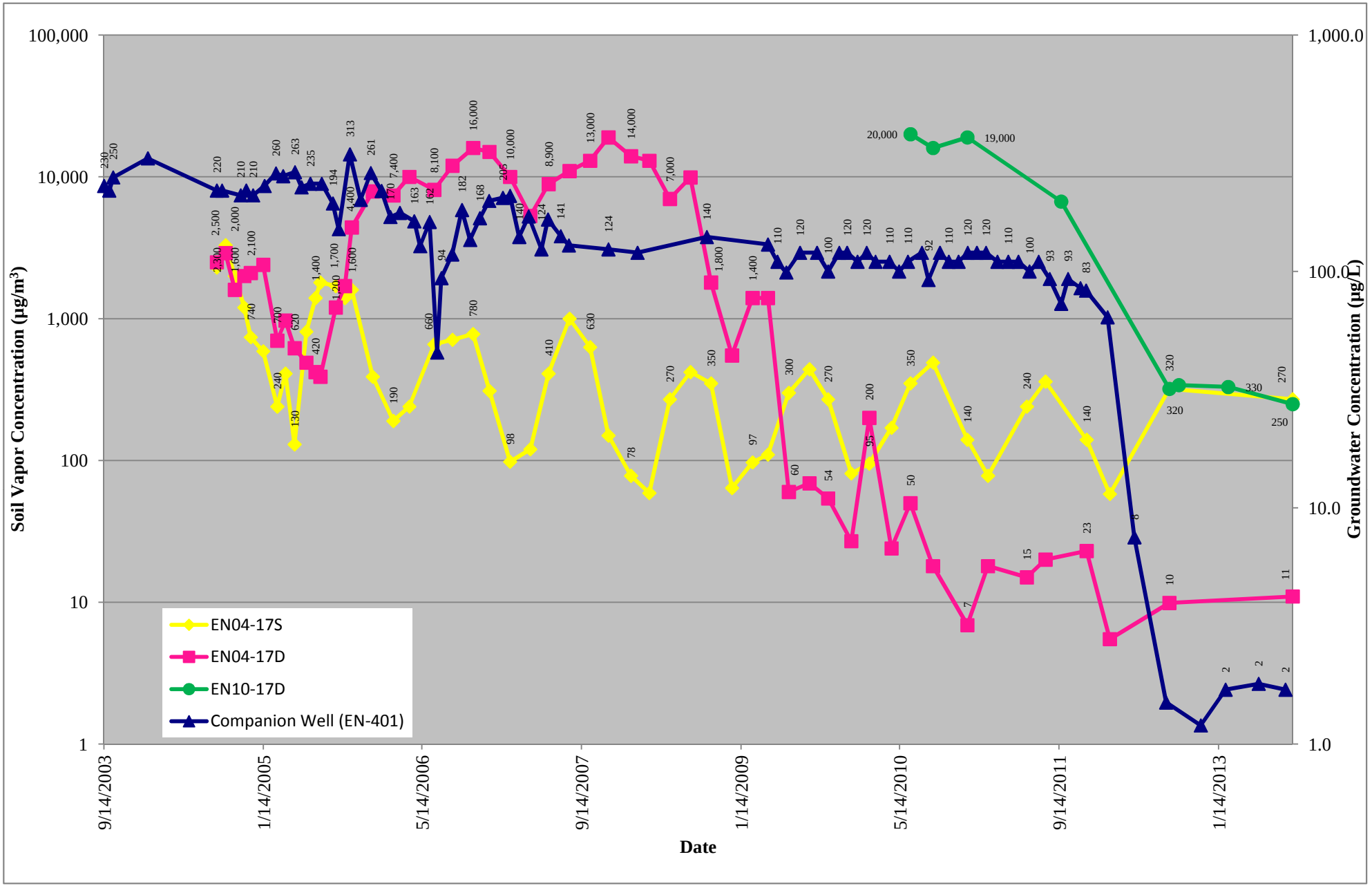


Figure B.17
TCE in Soil Vapor and Groundwater
Annual Report - Soil Vapor Monitoring through October 2013
Comprehensive Operations, Maintenance, Monitoring Program
Endicott, New York



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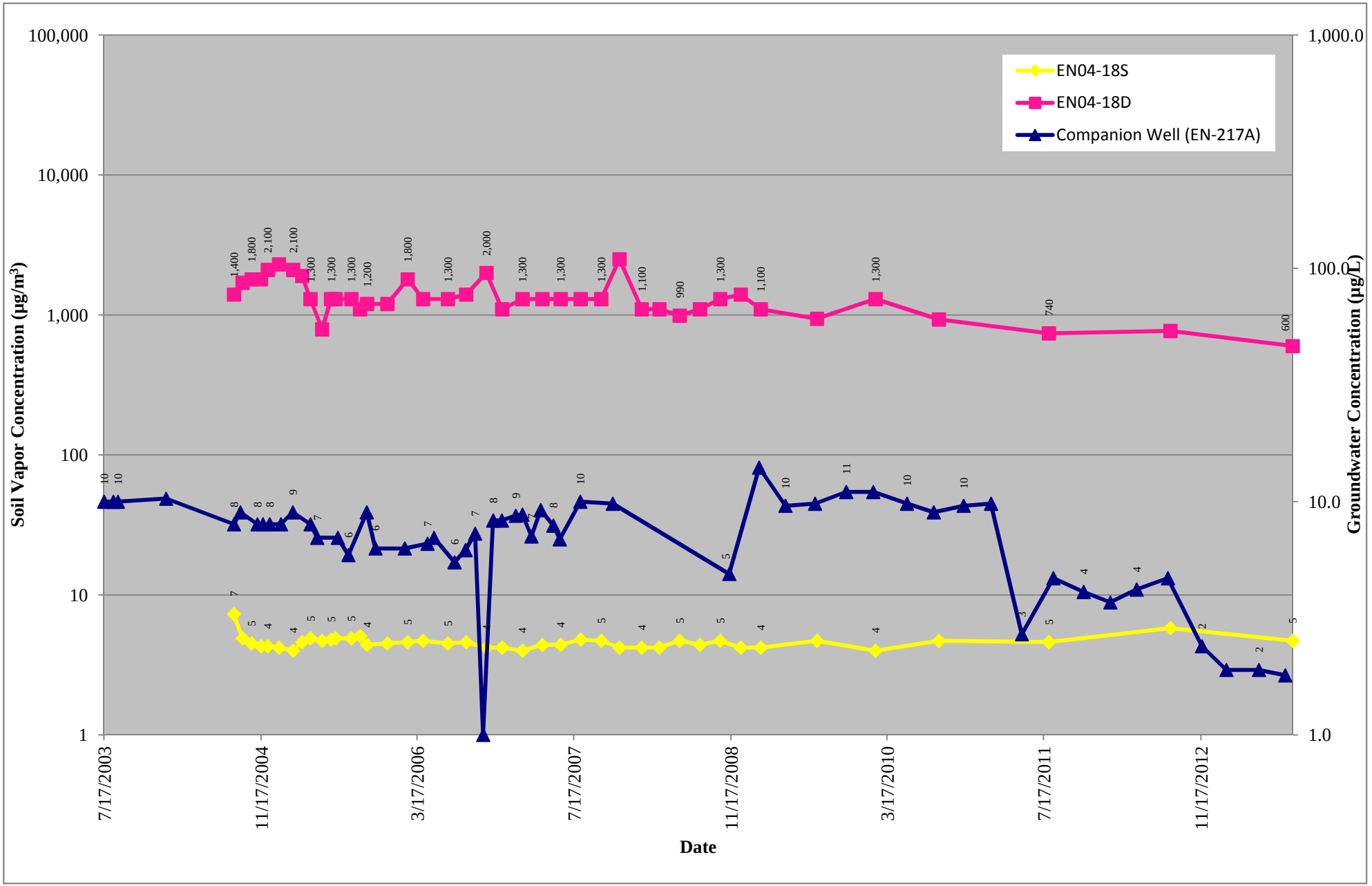
TCE in Soil Vapor and Groundwater
Annual Report - Soil Vapor Monitoring through October 2013
Comprehensive Operations, Maintenance, Monitoring Program
Endicott, New York



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TCE in Soil Vapor and Groundwater
Annual Report - Soil Vapor Monitoring through October 2013
Comprehensive Operations, Maintenance, Monitoring Program
Endicott, New York

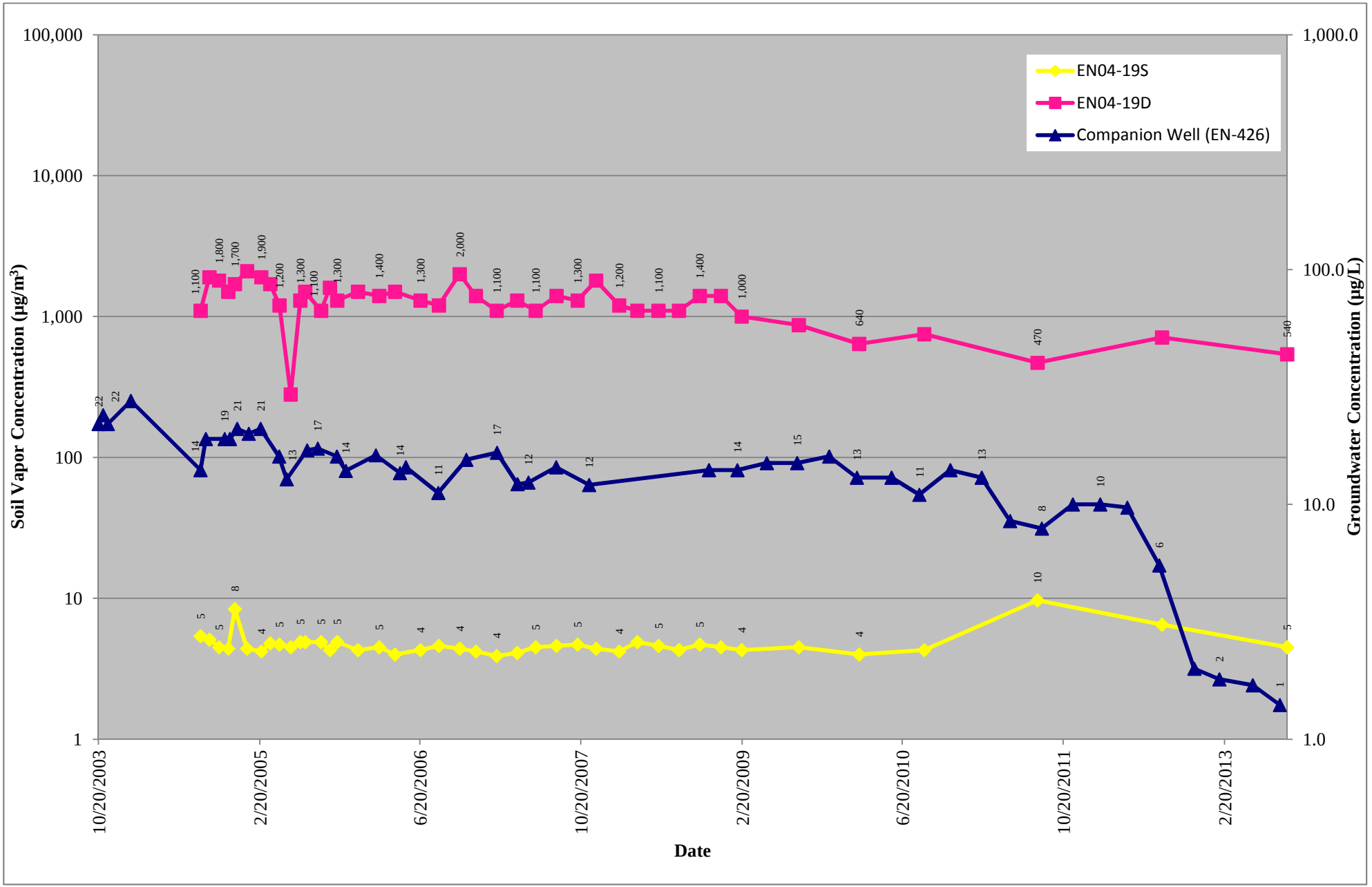


Figure B.20
TCE in Soil Vapor and Groundwater
Annual Report - Soil Vapor Monitoring through October 2013
Comprehensive Operations, Maintenance, Monitoring Program
Endicott, New York

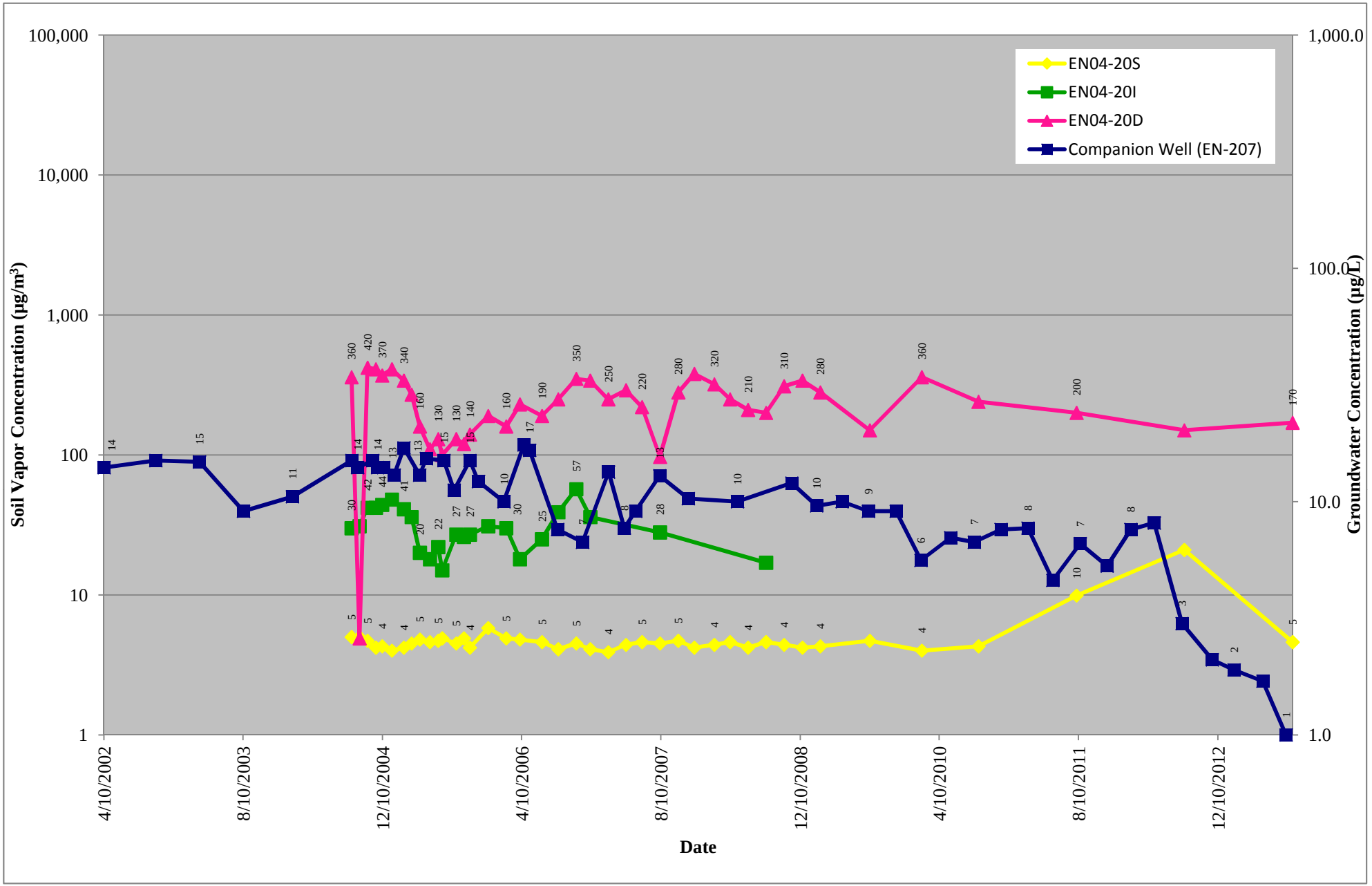


Figure B.21
TCE in Soil Vapor and Groundwater
Annual Report - Soil Vapor Monitoring through October 2013
Comprehensive Operations, Maintenance, Monitoring Program
Endicott, New York

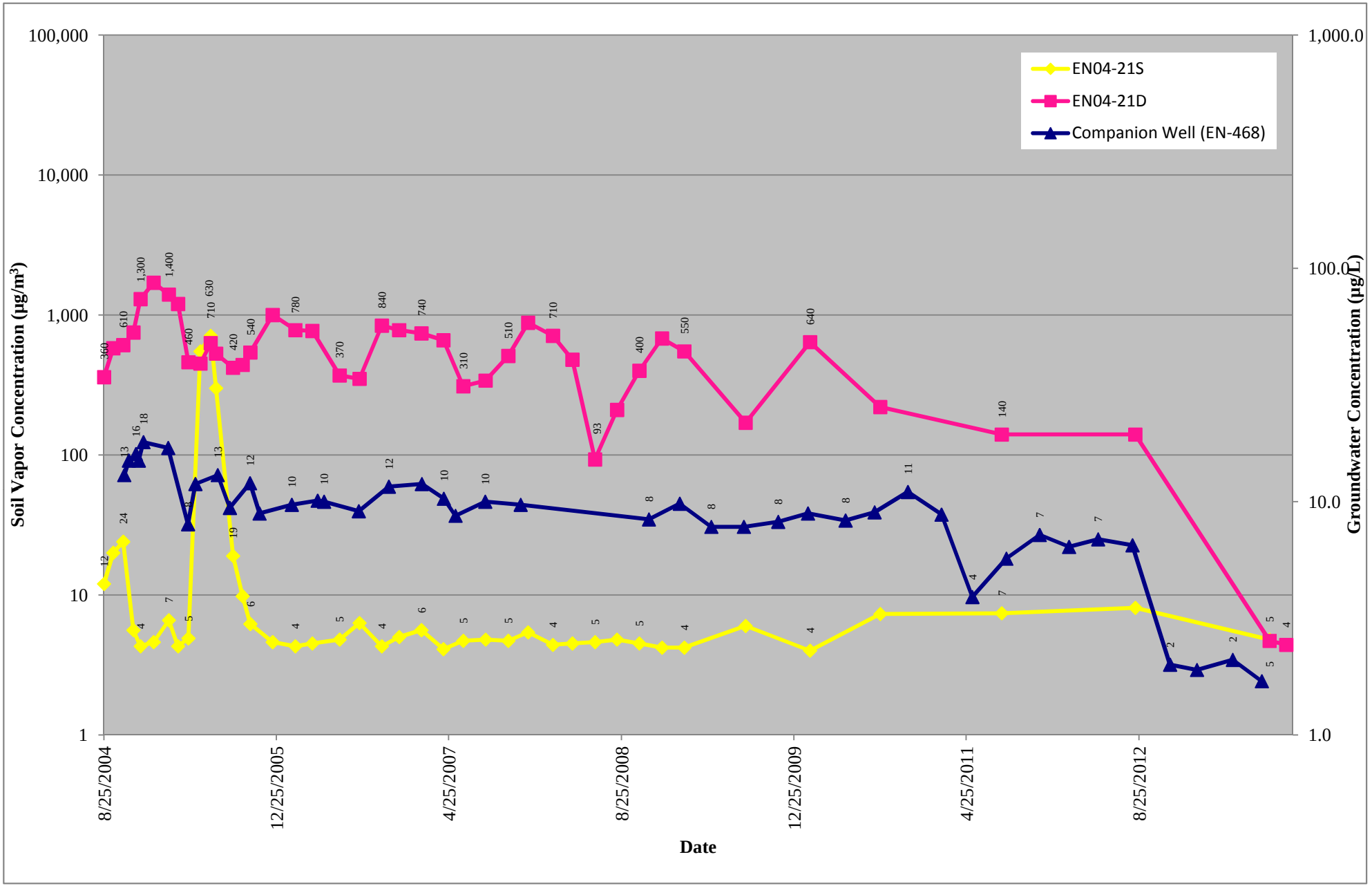
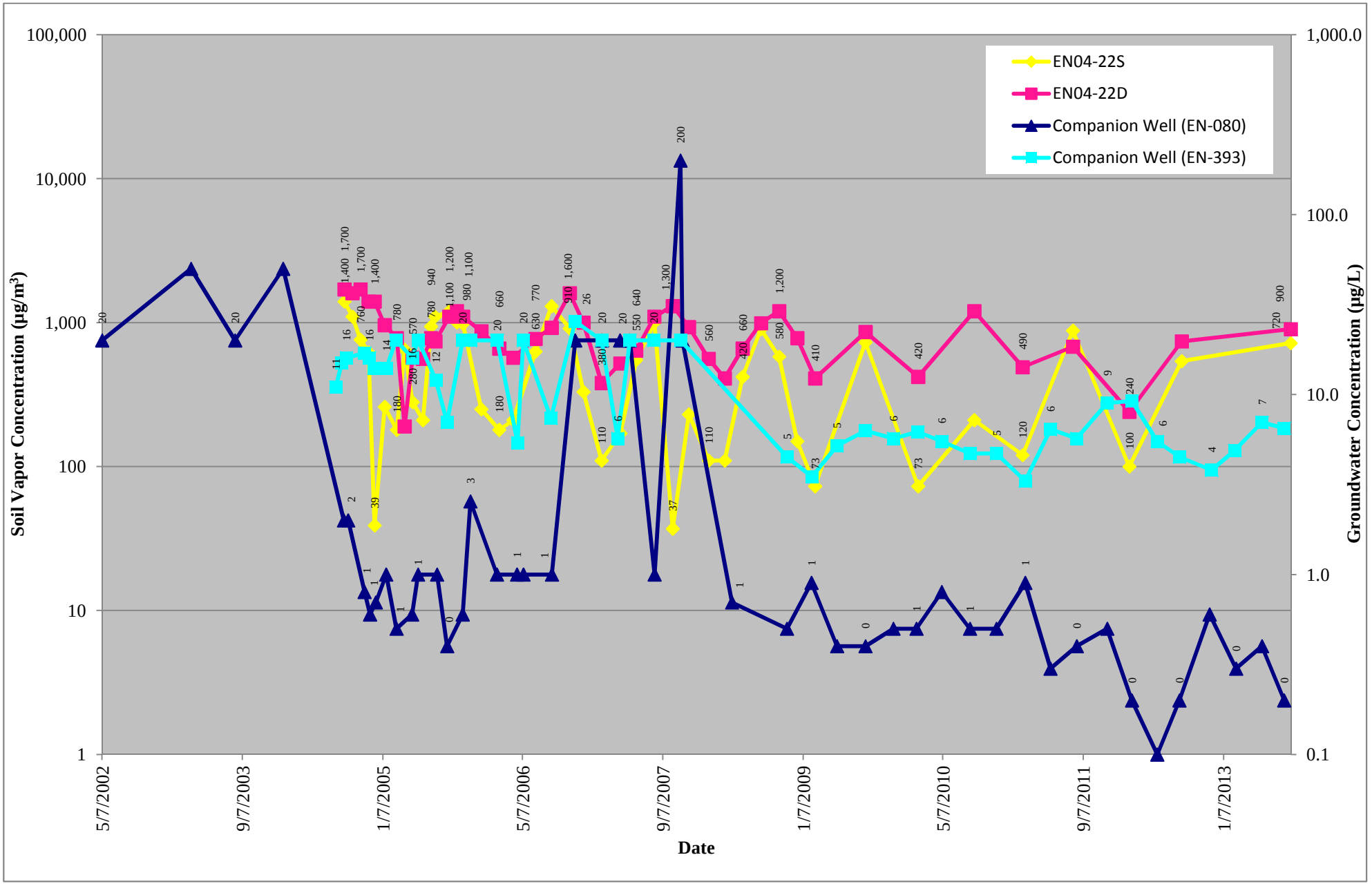


Figure B.22
TCE in Soil Vapor and Groundwater
Annual Report - Soil Vapor Monitoring through October 2013
Comprehensive Operations, Maintenance, Monitoring Program
Endicott, New York



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TCE in Soil Vapor and Groundwater
Annual Report - Soil Vapor Monitoring through October 2013
Comprehensive Operations, Maintenance, Monitoring Program
Endicott, New York

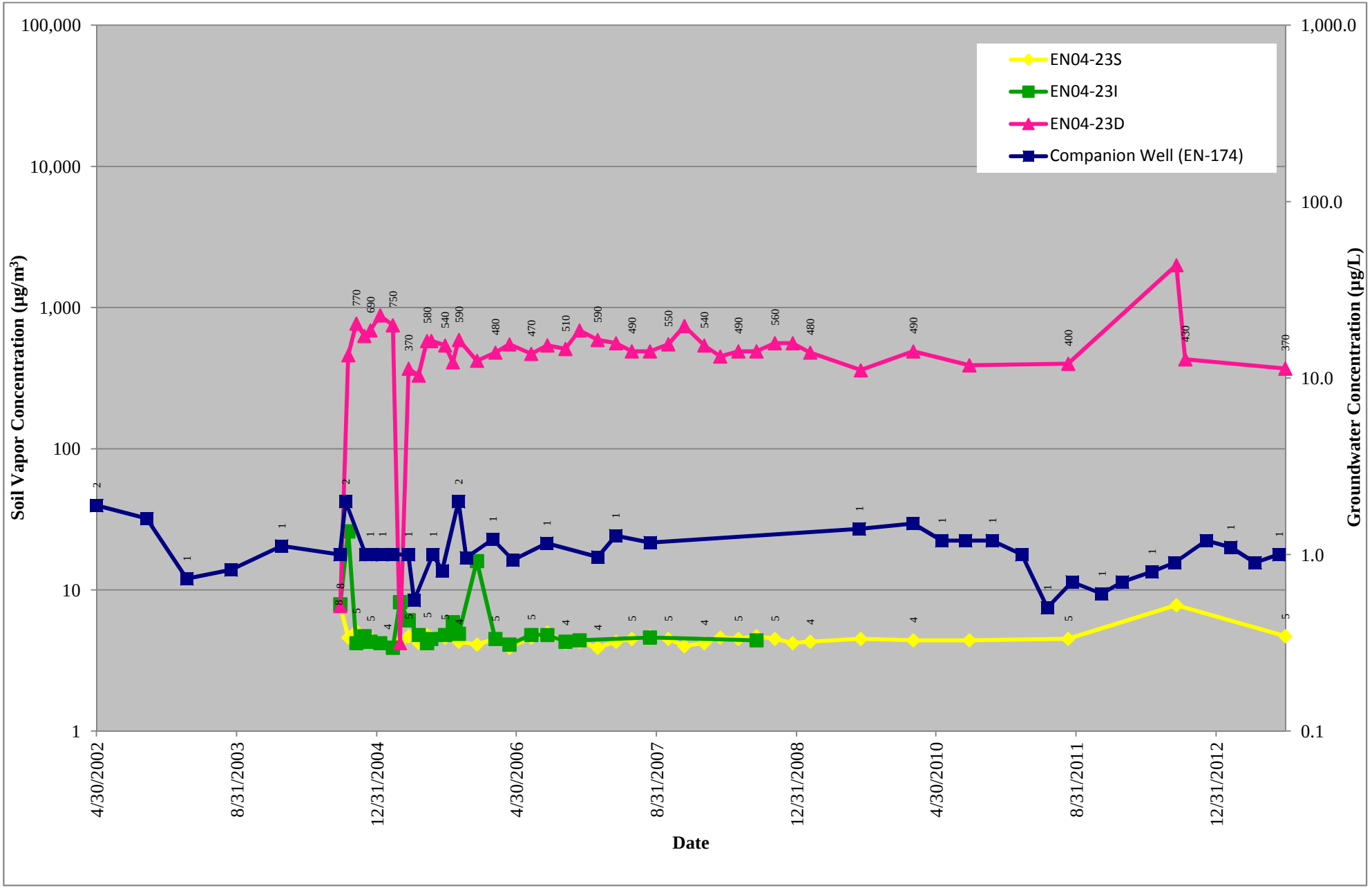


Figure B.24
TCE in Soil Vapor and Groundwater
Annual Report - Soil Vapor Monitoring through October 2013
Comprehensive Operations, Maintenance, Monitoring Program
Endicott, New York

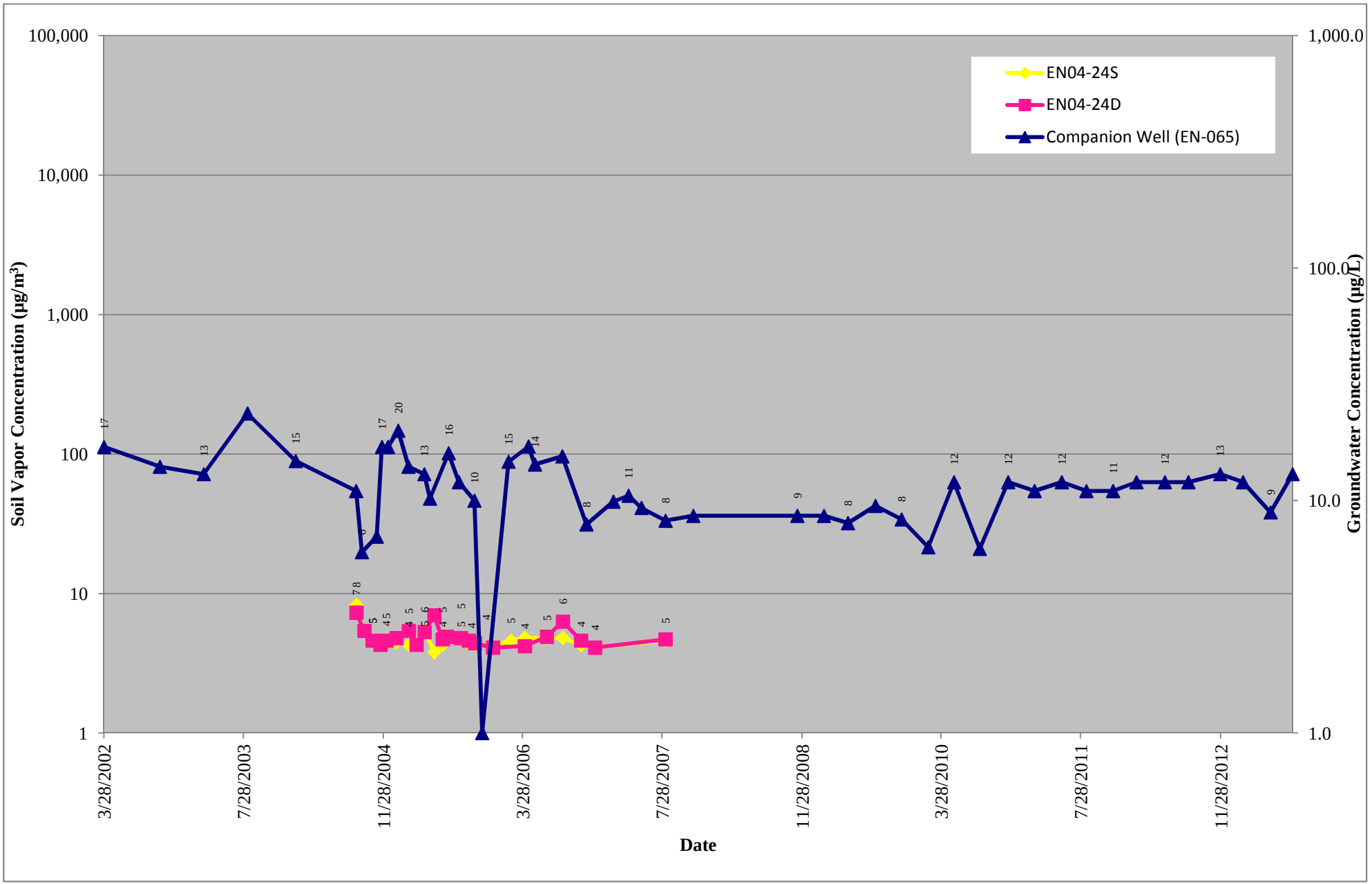
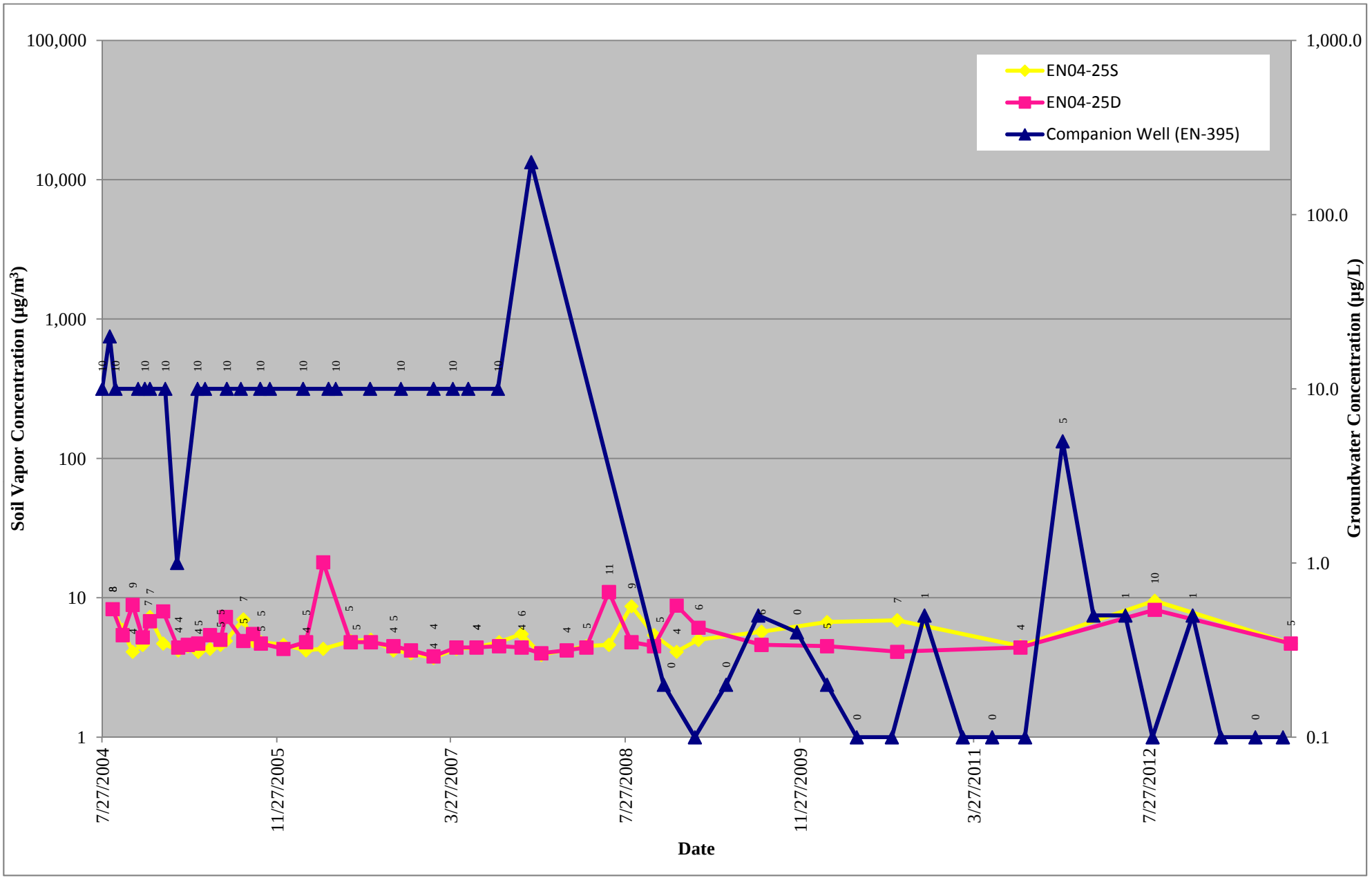


Figure B.25
TCE in Soil Vapor and Groundwater
Annual Report - Soil Vapor Monitoring through October 2013
Comprehensive Operations, Maintenance, Monitoring Program
Endicott, New York



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TCE in Soil Vapor and Groundwater
Annual Report - Soil Vapor Monitoring through October 2013
Comprehensive Operations, Maintenance, Monitoring Program
Endicott, New York

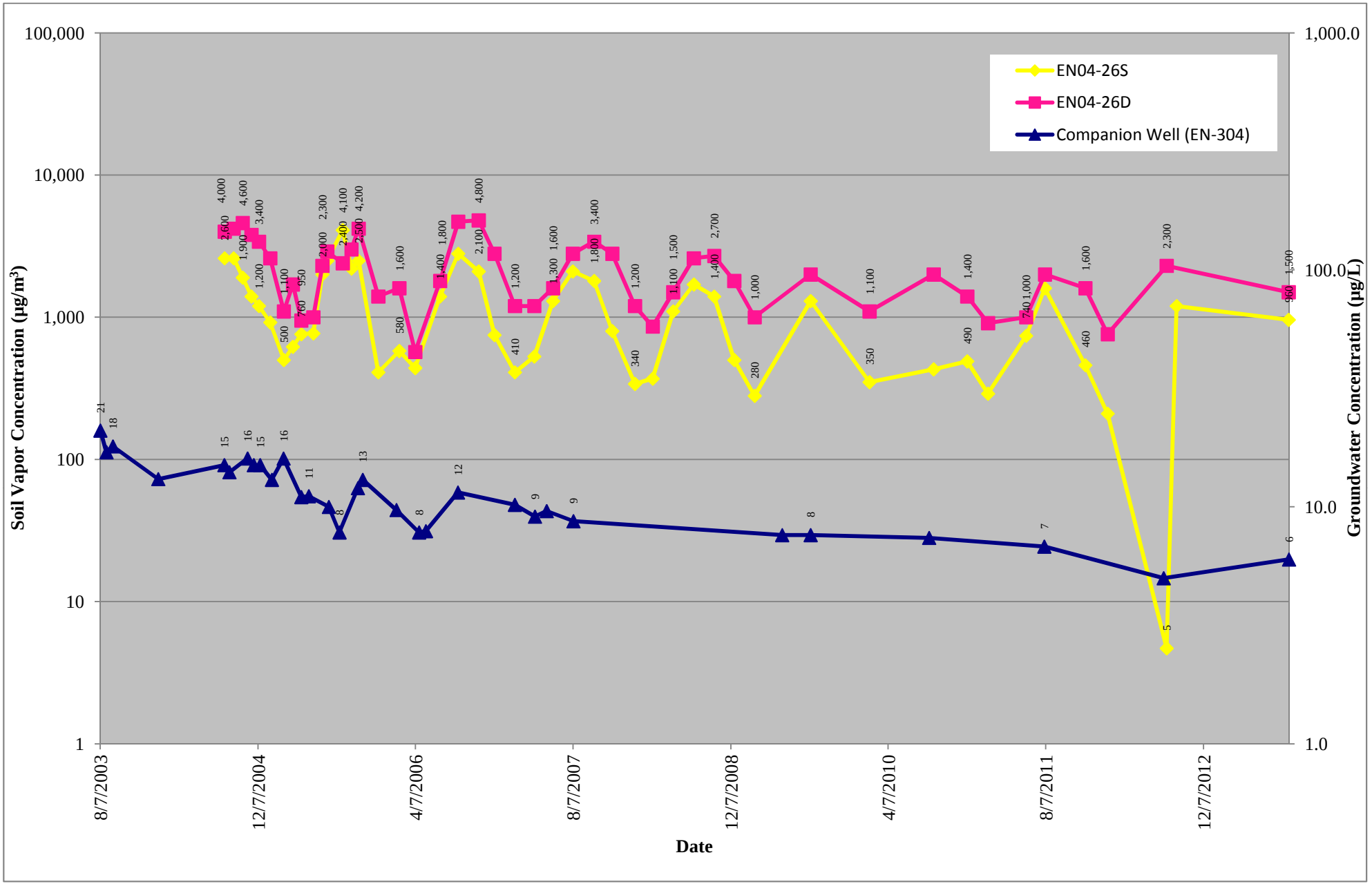

Figure B.27
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Annual Report - Soil Vapor Monitoring through October 2013
Comprehensive Operations, Maintenance, Monitoring Program
Endicott, New York

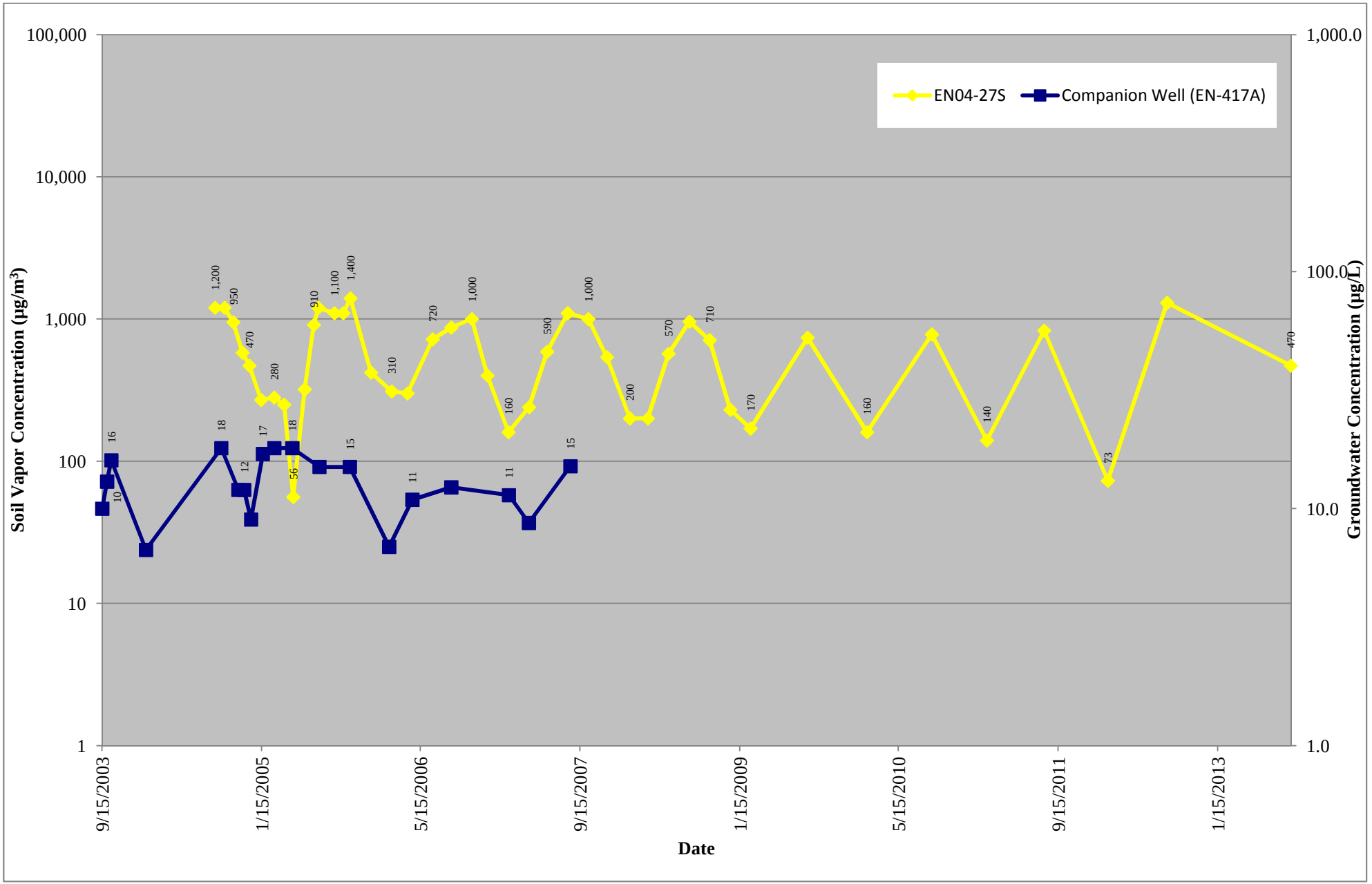

Figure B.28
TCE in Soil Vapor and Groundwater
Annual Report - Soil Vapor Monitoring through October 2013
Comprehensive Operations, Maintenance, Monitoring Program
Endicott, New York

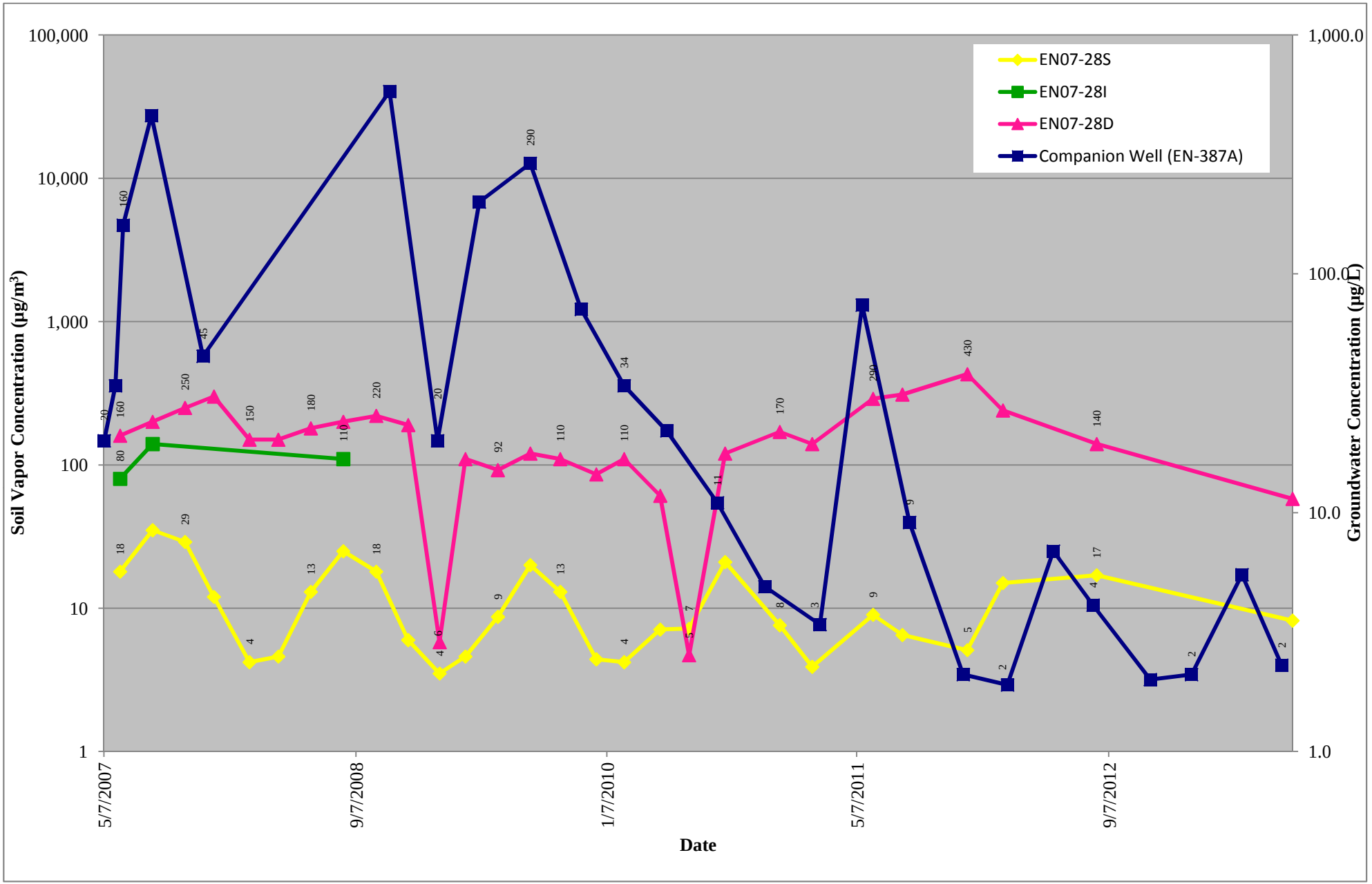

Figure B.29
TCE in Soil Vapor and Groundwater
Annual Report - Soil Vapor Monitoring through October 2013
Comprehensive Operations, Maintenance, Monitoring Program
Endicott, New York

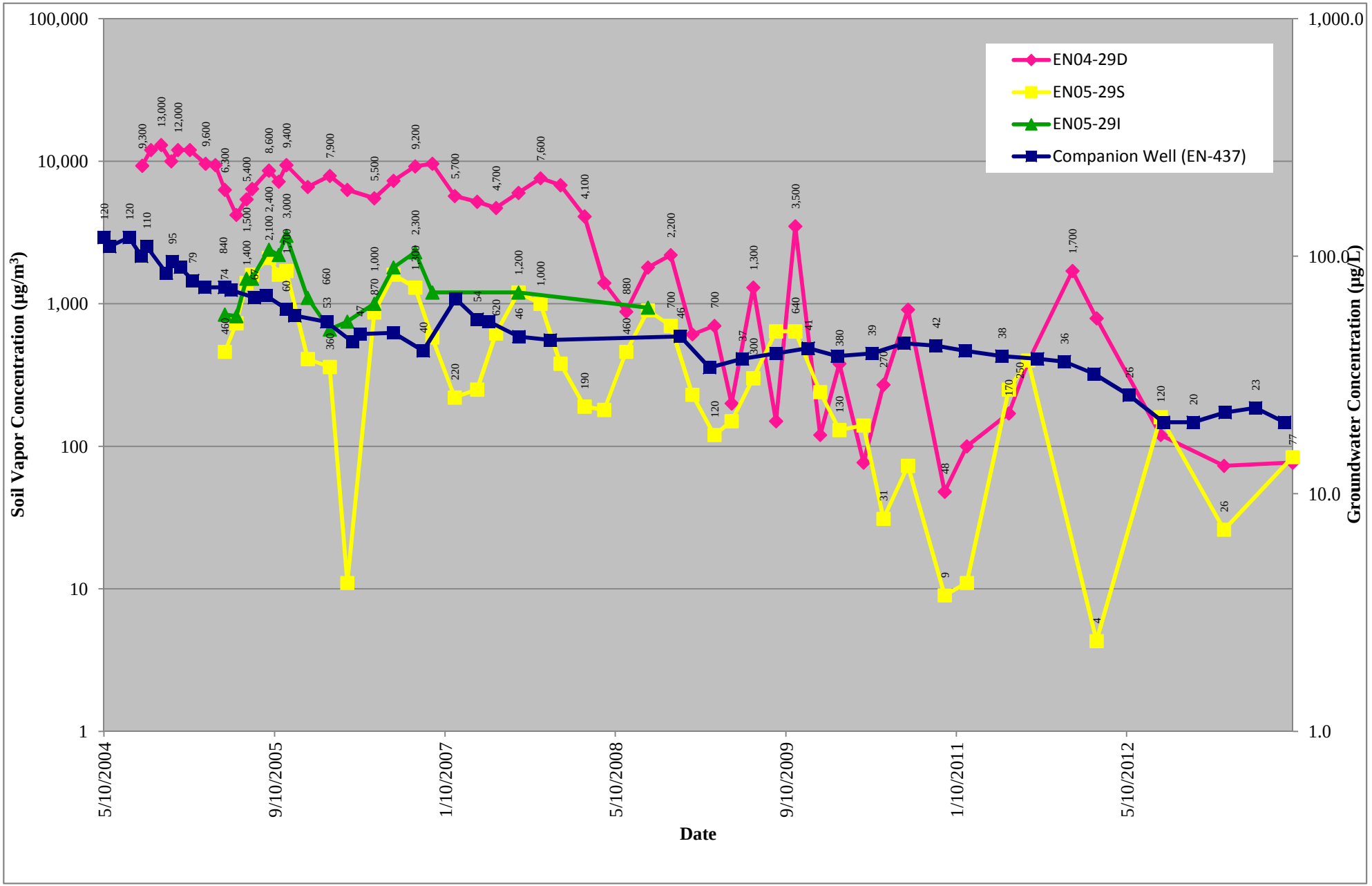

Figure B.30
TCE in Soil Vapor and Groundwater
Annual Report - Soil Vapor Monitoring through October 2013
Comprehensive Operations, Maintenance, Monitoring Program
Endicott, New York

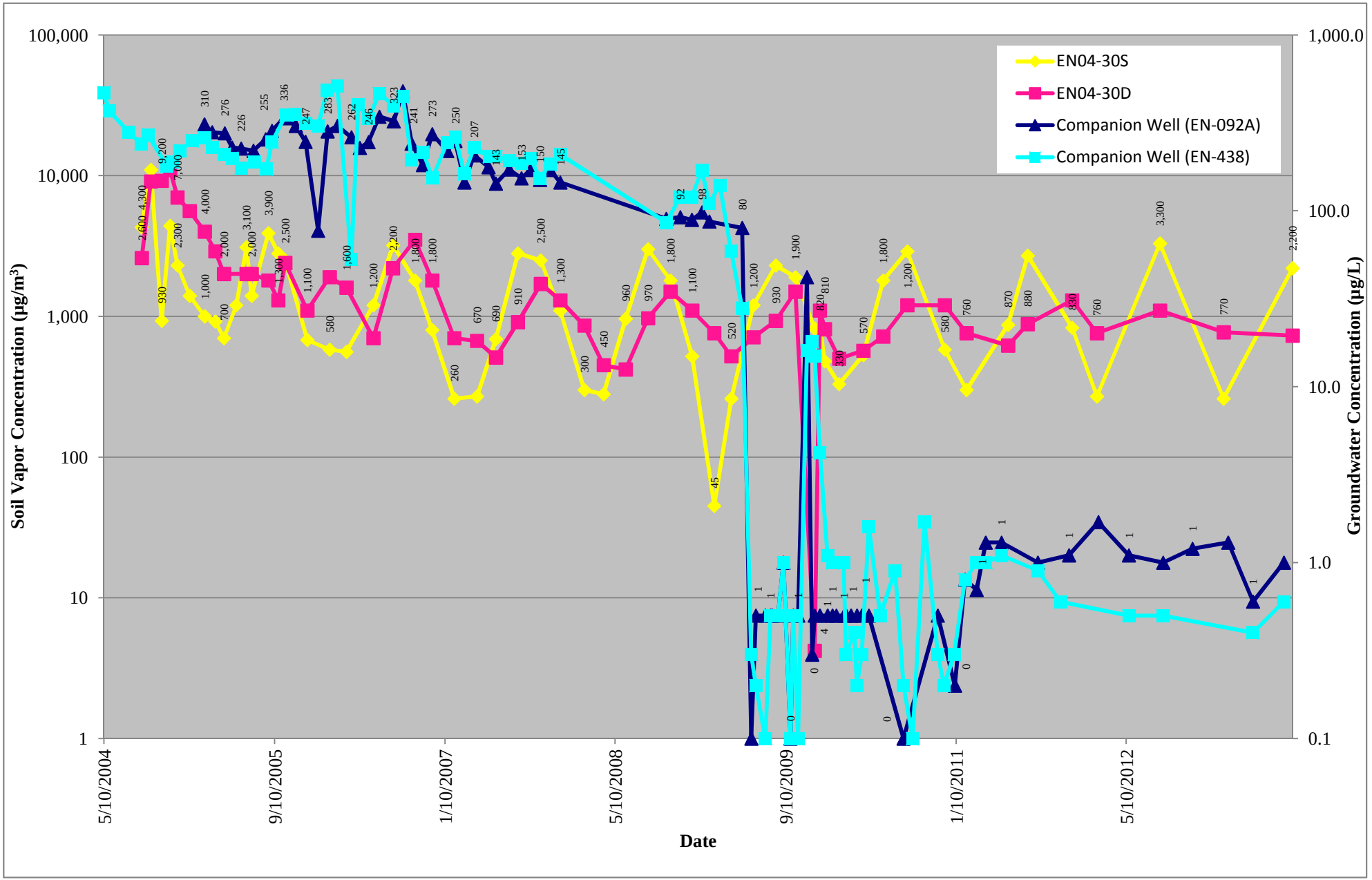

Figure B.31
TCE in Soil Vapor and Groundwater
Annual Report - Soil Vapor Monitoring through October 2013
Comprehensive Operations, Maintenance, Monitoring Program
Endicott, New York

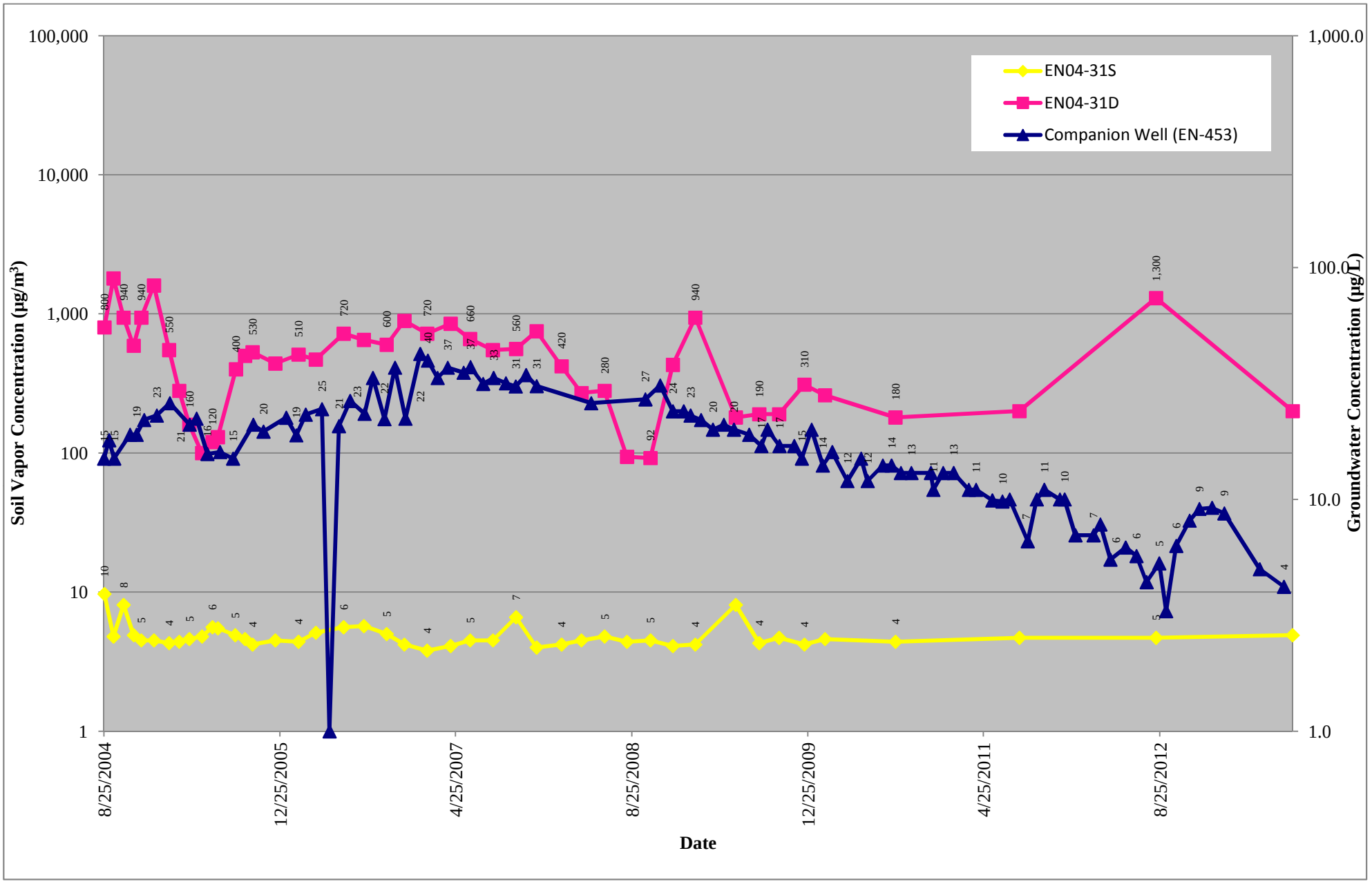

Figure B.32
TCE in Soil Vapor and Groundwater
Annual Report - Soil Vapor Monitoring through October 2013
Comprehensive Operations, Maintenance, Monitoring Program
Endicott, New York

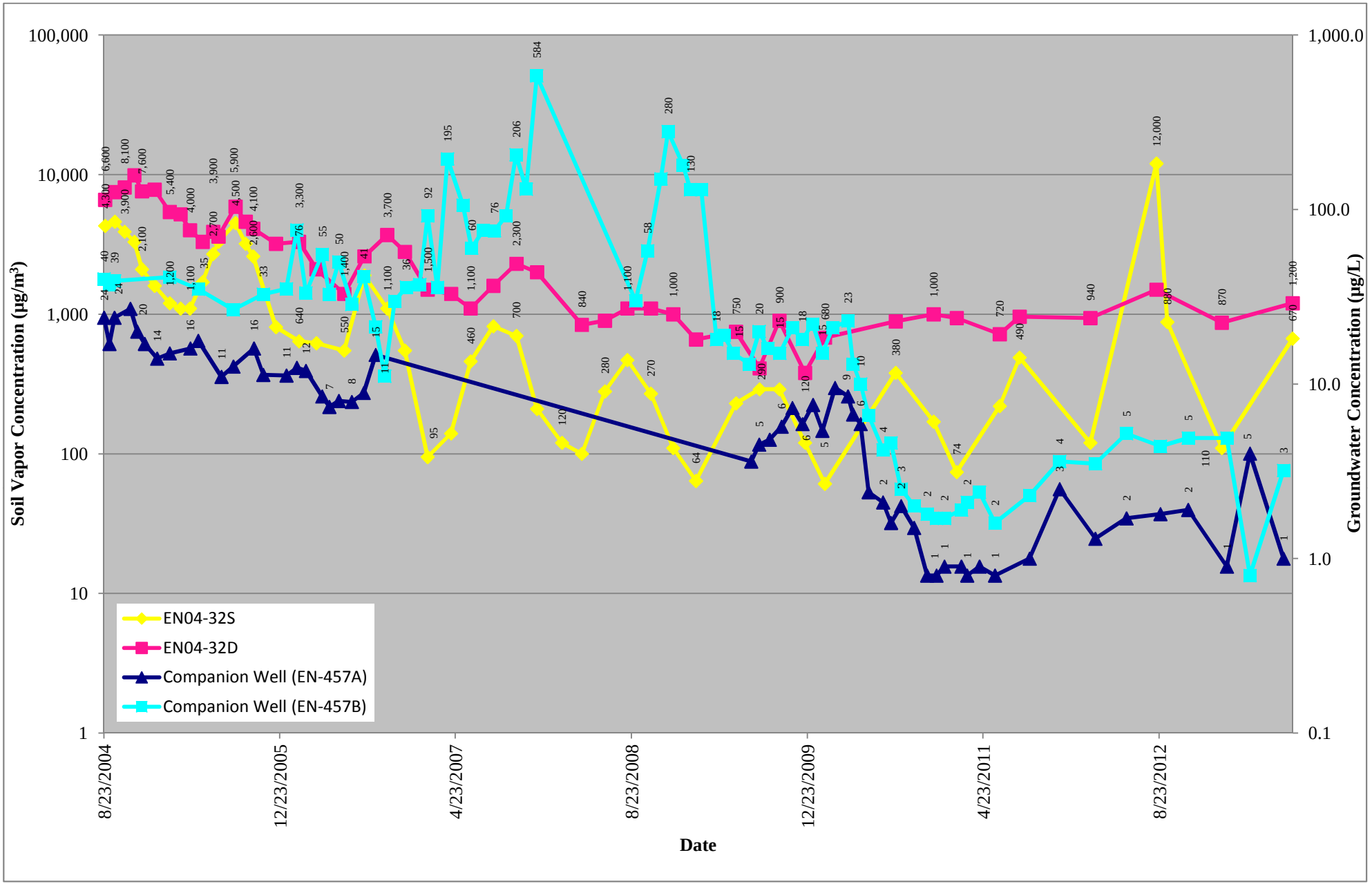

Figure B.33
TCE in Soil Vapor and Groundwater
Annual Report - Soil Vapor Monitoring through October 2013
Comprehensive Operations, Maintenance, Monitoring Program
Endicott, New York

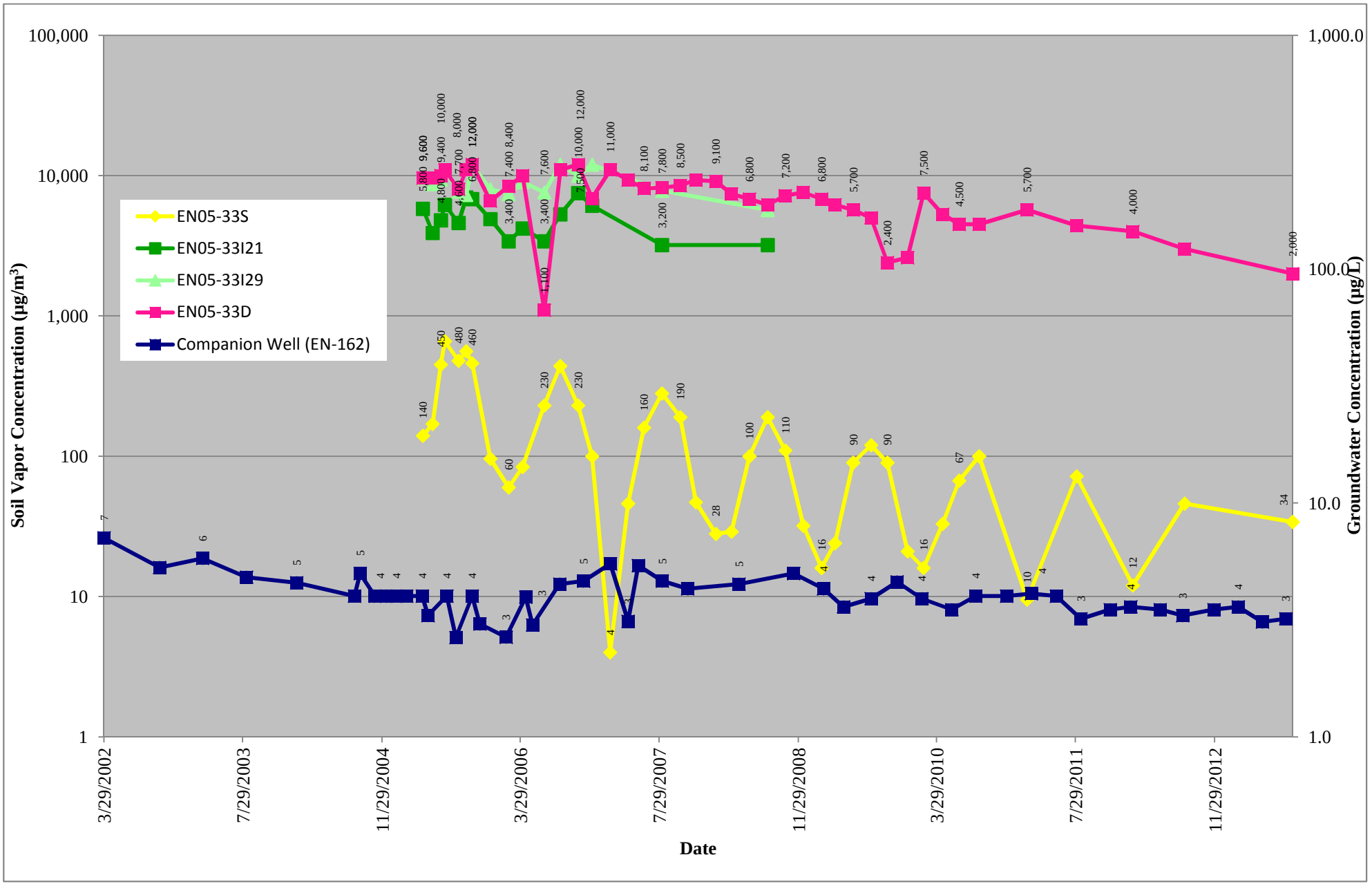

Figure B.34
TCE in Soil Vapor and Groundwater
Annual Report - Soil Vapor Monitoring through October 2013
Comprehensive Operations, Maintenance, Monitoring Program
Endicott, New York

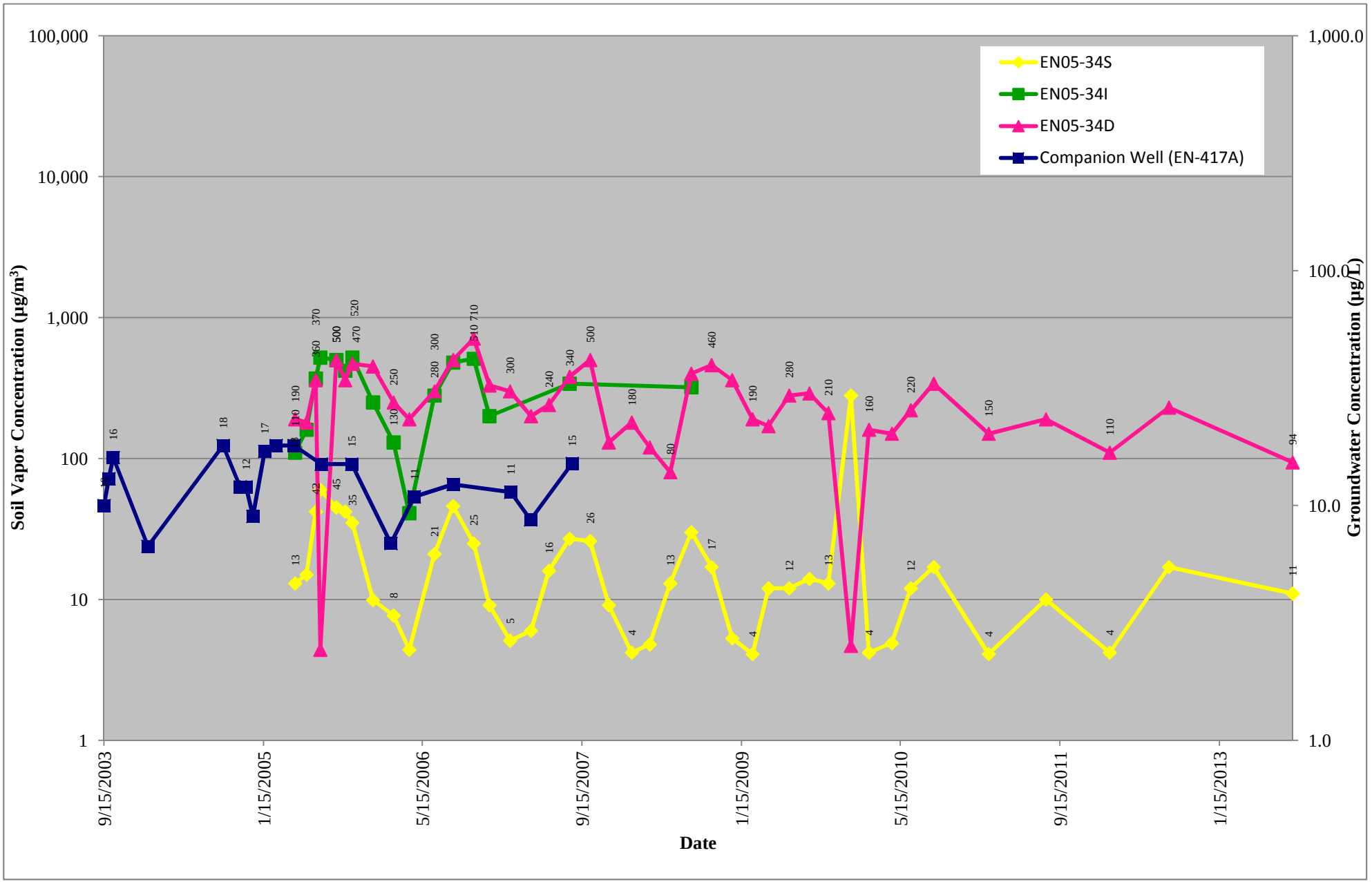

Figure B.35
TCE in Soil Vapor and Groundwater
Annual Report - Soil Vapor Monitoring through October 2013
Comprehensive Operations, Maintenance, Monitoring Program
Endicott, New York

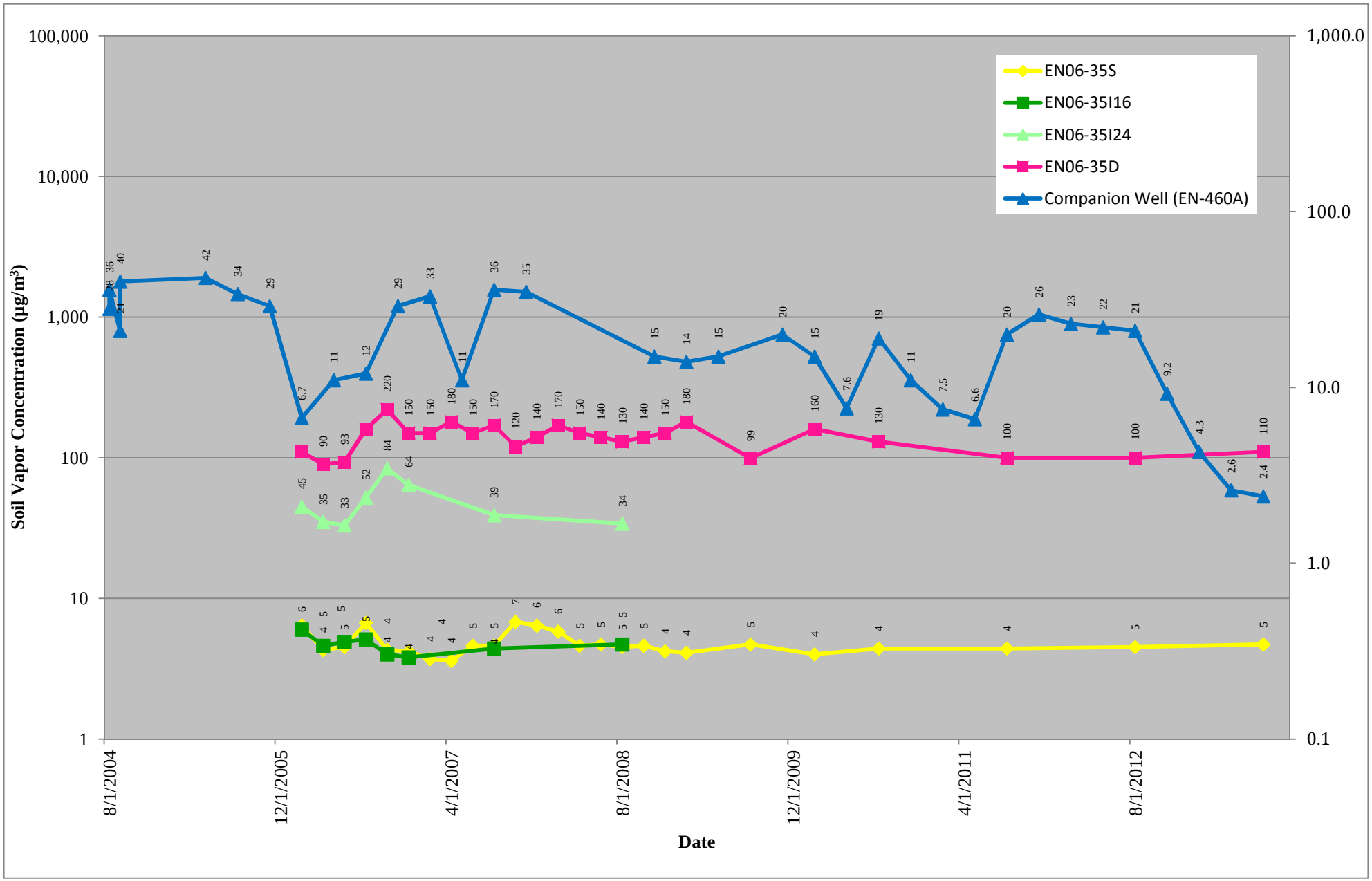

Figure B.36
TCE in Soil Vapor and Groundwater
Annual Report - Soil Vapor Monitoring through October 2013
Comprehensive Operations, Maintenance, Monitoring Program
Endicott, New York

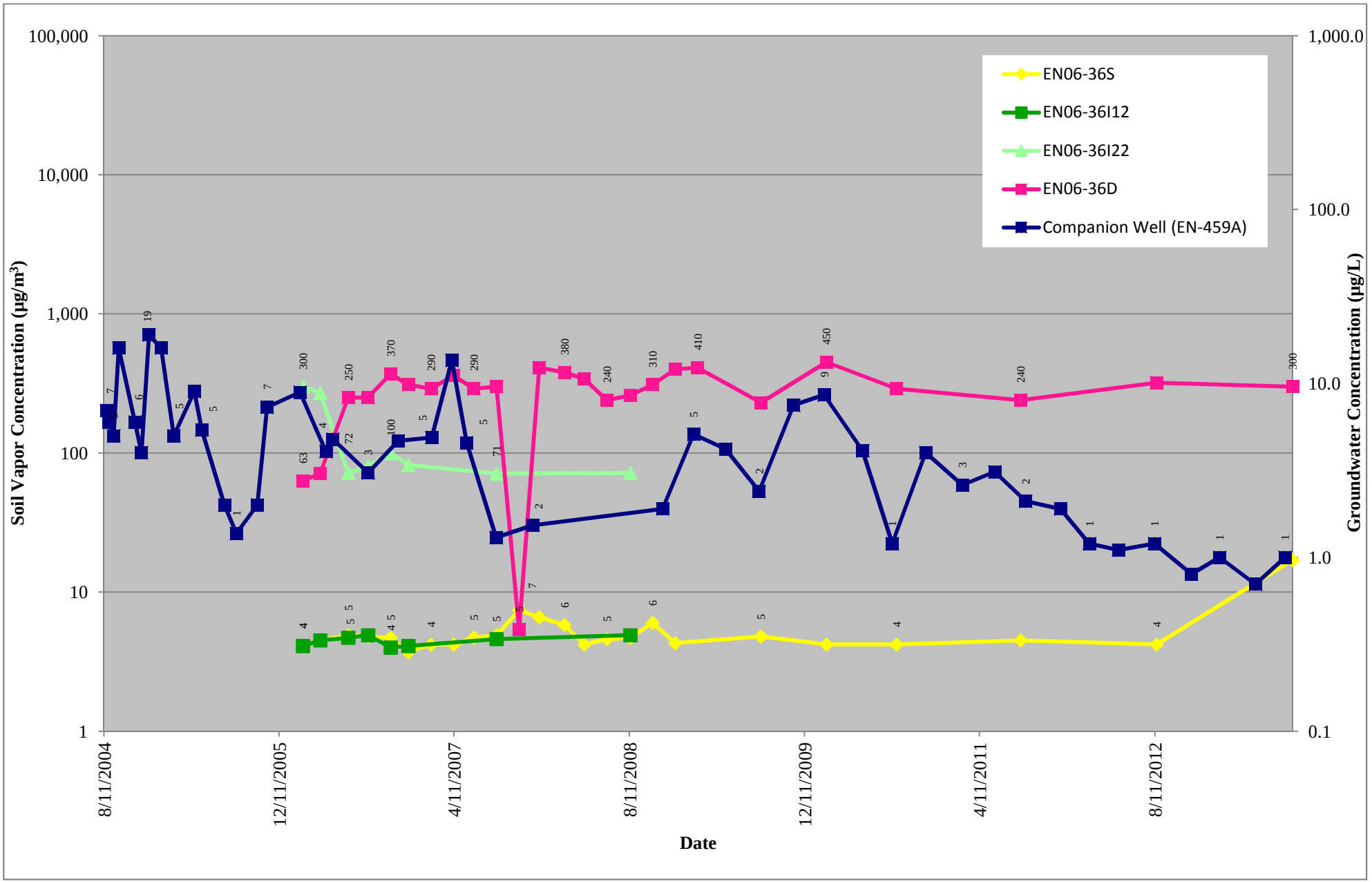

Figure B.37
TCE in Soil Vapor and Groundwater
Annual Report - Soil Vapor Monitoring through October 2013
Comprehensive Operations, Maintenance, Monitoring Program
Endicott, New York

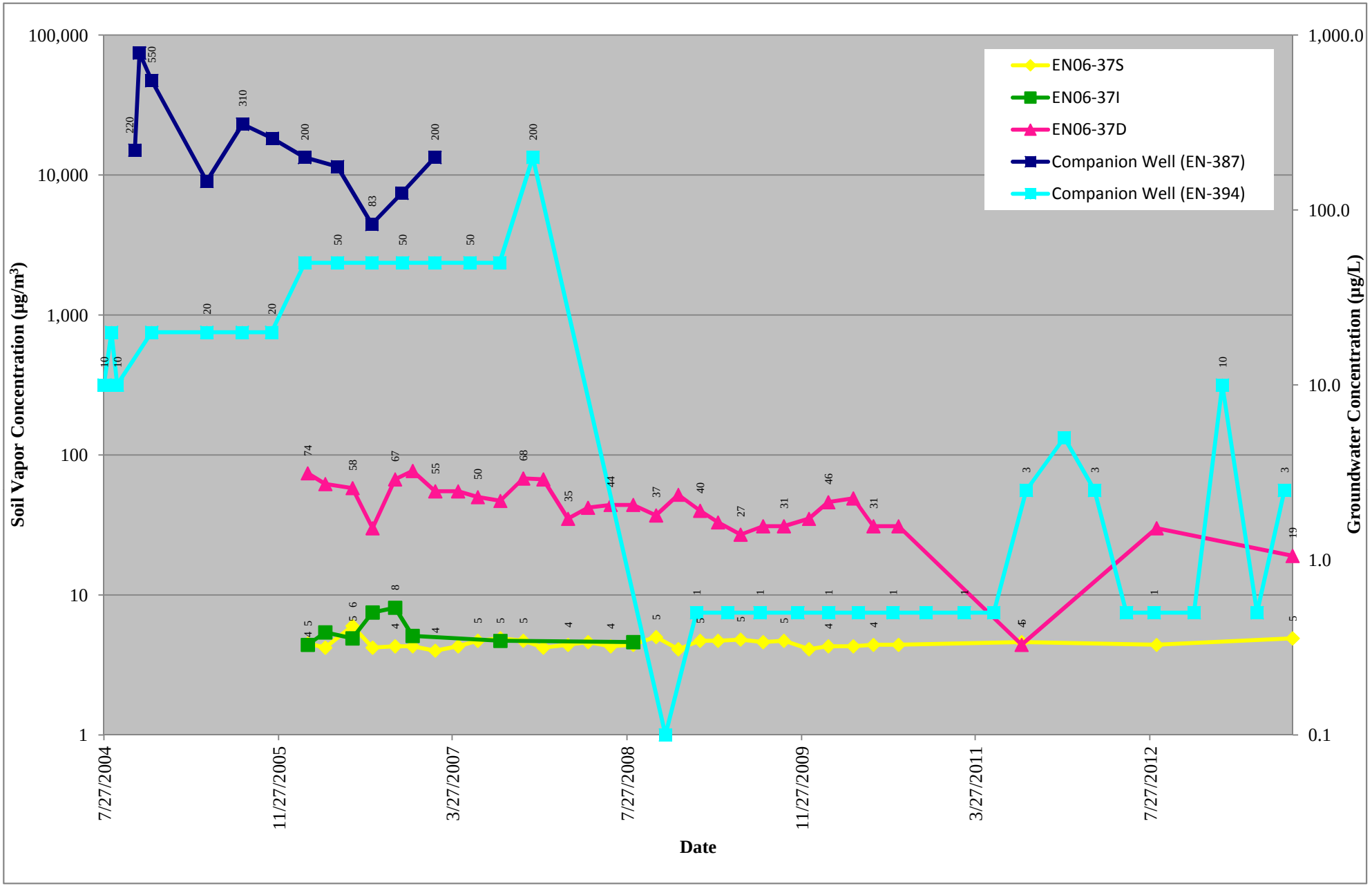

Figure B.38
PCE in Soil Vapor
Annual Report - Soil Vapor Monitoring through October 2013
Comprehensive Operations, Maintenance, Monitoring Program
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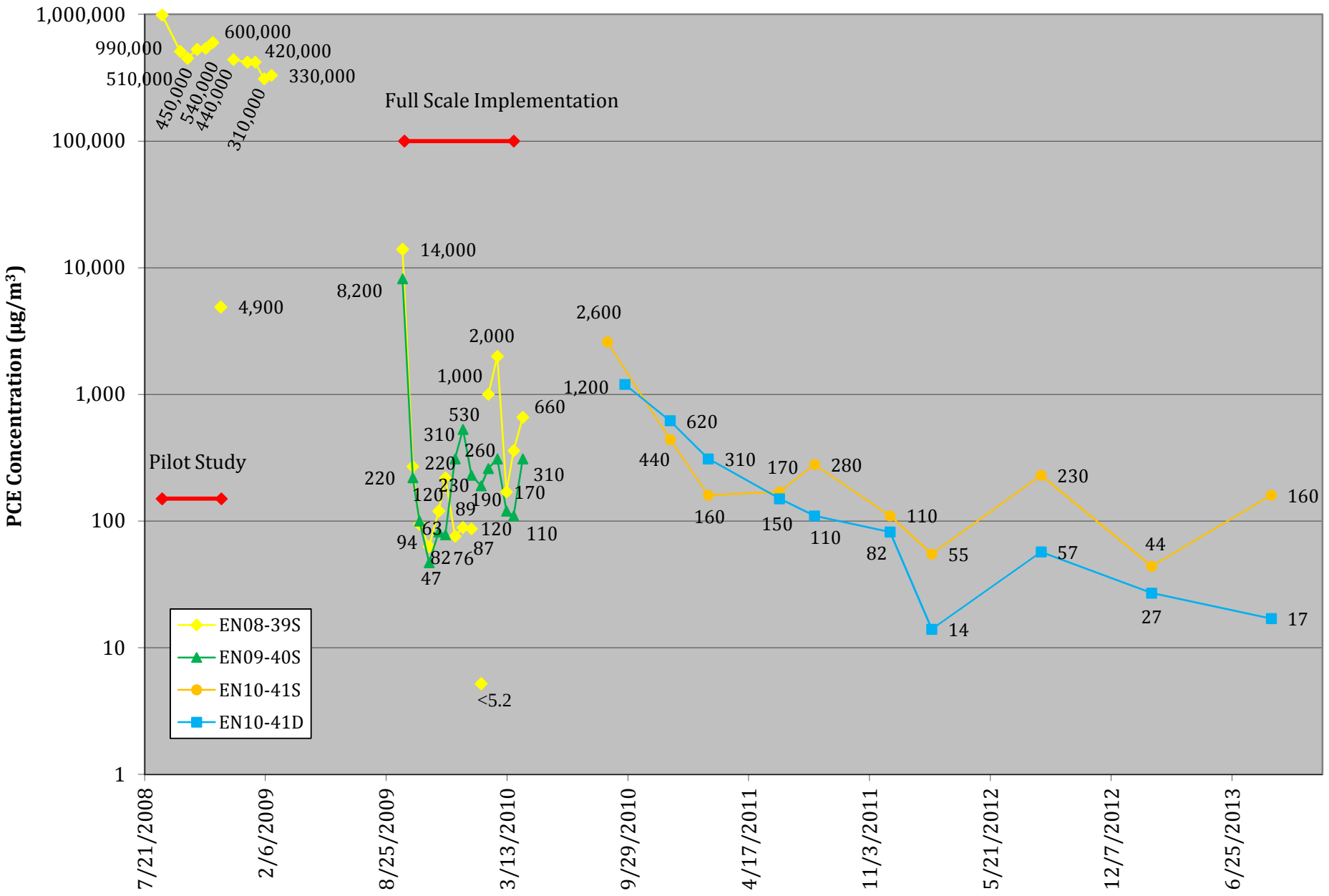

APPENDIX B.3

PLAN VIEW GRAPHICS - PCE, cDCE, TCA

Figure B.3.1

Comparisons of PCE Soil Vapor Concentrations Non Heating Season

Annual Report - Soil Vapor Monitoring Through August 2013

IBM

Endicott, New York

Drawn By:	S. Warner
Designed By:	E. Bradstreet
Reviewed By:	D. Carr
Project No:	2755.07
Date:	November 2013

Figure Narrative

These figures depict PCE 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 2013.

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 - PCE concentrations in micrograms per cubic meter (µg/m³)

Limits of Ventilation

µg/m³
- 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

N W E S

400 200 0 400 800 Feet

SANBORN HEAD

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Figure B.3.2

Comparisons of cDCE12 Soil Vapor Concentrations Non Heating Season

Annual Report - Soil Vapor Monitoring Through August 2013

IBM

Endicott, New York

Drawn By:	S. Warner
Designed By:	E. Bradstreet
Reviewed By:	D. Carr
Project No:	2755.76
Date:	November 2013

Figure Narrative

These figures depict cDCE12 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 2013.

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 - c12DCE concentrations in micrograms per cubic meter (µg/m³)

Limits of Ventilation

µg/m³
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

N W E S

400 200 0 400 800 Feet

SANBORN HEAD

Figure B.3.3

Comparisons of TCA111 Soil Vapor Concentrations Non Heating Season

Annual Report - Soil Vapor Monitoring Through August 2013

IBM

Endicott, New York

Drawn By:	S. Warner
Designed By:	E. Bradstreet
Reviewed By:	D. Carr
Project No:	2755.07
Date:	November 2013

Figure Narrative

These figures depict TCA111 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 2013.

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.

A Foundation Depth 2004

B Water Table Depth 2004

C Foundation Depth 2013

D Water Table Depth 2013

Legend

Soil Vapor Implant Location - TCA111 concentrations in micrograms per cubic meter (µg/m³)

Limits of Ventilation

µg/m³

- 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

N W E S

400 200 0 400 800 Feet

SANBORN HEAD

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APPENDIX C

ANALYTICAL RESULTS AND LABORATORY DATA (Select Copies Only)

Table C.1
Summary of Analytical Laboratory Data - Soil Vapor
Annual Report - Soil Vapor Monitoring through October 2013
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	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 (Freon
Designation **EN04-1**	EN04-1S	8	2/8/2011	EN041S020811	Summa Canister	21.3	0.3	0	1.57	ug/m3	< 5.3 U	- 6.6 -	< 3.1 U	< 3.1 U	< 2.0 U	< 4.3 U	< 3.1 U	< 3.2 U	< 2.1 U	< 2.7 U	< 6.0 U
Monitoring Well **EN-094**	EN04-1S	8	8/2/2011	EN041S080211	Summa Canister	20	0.6	0	1.61	ug/m3	< 5.5 U	- 10 -	< 3.2 U	< 3.2 U	< 2.0 U	< 4.4 U	< 3.2 U	< 3.2 U	< 8.5 U	< 2.8 U	< 6.2 U
	EN04-1S	8	2/15/2012	EN041S021512	Summa Canister	21.2	0.2	0	1.41	ug/m3	< 4.8 U	- 4.1 -	< 2.8 U	< 2.8 U	< 1.8 U	< 3.8 U	< 2.8 U	< 2.8 U	< 7.4 U	- 26 -	< 5.4 U
	EN04-1S	8	8/15/2012	EN041S081512	Summa Canister	20.3	0.6	0	1.79	ug/m3	< 6.1 U	- 12 -	< 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
	EN04-1S	8	8/27/2013	EN041S082713	Summa Canister	20.1	0.6	0	1.67	ug/m3	< 5.7 U	- 8.1 -	< 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
	EN04-1D	23	2/8/2011	EN041D020811	Summa Canister	21.3	0.4	0	1.56	ug/m3	< 5.3 U	- 150 -	< 3.1 U	< 3.1 U	< 2.0 U	- 17 -	< 3.1 U	< 3.2 U	< 2.0 U	< 2.7 U	< 6.0 U
	EN04-1D	23	8/2/2011	EN041D080211	Summa Canister	20	0.3	0	1.69	ug/m3	< 5.7 U	- 100 -	< 3.4 U	< 3.4 U	< 2.2 U	- 12 -	< 3.4 U	< 3.4 U	< 8.9 U	< 2.9 U	< 6.5 U
	EN04-1D	23	2/15/2012	EN041D021512	Summa Canister	21.1	0.3	0	1.52	ug/m3	< 5.2 U	- 120 -	< 3.0 U	< 3.0 U	< 1.9 U	- 53 -	- 7.8 -	< 3.1 U	< 8.0 U	< 26 U	< 5.8 U
	EN04-1D	23	8/15/2012	EN041D081512	Summa Canister	20.3	0.3	0.1	1.75	ug/m3	< 5.9 U	- 120 -	< 3.5 U	< 3.5 U	< 2.2 U	- 34 -	< 3.5 U	< 3.5 U	< 9.2 U	< 30 U	< 6.7 U
	EN04-1D	23	8/27/2013	EN041D082713	Summa Canister	20	0.4	0	1.79	ug/m3	< 6.1 U	- 96 -	< 3.5 U	< 3.5 U	< 2.3 U	- 19 -	< 3.5 U	< 3.6 U	< 9.4 U	< 31 U	< 6.8 U
Designation **EN04-2**	EN04-2S	8	2/8/2011	EN042S020811	Summa Canister	20.9	0.2	0	1.55	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	< 2.0 U	< 2.7 U	< 5.9 U
Monitoring Well **EN-450;EN-091A**	EN04-2S	8	6/8/2011	EN042S060811	Summa Canister	20.3	0.5	0	1.68	ug/m3	< 5.7 U	< 4.5 U	< 3.3 U	< 3.3 U	< 2.1 U	< 4.6 U	< 3.3 U	< 3.4 U	< 8.9 U	< 2.9 U	< 6.4 U
	EN04-2S	8	8/2/2011	EN042S080211	Summa Canister	20.6	0.3	0	1.65	ug/m3	< 5.6 U	- 16 -	< 3.3 U	< 3.3 U	< 2.1 U	< 4.5 U	< 3.3 U	< 3.3 U	< 8.7 U	< 2.9 U	< 6.3 U
	EN04-2S	8	2/15/2012	EN042S021512	Summa Canister	21.1	0.2	0	1.64	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
	EN04-2S	8	8/14/2012	EN042S081412	Summa Canister	20.6	0.5	0	3.13	ug/m3	< 11 U	- 18 -	< 6.2 U	< 6.2 U	< 4.0 U	< 8.5 U	< 6.2 U	< 6.3 U	< 16 U	< 54 U	< 12 U
	EN04-2S	8	2/12/2013	EN042S021213	Summa Canister	21.1	0.1	0	1.63	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
	EN04-2S	8	8/27/2013	EN042S082713	Summa Canister	20	0.6	0	1.70	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
	EN04-2D	20	2/8/2011	EN042D020811	Summa Canister	20.9	0.3	0	1.70	ug/m3	- 17 -	- 99 -	< 3.4 U	< 3.4 U	< 2.2 U	- 13 -	< 3.4 U	< 3.4 U	< 2.2 U	< 3.0 U	< 6.5 U
	EN04-2D	20	6/8/2011	EN042D060811	Summa Canister	20.4	0.2	0	1.71	ug/m3	- 19 -	- 86 -	< 3.4 U	< 3.4 U	< 2.2 U	- 11 -	< 3.4 U	< 3.5 U	< 9.0 U	< 3.0 U	< 6.6 U
	EN04-2D	20	8/2/2011	EN042D080211	Summa Canister	20.8	0.2	0	1.64	ug/m3	- 22 -	- 110 -	< 3.2 U	< 3.2 U	< 2.1 U	- 17 -	< 3.2 U	< 3.3 U	< 8.6 U	< 2.8 U	< 6.3 U
	EN04-2D	20	2/15/2012	EN042D021512	Summa Canister	21.1	0.3	0	1.61	ug/m3	- 18 -	- 94 -	< 3.2 U	< 3.2 U	< 2.0 U	- 11 -	< 3.2 U	< 3.2 U	< 8.5 U	< 28 U	< 6.2 U
	EN04-2D	20	8/14/2012	EN042D081412	Summa Canister	20.8	0.3	0	1.83	ug/m3	- 7.8 -	- 150 -	- 30 -	< 3.6 U	< 2.3 U	< 5.0 U	< 3.6 U	- 4.5 -	< 9.6 U	< 32 U	< 7.0 U
	EN04-2D	20	2/12/2013	EN042D021213	Summa Canister	21	0.2	0	1.62	ug/m3	- 18 -	- 96 -	< 3.2 U	< 3.2 U	< 2.1 U	- 13 -	< 3.2 U	< 3.3 U	< 8.5 U	< 28 U	< 6.2 U
	EN04-2D	20	8/27/2013	EN042D082713	Summa Canister	20	0.3	0	1.78	ug/m3	- 20 -	- 99 -	< 3.5 U	< 3.5 U	< 2.3 U	- 14 -	< 3.5 U	< 3.6 U	< 9.4 U	< 31 U	< 6.8 U
Designation **EN04-3**	EN04-3S	8	8/2/2011	EN043S080211	Summa Canister	20.3	0.3	0	1.55	ug/m3	< 5.2 U	- 4.4 -	< 3.1 U	< 3.1 U	< 2.0 U	< 4.2 U	< 3.1 U	< 3.1 U	< 8.2 U	< 2.7 U	< 5.9 U
Monitoring Well **EN-203**	EN04-3S	8	8/14/2012	EN043S081412	Summa Canister	20.6	0.4	0	1.87	ug/m3	< 6.3 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	< 32 U	< 7.2 U
	EN04-3S	8	8/28/2013	EN043S082813	Summa Canister	20	0.2	0	1.71	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
	EN04-3D	19	8/2/2011	EN043D080211	Summa Canister	20	0.2	0	1.68	ug/m3	- 14 -	- 28 -	< 3.3 U	< 3.3 U	< 2.1 U	< 4.6 U	< 3.3 U	< 3.4 U	< 8.9 U	< 2.9 U	< 6.4 U
	EN04-3D	19	8/14/2012	EN043D081412	Summa Canister	20	0.6	0	1.83	ug/m3	< 6.2 U	- 41 -	< 3.6 U	< 3.6 U	< 2.3 U	- 5.7 -	< 3.6 U	< 3.7 U	< 9.6 U	< 32 U	< 7.0 U
	EN04-3D	19	8/28/2013	EN043D082813	Summa Canister	19.6	0.4	0	1.93	ug/m3	< 6.5 U	- 30 -	< 3.8 U	< 3.8 U	< 2.5 U	< 5.3 U	< 3.8 U	< 3.9 U	< 10 U	< 34 U	< 7.4 U
	EN04-3D Dup	19	8/28/2013	DU1042082813	Summa Canister	19.6	0.4	0	1.86	ug/m3	< 6.3 U	- 34 -	< 3.7 U	< 3.7 U	< 2.4 U	- 5.4 -	< 3.7 U	< 3.8 U	< 9.8 U	< 32 U	< 7.1 U
Designation **EN04-4**	EN04-4S	8	8/2/2011	EN044S080211	Summa Canister	18.2	1.8	0	1.65	ug/m3	< 5.6 U	< 4.4 U	< 3.3 U	< 3.3 U	< 2.1 U	< 4.5 U	< 3.3 U	< 3.3 U	< 8.7 U	< 2.9 U	< 6.3 U
Monitoring Well **EN-022**	EN04-4S	8	8/15/2012	EN044S081512	Summa Canister	19.6	1.4	0	1.71	ug/m3	< 5.8 U	- 5.4 -	< 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
	EN04-4S	8	8/27/2013	EN044S082713	Summa Canister	17.8	1.8	0	1.78	ug/m3	- 13 -	< 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
	EN04-4D	17	8/2/2011	EN044D080211	Summa Canister	18.5	1.2	0	1.68	ug/m3	< 5.7 U	< 4.5 U	< 3.3 U	< 3.3 U	< 2.1 U	< 4.6 U	< 3.3 U	< 3.4 U	< 8.9 U	< 2.9 U	< 6.4 U
	EN04-4D	17	8/15/2012	EN044D081512	Summa Canister	19.1	1.6	0	1.71	ug/m3	< 5.8 U	- 5.0 -	< 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
	EN04-4D	17	8/27/2013	EN044D082713	Summa Canister	17.9	1.4	0	1.72	ug/m3	< 5.8 U	- 5.2 -	< 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

Table C.1
Summary of Analytical Laboratory Data - Soil Vapor
Annual Report - Soil Vapor Monitoring through October 2013
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	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 (Freon		
Designation **EN04-5**	EN04-5S	8	2/8/2011	EN045S020811	Summa Canister	20.2	1.1	0	1.49	ug/m3	<	5.0	U	-	76	-	<	3.0	U	<	3.0	U	<	1.9	U	-	7.9	-	<	3.0	U	<	3.0	U	<	2.0	U	<	2.6	U	<	5.7	U
Monitoring Well **EN-459A**	EN04-5S	8	8/3/2011	EN045S080311	Summa Canister	19	2.7	0	1.58	ug/m3	<	5.4	U	-	190	-	<	3.1	U	<	3.1	U	<	2.0	U	-	8.1	-	<	3.1	U	<	3.2	U	<	8.3	U	<	2.7	U	<	6.0	U
	EN04-5S	8	2/15/2012	EN045S021512	Summa Canister	21.2	0.8	0	1.55	ug/m3	<	5.2	U	-	59	-	<	3.1	U	<	3.1	U	<	2.0	U	-	5.5	-	<	3.1	U	<	3.1	U	<	8.2	U	-	81	-	<	5.9	U
	EN04-5S	8	8/15/2012	EN045S081512	Summa Canister	18.6	2.4	0	1.79	ug/m3	-	8.0	-	-	240	-	<	3.5	U	<	3.5	U	<	2.3	U	-	12	-	<	3.5	U	<	3.6	U	<	9.4	U	<	31	U	<	6.8	U
	EN04-5S	8	8/27/2013	EN045S082713	Summa Canister	18.5	1	0	1.68	ug/m3	<	5.7	U	-	170	-	<	3.3	U	<	3.3	U	<	2.1	U	-	9.7	-	<	3.3	U	<	3.4	U	<	8.9	U	<	29	U	<	6.4	U
	EN04-5D	34	2/8/2011	EN045D020811	Summa Canister	20	1.8	0	2.48	ug/m3	<	8.4	U	-	2500	-	<	4.9	U	<	4.9	U	<	3.2	U	-	95	-	<	4.9	U	<	5.0	U	<	3.3	U	<	4.3	U	<	9.5	U
	EN04-5D	34	8/3/2011	EN045D080311	Summa Canister	19.9	1	0	2.33	ug/m3	<	7.9	U	-	1600	-	<	4.6	U	<	4.6	U	<	3.0	U	-	52	-	<	4.6	U	<	4.7	U	<	12	U	<	4.0	U	<	8.9	U
	EN04-5D Dup	34	8/3/2011	DU3463080311	Summa Canister	19.9	1	0	2.19	ug/m3	<	7.4	U	-	2100	-	<	4.3	U	<	4.3	U	<	2.8	U	-	81	-	<	4.3	U	<	4.4	U	<	12	U	<	3.8	U	<	8.4	U
	EN04-5D	34	2/15/2012	EN045D021512	Summa Canister	20.8	1.1	0	1.61	ug/m3	<	5.5	U	-	400	-	<	3.2	U	<	3.2	U	<	2.0	U	-	75	-	<	3.2	U	<	3.2	U	<	8.5	U	<	28	U	<	6.2	U
	EN04-5D	34	8/15/2012	EN045D081512	Summa Canister	19.9	0.8	0	1.75	ug/m3	<	5.9	U	-	400	-	<	3.5	U	<	3.5	U	<	2.2	U	-	62	-	<	3.5	U	<	3.5	U	<	9.2	U	<	30	U	<	6.7	U
	EN04-5D	34	8/27/2013	EN045D082713	Summa Canister	17.6	2.5	0	1.69	ug/m3	<	5.7	U	-	190	-	<	3.4	U	<	3.4	U	<	2.2	U	-	53	-	<	3.4	U	<	3.4	U	<	8.9	U	<	29	U	<	6.5	U
Designation **EN04-6**	EN04-6S	8	8/3/2011	EN046S080311	Summa Canister	19.8	0.4	0	1.61	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	<	2.8	U	<	6.2	U
Monitoring Well **EN-310**	EN04-6S	8	8/15/2012	EN046S081512	Summa Canister	19.7	1.7	0	1.68	ug/m3	<	5.7	U	<	4.5	U	<	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
	EN04-6S	8	8/28/2013	EN046S082813	Summa Canister	19.1	1.4	0	1.54	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
	EN04-6D	27	8/3/2011	EN046D080311	Summa Canister	19.5	1.6	0	1.68	ug/m3	<	5.7	U	<	4.5	U	<	3.3	U	<	3.3	U	<	2.1	U	<	4.6	U	<	3.3	U	<	3.4	U	<	8.9	U	<	2.9	U	<	6.4	U
	EN04-6D	27	8/15/2012	EN046D081512	Summa Canister	20.6	0.3	0	1.75	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
	EN04-6D	27	8/28/2013	EN046D082813	Summa Canister	19.9	0.6	0	1.53	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
Designation **EN04-7**	EN04-7S	8	2/8/2011	EN047S020811	Summa Canister	20.1	0.3	0	2.00	ug/m3	<	6.8	U	<	5.4	U	<	4.0	U	<	4.0	U	<	2.6	U	<	5.4	U	<	4.0	U	<	4.0	U	<	2.6	U	<	3.5	U	<	7.7	U
Monitoring Well **EN-311**	EN04-7S	8	6/6/2011	EN047S060611	Summa Canister	19.7	0.2	0	1.71	ug/m3	-	7.8	-	<	4.6	U	<	3.4	U	<	3.4	U	<	2.2	U	<	4.7	U	<	3.4	U	<	3.5	U	<	9.0	U	<	3.0	U	<	6.6	U
	EN04-7S	8	8/3/2011	EN047S080311	Summa Canister	19.9	1.1	0	1.68	ug/m3	-	27	-	-	6.5	-	<	3.3	U	<	3.3	U	<	2.1	U	<	4.6	U	<	3.3	U	<	3.4	U	<	8.9	U	<	2.9	U	<	6.4	U
	EN04-7S Dup	8	8/3/2011	DU3361080311	Summa Canister	19.9	1.1	0	1.75	ug/m3	-	34	-	-	11	-	<	3.5	U	<	3.5	U	<	2.2	U	<	4.8	U	<	3.5	U	<	3.5	U	<	9.2	U	<	3.0	U	<	6.7	U
	EN04-7S	8	12/7/2011	EN047S120711	Summa Canister	20.7	0.5	0	2.01	ug/m3	-	6.9	-	<	5.4	U	<	4.0	U	<	4.0	U	<	2.6	U	<	5.5	U	<	4.0	U	<	4.1	U	<	11	U	<	3.5	U	<	7.7	U
	EN04-7S	8	2/15/2012	EN047S021512	Summa Canister	21.5	0.3	0	1.61	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
	EN04-7S	8	8/15/2012	EN047S081512	Summa Canister	19.1	1.1	0	1.71	ug/m3	-	35	-	-	10	-	<	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
	EN04-7S	8	8/27/2013	EN047S082713	Summa Canister	18.4	0.9	0	1.71	ug/m3	-	25	-	-	9.1	-	<	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
	EN04-7D	34	2/8/2011	EN047D020811	Summa Canister	19.8	1.7	0	6.11	ug/m3	<	21	U	-	5100	-	-	26	-	<	12	U	<	7.8	U	-	200	-	<	12	U	<	12	U	<	8.1	U	<	11	U	<	23	U
	EN04-7D Dup	34	2/8/2011	DU3328020811	Summa Canister	19.8	1.7	0	5.27	ug/m3	<	18	U	-	4600	-	-	28	-	<	10	U	<	6.7	U	-	190	-	<	10	U	<	11	U	<	7.0	U	<	9.2	U	<	20	U
	EN04-7D	34	6/6/2011	EN047D060611	Summa Canister	20	1	0	5.70	ug/m3	<	19	U	-	4400	-	-	24	-	<	11	U	<	7.3	U	<	16	U	<	11	U	<	12	U	<	30	U	<	9.9	U	<	22	U
	EN04-7D	34	8/3/2011	EN047D080311	Summa Canister	20.3	0.7	0	4.75	ug/m3	<	16	U	-	3700	-	-	21	-	<	9.4	U	<	6.1	U	-	160	-	<	9.4	U	<	9.6	U	<	25	U	<	8.2	U	<	18	U
	EN04-7D Dup	34	8/3/2011	DU3338080311	Summa Canister	20.3	0.7	0	3.73	ug/m3	<	13	U	-	3600	-	-	23	-	<	7.4	U	<	4.8	U	-	180	-	<	7.4	U	<	7.5	U	<	20	U	<	6.5	U	<	14	U
	EN04-7D	34	12/7/2011	EN047D120711	Summa Canister	19.5	1.4	0	4.31	ug/m3	<	15	U	-	4200	-	-	11	-	<	8.5	U	<	5.5	U	-	130	-	<	8.5	U	<	8.7	U	<	23	U	<	7.5	U	<	16	U
	EN04-7D	34	2/15/2012	EN047D021512	Summa Canister	20.5	1.5	0	6.75	ug/m3	<	23	U	-	3700	-	-	21	-	<	13	U	<	8.6	U	-	180	-	<	13	U	<	14	U	<	36	U	<	120	U	<	26	U
	EN04-7D Dup	34	2/15/2012	DU3363021512	Summa Canister	20.5	1.5	0	6.73	ug/m3	<	23	U	-	3800	-	-	24	-	<	13	U	<	8.6	U	-	170	-	<	13	U	<	14	U	<	36	U	<	120	U	<	26	U
	EN04-7D	34	8/15/2012	EN047D081512	Summa Canister	19.9	0.9	0	5.83	ug/m3	<	20	U	-	4000	-	-	17	-	<	12	U	<	7.4	U	-	160	-	<	12	U	<	12	U	<	31	U	<	100	U	<	22	U
	EN04-7D	34	8/27/2013	EN047D082713	Summa Canister	18.6	1.2	0	1.75	ug/m3	-	40	-	-	1600	-	-	4.1	-	<	3.5	U	<	2.2	U	-	59	-	<	3.5	U	<	3.5	U	<	9.2	U	<	30	U	<	6.7	U

Table C.1
Summary of Analytical Laboratory Data - Soil Vapor
Annual Report - Soil Vapor Monitoring through October 2013
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	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 (Freon	
Designation	**EN04-9**	EN04-9S	8	2/8/2011	EN049S020811	Summa Canister	21.3	0.2	0	1.60	ug/m3	-	19	-	-	900	-	-	4.0	-	<	3.2	U	<	2.0	U	-	34	-	<	3.2	U	-	5.2	-	<	2.1	U	<	2.8	U	<	6.1	U
Monitoring Well	**EN-278;EN-279**	EN04-9S	8	8/2/2011	EN049S080211	Summa Canister	19.5	0.5	0	5.27	ug/m3	-	77	-	-	2700	-	<	10	U	<	10	U	<	6.7	U	-	110	-	<	10	U	<	11	U	<	28	U	<	9.2	U	<	20	U
		EN04-9S	8	2/14/2012	EN049S021412	Summa Canister	21	0.3	0.1	1.49	ug/m3	-	20	-	-	690	-	-	3.9	-	<	3.0	U	<	1.9	U	-	44	-	<	3.0	U	-	3.6	-	<	7.9	U	<	26	U	<	5.7	U
		EN04-9S	8	8/15/2012	EN049S081512	Summa Canister	16.4	2	0	12.10	ug/m3	-	230	-	-	7900	-	<	24	U	<	24	U	<	15	U	-	360	-	<	24	U	<	24	U	<	64	U	<	210	U	<	46	U
		EN04-9S	8	8/27/2013	EN049S082713	Summa Canister	15.2	2.2	0	9.66	ug/m3	-	180	-	-	5600	-	<	19	U	<	19	U	<	12	U	-	320	-	<	19	U	<	20	U	<	51	U	<	170	U	<	37	U
		EN04-9D	20	2/8/2011	EN049D020811	Summa Canister	21.2	0.2	0.1	15.60	ug/m3	-	870	-	-	15000	-	-	760	-	<	31	U	<	20	U	-	810	-	-	250	-	-	230	-	<	20	U	<	27	U	<	60	U
		EN04-9D	20	8/2/2011	EN049D080211	Summa Canister	18.4	0.5	0	11.70	ug/m3	-	650	-	-	8500	-	-	360	-	<	23	U	<	15	U	-	660	-	-	160	-	-	110	-	<	62	U	<	20	U	-	120	
		EN04-9D	20	2/14/2012	EN049D021412	Summa Canister	19.7	0.9	0.1	12.20	ug/m3	-	540	-	-	7000	-	-	460	-	<	24	U	<	16	U	-	620	-	-	93	-	-	130	-	<	64	U	<	210	U	<	47	U
		EN04-9D	20	8/15/2012	EN049D081512	Summa Canister	18.2	0.7	0	1.83	ug/m3	<	6.2	U	-	800	-	<	3.6	U	<	3.6	U	<	2.3	U	-	25	-	<	3.6	U	<	3.7	U	<	9.6	U	<	32	U	<	7.0	U
		EN04-9D	20	8/27/2013	EN049D082713	Summa Canister	12.6	3.2	0	16.80	ug/m3	-	760	-	-	9500	-	-	670	-	<	33	U	<	21	U	-	1100	-	-	140	-	-	180	-	<	89	U	<	290	U	-	66	
Designation	**EN04-10**	EN04-10S	8	2/8/2011	EN0410S020811	Summa Canister	20.5	0.7	0	15.10	ug/m3	-	110	-	-	14000	-	-	2900	-	<	30	U	<	19	U	-	3300	-	-	290	-	-	1400	-	<	20	U	<	26	U	<	58	U
Monitoring Well	**EN-077**	EN04-10S	8	8/2/2011	EN0410S080211	Summa Canister	16.6	2.9	0	79.00	ug/m3	-	410	-	-	41000	-	-	5800	-	<	160	U	<	100	U	-	5300	-	-	230	-	-	2000	-	<	420	U	<	140	U	<	300	U
		EN04-10S Dup	8	8/2/2011	DU3333080211	Summa Canister	16.6	2.9	0	77.50	ug/m3	-	460	-	-	44000	-	-	6400	-	<	150	U	<	99	U	-	5600	-	-	270	-	-	2100	-	<	410	U	<	130	U	<	300	U
		EN04-10S	8	2/15/2012	EN0410S021512	Summa Canister	20.9	3.2	0	19.40	ug/m3	-	120	-	-	12000	-	-	2100	-	<	38	U	<	25	U	-	2200	-	-	460	-	-	750	-	<	100	U	<	340	U	<	74	U
		EN04-10S	8	8/15/2012	EN0410S081512	Summa Canister	13.3	6	0	98.80	ug/m3	-	610	-	-	54000	-	-	5900	-	<	200	U	<	130	U	-	6900	-	-	200	-	-	2100	-	<	520	U	<	1700	U	<	380	U
		EN04-10S	8	8/27/2013	EN0410S082713	Summa Canister	12.5	5.7	0	56.70	ug/m3	<	190	U	-	30000	-	-	3400	-	<	110	U	<	72	U	-	3700	-	-	130	-	-	1200	-	<	300	U	<	980	U	<	220	U
		EN04-10D	20	2/8/2011	EN0410D020811	Summa Canister	20.5	0.7	0	44.00	ug/m3	-	460	-	-	35000	-	-	7400	-	<	87	U	<	56	U	-	6200	-	-	570	-	-	2700	-	<	58	U	<	76	U	<	170	U
		EN04-10D	20	8/2/2011	EN0410D080211	Summa Canister	16.5	2.3	0	24.40	ug/m3	-	320	-	-	25000	-	-	4600	-	<	48	U	<	31	U	-	4300	-	-	310	-	-	1500	-	<	130	U	<	42	U	<	94	U
		EN04-10D	20	2/15/2012	EN0410D021512	Summa Canister	14.8	3.8	0	38.80	ug/m3	-	350	-	-	21000	-	-	4300	-	<	77	U	-	150	-	-	4200	-	-	740	-	-	860	-	<	200	U	-	1600	-	<	150	U
		EN04-10D	20	8/15/2012	EN0410D081512	Summa Canister	14.6	4.4	0	35.00	ug/m3	-	470	-	-	33000	-	-	5400	-	<	69	U	<	45	U	-	5500	-	-	320	-	-	1600	-	<	180	U	<	610	U	<	130	U
		EN04-10D	20	8/27/2013	EN0410D082713	Summa Canister	13.5	4.7	0	33.60	ug/m3	-	480	-	-	32000	-	-	4800	-	<	67	U	<	43	U	-	5100	-	-	250	-	-	1400	-	<	180	U	<	580	U	<	130	U
Designation	**EN04-11**	EN04-11S	8	2/9/2011	EN0411S020911	Summa Canister	20.9	0.4	0	1.46	ug/m3	<	5.0	U	-	49	-	<	2.9	U	<	2.9	U	<	1.9	U	<	4.0	U	<	2.9	U	<	3.0	U	<	1.9	U	<	2.5	U	<	5.6	U
Monitoring Well	**EN-215;EN-215B**	EN04-11S	8	6/8/2011	EN0411S060811	Summa Canister	19.4	0.8	0	1.75	ug/m3	<	5.9	U	-	120	-	<	3.5	U	<	3.5	U	<	2.2	U	<	4.8	U	<	3.5	U	<	3.5	U	<	9.2	U	<	3.0	U	<	6.7	U
		EN04-11S	8	8/2/2011	EN0411S080211	Summa Canister	19.5	1.2	0	1.68	ug/m3	-	8.0	-	-	180	-	<	3.3	U	<	3.3	U	<	2.1	U	-	6.4	-	<	3.3	U	<	3.4	U	<	8.9	U	<	2.9	U	<	6.4	U
		EN04-11S	8	12/7/2011	EN0411S120711	Summa Canister	20	0.5	0	1.53	ug/m3	<	5.2	U	-	69	-	<	3.0	U	<	3.0	U	<	2.0	U	<	4.2	U	<	3.0	U	<	3.1	U	<	8.1	U	<	2.6	UJ	<	5.9	U
		EN04-11S	8	2/14/2012	EN0411S021412	Summa Canister	21.5	0.2	0	1.46	ug/m3	<	5.0	U	-	40	-	<	2.9	U	<	2.9	U	<	1.9	U	<	4.0	U	<	2.9	U	<	3.0	U	<	7.7	U	<	25	U	<	5.6	U
		EN04-11S	8	8/15/2012	EN0411S081512	Summa Canister	20.8	0.5	0	1.64	ug/m3	-	8.3	-	-	140	-	<	3.2	U	<	3.2	U	<	2.1	U	-	9.2	-	<	3.2	U	<	3.3	U	<	8.6	U	<	28	U	<	6.3	U
		EN04-11S	8	2/12/2013	EN0411S021213	Summa Canister	20.4	0.1	0	1.55	ug/m3	<	5.2	U	-	24	-	<	3.1	U	<	3.1	U	<	2.0	U	-	4.4	-	<	3.1	U	<	3.1	U	<	8.2	U	<	27	U	<	5.9	U
		EN04-11S	8	8/27/2013	EN0411S082713	Summa Canister	19.6	0.6	0	1.78	ug/m3	-	8.9	-	-	100	-	<	3.5	U	<	3.5	U	<	2.3	U	-	12	-	<	3.5	U	<	3.6	U	<	9.4	U	<	31	U	<	6.8	U
		EN04-11D	21	2/9/2011	EN0411D020911	Summa Canister	21	0.8	0	1.48	ug/m3	-	39	-	-	1300	-	-	5.4	-	<	2.9	U	<	1.9	U	-	43	-	<	2.9	U	<	3.0	U	<	2.0	U	<	2.6	U	<	5.7	U
		EN04-11D	21	6/8/2011	EN0411D060811	Summa Canister	20.1	0.2	0	1.79	ug/m3	-	22	-	-	820	-	<	3.5	U	<	3.5	U	<	2.3	U	-	23	-	<	3.5	U	<	3.6	U	<	9.4	U	<	3.1	U	<	6.8	U
		EN04-11D	21	8/2/2011	EN0411D080211	Summa Canister	20	0.3	0	1.55	ug/m3	-	32	-	-	980	-	<	3.1	U	<	3.1	U	<	2.0	U	-	31	-	<	3.1	U	<	3.1	U	<	8.2	U	-	3.5	-	<	5.9	U
		EN04-11D	21	12/7/2011	EN0411D120711	Summa Canister	20	0.5	0	1.50	ug/m3	-	39	-	-	1100	-	-	3.7	-	<	3.0	U	<	1.9	U	-	31	-	<	3.0	U	<	3.0	U	<	7.9	U	<	2.6	UJ	<	5.7	U
		EN04-11D	21	2/14/2012	EN0411D021412	Summa Canister	21.4	0.5	0	1.41	ug/m3	-	34	-	-	1000	-	-	4.7	-	<	2.8	U	<	1.8	U	-	37	-	<	2.8	U	<	2.8	U	<	7.4	U	<	24	U	<	5.4	U
		EN04-11D	21	8/15/2012	EN0411D081512	Summa Canister	20.8	0.2	0	1.68	ug/m3	-	35	-	-	1000	-	-	3.6	-	<	3.3	U	<	2.1	U	-	33	-	<	3.3	U	<	3.4	U	<	8.9	U	<	29	U	<	6.4	U
		EN04-11D	21	2/12/2013	EN0411D021213	Summa Canister	20.4	0.1	0	1.58	ug/m3	-	32	-	-	910	-	-	4.5	-	<	3.1	U	<	2.0	U	-	34	-	<	3.1	U	<	3.2	U	<	8.3	U	<	27	U	<	6.0	U
		EN04-11D	21	8/27/2013	EN0411D082713	Summa Canister	19.9	0.2	0	1.83	ug/m3	-	28	-	-	790	-	<	3.6	U	<	3.6	U	<	2.3	U	-	24	-	<	3.6	U	<	3.7	U	<	9.6	U	<	32	U	<	7.0	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	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 (Freon
Designation **EN04-12**	EN04-12S	8	2/8/2011	EN0412S020811	Summa Canister	20.8	0.8	0	1.49	ug/m3	< 5.0 U	- 240 -	< 3.0 U	< 3.0 U	< 1.9 U	- 7.4 -	< 3.0 U	< 3.0 U	< 2.0 U	< 2.6 U	< 5.7 U
Monitoring Well **EN-214A**	EN04-12S	8	6/7/2011	EN0412S060711	Summa Canister	21	0.5	0	1.68	ug/m3	< 5.7 U	- 500 -	< 3.3 U	< 3.3 U	< 2.1 U	- 16 -	< 3.3 U	< 3.4 U	< 8.9 U	< 2.9 U	< 6.4 U
	EN04-12S	8	8/2/2011	EN0412S080211	Summa Canister	19.1	1.4	0	1.72	ug/m3	< 5.8 U	- 780 -	< 3.4 U	< 3.4 U	< 2.2 U	- 21 -	< 3.4 U	< 3.5 U	< 9.1 U	< 3.0 U	< 6.6 U
	EN04-12S	8	12/7/2011	EN0412S120711	Summa Canister	17.4	2.7	0	1.46	ug/m3	< 5.0 U	- 420 -	< 2.9 U	< 2.9 U	< 1.9 U	- 16 -	< 2.9 U	< 3.0 U	< 7.7 U	< 2.5 UJ	< 5.6 U
	EN04-12S	8	2/15/2012	EN0412S021512	Summa Canister	20.4	1.9	0	1.58	ug/m3	< 5.4 U	- 190 -	< 3.1 U	< 3.1 U	< 2.0 U	- 8.8 -	< 3.1 U	< 3.2 U	< 8.3 U	< 27 U	< 6.0 U
	EN04-12S	8	8/16/2012	EN0412S081612	Summa Canister	18.6	2.4	0	1.64	ug/m3	< 5.6 U	- 840 -	< 3.2 U	< 3.2 U	< 2.1 U	- 19 -	< 3.2 U	< 3.3 U	< 8.6 U	< 28 U	< 6.3 U
	EN04-12S	8	2/12/2013	EN0412S021213	Summa Canister	20.1	0.4	0	1.71	ug/m3	< 5.8 U	- 200 -	< 3.4 U	< 3.4 U	< 2.2 U	- 8.1 -	< 3.4 U	< 3.5 U	< 9.0 U	< 30 U	< 6.6 U
	EN04-12S	8	8/27/2013	EN0412S082713	Summa Canister	18.3	2.2	0	1.73	ug/m3	< 5.9 U	- 500 -	< 3.4 U	< 3.4 U	< 2.2 U	- 14 -	< 3.4 U	< 3.5 U	< 9.1 U	< 30 U	< 6.6 U
	EN04-12D	19	2/8/2011	EN0412D020811	Summa Canister	20.7	1	0	1.41	ug/m3	< 4.8 U	- 190 -	< 2.8 U	< 2.8 U	< 1.8 U	- 4.9 -	< 2.8 U	< 2.8 U	< 1.9 U	< 2.4 U	< 5.4 U
	EN04-12D	19	6/7/2011	EN0412D060711	Summa Canister	17.9	2.3	0	1.58	ug/m3	< 5.4 U	- 360 -	< 3.1 U	< 3.1 U	< 2.0 U	- 11 -	< 3.1 U	< 3.2 U	< 8.3 U	< 2.7 U	< 6.0 U
	EN04-12D	19	8/2/2011	EN0412D080211	Summa Canister	18.8	1.6	0	1.69	ug/m3	< 5.7 U	- 380 -	< 3.4 U	< 3.4 U	< 2.2 U	- 11 -	< 3.4 U	< 3.4 U	< 8.9 U	< 2.9 U	< 6.5 U
	EN04-12D	19	12/7/2011	EN0412D120711	Summa Canister	17.4	3	0.1	1.47	ug/m3	< 5.0 U	- 380 -	< 2.9 U	< 2.9 U	< 1.9 U	- 16 -	< 2.9 U	< 3.0 U	< 7.8 U	< 2.6 UJ	< 5.6 U
	EN04-12D	19	2/15/2012	EN0412D021512	Summa Canister	20.1	1.9	0	1.52	ug/m3	< 5.2 U	- 170 -	< 3.0 U	< 3.0 U	< 1.9 U	- 6.2 -	< 3.0 U	< 3.1 U	< 8.0 U	< 26 U	< 5.8 U
	EN04-12D	19	8/16/2012	EN0412D081612	Summa Canister	18.5	2.7	0	1.75	ug/m3	< 5.9 U	- 380 -	< 3.5 U	< 3.5 U	< 2.2 U	- 11 -	< 3.5 U	< 3.5 U	< 9.2 U	< 30 U	< 6.7 U
	EN04-12D	19	2/12/2013	EN0412D021213	Summa Canister	19.9	1	0	1.68	ug/m3	< 5.7 U	- 280 -	< 3.3 U	< 3.3 U	< 2.1 U	- 11 -	< 3.3 U	< 3.4 U	< 8.9 U	< 29 U	< 6.4 U
	EN04-12D	19	8/27/2013	EN0412D082713	Summa Canister	17.9	2.7	0	1.76	ug/m3	< 6.0 U	- 420 -	< 3.5 U	< 3.5 U	< 2.2 U	- 11 -	< 3.5 U	< 3.6 U	< 9.3 U	< 30 U	< 6.7 U
Designation **EN04-13**	EN04-13S	8	2/9/2011	EN0413S020911	Summa Canister	18.6	3.2	0	1.46	ug/m3	< 5.0 U	- 390 -	< 2.9 U	< 2.9 U	< 1.9 U	- 110 -	< 2.9 U	< 3.0 U	< 1.9 U	< 2.5 U	< 5.6 U
Monitoring Well **EN-449**	EN04-13S	8	8/3/2011	EN0413S080311	Summa Canister	18.6	2.5	0	1.70	ug/m3	< 5.8 U	- 1600 -	< 3.4 U	< 3.4 U	< 2.2 U	- 240 -	< 3.4 U	< 3.4 U	< 9.0 U	< 3.0 U	< 6.5 U
	EN04-13S	8	2/15/2012	EN0413S021512	Summa Canister	24	1.4	0	1.64	ug/m3	< 5.6 U	- 420 -	< 3.2 U	< 3.2 U	< 2.1 U	- 83 -	- 15 -	< 3.3 U	< 8.6 U	< 28 U	< 6.3 U
	EN04-13S	8	8/16/2012	EN0413S081612	Summa Canister	17.5	3.8	0	3.05	ug/m3	< 10 U	- 1500 -	< 6.0 U	< 6.0 U	< 3.9 U	- 160 -	< 6.0 U	< 6.2 U	< 16 U	< 53 U	< 12 U
	EN04-13S	8	8/29/2013	EN0413S082913	Summa Canister	16.6	4.3	0	1.77	ug/m3	< 6.0 U	- 1100 -	< 3.5 U	< 3.5 U	< 2.3 U	- 140 -	< 3.5 U	< 3.6 U	< 9.3 U	< 31 U	< 6.8 U
	EN04-13D	30	2/9/2011	EN0413D020911	Summa Canister	20.3	1.7	0	1.34	ug/m3	- 4.6 -	- 360 -	< 2.6 U	< 2.6 U	< 1.7 U	- 65 -	< 2.6 U	< 2.7 U	< 1.8 U	< 2.3 U	< 5.1 U
	EN04-13D	30	8/3/2011	EN0413D080311	Summa Canister	19.6	1.6	0	1.63	ug/m3	< 5.5 U	- 170 -	< 3.2 U	< 3.2 U	< 2.1 U	- 16 -	< 3.2 U	< 3.3 U	< 8.6 U	< 2.8 U	< 6.2 U
	EN04-13D	30	2/15/2012	EN0413D021512	Summa Canister	21.4	0.5	0	1.68	ug/m3	- 71 -	- 120 -	< 3.3 U	< 3.3 U	< 2.1 U	- 9.4 -	< 3.3 U	< 3.4 U	< 8.9 U	< 29 U	< 6.4 U
	EN04-13D	30	8/16/2012	EN0413D081612	Summa Canister	18.1	2.6	0	1.91	ug/m3	< 6.5 U	- 400 -	< 3.8 U	< 3.8 U	< 2.4 U	- 45 -	< 3.8 U	< 3.9 U	< 10 U	< 33 U	< 7.3 U
	EN04-13D Dup	30	8/16/2012	DU37419081612	Summa Canister	18.1	2.6	0	3.59	ug/m3	< 12 U	- 400 -	< 7.1 U	< 7.1 U	< 4.6 U	- 46 -	< 7.1 U	< 7.3 U	< 19 U	< 62 U	< 14 U
	EN04-13D	30	8/29/2013	EN0413D082913	Summa Canister	19	1.9	0	1.80	ug/m3	< 6.1 U	- 69 -	< 3.6 U	< 3.6 U	< 2.3 U	- 5.9 -	< 3.6 U	< 3.6 U	< 9.5 U	< 31 U	< 6.9 U
Designation **EN04-14**	EN04-14S	8	2/8/2011	EN0414S020811	Summa Canister	20.4	1.3	0	1.55	ug/m3	< 5.2 U	- 9.3 -	< 3.1 U	< 3.1 U	< 2.0 U	- 5.4 -	< 3.1 U	< 3.1 U	< 2.0 U	< 2.7 U	< 5.9 U
Monitoring Well **EN-462**	EN04-14S	8	8/3/2011	EN0414S080311	Summa Canister	18.9	2.1	0	1.66	ug/m3	< 5.6 U	- 19 -	< 3.3 U	< 3.3 U	< 2.1 U	< 4.5 U	< 3.3 U	< 3.4 U	< 8.8 U	< 2.9 U	< 6.4 U
	EN04-14S	8	2/16/2012	EN0414S021612	Summa Canister	20.4	1.4	0	2.67	ug/m3	< 9.0 U	- 9.6 -	< 5.3 U	< 5.3 U	< 3.4 U	< 7.3 U	< 5.3 U	< 5.4 U	< 14 U	< 46 U	< 10 U
	EN04-14S	8	8/16/2012	EN0414S081612	Summa Canister	20.1	1.1	0	1.68	ug/m3	< 5.7 U	- 28 -	< 3.3 U	< 3.3 U	< 2.1 U	- 8.8 -	< 3.3 U	< 3.4 U	< 8.9 U	< 29 U	< 6.4 U
	EN04-14S	8	8/28/2013	EN0414S082813	Summa Canister	18.8	2.5	0	1.76	ug/m3	< 6.0 U	- 16 -	< 3.5 U	< 3.5 U	< 2.2 U	- 5.2 -	< 3.5 U	< 3.6 U	< 9.3 U	< 30 U	< 6.7 U
	EN04-14D	34	2/8/2011	EN0414D020811	Summa Canister	20.6	0.9	0	3.88	ug/m3	< 13 U	- 3300 -	< 7.7 U	< 7.7 U	< 5.0 U	- 110 -	< 7.7 U	< 7.8 U	< 5.1 U	< 6.7 U	< 15 U
	EN04-14D	34	8/3/2011	EN0414D080311	Summa Canister	19.7	0.7	0	1.68	ug/m3	< 5.7 U	- 1100 -	< 3.3 U	< 3.3 U	< 2.1 U	- 47 -	< 3.3 U	< 3.4 U	< 8.9 U	< 2.9 U	< 6.4 U
	EN04-14D	34	2/16/2012	EN0414D021612	Summa Canister	20.6	0.5	0	1.58	ug/m3	< 5.4 U	- 600 -	< 3.1 U	< 3.1 U	< 2.0 U	- 11 -	- 5.6 -	< 3.2 U	< 8.3 U	< 27 U	< 6.0 U
	EN04-14D	34	8/16/2012	EN0414D081612	Summa Canister	20	1	0	1.68	ug/m3	< 5.7 U	- 420 -	< 3.3 U	< 3.3 U	< 2.1 U	- 20 -	< 3.3 U	< 3.4 U	< 8.9 U	< 29 U	< 6.4 U
	EN04-14D	34	8/28/2013	EN0414D082813	Summa Canister	19.3	1.4	0	1.88	ug/m3	- 13 -	- 100 -	< 3.7 U	< 3.7 U	< 2.4 U	- 6.5 -	< 3.7 U	< 3.8 U	< 9.9 U	< 33 U	< 7.2 U
Designation **EN04-15**	EN04-15S	8	8/2/2011	EN0415S080211	Summa Canister	19	1	0	1.69	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	< 2.9 U	< 6.5 U
Monitoring Well **EN-162**	EN04-15S	8	8/16/2012	EN0415S081612	Summa Canister	18.8	2	0.1	1.75	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
	EN04-15S	8	8/28/2013	EN0415S082813	Summa Canister	18.2	1.8	0	1.75	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
	EN04-15D	30	8/2/2011	EN0415D080211	Summa Canister	19.1	0.9	0	1.69	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	< 2.9 U	< 6.5 U
	EN04-15D	30	8/16/2012	EN0415D081612	Summa Canister	19	1.8	0.1	1.68	ug/m3	< 5.7 U	< 4.5 U	< 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
	EN04-15D	30	8/28/2013	EN0415D082813	Summa Canister	18.5	1.4	0	1.71	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

Table C.1
Summary of Analytical Laboratory Data - Soil Vapor
Annual Report - Soil Vapor Monitoring through October 2013
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	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 (Freon		
Designation	**EN04-16**	EN04-16S	8	8/2/2011	EN0416S080211	Summa Canister	18.4	2.1	0	1.50	ug/m3	-	12	-	-	9.4	-	<	3.0	U	<	3.0	U	<	1.9	U	-	4.9	-	<	3.0	U	<	3.0	U	<	7.9	U	<	2.6	U	<	5.7	U
Monitoring Well	**EN-206**	EN04-16S	8	8/15/2012	EN0416S081512	Summa Canister	18.9	2.2	0	1.68	ug/m3	-	6.7	-	-	8.3	-	<	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
		EN04-16S	8	8/29/2013	EN0416S082913	Summa Canister	18	2.6	0	1.76	ug/m3	<	6.0	U	-	5.2	-	<	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
		EN04-16D	34	8/2/2011	EN0416D080211	Summa Canister	18.9	0.6	0	6.03	ug/m3	-	190	-	-	2900	-	-	14	-	<	12	U	<	7.7	U	-	99	-	<	12	U	<	12	U	<	32	U	<	10	U	<	23	U
		EN04-16D	34	8/15/2012	EN0416D081512	Summa Canister	19.4	1.3	0	1.68	ug/m3	-	29	-	-	300	-	<	3.3	U	<	3.3	U	<	2.1	U	-	24	-	<	3.3	U	<	3.4	U	<	8.9	U	<	29	U	<	6.4	U
		EN04-16D	34	8/29/2013	EN0416D082913	Summa Canister	17.9	2.6	0	1.81	ug/m3	<	6.1	U	-	38	-	<	3.6	U	<	3.6	U	<	2.3	U	-	5.0	-	<	3.6	U	<	3.7	U	<	9.6	U	<	31	U	<	6.9	U
		EN04-16D	34	10/14/2013	EN0416D101413	Summa Canister	NR	NR	NR	1.66	ug/m3	<	5.6	U	-	43	-	<	3.3	U	<	3.3	U	<	2.1	U	-	5.1	-	<	3.3	U	<	3.4	U	<	8.8	U	<	29	U	<	6.4	U
Designation	**EN04-17/ EN10-17D**	EN04-17S	8	2/8/2011	EN0417S020811	Summa Canister	20.9	0.3	0	1.58	ug/m3	<	5.4	U	-	78	-	<	3.1	U	<	3.1	U	<	2.0	U	<	4.3	U	<	3.1	U	<	3.2	U	<	2.1	U	<	2.7	U	<	6.0	U
Monitoring Well	**EN-401**	EN04-17S	8	6/7/2011	EN0417S060711	Summa Canister	20.5	0.5	0	1.79	ug/m3	<	6.1	U	-	240	-	<	3.5	U	<	3.5	U	<	2.3	U	<	4.9	U	<	3.5	U	<	3.6	U	<	9.4	U	<	3.1	U	<	6.8	U
		EN04-17S	8	8/3/2011	EN0417S080311	Summa Canister	19.1	1.1	0	1.61	ug/m3	<	5.5	U	-	360	-	<	3.2	U	<	3.2	U	<	2.0	U	-	9.8	-	<	3.2	U	<	3.2	U	<	8.5	U	<	2.8	U	<	6.2	U
		EN04-17S	8	12/7/2011	EN0417S120711	Summa Canister	19.8	0.5	0.1	1.44	ug/m3	<	4.9	U	-	140	-	<	2.8	U	<	2.8	U	<	1.8	U	<	3.9	U	<	2.8	U	<	2.9	U	<	7.6	U	<	2.5	UJ	<	5.5	U
		EN04-17S	8	2/16/2012	EN0417S021612	Summa Canister	20.8	0.3	0	1.55	ug/m3	<	5.2	U	-	58	-	<	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
		EN04-17S	8	8/16/2012	EN0417S081612	Summa Canister	20.3	0.8	0	1.64	ug/m3	<	5.6	U	-	320	-	<	3.2	U	<	3.2	U	<	2.1	U	-	8.1	-	<	3.2	U	<	3.3	U	<	8.6	U	<	28	U	<	6.3	U
		EN04-17S	8	8/28/2013	EN0417S082813	Summa Canister	19.7	1.1	0	1.74	ug/m3	<	5.9	U	-	270	-	<	3.4	U	<	3.4	U	<	2.2	U	-	6.7	-	<	3.4	U	<	3.5	U	<	9.2	U	<	30	U	<	6.7	U
		EN04-17D	28	2/8/2011	EN0417D020811	Summa Canister	21	0.2	0	1.55	ug/m3	-	110	-	-	18	-	<	3.1	U	<	3.1	U	<	2.0	U	<	4.2	U	<	3.1	U	<	3.1	U	<	2.0	U	<	2.7	U	<	5.9	U
		EN04-17D	28	6/7/2011	EN0417D060711	Summa Canister	20.2	1	0	1.71	ug/m3	<	5.8	U	-	15	-	<	3.4	U	<	3.4	U	<	2.2	U	<	4.7	U	<	3.4	U	<	3.5	U	<	9.0	U	<	3.0	U	<	6.6	U
		EN04-17D	28	8/3/2011	EN0417D080311	Summa Canister	19	1.1	0	1.52	ug/m3	<	5.2	U	-	20	-	<	3.0	U	<	3.0	U	<	1.9	U	<	4.1	U	<	3.0	U	<	3.1	U	<	8.0	U	<	2.6	U	<	5.8	U
		EN04-17D	28	12/7/2011	EN0417D120711	Summa Canister	19.7	0.6	0.1	1.46	ug/m3	<	5.0	U	-	23	-	<	2.9	U	<	2.9	U	<	1.9	U	<	4.0	U	<	2.9	U	<	3.0	U	<	7.7	U	<	2.5	UJ	<	5.6	U
		EN04-17D	28	2/16/2012	EN0417D021612	Summa Canister	20.8	0.3	0	1.58	ug/m3	<	5.4	U	-	5.5	-	<	3.1	U	<	3.1	U	<	2.0	U	<	4.3	U	<	3.1	U	<	3.2	U	<	8.3	U	-	35	-	<	6.0	U
		EN04-17D	28	8/16/2012	EN0417D081612	Summa Canister	20.5	0.5	0.1	1.64	ug/m3	<	5.6	U	-	9.9	-	<	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
		EN04-17D	28	8/28/2013	EN0417D082813	Summa Canister	19.6	1.2	0	1.76	ug/m3	<	6.0	U	-	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
		EN10-17D	34	12/7/2011	EN1017D120711	Summa Canister	19.7	0.6	0	20.00	ug/m3	<	68	U	-	19000	-	-	96	-	<	40	U	<	26	U	-	360	-	<	40	U	<	40	U	<	100	U	<	35	U	<	77	U
		EN10-17D	34	2/16/2012	EN1017D021612	Summa Canister	20.6	0.8	0	10.20	ug/m3	<	34	U	-	6700	-	-	93	-	<	20	U	<	13	U	-	240	-	-	55	-	<	21	U	<	54	U	-	330	-	<	39	U
		EN10-17D	34	8/16/2012	EN1017D081612	Summa Canister	20.3	0.7	0.1	1.61	ug/m3	-	7.2	-	-	320	-	-	13	-	<	3.2	U	<	2.0	U	-	240	-	<	3.2	U	<	3.2	U	<	8.5	U	<	28	U	<	6.2	U
		EN10-17D	34	2/12/2013	EN1017D021213	Summa Canister	20.1	0.4	0	1.61	ug/m3	<	5.5	U	-	330	-	-	15	-	<	3.2	U	<	2.0	U	-	270	-	<	3.2	U	<	3.2	U	<	8.5	U	<	28	U	<	6.2	U
		EN10-17D	34	8/28/2013	EN1017D082813	Summa Canister	20.1	0.6	0	1.83	ug/m3	<	6.2	U	-	250	-	-	11	-	<	3.6	U	<	2.3	U	-	190	-	<	3.6	U	<	3.7	U	<	9.6	U	<	32	U	<	7.0	U
Designation	**EN04-18**	EN04-18S	8	8/2/2011	EN0418S080211	Summa Canister	19.4	1.1	0	1.70	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	<	3.0	U	<	6.5	U
Monitoring Well	**EN-217A**	EN04-18S	8	8/14/2012	EN0418S081412	Summa Canister	20.4	0.4	0	1.75	ug/m3	<	5.9	U	-	5.8	-	<	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
		EN04-18S	8	8/29/2013	EN0418S082913	Summa Canister	18.9	1.4	0	1.74	ug/m3	-	200	-	<	4.7	U	<	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
		EN04-18D	31	8/2/2011	EN0418D080211	Summa Canister	19.9	0.4	0	1.78	ug/m3	-	9.4	-	-	740	-	-	5.0	-	<	3.5	U	<	2.3	U	-	46	-	<	3.5	U	<	3.6	U	<	9.4	U	<	3.1	U	<	6.8	U
		EN04-18D Dup	31	8/2/2011	DU3370080211	Summa Canister	19.9	0.4	0	1.73	ug/m3	-	8.3	-	-	750	-	-	5.3	-	<	3.4	U	<	2.2	U	-	55	-	<	3.4	U	<	3.5	U	<	9.1	U	<	3.0	U	<	6.6	U
		EN04-18D	31	8/14/2012	EN0418D081412	Summa Canister	20.9	0	0.1	1.71	ug/m3	-	8.4	-	-	770	-	-	4.5	-	<	3.4	U	<	2.2	U	-	45	-	<	3.4	U	<	3.5	U	<	9.0	U	<	30	U	<	6.6	U
		EN04-18D Dup	31	8/14/2012	DU3362081412	Summa Canister	20.9	0	0.1	1.83	ug/m3	-	6.7	-	-	710	-	-	5.0	-	<	3.6	U	<	2.3	U	-	35	-	-	6.0	-	<	3.7	U	<	9.6	U	<	32	U	<	7.0	U
		EN04-18D	31	8/29/2013	EN0418D082913	Summa Canister	19.3	0.6	0	1.70	ug/m3	-	7.7	-	-	600	-	-	3.6	-	<	3.4	U	<	2.2	U	-	41	-	<	3.4	U	<	3.4	U	<	9.0	U	<	30	U	<	6.5	U
Designation	**EN04-19**	EN04-19S	8	8/3/2011	EN0419S080311	Summa Canister	19.7	0.7	0	3.62	ug/m3	<	12	U	<	9.7	U	<	7.2	U	<	7.2	U	<	4.6	U	<	9.9	U	<	7.2	U	<	7.3	U	<	19	U	<	6.3	U	<	14	U
Monitoring Well	**EN-426**	EN04-19S	8	8/14/2012	EN0419S081412	Summa Canister	20.4	0.6	0.1	1.83	ug/m3	<	6.2	U	-	6.5	-	<	3.6	U	<	3.6	U	<	2.3	U	<	5.0	U	<	3.6	U	<	3.7	U	<	9.6	U	-	130	J	<	7.0	U
		EN04-19S	8	8/28/2013	EN0419S082813	Summa Canister	18.9	1.3	0	1.67	ug/m3	<	5.7	U	<	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
		EN04-19D	29.5	8/3/2011	EN0419D080311	Summa Canister	19.9	0.5	0	1.76	ug/m3	<	6.0	U	-	470	-	-	4.2	-	<	3.5	U	<	2.2	U	-	28	-	<	3.5	U	<	3.6	U	<	9.3	U	<	3.0	U	<	6.7	U
		EN04-19D	29.5	8/14/2012	EN0419D081412	Summa Canister	20.5	0.3	0.1	1.71	ug/m3	<	5.8	U	-	710	-	-	4.3	-	<	3.4	U	<	2.2	U	-	38	-	<	3.4	U	<	3.5	U	<	9.0	U	<	30	U	<	6.6	U
		EN04-19D Dup	29.5	8/14/2012	DU3352081412	Summa Canister	20.5	0.3	0.1	1.71	ug/m3	<	5.8	U	-	710	-	-	5.1	-	<	3.4	U	<	2.2	U	-	40	-	<	3.4	U	<	3.5	U	<	9.0	U	<	30	U	<	6.6	U
		EN04-19D	29.5	8/28/2013	EN0419D082813	Summa Canister	18.6	0.9	0	1.71	ug/m3	<	5.8	U	-	540	-	-	4.3	-	<	3.4	U	<	2.2	U	-	42	-	<	3.4	U	<	3.5	U	<	9.0	U	<	30	U	<	6.6	U
		EN04-19D Dup	29.5	8/28/2013	DU3457282813	Summa Canister	18.6	0.9	0	1.73	ug/m3	<	5.9	U	-	520	-	-	4.7	-	<	3.4	U	<	2.2	U	-	39	-	<	3.4	U	<	3.5	U	<	9.1	U	<	30	U	<	6.6	U

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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	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 (Freon		
Designation **EN04-20**	EN04-20S	8	8/3/2011	EN0420S080311	Summa Canister	19.9	1.1	0	1.63	ug/m3	<	5.5	U	-	9.9	-	<	3.2	U	<	3.2	U	<	2.1	U	<	4.4	U	<	3.2	U	<	3.3	U	<	8.6	U	<	2.8	U	<	6.2	U
Monitoring Well **EN-207**	EN04-20S	8	8/14/2012	EN0420S081412	Summa Canister	20	1.5	0.1	5.01	ug/m3	<	17	U	-	21	-	<	9.9	U	<	9.9	U	<	6.4	U	<	14	U	<	9.9	U	<	10	U	<	26	U	<	87	U	<	19	U
	EN04-20S	8	8/28/2013	EN0420S082813	Summa Canister	19.2	1.4	0	1.72	ug/m3	-	7.5	-	<	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
	EN04-20D	36	8/3/2011	EN0420D080311	Summa Canister	20.1	0.4	0	1.65	ug/m3	<	5.6	U	-	200	-	<	3.3	U	<	3.3	U	<	2.1	U	-	6.1	-	<	3.3	U	<	3.3	U	<	8.7	U	<	2.9	U	<	6.3	U
	EN04-20D Dup	36	8/3/2011	DU35655080311	Summa Canister	20.1	0.4	0	1.69	ug/m3	<	5.7	U	-	170	-	<	3.4	U	<	3.4	U	<	2.2	U	-	4.7	-	<	3.4	U	<	3.4	U	<	8.9	U	<	2.9	U	<	6.5	U
	EN04-20D	36	8/14/2012	EN0420D081412	Summa Canister	20.8	0.2	0	1.71	ug/m3	<	5.8	U	-	150	-	<	3.4	U	<	3.4	U	<	2.2	U	-	10	-	<	3.4	U	<	3.5	U	<	9.0	U	<	30	U	<	6.6	U
	EN04-20D	36	8/28/2013	EN0420D082813	Summa Canister	19.5	0.8	0	1.80	ug/m3	<	6.1	U	-	170	-	<	3.6	U	<	3.6	U	<	2.3	U	-	9.6	-	<	3.6	U	<	3.6	U	<	9.5	U	<	31	U	<	6.9	U
Designation **EN04-21**	EN04-21S	7.5	8/3/2011	EN0421S080311	Summa Canister	19	1.7	0	1.69	ug/m3	-	120	-	-	7.4	-	<	3.4	U	<	3.4	U	<	2.2	U	<	4.6	U	<	3.4	U	<	3.4	U	<	8.9	U	<	2.9	U	<	6.5	U
Monitoring Well **EN-468**	EN04-21S	7.5	8/14/2012	EN0421S081412	Summa Canister	20.3	0.6	0.1	3.02	ug/m3	<	10	U	<	8.1	U	<	6.0	U	<	6.0	U	<	3.8	U	<	8.2	U	<	6.0	U	<	6.1	U	<	16	U	<	52	UJ	<	12	U
	EN04-21S	7.5	8/28/2013	EN0421S082813	Summa Canister	15.5	3.4	0	1.80	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
	EN04-21S Dup	7.5	8/28/2013	DU8026082813	Summa Canister	15.5	3.4	0	1.77	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
	EN04-21D	23	8/3/2011	EN0421D080311	Summa Canister	19.6	1.1	0	1.66	ug/m3	-	7.3	-	-	140	-	<	3.3	U	<	3.3	U	<	2.1	U	<	4.5	U	<	3.3	U	<	3.4	U	<	8.8	U	<	2.9	U	<	6.4	U
	EN04-21D	23	8/14/2012	EN0421D081412	Summa Canister	20	1	0	1.79	ug/m3	-	13	-	-	140	-	<	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
	EN04-21D	23	8/28/2013	EN0421D082813	Summa Canister	8	7.9	0	1.76	ug/m3	<	6.0	U	<	4.7	U	<	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
	EN04-21D	23	10/14/2013	EN0421D101413	Summa Canister	NR	NR	NR	1.65	ug/m3	<	5.6	U	<	4.4	U	<	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
Designation **EN04-22**	EN04-22S	8	2/8/2011	EN0422S020811	Summa Canister	20.1	0.2	0	1.58	ug/m3	<	5.4	U	-	120	-	-	72	-	-	10	-	<	2.0	U	-	16	-	<	3.1	U	<	3.2	U	<	2.1	U	<	2.7	U	<	6.0	U
Monitoring Well **EN-080;EN-393**	EN04-22S	8	8/2/2011	EN0422S080211	Summa Canister	14.7	4.7	0	1.49	ug/m3	-	8.4	-	-	880	-	-	280	-	-	39	-	<	1.9	U	-	64	-	<	3.0	U	-	3.8	-	<	7.9	U	<	2.6	U	-	17	
	EN04-22S	8	2/14/2012	EN0422S021412	Summa Canister	19.2	1.6	0.1	1.52	ug/m3	<	5.2	U	-	100	-	-	42	-	-	8.4	-	<	1.9	U	-	16	-	<	3.0	U	<	3.1	U	<	8.0	U	<	26	U	<	5.8	U
	EN04-22S	8	8/14/2012	EN0422S081412	Summa Canister	18.4	2.4	0	1.75	ug/m3	-	6.1	-	-	540	-	-	85	-	-	15	-	<	2.2	U	-	35	-	<	3.5	U	<	3.5	U	<	9.2	U	<	30	U	-	10	
	EN04-22S Dup	8	8/14/2012	DU33543081412	Summa Canister	18.4	2.4	0	1.71	ug/m3	<	5.8	U	-	300	-	-	52	-	-	11	-	<	2.2	U	-	20	-	<	3.4	U	<	3.5	U	<	9.0	U	<	30	U	<	6.6	U
	EN04-22S	8	8/28/2013	EN0422S082813	Summa Canister	14.1	4.1	0	1.71	ug/m3	-	6.7	-	-	720	-	-	89	-	-	13	-	<	2.2	U	-	60	-	<	3.4	U	<	3.5	U	<	9.0	U	<	30	U	-	14	
	EN04-22D	16	2/8/2011	EN0422D020811	Summa Canister	18.5	3.6	0	1.49	ug/m3	<	5.0	U	-	490	-	-	390	-	-	55	-	<	1.9	U	-	42	-	<	3.0	U	-	4.6	-	-	3.0	-	<	2.6	U	-	7.6	
	EN04-22D	16	8/2/2011	EN0422D080211	Summa Canister	14.6	4.6	0	1.55	ug/m3	<	5.2	U	-	680	-	-	500	-	-	71	-	<	2.0	U	-	58	-	<	3.1	U	-	5.4	-	<	8.2	U	<	2.7	U	-	12	
	EN04-22D	16	2/14/2012	EN0422D021412	Summa Canister	18.4	2.4	0	1.58	ug/m3	<	5.4	U	-	240	-	-	120	-	-	22	-	<	2.0	U	-	30	-	<	3.1	U	<	3.2	U	<	8.3	U	<	27	U	<	6.0	U
	EN04-22D	16	8/14/2012	EN0422D081412	Summa Canister	19	2	0	2.79	ug/m3	<	9.5	U	-	740	-	-	230	-	-	31	-	<	3.6	U	-	56	-	<	5.5	U	<	5.6	U	<	15	U	<	48	UJ	-	12	
	EN04-22D	16	8/28/2013	EN0422D082813	Summa Canister	14	4.3	0	1.64	ug/m3	-	9.0	-	-	900	-	-	160	-	-	22	-	<	2.1	U	-	76	-	<	3.2	U	-	3.9	-	<	8.6	U	<	28	U	-	14	
Designation **EN04-23**	EN04-23S	8	8/3/2011	EN0423S080311	Summa Canister	19.5	1.3	0	1.68	ug/m3	<	5.7	U	<	4.5	U	<	3.3	U	<	3.3	U	<	2.1	U	<	4.6	U	<	3.3	U	<	3.4	U	<	8.9	U	<	2.9	U	<	6.4	U
Monitoring Well **EN-174**	EN04-23S	8	8/14/2012	EN0423S081412	Summa Canister	19.5	2	0.1	2.91	ug/m3	<	9.9	U	<	7.8	U	<	5.8	U	<	5.8	U	<	3.7	U	<	7.9	U	<	5.8	U	<	5.9	U	<	15	U	<	50	U	<	11	U
	EN04-23S Dup	8	8/14/2012	DU34085081412	Summa Canister	19.5	2	0.1	1.61	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
	EN04-23S	8	8/28/2013	EN0423S082813	Summa Canister	17.2	2.9	0	1.75	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
	EN04-23S Dup	8	8/28/2013	DU1354082813	Summa Canister	17.2	2.9	0	1.82	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
	EN04-23D	23	8/3/2011	EN0423D080311	Summa Canister	19.9	0.8	0	1.69	ug/m3	-	14	-	-	400	-	-	96	-	-	8.1	-	<	2.2	U	<	4.6	U	<	3.4	U	-	16	-	<	8.9	U	<	2.9	U	<	6.5	U
	EN04-23D Dup	23	8/3/2011	DU3355080311	Summa Canister	19.9	0.8	0	1.68	ug/m3	-	15	-	-	390	-	-	96	-	-	8.3	-	<	2.1	U	<	4.6	U	<	3.3	U	-	16	-	<	8.9	U	<	2.9	U	<	6.4	U
	EN04-23D	23	8/14/2012	EN0423D081412	Summa Canister	19.9	1.1	0	4.76	ug/m3	-	540	-	-	2000	-	<	9.4	U	<	9.4	U	<	6.1	U	-	490	-	<	9.4	U	<	9.6	U	<	25	U	<	83	U	<	18	U
	EN04-23D	23	8/28/2013	EN0423D082813	Summa Canister	18.4	1.3	0	1.69	ug/m3	-	15	-	-	370	-	-	54	-	-	5.3	-	<	2.2	U	<	4.6	U	<	3.4	U	-	9.2	-	<	8.9	U	<	29	U	<	6.5	U
Designation **EN04-25**	EN04-25S	8	8/4/2011	EN0425S080411	Summa Canister	19	1.4	0	1.68	ug/m3	-	7.5	-	<	4.5	U	<	3.3	U	<	3.3	U	<	2.1	U	<	4.6	U	<	3.3	U	<	3.4	U	<	8.9	U	<	2.9	U	<	6.4	U
Monitoring Well **EN-395**	EN04-25S	8	8/13/2012	EN0425S081312	Summa Canister	15.6	3.6	0	1.68	ug/m3	-	10	-	-	9.5	-	<	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
	EN04-25S	8	8/28/2013	EN0425S082813	Summa Canister	15.1	3.7	0	1.76	ug/m3	-	5.9	U	<	4.7	U	<	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
	EN04-25D	17.5	8/4/2011	EN0425D080411	Summa Canister	19.5	0.9	0	1.64	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	-	3.0	-	<	6.3	U
	EN04-25D	17.5	8/13/2012	EN0425D081312	Summa Canister	19.4	1.3	0	1.79	ug/m3	-	6.3	-	-	8.2	-	<	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
	EN04-25D	17.5	8/28/2013	EN0425D082813	Summa Canister	17.6	1.8	0	1.74	ug/m3	<	5.9	U	<	4.7	U	<	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

Table C.1
Summary of Analytical Laboratory Data - Soil Vapor
Annual Report - Soil Vapor Monitoring through October 2013
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	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 (Freon	
Designation **EN04-26**	EN04-26S	8	2/9/2011	EN0426S020911	Summa Canister	20.4	0.9	0	1.39	ug/m3	<	4.7	U	-	290	-	<	2.8	U	<	2.8	U	<	1.8	U	-	29	-	<	2.8	U	<	2.8	U	<	1.8	U	<	2.4	U	-	6.0	
Monitoring Well **EN-304**	EN04-26S	8	6/7/2011	EN0426S060711	Summa Canister	20	1.2	0	12.90	ug/m3	<	44	U	-	740	-	<	26	U	<	26	U	<	16	U	-	57	-	<	26	U	<	26	U	<	68	U	<	22	U	<	49	U
	EN04-26S	8	8/4/2011	EN0426S080411	Summa Canister	20	1.1	0	1.64	ug/m3	-	18	-	-	1600	-	<	3.2	U	<	3.2	U	<	2.1	U	-	86	-	<	3.2	U	<	3.3	U	<	8.6	U	<	2.8	U	-	8.6	
	EN04-26S	8	12/7/2011	EN0426S120711	Summa Canister	19.9	0.7	0	1.60	ug/m3	-	7.3	-	-	460	-	<	3.2	U	<	3.2	U	<	2.0	U	-	40	-	<	3.2	U	<	3.2	U	<	8.4	U	<	2.8	UJ	-	6.3	
	EN04-26S	8	2/14/2012	EN0426S021412	Summa Canister	20.8	0.6	0	1.58	ug/m3	<	5.4	U	-	210	-	<	3.1	U	<	3.1	U	<	2.0	U	-	19	-	<	3.1	U	<	3.2	U	<	8.3	U	<	27	U	<	6.0	U
	EN04-26S	8	8/14/2012	EN0426S081412	Summa Canister	18.6	2.1	0	1.75	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
	EN04-26S	8	8/26/2013	EN0426S082613	Summa Canister	19.4	1.5	0	3.05	ug/m3	-	17	-	-	960	-	<	6.0	U	<	6.0	U	<	3.9	U	-	57	-	<	6.0	U	<	6.2	U	<	16	U	<	53	U	<	12	U
	EN04-26D	14	2/9/2011	EN0426D020911	Summa Canister	20	1	0	1.49	ug/m3	-	6.2	-	-	910	-	<	3.0	U	<	3.0	U	<	1.9	U	-	44	-	<	3.0	U	<	3.0	U	<	2.0	U	<	2.6	U	-	8.9	
	EN04-26D	14	6/7/2011	EN0426D060711	Summa Canister	19.6	1	0	1.71	ug/m3	-	8.2	-	-	1000	-	<	3.4	U	<	3.4	U	<	2.2	U	-	59	-	<	3.4	U	<	3.5	U	<	9.0	U	<	3.0	U	-	12	
	EN04-26D	14	8/4/2011	EN0426D080411	Summa Canister	19.9	1.2	0	2.24	ug/m3	-	13	-	-	2000	-	<	4.4	U	<	4.4	U	<	2.9	U	-	99	-	<	4.4	U	<	4.5	U	<	12	U	<	3.9	U	-	15	
	EN04-26D	14	12/7/2011	EN0426D120711	Summa Canister	20.1	0.8	0	1.63	ug/m3	-	14	-	-	1600	-	<	3.2	U	<	3.2	U	<	2.1	U	-	79	-	<	3.2	U	<	3.3	U	<	8.6	U	<	2.8	UJ	-	10	
	EN04-26D	14	2/14/2012	EN0426D021412	Summa Canister	20.5	0.7	0	1.58	ug/m3	-	6.4	-	-	760	-	<	3.1	U	<	3.1	U	<	2.0	U	-	44	-	<	3.1	U	<	3.2	U	<	8.3	U	<	27	U	-	6.2	
	EN04-26D	14	8/14/2012	EN0426D081412	Summa Canister	18.6	1.8	0	4.38	ug/m3	-	17	-	-	2300	-	<	8.7	U	<	8.7	U	<	5.6	U	-	100	-	<	8.7	U	<	8.9	U	<	23	U	<	76	U	<	17	U
	EN04-26D	14	8/26/2013	EN0426D082613	Summa Canister	19.4	1.4	0	1.78	ug/m3	-	16	-	-	1500	-	<	3.5	U	<	3.5	U	<	2.3	U	-	64	-	<	3.5	U	<	3.6	U	<	9.4	U	<	31	U	<	6.8	U
Designation **EN04-27**	EN04-27S	8	2/9/2011	EN0427S020911	Summa Canister	20	1.5	0	1.49	ug/m3	-	18	-	-	140	-	<	3.0	U	<	3.0	U	<	1.9	U	-	30	-	<	3.0	U	<	3.0	U	<	2.0	U	<	2.6	U	<	5.7	U
Monitoring Well **EN-417A**	EN04-27S	8	8/3/2011	EN0427S080311	Summa Canister	13.6	6.6	0	1.64	ug/m3	-	180	-	-	830	-	<	3.2	U	<	3.2	U	<	2.1	U	-	160	-	<	3.2	U	<	3.3	U	<	8.6	U	<	2.8	U	<	6.3	U
	EN04-27S	8	2/14/2012	EN0427S021412	Summa Canister	20.9	1.3	0.1	1.64	ug/m3	-	18	-	-	73	-	<	3.2	U	<	3.2	U	<	2.1	U	-	15	-	<	3.2	U	<	3.3	U	<	8.6	U	<	28	U	<	6.3	U
	EN04-27S	8	8/13/2012	EN0427S081312	Summa Canister	14.8	4.6	0	1.83	ug/m3	-	21	-	-	1300	-	<	3.6	U	<	3.6	U	<	2.3	U	-	66	-	<	3.6	U	<	3.7	U	<	9.6	U	<	32	U	<	7.0	U
	EN04-27S	8	8/26/2013	EN0427S082613	Summa Canister	14.5	5.4	0	1.66	ug/m3	-	120	-	-	470	-	<	3.3	U	<	3.3	U	<	2.1	U	-	100	-	<	3.3	U	<	3.4	U	<	8.8	U	<	29	U	<	6.4	U
Designation **EN07-28**	EN07-28S	7	2/9/2011	EN0728S020911	Summa Canister	20.3	0.2	0	1.45	ug/m3	-	72	-	<	3.9	U	<	2.9	U	<	2.9	U	<	1.8	U	<	4.0	U	<	2.9	U	<	2.9	U	<	1.9	U	<	2.5	U	<	5.6	U
Monitoring Well **EN-387A**	EN07-28S	7	6/7/2011	EN0728S060711	Summa Canister	19.7	0.3	0	1.68	ug/m3	-	210	-	-	9.0	-	<	3.3	U	<	3.3	U	<	2.1	U	<	4.6	U	<	3.3	U	<	3.4	U	<	8.9	U	<	2.9	U	<	6.4	U
	EN07-28S Dup	7	6/7/2011	DU3322060711	Summa Canister	19.7	0.3	0	1.75	ug/m3	-	210	-	-	8.2	-	<	3.5	U	<	3.5	U	<	2.2	U	<	4.8	U	<	3.5	U	<	3.5	U	<	9.2	U	<	3.0	U	<	6.7	U
	EN07-28S	7	8/3/2011	EN0728S080311	Summa Canister	20.1	0.5	0	1.40	ug/m3	-	170	-	-	6.5	-	<	2.8	U	<	2.8	U	<	1.8	U	<	3.8	U	<	2.8	U	<	2.8	U	<	7.4	U	<	2.4	U	<	5.4	U
	EN07-28S	7	12/7/2011	EN0728S120711	Summa Canister	20.8	0.6	0	1.90	ug/m3	-	120	-	<	5.1	U	<	3.8	U	<	3.8	U	<	2.4	U	<	5.2	U	<	3.8	U	<	3.8	U	<	10	U	<	3.3	U	<	7.3	U
	EN07-28S	7	2/14/2012	EN0728S021412	Summa Canister	18.9	0.3	0.1	1.52	ug/m3	-	64	-	-	15	-	<	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
	EN07-28S	7	8/14/2012	EN0728S081412	Summa Canister	20.3	0.8	0	1.79	ug/m3	-	470	-	-	17	-	<	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
	EN07-28S	7	8/29/2013	EN0728S082913	Summa Canister	19.9	0.6	0	1.54	ug/m3	-	210	-	-	8.2	-	<	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
	EN07-28D	19	2/9/2011	EN0728D020911	Summa Canister	9.7	9	0	2.87	ug/m3	-	3700	-	-	140	-	-	14	-	-	14	-	<	3.7	U	<	7.8	U	<	5.7	U	<	5.8	U	<	3.8	U	<	5.0	U	<	11	U
	EN07-28D	19	6/7/2011	EN0728D060711	Summa Canister	17.1	2.5	0	3.42	ug/m3	-	3800	-	-	290	-	-	90	-	-	15	-	<	4.4	U	<	9.3	U	<	6.8	U	<	6.9	U	<	18	U	<	5.9	U	<	13	U
	EN07-28D	19	8/3/2011	EN0728D080311	Summa Canister	17.5	2.2	0	5.52	ug/m3	-	4800	-	-	310	-	-	230	-	<	11	U	<	7.0	U	<	15	U	<	11	U	<	11	U	<	29	U	<	9.6	U	<	21	U
	EN07-28D	19	12/7/2011	EN0728D120711	Summa Canister	16.8	3.7	0	5.76	ug/m3	-	5700	-	-	430	-	-	91	-	<	11	U	<	7.4	U	<	16	U	<	11	U	<	12	U	<	30	U	<	10	UJ	<	22	U
	EN07-28D	19	2/14/2012	EN0728D021412	Summa Canister	18	4.2	0.1	5.07	ug/m3	-	3500	-	-	240	-	-	46	-	<	10	U	<	6.5	U	<	14	U	<	10	U	<	10	U	<	27	U	<	88	U	<	19	U
	EN07-28D	19	8/14/2012	EN0728D081412	Summa Canister	19.5	4.6	0	2.85	ug/m3	-	2500	-	-	140	-	-	16	-	<	5.6	U	<	3.6	U	<	7.8	U	<	5.6	U	<	5.8	U	<	15	U	<	50	U	<	11	U
	EN07-28D	19	8/29/2013	EN0728D082913	Summa Canister	13.5	5.3	0	1.60	ug/m3	-	1400	-	-	58	-	-	8.5	-	-	6.1	-	<	2.0	U	<	4.4	U	<	3.2	U	<	3.2	U	<	8.4	U	<	28	U	<	6.1	U

Table C.1
Summary of Analytical Laboratory Data - Soil Vapor
Annual Report - Soil Vapor Monitoring through October 2013
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	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 (Freon
Designation **EN04-29;EN05-29**	EN05-29S	8	2/8/2011	EN0529S020811	Summa Canister	21.1	0.3	0.1	1.65	ug/m3	< 5.6 U	- 11 -	< 3.3 U	< 3.3 U	< 2.1 U	< 4.5 U	< 3.3 U	< 3.3 U	< 2.2 U	< 2.9 U	< 6.3 U
Monitoring Well **EN-437**	EN05-29S	8	6/8/2011	EN0529S060811	Summa Canister	18.9	1.3	0	1.71	ug/m3	< 5.8 U	- 250 -	< 3.4 U	< 3.4 U	< 2.2 U	- 20 -	< 3.4 U	< 3.5 U	< 9.0 U	< 3.0 U	< 6.6 U
	EN05-29S	8	8/2/2011	EN0529S080211	Summa Canister	18.9	1.2	0	1.81	ug/m3	< 6.1 U	- 400 -	< 3.6 U	< 3.6 U	< 2.3 U	- 29 -	< 3.6 U	< 3.7 U	< 9.6 U	< 3.1 U	< 6.9 U
	EN05-29S	8	2/14/2012	EN0529S021412	Summa Canister	20.7	0.7	0.1	1.61	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
	EN05-29S	8	8/15/2012	EN0529S081512	Summa Canister	19.4	1.4	0	1.69	ug/m3	< 5.7 U	- 160 -	< 3.4 U	< 3.4 U	< 2.2 U	- 17 -	< 3.4 U	< 3.4 U	< 8.9 U	< 29 U	< 6.5 U
	EN05-29S	8	2/12/2013	EN0429S021213	Summa Canister	20.4	0.4	0	1.58	ug/m3	< 5.4 U	- 26 -	< 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
	EN05-29S Dup	8	2/12/2013	DU3456021213	Summa Canister	20.4	0.4	0	1.64	ug/m3	< 5.6 U	- 24 -	< 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
	EN05-29S	8	8/27/2013	EN0529S082713	Summa Canister	17.7	2	0	1.67	ug/m3	< 5.7 U	- 84 -	< 3.3 U	< 3.3 U	< 2.1 U	- 8.5 -	< 3.3 U	< 3.4 U	< 8.8 U	< 29 U	< 6.4 U
	EN04-29D	20	2/8/2011	EN0429D020811	Summa Canister	20.8	0.6	0	1.55	ug/m3	< 5.2 U	- 100 -	< 3.1 U	< 3.1 U	< 2.0 U	- 6.2 -	< 3.1 U	< 3.1 U	< 2.0 U	< 2.7 U	< 5.9 U
	EN04-29D Dup	20	2/8/2011	DU3366020811	Summa Canister	20.8	0.6	0	1.57	ug/m3	< 5.3 U	- 120 -	< 3.1 U	< 3.1 U	< 2.0 U	- 6.0 -	< 3.1 U	< 3.2 U	< 2.1 U	< 2.7 U	< 6.0 U
	EN04-29D	20	6/8/2011	EN0429D060811	Summa Canister	18.9	1.5	0	1.75	ug/m3	< 5.9 U	- 170 -	< 3.5 U	< 3.5 U	< 2.2 U	- 10 -	< 3.5 U	< 3.5 U	< 9.2 U	< 3.0 U	< 6.7 U
	EN04-29D	20	8/2/2011	EN0429D080211	Summa Canister	19	1.1	0	1.75	ug/m3	< 5.9 U	- 390 -	< 3.5 U	< 3.5 U	< 2.2 U	- 33 -	< 3.5 U	< 3.5 U	< 9.2 U	< 3.0 U	< 6.7 U
	EN04-29D	20	12/7/2011	EN0429D120711	Summa Canister	18.7	1.3	0	3.46	ug/m3	< 12 U	- 1700 -	< 6.8 U	< 6.8 U	< 4.4 U	- 69 -	< 6.8 U	< 7.0 U	< 18 U	< 6.0 U	< 13 U
	EN04-29D	20	2/14/2012	EN0429D021412	Summa Canister	20.8	0.8	0.1	1.68	ug/m3	< 5.7 U	- 790 -	< 3.3 U	< 3.3 U	< 2.1 U	- 51 -	< 3.3 U	< 3.4 U	< 8.9 U	< 29 U	< 6.4 U
	EN04-29D Dup	20	2/14/2012	DU1027021412	Summa Canister	20.8	0.8	0.1	1.68	ug/m3	< 5.7 U	- 800 -	< 3.3 U	< 3.3 U	< 2.1 U	- 49 -	< 3.3 U	< 3.4 U	< 8.9 U	< 29 U	< 6.4 U
	EN04-29D	20	8/15/2012	EN0429D081512	Summa Canister	18.6	2.4	0	1.71	ug/m3	< 5.8 U	- 120 -	< 3.4 U	< 3.4 U	< 2.2 U	- 12 -	< 3.4 U	< 3.5 U	< 9.0 U	< 30 U	< 6.6 U
	EN04-29D	20	2/12/2013	EN0429D021213	Summa Canister	20.5	0.3	0	1.62	ug/m3	< 5.5 U	- 73 -	< 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
	EN04-29D	20	8/27/2013	EN0429D082713	Summa Canister	18	1.7	0	1.93	ug/m3	< 6.5 U	- 77 -	< 3.8 U	< 3.8 U	< 2.5 U	- 9.8 -	< 3.8 U	< 3.9 U	< 10 U	< 34 U	< 7.4 U
	EN04-29D Dup	20	8/27/2013	DU34647082713	Summa Canister	18	1.7	0	1.71	ug/m3	< 5.8 U	- 66 -	< 3.4 U	< 3.4 U	< 2.2 U	- 7.8 -	< 3.4 U	< 3.5 U	< 9.0 U	< 30 U	< 6.6 U
Designation **EN04-30**	EN04-30S	9	2/8/2011	EN0430S020811	Summa Canister	21.4	0.3	0	1.64	ug/m3	< 5.6 U	- 300 -	< 3.2 U	< 3.2 U	< 2.1 U	< 4.5 U	< 3.2 U	< 3.3 U	< 2.2 U	< 2.8 U	< 6.3 U
Monitoring Well **EN-092A;EN-438**	EN04-30S	9	6/7/2011	EN0430S060711	Summa Canister	20.9	0.3	0	1.79	ug/m3	< 6.1 U	- 870 -	< 3.5 U	< 3.5 U	< 2.3 U	- 6.2 -	< 3.5 U	< 3.6 U	< 9.4 U	< 3.1 U	< 6.8 U
	EN04-30S	9	8/2/2011	EN0430S080211	Summa Canister	20.1	0.4	0	3.28	ug/m3	< 11 U	- 2700 -	< 6.5 U	< 6.5 U	< 4.2 U	- 23 -	< 6.5 U	< 6.6 U	< 17 U	< 5.7 U	< 12 U
	EN04-30S	9	12/7/2011	EN0430S120711	Summa Canister	19.8	0.5	0	1.61	ug/m3	< 5.5 U	- 830 -	< 3.2 U	< 3.2 U	< 2.0 U	- 9.2 -	< 3.2 U	< 3.2 U	< 8.5 U	< 2.8 UJ	< 6.2 U
	EN04-30S Dup	9	12/7/2011	DU3457120711	Summa Canister	19.8	0.5	0	1.58	ug/m3	< 5.4 U	- 700 -	< 3.1 U	< 3.1 U	< 2.0 U	- 9.6 -	< 3.1 U	< 3.2 U	< 8.3 U	< 2.7 U	< 6.0 U
	EN04-30S	9	2/16/2012	EN0430S021612	Summa Canister	NM	NM	NM	1.46	ug/m3	< 5.0 U	- 270 -	< 2.9 U	< 2.9 U	< 1.9 U	- 4.5 -	< 2.9 U	< 3.0 U	< 7.7 U	- 40 -	< 5.6 U
	EN04-30S	9	8/14/2012	EN0430S081412	Summa Canister	19	0.9	0	6.59	ug/m3	< 22 U	- 3300 -	< 13 U	< 13 U	< 8.4 U	- 36 -	< 13 U	< 13 U	< 35 U	< 110 U	< 25 U
	EN04-30S	9	2/12/2013	EN0430S021213	Summa Canister	20.9	0.1	0	1.56	ug/m3	< 5.3 U	- 260 -	< 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
	EN04-30S	9	8/28/2013	EN0430S082813	Summa Canister	19.6	0.5	0	2.97	ug/m3	< 10 U	- 2200 -	< 5.9 U	< 5.9 U	< 3.8 U	- 16 -	< 5.9 U	< 6.0 U	< 16 U	< 52 U	< 11 U
	EN04-30S Dup	9	8/28/2013	DU9495082813	Summa Canister	19.6	0.5	0	2.70	ug/m3	< 9.2 U	- 2000 -	< 5.4 U	< 5.4 U	< 3.4 U	- 17 -	< 5.4 U	< 5.5 U	< 14 U	< 47 U	< 10 U
	EN04-30D	20	2/8/2011	EN0430D020811	Summa Canister	21.3	0.4	0	1.55	ug/m3	- 26 -	- 760 -	- 4.4 -	< 3.1 U	< 2.0 U	- 38 -	< 3.1 U	< 3.1 U	< 2.0 U	< 2.7 U	< 5.9 U
	EN04-30D	20	6/7/2011	EN0430D060711	Summa Canister	20.5	0.3	0	1.71	ug/m3	- 26 -	- 620 -	- 5.4 -	< 3.4 U	< 2.2 U	- 53 -	< 3.4 U	< 3.5 U	< 9.0 U	< 3.0 U	< 6.6 U
	EN04-30D	20	8/2/2011	EN0430D080211	Summa Canister	19.4	0.4	0	1.61	ug/m3	- 42 -	- 880 -	- 6.6 -	< 3.2 U	< 2.0 U	- 90 -	< 3.2 U	- 4.0 -	< 8.5 U	< 2.8 U	- 7.5
	EN04-30D	20	12/7/2011	EN0430D120711	Summa Canister	19.7	0.6	0.1	1.45	ug/m3	- 55 -	- 1300 -	- 6.4 -	< 2.9 U	< 1.8 U	- 130 -	< 2.9 U	- 25 -	< 7.6 U	< 2.5 UJ	- 19
	EN04-30D	20	2/16/2012	EN0430D021612	Summa Canister	19.7	0.6	0.1	1.55	ug/m3	- 33 -	- 760 -	- 5.4 -	< 3.1 U	< 2.0 U	- 100 -	- 8.6 -	- 30 -	< 8.2 U	- 30 -	- 17
	EN04-30D	20	8/14/2012	EN0430D081412	Summa Canister	20	0.7	0	1.75	ug/m3	- 42 -	- 1100 -	- 4.2 -	< 3.5 U	< 2.2 U	- 120 -	< 3.5 U	- 10 -	< 9.2 U	< 30 U	- 8.4
	EN04-30D	20	2/12/2013	EN0430D021213	Summa Canister	20.6	0.4	0	1.55	ug/m3	- 31 -	- 770 -	- 3.3 -	< 3.1 U	< 2.0 U	- 96 -	< 3.1 U	< 3.1 U	< 8.2 U	< 27 U	< 5.9 U
	EN04-30D	20	8/28/2013	EN0430D082813	Summa Canister	19.3	0.8	0	1.62	ug/m3	- 26 -	- 730 -	- 4.6 -	< 3.2 U	< 2.1 U	- 110 -	< 3.2 U	< 3.3 U	< 8.5 U	< 28 U	< 6.2 U
Designation **EN04-31**	EN04-31S	10	8/2/2011	EN0431S080211	Summa Canister	20.4	0.1	0	1.75	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	< 3.0 U	< 6.7 U
Monitoring Well **EN-453**	EN04-31S	10	8/14/2012	EN0431S081412	Summa Canister	21	0.1	0	1.75	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
	EN04-31S	10	8/27/2013	EN0431S082713	Summa Canister	20.4	0.1	0	1.81	ug/m3	< 6.1 U	< 4.9 U	< 3.6 U	< 3.6 U	< 2.3 U	< 4.9 U	< 3.6 U	< 3.7 U	< 9.6 U	< 31 U	< 6.9 U
	EN04-31D	19	8/2/2011	EN0431D080211	Summa Canister	20.2	0.1	0	2.17	ug/m3	< 7.4 U	- 200 -	< 4.3 U	< 4.3 U	< 2.8 U	< 5.9 U	< 4.3 U	< 4.4 U	< 11 U	< 3.8 U	< 8.3 U
	EN04-31D	19	8/14/2012	EN0431D081412	Summa Canister	20.9	0.1	0	1.78	ug/m3	- 6.2 -	- 1300 -	< 3.5 U	< 3.5 U	< 2.3 U	- 14 -	< 3.5 U	< 3.6 U	< 9.4 U	< 31 U	< 6.8 U
	EN04-31D	19	8/27/2013	EN0431D082713	Summa Canister	20.5	0.1	0	1.73	ug/m3	< 5.9 U	- 200 -	< 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

Table C.1
Summary of Analytical Laboratory Data - Soil Vapor
Annual Report - Soil Vapor Monitoring through October 2013
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	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 (Freon		
Designation **EN04-32**	EN04-32S	8	2/9/2011	EN0432S020911	Summa Canister	21.4	0.6	0	1.64	ug/m3	<	5.6	U	-	74	-	<	3.2	U	<	3.2	U	<	2.1	U	<	4.5	U	<	3.2	U	<	3.3	U	<	2.2	U	<	2.8	U	<	6.3	U
Monitoring Well **EN-457A;EN-457B**	EN04-32S Dup	8	2/9/2011	DU3365020911	Summa Canister	21.4	0.6	0	1.49	ug/m3	<	5.0	U	-	70	-	<	3.0	U	<	3.0	U	<	1.9	U	<	4.1	U	<	3.0	U	<	3.0	U	<	2.0	U	<	2.6	U	<	5.7	U
	EN04-32S	8	6/8/2011	EN0432S060811	Summa Canister	19.5	0.5	0	1.75	ug/m3	<	5.9	U	-	220	-	<	3.5	U	<	3.5	U	<	2.2	U	-	4.9	-	<	3.5	U	<	3.5	U	<	9.2	U	<	3.0	U	<	6.7	U
	EN04-32S	8	8/2/2011	EN0432S080211	Summa Canister	18.7	1	0	1.71	ug/m3	<	5.8	U	-	490	-	<	3.4	U	<	3.4	U	<	2.2	U	-	14	-	<	3.4	U	<	3.5	U	<	9.0	U	<	3.0	U	<	6.6	U
	EN04-32S	8	2/14/2012	EN0432S021412	Summa Canister	20.6	0.6	0.1	1.71	ug/m3	<	5.8	U	-	120	-	<	3.4	U	<	3.4	U	<	2.2	U	-	6.0	-	<	3.4	U	<	3.5	U	<	9.0	U	<	30	U	<	6.6	U
	EN04-32S	8	8/15/2012	EN0432S081512	Summa Canister	19	1.2	0	17.50	ug/m3	-	820	-	-	12000	-	-	560	-	<	35	U	<	22	U	-	1200	-	-	270	-	-	190	-	<	92	U	<	300	U	-	130	
	EN04-32S Dup	8	8/15/2012	DU3461081512	Summa Canister	19	1.2	0	1.87	ug/m3	<	6.3	U	-	810	-	<	3.7	U	<	3.7	U	<	2.4	U	-	27	-	<	3.7	U	<	3.8	U	<	9.9	U	<	32	U	<	7.2	U
	EN04-32S	8	2/12/2013	EN0432S021213	Summa Canister	20.3	0.3	0	1.60	ug/m3	<	5.4	U	-	110	-	<	3.2	U	<	3.2	U	<	2.0	U	-	8.0	-	<	3.2	U	<	3.2	U	<	8.4	U	<	28	U	<	6.1	U
	EN04-32S	8	8/27/2013	EN0432S082713	Summa Canister	17.8	1.2	0	1.70	ug/m3	<	5.8	U	-	670	-	-	8.2	-	<	3.4	U	<	2.2	U	-	45	-	<	3.4	U	<	3.4	U	<	9.0	U	<	30	U	<	6.5	U
	EN04-32D	18	2/9/2011	EN0432D020911	Summa Canister	21	0.6	0	1.52	ug/m3	<	5.2	U	-	940	-	<	3.0	U	<	3.0	U	<	1.9	U	-	15	-	<	3.0	U	<	3.1	U	<	2.0	U	<	2.6	U	<	5.8	U
	EN04-32D	18	6/8/2011	EN0432D060811	Summa Canister	19.7	0.4	0	1.68	ug/m3	<	5.7	U	-	720	-	<	3.3	U	<	3.3	U	<	2.1	U	-	12	-	<	3.3	U	<	3.4	U	<	8.9	U	<	2.9	U	<	6.4	U
	EN04-32D	18	8/2/2011	EN0432D080211	Summa Canister	18.6	0.6	0	1.61	ug/m3	<	5.5	U	-	960	-	<	3.2	U	<	3.2	U	<	2.0	U	-	18	-	<	3.2	U	<	3.2	U	<	8.5	U	<	2.8	U	<	6.2	U
	EN04-32D	18	2/14/2012	EN0432D021412	Summa Canister	20.3	0.8	0.1	1.58	ug/m3	-	28	-	-	940	-	<	3.1	U	<	3.1	U	<	2.0	U	-	23	-	<	3.1	U	-	3.2	-	<	8.3	U	<	27	U	-	16	
	EN04-32D	18	8/15/2012	EN0432D081512	Summa Canister	18.3	1.4	0	2.80	ug/m3	<	9.5	U	-	1500	-	<	5.6	U	<	5.6	U	<	3.6	U	-	42	-	<	5.6	U	-	6.7	-	<	15	U	<	49	U	<	11	U
	EN04-32D	18	2/12/2013	EN0432D021213	Summa Canister	19.6	0.8	0	1.61	ug/m3	<	5.5	U	-	870	-	<	3.2	U	<	3.2	U	<	2.0	U	-	140	-	<	3.2	U	-	5.4	-	<	8.5	U	<	28	U	<	6.2	U
	EN04-32D	18	8/27/2013	EN0432D082713	Summa Canister	18	0.9	0	1.64	ug/m3	<	5.6	U	-	1200	-	<	3.2	U	<	3.2	U	<	2.1	U	-	120	-	<	3.2	U	-	4.9	-	<	8.6	U	<	28	U	-	7.4	
Designation **EN05-33**	EN05-33S	7.5	2/9/2011	EN0533S020911	Summa Canister	21.5	0.5	0	1.58	ug/m3	<	5.4	U	-	9.5	-	<	3.1	U	<	3.1	U	<	2.0	U	<	4.3	U	<	3.1	U	<	3.2	U	<	2.1	U	<	2.7	U	<	6.0	U
Monitoring Well **EN-162**	EN05-33S	7.5	8/2/2011	EN0533S080211	Summa Canister	19.3	0.4	0	1.71	ug/m3	-	17	-	-	72	-	<	3.4	U	<	3.4	U	<	2.2	U	-	7.8	-	<	3.4	U	<	3.5	U	<	9.0	U	<	3.0	U	<	6.6	U
	EN05-33S	7.5	2/15/2012	EN0533S021512	Summa Canister	21.4	0.2	0	1.64	ug/m3	<	5.6	U	-	12	-	<	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
	EN05-33S	7.5	8/15/2012	EN0533S081512	Summa Canister	19.8	0.9	0	1.71	ug/m3	-	14	-	-	46	-	<	3.4	U	<	3.4	U	<	2.2	U	-	5.6	-	<	3.4	U	<	3.5	U	<	9.0	U	<	30	U	<	6.6	U
	EN05-33S	7.5	8/29/2013	EN0533S082913	Summa Canister	19.7	0.9	0	1.70	ug/m3	-	13	-	-	34	-	<	3.4	U	<	3.4	U	<	2.2	U	-	4.9	-	<	3.4	U	<	3.4	U	<	9.0	U	<	30	U	<	6.5	U
	EN05-33D	32	2/9/2011	EN0533D020911	Summa Canister	21.2	1.2	0	7.75	ug/m3	-	270	-	-	5700	-	-	21	-	<	15	U	<	9.9	U	-	230	-	<	15	U	<	16	U	<	10	U	<	13	U	<	30	U
	EN05-33D	32	8/2/2011	EN0533D080211	Summa Canister	19.8	0.2	0	6.27	ug/m3	-	240	-	-	4400	-	<	12	U	<	12	U	<	8.0	U	-	170	-	<	12	U	<	13	U	<	33	U	<	11	U	<	24	U
	EN05-33D	32	2/15/2012	EN0533D021512	Summa Canister	21	0.7	0	6.83	ug/m3	-	220	-	-	4000	-	-	17	-	<	14	U	<	8.7	U	-	160	-	-	25	-	<	14	U	<	36	U	<	120	U	<	26	U
	EN05-33D Dup	32	2/15/2012	DU3345021512	Summa Canister	21	0.7	0	6.83	ug/m3	-	220	-	-	4000	-	-	18	-	<	14	U	<	8.7	U	-	190	-	-	15	-	<	14	U	<	36	U	-	130	-	<	26	U
	EN05-33D	32	8/15/2012	EN0533D081512	Summa Canister	20.3	0.4	0	4.48	ug/m3	-	180	-	-	3000	-	<	8.9	U	<	8.9	U	<	5.7	U	-	95	-	<	8.9	U	<	9.1	U	<	24	U	<	78	U	<	17	U
	EN05-33D	32	8/29/2013	EN0533D082913	Summa Canister	20	0.6	0	2.88	ug/m3	-	85	-	-	2000	-	<	5.7	U	<	5.7	U	<	3.7	U	-	96	-	<	5.7	U	<	5.8	U	<	15	U	<	50	U	<	11	U
Designation **EN05-34**	EN05-34S	8	2/9/2011	EN0534S020911	Summa Canister	21	0.3	0	1.52	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	<	2.0	U	<	2.6	U	<	5.8	U
Monitoring Well **EN-417A**	EN05-34S	8	8/3/2011	EN0534S080311	Summa Canister	19.2	2.1	0	1.68	ug/m3	<	5.7	U	-	10	-	<	3.3	U	<	3.3	U	<	2.1	U	<	4.6	U	<	3.3	U	<	3.4	U	<	8.9	U	<	2.9	U	<	6.4	U
	EN05-34S	8	2/14/2012	EN0534S021412	Summa Canister	20.8	0.6	0.1	1.58	ug/m3	<	5.4	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
	EN05-34S Dup	8	2/14/2012	DU3337021412	Summa Canister	20.8	0.6	0.1	1.55	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
	EN05-34S	8	8/13/2012	EN0534S081312	Summa Canister	19.2	1.5	0	1.91	ug/m3	-	7.3	-	-	17	-	<	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
	EN05-34S	8	8/26/2013	EN0534S082613	Summa Canister	19.6	1.4	0	1.63	ug/m3	<	5.5	U	-	11	-	<	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
	EN05-34D	13.5	2/9/2011	EN0534D020911	Summa Canister	20.5	0.6	0	1.49	ug/m3	-	18	-	-	150	-	<	3.0	U	<	3.0	U	<	1.9	U	-	13	-	<	3.0	U	<	3.0	U	<	2.0	U	<	2.6	U	<	5.7	U
	EN05-34D Dup	13.5	2/9/2011	DU3831020911	Summa Canister	20.5	0.6	0	1.61	ug/m3	-	16	-	-	160	-	<	3.2	U	<	3.2	U	<	2.0	U	-	12	-	<	3.2	U	<	3.2	U	<	2.1	U	<	2.8	U	<	6.2	U
	EN05-34D	13.5	8/3/2011	EN0534D080311	Summa Canister	19	0.9	0	1.61	ug/m3	-	25	-	-	190	-	<	3.2	U	<	3.2	U	<	2.0	U	-	13	-	<	3.2	U	<	3.2	U	<	8.5	U	<	2.8	U	<	6.2	U
	EN05-34D	13.5	2/14/2012	EN0534D021412	Summa Canister	21.2	0.3	0.1	1.55	ug/m3	-	15	-	-	110	-	<	3.1	U	<	3.1	U	<	2.0	U	-	10	-	<	3.1	U	<	3.1	U	<	8.2	U	<	27	U	<	5.9	U
	EN05-34D	13.5	8/13/2012	EN0534D081312	Summa Canister	19.1	0.9	0	1.87	ug/m3	-	29	-	-	230	-	<	3.7	U	<	3.7	U	<	2.4	U	-	18	-	<	3.7	U	<	3.8	U	<	9.9	U	<	32	U	<	7.2	U
	EN05-34D	13.5	8/26/2013	EN0534D082613	Summa Canister	18.9	1.4	0	1.75	ug/m3	-	14	-	-	94	-	<	3.5	U	<	3.5	U	<	2.2	U	-	8.5	-	<	3.5	U	<	3.5	U	<	9.2	U	<	30	U	<	6.7	U

Table C.1
Summary of Analytical Laboratory Data - Soil Vapor
Annual Report - Soil Vapor Monitoring through October 2013
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	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 (Freon	
Designation	**EN06-35**	EN06-35S	8	8/3/2011	EN0635S080311	Summa Canister	19.7	1.2	0	1.64	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	<	2.8	U	<	6.3	U
Monitoring Well	**EN-460**	EN06-35S	8	8/15/2012	EN0635S081512	Summa Canister	20.2	1.3	0	1.68	ug/m3	<	5.7	U	<	4.5	U	<	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
		EN06-35S Dup	8	8/15/2012	DU3327081512	Summa Canister	20.2	1.3	0	1.71	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
		EN06-35S	8	8/28/2013	EN0635S082813	Summa Canister	19.4	1.2	0	1.76	ug/m3	<	6.0	U	<	4.7	U	<	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
		EN06-35S Dup	8	8/28/2013	DU9534082813	Summa Canister	19.4	1.2	0	1.87	ug/m3	<	6.3	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	<	32	U	<	7.2	U
		EN06-35D	34	8/3/2011	EN0635D080311	Summa Canister	19.8	0.9	0	1.61	ug/m3	<	5.5	U	-	100	-	<	3.2	U	<	3.2	U	-	2.3	-	-	18	-	<	3.2	U	<	3.2	U	<	8.5	U	<	2.8	U	<	6.2	U
		EN06-35D	34	8/15/2012	EN0635D081512	Summa Canister	20.6	0.3	0	1.75	ug/m3	<	5.9	U	-	100	-	<	3.5	U	<	3.5	U	<	2.2	U	-	15	-	<	3.5	U	<	3.5	U	<	9.2	U	<	30	U	<	6.7	U
		EN06-35D	34	8/28/2013	EN0635D082813	Summa Canister	19.3	1.3	0	1.69	ug/m3	<	5.7	U	-	110	-	<	3.4	U	<	3.4	U	<	2.2	U	-	20	-	<	3.4	U	<	3.4	U	<	8.9	U	<	29	U	<	6.5	U
Designation	**EN06-36**	EN06-36S	8	8/3/2011	EN0636S080311	Summa Canister	19.8	1.4	0	1.68	ug/m3	<	5.7	U	<	4.5	U	<	3.3	U	<	3.3	U	<	2.1	U	-	9.3	-	<	3.3	U	<	3.4	U	<	8.9	U	<	2.9	U	<	6.4	U
Monitoring Well	**EN-459A;EN-460A**	EN06-36S	8	8/15/2012	EN0636S081512	Summa Canister	20	1.2	0	1.55	ug/m3	<	5.2	U	<	4.2	U	<	3.1	U	<	3.1	U	<	2.0	U	-	12	-	<	3.1	U	<	3.1	U	<	8.2	U	<	27	U	<	5.9	U
		EN06-36S	8	8/28/2013	EN0636S082813	Summa Canister	19.9	1.3	0	1.79	ug/m3	<	6.1	U	-	17	-	<	3.5	U	<	3.5	U	<	2.3	U	-	10	-	<	3.5	U	<	3.6	U	<	9.4	U	<	31	U	<	6.8	U
		EN06-36D	33	8/3/2011	EN0636D080311	Summa Canister	20.2	1.1	0	1.61	ug/m3	-	16	-	-	240	-	-	3.7	-	<	3.2	U	<	2.0	U	-	250	-	<	3.2	U	<	3.2	U	<	8.5	U	<	2.8	U	<	6.2	U
		EN06-36D	33	8/15/2012	EN0636D081512	Summa Canister	20.2	0.8	0	1.75	ug/m3	<	5.9	U	-	320	-	<	3.5	U	<	3.5	U	<	2.2	U	-	250	-	<	3.5	U	<	3.5	U	<	9.2	U	<	30	U	<	6.7	U
		EN06-36D	33	8/28/2013	EN0636D082813	Summa Canister	19.1	1.5	0	1.76	ug/m3	-	6.7	-	-	300	-	<	3.5	U	<	3.5	U	<	2.2	U	-	240	-	<	3.5	U	<	3.6	U	<	9.3	U	<	30	U	<	6.7	U
Designation	**EN06-37**	EN06-37S	8	8/3/2011	EN0637S080311	Summa Canister	19.4	1.4	0	1.73	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	<	3.0	U	<	6.6	U
Monitoring Well	**EN-387;EN-394**	EN06-37S	8	8/14/2012	EN0637S081412	Summa Canister	19.4	2.2	0.1	1.65	ug/m3	<	5.6	U	<	4.4	U	<	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
		EN06-37S	8	8/29/2013	EN0637S082913	Summa Canister	18.5	2.2	0	1.83	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
		EN06-37D	21	8/3/2011	EN0637D080311	Summa Canister	19.2	1.3	0	1.65	ug/m3	<	5.6	U	<	4.4	U	<	3.3	U	<	3.3	U	<	2.1	U	<	4.5	U	<	3.3	U	<	3.3	U	<	8.7	U	<	2.9	U	<	6.3	U
		EN06-37D	21	8/14/2012	EN0637D081412	Summa Canister	18	3.1	0.1	1.68	ug/m3	-	21	-	-	30	-	-	6.0	-	<	3.3	U	<	2.1	U	<	4.6	U	<	3.3	U	<	3.4	U	<	8.9	U	<	29	U	<	6.4	U
		EN06-37D	21	8/29/2013	EN0637D082913	Summa Canister	17.3	3.1	0	1.65	ug/m3	-	13	-	-	19	-	<	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

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Annual Report - Soil Vapor Monitoring through October 2013
Comprehensive Operations, Maintenance, Monitoring Program
Endicott, New York

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Designation **EN10-41**	EN10-41S		2/9/2011	EN1041S020911	Summa Canister	2.8	1.8	0	1.52	ug/m3	- 160 -	- 20 -	< 3.0 U	< 3.0 U	< 1.9 U	< 4.1 U	< 3.0 U	< 3.1 U	< 2.0 U	< 2.6 U	< 5.8 U
	EN10-41S		6/7/2011	EN1041S060711	Summa Canister	NM	NM	NM	1.68	ug/m3	- 170 -	- 17 -	< 3.3 U	< 3.3 U	< 2.1 U	< 4.6 U	< 3.3 U	< 3.4 U	< 8.9 U	< 2.9 U	< 6.4 U
	EN10-41S		8/4/2011	EN1041S080411	Summa Canister	14.1	1.3	0	1.68	ug/m3	- 280 -	- 21 -	< 3.3 U	< 3.3 U	< 2.1 U	< 4.6 U	< 3.3 U	< 3.4 U	< 8.9 U	< 2.9 U	< 6.4 U
	EN10-41S		12/7/2011	EN1041S120711	Summa Canister	12.6	1.4	0	1.60	ug/m3	- 110 -	- 9.4 -	< 3.2 U	< 3.2 U	< 2.0 U	< 4.4 U	< 3.2 U	< 3.2 U	< 8.4 U	< 2.8 UJ	< 6.1 U
	EN10-41S Dup		12/7/2011	DU13898120711	Summa Canister	12.6	1.4	0	1.57	ug/m3	- 84 -	- 6.8 -	< 3.1 U	< 3.1 U	< 2.0 U	< 4.3 U	< 3.1 U	< 3.2 U	< 8.3 U	< 2.7 UJ	< 6.0 U
	EN10-41S		2/14/2012	EN1041S021412	Summa Canister	8.3	1.7	0.1	1.52	ug/m3	- 55 -	- 5.3 -	< 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
	EN10-41S		8/13/2012	EN1041S081312	Summa Canister	12.2	1.5	0	1.70	ug/m3	- 230 -	- 17 -	< 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
	EN10-41S		2/13/2013	EN1041S021313	Summa Canister	16.6	0.9	0	1.75	ug/m3	- 44 -	< 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
	EN10-41S		8/29/2013	EN1041S082913	Summa Canister	10.1	4.1	0	1.69	ug/m3	- 160 -	- 11 -	< 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
	EN10-41S Dup		8/29/2013	DU37423082913	Summa Canister	10.1	4.1	0	1.80	ug/m3	- 160 -	- 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
	EN10-41D		2/9/2011	EN1041D020911	Summa Canister	12.9	0.1	0	1.55	ug/m3	- 310 -	- 47 -	- 21 -	- 4.0 -	< 2.0 U	< 4.2 U	< 3.1 U	< 3.1 U	< 2.0 U	< 2.7 U	< 5.9 U
	EN10-41D		6/7/2011	EN1041D060711	Summa Canister	1.4	0.1	0	1.75	ug/m3	- 150 -	- 29 -	- 16 -	< 3.5 U	< 2.2 U	< 4.8 U	< 3.5 U	< 3.5 U	< 9.2 U	< 3.0 U	< 6.7 U
	EN10-41D Dup		6/7/2011	DU3331060711	Summa Canister	1.4	0.1	0	1.75	ug/m3	- 120 -	- 22 -	- 9.8 -	< 3.5 U	< 2.2 U	< 4.8 U	< 3.5 U	< 3.5 U	< 9.2 U	< 3.0 U	< 6.7 U
	EN10-41D		8/4/2011	EN1041D080411	Summa Canister	13.3	0.1	0	1.71	ug/m3	- 110 -	- 24 -	- 5.3 -	< 3.4 U	< 2.2 U	< 4.7 U	< 3.4 U	< 3.5 U	< 9.0 U	< 3.0 U	< 6.6 U
	EN10-41D		12/7/2011	EN1041D120711	Summa Canister	3.4	0.9	0	1.55	ug/m3	- 82 -	- 19 -	< 3.1 U	< 3.1 U	< 2.0 U	< 4.2 U	< 3.1 U	< 3.1 U	< 8.2 U	< 2.7 UJ	< 5.9 U
	EN10-41D		2/14/2012	EN1041D021412	Summa Canister	13.2	0.6	0.1	1.55	ug/m3	- 14 -	- 4.5 -	< 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
	EN10-41D		8/13/2012	EN1041D081312	Summa Canister	11	2	0	1.69	ug/m3	- 57 -	- 20 -	< 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
	EN10-41D		2/13/2013	EN1041D021313	Summa Canister	18.3	0.3	0	1.62	ug/m3	- 27 -	- 9.6 -	< 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
	EN10-41D		8/29/2013	EN1041D082913	Summa Canister	8.4	3.7	0	3.22	ug/m3	- 17 -	< 8.6 U	< 6.4 U	< 6.4 U	< 4.1 U	< 8.8 U	< 6.4 U	< 6.5 U	< 17 U	< 56 U	< 12 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. The samples were analyzed by 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. 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. Vapor sampling during the time period noted in this table was performed by Sanborn Head.

3. This table is an abbreviated summary of the soil vapor monitoring. Data reported were collected in routine monitoring events during the 2011 to 2013 calendar years.

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2/28/2013
Ms. Erica Bradstreet
Sanborn, Head & Associates
1715 W 13th Street

Houston TX 77008

Project Name: IBM Groundwater Vapor Project
Project #: 2755.07
Workorder #: 1302250

Dear Ms. Erica Bradstreet

The following report includes the data for the above referenced project for sample(s) received on 2/14/2013 at Air Toxics Ltd.

The data and associated QC analyzed by Modified TO-15 are compliant with the project requirements or laboratory criteria with the exception of the deviations noted in the attached case narrative.

Thank you for choosing Air Toxics Ltd. for your air analysis needs. Air Toxics Ltd. is committed to providing accurate data of the highest quality. Please feel free to contact the Project Manager: Ausha Scott at 916-985-1000 if you have any questions regarding the data in this report.

Regards,

Ausha Scott

Project Manager

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WORK ORDER #: 1302250

Work Order Summary

CLIENT:	Ms. Erica Bradstreet Sanborn, Head & Associates 1715 W 13th Street Houston, TX 77008	**BILL TO:**	Accounts Payable Sanborn, Head & Associates 20 Foundry Street Concord, NH 03301
PHONE:	713-869-2259	**P.O. #**	3304.00
FAX:		**PROJECT #**	2755.07 IBM Groundwater Vapor Project
DATE RECEIVED:	02/14/2013	**CONTACT:**	Ausha Scott
DATE COMPLETED:	02/28/2013		

FRACTION #	NAME	TEST	RECEIPT VAC./PRES.	FINAL PRESSURE
01A	DU3456021213	Modified TO-15	5.5 "Hg	5 psi
02A	EB3333021213	Modified TO-15	6.0 "Hg	5 psi
03A	EB3352021313	Modified TO-15	5.5 "Hg	5 psi
04A	EN0411D021213	Modified TO-15	4.6 "Hg	5 psi
05A	EN0411S021213	Modified TO-15	4.0 "Hg	5 psi
06A	EN0412D021213	Modified TO-15	6.0 "Hg	5 psi
07A	EN0412S021213	Modified TO-15	6.5 "Hg	5 psi
08A	EN0429D021213	Modified TO-15	5.2 "Hg	5 psi
09A	EN0429S021213	Modified TO-15	4.5 "Hg	5 psi
10A	EN042S021213	Modified TO-15	5.4 "Hg	5 psi
11A	EN0430D021213	Modified TO-15	4.0 "Hg	5 psi
12A	EN0430S021213	Modified TO-15	4.2 "Hg	5 psi
13A	EN0432D021213	Modified TO-15	5.0 "Hg	5 psi
13AA	EN0432D021213 Lab Duplicate	Modified TO-15	5.0 "Hg	5 psi
14A	EN0432S021213	Modified TO-15	4.8 "Hg	5 psi
14AA	EN0432S021213 Lab Duplicate	Modified TO-15	4.8 "Hg	5 psi
15A	EN1017D021213	Modified TO-15	5.0 "Hg	5 psi
16A	EN1041D021313	Modified TO-15	5.2 "Hg	5 psi
17A	EN1041S021313	Modified TO-15	7.0 "Hg	5 psi
18A	EN042D021213	Modified TO-15	5.2 "Hg	5 psi
19A	Lab Blank	Modified TO-15	NA	NA
19B	Lab Blank	Modified TO-15	NA	NA
20A	CCV	Modified TO-15	NA	NA

Continued on next page

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WORK ORDER #: 1302250

Work Order Summary

CLIENT:	Ms. Erica Bradstreet Sanborn, Head & Associates 1715 W 13th Street Houston, TX 77008	**BILL TO:**	Accounts Payable Sanborn, Head & Associates 20 Foundry Street Concord, NH 03301
PHONE:	713-869-2259	**P.O. #**	3304.00
FAX:		**PROJECT #**	2755.07 IBM Groundwater Vapor Project
DATE RECEIVED:	02/14/2013	**CONTACT:**	Ausha Scott
DATE COMPLETED:	02/28/2013		

FRACTION #	NAME	TEST	RECEIPT VAC./PRES.	FINAL PRESSURE
20B	CCV	Modified TO-15	NA	NA
21A	LCS	Modified TO-15	NA	NA
21AA	LCSD	Modified TO-15	NA	NA
21B	LCS	Modified TO-15	NA	NA
21BB	LCSD	Modified TO-15	NA	NA

CERTIFIED BY: Heidi Mayo DATE: 02/28/13

Technical Director

Certfication numbers: AZ Licensure AZ0775, CA NELAP - 12282CA, NY NELAP - 11291,
TX NELAP - T104704434-12-5, UT NELAP CA009332012-3, WA NELAP - C935
Name of Accrediting Agency: NELAP/ORELAP (Oregon Environmental Laboratory Accreditation Program)
Accreditation number: CA300005, Effective date: 10/18/2011, Expiration date: 10/17/2012.
Eurofins Air Toxics Ltd. certifies that the test results contained in this report meet all requirements of the NELAC standards

180 BLUE RAVINE ROAD, SUITE B FOLSOM, CA - 9563
(916) 985-1000 . (800) 985-5955 . FAX (916) 985-1020

LABORATORY NARRATIVE
EPA Method TO-15
Sanborn, Head & Associates
Workorder# 1302250

Eighteen 1 Liter Summa Canister (100% Certified) samples were received on February 14, 2013. The laboratory performed analysis via EPA Method TO-15 using GC/MS in the full scan mode.

This workorder was independently validated prior to submittal using 'USEPA National Functional Guidelines' as generally applied to the analysis of volatile organic compounds in air. A rules-based, logic driven, independent validation engine was employed to assess completeness, evaluate pass/fail of relevant project quality control requirements and verification of all quantified amounts.

Receiving Notes

The Chain of Custody (COC) information for sample EN0429D021213 did not match the entry on the sample tag with regard to sample identification. The information on the COC was used to process and report the sample.

Analytical Notes

There were no analytical discrepancies.

Definition of Data Qualifying Flags

Eight qualifiers may have been used on the data analysis sheets and indicates as follows:

B - Compound present in laboratory blank greater than reporting limit (background subtraction not performed).
J - Estimated value.
E - Exceeds instrument calibration range.
S - Saturated peak.
Q - Exceeds quality control limits.
U - Compound analyzed for but not detected above the reporting limit.
UJ- Non-detected compound associated with low bias in the CCV and/or LCS.
N - The identification is based on presumptive evidence.

File extensions may have been used on the data analysis sheets and indicates as follows:
a-File was requantified
b-File was quantified by a second column and detector
r1-File was requantified for the purpose of reissue

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Summary of Detected Compounds
EPA METHOD TO-15 GC/MS FULL SCAN

Client Sample ID: DU3456021213

Lab ID#: 1302250-01A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Trichloroethene	0.82	4.6	4.4	24

Client Sample ID: EB3333021213

Lab ID#: 1302250-02A

No Detections Were Found.

Client Sample ID: EB3352021313

Lab ID#: 1302250-03A

No Detections Were Found.

Client Sample ID: EN0411D021213

Lab ID#: 1302250-04A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
cis-1,2-Dichloroethene	0.79	1.1	3.1	4.5
1,1,1-Trichloroethane	0.79	6.2	4.3	34
Trichloroethene	0.79	170	4.2	910
Tetrachloroethene	0.79	4.7	5.4	32

Client Sample ID: EN0411S021213

Lab ID#: 1302250-05A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,1,1-Trichloroethane	0.78	0.80	4.2	4.4
Trichloroethene	0.78	4.4	4.2	24

Client Sample ID: EN0412D021213

Lab ID#: 1302250-06A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,1,1-Trichloroethane	0.84	2.1	4.6	11

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Summary of Detected Compounds
EPA METHOD TO-15 GC/MS FULL SCAN

Client Sample ID: EN0412D021213

Lab ID#: 1302250-06A

Trichloroethene	0.84	52	4.5	280

Client Sample ID: EN0412S021213

Lab ID#: 1302250-07A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,1,1-Trichloroethane	0.86	1.5	4.7	8.1
Trichloroethene	0.86	38	4.6	200

Client Sample ID: EN0429D021213

Lab ID#: 1302250-08A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Trichloroethene	0.81	14	4.4	73

Client Sample ID: EN0429S021213

Lab ID#: 1302250-09A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Trichloroethene	0.79	4.8	4.2	26

Client Sample ID: EN042S021213

Lab ID#: 1302250-10A

No Detections Were Found.

Client Sample ID: EN0430D021213

Lab ID#: 1302250-11A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
cis-1,2-Dichloroethene	0.78	0.84	3.1	3.3
1,1,1-Trichloroethane	0.78	18	4.2	96
Trichloroethene	0.78	140	4.2	770
Tetrachloroethene	0.78	4.5	5.2	31

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Summary of Detected Compounds
EPA METHOD TO-15 GC/MS FULL SCAN

Client Sample ID: EN0430S021213

Lab ID#: 1302250-12A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Trichloroethene	0.78	48	4.2	260

Client Sample ID: EN0432D021213

Lab ID#: 1302250-13A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,1-Dichloroethane	0.80	1.3	3.2	5.4
1,1,1-Trichloroethane	0.80	25	4.4	140
Trichloroethene	0.80	160	4.3	870

Client Sample ID: EN0432D021213 Lab Duplicate

Lab ID#: 1302250-13AA

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,1,1-Trichloroethane	1.3	24	7.2	130
Trichloroethene	1.3	160	7.1	880

Client Sample ID: EN0432S021213

Lab ID#: 1302250-14A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,1,1-Trichloroethane	0.80	1.5	4.4	8.0
Trichloroethene	0.80	21	4.3	110

Client Sample ID: EN0432S021213 Lab Duplicate

Lab ID#: 1302250-14AA

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,1,1-Trichloroethane	1.3	1.6	7.3	8.6
Trichloroethene	1.3	22	7.2	120

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Summary of Detected Compounds
EPA METHOD TO-15 GC/MS FULL SCAN

Client Sample ID: EN1017D021213

Lab ID#: 1302250-15A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
cis-1,2-Dichloroethene	0.80	3.8	3.2	15
1,1,1-Trichloroethane	0.80	50	4.4	270
Trichloroethene	0.80	62	4.3	330

Client Sample ID: EN1041D021313

Lab ID#: 1302250-16A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Trichloroethene	0.81	1.8	4.4	9.6
Tetrachloroethene	0.81	4.0	5.5	27

Client Sample ID: EN1041S021313

Lab ID#: 1302250-17A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Tetrachloroethene	0.88	6.5	5.9	44

Client Sample ID: EN042D021213

Lab ID#: 1302250-18A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,1,1-Trichloroethane	0.81	2.4	4.4	13
Trichloroethene	0.81	18	4.4	96
Tetrachloroethene	0.81	2.6	5.5	18

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Client Sample ID: DU3456021213

Lab ID#: 1302250-01A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**o022008**	**Date of Collection: 2/12/13 1:40:00 PM**	
Dil. Factor:	**1.64**	**Date of Analysis: 2/20/13 01:20 PM**	

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Vinyl Chloride	0.82	Not Detected	2.1	Not Detected
Chloroethane	3.3	Not Detected	8.6	Not Detected
1,1-Dichloroethene	0.82	Not Detected	3.2	Not Detected
Freon 113	0.82	Not Detected	6.3	Not Detected
Methylene Chloride	8.2	Not Detected	28	Not Detected
1,1-Dichloroethane	0.82	Not Detected	3.3	Not Detected
cis-1,2-Dichloroethene	0.82	Not Detected	3.2	Not Detected
1,1,1-Trichloroethane	0.82	Not Detected	4.5	Not Detected
Trichloroethene	0.82	4.6	4.4	24
Tetrachloroethene	0.82	Not Detected	5.6	Not Detected
trans-1,2-Dichloroethene	0.82	Not Detected	3.2	Not Detected

Container Type: 1 Liter Summa Canister (100% Certified)

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	95	70-130
Toluene-d8	88	70-130
4-Bromofluorobenzene	95	70-130

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Client Sample ID: EB3333021213

Lab ID#: 1302250-02A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**o022009**	**Date of Collection: 2/12/13 6:08:00 PM**	
Dil. Factor:	**1.68**	**Date of Analysis: 2/20/13 01:56 PM**	

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Vinyl Chloride	0.84	Not Detected	2.1	Not Detected
Chloroethane	3.4	Not Detected	8.9	Not Detected
1,1-Dichloroethene	0.84	Not Detected	3.3	Not Detected
Freon 113	0.84	Not Detected	6.4	Not Detected
Methylene Chloride	8.4	Not Detected	29	Not Detected
1,1-Dichloroethane	0.84	Not Detected	3.4	Not Detected
cis-1,2-Dichloroethene	0.84	Not Detected	3.3	Not Detected
1,1,1-Trichloroethane	0.84	Not Detected	4.6	Not Detected
Trichloroethene	0.84	Not Detected	4.5	Not Detected
Tetrachloroethene	0.84	Not Detected	5.7	Not Detected
trans-1,2-Dichloroethene	0.84	Not Detected	3.3	Not Detected

Container Type: 1 Liter Summa Canister (100% Certified)

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	90	70-130
Toluene-d8	90	70-130
4-Bromofluorobenzene	96	70-130

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Client Sample ID: EB3352021313

Lab ID#: 1302250-03A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**o022010**	**Date of Collection: 2/13/13 10:07:00 AM**	
Dil. Factor:	**1.64**	**Date of Analysis: 2/20/13 02:36 PM**	

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Vinyl Chloride	0.82	Not Detected	2.1	Not Detected
Chloroethane	3.3	Not Detected	8.6	Not Detected
1,1-Dichloroethene	0.82	Not Detected	3.2	Not Detected
Freon 113	0.82	Not Detected	6.3	Not Detected
Methylene Chloride	8.2	Not Detected	28	Not Detected
1,1-Dichloroethane	0.82	Not Detected	3.3	Not Detected
cis-1,2-Dichloroethene	0.82	Not Detected	3.2	Not Detected
1,1,1-Trichloroethane	0.82	Not Detected	4.5	Not Detected
Trichloroethene	0.82	Not Detected	4.4	Not Detected
Tetrachloroethene	0.82	Not Detected	5.6	Not Detected
trans-1,2-Dichloroethene	0.82	Not Detected	3.2	Not Detected

Container Type: 1 Liter Summa Canister (100% Certified)

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	93	70-130
Toluene-d8	90	70-130
4-Bromofluorobenzene	96	70-130

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Client Sample ID: EN0411D021213

Lab ID#: 1302250-04A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**o022011**	**Date of Collection: 2/12/13 1:05:00 PM**	
Dil. Factor:	**1.58**	**Date of Analysis: 2/20/13 03:13 PM**	

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Vinyl Chloride	0.79	Not Detected	2.0	Not Detected
Chloroethane	3.2	Not Detected	8.3	Not Detected
1,1-Dichloroethene	0.79	Not Detected	3.1	Not Detected
Freon 113	0.79	Not Detected	6.0	Not Detected
Methylene Chloride	7.9	Not Detected	27	Not Detected
1,1-Dichloroethane	0.79	Not Detected	3.2	Not Detected
cis-1,2-Dichloroethene	0.79	1.1	3.1	4.5
1,1,1-Trichloroethane	0.79	6.2	4.3	34
Trichloroethene	0.79	170	4.2	910
Tetrachloroethene	0.79	4.7	5.4	32
trans-1,2-Dichloroethene	0.79	Not Detected	3.1	Not Detected

Container Type: 1 Liter Summa Canister (100% Certified)

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	98	70-130
Toluene-d8	96	70-130
4-Bromofluorobenzene	96	70-130

eurofins | Air Toxics

Client Sample ID: EN0411S021213

Lab ID#: 1302250-05A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**o022012**	**Date of Collection: 2/12/13 1:05:00 PM**	
Dil. Factor:	**1.55**	**Date of Analysis: 2/20/13 03:50 PM**	

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Vinyl Chloride	0.78	Not Detected	2.0	Not Detected
Chloroethane	3.1	Not Detected	8.2	Not Detected
1,1-Dichloroethene	0.78	Not Detected	3.1	Not Detected
Freon 113	0.78	Not Detected	5.9	Not Detected
Methylene Chloride	7.8	Not Detected	27	Not Detected
1,1-Dichloroethane	0.78	Not Detected	3.1	Not Detected
cis-1,2-Dichloroethene	0.78	Not Detected	3.1	Not Detected
1,1,1-Trichloroethane	0.78	0.80	4.2	4.4
Trichloroethene	0.78	4.4	4.2	24
Tetrachloroethene	0.78	Not Detected	5.2	Not Detected
trans-1,2-Dichloroethene	0.78	Not Detected	3.1	Not Detected

Container Type: 1 Liter Summa Canister (100% Certified)

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	92	70-130
Toluene-d8	90	70-130
4-Bromofluorobenzene	95	70-130

eurofins | Air Toxics

Client Sample ID: EN0412D021213

Lab ID#: 1302250-06A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**o022013**	**Date of Collection: 2/12/13 2:52:00 PM**	
Dil. Factor:	**1.68**	**Date of Analysis: 2/20/13 04:31 PM**	

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Vinyl Chloride	0.84	Not Detected	2.1	Not Detected
Chloroethane	3.4	Not Detected	8.9	Not Detected
1,1-Dichloroethene	0.84	Not Detected	3.3	Not Detected
Freon 113	0.84	Not Detected	6.4	Not Detected
Methylene Chloride	8.4	Not Detected	29	Not Detected
1,1-Dichloroethane	0.84	Not Detected	3.4	Not Detected
cis-1,2-Dichloroethene	0.84	Not Detected	3.3	Not Detected
1,1,1-Trichloroethane	0.84	2.1	4.6	11
Trichloroethene	0.84	52	4.5	280
Tetrachloroethene	0.84	Not Detected	5.7	Not Detected
trans-1,2-Dichloroethene	0.84	Not Detected	3.3	Not Detected

Container Type: 1 Liter Summa Canister (100% Certified)

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	91	70-130
Toluene-d8	89	70-130
4-Bromofluorobenzene	95	70-130

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Client Sample ID: EN0412S021213

Lab ID#: 1302250-07A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**o022014**	**Date of Collection: 2/12/13 2:56:00 PM**	
Dil. Factor:	**1.71**	**Date of Analysis: 2/20/13 05:08 PM**	

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Vinyl Chloride	0.86	Not Detected	2.2	Not Detected
Chloroethane	3.4	Not Detected	9.0	Not Detected
1,1-Dichloroethene	0.86	Not Detected	3.4	Not Detected
Freon 113	0.86	Not Detected	6.6	Not Detected
Methylene Chloride	8.6	Not Detected	30	Not Detected
1,1-Dichloroethane	0.86	Not Detected	3.5	Not Detected
cis-1,2-Dichloroethene	0.86	Not Detected	3.4	Not Detected
1,1,1-Trichloroethane	0.86	1.5	4.7	8.1
Trichloroethene	0.86	38	4.6	200
Tetrachloroethene	0.86	Not Detected	5.8	Not Detected
trans-1,2-Dichloroethene	0.86	Not Detected	3.4	Not Detected

Container Type: 1 Liter Summa Canister (100% Certified)

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	91	70-130
Toluene-d8	91	70-130
4-Bromofluorobenzene	97	70-130

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Client Sample ID: EN0429D021213

Lab ID#: 1302250-08A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**o022015**	**Date of Collection:**	**2/12/13 11:21:00 AM**
Dil. Factor:	**1.62**	**Date of Analysis:**	**2/20/13 05:45 PM**

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Vinyl Chloride	0.81	Not Detected	2.1	Not Detected
Chloroethane	3.2	Not Detected	8.5	Not Detected
1,1-Dichloroethene	0.81	Not Detected	3.2	Not Detected
Freon 113	0.81	Not Detected	6.2	Not Detected
Methylene Chloride	8.1	Not Detected	28	Not Detected
1,1-Dichloroethane	0.81	Not Detected	3.3	Not Detected
cis-1,2-Dichloroethene	0.81	Not Detected	3.2	Not Detected
1,1,1-Trichloroethane	0.81	Not Detected	4.4	Not Detected
Trichloroethene	0.81	14	4.4	73
Tetrachloroethene	0.81	Not Detected	5.5	Not Detected
trans-1,2-Dichloroethene	0.81	Not Detected	3.2	Not Detected

Container Type: 1 Liter Summa Canister (100% Certified)

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	95	70-130
Toluene-d8	92	70-130
4-Bromofluorobenzene	96	70-130

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Client Sample ID: EN0429S021213

Lab ID#: 1302250-09A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**o022016**	**Date of Collection: 2/12/13 1:40:00 PM**	
Dil. Factor:	**1.58**	**Date of Analysis: 2/20/13 06:22 PM**	

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Vinyl Chloride	0.79	Not Detected	2.0	Not Detected
Chloroethane	3.2	Not Detected	8.3	Not Detected
1,1-Dichloroethene	0.79	Not Detected	3.1	Not Detected
Freon 113	0.79	Not Detected	6.0	Not Detected
Methylene Chloride	7.9	Not Detected	27	Not Detected
1,1-Dichloroethane	0.79	Not Detected	3.2	Not Detected
cis-1,2-Dichloroethene	0.79	Not Detected	3.1	Not Detected
1,1,1-Trichloroethane	0.79	Not Detected	4.3	Not Detected
Trichloroethene	0.79	4.8	4.2	26
Tetrachloroethene	0.79	Not Detected	5.4	Not Detected
trans-1,2-Dichloroethene	0.79	Not Detected	3.1	Not Detected

Container Type: 1 Liter Summa Canister (100% Certified)

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	93	70-130
Toluene-d8	92	70-130
4-Bromofluorobenzene	95	70-130

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Client Sample ID: EN042S021213

Lab ID#: 1302250-10A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**o022017**	**Date of Collection:**	**2/12/13 8:47:00 AM**
Dil. Factor:	**1.63**	**Date of Analysis:**	**2/20/13 06:59 PM**

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Vinyl Chloride	0.82	Not Detected	2.1	Not Detected
Chloroethane	3.3	Not Detected	8.6	Not Detected
1,1-Dichloroethene	0.82	Not Detected	3.2	Not Detected
Freon 113	0.82	Not Detected	6.2	Not Detected
Methylene Chloride	8.2	Not Detected	28	Not Detected
1,1-Dichloroethane	0.82	Not Detected	3.3	Not Detected
cis-1,2-Dichloroethene	0.82	Not Detected	3.2	Not Detected
1,1,1-Trichloroethane	0.82	Not Detected	4.4	Not Detected
Trichloroethene	0.82	Not Detected	4.4	Not Detected
Tetrachloroethene	0.82	Not Detected	5.5	Not Detected
trans-1,2-Dichloroethene	0.82	Not Detected	3.2	Not Detected

Container Type: 1 Liter Summa Canister (100% Certified)

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	93	70-130
Toluene-d8	92	70-130
4-Bromofluorobenzene	96	70-130

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Client Sample ID: EN0430D021213

Lab ID#: 1302250-11A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**o022018**	**Date of Collection:**	**2/12/13 10:18:00 AM**
Dil. Factor:	**1.55**	**Date of Analysis:**	**2/20/13 07:36 PM**

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Vinyl Chloride	0.78	Not Detected	2.0	Not Detected
Chloroethane	3.1	Not Detected	8.2	Not Detected
1,1-Dichloroethene	0.78	Not Detected	3.1	Not Detected
Freon 113	0.78	Not Detected	5.9	Not Detected
Methylene Chloride	7.8	Not Detected	27	Not Detected
1,1-Dichloroethane	0.78	Not Detected	3.1	Not Detected
cis-1,2-Dichloroethene	0.78	0.84	3.1	3.3
1,1,1-Trichloroethane	0.78	18	4.2	96
Trichloroethene	0.78	140	4.2	770
Tetrachloroethene	0.78	4.5	5.2	31
trans-1,2-Dichloroethene	0.78	Not Detected	3.1	Not Detected

Container Type: 1 Liter Summa Canister (100% Certified)

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	93	70-130
Toluene-d8	90	70-130
4-Bromofluorobenzene	95	70-130

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Client Sample ID: EN0430S021213

Lab ID#: 1302250-12A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**o022019**	**Date of Collection: 2/12/13 10:18:00 AM**	
Dil. Factor:	**1.56**	**Date of Analysis: 2/20/13 08:14 PM**	

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Vinyl Chloride	0.78	Not Detected	2.0	Not Detected
Chloroethane	3.1	Not Detected	8.2	Not Detected
1,1-Dichloroethene	0.78	Not Detected	3.1	Not Detected
Freon 113	0.78	Not Detected	6.0	Not Detected
Methylene Chloride	7.8	Not Detected	27	Not Detected
1,1-Dichloroethane	0.78	Not Detected	3.2	Not Detected
cis-1,2-Dichloroethene	0.78	Not Detected	3.1	Not Detected
1,1,1-Trichloroethane	0.78	Not Detected	4.2	Not Detected
Trichloroethene	0.78	48	4.2	260
Tetrachloroethene	0.78	Not Detected	5.3	Not Detected
trans-1,2-Dichloroethene	0.78	Not Detected	3.1	Not Detected

Container Type: 1 Liter Summa Canister (100% Certified)

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	93	70-130
Toluene-d8	90	70-130
4-Bromofluorobenzene	94	70-130

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Client Sample ID: EN0432D021213

Lab ID#: 1302250-13A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**o022108**	**Date of Collection: 2/12/13 1:24:00 PM**	
Dil. Factor:	**1.61**	**Date of Analysis: 2/21/13 01:14 PM**	

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Vinyl Chloride	0.80	Not Detected	2.0	Not Detected
Chloroethane	3.2	Not Detected	8.5	Not Detected
1,1-Dichloroethene	0.80	Not Detected	3.2	Not Detected
Freon 113	0.80	Not Detected	6.2	Not Detected
Methylene Chloride	8.0	Not Detected	28	Not Detected
1,1-Dichloroethane	0.80	1.3	3.2	5.4
cis-1,2-Dichloroethene	0.80	Not Detected	3.2	Not Detected
1,1,1-Trichloroethane	0.80	25	4.4	140
Trichloroethene	0.80	160	4.3	870
Tetrachloroethene	0.80	Not Detected	5.5	Not Detected
trans-1,2-Dichloroethene	0.80	Not Detected	3.2	Not Detected

Container Type: 1 Liter Summa Canister (100% Certified)

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	94	70-130
Toluene-d8	89	70-130
4-Bromofluorobenzene	96	70-130

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Client Sample ID: EN0432D021213 Lab Duplicate

Lab ID#: 1302250-13AA

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**o022114**	**Date of Collection: 2/12/13 1:24:00 PM**	
Dil. Factor:	**2.64**	**Date of Analysis: 2/21/13 04:55 PM**	

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Vinyl Chloride	1.3	Not Detected	3.4	Not Detected
Chloroethane	5.3	Not Detected	14	Not Detected
1,1-Dichloroethene	1.3	Not Detected	5.2	Not Detected
Freon 113	1.3	Not Detected	10	Not Detected
Methylene Chloride	13	Not Detected	46	Not Detected
1,1-Dichloroethane	1.3	Not Detected	5.3	Not Detected
cis-1,2-Dichloroethene	1.3	Not Detected	5.2	Not Detected
1,1,1-Trichloroethane	1.3	24	7.2	130
Trichloroethene	1.3	160	7.1	880
Tetrachloroethene	1.3	Not Detected	9.0	Not Detected
trans-1,2-Dichloroethene	1.3	Not Detected	5.2	Not Detected

Container Type: 1 Liter Summa Canister (100% Certified)

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	94	70-130
Toluene-d8	92	70-130
4-Bromofluorobenzene	96	70-130

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Client Sample ID: EN0432S021213

Lab ID#: 1302250-14A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**o022109**	**Date of Collection: 2/12/13 1:24:00 PM**	
Dil. Factor:	**1.60**	**Date of Analysis: 2/21/13 01:52 PM**	

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Vinyl Chloride	0.80	Not Detected	2.0	Not Detected
Chloroethane	3.2	Not Detected	8.4	Not Detected
1,1-Dichloroethene	0.80	Not Detected	3.2	Not Detected
Freon 113	0.80	Not Detected	6.1	Not Detected
Methylene Chloride	8.0	Not Detected	28	Not Detected
1,1-Dichloroethane	0.80	Not Detected	3.2	Not Detected
cis-1,2-Dichloroethene	0.80	Not Detected	3.2	Not Detected
1,1,1-Trichloroethane	0.80	1.5	4.4	8.0
Trichloroethene	0.80	21	4.3	110
Tetrachloroethene	0.80	Not Detected	5.4	Not Detected
trans-1,2-Dichloroethene	0.80	Not Detected	3.2	Not Detected

Container Type: 1 Liter Summa Canister (100% Certified)

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	92	70-130
Toluene-d8	91	70-130
4-Bromofluorobenzene	97	70-130

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Client Sample ID: EN0432S021213 Lab Duplicate

Lab ID#: 1302250-14AA

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**o022115**	**Date of Collection: 2/12/13 1:24:00 PM**	
Dil. Factor:	**2.69**	**Date of Analysis: 2/21/13 05:32 PM**	

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Vinyl Chloride	1.3	Not Detected	3.4	Not Detected
Chloroethane	5.4	Not Detected	14	Not Detected
1,1-Dichloroethene	1.3	Not Detected	5.3	Not Detected
Freon 113	1.3	Not Detected	10	Not Detected
Methylene Chloride	13	Not Detected	47	Not Detected
1,1-Dichloroethane	1.3	Not Detected	5.4	Not Detected
cis-1,2-Dichloroethene	1.3	Not Detected	5.3	Not Detected
1,1,1-Trichloroethane	1.3	1.6	7.3	8.6
Trichloroethene	1.3	22	7.2	120
Tetrachloroethene	1.3	Not Detected	9.1	Not Detected
trans-1,2-Dichloroethene	1.3	Not Detected	5.3	Not Detected

Container Type: 1 Liter Summa Canister (100% Certified)

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	94	70-130
Toluene-d8	91	70-130
4-Bromofluorobenzene	96	70-130

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Client Sample ID: EN1017D021213

Lab ID#: 1302250-15A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**o022110**	**Date of Collection: 2/12/13 4:55:00 PM**	
Dil. Factor:	**1.61**	**Date of Analysis: 2/21/13 02:29 PM**	

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Vinyl Chloride	0.80	Not Detected	2.0	Not Detected
Chloroethane	3.2	Not Detected	8.5	Not Detected
1,1-Dichloroethene	0.80	Not Detected	3.2	Not Detected
Freon 113	0.80	Not Detected	6.2	Not Detected
Methylene Chloride	8.0	Not Detected	28	Not Detected
1,1-Dichloroethane	0.80	Not Detected	3.2	Not Detected
cis-1,2-Dichloroethene	0.80	3.8	3.2	15
1,1,1-Trichloroethane	0.80	50	4.4	270
Trichloroethene	0.80	62	4.3	330
Tetrachloroethene	0.80	Not Detected	5.5	Not Detected
trans-1,2-Dichloroethene	0.80	Not Detected	3.2	Not Detected

Container Type: 1 Liter Summa Canister (100% Certified)

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	95	70-130
Toluene-d8	90	70-130
4-Bromofluorobenzene	97	70-130

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Client Sample ID: EN1041D021313

Lab ID#: 1302250-16A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**o022111**	**Date of Collection: 2/13/13 8:46:00 AM**	
Dil. Factor:	**1.62**	**Date of Analysis: 2/21/13 03:05 PM**	

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Vinyl Chloride	0.81	Not Detected	2.1	Not Detected
Chloroethane	3.2	Not Detected	8.5	Not Detected
1,1-Dichloroethene	0.81	Not Detected	3.2	Not Detected
Freon 113	0.81	Not Detected	6.2	Not Detected
Methylene Chloride	8.1	Not Detected	28	Not Detected
1,1-Dichloroethane	0.81	Not Detected	3.3	Not Detected
cis-1,2-Dichloroethene	0.81	Not Detected	3.2	Not Detected
1,1,1-Trichloroethane	0.81	Not Detected	4.4	Not Detected
Trichloroethene	0.81	1.8	4.4	9.6
Tetrachloroethene	0.81	4.0	5.5	27
trans-1,2-Dichloroethene	0.81	Not Detected	3.2	Not Detected

Container Type: 1 Liter Summa Canister (100% Certified)

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	94	70-130
Toluene-d8	91	70-130
4-Bromofluorobenzene	99	70-130

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Client Sample ID: EN1041S021313

Lab ID#: 1302250-17A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**o022112**	**Date of Collection: 2/13/13 8:39:00 AM**	
Dil. Factor:	**1.75**	**Date of Analysis: 2/21/13 03:42 PM**	

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Vinyl Chloride	0.88	Not Detected	2.2	Not Detected
Chloroethane	3.5	Not Detected	9.2	Not Detected
1,1-Dichloroethene	0.88	Not Detected	3.5	Not Detected
Freon 113	0.88	Not Detected	6.7	Not Detected
Methylene Chloride	8.8	Not Detected	30	Not Detected
1,1-Dichloroethane	0.88	Not Detected	3.5	Not Detected
cis-1,2-Dichloroethene	0.88	Not Detected	3.5	Not Detected
1,1,1-Trichloroethane	0.88	Not Detected	4.8	Not Detected
Trichloroethene	0.88	Not Detected	4.7	Not Detected
Tetrachloroethene	0.88	6.5	5.9	44
trans-1,2-Dichloroethene	0.88	Not Detected	3.5	Not Detected

Container Type: 1 Liter Summa Canister (100% Certified)

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	94	70-130
Toluene-d8	92	70-130
4-Bromofluorobenzene	98	70-130

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Client Sample ID: EN042D021213

Lab ID#: 1302250-18A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**o022113**	**Date of Collection: 2/12/13 8:48:00 AM**	
Dil. Factor:	**1.62**	**Date of Analysis: 2/21/13 04:18 PM**	

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Vinyl Chloride	0.81	Not Detected	2.1	Not Detected
Chloroethane	3.2	Not Detected	8.5	Not Detected
1,1-Dichloroethene	0.81	Not Detected	3.2	Not Detected
Freon 113	0.81	Not Detected	6.2	Not Detected
Methylene Chloride	8.1	Not Detected	28	Not Detected
1,1-Dichloroethane	0.81	Not Detected	3.3	Not Detected
cis-1,2-Dichloroethene	0.81	Not Detected	3.2	Not Detected
1,1,1-Trichloroethane	0.81	2.4	4.4	13
Trichloroethene	0.81	18	4.4	96
Tetrachloroethene	0.81	2.6	5.5	18
trans-1,2-Dichloroethene	0.81	Not Detected	3.2	Not Detected

Container Type: 1 Liter Summa Canister (100% Certified)

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	98	70-130
Toluene-d8	92	70-130
4-Bromofluorobenzene	97	70-130

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Client Sample ID: Lab Blank

Lab ID#: 1302250-19A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**o022007**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 2/20/13 12:25 PM**	

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Vinyl Chloride	0.50	Not Detected	1.3	Not Detected
Chloroethane	2.0	Not Detected	5.3	Not Detected
1,1-Dichloroethene	0.50	Not Detected	2.0	Not Detected
Freon 113	0.50	Not Detected	3.8	Not Detected
Methylene Chloride	5.0	Not Detected	17	Not Detected
1,1-Dichloroethane	0.50	Not Detected	2.0	Not Detected
cis-1,2-Dichloroethene	0.50	Not Detected	2.0	Not Detected
1,1,1-Trichloroethane	0.50	Not Detected	2.7	Not Detected
Trichloroethene	0.50	Not Detected	2.7	Not Detected
Tetrachloroethene	0.50	Not Detected	3.4	Not Detected
trans-1,2-Dichloroethene	0.50	Not Detected	2.0	Not Detected

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	92	70-130
Toluene-d8	89	70-130
4-Bromofluorobenzene	96	70-130

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Client Sample ID: Lab Blank

Lab ID#: 1302250-19B

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**o022107**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 2/21/13 12:14 PM**	

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Vinyl Chloride	0.50	Not Detected	1.3	Not Detected
Chloroethane	2.0	Not Detected	5.3	Not Detected
1,1-Dichloroethene	0.50	Not Detected	2.0	Not Detected
Freon 113	0.50	Not Detected	3.8	Not Detected
Methylene Chloride	5.0	Not Detected	17	Not Detected
1,1-Dichloroethane	0.50	Not Detected	2.0	Not Detected
cis-1,2-Dichloroethene	0.50	Not Detected	2.0	Not Detected
1,1,1-Trichloroethane	0.50	Not Detected	2.7	Not Detected
Trichloroethene	0.50	Not Detected	2.7	Not Detected
Tetrachloroethene	0.50	Not Detected	3.4	Not Detected
trans-1,2-Dichloroethene	0.50	Not Detected	2.0	Not Detected

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	92	70-130
Toluene-d8	88	70-130
4-Bromofluorobenzene	97	70-130

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Client Sample ID: CCV

Lab ID#: 1302250-20A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**o022003**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 2/20/13 09:56 AM**	

Compound	%Recovery
Vinyl Chloride	94
Chloroethane	88
1,1-Dichloroethene	99
Freon 113	96
Methylene Chloride	83
1,1-Dichloroethane	93
cis-1,2-Dichloroethene	94
1,1,1-Trichloroethane	93
Trichloroethene	95
Tetrachloroethene	91
trans-1,2-Dichloroethene	93

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	89	70-130
Toluene-d8	90	70-130
4-Bromofluorobenzene	104	70-130

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Client Sample ID: CCV

Lab ID#: 1302250-20B

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**o022102**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 2/21/13 09:09 AM**	

Compound	**%Recovery**
Vinyl Chloride	91
Chloroethane	97
1,1-Dichloroethene	96
Freon 113	95
Methylene Chloride	82
1,1-Dichloroethane	92
cis-1,2-Dichloroethene	94
1,1,1-Trichloroethane	92
Trichloroethene	93
Tetrachloroethene	86
trans-1,2-Dichloroethene	94

Container Type: NA - Not Applicable

Surrogates	**%Recovery**	**Method Limits**
1,2-Dichloroethane-d4	88	70-130
Toluene-d8	89	70-130
4-Bromofluorobenzene	104	70-130

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Client Sample ID: LCS

Lab ID#: 1302250-21A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**o022004**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 2/20/13 10:32 AM**	

Compound	%Recovery
Vinyl Chloride	98
Chloroethane	90
1,1-Dichloroethene	106
Freon 113	101
Methylene Chloride	86
1,1-Dichloroethane	96
cis-1,2-Dichloroethene	99
1,1,1-Trichloroethane	98
Trichloroethene	95
Tetrachloroethene	93
trans-1,2-Dichloroethene	110

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	92	70-130
Toluene-d8	91	70-130
4-Bromofluorobenzene	102	70-130

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Client Sample ID: LCSD

Lab ID#: 1302250-21AA

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**o022005**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 2/20/13 11:12 AM**	

Compound	**%Recovery**
Vinyl Chloride	96
Chloroethane	87
1,1-Dichloroethene	105
Freon 113	100
Methylene Chloride	84
1,1-Dichloroethane	96
cis-1,2-Dichloroethene	97
1,1,1-Trichloroethane	96
Trichloroethene	97
Tetrachloroethene	97
trans-1,2-Dichloroethene	108

Container Type: NA - Not Applicable

Surrogates	**%Recovery**	**Method Limits**
1,2-Dichloroethane-d4	90	70-130
Toluene-d8	91	70-130
4-Bromofluorobenzene	100	70-130

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Client Sample ID: LCS

Lab ID#: 1302250-21B

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**o022103**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 2/21/13 09:47 AM**	

Compound	**%Recovery**
Vinyl Chloride	99
Chloroethane	90
1,1-Dichloroethene	106
Freon 113	101
Methylene Chloride	85
1,1-Dichloroethane	96
cis-1,2-Dichloroethene	98
1,1,1-Trichloroethane	99
Trichloroethene	95
Tetrachloroethene	93
trans-1,2-Dichloroethene	109

Container Type: NA - Not Applicable

Surrogates	**%Recovery**	**Method Limits**
1,2-Dichloroethane-d4	89	70-130
Toluene-d8	90	70-130
4-Bromofluorobenzene	103	70-130

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Client Sample ID: LCSD

Lab ID#: 1302250-21BB

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**o022104**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 2/21/13 10:24 AM**	

Compound	**%Recovery**
Vinyl Chloride	97
Chloroethane	90
1,1-Dichloroethene	105
Freon 113	99
Methylene Chloride	88
1,1-Dichloroethane	95
cis-1,2-Dichloroethene	98
1,1,1-Trichloroethane	98
Trichloroethene	96
Tetrachloroethene	95
trans-1,2-Dichloroethene	110

Container Type: NA - Not Applicable

Surrogates	**%Recovery**	**Method Limits**
1,2-Dichloroethane-d4	91	70-130
Toluene-d8	89	70-130
4-Bromofluorobenzene	100	70-130

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9/17/2013
Ms. Erica Bradstreet
Sanborn, Head & Associates
1715 W 13th Street

Houston TX 77008

Project Name: Endicott Groundwater Vapor Project
Project #: 2755.07
Workorder #: 1308714

Dear Ms. Erica Bradstreet

The following report includes the data for the above referenced project for sample(s) received on 8/30/2013 at Air Toxics Ltd.

The data and associated QC analyzed by Modified TO-15 are compliant with the project requirements or laboratory criteria with the exception of the deviations noted in the attached case narrative.

Thank you for choosing Air Toxics Ltd. for your air analysis needs. Air Toxics Ltd. is committed to providing accurate data of the highest quality. Please feel free to contact the Project Manager: Ausha Scott at 916-985-1000 if you have any questions regarding the data in this report.

Regards,

Ausha Scott

Project Manager

WORK ORDER #: 1308714

Work Order Summary

CLIENT:	Ms. Erica Bradstreet Sanborn, Head & Associates 1715 W 13th Street Houston, TX 77008	**BILL TO:**	Accounts Payable Sanborn, Head & Associates 20 Foundry Street Concord, NH 03301
PHONE:	713-869-2259	**P.O. #**	3304.00
FAX:		**PROJECT #**	2755.07 Endicott Groundwater Vapor Project
DATE RECEIVED:	08/30/2013	**CONTACT:**	Ausha Scott
DATE COMPLETED:	09/17/2013		

FRACTION #	NAME	TEST	RECEIPT VAC./PRES.	FINAL PRESSURE
01A	DU37423082913	Modified TO-15	6.9 "Hg	5.7 psi
02A	EB1025082913	Modified TO-15	6.9 "Hg	5.1 psi
03A	EN0413D082913	Modified TO-15	7.6 "Hg	5.1 psi
04A	EN0413S082913	Modified TO-15	7.3 "Hg	5 psi
05A	EN0415D082813	Modified TO-15	6.5 "Hg	5 psi
06A	EN0415S082813	Modified TO-15	6.7 "Hg	5.3 psi
07A	EN0416D082913	Modified TO-15	7.6 "Hg	5.2 psi
07AA	EN0416D082913 Lab Duplicate	Modified TO-15	7.6 "Hg	5.2 psi
08A	EN0416S082913	Modified TO-15	7.1 "Hg	5 psi
09A	EN0417D082813	Modified TO-15	7.1 "Hg	5 psi
10A	EN0418S082913	Modified TO-15	6.7 "Hg	5.2 psi
11A	EN0425S082813	Modified TO-15	6.7 "Hg	5.4 psi
12A	EN043D082813	Modified TO-15	8.2 "Hg	5.9 psi
13A	EN0533D082913	Modified TO-15	6.3 "Hg	5.4 psi
13AA	EN0533D082913 Lab Duplicate	Modified TO-15	6.3 "Hg	5.4 psi
14A	EN0533S082913	Modified TO-15	6.3 "Hg	5 psi
15A	EN0637D082913	Modified TO-15	5.1 "Hg	5.4 psi
16A	EN0637S082913	Modified TO-15	7.8 "Hg	5.2 psi
17A	EN0728D082913	Modified TO-15	4.7 "Hg	5.1 psi
18A	EN0728S082913	Modified TO-15	3.5 "Hg	5.3 psi
19A	EN1041S082913	Modified TO-15	6.5 "Hg	4.8 psi
20A	EN1041D082913	Modified TO-15	6.1 "Hg	5.2 psi
21A	EN0418D082913	Modified TO-15	6.1 "Hg	5.2 psi

Continued on next page

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WORK ORDER #: 1308714

Work Order Summary

CLIENT:	Ms. Erica Bradstreet Sanborn, Head & Associates 1715 W 13th Street Houston, TX 77008	**BILL TO:**	Accounts Payable Sanborn, Head & Associates 20 Foundry Street Concord, NH 03301
PHONE:	713-869-2259	**P.O. #**	3304.00
FAX:		**PROJECT #**	2755.07 Endicott Groundwater Vapor Project
DATE RECEIVED:	08/30/2013	**CONTACT:**	Ausha Scott
DATE COMPLETED:	09/17/2013		

FRACTION #	NAME	TEST	RECEIPT VAC./PRES.	FINAL PRESSURE
22A	Lab Blank	Modified TO-15	NA	NA
22B	Lab Blank	Modified TO-15	NA	NA
23A	CCV	Modified TO-15	NA	NA
23B	CCV	Modified TO-15	NA	NA
24A	LCS	Modified TO-15	NA	NA
24AA	LCSD	Modified TO-15	NA	NA
24B	LCS	Modified TO-15	NA	NA
24BB	LCSD	Modified TO-15	NA	NA

CERTIFIED BY: Heidi Hayes DATE: 09/17/13

Technical Director

Certification numbers: AZ Licensure AZ0775, CA NELAP - 12282CA, NJ NELAP - CA016, NY NELAP - 11291, TX NELAP - T104704434-12-5, UT NELAP CA009332012-3, VA NELAP - 460197, WA NELAP - C935
Name of Accrediting Agency: NELAP/ORELAP (Oregon Environmental Laboratory Accreditation Program)
Accreditation number: CA300005, Effective date: 10/18/2012, Expiration date: 10/17/2013.
Eurofins Air Toxics Inc.. certifies that the test results contained in this report meet all requirements of the NELAC standards

180 BLUE RAVINE ROAD, SUITE B FOLSOM, CA - 956
(916) 985-1000 . (800) 985-5955 . FAX (916) 985-1020

LABORATORY NARRATIVE
EPA Method TO-15
Sanborn, Head & Associates
Workorder# 1308714

twenty-one 1 Liter Summa Canister (100% Certified) samples were received on August 30, 2013. The laboratory performed analysis via EPA Method TO-15 using GC/MS in the full scan mode.

This workorder was independently validated prior to submittal using 'USEPA National Functional Guidelines' as generally applied to the analysis of volatile organic compounds in air. A rules-based, logic driven, independent validation engine was employed to assess completeness, evaluate pass/fail of relevant project quality control requirements and verification of all quantified amounts.

Receiving Notes

The Chain of Custody (COC) information for sample EN0413D082913 did not match the information on the canister with regard to canister identification. The client was notified of the discrepancy and the information on the canister was used to process and report the sample.

Analytical Notes

Dilution was performed on samples EN0533D082913 and EN0533D082913 Lab Duplicate due to the presence of high level target species.

Definition of Data Qualifying Flags

Eight qualifiers may have been used on the data analysis sheets and indicates as follows:

B - Compound present in laboratory blank greater than reporting limit (background subtraction not performed).

J - Estimated value.

E - Exceeds instrument calibration range.

S - Saturated peak.

Q - Exceeds quality control limits.

U - Compound analyzed for but not detected above the reporting limit, LOD, or MDL value. See data page for project specific U-flag definition.

UJ- Non-detected compound associated with low bias in the CCV

N - The identification is based on presumptive evidence.

File extensions may have been used on the data analysis sheets and indicates as follows:

a-File was requantified

b-File was quantified by a second column and detector

r1-File was requantified for the purpose of reissue

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Summary of Detected Compounds
EPA METHOD TO-15 GC/MS FULL SCAN

Client Sample ID: DU37423082913

Lab ID#: 1308714-01A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Trichloroethene	0.90	2.1	4.8	11
Tetrachloroethene	0.90	23	6.1	160

Client Sample ID: EB1025082913

Lab ID#: 1308714-02A

No Detections Were Found.

Client Sample ID: EN0413D082913

Lab ID#: 1308714-03A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,1,1-Trichloroethane	0.90	1.1	4.9	5.9
Trichloroethene	0.90	13	4.8	69

Client Sample ID: EN0413S082913

Lab ID#: 1308714-04A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,1,1-Trichloroethane	0.88	25	4.8	140
Trichloroethene	0.88	210	4.8	1100

Client Sample ID: EN0415D082813

Lab ID#: 1308714-05A

No Detections Were Found.

Client Sample ID: EN0415S082813

Lab ID#: 1308714-06A

No Detections Were Found.

Client Sample ID: EN0416D082913

Lab ID#: 1308714-07A

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Summary of Detected Compounds
EPA METHOD TO-15 GC/MS FULL SCAN

Client Sample ID: EN0416D082913

Lab ID#: 1308714-07A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,1,1-Trichloroethane	0.90	0.91	4.9	5.0
Trichloroethene	0.90	7.0	4.9	38

Client Sample ID: EN0416D082913 Lab Duplicate

Lab ID#: 1308714-07AA

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Trichloroethene	1.2	7.0	6.4	38

Client Sample ID: EN0416S082913

Lab ID#: 1308714-08A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Trichloroethene	0.88	0.98	4.7	5.2

Client Sample ID: EN0417D082813

Lab ID#: 1308714-09A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Trichloroethene	0.88	2.1	4.7	11

Client Sample ID: EN0418S082913

Lab ID#: 1308714-10A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Tetrachloroethene	0.87	30	5.9	200

Client Sample ID: EN0425S082813

Lab ID#: 1308714-11A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Tetrachloroethene	0.88	0.88	6.0	5.9

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Summary of Detected Compounds
EPA METHOD TO-15 GC/MS FULL SCAN

Client Sample ID: EN043D082813

Lab ID#: 1308714-12A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Trichloroethene	0.96	5.5	5.2	30

Client Sample ID: EN0533D082913

Lab ID#: 1308714-13A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,1,1-Trichloroethane	1.4	18	7.8	96
Trichloroethene	1.4	380	7.7	2000
Tetrachloroethene	1.4	13	9.8	85

Client Sample ID: EN0533D082913 Lab Duplicate

Lab ID#: 1308714-13AA

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,1,1-Trichloroethane	1.4	16	7.8	89
Trichloroethene	1.4	350	7.7	1900
Tetrachloroethene	1.4	12	9.8	78

Client Sample ID: EN0533S082913

Lab ID#: 1308714-14A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,1,1-Trichloroethane	0.85	0.90	4.6	4.9
Trichloroethene	0.85	6.4	4.6	34
Tetrachloroethene	0.85	1.9	5.8	13

Client Sample ID: EN0637D082913

Lab ID#: 1308714-15A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Trichloroethene	0.82	3.5	4.4	19
Tetrachloroethene	0.82	1.9	5.6	13

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Summary of Detected Compounds
EPA METHOD TO-15 GC/MS FULL SCAN

Client Sample ID: EN0637S082913

Lab ID#: 1308714-16A

No Detections Were Found.

Client Sample ID: EN0728D082913

Lab ID#: 1308714-17A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
cis-1,2-Dichloroethene	0.80	2.1	3.2	8.5
Trichloroethene	0.80	11	4.3	58
Tetrachloroethene	0.80	200	5.4	1400
trans-1,2-Dichloroethene	0.80	1.5	3.2	6.1

Client Sample ID: EN0728S082913

Lab ID#: 1308714-18A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Trichloroethene	0.77	1.5	4.1	8.2
Tetrachloroethene	0.77	30	5.2	210

Client Sample ID: EN1041S082913

Lab ID#: 1308714-19A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Trichloroethene	0.84	2.0	4.5	11
Tetrachloroethene	0.84	24	5.7	160

Client Sample ID: EN1041D082913

Lab ID#: 1308714-20A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Tetrachloroethene	1.6	2.6	11	17

Client Sample ID: EN0418D082913

Lab ID#: 1308714-21A

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Summary of Detected Compounds
EPA METHOD TO-15 GC/MS FULL SCAN

Client Sample ID: EN0418D082913

Lab ID#: 1308714-21A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
cis-1,2-Dichloroethene	0.85	0.90	3.4	3.6
1,1,1-Trichloroethane	0.85	7.5	4.6	41
Trichloroethene	0.85	110	4.6	600
Tetrachloroethene	0.85	1.1	5.8	7.7

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Client Sample ID: DU37423082913

Lab ID#: 1308714-01A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**17090608**	**Date of Collection: 8/29/13 10:46:00 AM**	
Dil. Factor:	**1.80**	**Date of Analysis: 9/6/13 12:18 PM**	

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Vinyl Chloride	0.90	Not Detected	2.3	Not Detected
Chloroethane	3.6	Not Detected	9.5	Not Detected
1,1-Dichloroethene	0.90	Not Detected	3.6	Not Detected
Freon 113	0.90	Not Detected	6.9	Not Detected
Methylene Chloride	9.0	Not Detected	31	Not Detected
1,1-Dichloroethane	0.90	Not Detected	3.6	Not Detected
cis-1,2-Dichloroethene	0.90	Not Detected	3.6	Not Detected
1,1,1-Trichloroethane	0.90	Not Detected	4.9	Not Detected
Trichloroethene	0.90	2.1	4.8	11
Tetrachloroethene	0.90	23	6.1	160
trans-1,2-Dichloroethene	0.90	Not Detected	3.6	Not Detected

Container Type: 1 Liter Summa Canister (100% Certified)

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	88	70-130
Toluene-d8	99	70-130
4-Bromofluorobenzene	102	70-130

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Client Sample ID: EB1025082913

Lab ID#: 1308714-02A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**17090609**	**Date of Collection: 8/29/13 8:49:00 AM**	
Dil. Factor:	**1.75**	**Date of Analysis: 9/6/13 12:40 PM**	

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Vinyl Chloride	0.88	Not Detected	2.2	Not Detected
Chloroethane	3.5	Not Detected	9.2	Not Detected
1,1-Dichloroethene	0.88	Not Detected	3.5	Not Detected
Freon 113	0.88	Not Detected	6.7	Not Detected
Methylene Chloride	8.8	Not Detected	30	Not Detected
1,1-Dichloroethane	0.88	Not Detected	3.5	Not Detected
cis-1,2-Dichloroethene	0.88	Not Detected	3.5	Not Detected
1,1,1-Trichloroethane	0.88	Not Detected	4.8	Not Detected
Trichloroethene	0.88	Not Detected	4.7	Not Detected
Tetrachloroethene	0.88	Not Detected	5.9	Not Detected
trans-1,2-Dichloroethene	0.88	Not Detected	3.5	Not Detected

Container Type: 1 Liter Summa Canister (100% Certified)

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	85	70-130
Toluene-d8	100	70-130
4-Bromofluorobenzene	101	70-130

eurofins | Air Toxics

Client Sample ID: EN0413D082913

Lab ID#: 1308714-03A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**17090610**	**Date of Collection: 8/29/13 10:15:00 AM**	
Dil. Factor:	**1.80**	**Date of Analysis: 9/6/13 01:01 PM**	

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Vinyl Chloride	0.90	Not Detected	2.3	Not Detected
Chloroethane	3.6	Not Detected	9.5	Not Detected
1,1-Dichloroethene	0.90	Not Detected	3.6	Not Detected
Freon 113	0.90	Not Detected	6.9	Not Detected
Methylene Chloride	9.0	Not Detected	31	Not Detected
1,1-Dichloroethane	0.90	Not Detected	3.6	Not Detected
cis-1,2-Dichloroethene	0.90	Not Detected	3.6	Not Detected
1,1,1-Trichloroethane	0.90	1.1	4.9	5.9
Trichloroethene	0.90	13	4.8	69
Tetrachloroethene	0.90	Not Detected	6.1	Not Detected
trans-1,2-Dichloroethene	0.90	Not Detected	3.6	Not Detected

Container Type: 1 Liter Summa Canister (100% Certified)

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	84	70-130
Toluene-d8	99	70-130
4-Bromofluorobenzene	104	70-130

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Client Sample ID: EN0413S082913

Lab ID#: 1308714-04A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**17090611**	**Date of Collection: 8/29/13 10:15:00 AM**	
Dil. Factor:	**1.77**	**Date of Analysis: 9/6/13 01:23 PM**	

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Vinyl Chloride	0.88	Not Detected	2.3	Not Detected
Chloroethane	3.5	Not Detected	9.3	Not Detected
1,1-Dichloroethene	0.88	Not Detected	3.5	Not Detected
Freon 113	0.88	Not Detected	6.8	Not Detected
Methylene Chloride	8.8	Not Detected	31	Not Detected
1,1-Dichloroethane	0.88	Not Detected	3.6	Not Detected
cis-1,2-Dichloroethene	0.88	Not Detected	3.5	Not Detected
1,1,1-Trichloroethane	0.88	25	4.8	140
Trichloroethene	0.88	210	4.8	1100
Tetrachloroethene	0.88	Not Detected	6.0	Not Detected
trans-1,2-Dichloroethene	0.88	Not Detected	3.5	Not Detected

Container Type: 1 Liter Summa Canister (100% Certified)

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	85	70-130
Toluene-d8	101	70-130
4-Bromofluorobenzene	102	70-130

eurofins | Air Toxics

Client Sample ID: EN0415D082813

Lab ID#: 1308714-05A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**17090612**	**Date of Collection: 8/28/13 5:21:00 PM**	
Dil. Factor:	**1.71**	**Date of Analysis: 9/6/13 01:45 PM**	

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Vinyl Chloride	0.86	Not Detected	2.2	Not Detected
Chloroethane	3.4	Not Detected	9.0	Not Detected
1,1-Dichloroethene	0.86	Not Detected	3.4	Not Detected
Freon 113	0.86	Not Detected	6.6	Not Detected
Methylene Chloride	8.6	Not Detected	30	Not Detected
1,1-Dichloroethane	0.86	Not Detected	3.5	Not Detected
cis-1,2-Dichloroethene	0.86	Not Detected	3.4	Not Detected
1,1,1-Trichloroethane	0.86	Not Detected	4.7	Not Detected
Trichloroethene	0.86	Not Detected	4.6	Not Detected
Tetrachloroethene	0.86	Not Detected	5.8	Not Detected
trans-1,2-Dichloroethene	0.86	Not Detected	3.4	Not Detected

Container Type: 1 Liter Summa Canister (100% Certified)

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	85	70-130
Toluene-d8	101	70-130
4-Bromofluorobenzene	103	70-130

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Client Sample ID: EN0415S082813

Lab ID#: 1308714-06A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**17090614**	**Date of Collection: 8/28/13 5:16:00 PM**	
Dil. Factor:	**1.75**	**Date of Analysis: 9/6/13 03:36 PM**	

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Vinyl Chloride	0.88	Not Detected	2.2	Not Detected
Chloroethane	3.5	Not Detected	9.2	Not Detected
1,1-Dichloroethene	0.88	Not Detected	3.5	Not Detected
Freon 113	0.88	Not Detected	6.7	Not Detected
Methylene Chloride	8.8	Not Detected	30	Not Detected
1,1-Dichloroethane	0.88	Not Detected	3.5	Not Detected
cis-1,2-Dichloroethene	0.88	Not Detected	3.5	Not Detected
1,1,1-Trichloroethane	0.88	Not Detected	4.8	Not Detected
Trichloroethene	0.88	Not Detected	4.7	Not Detected
Tetrachloroethene	0.88	Not Detected	5.9	Not Detected
trans-1,2-Dichloroethene	0.88	Not Detected	3.5	Not Detected

Container Type: 1 Liter Summa Canister (100% Certified)

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	84	70-130
Toluene-d8	101	70-130
4-Bromofluorobenzene	103	70-130

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Client Sample ID: EN0416D082913

Lab ID#: 1308714-07A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**17090615**	**Date of Collection: 8/29/13 11:40:00 AM**	
Dil. Factor:	**1.81**	**Date of Analysis: 9/6/13 03:57 PM**	

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Vinyl Chloride	0.90	Not Detected	2.3	Not Detected
Chloroethane	3.6	Not Detected	9.6	Not Detected
1,1-Dichloroethene	0.90	Not Detected	3.6	Not Detected
Freon 113	0.90	Not Detected	6.9	Not Detected
Methylene Chloride	9.0	Not Detected	31	Not Detected
1,1-Dichloroethane	0.90	Not Detected	3.7	Not Detected
cis-1,2-Dichloroethene	0.90	Not Detected	3.6	Not Detected
1,1,1-Trichloroethane	0.90	0.91	4.9	5.0
Trichloroethene	0.90	7.0	4.9	38
Tetrachloroethene	0.90	Not Detected	6.1	Not Detected
trans-1,2-Dichloroethene	0.90	Not Detected	3.6	Not Detected

Container Type: 1 Liter Summa Canister (100% Certified)

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	85	70-130
Toluene-d8	98	70-130
4-Bromofluorobenzene	100	70-130

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Client Sample ID: EN0416D082913 Lab Duplicate

Lab ID#: 1308714-07AA

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**17090625**	**Date of Collection: 8/29/13 11:40:00 AM**	
Dil. Factor:	**2.39**	**Date of Analysis: 9/6/13 07:40 PM**	

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Vinyl Chloride	1.2	Not Detected	3.0	Not Detected
Chloroethane	4.8	Not Detected	13	Not Detected
1,1-Dichloroethene	1.2	Not Detected	4.7	Not Detected
Freon 113	1.2	Not Detected	9.2	Not Detected
Methylene Chloride	12	Not Detected	42	Not Detected
1,1-Dichloroethane	1.2	Not Detected	4.8	Not Detected
cis-1,2-Dichloroethene	1.2	Not Detected	4.7	Not Detected
1,1,1-Trichloroethane	1.2	Not Detected	6.5	Not Detected
Trichloroethene	1.2	7.0	6.4	38
Tetrachloroethene	1.2	Not Detected	8.1	Not Detected
trans-1,2-Dichloroethene	1.2	Not Detected	4.7	Not Detected

Container Type: 1 Liter Summa Canister (100% Certified)

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	86	70-130
Toluene-d8	100	70-130
4-Bromofluorobenzene	101	70-130

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Client Sample ID: EN0416S082913

Lab ID#: 1308714-08A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**17090613**	**Date of Collection: 8/29/13 11:40:00 AM**	
Dil. Factor:	**1.76**	**Date of Analysis: 9/6/13 02:06 PM**	

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Vinyl Chloride	0.88	Not Detected	2.2	Not Detected
Chloroethane	3.5	Not Detected	9.3	Not Detected
1,1-Dichloroethene	0.88	Not Detected	3.5	Not Detected
Freon 113	0.88	Not Detected	6.7	Not Detected
Methylene Chloride	8.8	Not Detected	30	Not Detected
1,1-Dichloroethane	0.88	Not Detected	3.6	Not Detected
cis-1,2-Dichloroethene	0.88	Not Detected	3.5	Not Detected
1,1,1-Trichloroethane	0.88	Not Detected	4.8	Not Detected
Trichloroethene	0.88	0.98	4.7	5.2
Tetrachloroethene	0.88	Not Detected	6.0	Not Detected
trans-1,2-Dichloroethene	0.88	Not Detected	3.5	Not Detected

Container Type: 1 Liter Summa Canister (100% Certified)

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	86	70-130
Toluene-d8	100	70-130
4-Bromofluorobenzene	102	70-130

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Client Sample ID: EN0417D082813

Lab ID#: 1308714-09A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**17090616**	**Date of Collection: 8/28/13 9:50:00 AM**	
Dil. Factor:	**1.76**	**Date of Analysis: 9/6/13 04:19 PM**	

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Vinyl Chloride	0.88	Not Detected	2.2	Not Detected
Chloroethane	3.5	Not Detected	9.3	Not Detected
1,1-Dichloroethene	0.88	Not Detected	3.5	Not Detected
Freon 113	0.88	Not Detected	6.7	Not Detected
Methylene Chloride	8.8	Not Detected	30	Not Detected
1,1-Dichloroethane	0.88	Not Detected	3.6	Not Detected
cis-1,2-Dichloroethene	0.88	Not Detected	3.5	Not Detected
1,1,1-Trichloroethane	0.88	Not Detected	4.8	Not Detected
Trichloroethene	0.88	2.1	4.7	11
Tetrachloroethene	0.88	Not Detected	6.0	Not Detected
trans-1,2-Dichloroethene	0.88	Not Detected	3.5	Not Detected

Container Type: 1 Liter Summa Canister (100% Certified)

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	84	70-130
Toluene-d8	101	70-130
4-Bromofluorobenzene	100	70-130

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Client Sample ID: EN0418S082913

Lab ID#: 1308714-10A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**17090617**	**Date of Collection: 8/29/13 11:54:00 AM**	
Dil. Factor:	**1.74**	**Date of Analysis: 9/6/13 04:41 PM**	

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Vinyl Chloride	0.87	Not Detected	2.2	Not Detected
Chloroethane	3.5	Not Detected	9.2	Not Detected
1,1-Dichloroethene	0.87	Not Detected	3.4	Not Detected
Freon 113	0.87	Not Detected	6.7	Not Detected
Methylene Chloride	8.7	Not Detected	30	Not Detected
1,1-Dichloroethane	0.87	Not Detected	3.5	Not Detected
cis-1,2-Dichloroethene	0.87	Not Detected	3.4	Not Detected
1,1,1-Trichloroethane	0.87	Not Detected	4.7	Not Detected
Trichloroethene	0.87	Not Detected	4.7	Not Detected
Tetrachloroethene	0.87	30	5.9	200
trans-1,2-Dichloroethene	0.87	Not Detected	3.4	Not Detected

Container Type: 1 Liter Summa Canister (100% Certified)

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	86	70-130
Toluene-d8	101	70-130
4-Bromofluorobenzene	101	70-130

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Client Sample ID: EN0425S082813

Lab ID#: 1308714-11A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**17090618**	**Date of Collection: 8/28/13 1:17:00 PM**	
Dil. Factor:	**1.76**	**Date of Analysis: 9/6/13 05:02 PM**	

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Vinyl Chloride	0.88	Not Detected	2.2	Not Detected
Chloroethane	3.5	Not Detected	9.3	Not Detected
1,1-Dichloroethene	0.88	Not Detected	3.5	Not Detected
Freon 113	0.88	Not Detected	6.7	Not Detected
Methylene Chloride	8.8	Not Detected	30	Not Detected
1,1-Dichloroethane	0.88	Not Detected	3.6	Not Detected
cis-1,2-Dichloroethene	0.88	Not Detected	3.5	Not Detected
1,1,1-Trichloroethane	0.88	Not Detected	4.8	Not Detected
Trichloroethene	0.88	Not Detected	4.7	Not Detected
Tetrachloroethene	0.88	0.88	6.0	5.9
trans-1,2-Dichloroethene	0.88	Not Detected	3.5	Not Detected

Container Type: 1 Liter Summa Canister (100% Certified)

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	86	70-130
Toluene-d8	100	70-130
4-Bromofluorobenzene	100	70-130

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Client Sample ID: EN043D082813

Lab ID#: 1308714-12A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**17090619**	**Date of Collection: 8/28/13 11:00:00 AM**	
Dil. Factor:	**1.93**	**Date of Analysis: 9/6/13 05:24 PM**	

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Vinyl Chloride	0.96	Not Detected	2.5	Not Detected
Chloroethane	3.9	Not Detected	10	Not Detected
1,1-Dichloroethene	0.96	Not Detected	3.8	Not Detected
Freon 113	0.96	Not Detected	7.4	Not Detected
Methylene Chloride	9.6	Not Detected	34	Not Detected
1,1-Dichloroethane	0.96	Not Detected	3.9	Not Detected
cis-1,2-Dichloroethene	0.96	Not Detected	3.8	Not Detected
1,1,1-Trichloroethane	0.96	Not Detected	5.3	Not Detected
Trichloroethene	0.96	5.5	5.2	30
Tetrachloroethene	0.96	Not Detected	6.5	Not Detected
trans-1,2-Dichloroethene	0.96	Not Detected	3.8	Not Detected

Container Type: 1 Liter Summa Canister (100% Certified)

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	84	70-130
Toluene-d8	99	70-130
4-Bromofluorobenzene	100	70-130

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Client Sample ID: EN0533D082913

Lab ID#: 1308714-13A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**17090606**	**Date of Collection: 8/29/13 8:50:00 AM**	
Dil. Factor:	**2.88**	**Date of Analysis: 9/6/13 11:27 AM**	

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Vinyl Chloride	1.4	Not Detected	3.7	Not Detected
Chloroethane	5.8	Not Detected	15	Not Detected
1,1-Dichloroethene	1.4	Not Detected	5.7	Not Detected
Freon 113	1.4	Not Detected	11	Not Detected
Methylene Chloride	14	Not Detected	50	Not Detected
1,1-Dichloroethane	1.4	Not Detected	5.8	Not Detected
cis-1,2-Dichloroethene	1.4	Not Detected	5.7	Not Detected
1,1,1-Trichloroethane	1.4	18	7.8	96
Trichloroethene	1.4	380	7.7	2000
Tetrachloroethene	1.4	13	9.8	85
trans-1,2-Dichloroethene	1.4	Not Detected	5.7	Not Detected

Container Type: 1 Liter Summa Canister (100% Certified)

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	85	70-130
Toluene-d8	103	70-130
4-Bromofluorobenzene	100	70-130

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Client Sample ID: EN0533D082913 Lab Duplicate

Lab ID#: 1308714-13AA

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**17090607**	**Date of Collection: 8/29/13 8:50:00 AM**	
Dil. Factor:	**2.88**	**Date of Analysis: 9/6/13 11:56 AM**	

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Vinyl Chloride	1.4	Not Detected	3.7	Not Detected
Chloroethane	5.8	Not Detected	15	Not Detected
1,1-Dichloroethene	1.4	Not Detected	5.7	Not Detected
Freon 113	1.4	Not Detected	11	Not Detected
Methylene Chloride	14	Not Detected	50	Not Detected
1,1-Dichloroethane	1.4	Not Detected	5.8	Not Detected
cis-1,2-Dichloroethene	1.4	Not Detected	5.7	Not Detected
1,1,1-Trichloroethane	1.4	16	7.8	89
Trichloroethene	1.4	350	7.7	1900
Tetrachloroethene	1.4	12	9.8	78
trans-1,2-Dichloroethene	1.4	Not Detected	5.7	Not Detected

Container Type: 1 Liter Summa Canister (100% Certified)

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	86	70-130
Toluene-d8	101	70-130
4-Bromofluorobenzene	100	70-130

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Client Sample ID: EN0533S082913

Lab ID#: 1308714-14A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**17090621**	**Date of Collection: 8/29/13 8:50:00 AM**	
Dil. Factor:	**1.70**	**Date of Analysis: 9/6/13 06:07 PM**	

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Vinyl Chloride	0.85	Not Detected	2.2	Not Detected
Chloroethane	3.4	Not Detected	9.0	Not Detected
1,1-Dichloroethene	0.85	Not Detected	3.4	Not Detected
Freon 113	0.85	Not Detected	6.5	Not Detected
Methylene Chloride	8.5	Not Detected	30	Not Detected
1,1-Dichloroethane	0.85	Not Detected	3.4	Not Detected
cis-1,2-Dichloroethene	0.85	Not Detected	3.4	Not Detected
1,1,1-Trichloroethane	0.85	0.90	4.6	4.9
Trichloroethene	0.85	6.4	4.6	34
Tetrachloroethene	0.85	1.9	5.8	13
trans-1,2-Dichloroethene	0.85	Not Detected	3.4	Not Detected

Container Type: 1 Liter Summa Canister (100% Certified)

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	83	70-130
Toluene-d8	100	70-130
4-Bromofluorobenzene	100	70-130

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Client Sample ID: EN0637D082913

Lab ID#: 1308714-15A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**17090622**	**Date of Collection: 8/29/13 10:47:00 AM**	
Dil. Factor:	**1.65**	**Date of Analysis: 9/6/13 06:29 PM**	

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Vinyl Chloride	0.82	Not Detected	2.1	Not Detected
Chloroethane	3.3	Not Detected	8.7	Not Detected
1,1-Dichloroethene	0.82	Not Detected	3.3	Not Detected
Freon 113	0.82	Not Detected	6.3	Not Detected
Methylene Chloride	8.2	Not Detected	29	Not Detected
1,1-Dichloroethane	0.82	Not Detected	3.3	Not Detected
cis-1,2-Dichloroethene	0.82	Not Detected	3.3	Not Detected
1,1,1-Trichloroethane	0.82	Not Detected	4.5	Not Detected
Trichloroethene	0.82	3.5	4.4	19
Tetrachloroethene	0.82	1.9	5.6	13
trans-1,2-Dichloroethene	0.82	Not Detected	3.3	Not Detected

Container Type: 1 Liter Summa Canister (100% Certified)

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	85	70-130
Toluene-d8	98	70-130
4-Bromofluorobenzene	100	70-130

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Client Sample ID: EN0637S082913

Lab ID#: 1308714-16A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**17090620**	**Date of Collection: 8/29/13 10:31:00 AM**	
Dil. Factor:	**1.83**	**Date of Analysis: 9/6/13 05:46 PM**	

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Vinyl Chloride	0.92	Not Detected	2.3	Not Detected
Chloroethane	3.7	Not Detected	9.6	Not Detected
1,1-Dichloroethene	0.92	Not Detected	3.6	Not Detected
Freon 113	0.92	Not Detected	7.0	Not Detected
Methylene Chloride	9.2	Not Detected	32	Not Detected
1,1-Dichloroethane	0.92	Not Detected	3.7	Not Detected
cis-1,2-Dichloroethene	0.92	Not Detected	3.6	Not Detected
1,1,1-Trichloroethane	0.92	Not Detected	5.0	Not Detected
Trichloroethene	0.92	Not Detected	4.9	Not Detected
Tetrachloroethene	0.92	Not Detected	6.2	Not Detected
trans-1,2-Dichloroethene	0.92	Not Detected	3.6	Not Detected

Container Type: 1 Liter Summa Canister (100% Certified)

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	86	70-130
Toluene-d8	100	70-130
4-Bromofluorobenzene	100	70-130

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Client Sample ID: EN0728D082913

Lab ID#: 1308714-17A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**17090623**	**Date of Collection: 8/29/13 10:03:00 AM**	
Dil. Factor:	**1.60**	**Date of Analysis: 9/6/13 06:51 PM**	

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Vinyl Chloride	0.80	Not Detected	2.0	Not Detected
Chloroethane	3.2	Not Detected	8.4	Not Detected
1,1-Dichloroethene	0.80	Not Detected	3.2	Not Detected
Freon 113	0.80	Not Detected	6.1	Not Detected
Methylene Chloride	8.0	Not Detected	28	Not Detected
1,1-Dichloroethane	0.80	Not Detected	3.2	Not Detected
cis-1,2-Dichloroethene	0.80	2.1	3.2	8.5
1,1,1-Trichloroethane	0.80	Not Detected	4.4	Not Detected
Trichloroethene	0.80	11	4.3	58
Tetrachloroethene	0.80	200	5.4	1400
trans-1,2-Dichloroethene	0.80	1.5	3.2	6.1

Container Type: 1 Liter Summa Canister (100% Certified)

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	84	70-130
Toluene-d8	100	70-130
4-Bromofluorobenzene	100	70-130

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Client Sample ID: EN0728S082913

Lab ID#: 1308714-18A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**17090624**	**Date of Collection: 8/29/13 9:53:00 AM**	
Dil. Factor:	**1.54**	**Date of Analysis: 9/6/13 07:12 PM**	

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Vinyl Chloride	0.77	Not Detected	2.0	Not Detected
Chloroethane	3.1	Not Detected	8.1	Not Detected
1,1-Dichloroethene	0.77	Not Detected	3.0	Not Detected
Freon 113	0.77	Not Detected	5.9	Not Detected
Methylene Chloride	7.7	Not Detected	27	Not Detected
1,1-Dichloroethane	0.77	Not Detected	3.1	Not Detected
cis-1,2-Dichloroethene	0.77	Not Detected	3.0	Not Detected
1,1,1-Trichloroethane	0.77	Not Detected	4.2	Not Detected
Trichloroethene	0.77	1.5	4.1	8.2
Tetrachloroethene	0.77	30	5.2	210
trans-1,2-Dichloroethene	0.77	Not Detected	3.0	Not Detected

Container Type: 1 Liter Summa Canister (100% Certified)

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	84	70-130
Toluene-d8	99	70-130
4-Bromofluorobenzene	101	70-130

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Client Sample ID: EN1041S082913

Lab ID#: 1308714-19A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**17090908**	**Date of Collection: 8/29/13 10:46:00 AM**	
Dil. Factor:	**1.69**	**Date of Analysis: 9/9/13 11:33 AM**	

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Vinyl Chloride	0.84	Not Detected	2.2	Not Detected
Chloroethane	3.4	Not Detected	8.9	Not Detected
1,1-Dichloroethene	0.84	Not Detected	3.4	Not Detected
Freon 113	0.84	Not Detected	6.5	Not Detected
Methylene Chloride	8.4	Not Detected	29	Not Detected
1,1-Dichloroethane	0.84	Not Detected	3.4	Not Detected
cis-1,2-Dichloroethene	0.84	Not Detected	3.4	Not Detected
1,1,1-Trichloroethane	0.84	Not Detected	4.6	Not Detected
Trichloroethene	0.84	2.0	4.5	11
Tetrachloroethene	0.84	24	5.7	160
trans-1,2-Dichloroethene	0.84	Not Detected	3.4	Not Detected

Container Type: 1 Liter Summa Canister (100% Certified)

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	85	70-130
Toluene-d8	99	70-130
4-Bromofluorobenzene	102	70-130

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Client Sample ID: EN1041D082913

Lab ID#: 1308714-20A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**17090915**	**Date of Collection: 8/29/13 9:37:00 AM**	
Dil. Factor:	**3.22**	**Date of Analysis: 9/9/13 02:09 PM**	

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Vinyl Chloride	1.6	Not Detected	4.1	Not Detected
Chloroethane	6.4	Not Detected	17	Not Detected
1,1-Dichloroethene	1.6	Not Detected	6.4	Not Detected
Freon 113	1.6	Not Detected	12	Not Detected
Methylene Chloride	16	Not Detected	56	Not Detected
1,1-Dichloroethane	1.6	Not Detected	6.5	Not Detected
cis-1,2-Dichloroethene	1.6	Not Detected	6.4	Not Detected
1,1,1-Trichloroethane	1.6	Not Detected	8.8	Not Detected
Trichloroethene	1.6	Not Detected	8.6	Not Detected
Tetrachloroethene	1.6	2.6	11	17
trans-1,2-Dichloroethene	1.6	Not Detected	6.4	Not Detected

Container Type: 1 Liter Summa Canister (100% Certified)

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	85	70-130
Toluene-d8	100	70-130
4-Bromofluorobenzene	103	70-130

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Client Sample ID: EN0418D082913

Lab ID#: 1308714-21A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**17090909**	**Date of Collection: 8/29/13 11:54:00 AM**	
Dil. Factor:	**1.70**	**Date of Analysis: 9/9/13 11:54 AM**	

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Vinyl Chloride	0.85	Not Detected	2.2	Not Detected
Chloroethane	3.4	Not Detected	9.0	Not Detected
1,1-Dichloroethene	0.85	Not Detected	3.4	Not Detected
Freon 113	0.85	Not Detected	6.5	Not Detected
Methylene Chloride	8.5	Not Detected	30	Not Detected
1,1-Dichloroethane	0.85	Not Detected	3.4	Not Detected
cis-1,2-Dichloroethene	0.85	0.90	3.4	3.6
1,1,1-Trichloroethane	0.85	7.5	4.6	41
Trichloroethene	0.85	110	4.6	600
Tetrachloroethene	0.85	1.1	5.8	7.7
trans-1,2-Dichloroethene	0.85	Not Detected	3.4	Not Detected

Container Type: 1 Liter Summa Canister (100% Certified)

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	85	70-130
Toluene-d8	100	70-130
4-Bromofluorobenzene	101	70-130

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Client Sample ID: Lab Blank

Lab ID#: 1308714-22A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**17090605**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 9/6/13 10:25 AM**	

Compound	**Rpt. Limit (ppbv)**	**Amount (ppbv)**	**Rpt. Limit (ug/m3)**	**Amount (ug/m3)**
Vinyl Chloride	0.50	Not Detected	1.3	Not Detected
Chloroethane	2.0	Not Detected	5.3	Not Detected
1,1-Dichloroethene	0.50	Not Detected	2.0	Not Detected
Freon 113	0.50	Not Detected	3.8	Not Detected
Methylene Chloride	5.0	Not Detected	17	Not Detected
1,1-Dichloroethane	0.50	Not Detected	2.0	Not Detected
cis-1,2-Dichloroethene	0.50	Not Detected	2.0	Not Detected
1,1,1-Trichloroethane	0.50	Not Detected	2.7	Not Detected
Trichloroethene	0.50	Not Detected	2.7	Not Detected
Tetrachloroethene	0.50	Not Detected	3.4	Not Detected
trans-1,2-Dichloroethene	0.50	Not Detected	2.0	Not Detected

Container Type: NA - Not Applicable

Surrogates	**%Recovery**	**Method Limits**
1,2-Dichloroethane-d4	89	70-130
Toluene-d8	101	70-130
4-Bromofluorobenzene	100	70-130

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Client Sample ID: Lab Blank

Lab ID#: 1308714-22B

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**17090906**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 9/9/13 10:28 AM**	

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Vinyl Chloride	0.50	Not Detected	1.3	Not Detected
Chloroethane	2.0	Not Detected	5.3	Not Detected
1,1-Dichloroethene	0.50	Not Detected	2.0	Not Detected
Freon 113	0.50	Not Detected	3.8	Not Detected
Methylene Chloride	5.0	Not Detected	17	Not Detected
1,1-Dichloroethane	0.50	Not Detected	2.0	Not Detected
cis-1,2-Dichloroethene	0.50	Not Detected	2.0	Not Detected
1,1,1-Trichloroethane	0.50	Not Detected	2.7	Not Detected
Trichloroethene	0.50	Not Detected	2.7	Not Detected
Tetrachloroethene	0.50	Not Detected	3.4	Not Detected
trans-1,2-Dichloroethene	0.50	Not Detected	2.0	Not Detected

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	86	70-130
Toluene-d8	102	70-130
4-Bromofluorobenzene	103	70-130

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Client Sample ID: CCV

Lab ID#: 1308714-23A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**17090602**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 9/6/13 08:54 AM**	

Compound	**%Recovery**
Vinyl Chloride	83
Chloroethane	87
1,1-Dichloroethene	90
Freon 113	94
Methylene Chloride	82
1,1-Dichloroethane	90
cis-1,2-Dichloroethene	87
1,1,1-Trichloroethane	91
Trichloroethene	94
Tetrachloroethene	91
trans-1,2-Dichloroethene	93

Container Type: NA - Not Applicable

Surrogates	**%Recovery**	**Method Limits**
1,2-Dichloroethane-d4	90	70-130
Toluene-d8	101	70-130
4-Bromofluorobenzene	97	70-130

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Client Sample ID: CCV

Lab ID#: 1308714-23B

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**17090902**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 9/9/13 08:51 AM**	

Compound	**%Recovery**
Vinyl Chloride	91
Chloroethane	93
1,1-Dichloroethene	96
Freon 113	101
Methylene Chloride	88
1,1-Dichloroethane	95
cis-1,2-Dichloroethene	91
1,1,1-Trichloroethane	97
Trichloroethene	94
Tetrachloroethene	95
trans-1,2-Dichloroethene	101

Container Type: NA - Not Applicable

Surrogates	**%Recovery**	**Method Limits**
1,2-Dichloroethane-d4	94	70-130
Toluene-d8	100	70-130
4-Bromofluorobenzene	99	70-130

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Client Sample ID: LCS

Lab ID#: 1308714-24A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**17090603**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 9/6/13 09:15 AM**	

Compound	%Recovery	Method Limits
Vinyl Chloride	95	70-130
Chloroethane	100	70-130
1,1-Dichloroethene	109	70-130
Freon 113	107	70-130
Methylene Chloride	90	70-130
1,1-Dichloroethane	101	70-130
cis-1,2-Dichloroethene	97	70-130
1,1,1-Trichloroethane	103	70-130
Trichloroethene	105	70-130
Tetrachloroethene	102	70-130
trans-1,2-Dichloroethene	117	70-130

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	91	70-130
Toluene-d8	102	70-130
4-Bromofluorobenzene	97	70-130

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Client Sample ID: LCSD

Lab ID#: 1308714-24AA

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**17090604**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 9/6/13 09:36 AM**	

Compound	%Recovery	Method Limits
Vinyl Chloride	83	70-130
Chloroethane	86	70-130
1,1-Dichloroethene	95	70-130
Freon 113	95	70-130
Methylene Chloride	81	70-130
1,1-Dichloroethane	88	70-130
cis-1,2-Dichloroethene	85	70-130
1,1,1-Trichloroethane	91	70-130
Trichloroethene	93	70-130
Tetrachloroethene	93	70-130
trans-1,2-Dichloroethene	103	70-130

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	88	70-130
Toluene-d8	99	70-130
4-Bromofluorobenzene	96	70-130

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Client Sample ID: LCS

Lab ID#: 1308714-24B

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**17090903**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 9/9/13 09:12 AM**	

Compound	%Recovery	Method Limits
Vinyl Chloride	84	70-130
Chloroethane	88	70-130
1,1-Dichloroethene	96	70-130
Freon 113	95	70-130
Methylene Chloride	82	70-130
1,1-Dichloroethane	88	70-130
cis-1,2-Dichloroethene	87	70-130
1,1,1-Trichloroethane	92	70-130
Trichloroethene	93	70-130
Tetrachloroethene	92	70-130
trans-1,2-Dichloroethene	103	70-130

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	89	70-130
Toluene-d8	100	70-130
4-Bromofluorobenzene	93	70-130

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Client Sample ID: LCSD

Lab ID#: 1308714-24BB

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**17090904**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 9/9/13 09:32 AM**	

Compound	%Recovery	Method Limits
Vinyl Chloride	87	70-130
Chloroethane	91	70-130
1,1-Dichloroethene	100	70-130
Freon 113	98	70-130
Methylene Chloride	85	70-130
1,1-Dichloroethane	91	70-130
cis-1,2-Dichloroethene	88	70-130
1,1,1-Trichloroethane	96	70-130
Trichloroethene	94	70-130
Tetrachloroethene	93	70-130
trans-1,2-Dichloroethene	108	70-130

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	93	70-130
Toluene-d8	101	70-130
4-Bromofluorobenzene	96	70-130

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9/17/2013
Ms. Erica Bradstreet
Sanborn, Head & Associates
1715 W 13th Street

Houston TX 77008

Project Name: Endicott Groundwater Vapor Project
Project #: 2755.07
Workorder #: 1308715

Dear Ms. Erica Bradstreet

The following report includes the data for the above referenced project for sample(s) received on 8/30/2013 at Air Toxics Ltd.

The data and associated QC analyzed by Modified TO-15 are compliant with the project requirements or laboratory criteria with the exception of the deviations noted in the attached case narrative.

Thank you for choosing Air Toxics Ltd. for your air analysis needs. Air Toxics Ltd. is committed to providing accurate data of the highest quality. Please feel free to contact the Project Manager: Ausha Scott at 916-985-1000 if you have any questions regarding the data in this report.

Regards,

Ausha Scott

Project Manager

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WORK ORDER #: 1308715

Work Order Summary

CLIENT:	Ms. Erica Bradstreet Sanborn, Head & Associates 1715 W 13th Street Houston, TX 77008	**BILL TO:**	Accounts Payable Sanborn, Head & Associates 20 Foundry Street Concord, NH 03301
PHONE:	713-869-2259	**P.O. #**	3304.00
FAX:		**PROJECT #**	2755.07 Endicott Groundwater Vapor Project
DATE RECEIVED:	08/30/2013	**CONTACT:**	Ausha Scott
DATE COMPLETED:	09/16/2013		

FRACTION #	NAME	TEST	RECEIPT VAC./PRES.	FINAL PRESSURE
01A	DU1042082813	Modified TO-15	8.4 "Hg	5 psi
01AA	DU1042082813 Lab Duplicate	Modified TO-15	8.4 "Hg	5 psi
02A	DU1354082813	Modified TO-15	8 "Hg	5 psi
03A	DU34572082813	Modified TO-15	7.1 "Hg	4.7 psi
04A	DU8026082813	Modified TO-15	7.6 "Hg	4.8 psi
05A	DU9495082813	Modified TO-15	7.1 "Hg	4.7 psi
05AA	DU9495082813 Lab Duplicate	Modified TO-15	7.1 "Hg	4.7 psi
06A	EB11834082813	Modified TO-15	2.6 "Hg	4.9 psi
07A	EN0417S082813	Modified TO-15	7.1 "Hg	4.8 psi
08A	EN0419D082813	Modified TO-15	6.7 "Hg	4.8 psi
09A	EN0419S082813	Modified TO-15	5.7 "Hg	5.2 psi
10A	EN0421S082813	Modified TO-15	7.8 "Hg	4.9 psi
11A	EN0422D082813	Modified TO-15	5.5 "Hg	5 psi
12A	EN0422S082813	Modified TO-15	6.5 "Hg	5 psi
13A	EN0423D082813	Modified TO-15	6.5 "Hg	4.7 psi
14A	EN0423S082813	Modified TO-15	7.3 "Hg	4.8 psi
15A	EN0425D082813	Modified TO-15	7.1 "Hg	4.8 psi
16A	EN0430D082813	Modified TO-15	5.5 "Hg	4.8 psi
17A	EN0430S082813	Modified TO-15	7.6 "Hg	4.9 psi
17AA	EN0430S082813 Lab Duplicate	Modified TO-15	7.6 "Hg	4.9 psi
18A	EN043S082813	Modified TO-15	6.9 "Hg	4.7 psi
19A	EN0635S082813	Modified TO-15	7.1 "Hg	5 psi
20A	EN0636D082813	Modified TO-15	7.3 "Hg	4.9 psi

Continued on next page

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WORK ORDER #: 1308715

Work Order Summary

CLIENT:	Ms. Erica Bradstreet Sanborn, Head & Associates 1715 W 13th Street Houston, TX 77008	**BILL TO:**	Accounts Payable Sanborn, Head & Associates 20 Foundry Street Concord, NH 03301
PHONE:	713-869-2259	**P.O. #**	3304.00
FAX:		**PROJECT #**	2755.07 Endicott Groundwater Vapor Project
DATE RECEIVED:	08/30/2013	**CONTACT:**	Ausha Scott
DATE COMPLETED:	09/16/2013		

FRACTION #	NAME	TEST	RECEIPT VAC./PRES.	FINAL PRESSURE
21A	EN1017D082813	Modified TO-15	8.2 "Hg	4.9 psi
22A	EN0429D082713	Modified TO-15	9.2 "Hg	5 psi
23A	EN0635D082813	Modified TO-15	6.1 "Hg	5.1 psi
24A	EN0420D082813	Modified TO-15	7.8 "Hg	4.9 psi
25A	EN0410D082713	Modified TO-15	6.1 "Hg	5 psi
26A	Lab Blank	Modified TO-15	NA	NA
26B	Lab Blank	Modified TO-15	NA	NA
26C	Lab Blank	Modified TO-15	NA	NA
27A	CCV	Modified TO-15	NA	NA
27B	CCV	Modified TO-15	NA	NA
27C	CCV	Modified TO-15	NA	NA
28A	LCS	Modified TO-15	NA	NA
28AA	LCSD	Modified TO-15	NA	NA
28B	LCS	Modified TO-15	NA	NA
28BB	LCSD	Modified TO-15	NA	NA
28C	LCS	Modified TO-15	NA	NA
28CC	LCSD	Modified TO-15	NA	NA

CERTIFIED BY: Heidi Rayos DATE: 09/16/13

Technical Director

Certification numbers: AZ Licensure AZ0775, CA NELAP - 12282CA, NJ NELAP - CA016, NY NELAP - 11291, TX NELAP - T104704434-12-5, UT NELAP CA009332012-3, VA NELAP - 460197, WA NELAP - C935
Name of Accrediting Agency: NELAP/ORELAP (Oregon Environmental Laboratory Accreditation Program)
Accreditation number: CA300005, Effective date: 10/18/2012, Expiration date: 10/17/2013.
Eurofins Air Toxics Inc.. certifies that the test results contained in this report meet all requirements of the NELAC standards

180 BLUE RAVINE ROAD, SUITE B FOLSOM, CA - 956
(916) 985-1000 . (800) 985-5955 . FAX (916) 985-1020

LABORATORY NARRATIVE
EPA Method TO-15
Sanborn, Head & Associates
Workorder# 1308715

twenty-five 1 Liter Summa Canister (100% Certified) samples were received on August 30, 2013. The laboratory performed analysis via EPA Method TO-15 using GC/MS in the full scan mode.

This workorder was independently validated prior to submittal using 'USEPA National Functional Guidelines' as generally applied to the analysis of volatile organic compounds in air. A rules-based, logic driven, independent validation engine was employed to assess completeness, evaluate pass/fail of relevant project quality control requirements and verification of all quantified amounts.

Receiving Notes

The Chain of Custody (COC) was not relinquished properly. A signature and date were not provided by the field sampler.

Analytical Notes

Dilution was performed on samples EN0430S082813 and EN0410D082713 due to the presence of high level target species.

Definition of Data Qualifying Flags

Eight qualifiers may have been used on the data analysis sheets and indicates as follows:

B - Compound present in laboratory blank greater than reporting limit (background subtraction not performed).

J - Estimated value.

E - Exceeds instrument calibration range.

S - Saturated peak.

Q - Exceeds quality control limits.

U - Compound analyzed for but not detected above the reporting limit, LOD, or MDL value. See data page for project specific U-flag definition.

UJ- Non-detected compound associated with low bias in the CCV

N - The identification is based on presumptive evidence.

File extensions may have been used on the data analysis sheets and indicates as follows:

a-File was requantified

b-File was quantified by a second column and detector

r1-File was requantified for the purpose of reissue

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Summary of Detected Compounds
EPA METHOD TO-15 GC/MS FULL SCAN

Client Sample ID: DU1042082813

Lab ID#: 1308715-01A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,1,1-Trichloroethane	0.93	0.98	5.1	5.4
Trichloroethene	0.93	6.3	5.0	34

Client Sample ID: DU1042082813 Lab Duplicate

Lab ID#: 1308715-01AA

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Trichloroethene	0.93	5.1	5.0	28

Client Sample ID: DU1354082813

Lab ID#: 1308715-02A

No Detections Were Found.

Client Sample ID: DU34572082813

Lab ID#: 1308715-03A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
cis-1,2-Dichloroethene	0.86	1.2	3.4	4.7
1,1,1-Trichloroethane	0.86	7.1	4.7	39
Trichloroethene	0.86	96	4.6	520

Client Sample ID: DU8026082813

Lab ID#: 1308715-04A

No Detections Were Found.

Client Sample ID: DU9495082813

Lab ID#: 1308715-05A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,1,1-Trichloroethane	1.4	3.1	7.4	17
Trichloroethene	1.4	380	7.2	2000

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Summary of Detected Compounds
EPA METHOD TO-15 GC/MS FULL SCAN

Client Sample ID: DU9495082813 Lab Duplicate

Lab ID#: 1308715-05AA

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,1,1-Trichloroethane	1.4	2.5	7.4	14
Trichloroethene	1.4	290	7.2	1500

Client Sample ID: EB11834082813

Lab ID#: 1308715-06A

No Detections Were Found.

Client Sample ID: EN0417S082813

Lab ID#: 1308715-07A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,1,1-Trichloroethane	0.87	1.2	4.7	6.7
Trichloroethene	0.87	50	4.7	270

Client Sample ID: EN0419D082813

Lab ID#: 1308715-08A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
cis-1,2-Dichloroethene	0.86	1.1	3.4	4.3
1,1,1-Trichloroethane	0.86	7.7	4.7	42
Trichloroethene	0.86	100	4.6	540

Client Sample ID: EN0419S082813

Lab ID#: 1308715-09A

No Detections Were Found.

Client Sample ID: EN0421S082813

Lab ID#: 1308715-10A

No Detections Were Found.

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Summary of Detected Compounds
EPA METHOD TO-15 GC/MS FULL SCAN

Client Sample ID: EN0422D082813

Lab ID#: 1308715-11A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 113	0.82	1.8	6.3	14
1,1-Dichloroethane	0.82	0.97	3.3	3.9
cis-1,2-Dichloroethene	0.82	42	3.2	160
1,1,1-Trichloroethane	0.82	14	4.5	76
Trichloroethene	0.82	170	4.4	900
Tetrachloroethene	0.82	1.3	5.6	9.0
trans-1,2-Dichloroethene	0.82	5.5	3.2	22

Client Sample ID: EN0422S082813

Lab ID#: 1308715-12A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 113	0.86	1.8	6.6	14
cis-1,2-Dichloroethene	0.86	22	3.4	89
1,1,1-Trichloroethane	0.86	11	4.7	60
Trichloroethene	0.86	130	4.6	720
Tetrachloroethene	0.86	0.99	5.8	6.7
trans-1,2-Dichloroethene	0.86	3.3	3.4	13

Client Sample ID: EN0423D082813

Lab ID#: 1308715-13A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,1-Dichloroethane	0.84	2.3	3.4	9.2
cis-1,2-Dichloroethene	0.84	14	3.4	54
Trichloroethene	0.84	69	4.5	370
Tetrachloroethene	0.84	2.3	5.7	15
trans-1,2-Dichloroethene	0.84	1.3	3.4	5.3

Client Sample ID: EN0423S082813

Lab ID#: 1308715-14A

No Detections Were Found.

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Summary of Detected Compounds
EPA METHOD TO-15 GC/MS FULL SCAN

Client Sample ID: EN0425D082813

Lab ID#: 1308715-15A

No Detections Were Found.

Client Sample ID: EN0430D082813

Lab ID#: 1308715-16A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
cis-1,2-Dichloroethene	0.81	1.2	3.2	4.6
1,1,1-Trichloroethane	0.81	20	4.4	110
Trichloroethene	0.81	140	4.4	730
Tetrachloroethene	0.81	3.9	5.5	26

Client Sample ID: EN0430S082813

Lab ID#: 1308715-17A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,1,1-Trichloroethane	1.5	3.0	8.1	16
Trichloroethene	1.5	420	8.0	2200

Client Sample ID: EN0430S082813 Lab Duplicate

Lab ID#: 1308715-17AA

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,1,1-Trichloroethane	1.5	3.5	8.0	19
Trichloroethene	1.5	440	7.8	2400

Client Sample ID: EN043S082813

Lab ID#: 1308715-18A

No Detections Were Found.

Client Sample ID: EN0635S082813

Lab ID#: 1308715-19A

No Detections Were Found.

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Summary of Detected Compounds
EPA METHOD TO-15 GC/MS FULL SCAN

Client Sample ID: EN0636D082813

Lab ID#: 1308715-20A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,1,1-Trichloroethane	0.88	44	4.8	240
Trichloroethene	0.88	56	4.7	300
Tetrachloroethene	0.88	0.99	6.0	6.7

Client Sample ID: EN1017D082813

Lab ID#: 1308715-21A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
cis-1,2-Dichloroethene	0.92	2.8	3.6	11
1,1,1-Trichloroethane	0.92	34	5.0	190
Trichloroethene	0.92	46	4.9	250

Client Sample ID: EN0429D082713

Lab ID#: 1308715-22A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,1,1-Trichloroethane	0.96	1.8	5.3	9.8
Trichloroethene	0.96	14	5.2	77

Client Sample ID: EN0635D082813

Lab ID#: 1308715-23A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,1,1-Trichloroethane	0.84	3.7	4.6	20
Trichloroethene	0.84	20	4.5	110

Client Sample ID: EN0420D082813

Lab ID#: 1308715-24A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,1,1-Trichloroethane	0.90	1.8	4.9	9.6
Trichloroethene	0.90	31	4.8	170

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Summary of Detected Compounds
EPA METHOD TO-15 GC/MS FULL SCAN

Client Sample ID: EN0410D082713

Lab ID#: 1308715-25A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,1-Dichloroethene	17	64	67	250
1,1-Dichloroethane	17	360	68	1400
cis-1,2-Dichloroethene	17	1200	67	4800
1,1,1-Trichloroethane	17	930	92	5100
Trichloroethene	17	6000	90	32000
Tetrachloroethene	17	70	110	480

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Client Sample ID: DU1042082813

Lab ID#: 1308715-01A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**j090610**	**Date of Collection: 8/28/13 11:00:00 AM**	
Dil. Factor:	**1.86**	**Date of Analysis: 9/6/13 04:57 PM**	

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Vinyl Chloride	0.93	Not Detected	2.4	Not Detected
Chloroethane	3.7	Not Detected	9.8	Not Detected
1,1-Dichloroethene	0.93	Not Detected	3.7	Not Detected
Freon 113	0.93	Not Detected	7.1	Not Detected
Methylene Chloride	9.3	Not Detected	32	Not Detected
1,1-Dichloroethane	0.93	Not Detected	3.8	Not Detected
cis-1,2-Dichloroethene	0.93	Not Detected	3.7	Not Detected
1,1,1-Trichloroethane	0.93	0.98	5.1	5.4
Trichloroethene	0.93	6.3	5.0	34
Tetrachloroethene	0.93	Not Detected	6.3	Not Detected
trans-1,2-Dichloroethene	0.93	Not Detected	3.7	Not Detected

Container Type: 1 Liter Summa Canister (100% Certified)

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	92	70-130
Toluene-d8	90	70-130
4-Bromofluorobenzene	109	70-130

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Client Sample ID: DU1042082813 Lab Duplicate

Lab ID#: 1308715-01AA

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**j090611**	**Date of Collection: 8/28/13 11:00:00 AM**	
Dil. Factor:	**1.86**	**Date of Analysis: 9/6/13 05:26 PM**	

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Vinyl Chloride	0.93	Not Detected	2.4	Not Detected
Chloroethane	3.7	Not Detected	9.8	Not Detected
1,1-Dichloroethene	0.93	Not Detected	3.7	Not Detected
Freon 113	0.93	Not Detected	7.1	Not Detected
Methylene Chloride	9.3	Not Detected	32	Not Detected
1,1-Dichloroethane	0.93	Not Detected	3.8	Not Detected
cis-1,2-Dichloroethene	0.93	Not Detected	3.7	Not Detected
1,1,1-Trichloroethane	0.93	Not Detected	5.1	Not Detected
Trichloroethene	0.93	5.1	5.0	28
Tetrachloroethene	0.93	Not Detected	6.3	Not Detected
trans-1,2-Dichloroethene	0.93	Not Detected	3.7	Not Detected

Container Type: 1 Liter Summa Canister (100% Certified)

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	98	70-130
Toluene-d8	91	70-130
4-Bromofluorobenzene	107	70-130

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Client Sample ID: DU1354082813

Lab ID#: 1308715-02A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**j090612**	**Date of Collection: 8/28/13 2:37:00 PM**	
Dil. Factor:	**1.82**	**Date of Analysis: 9/6/13 05:59 PM**	

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Vinyl Chloride	0.91	Not Detected	2.3	Not Detected
Chloroethane	3.6	Not Detected	9.6	Not Detected
1,1-Dichloroethene	0.91	Not Detected	3.6	Not Detected
Freon 113	0.91	Not Detected	7.0	Not Detected
Methylene Chloride	9.1	Not Detected	32	Not Detected
1,1-Dichloroethane	0.91	Not Detected	3.7	Not Detected
cis-1,2-Dichloroethene	0.91	Not Detected	3.6	Not Detected
1,1,1-Trichloroethane	0.91	Not Detected	5.0	Not Detected
Trichloroethene	0.91	Not Detected	4.9	Not Detected
Tetrachloroethene	0.91	Not Detected	6.2	Not Detected
trans-1,2-Dichloroethene	0.91	Not Detected	3.6	Not Detected

Container Type: 1 Liter Summa Canister (100% Certified)

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	98	70-130
Toluene-d8	98	70-130
4-Bromofluorobenzene	106	70-130

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Client Sample ID: DU34572082813

Lab ID#: 1308715-03A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**j090613**	**Date of Collection: 8/28/13 4:34:00 PM**	
Dil. Factor:	**1.73**	**Date of Analysis: 9/6/13 06:28 PM**	

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Vinyl Chloride	0.86	Not Detected	2.2	Not Detected
Chloroethane	3.5	Not Detected	9.1	Not Detected
1,1-Dichloroethene	0.86	Not Detected	3.4	Not Detected
Freon 113	0.86	Not Detected	6.6	Not Detected
Methylene Chloride	8.6	Not Detected	30	Not Detected
1,1-Dichloroethane	0.86	Not Detected	3.5	Not Detected
cis-1,2-Dichloroethene	0.86	1.2	3.4	4.7
1,1,1-Trichloroethane	0.86	7.1	4.7	39
Trichloroethene	0.86	96	4.6	520
Tetrachloroethene	0.86	Not Detected	5.9	Not Detected
trans-1,2-Dichloroethene	0.86	Not Detected	3.4	Not Detected

Container Type: 1 Liter Summa Canister (100% Certified)

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	97	70-130
Toluene-d8	97	70-130
4-Bromofluorobenzene	103	70-130

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Client Sample ID: DU8026082813

Lab ID#: 1308715-04A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**j090614**	**Date of Collection: 8/28/13 4:25:00 PM**	
Dil. Factor:	**1.77**	**Date of Analysis: 9/6/13 07:03 PM**	

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Vinyl Chloride	0.88	Not Detected	2.3	Not Detected
Chloroethane	3.5	Not Detected	9.3	Not Detected
1,1-Dichloroethene	0.88	Not Detected	3.5	Not Detected
Freon 113	0.88	Not Detected	6.8	Not Detected
Methylene Chloride	8.8	Not Detected	31	Not Detected
1,1-Dichloroethane	0.88	Not Detected	3.6	Not Detected
cis-1,2-Dichloroethene	0.88	Not Detected	3.5	Not Detected
1,1,1-Trichloroethane	0.88	Not Detected	4.8	Not Detected
Trichloroethene	0.88	Not Detected	4.8	Not Detected
Tetrachloroethene	0.88	Not Detected	6.0	Not Detected
trans-1,2-Dichloroethene	0.88	Not Detected	3.5	Not Detected

Container Type: 1 Liter Summa Canister (100% Certified)

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	99	70-130
Toluene-d8	92	70-130
4-Bromofluorobenzene	101	70-130

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Client Sample ID: DU9495082813

Lab ID#: 1308715-05A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**j090914**	**Date of Collection: 8/28/13 10:03:00 AM**	
Dil. Factor:	**2.70**	**Date of Analysis: 9/9/13 05:04 PM**	

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Vinyl Chloride	1.4	Not Detected	3.4	Not Detected
Chloroethane	5.4	Not Detected	14	Not Detected
1,1-Dichloroethene	1.4	Not Detected	5.4	Not Detected
Freon 113	1.4	Not Detected	10	Not Detected
Methylene Chloride	14	Not Detected	47	Not Detected
1,1-Dichloroethane	1.4	Not Detected	5.5	Not Detected
cis-1,2-Dichloroethene	1.4	Not Detected	5.4	Not Detected
1,1,1-Trichloroethane	1.4	3.1	7.4	17
Trichloroethene	1.4	380	7.2	2000
Tetrachloroethene	1.4	Not Detected	9.2	Not Detected
trans-1,2-Dichloroethene	1.4	Not Detected	5.4	Not Detected

Container Type: 1 Liter Summa Canister (100% Certified)

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	94	70-130
Toluene-d8	98	70-130
4-Bromofluorobenzene	102	70-130

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Client Sample ID: DU9495082813 Lab Duplicate

Lab ID#: 1308715-05AA

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**j090917**	**Date of Collection: 8/28/13 10:03:00 AM**	
Dil. Factor:	**2.70**	**Date of Analysis: 9/9/13 07:20 PM**	

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Vinyl Chloride	1.4	Not Detected	3.4	Not Detected
Chloroethane	5.4	Not Detected	14	Not Detected
1,1-Dichloroethene	1.4	Not Detected	5.4	Not Detected
Freon 113	1.4	Not Detected	10	Not Detected
Methylene Chloride	14	Not Detected	47	Not Detected
1,1-Dichloroethane	1.4	Not Detected	5.5	Not Detected
cis-1,2-Dichloroethene	1.4	Not Detected	5.4	Not Detected
1,1,1-Trichloroethane	1.4	2.5	7.4	14
Trichloroethene	1.4	290	7.2	1500
Tetrachloroethene	1.4	Not Detected	9.2	Not Detected
trans-1,2-Dichloroethene	1.4	Not Detected	5.4	Not Detected

Container Type: 1 Liter Summa Canister (100% Certified)

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	96	70-130
Toluene-d8	97	70-130
4-Bromofluorobenzene	103	70-130

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Client Sample ID: EB11834082813

Lab ID#: 1308715-06A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**j090616**	**Date of Collection: 8/28/13 4:12:00 PM**	
Dil. Factor:	**1.46**	**Date of Analysis: 9/6/13 08:07 PM**	

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Vinyl Chloride	0.73	Not Detected	1.9	Not Detected
Chloroethane	2.9	Not Detected	7.7	Not Detected
1,1-Dichloroethene	0.73	Not Detected	2.9	Not Detected
Freon 113	0.73	Not Detected	5.6	Not Detected
Methylene Chloride	7.3	Not Detected	25	Not Detected
1,1-Dichloroethane	0.73	Not Detected	3.0	Not Detected
cis-1,2-Dichloroethene	0.73	Not Detected	2.9	Not Detected
1,1,1-Trichloroethane	0.73	Not Detected	4.0	Not Detected
Trichloroethene	0.73	Not Detected	3.9	Not Detected
Tetrachloroethene	0.73	Not Detected	5.0	Not Detected
trans-1,2-Dichloroethene	0.73	Not Detected	2.9	Not Detected

Container Type: 1 Liter Summa Canister (100% Certified)

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	96	70-130
Toluene-d8	95	70-130
4-Bromofluorobenzene	98	70-130

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Client Sample ID: EN0417S082813

Lab ID#: 1308715-07A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**j090617**	**Date of Collection: 8/28/13 9:15:00 AM**	
Dil. Factor:	**1.74**	**Date of Analysis: 9/6/13 08:34 PM**	

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Vinyl Chloride	0.87	Not Detected	2.2	Not Detected
Chloroethane	3.5	Not Detected	9.2	Not Detected
1,1-Dichloroethene	0.87	Not Detected	3.4	Not Detected
Freon 113	0.87	Not Detected	6.7	Not Detected
Methylene Chloride	8.7	Not Detected	30	Not Detected
1,1-Dichloroethane	0.87	Not Detected	3.5	Not Detected
cis-1,2-Dichloroethene	0.87	Not Detected	3.4	Not Detected
1,1,1-Trichloroethane	0.87	1.2	4.7	6.7
Trichloroethene	0.87	50	4.7	270
Tetrachloroethene	0.87	Not Detected	5.9	Not Detected
trans-1,2-Dichloroethene	0.87	Not Detected	3.4	Not Detected

Container Type: 1 Liter Summa Canister (100% Certified)

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	95	70-130
Toluene-d8	100	70-130
4-Bromofluorobenzene	99	70-130

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Client Sample ID: EN0419D082813

Lab ID#: 1308715-08A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**j090618**	**Date of Collection: 8/28/13 4:34:00 PM**	
Dil. Factor:	**1.71**	**Date of Analysis: 9/6/13 08:59 PM**	

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Vinyl Chloride	0.86	Not Detected	2.2	Not Detected
Chloroethane	3.4	Not Detected	9.0	Not Detected
1,1-Dichloroethene	0.86	Not Detected	3.4	Not Detected
Freon 113	0.86	Not Detected	6.6	Not Detected
Methylene Chloride	8.6	Not Detected	30	Not Detected
1,1-Dichloroethane	0.86	Not Detected	3.5	Not Detected
cis-1,2-Dichloroethene	0.86	1.1	3.4	4.3
1,1,1-Trichloroethane	0.86	7.7	4.7	42
Trichloroethene	0.86	100	4.6	540
Tetrachloroethene	0.86	Not Detected	5.8	Not Detected
trans-1,2-Dichloroethene	0.86	Not Detected	3.4	Not Detected

Container Type: 1 Liter Summa Canister (100% Certified)

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	100	70-130
Toluene-d8	97	70-130
4-Bromofluorobenzene	100	70-130

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Client Sample ID: EN0419S082813

Lab ID#: 1308715-09A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**j090619**	**Date of Collection: 8/28/13 3:02:00 PM**	
Dil. Factor:	**1.67**	**Date of Analysis: 9/6/13 09:39 PM**	

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Vinyl Chloride	0.84	Not Detected	2.1	Not Detected
Chloroethane	3.3	Not Detected	8.8	Not Detected
1,1-Dichloroethene	0.84	Not Detected	3.3	Not Detected
Freon 113	0.84	Not Detected	6.4	Not Detected
Methylene Chloride	8.4	Not Detected	29	Not Detected
1,1-Dichloroethane	0.84	Not Detected	3.4	Not Detected
cis-1,2-Dichloroethene	0.84	Not Detected	3.3	Not Detected
1,1,1-Trichloroethane	0.84	Not Detected	4.6	Not Detected
Trichloroethene	0.84	Not Detected	4.5	Not Detected
Tetrachloroethene	0.84	Not Detected	5.7	Not Detected
trans-1,2-Dichloroethene	0.84	Not Detected	3.3	Not Detected

Container Type: 1 Liter Summa Canister (100% Certified)

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	98	70-130
Toluene-d8	92	70-130
4-Bromofluorobenzene	102	70-130

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Client Sample ID: EN0421S082813

Lab ID#: 1308715-10A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**j090620**	**Date of Collection: 8/28/13 4:25:00 PM**	
Dil. Factor:	**1.80**	**Date of Analysis: 9/6/13 10:06 PM**	

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Vinyl Chloride	0.90	Not Detected	2.3	Not Detected
Chloroethane	3.6	Not Detected	9.5	Not Detected
1,1-Dichloroethene	0.90	Not Detected	3.6	Not Detected
Freon 113	0.90	Not Detected	6.9	Not Detected
Methylene Chloride	9.0	Not Detected	31	Not Detected
1,1-Dichloroethane	0.90	Not Detected	3.6	Not Detected
cis-1,2-Dichloroethene	0.90	Not Detected	3.6	Not Detected
1,1,1-Trichloroethane	0.90	Not Detected	4.9	Not Detected
Trichloroethene	0.90	Not Detected	4.8	Not Detected
Tetrachloroethene	0.90	Not Detected	6.1	Not Detected
trans-1,2-Dichloroethene	0.90	Not Detected	3.6	Not Detected

Container Type: 1 Liter Summa Canister (100% Certified)

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	104	70-130
Toluene-d8	94	70-130
4-Bromofluorobenzene	102	70-130

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Client Sample ID: EN0422D082813

Lab ID#: 1308715-11A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**j090621**	**Date of Collection: 8/28/13 4:21:00 PM**	
Dil. Factor:	**1.64**	**Date of Analysis: 9/6/13 10:36 PM**	

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Vinyl Chloride	0.82	Not Detected	2.1	Not Detected
Chloroethane	3.3	Not Detected	8.6	Not Detected
1,1-Dichloroethene	0.82	Not Detected	3.2	Not Detected
Freon 113	0.82	1.8	6.3	14
Methylene Chloride	8.2	Not Detected	28	Not Detected
1,1-Dichloroethane	0.82	0.97	3.3	3.9
cis-1,2-Dichloroethene	0.82	42	3.2	160
1,1,1-Trichloroethane	0.82	14	4.5	76
Trichloroethene	0.82	170	4.4	900
Tetrachloroethene	0.82	1.3	5.6	9.0
trans-1,2-Dichloroethene	0.82	5.5	3.2	22

Container Type: 1 Liter Summa Canister (100% Certified)

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	101	70-130
Toluene-d8	95	70-130
4-Bromofluorobenzene	101	70-130

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Client Sample ID: EN0422S082813

Lab ID#: 1308715-12A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**j090911**	**Date of Collection: 8/28/13 4:12:00 PM**	
Dil. Factor:	**1.71**	**Date of Analysis: 9/9/13 03:14 PM**	

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Vinyl Chloride	0.86	Not Detected	2.2	Not Detected
Chloroethane	3.4	Not Detected	9.0	Not Detected
1,1-Dichloroethene	0.86	Not Detected	3.4	Not Detected
Freon 113	0.86	1.8	6.6	14
Methylene Chloride	8.6	Not Detected	30	Not Detected
1,1-Dichloroethane	0.86	Not Detected	3.5	Not Detected
cis-1,2-Dichloroethene	0.86	22	3.4	89
1,1,1-Trichloroethane	0.86	11	4.7	60
Trichloroethene	0.86	130	4.6	720
Tetrachloroethene	0.86	0.99	5.8	6.7
trans-1,2-Dichloroethene	0.86	3.3	3.4	13

Container Type: 1 Liter Summa Canister (100% Certified)

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	96	70-130
Toluene-d8	92	70-130
4-Bromofluorobenzene	110	70-130

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Client Sample ID: EN0423D082813

Lab ID#: 1308715-13A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**j090913**	**Date of Collection: 8/28/13 2:12:00 PM**	
Dil. Factor:	**1.69**	**Date of Analysis: 9/9/13 04:36 PM**	

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Vinyl Chloride	0.84	Not Detected	2.2	Not Detected
Chloroethane	3.4	Not Detected	8.9	Not Detected
1,1-Dichloroethene	0.84	Not Detected	3.4	Not Detected
Freon 113	0.84	Not Detected	6.5	Not Detected
Methylene Chloride	8.4	Not Detected	29	Not Detected
1,1-Dichloroethane	0.84	2.3	3.4	9.2
cis-1,2-Dichloroethene	0.84	14	3.4	54
1,1,1-Trichloroethane	0.84	Not Detected	4.6	Not Detected
Trichloroethene	0.84	69	4.5	370
Tetrachloroethene	0.84	2.3	5.7	15
trans-1,2-Dichloroethene	0.84	1.3	3.4	5.3

Container Type: 1 Liter Summa Canister (100% Certified)

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	89	70-130
Toluene-d8	91	70-130
4-Bromofluorobenzene	100	70-130

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Client Sample ID: EN0423S082813

Lab ID#: 1308715-14A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**17090910**	**Date of Collection: 8/28/13 3:27:00 PM**	
Dil. Factor:	**1.75**	**Date of Analysis: 9/9/13 12:16 PM**	

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Vinyl Chloride	0.88	Not Detected	2.2	Not Detected
Chloroethane	3.5	Not Detected	9.2	Not Detected
1,1-Dichloroethene	0.88	Not Detected	3.5	Not Detected
Freon 113	0.88	Not Detected	6.7	Not Detected
Methylene Chloride	8.8	Not Detected	30	Not Detected
1,1-Dichloroethane	0.88	Not Detected	3.5	Not Detected
cis-1,2-Dichloroethene	0.88	Not Detected	3.5	Not Detected
1,1,1-Trichloroethane	0.88	Not Detected	4.8	Not Detected
Trichloroethene	0.88	Not Detected	4.7	Not Detected
Tetrachloroethene	0.88	Not Detected	5.9	Not Detected
trans-1,2-Dichloroethene	0.88	Not Detected	3.5	Not Detected

Container Type: 1 Liter Summa Canister (100% Certified)

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	85	70-130
Toluene-d8	100	70-130
4-Bromofluorobenzene	102	70-130

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Client Sample ID: EN0425D082813

Lab ID#: 1308715-15A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**17090911**	**Date of Collection: 8/28/13 1:19:00 PM**	
Dil. Factor:	**1.74**	**Date of Analysis: 9/9/13 12:38 PM**	

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Vinyl Chloride	0.87	Not Detected	2.2	Not Detected
Chloroethane	3.5	Not Detected	9.2	Not Detected
1,1-Dichloroethene	0.87	Not Detected	3.4	Not Detected
Freon 113	0.87	Not Detected	6.7	Not Detected
Methylene Chloride	8.7	Not Detected	30	Not Detected
1,1-Dichloroethane	0.87	Not Detected	3.5	Not Detected
cis-1,2-Dichloroethene	0.87	Not Detected	3.4	Not Detected
1,1,1-Trichloroethane	0.87	Not Detected	4.7	Not Detected
Trichloroethene	0.87	Not Detected	4.7	Not Detected
Tetrachloroethene	0.87	Not Detected	5.9	Not Detected
trans-1,2-Dichloroethene	0.87	Not Detected	3.4	Not Detected

Container Type: 1 Liter Summa Canister (100% Certified)

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	84	70-130
Toluene-d8	99	70-130
4-Bromofluorobenzene	102	70-130

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Client Sample ID: EN0430D082813

Lab ID#: 1308715-16A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**17090912**	**Date of Collection: 8/28/13 9:30:00 AM**	
Dil. Factor:	**1.62**	**Date of Analysis: 9/9/13 12:59 PM**	

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Vinyl Chloride	0.81	Not Detected	2.1	Not Detected
Chloroethane	3.2	Not Detected	8.5	Not Detected
1,1-Dichloroethene	0.81	Not Detected	3.2	Not Detected
Freon 113	0.81	Not Detected	6.2	Not Detected
Methylene Chloride	8.1	Not Detected	28	Not Detected
1,1-Dichloroethane	0.81	Not Detected	3.3	Not Detected
cis-1,2-Dichloroethene	0.81	1.2	3.2	4.6
1,1,1-Trichloroethane	0.81	20	4.4	110
Trichloroethene	0.81	140	4.4	730
Tetrachloroethene	0.81	3.9	5.5	26
trans-1,2-Dichloroethene	0.81	Not Detected	3.2	Not Detected

Container Type: 1 Liter Summa Canister (100% Certified)

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	85	70-130
Toluene-d8	99	70-130
4-Bromofluorobenzene	101	70-130

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Client Sample ID: EN0430S082813

Lab ID#: 1308715-17A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**j090907**	**Date of Collection: 8/28/13 10:39:00 AM**	
Dil. Factor:	**2.97**	**Date of Analysis: 9/9/13 12:38 PM**	

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Vinyl Chloride	1.5	Not Detected	3.8	Not Detected
Chloroethane	5.9	Not Detected	16	Not Detected
1,1-Dichloroethene	1.5	Not Detected	5.9	Not Detected
Freon 113	1.5	Not Detected	11	Not Detected
Methylene Chloride	15	Not Detected	52	Not Detected
1,1-Dichloroethane	1.5	Not Detected	6.0	Not Detected
cis-1,2-Dichloroethene	1.5	Not Detected	5.9	Not Detected
1,1,1-Trichloroethane	1.5	3.0	8.1	16
Trichloroethene	1.5	420	8.0	2200
Tetrachloroethene	1.5	Not Detected	10	Not Detected
trans-1,2-Dichloroethene	1.5	Not Detected	5.9	Not Detected

Container Type: 1 Liter Summa Canister (100% Certified)

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	89	70-130
Toluene-d8	98	70-130
4-Bromofluorobenzene	104	70-130

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Client Sample ID: EN0430S082813 Lab Duplicate

Lab ID#: 1308715-17AA

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**j090912**	**Date of Collection: 8/28/13 10:39:00 AM**	
Dil. Factor:	**2.92**	**Date of Analysis: 9/9/13 04:01 PM**	

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Vinyl Chloride	1.5	Not Detected	3.7	Not Detected
Chloroethane	5.8	Not Detected	15	Not Detected
1,1-Dichloroethene	1.5	Not Detected	5.8	Not Detected
Freon 113	1.5	Not Detected	11	Not Detected
Methylene Chloride	15	Not Detected	51	Not Detected
1,1-Dichloroethane	1.5	Not Detected	5.9	Not Detected
cis-1,2-Dichloroethene	1.5	Not Detected	5.8	Not Detected
1,1,1-Trichloroethane	1.5	3.5	8.0	19
Trichloroethene	1.5	440	7.8	2400
Tetrachloroethene	1.5	Not Detected	9.9	Not Detected
trans-1,2-Dichloroethene	1.5	Not Detected	5.8	Not Detected

Container Type: 1 Liter Summa Canister (100% Certified)

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	91	70-130
Toluene-d8	99	70-130
4-Bromofluorobenzene	99	70-130

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Client Sample ID: EN043S082813

Lab ID#: 1308715-18A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**17090913**	**Date of Collection: 8/28/13 10:07:00 AM**	
Dil. Factor:	**1.71**	**Date of Analysis: 9/9/13 01:21 PM**	

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Vinyl Chloride	0.86	Not Detected	2.2	Not Detected
Chloroethane	3.4	Not Detected	9.0	Not Detected
1,1-Dichloroethene	0.86	Not Detected	3.4	Not Detected
Freon 113	0.86	Not Detected	6.6	Not Detected
Methylene Chloride	8.6	Not Detected	30	Not Detected
1,1-Dichloroethane	0.86	Not Detected	3.5	Not Detected
cis-1,2-Dichloroethene	0.86	Not Detected	3.4	Not Detected
1,1,1-Trichloroethane	0.86	Not Detected	4.7	Not Detected
Trichloroethene	0.86	Not Detected	4.6	Not Detected
Tetrachloroethene	0.86	Not Detected	5.8	Not Detected
trans-1,2-Dichloroethene	0.86	Not Detected	3.4	Not Detected

Container Type: 1 Liter Summa Canister (100% Certified)

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	84	70-130
Toluene-d8	99	70-130
4-Bromofluorobenzene	103	70-130

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Client Sample ID: EN0635S082813

Lab ID#: 1308715-19A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**17090914**	**Date of Collection: 8/28/13 12:42:00 PM**	
Dil. Factor:	**1.76**	**Date of Analysis: 9/9/13 01:43 PM**	

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Vinyl Chloride	0.88	Not Detected	2.2	Not Detected
Chloroethane	3.5	Not Detected	9.3	Not Detected
1,1-Dichloroethene	0.88	Not Detected	3.5	Not Detected
Freon 113	0.88	Not Detected	6.7	Not Detected
Methylene Chloride	8.8	Not Detected	30	Not Detected
1,1-Dichloroethane	0.88	Not Detected	3.6	Not Detected
cis-1,2-Dichloroethene	0.88	Not Detected	3.5	Not Detected
1,1,1-Trichloroethane	0.88	Not Detected	4.8	Not Detected
Trichloroethene	0.88	Not Detected	4.7	Not Detected
Tetrachloroethene	0.88	Not Detected	6.0	Not Detected
trans-1,2-Dichloroethene	0.88	Not Detected	3.5	Not Detected

Container Type: 1 Liter Summa Canister (100% Certified)

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	86	70-130
Toluene-d8	98	70-130
4-Bromofluorobenzene	102	70-130

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Client Sample ID: EN0636D082813

Lab ID#: 1308715-20A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**17090916**	**Date of Collection: 8/28/13 11:15:00 AM**	
Dil. Factor:	**1.76**	**Date of Analysis: 9/9/13 02:31 PM**	

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Vinyl Chloride	0.88	Not Detected	2.2	Not Detected
Chloroethane	3.5	Not Detected	9.3	Not Detected
1,1-Dichloroethene	0.88	Not Detected	3.5	Not Detected
Freon 113	0.88	Not Detected	6.7	Not Detected
Methylene Chloride	8.8	Not Detected	30	Not Detected
1,1-Dichloroethane	0.88	Not Detected	3.6	Not Detected
cis-1,2-Dichloroethene	0.88	Not Detected	3.5	Not Detected
1,1,1-Trichloroethane	0.88	44	4.8	240
Trichloroethene	0.88	56	4.7	300
Tetrachloroethene	0.88	0.99	6.0	6.7
trans-1,2-Dichloroethene	0.88	Not Detected	3.5	Not Detected

Container Type: 1 Liter Summa Canister (100% Certified)

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	83	70-130
Toluene-d8	101	70-130
4-Bromofluorobenzene	102	70-130

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Client Sample ID: EN1017D082813

Lab ID#: 1308715-21A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**17090918**	**Date of Collection: 8/28/13 9:11:00 AM**	
Dil. Factor:	**1.83**	**Date of Analysis: 9/9/13 04:40 PM**	

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Vinyl Chloride	0.92	Not Detected	2.3	Not Detected
Chloroethane	3.7	Not Detected	9.6	Not Detected
1,1-Dichloroethene	0.92	Not Detected	3.6	Not Detected
Freon 113	0.92	Not Detected	7.0	Not Detected
Methylene Chloride	9.2	Not Detected	32	Not Detected
1,1-Dichloroethane	0.92	Not Detected	3.7	Not Detected
cis-1,2-Dichloroethene	0.92	2.8	3.6	11
1,1,1-Trichloroethane	0.92	34	5.0	190
Trichloroethene	0.92	46	4.9	250
Tetrachloroethene	0.92	Not Detected	6.2	Not Detected
trans-1,2-Dichloroethene	0.92	Not Detected	3.6	Not Detected

Container Type: 1 Liter Summa Canister (100% Certified)

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	83	70-130
Toluene-d8	100	70-130
4-Bromofluorobenzene	104	70-130

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Client Sample ID: EN0429D082713

Lab ID#: 1308715-22A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**17090919**	**Date of Collection: 8/27/13 1:06:00 PM**	
Dil. Factor:	**1.93**	**Date of Analysis: 9/9/13 05:02 PM**	

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Vinyl Chloride	0.96	Not Detected	2.5	Not Detected
Chloroethane	3.9	Not Detected	10	Not Detected
1,1-Dichloroethene	0.96	Not Detected	3.8	Not Detected
Freon 113	0.96	Not Detected	7.4	Not Detected
Methylene Chloride	9.6	Not Detected	34	Not Detected
1,1-Dichloroethane	0.96	Not Detected	3.9	Not Detected
cis-1,2-Dichloroethene	0.96	Not Detected	3.8	Not Detected
1,1,1-Trichloroethane	0.96	1.8	5.3	9.8
Trichloroethene	0.96	14	5.2	77
Tetrachloroethene	0.96	Not Detected	6.5	Not Detected
trans-1,2-Dichloroethene	0.96	Not Detected	3.8	Not Detected

Container Type: 1 Liter Summa Canister (100% Certified)

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	85	70-130
Toluene-d8	98	70-130
4-Bromofluorobenzene	101	70-130

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Client Sample ID: EN0635D082813

Lab ID#: 1308715-23A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**17090917**	**Date of Collection: 8/28/13 11:08:00 AM**	
Dil. Factor:	**1.69**	**Date of Analysis: 9/9/13 04:18 PM**	

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Vinyl Chloride	0.84	Not Detected	2.2	Not Detected
Chloroethane	3.4	Not Detected	8.9	Not Detected
1,1-Dichloroethene	0.84	Not Detected	3.4	Not Detected
Freon 113	0.84	Not Detected	6.5	Not Detected
Methylene Chloride	8.4	Not Detected	29	Not Detected
1,1-Dichloroethane	0.84	Not Detected	3.4	Not Detected
cis-1,2-Dichloroethene	0.84	Not Detected	3.4	Not Detected
1,1,1-Trichloroethane	0.84	3.7	4.6	20
Trichloroethene	0.84	20	4.5	110
Tetrachloroethene	0.84	Not Detected	5.7	Not Detected
trans-1,2-Dichloroethene	0.84	Not Detected	3.4	Not Detected

Container Type: 1 Liter Summa Canister (100% Certified)

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	86	70-130
Toluene-d8	98	70-130
4-Bromofluorobenzene	103	70-130

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Client Sample ID: EN0420D082813

Lab ID#: 1308715-24A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**17090920**	**Date of Collection: 8/28/13 3:20:00 PM**	
Dil. Factor:	**1.80**	**Date of Analysis: 9/9/13 05:24 PM**	

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Vinyl Chloride	0.90	Not Detected	2.3	Not Detected
Chloroethane	3.6	Not Detected	9.5	Not Detected
1,1-Dichloroethene	0.90	Not Detected	3.6	Not Detected
Freon 113	0.90	Not Detected	6.9	Not Detected
Methylene Chloride	9.0	Not Detected	31	Not Detected
1,1-Dichloroethane	0.90	Not Detected	3.6	Not Detected
cis-1,2-Dichloroethene	0.90	Not Detected	3.6	Not Detected
1,1,1-Trichloroethane	0.90	1.8	4.9	9.6
Trichloroethene	0.90	31	4.8	170
Tetrachloroethene	0.90	Not Detected	6.1	Not Detected
trans-1,2-Dichloroethene	0.90	Not Detected	3.6	Not Detected

Container Type: 1 Liter Summa Canister (100% Certified)

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	84	70-130
Toluene-d8	101	70-130
4-Bromofluorobenzene	100	70-130

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Client Sample ID: EN0410D082713

Lab ID#: 1308715-25A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**17090921**	**Date of Collection: 8/27/13 9:22:00 AM**	
Dil. Factor:	**33.6**	**Date of Analysis: 9/9/13 05:44 PM**	

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Vinyl Chloride	17	Not Detected	43	Not Detected
Chloroethane	67	Not Detected	180	Not Detected
1,1-Dichloroethene	17	64	67	250
Freon 113	17	Not Detected	130	Not Detected
Methylene Chloride	170	Not Detected	580	Not Detected
1,1-Dichloroethane	17	360	68	1400
cis-1,2-Dichloroethene	17	1200	67	4800
1,1,1-Trichloroethane	17	930	92	5100
Trichloroethene	17	6000	90	32000
Tetrachloroethene	17	70	110	480
trans-1,2-Dichloroethene	17	Not Detected	67	Not Detected

Container Type: 1 Liter Summa Canister (100% Certified)

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	85	70-130
Toluene-d8	100	70-130
4-Bromofluorobenzene	97	70-130

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Client Sample ID: Lab Blank

Lab ID#: 1308715-26A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**j090606**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 9/6/13 01:38 PM**	

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Vinyl Chloride	0.50	Not Detected	1.3	Not Detected
Chloroethane	2.0	Not Detected	5.3	Not Detected
1,1-Dichloroethene	0.50	Not Detected	2.0	Not Detected
Freon 113	0.50	Not Detected	3.8	Not Detected
Methylene Chloride	5.0	Not Detected	17	Not Detected
1,1-Dichloroethane	0.50	Not Detected	2.0	Not Detected
cis-1,2-Dichloroethene	0.50	Not Detected	2.0	Not Detected
1,1,1-Trichloroethane	0.50	Not Detected	2.7	Not Detected
Trichloroethene	0.50	Not Detected	2.7	Not Detected
Tetrachloroethene	0.50	Not Detected	3.4	Not Detected
trans-1,2-Dichloroethene	0.50	Not Detected	2.0	Not Detected

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	94	70-130
Toluene-d8	99	70-130
4-Bromofluorobenzene	98	70-130

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Client Sample ID: Lab Blank

Lab ID#: 1308715-26B

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**j090906**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 9/9/13 12:05 PM**	

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Vinyl Chloride	0.50	Not Detected	1.3	Not Detected
Chloroethane	2.0	Not Detected	5.3	Not Detected
1,1-Dichloroethene	0.50	Not Detected	2.0	Not Detected
Freon 113	0.50	Not Detected	3.8	Not Detected
Methylene Chloride	5.0	Not Detected	17	Not Detected
1,1-Dichloroethane	0.50	Not Detected	2.0	Not Detected
cis-1,2-Dichloroethene	0.50	Not Detected	2.0	Not Detected
1,1,1-Trichloroethane	0.50	Not Detected	2.7	Not Detected
Trichloroethene	0.50	Not Detected	2.7	Not Detected
Tetrachloroethene	0.50	Not Detected	3.4	Not Detected
trans-1,2-Dichloroethene	0.50	Not Detected	2.0	Not Detected

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	93	70-130
Toluene-d8	97	70-130
4-Bromofluorobenzene	102	70-130

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Client Sample ID: Lab Blank

Lab ID#: 1308715-26C

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**17090906**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 9/9/13 10:28 AM**	

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Vinyl Chloride	0.50	Not Detected	1.3	Not Detected
Chloroethane	2.0	Not Detected	5.3	Not Detected
1,1-Dichloroethene	0.50	Not Detected	2.0	Not Detected
Freon 113	0.50	Not Detected	3.8	Not Detected
Methylene Chloride	5.0	Not Detected	17	Not Detected
1,1-Dichloroethane	0.50	Not Detected	2.0	Not Detected
cis-1,2-Dichloroethene	0.50	Not Detected	2.0	Not Detected
1,1,1-Trichloroethane	0.50	Not Detected	2.7	Not Detected
Trichloroethene	0.50	Not Detected	2.7	Not Detected
Tetrachloroethene	0.50	Not Detected	3.4	Not Detected
trans-1,2-Dichloroethene	0.50	Not Detected	2.0	Not Detected

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	86	70-130
Toluene-d8	102	70-130
4-Bromofluorobenzene	103	70-130

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Client Sample ID: CCV

Lab ID#: 1308715-27A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**j090602**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 9/6/13 11:34 AM**	

Compound	**%Recovery**
Vinyl Chloride	99
Chloroethane	92
1,1-Dichloroethene	97
Freon 113	106
Methylene Chloride	91
1,1-Dichloroethane	92
cis-1,2-Dichloroethene	98
1,1,1-Trichloroethane	97
Trichloroethene	102
Tetrachloroethene	105
trans-1,2-Dichloroethene	101

Container Type: NA - Not Applicable

Surrogates	**%Recovery**	**Method Limits**
1,2-Dichloroethane-d4	95	70-130
Toluene-d8	102	70-130
4-Bromofluorobenzene	106	70-130

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Client Sample ID: CCV

Lab ID#: 1308715-27B

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**j090902**	**Date of Collection: NA**
Dil. Factor:	**1.00**	**Date of Analysis: 9/9/13 09:47 AM**

Compound	%Recovery
Vinyl Chloride	106
Chloroethane	101
1,1-Dichloroethene	101
Freon 113	105
Methylene Chloride	92
1,1-Dichloroethane	96
cis-1,2-Dichloroethene	104
1,1,1-Trichloroethane	96
Trichloroethene	100
Tetrachloroethene	100
trans-1,2-Dichloroethene	104

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	96	70-130
Toluene-d8	99	70-130
4-Bromofluorobenzene	108	70-130

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Client Sample ID: CCV

Lab ID#: 1308715-27C

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**17090902**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 9/9/13 08:51 AM**	

Compound	**%Recovery**
Vinyl Chloride	91
Chloroethane	93
1,1-Dichloroethene	96
Freon 113	101
Methylene Chloride	88
1,1-Dichloroethane	95
cis-1,2-Dichloroethene	91
1,1,1-Trichloroethane	97
Trichloroethene	94
Tetrachloroethene	95
trans-1,2-Dichloroethene	101

Container Type: NA - Not Applicable

Surrogates	**%Recovery**	**Method Limits**
1,2-Dichloroethane-d4	94	70-130
Toluene-d8	100	70-130
4-Bromofluorobenzene	99	70-130

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Client Sample ID: LCS

Lab ID#: 1308715-28A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**j090603**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 9/6/13 12:04 PM**	

Compound	%Recovery	Method Limits
Vinyl Chloride	97	70-130
Chloroethane	95	70-130
1,1-Dichloroethene	103	70-130
Freon 113	101	70-130
Methylene Chloride	87	70-130
1,1-Dichloroethane	88	70-130
cis-1,2-Dichloroethene	94	70-130
1,1,1-Trichloroethane	95	70-130
Trichloroethene	94	70-130
Tetrachloroethene	95	70-130
trans-1,2-Dichloroethene	107	70-130

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	96	70-130
Toluene-d8	102	70-130
4-Bromofluorobenzene	101	70-130

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Client Sample ID: LCSD

Lab ID#: 1308715-28AA

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**j090604**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 9/6/13 12:33 PM**	

Compound	%Recovery	Method Limits
Vinyl Chloride	97	70-130
Chloroethane	92	70-130
1,1-Dichloroethene	102	70-130
Freon 113	101	70-130
Methylene Chloride	84	70-130
1,1-Dichloroethane	85	70-130
cis-1,2-Dichloroethene	92	70-130
1,1,1-Trichloroethane	92	70-130
Trichloroethene	98	70-130
Tetrachloroethene	98	70-130
trans-1,2-Dichloroethene	106	70-130

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	88	70-130
Toluene-d8	100	70-130
4-Bromofluorobenzene	104	70-130

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Client Sample ID: LCS

Lab ID#: 1308715-28B

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**j090903**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 9/9/13 10:19 AM**	

Compound	%Recovery	Method Limits
Vinyl Chloride	101	70-130
Chloroethane	95	70-130
1,1-Dichloroethene	107	70-130
Freon 113	105	70-130
Methylene Chloride	89	70-130
1,1-Dichloroethane	88	70-130
cis-1,2-Dichloroethene	100	70-130
1,1,1-Trichloroethane	93	70-130
Trichloroethene	95	70-130
Tetrachloroethene	95	70-130
trans-1,2-Dichloroethene	108	70-130

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	95	70-130
Toluene-d8	100	70-130
4-Bromofluorobenzene	107	70-130

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Client Sample ID: LCSD

Lab ID#: 1308715-28BB

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**j090904**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 9/9/13 10:41 AM**	

Compound	%Recovery	Method Limits
Vinyl Chloride	99	70-130
Chloroethane	89	70-130
1,1-Dichloroethene	101	70-130
Freon 113	97	70-130
Methylene Chloride	82	70-130
1,1-Dichloroethane	86	70-130
cis-1,2-Dichloroethene	92	70-130
1,1,1-Trichloroethane	89	70-130
Trichloroethene	92	70-130
Tetrachloroethene	93	70-130
trans-1,2-Dichloroethene	107	70-130

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	91	70-130
Toluene-d8	100	70-130
4-Bromofluorobenzene	105	70-130

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Client Sample ID: LCS

Lab ID#: 1308715-28C

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**17090903**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 9/9/13 09:12 AM**	

Compound	%Recovery	Method Limits
Vinyl Chloride	84	70-130
Chloroethane	88	70-130
1,1-Dichloroethene	96	70-130
Freon 113	95	70-130
Methylene Chloride	82	70-130
1,1-Dichloroethane	88	70-130
cis-1,2-Dichloroethene	87	70-130
1,1,1-Trichloroethane	92	70-130
Trichloroethene	93	70-130
Tetrachloroethene	92	70-130
trans-1,2-Dichloroethene	103	70-130

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	89	70-130
Toluene-d8	100	70-130
4-Bromofluorobenzene	93	70-130

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Client Sample ID: LCSD

Lab ID#: 1308715-28CC

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**17090904**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 9/9/13 09:32 AM**	

Compound	%Recovery	Method Limits
Vinyl Chloride	87	70-130
Chloroethane	91	70-130
1,1-Dichloroethene	100	70-130
Freon 113	98	70-130
Methylene Chloride	85	70-130
1,1-Dichloroethane	91	70-130
cis-1,2-Dichloroethene	88	70-130
1,1,1-Trichloroethane	96	70-130
Trichloroethene	94	70-130
Tetrachloroethene	93	70-130
trans-1,2-Dichloroethene	108	70-130

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	93	70-130
Toluene-d8	101	70-130
4-Bromofluorobenzene	96	70-130

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9/12/2013
Ms. Erica Bradstreet
Sanborn, Head & Associates
1715 W 13th Street

Houston TX 77008

Project Name: Endicott Groundwater Vapor Project
Project #: 2755.07
Workorder #: 1308716

Dear Ms. Erica Bradstreet

The following report includes the data for the above referenced project for sample(s) received on 8/30/2013 at Air Toxics Ltd.

The data and associated QC analyzed by Modified TO-15 are compliant with the project requirements or laboratory criteria with the exception of the deviations noted in the attached case narrative.

Thank you for choosing Air Toxics Ltd. for your air analysis needs. Air Toxics Ltd. is committed to providing accurate data of the highest quality. Please feel free to contact the Project Manager: Ausha Scott at 916-985-1000 if you have any questions regarding the data in this report.

Regards,

Ausha Scott

Project Manager

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WORK ORDER #: 1308716

Work Order Summary

CLIENT:	Ms. Erica Bradstreet Sanborn, Head & Associates 1715 W 13th Street Houston, TX 77008	**BILL TO:**	Accounts Payable Sanborn, Head & Associates 20 Foundry Street Concord, NH 03301
PHONE:	713-869-2259	**P.O. #**	3304.00
FAX:		**PROJECT #**	2755.07 Endicott Groundwater Vapor Project
DATE RECEIVED:	08/30/2013	**CONTACT:**	Ausha Scott
DATE COMPLETED:	09/12/2013		

FRACTION #	NAME	TEST	RECEIPT VAC./PRES.	FINAL PRESSURE
01A	DU34647082713	Modified TO-15	6.5 "Hg	5 psi
01AA	DU34647082713 Lab Duplicate	Modified TO-15	6.5 "Hg	5 psi
02A	DU9534082813	Modified TO-15	8.2 "Hg	5.3 psi
03A	EN0411D082713	Modified TO-15	7.6 "Hg	5.4 psi
04A	EN0411S082713	Modified TO-15	7.1 "Hg	5.2 psi
05A	EN0412D082713	Modified TO-15	6.5 "Hg	5.5 psi
06A	EN0414D082813	Modified TO-15	8 "Hg	5.6 psi
07A	EN041S082713	Modified TO-15	5.7 "Hg	5.2 psi
08A	EN0420S082813	Modified TO-15	6.7 "Hg	4.9 psi
09A	EN0421D082813	Modified TO-15	7.3 "Hg	4.8 psi
10A	EN0432D082713	Modified TO-15	5.3 "Hg	5.1 psi
11A	EN0432S082713	Modified TO-15	6.5 "Hg	4.8 psi
12A	EN044D082713	Modified TO-15	6.3 "Hg	5.3 psi
13A	EN046D082813	Modified TO-15	3.7 "Hg	5 psi
14A	EN046S082813	Modified TO-15	3.7 "Hg	5.2 psi
15A	EN047D082713	Modified TO-15	6.9 "Hg	5.1 psi
16A	EN047S082713	Modified TO-15	6.3 "Hg	5.1 psi
17A	EN0529S082713	Modified TO-15	5.3 "Hg	5.5 psi
17AA	EN0529S082713 Lab Duplicate	Modified TO-15	5.3 "Hg	5.5 psi
18A	EN0636S082813	Modified TO-15	7.6 "Hg	5 psi
19A	Lab Blank	Modified TO-15	NA	NA
19B	Lab Blank	Modified TO-15	NA	NA
20A	CCV	Modified TO-15	NA	NA

Continued on next page

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WORK ORDER #: 1308716

Work Order Summary

CLIENT:	Ms. Erica Bradstreet Sanborn, Head & Associates 1715 W 13th Street Houston, TX 77008	**BILL TO:**	Accounts Payable Sanborn, Head & Associates 20 Foundry Street Concord, NH 03301
PHONE:	713-869-2259	**P.O. #**	3304.00
FAX:		**PROJECT #**	2755.07 Endicott Groundwater Vapor Project
DATE RECEIVED:	08/30/2013	**CONTACT:**	Ausha Scott
DATE COMPLETED:	09/12/2013		

FRACTION #	NAME	TEST	RECEIPT VAC./PRES.	FINAL PRESSURE
20B	CCV	Modified TO-15	NA	NA
21A	LCS	Modified TO-15	NA	NA
21AA	LCSD	Modified TO-15	NA	NA
21B	LCS	Modified TO-15	NA	NA
21BB	LCSD	Modified TO-15	NA	NA

CERTIFIED BY: Heidi Hayes DATE: 09/12/13

Technical Director

Certification numbers: AZ Licensure AZ0775, CA NELAP - 12282CA, NJ NELAP - CA016, NY NELAP - 11291, TX NELAP - T104704434-12-5, UT NELAP CA009332012-3, VA NELAP - 460197, WA NELAP - C935
Name of Accrediting Agency: NELAP/ORELAP (Oregon Environmental Laboratory Accreditation Program)
Accreditation number: CA300005, Effective date: 10/18/2012, Expiration date: 10/17/2013.
Eurofins Air Toxics Inc.. certifies that the test results contained in this report meet all requirements of the NELAC standards

180 BLUE RAVINE ROAD, SUITE B FOLSOM, CA - 9563
(916) 985-1000 . (800) 985-5955 . FAX (916) 985-1020

LABORATORY NARRATIVE
EPA Method TO-15
Sanborn, Head & Associates
Workorder# 1308716

Eighteen 1 Liter Summa Canister (100% Certified) samples were received on August 30, 2013. The laboratory performed analysis via EPA Method TO-15 using GC/MS in the full scan mode.

This workorder was independently validated prior to submittal using 'USEPA National Functional Guidelines' as generally applied to the analysis of volatile organic compounds in air. A rules-based, logic driven, independent validation engine was employed to assess completeness, evaluate pass/fail of relevant project quality control requirements and verification of all quantified amounts.

Receiving Notes

The Chain of Custody (COC) information for sample EN044D082713 did not match the information on the canister with regard to canister identification. The client was notified of the discrepancy and the information on the canister was used to process and report the sample.

Analytical Notes

There were no analytical discrepancies.

Definition of Data Qualifying Flags

Eight qualifiers may have been used on the data analysis sheets and indicates as follows:

B - Compound present in laboratory blank greater than reporting limit (background subtraction not performed).

J - Estimated value.

E - Exceeds instrument calibration range.

S - Saturated peak.

Q - Exceeds quality control limits.

U - Compound analyzed for but not detected above the reporting limit, LOD, or MDL value. See data page for project specific U-flag definition.

UJ- Non-detected compound associated with low bias in the CCV

N - The identification is based on presumptive evidence.

File extensions may have been used on the data analysis sheets and indicates as follows:

a-File was requantified

b-File was quantified by a second column and detector

r1-File was requantified for the purpose of reissue

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Summary of Detected Compounds
EPA METHOD TO-15 GC/MS FULL SCAN

Client Sample ID: DU34647082713

Lab ID#: 1308716-01A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,1,1-Trichloroethane	0.86	1.4	4.7	7.8
Trichloroethene	0.86	12	4.6	66

Client Sample ID: DU34647082713 Lab Duplicate

Lab ID#: 1308716-01AA

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Trichloroethene	1.6	13	8.5	71

Client Sample ID: DU9534082813

Lab ID#: 1308716-02A

No Detections Were Found.

Client Sample ID: EN0411D082713

Lab ID#: 1308716-03A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,1,1-Trichloroethane	0.92	4.5	5.0	24
Trichloroethene	0.92	150	4.9	790
Tetrachloroethene	0.92	4.2	6.2	28

Client Sample ID: EN0411S082713

Lab ID#: 1308716-04A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,1,1-Trichloroethane	0.89	2.3	4.8	12
Trichloroethene	0.89	19	4.8	100
Tetrachloroethene	0.89	1.3	6.0	8.9

Client Sample ID: EN0412D082713

Lab ID#: 1308716-05A

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Summary of Detected Compounds
EPA METHOD TO-15 GC/MS FULL SCAN

Client Sample ID: EN0412D082713

Lab ID#: 1308716-05A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,1,1-Trichloroethane	0.88	2.1	4.8	11
Trichloroethene	0.88	79	4.7	420

Client Sample ID: EN0414D082813

Lab ID#: 1308716-06A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,1,1-Trichloroethane	0.94	1.2	5.1	6.5
Trichloroethene	0.94	19	5.0	100
Tetrachloroethene	0.94	1.9	6.4	13

Client Sample ID: EN041S082713

Lab ID#: 1308716-07A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Trichloroethene	0.84	1.5	4.5	8.1

Client Sample ID: EN0420S082813

Lab ID#: 1308716-08A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Tetrachloroethene	0.86	1.1	5.8	7.5

Client Sample ID: EN0421D082813

Lab ID#: 1308716-09A

No Detections Were Found.

Client Sample ID: EN0432D082713

Lab ID#: 1308716-10A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 113	0.82	0.96	6.3	7.4

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Summary of Detected Compounds
EPA METHOD TO-15 GC/MS FULL SCAN

Client Sample ID: EN0432D082713

Lab ID#: 1308716-10A

1,1-Dichloroethane	0.82	1.2	3.3	4.9
1,1,1-Trichloroethane	0.82	21	4.5	120
Trichloroethene	0.82	230	4.4	1200

Client Sample ID: EN0432S082713

Lab ID#: 1308716-11A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
cis-1,2-Dichloroethene	0.85	2.0	3.4	8.2
1,1,1-Trichloroethane	0.85	8.2	4.6	45
Trichloroethene	0.85	120	4.6	670

Client Sample ID: EN044D082713

Lab ID#: 1308716-12A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Trichloroethene	0.86	0.96	4.6	5.2

Client Sample ID: EN046D082813

Lab ID#: 1308716-13A

No Detections Were Found.

Client Sample ID: EN046S082813

Lab ID#: 1308716-14A

No Detections Were Found.

Client Sample ID: EN047D082713

Lab ID#: 1308716-15A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
cis-1,2-Dichloroethene	0.88	1.0	3.5	4.1
1,1,1-Trichloroethane	0.88	11	4.8	59
Trichloroethene	0.88	300	4.7	1600

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Summary of Detected Compounds
EPA METHOD TO-15 GC/MS FULL SCAN

Client Sample ID: EN047D082713

Lab ID#: 1308716-15A

Tetrachloroethene	0.88	5.9	5.9	40

Client Sample ID: EN047S082713

Lab ID#: 1308716-16A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Trichloroethene	0.86	1.7	4.6	9.1
Tetrachloroethene	0.86	3.6	5.8	25

Client Sample ID: EN0529S082713

Lab ID#: 1308716-17A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,1,1-Trichloroethane	0.84	1.6	4.6	8.5
Trichloroethene	0.84	16	4.5	84

Client Sample ID: EN0529S082713 Lab Duplicate

Lab ID#: 1308716-17AA

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,1,1-Trichloroethane	0.84	1.3	4.6	6.9
Trichloroethene	0.84	12	4.5	66

Client Sample ID: EN0636S082813

Lab ID#: 1308716-18A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,1,1-Trichloroethane	0.90	1.9	4.9	10
Trichloroethene	0.90	3.1	4.8	17

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Client Sample ID: DU34647082713

Lab ID#: 1308716-01A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**j090507**	**Date of Collection:**	**8/27/13 1:06:00 PM**
Dil. Factor:	**1.71**	**Date of Analysis:**	**9/5/13 02:17 PM**

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Vinyl Chloride	0.86	Not Detected	2.2	Not Detected
Chloroethane	3.4	Not Detected	9.0	Not Detected
1,1-Dichloroethene	0.86	Not Detected	3.4	Not Detected
Freon 113	0.86	Not Detected	6.6	Not Detected
Methylene Chloride	8.6	Not Detected	30	Not Detected
1,1-Dichloroethane	0.86	Not Detected	3.5	Not Detected
cis-1,2-Dichloroethene	0.86	Not Detected	3.4	Not Detected
1,1,1-Trichloroethane	0.86	1.4	4.7	7.8
Trichloroethene	0.86	12	4.6	66
Tetrachloroethene	0.86	Not Detected	5.8	Not Detected
trans-1,2-Dichloroethene	0.86	Not Detected	3.4	Not Detected

Container Type: 1 Liter Summa Canister (100% Certified)

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	90	70-130
Toluene-d8	98	70-130
4-Bromofluorobenzene	99	70-130

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Client Sample ID: DU34647082713 Lab Duplicate

Lab ID#: 1308716-01AA

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**j090511**	**Date of Collection:**	**8/27/13 1:06:00 PM**
Dil. Factor:	**3.15**	**Date of Analysis:**	**9/5/13 04:20 PM**

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Vinyl Chloride	1.6	Not Detected	4.0	Not Detected
Chloroethane	6.3	Not Detected	17	Not Detected
1,1-Dichloroethene	1.6	Not Detected	6.2	Not Detected
Freon 113	1.6	Not Detected	12	Not Detected
Methylene Chloride	16	Not Detected	55	Not Detected
1,1-Dichloroethane	1.6	Not Detected	6.4	Not Detected
cis-1,2-Dichloroethene	1.6	Not Detected	6.2	Not Detected
1,1,1-Trichloroethane	1.6	Not Detected	8.6	Not Detected
Trichloroethene	1.6	13	8.5	71
Tetrachloroethene	1.6	Not Detected	11	Not Detected
trans-1,2-Dichloroethene	1.6	Not Detected	6.2	Not Detected

Container Type: 1 Liter Summa Canister (100% Certified)

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	94	70-130
Toluene-d8	96	70-130
4-Bromofluorobenzene	97	70-130

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Client Sample ID: DU9534082813

Lab ID#: 1308716-02A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**j090509**	**Date of Collection:**	**8/28/13 11:58:00 AM**
Dil. Factor:	**1.87**	**Date of Analysis:**	**9/5/13 03:17 PM**

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Vinyl Chloride	0.94	Not Detected	2.4	Not Detected
Chloroethane	3.7	Not Detected	9.9	Not Detected
1,1-Dichloroethene	0.94	Not Detected	3.7	Not Detected
Freon 113	0.94	Not Detected	7.2	Not Detected
Methylene Chloride	9.4	Not Detected	32	Not Detected
1,1-Dichloroethane	0.94	Not Detected	3.8	Not Detected
cis-1,2-Dichloroethene	0.94	Not Detected	3.7	Not Detected
1,1,1-Trichloroethane	0.94	Not Detected	5.1	Not Detected
Trichloroethene	0.94	Not Detected	5.0	Not Detected
Tetrachloroethene	0.94	Not Detected	6.3	Not Detected
trans-1,2-Dichloroethene	0.94	Not Detected	3.7	Not Detected

Container Type: 1 Liter Summa Canister (100% Certified)

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	93	70-130
Toluene-d8	96	70-130
4-Bromofluorobenzene	103	70-130

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Client Sample ID: EN0411D082713

Lab ID#: 1308716-03A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**j090510**	**Date of Collection:**	**8/27/13 3:27:00 PM**
Dil. Factor:	**1.83**	**Date of Analysis:**	**9/5/13 03:46 PM**

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Vinyl Chloride	0.92	Not Detected	2.3	Not Detected
Chloroethane	3.7	Not Detected	9.6	Not Detected
1,1-Dichloroethene	0.92	Not Detected	3.6	Not Detected
Freon 113	0.92	Not Detected	7.0	Not Detected
Methylene Chloride	9.2	Not Detected	32	Not Detected
1,1-Dichloroethane	0.92	Not Detected	3.7	Not Detected
cis-1,2-Dichloroethene	0.92	Not Detected	3.6	Not Detected
1,1,1-Trichloroethane	0.92	4.5	5.0	24
Trichloroethene	0.92	150	4.9	790
Tetrachloroethene	0.92	4.2	6.2	28
trans-1,2-Dichloroethene	0.92	Not Detected	3.6	Not Detected

Container Type: 1 Liter Summa Canister (100% Certified)

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	98	70-130
Toluene-d8	96	70-130
4-Bromofluorobenzene	103	70-130

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Client Sample ID: EN0411S082713

Lab ID#: 1308716-04A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**j090512**	**Date of Collection:**	**8/27/13 3:35:00 PM**
Dil. Factor:	**1.78**	**Date of Analysis:**	**9/5/13 04:50 PM**

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Vinyl Chloride	0.89	Not Detected	2.3	Not Detected
Chloroethane	3.6	Not Detected	9.4	Not Detected
1,1-Dichloroethene	0.89	Not Detected	3.5	Not Detected
Freon 113	0.89	Not Detected	6.8	Not Detected
Methylene Chloride	8.9	Not Detected	31	Not Detected
1,1-Dichloroethane	0.89	Not Detected	3.6	Not Detected
cis-1,2-Dichloroethene	0.89	Not Detected	3.5	Not Detected
1,1,1-Trichloroethane	0.89	2.3	4.8	12
Trichloroethene	0.89	19	4.8	100
Tetrachloroethene	0.89	1.3	6.0	8.9
trans-1,2-Dichloroethene	0.89	Not Detected	3.5	Not Detected

Container Type: 1 Liter Summa Canister (100% Certified)

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	99	70-130
Toluene-d8	98	70-130
4-Bromofluorobenzene	98	70-130

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Client Sample ID: EN0412D082713

Lab ID#: 1308716-05A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**j090513**	**Date of Collection: 8/27/13 5:20:00 PM**	
Dil. Factor:	**1.76**	**Date of Analysis: 9/5/13 05:18 PM**	

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Vinyl Chloride	0.88	Not Detected	2.2	Not Detected
Chloroethane	3.5	Not Detected	9.3	Not Detected
1,1-Dichloroethene	0.88	Not Detected	3.5	Not Detected
Freon 113	0.88	Not Detected	6.7	Not Detected
Methylene Chloride	8.8	Not Detected	30	Not Detected
1,1-Dichloroethane	0.88	Not Detected	3.6	Not Detected
cis-1,2-Dichloroethene	0.88	Not Detected	3.5	Not Detected
1,1,1-Trichloroethane	0.88	2.1	4.8	11
Trichloroethene	0.88	79	4.7	420
Tetrachloroethene	0.88	Not Detected	6.0	Not Detected
trans-1,2-Dichloroethene	0.88	Not Detected	3.5	Not Detected

Container Type: 1 Liter Summa Canister (100% Certified)

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	92	70-130
Toluene-d8	95	70-130
4-Bromofluorobenzene	104	70-130

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Client Sample ID: EN0414D082813

Lab ID#: 1308716-06A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**j090514**	**Date of Collection:**	**8/28/13 8:55:00 AM**
Dil. Factor:	**1.88**	**Date of Analysis:**	**9/5/13 05:44 PM**

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Vinyl Chloride	0.94	Not Detected	2.4	Not Detected
Chloroethane	3.8	Not Detected	9.9	Not Detected
1,1-Dichloroethene	0.94	Not Detected	3.7	Not Detected
Freon 113	0.94	Not Detected	7.2	Not Detected
Methylene Chloride	9.4	Not Detected	33	Not Detected
1,1-Dichloroethane	0.94	Not Detected	3.8	Not Detected
cis-1,2-Dichloroethene	0.94	Not Detected	3.7	Not Detected
1,1,1-Trichloroethane	0.94	1.2	5.1	6.5
Trichloroethene	0.94	19	5.0	100
Tetrachloroethene	0.94	1.9	6.4	13
trans-1,2-Dichloroethene	0.94	Not Detected	3.7	Not Detected

Container Type: 1 Liter Summa Canister (100% Certified)

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	94	70-130
Toluene-d8	93	70-130
4-Bromofluorobenzene	103	70-130

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Client Sample ID: EN041S082713

Lab ID#: 1308716-07A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**j090515**	**Date of Collection:**	**8/27/13 8:12:00 AM**
Dil. Factor:	**1.67**	**Date of Analysis:**	**9/5/13 06:14 PM**

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Vinyl Chloride	0.84	Not Detected	2.1	Not Detected
Chloroethane	3.3	Not Detected	8.8	Not Detected
1,1-Dichloroethene	0.84	Not Detected	3.3	Not Detected
Freon 113	0.84	Not Detected	6.4	Not Detected
Methylene Chloride	8.4	Not Detected	29	Not Detected
1,1-Dichloroethane	0.84	Not Detected	3.4	Not Detected
cis-1,2-Dichloroethene	0.84	Not Detected	3.3	Not Detected
1,1,1-Trichloroethane	0.84	Not Detected	4.6	Not Detected
Trichloroethene	0.84	1.5	4.5	8.1
Tetrachloroethene	0.84	Not Detected	5.7	Not Detected
trans-1,2-Dichloroethene	0.84	Not Detected	3.3	Not Detected

Container Type: 1 Liter Summa Canister (100% Certified)

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	99	70-130
Toluene-d8	95	70-130
4-Bromofluorobenzene	99	70-130

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Client Sample ID: EN0420S082813

Lab ID#: 1308716-08A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**j090516**	**Date of Collection:**	**8/28/13 3:15:00 PM**
Dil. Factor:	**1.72**	**Date of Analysis:**	**9/5/13 06:52 PM**

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Vinyl Chloride	0.86	Not Detected	2.2	Not Detected
Chloroethane	3.4	Not Detected	9.1	Not Detected
1,1-Dichloroethene	0.86	Not Detected	3.4	Not Detected
Freon 113	0.86	Not Detected	6.6	Not Detected
Methylene Chloride	8.6	Not Detected	30	Not Detected
1,1-Dichloroethane	0.86	Not Detected	3.5	Not Detected
cis-1,2-Dichloroethene	0.86	Not Detected	3.4	Not Detected
1,1,1-Trichloroethane	0.86	Not Detected	4.7	Not Detected
Trichloroethene	0.86	Not Detected	4.6	Not Detected
Tetrachloroethene	0.86	1.1	5.8	7.5
trans-1,2-Dichloroethene	0.86	Not Detected	3.4	Not Detected

Container Type: 1 Liter Summa Canister (100% Certified)

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	93	70-130
Toluene-d8	96	70-130
4-Bromofluorobenzene	106	70-130

eurofins | Air Toxics

Client Sample ID: EN0421D082813

Lab ID#: 1308716-09A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**j090517**	**Date of Collection: 8/28/13 3:35:00 PM**	
Dil. Factor:	**1.76**	**Date of Analysis: 9/5/13 07:21 PM**	

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Vinyl Chloride	0.88	Not Detected	2.2	Not Detected
Chloroethane	3.5	Not Detected	9.3	Not Detected
1,1-Dichloroethene	0.88	Not Detected	3.5	Not Detected
Freon 113	0.88	Not Detected	6.7	Not Detected
Methylene Chloride	8.8	Not Detected	30	Not Detected
1,1-Dichloroethane	0.88	Not Detected	3.6	Not Detected
cis-1,2-Dichloroethene	0.88	Not Detected	3.5	Not Detected
1,1,1-Trichloroethane	0.88	Not Detected	4.8	Not Detected
Trichloroethene	0.88	Not Detected	4.7	Not Detected
Tetrachloroethene	0.88	Not Detected	6.0	Not Detected
trans-1,2-Dichloroethene	0.88	Not Detected	3.5	Not Detected

Container Type: 1 Liter Summa Canister (100% Certified)

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	96	70-130
Toluene-d8	90	70-130
4-Bromofluorobenzene	99	70-130

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Client Sample ID: EN0432D082713

Lab ID#: 1308716-10A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**j090518**	**Date of Collection:**	**8/27/13 2:57:00 PM**
Dil. Factor:	**1.64**	**Date of Analysis:**	**9/5/13 07:52 PM**

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Vinyl Chloride	0.82	Not Detected	2.1	Not Detected
Chloroethane	3.3	Not Detected	8.6	Not Detected
1,1-Dichloroethene	0.82	Not Detected	3.2	Not Detected
Freon 113	0.82	0.96	6.3	7.4
Methylene Chloride	8.2	Not Detected	28	Not Detected
1,1-Dichloroethane	0.82	1.2	3.3	4.9
cis-1,2-Dichloroethene	0.82	Not Detected	3.2	Not Detected
1,1,1-Trichloroethane	0.82	21	4.5	120
Trichloroethene	0.82	230	4.4	1200
Tetrachloroethene	0.82	Not Detected	5.6	Not Detected
trans-1,2-Dichloroethene	0.82	Not Detected	3.2	Not Detected

Container Type: 1 Liter Summa Canister (100% Certified)

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	94	70-130
Toluene-d8	95	70-130
4-Bromofluorobenzene	99	70-130

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Client Sample ID: EN0432S082713

Lab ID#: 1308716-11A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**j090519**	**Date of Collection:**	**8/27/13 2:48:00 PM**
Dil. Factor:	**1.70**	**Date of Analysis:**	**9/5/13 08:33 PM**

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Vinyl Chloride	0.85	Not Detected	2.2	Not Detected
Chloroethane	3.4	Not Detected	9.0	Not Detected
1,1-Dichloroethene	0.85	Not Detected	3.4	Not Detected
Freon 113	0.85	Not Detected	6.5	Not Detected
Methylene Chloride	8.5	Not Detected	30	Not Detected
1,1-Dichloroethane	0.85	Not Detected	3.4	Not Detected
cis-1,2-Dichloroethene	0.85	2.0	3.4	8.2
1,1,1-Trichloroethane	0.85	8.2	4.6	45
Trichloroethene	0.85	120	4.6	670
Tetrachloroethene	0.85	Not Detected	5.8	Not Detected
trans-1,2-Dichloroethene	0.85	Not Detected	3.4	Not Detected

Container Type: 1 Liter Summa Canister (100% Certified)

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	97	70-130
Toluene-d8	98	70-130
4-Bromofluorobenzene	97	70-130

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Client Sample ID: EN044D082713

Lab ID#: 1308716-12A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**j090520**	**Date of Collection:**	**8/27/13 5:35:00 PM**
Dil. Factor:	**1.72**	**Date of Analysis:**	**9/5/13 09:00 PM**

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Vinyl Chloride	0.86	Not Detected	2.2	Not Detected
Chloroethane	3.4	Not Detected	9.1	Not Detected
1,1-Dichloroethene	0.86	Not Detected	3.4	Not Detected
Freon 113	0.86	Not Detected	6.6	Not Detected
Methylene Chloride	8.6	Not Detected	30	Not Detected
1,1-Dichloroethane	0.86	Not Detected	3.5	Not Detected
cis-1,2-Dichloroethene	0.86	Not Detected	3.4	Not Detected
1,1,1-Trichloroethane	0.86	Not Detected	4.7	Not Detected
Trichloroethene	0.86	0.96	4.6	5.2
Tetrachloroethene	0.86	Not Detected	5.8	Not Detected
trans-1,2-Dichloroethene	0.86	Not Detected	3.4	Not Detected

Container Type: 1 Liter Summa Canister (100% Certified)

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	91	70-130
Toluene-d8	93	70-130
4-Bromofluorobenzene	102	70-130

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Client Sample ID: EN046D082813

Lab ID#: 1308716-13A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**j090521**	**Date of Collection:**	**8/28/13 11:43:00 AM**
Dil. Factor:	**1.53**	**Date of Analysis:**	**9/5/13 09:27 PM**

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Vinyl Chloride	0.76	Not Detected	2.0	Not Detected
Chloroethane	3.1	Not Detected	8.1	Not Detected
1,1-Dichloroethene	0.76	Not Detected	3.0	Not Detected
Freon 113	0.76	Not Detected	5.9	Not Detected
Methylene Chloride	7.6	Not Detected	26	Not Detected
1,1-Dichloroethane	0.76	Not Detected	3.1	Not Detected
cis-1,2-Dichloroethene	0.76	Not Detected	3.0	Not Detected
1,1,1-Trichloroethane	0.76	Not Detected	4.2	Not Detected
Trichloroethene	0.76	Not Detected	4.1	Not Detected
Tetrachloroethene	0.76	Not Detected	5.2	Not Detected
trans-1,2-Dichloroethene	0.76	Not Detected	3.0	Not Detected

Container Type: 1 Liter Summa Canister (100% Certified)

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	97	70-130
Toluene-d8	96	70-130
4-Bromofluorobenzene	106	70-130

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Client Sample ID: EN046S082813

Lab ID#: 1308716-14A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**j090522**	**Date of Collection:**	**8/28/13 11:43:00 AM**
Dil. Factor:	**1.54**	**Date of Analysis:**	**9/5/13 09:53 PM**

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Vinyl Chloride	0.77	Not Detected	2.0	Not Detected
Chloroethane	3.1	Not Detected	8.1	Not Detected
1,1-Dichloroethene	0.77	Not Detected	3.0	Not Detected
Freon 113	0.77	Not Detected	5.9	Not Detected
Methylene Chloride	7.7	Not Detected	27	Not Detected
1,1-Dichloroethane	0.77	Not Detected	3.1	Not Detected
cis-1,2-Dichloroethene	0.77	Not Detected	3.0	Not Detected
1,1,1-Trichloroethane	0.77	Not Detected	4.2	Not Detected
Trichloroethene	0.77	Not Detected	4.1	Not Detected
Tetrachloroethene	0.77	Not Detected	5.2	Not Detected
trans-1,2-Dichloroethene	0.77	Not Detected	3.0	Not Detected

Container Type: 1 Liter Summa Canister (100% Certified)

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	96	70-130
Toluene-d8	95	70-130
4-Bromofluorobenzene	101	70-130

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Client Sample ID: EN047D082713

Lab ID#: 1308716-15A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**j090523**	**Date of Collection:**	**8/27/13 3:11:00 PM**
Dil. Factor:	**1.75**	**Date of Analysis:**	**9/5/13 10:19 PM**

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Vinyl Chloride	0.88	Not Detected	2.2	Not Detected
Chloroethane	3.5	Not Detected	9.2	Not Detected
1,1-Dichloroethene	0.88	Not Detected	3.5	Not Detected
Freon 113	0.88	Not Detected	6.7	Not Detected
Methylene Chloride	8.8	Not Detected	30	Not Detected
1,1-Dichloroethane	0.88	Not Detected	3.5	Not Detected
cis-1,2-Dichloroethene	0.88	1.0	3.5	4.1
1,1,1-Trichloroethane	0.88	11	4.8	59
Trichloroethene	0.88	300	4.7	1600
Tetrachloroethene	0.88	5.9	5.9	40
trans-1,2-Dichloroethene	0.88	Not Detected	3.5	Not Detected

Container Type: 1 Liter Summa Canister (100% Certified)

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	98	70-130
Toluene-d8	93	70-130
4-Bromofluorobenzene	103	70-130

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Client Sample ID: EN047S082713

Lab ID#: 1308716-16A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**j090524**	**Date of Collection:**	**8/27/13 3:11:00 PM**
Dil. Factor:	**1.71**	**Date of Analysis:**	**9/5/13 10:51 PM**

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Vinyl Chloride	0.86	Not Detected	2.2	Not Detected
Chloroethane	3.4	Not Detected	9.0	Not Detected
1,1-Dichloroethene	0.86	Not Detected	3.4	Not Detected
Freon 113	0.86	Not Detected	6.6	Not Detected
Methylene Chloride	8.6	Not Detected	30	Not Detected
1,1-Dichloroethane	0.86	Not Detected	3.5	Not Detected
cis-1,2-Dichloroethene	0.86	Not Detected	3.4	Not Detected
1,1,1-Trichloroethane	0.86	Not Detected	4.7	Not Detected
Trichloroethene	0.86	1.7	4.6	9.1
Tetrachloroethene	0.86	3.6	5.8	25
trans-1,2-Dichloroethene	0.86	Not Detected	3.4	Not Detected

Container Type: 1 Liter Summa Canister (100% Certified)

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	93	70-130
Toluene-d8	95	70-130
4-Bromofluorobenzene	99	70-130

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Client Sample ID: EN0529S082713

Lab ID#: 1308716-17A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**j090607**	**Date of Collection:**	**8/27/13 11:54:00 AM**
Dil. Factor:	**1.67**	**Date of Analysis:**	**9/6/13 03:16 PM**

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Vinyl Chloride	0.84	Not Detected	2.1	Not Detected
Chloroethane	3.3	Not Detected	8.8	Not Detected
1,1-Dichloroethene	0.84	Not Detected	3.3	Not Detected
Freon 113	0.84	Not Detected	6.4	Not Detected
Methylene Chloride	8.4	Not Detected	29	Not Detected
1,1-Dichloroethane	0.84	Not Detected	3.4	Not Detected
cis-1,2-Dichloroethene	0.84	Not Detected	3.3	Not Detected
1,1,1-Trichloroethane	0.84	1.6	4.6	8.5
Trichloroethene	0.84	16	4.5	84
Tetrachloroethene	0.84	Not Detected	5.7	Not Detected
trans-1,2-Dichloroethene	0.84	Not Detected	3.3	Not Detected

Container Type: 1 Liter Summa Canister (100% Certified)

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	91	70-130
Toluene-d8	96	70-130
4-Bromofluorobenzene	104	70-130

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Client Sample ID: EN0529S082713 Lab Duplicate

Lab ID#: 1308716-17AA

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**j090608**	**Date of Collection:**	**8/27/13 11:54:00 AM**
Dil. Factor:	**1.67**	**Date of Analysis:**	**9/6/13 03:45 PM**

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Vinyl Chloride	0.84	Not Detected	2.1	Not Detected
Chloroethane	3.3	Not Detected	8.8	Not Detected
1,1-Dichloroethene	0.84	Not Detected	3.3	Not Detected
Freon 113	0.84	Not Detected	6.4	Not Detected
Methylene Chloride	8.4	Not Detected	29	Not Detected
1,1-Dichloroethane	0.84	Not Detected	3.4	Not Detected
cis-1,2-Dichloroethene	0.84	Not Detected	3.3	Not Detected
1,1,1-Trichloroethane	0.84	1.3	4.6	6.9
Trichloroethene	0.84	12	4.5	66
Tetrachloroethene	0.84	Not Detected	5.7	Not Detected
trans-1,2-Dichloroethene	0.84	Not Detected	3.3	Not Detected

Container Type: 1 Liter Summa Canister (100% Certified)

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	96	70-130
Toluene-d8	95	70-130
4-Bromofluorobenzene	102	70-130

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Client Sample ID: EN0636S082813

Lab ID#: 1308716-18A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**j090609**	**Date of Collection:**	**8/28/13 11:15:00 AM**
Dil. Factor:	**1.79**	**Date of Analysis:**	**9/6/13 04:21 PM**

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Vinyl Chloride	0.90	Not Detected	2.3	Not Detected
Chloroethane	3.6	Not Detected	9.4	Not Detected
1,1-Dichloroethene	0.90	Not Detected	3.5	Not Detected
Freon 113	0.90	Not Detected	6.8	Not Detected
Methylene Chloride	9.0	Not Detected	31	Not Detected
1,1-Dichloroethane	0.90	Not Detected	3.6	Not Detected
cis-1,2-Dichloroethene	0.90	Not Detected	3.5	Not Detected
1,1,1-Trichloroethane	0.90	1.9	4.9	10
Trichloroethene	0.90	3.1	4.8	17
Tetrachloroethene	0.90	Not Detected	6.1	Not Detected
trans-1,2-Dichloroethene	0.90	Not Detected	3.5	Not Detected

Container Type: 1 Liter Summa Canister (100% Certified)

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	91	70-130
Toluene-d8	101	70-130
4-Bromofluorobenzene	102	70-130

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Client Sample ID: Lab Blank

Lab ID#: 1308716-19A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**j090506**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 9/5/13 01:38 PM**	

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Vinyl Chloride	0.50	Not Detected	1.3	Not Detected
Chloroethane	2.0	Not Detected	5.3	Not Detected
1,1-Dichloroethene	0.50	Not Detected	2.0	Not Detected
Freon 113	0.50	Not Detected	3.8	Not Detected
Methylene Chloride	5.0	Not Detected	17	Not Detected
1,1-Dichloroethane	0.50	Not Detected	2.0	Not Detected
cis-1,2-Dichloroethene	0.50	Not Detected	2.0	Not Detected
1,1,1-Trichloroethane	0.50	Not Detected	2.7	Not Detected
Trichloroethene	0.50	Not Detected	2.7	Not Detected
Tetrachloroethene	0.50	Not Detected	3.4	Not Detected
trans-1,2-Dichloroethene	0.50	Not Detected	2.0	Not Detected

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	87	70-130
Toluene-d8	99	70-130
4-Bromofluorobenzene	102	70-130

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Client Sample ID: Lab Blank

Lab ID#: 1308716-19B

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**j090606**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 9/6/13 01:38 PM**	

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Vinyl Chloride	0.50	Not Detected	1.3	Not Detected
Chloroethane	2.0	Not Detected	5.3	Not Detected
1,1-Dichloroethene	0.50	Not Detected	2.0	Not Detected
Freon 113	0.50	Not Detected	3.8	Not Detected
Methylene Chloride	5.0	Not Detected	17	Not Detected
1,1-Dichloroethane	0.50	Not Detected	2.0	Not Detected
cis-1,2-Dichloroethene	0.50	Not Detected	2.0	Not Detected
1,1,1-Trichloroethane	0.50	Not Detected	2.7	Not Detected
Trichloroethene	0.50	Not Detected	2.7	Not Detected
Tetrachloroethene	0.50	Not Detected	3.4	Not Detected
trans-1,2-Dichloroethene	0.50	Not Detected	2.0	Not Detected

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	94	70-130
Toluene-d8	99	70-130
4-Bromofluorobenzene	98	70-130

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Client Sample ID: CCV

Lab ID#: 1308716-20A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**j090502**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 9/5/13 11:23 AM**	

Compound	%Recovery
Vinyl Chloride	85
Chloroethane	81
1,1-Dichloroethene	87
Freon 113	90
Methylene Chloride	75
1,1-Dichloroethane	79
cis-1,2-Dichloroethene	85
1,1,1-Trichloroethane	80
Trichloroethene	87
Tetrachloroethene	88
trans-1,2-Dichloroethene	85

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	92	70-130
Toluene-d8	100	70-130
4-Bromofluorobenzene	102	70-130

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Client Sample ID: CCV

Lab ID#: 1308716-20B

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**j090602**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 9/6/13 11:34 AM**	

Compound	%Recovery
Vinyl Chloride	99
Chloroethane	92
1,1-Dichloroethene	97
Freon 113	106
Methylene Chloride	91
1,1-Dichloroethane	92
cis-1,2-Dichloroethene	98
1,1,1-Trichloroethane	97
Trichloroethene	102
Tetrachloroethene	105
trans-1,2-Dichloroethene	101

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	95	70-130
Toluene-d8	102	70-130
4-Bromofluorobenzene	106	70-130

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Client Sample ID: LCS

Lab ID#: 1308716-21A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**j090503**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 9/5/13 11:53 AM**	

Compound	%Recovery	Method Limits
Vinyl Chloride	102	70-130
Chloroethane	93	70-130
1,1-Dichloroethene	107	70-130
Freon 113	104	70-130
Methylene Chloride	87	70-130
1,1-Dichloroethane	88	70-130
cis-1,2-Dichloroethene	95	70-130
1,1,1-Trichloroethane	95	70-130
Trichloroethene	96	70-130
Tetrachloroethene	98	70-130
trans-1,2-Dichloroethene	114	70-130

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	92	70-130
Toluene-d8	99	70-130
4-Bromofluorobenzene	101	70-130

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Client Sample ID: LCSD

Lab ID#: 1308716-21AA

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**j090504**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 9/5/13 12:35 PM**	

Compound	%Recovery	Method Limits
Vinyl Chloride	102	70-130
Chloroethane	95	70-130
1,1-Dichloroethene	104	70-130
Freon 113	102	70-130
Methylene Chloride	86	70-130
1,1-Dichloroethane	88	70-130
cis-1,2-Dichloroethene	99	70-130
1,1,1-Trichloroethane	92	70-130
Trichloroethene	97	70-130
Tetrachloroethene	96	70-130
trans-1,2-Dichloroethene	107	70-130

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	91	70-130
Toluene-d8	103	70-130
4-Bromofluorobenzene	103	70-130

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Client Sample ID: LCS

Lab ID#: 1308716-21B

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**j090603**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 9/6/13 12:04 PM**	

Compound	%Recovery	Method Limits
Vinyl Chloride	97	70-130
Chloroethane	95	70-130
1,1-Dichloroethene	103	70-130
Freon 113	101	70-130
Methylene Chloride	87	70-130
1,1-Dichloroethane	88	70-130
cis-1,2-Dichloroethene	94	70-130
1,1,1-Trichloroethane	95	70-130
Trichloroethene	94	70-130
Tetrachloroethene	95	70-130
trans-1,2-Dichloroethene	107	70-130

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	96	70-130
Toluene-d8	102	70-130
4-Bromofluorobenzene	101	70-130

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Client Sample ID: LCSD

Lab ID#: 1308716-21BB

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**j090604**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 9/6/13 12:33 PM**	

Compound	%Recovery	Method Limits
Vinyl Chloride	97	70-130
Chloroethane	92	70-130
1,1-Dichloroethene	102	70-130
Freon 113	101	70-130
Methylene Chloride	84	70-130
1,1-Dichloroethane	85	70-130
cis-1,2-Dichloroethene	92	70-130
1,1,1-Trichloroethane	92	70-130
Trichloroethene	98	70-130
Tetrachloroethene	98	70-130
trans-1,2-Dichloroethene	106	70-130

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	88	70-130
Toluene-d8	100	70-130
4-Bromofluorobenzene	104	70-130

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9/17/2013
Ms. Erica Bradstreet
Sanborn, Head & Associates
1715 W 13th Street

Houston TX 77008

Project Name: Endicott Groundwater Vapor Project
Project #: 2755.07
Workorder #: 1308717

Dear Ms. Erica Bradstreet

The following report includes the data for the above referenced project for sample(s) received on 8/30/2013 at Air Toxics Ltd.

The data and associated QC analyzed by Modified TO-15 are compliant with the project requirements or laboratory criteria with the exception of the deviations noted in the attached case narrative.

Thank you for choosing Air Toxics Ltd. for your air analysis needs. Air Toxics Ltd. is committed to providing accurate data of the highest quality. Please feel free to contact the Project Manager: Ausha Scott at 916-985-1000 if you have any questions regarding the data in this report.

Regards,

Ausha Scott

Project Manager

WORK ORDER #: 1308717

Work Order Summary

CLIENT:	Ms. Erica Bradstreet Sanborn, Head & Associates 1715 W 13th Street Houston, TX 77008	**BILL TO:**	Accounts Payable Sanborn, Head & Associates 20 Foundry Street Concord, NH 03301
PHONE:	713-869-2259	**P.O. #**	3304.00
FAX:		**PROJECT #**	2755.07 Endicott Groundwater Vapor Project
DATE RECEIVED:	08/30/2013	**CONTACT:**	Ausha Scott
DATE COMPLETED:	09/17/2013		

FRACTION #	NAME	TEST	RECEIPT VAC./PRES.	FINAL PRESSURE
01A	EN0410S082713	Modified TO-15	6.4 "Hg	5 psi
02A	EN0412S082713	Modified TO-15	6.8 "Hg	5 psi
03A	EN0414S082813	Modified TO-15	7.2 "Hg	5 psi
04A	EN041D082713	Modified TO-15	7.6 "Hg	5 psi
05A	EN0426D082613	Modified TO-15	7.4 "Hg	5 psi
05AA	EN0426D082613 Lab Duplicate	Modified TO-15	7.4 "Hg	5 psi
06A	EN0426S082613	Modified TO-15	5.8 "Hg	5 psi
06AA	EN0426S082613 Lab Duplicate	Modified TO-15	5.8 "Hg	5 psi
07A	EN0427S082613	Modified TO-15	5.8 "Hg	5 psi
08A	EN042D082713	Modified TO-15	7.4 "Hg	5 psi
09A	EN042S082713	Modified TO-15	6.4 "Hg	5 psi
10A	EN0431S082713	Modified TO-15	7.8 "Hg	5 psi
11A	EN044S082713	Modified TO-15	7.4 "Hg	5 psi
12A	EN045D082713	Modified TO-15	6.2 "Hg	5 psi
13A	EN045S082713	Modified TO-15	6.0 "Hg	5 psi
14A	EN049D082713	Modified TO-15	6.0 "Hg	5 psi
15A	EN049S082713	Modified TO-15	6.2 "Hg	5 psi
16A	EN0534D082613	Modified TO-15	7.0 "Hg	5 psi
17A	EN0534S082613	Modified TO-15	5.4 "Hg	5 psi
18A	EN0431D082713	Modified TO-15	6.8 "Hg	5 psi
19A	Lab Blank	Modified TO-15	NA	NA
19B	Lab Blank	Modified TO-15	NA	NA
20A	CCV	Modified TO-15	NA	NA

Continued on next page

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WORK ORDER #: 1308717

Work Order Summary

CLIENT:	Ms. Erica Bradstreet Sanborn, Head & Associates 1715 W 13th Street Houston, TX 77008	**BILL TO:**	Accounts Payable Sanborn, Head & Associates 20 Foundry Street Concord, NH 03301
PHONE:	713-869-2259	**P.O. #**	3304.00
FAX:		**PROJECT #**	2755.07 Endicott Groundwater Vapor Project
DATE RECEIVED:	08/30/2013	**CONTACT:**	Ausha Scott
DATE COMPLETED:	09/17/2013		

FRACTION #	NAME	TEST	RECEIPT VAC./PRES.	FINAL PRESSURE
20B	CCV	Modified TO-15	NA	NA
21A	LCS	Modified TO-15	NA	NA
21AA	LCSD	Modified TO-15	NA	NA
21B	LCS	Modified TO-15	NA	NA
21BB	LCSD	Modified TO-15	NA	NA

CERTIFIED BY: Heidi Rayos DATE: 09/17/13

Technical Director

Certification numbers: AZ Licensure AZ0775, CA NELAP - 12282CA, NJ NELAP - CA016, NY NELAP - 11291, TX NELAP - T104704434-12-5, UT NELAP CA009332012-3, VA NELAP - 460197, WA NELAP - C935
Name of Accrediting Agency: NELAP/ORELAP (Oregon Environmental Laboratory Accreditation Program)
Accreditation number: CA300005, Effective date: 10/18/2012, Expiration date: 10/17/2013.
Eurofins Air Toxics Inc.. certifies that the test results contained in this report meet all requirements of the NELAC standards

180 BLUE RAVINE ROAD, SUITE B FOLSOM, CA - 956
(916) 985-1000 . (800) 985-5955 . FAX (916) 985-1020

LABORATORY NARRATIVE
EPA Method TO-15
Sanborn, Head & Associates
Workorder# 1308717

Eighteen 1 Liter Summa Canister (100% Certified) samples were received on August 30, 2013. The laboratory performed analysis via EPA Method TO-15 using GC/MS in the full scan mode.

This workorder was independently validated prior to submittal using 'USEPA National Functional Guidelines' as generally applied to the analysis of volatile organic compounds in air. A rules-based, logic driven, independent validation engine was employed to assess completeness, evaluate pass/fail of relevant project quality control requirements and verification of all quantified amounts.

Receiving Notes

There were no receiving discrepancies.

Analytical Notes

Dilution was performed on samples EN0410S082713, EN049D082713 and EN049S082713 due to the presence of high level target species.

Definition of Data Qualifying Flags

Eight qualifiers may have been used on the data analysis sheets and indicates as follows:

B - Compound present in laboratory blank greater than reporting limit (background subtraction not performed).

J - Estimated value.

E - Exceeds instrument calibration range.

S - Saturated peak.

Q - Exceeds quality control limits.

U - Compound analyzed for but not detected above the reporting limit, LOD, or MDL value. See data page for project specific U-flag definition.

UJ- Non-detected compound associated with low bias in the CCV

N - The identification is based on presumptive evidence.

File extensions may have been used on the data analysis sheets and indicates as follows:

a-File was requantified

b-File was quantified by a second column and detector

r1-File was requantified for the purpose of reissue

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Summary of Detected Compounds
EPA METHOD TO-15 GC/MS FULL SCAN

Client Sample ID: EN0410S082713

Lab ID#: 1308717-01A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,1-Dichloroethene	28	32	110	130
1,1-Dichloroethane	28	290	110	1200
cis-1,2-Dichloroethene	28	870	110	3400
1,1,1-Trichloroethane	28	670	150	3700
Trichloroethene	28	5500	150	30000

Client Sample ID: EN0412S082713

Lab ID#: 1308717-02A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,1,1-Trichloroethane	0.86	2.5	4.7	14
Trichloroethene	0.86	93	4.6	500

Client Sample ID: EN0414S082813

Lab ID#: 1308717-03A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,1,1-Trichloroethane	0.88	0.95	4.8	5.2
Trichloroethene	0.88	3.0	4.7	16

Client Sample ID: EN041D082713

Lab ID#: 1308717-04A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,1,1-Trichloroethane	0.90	3.5	4.9	19
Trichloroethene	0.90	18	4.8	96

Client Sample ID: EN0426D082613

Lab ID#: 1308717-05A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,1,1-Trichloroethane	0.89	12	4.8	64

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Summary of Detected Compounds
EPA METHOD TO-15 GC/MS FULL SCAN

Client Sample ID: EN0426D082613

Lab ID#: 1308717-05A

Trichloroethene	0.89	280	4.8	1500
Tetrachloroethene	0.89	2.4	6.0	16

Client Sample ID: EN0426D082613 Lab Duplicate

Lab ID#: 1308717-05AA

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,1,1-Trichloroethane	1.2	12	6.4	64
Trichloroethene	1.2	270	6.3	1500
Tetrachloroethene	1.2	2.4	7.9	16

Client Sample ID: EN0426S082613

Lab ID#: 1308717-06A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,1,1-Trichloroethane	1.5	10	8.3	57
Trichloroethene	1.5	180	8.2	960
Tetrachloroethene	1.5	2.5	10	17

Client Sample ID: EN0426S082613 Lab Duplicate

Lab ID#: 1308717-06AA

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,1,1-Trichloroethane	1.1	7.8	6.0	43
Trichloroethene	1.1	140	5.9	730
Tetrachloroethene	1.1	2.0	7.5	13

Client Sample ID: EN0427S082613

Lab ID#: 1308717-07A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,1,1-Trichloroethane	0.83	19	4.5	100
Trichloroethene	0.83	88	4.5	470
Tetrachloroethene	0.83	18	5.6	120

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Summary of Detected Compounds
EPA METHOD TO-15 GC/MS FULL SCAN

Client Sample ID: EN042D082713

Lab ID#: 1308717-08A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,1,1-Trichloroethane	0.89	2.7	4.8	14
Trichloroethene	0.89	18	4.8	99
Tetrachloroethene	0.89	3.0	6.0	20

Client Sample ID: EN042S082713

Lab ID#: 1308717-09A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Trichloroethene	0.85	2.0	4.6	11

Client Sample ID: EN0431S082713

Lab ID#: 1308717-10A

No Detections Were Found.

Client Sample ID: EN044S082713

Lab ID#: 1308717-11A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Tetrachloroethene	0.89	1.9	6.0	13

Client Sample ID: EN045D082713

Lab ID#: 1308717-12A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,1,1-Trichloroethane	0.84	9.7	4.6	53
Trichloroethene	0.84	36	4.5	190

Client Sample ID: EN045S082713

Lab ID#: 1308717-13A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,1,1-Trichloroethane	0.84	1.8	4.6	9.7

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Summary of Detected Compounds
EPA METHOD TO-15 GC/MS FULL SCAN

Client Sample ID: EN045S082713

Lab ID#: 1308717-13A

Trichloroethene	0.84	32	4.5	170

Client Sample ID: EN049D082713

Lab ID#: 1308717-14A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,1-Dichloroethene	8.4	35	33	140
Freon 113	8.4	8.6	64	66
1,1-Dichloroethane	8.4	44	34	180
cis-1,2-Dichloroethene	8.4	170	33	670
1,1,1-Trichloroethane	8.4	200	46	1100
Trichloroethene	8.4	1800	45	9500
Tetrachloroethene	8.4	110	57	760

Client Sample ID: EN049S082713

Lab ID#: 1308717-15A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,1,1-Trichloroethane	4.8	58	26	320
Trichloroethene	4.8	1000	26	5600
Tetrachloroethene	4.8	26	33	180

Client Sample ID: EN0534D082613

Lab ID#: 1308717-16A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,1,1-Trichloroethane	0.88	1.6	4.8	8.5
Trichloroethene	0.88	18	4.7	94
Tetrachloroethene	0.88	2.1	5.9	14

Client Sample ID: EN0534S082613

Lab ID#: 1308717-17A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)

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Summary of Detected Compounds
EPA METHOD TO-15 GC/MS FULL SCAN

Client Sample ID: EN0534S082613

Lab ID#: 1308717-17A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Trichloroethene	0.82	2.1	4.4	11

Client Sample ID: EN0431D082713

Lab ID#: 1308717-18A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Trichloroethene	0.86	37	4.6	200

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Client Sample ID: EN0410S082713

Lab ID#: 1308717-01A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**j090915**	**Date of Collection: 8/27/13 9:22:00 AM**	
Dil. Factor:	**56.7**	**Date of Analysis: 9/9/13 05:59 PM**	

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Vinyl Chloride	28	Not Detected	72	Not Detected
Chloroethane	110	Not Detected	300	Not Detected
1,1-Dichloroethene	28	32	110	130
Freon 113	28	Not Detected	220	Not Detected
Methylene Chloride	280	Not Detected	980	Not Detected
1,1-Dichloroethane	28	290	110	1200
cis-1,2-Dichloroethene	28	870	110	3400
1,1,1-Trichloroethane	28	670	150	3700
Trichloroethene	28	5500	150	30000
Tetrachloroethene	28	Not Detected	190	Not Detected
trans-1,2-Dichloroethene	28	Not Detected	110	Not Detected

Container Type: 1 Liter Summa Canister (100% Certified)

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	92	70-130
Toluene-d8	99	70-130
4-Bromofluorobenzene	116	70-130

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Client Sample ID: EN0412S082713

Lab ID#: 1308717-02A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**17090506**	**Date of Collection: 8/27/13 5:20:00 PM**	
Dil. Factor:	**1.73**	**Date of Analysis: 9/5/13 10:31 AM**	

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Vinyl Chloride	0.86	Not Detected	2.2	Not Detected
Chloroethane	3.5	Not Detected	9.1	Not Detected
1,1-Dichloroethene	0.86	Not Detected	3.4	Not Detected
Freon 113	0.86	Not Detected	6.6	Not Detected
Methylene Chloride	8.6	Not Detected	30	Not Detected
1,1-Dichloroethane	0.86	Not Detected	3.5	Not Detected
cis-1,2-Dichloroethene	0.86	Not Detected	3.4	Not Detected
1,1,1-Trichloroethane	0.86	2.5	4.7	14
Trichloroethene	0.86	93	4.6	500
Tetrachloroethene	0.86	Not Detected	5.9	Not Detected
trans-1,2-Dichloroethene	0.86	Not Detected	3.4	Not Detected

Container Type: 1 Liter Summa Canister (100% Certified)

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	85	70-130
Toluene-d8	101	70-130
4-Bromofluorobenzene	102	70-130

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Client Sample ID: EN0414S082813

Lab ID#: 1308717-03A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**17090507**	**Date of Collection: 8/28/13 9:01:00 AM**	
Dil. Factor:	**1.76**	**Date of Analysis: 9/5/13 10:53 AM**	

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Vinyl Chloride	0.88	Not Detected	2.2	Not Detected
Chloroethane	3.5	Not Detected	9.3	Not Detected
1,1-Dichloroethene	0.88	Not Detected	3.5	Not Detected
Freon 113	0.88	Not Detected	6.7	Not Detected
Methylene Chloride	8.8	Not Detected	30	Not Detected
1,1-Dichloroethane	0.88	Not Detected	3.6	Not Detected
cis-1,2-Dichloroethene	0.88	Not Detected	3.5	Not Detected
1,1,1-Trichloroethane	0.88	0.95	4.8	5.2
Trichloroethene	0.88	3.0	4.7	16
Tetrachloroethene	0.88	Not Detected	6.0	Not Detected
trans-1,2-Dichloroethene	0.88	Not Detected	3.5	Not Detected

Container Type: 1 Liter Summa Canister (100% Certified)

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	85	70-130
Toluene-d8	100	70-130
4-Bromofluorobenzene	102	70-130

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Client Sample ID: EN041D082713

Lab ID#: 1308717-04A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**17090508**	**Date of Collection: 8/27/13 8:23:00 AM**	
Dil. Factor:	**1.79**	**Date of Analysis: 9/5/13 11:15 AM**	

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Vinyl Chloride	0.90	Not Detected	2.3	Not Detected
Chloroethane	3.6	Not Detected	9.4	Not Detected
1,1-Dichloroethene	0.90	Not Detected	3.5	Not Detected
Freon 113	0.90	Not Detected	6.8	Not Detected
Methylene Chloride	9.0	Not Detected	31	Not Detected
1,1-Dichloroethane	0.90	Not Detected	3.6	Not Detected
cis-1,2-Dichloroethene	0.90	Not Detected	3.5	Not Detected
1,1,1-Trichloroethane	0.90	3.5	4.9	19
Trichloroethene	0.90	18	4.8	96
Tetrachloroethene	0.90	Not Detected	6.1	Not Detected
trans-1,2-Dichloroethene	0.90	Not Detected	3.5	Not Detected

Container Type: 1 Liter Summa Canister (100% Certified)

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	86	70-130
Toluene-d8	100	70-130
4-Bromofluorobenzene	100	70-130

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Client Sample ID: EN0426D082613

Lab ID#: 1308717-05A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**17090509**	**Date of Collection: 8/26/13 6:20:00 PM**	
Dil. Factor:	**1.78**	**Date of Analysis: 9/5/13 11:36 AM**	

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Vinyl Chloride	0.89	Not Detected	2.3	Not Detected
Chloroethane	3.6	Not Detected	9.4	Not Detected
1,1-Dichloroethene	0.89	Not Detected	3.5	Not Detected
Freon 113	0.89	Not Detected	6.8	Not Detected
Methylene Chloride	8.9	Not Detected	31	Not Detected
1,1-Dichloroethane	0.89	Not Detected	3.6	Not Detected
cis-1,2-Dichloroethene	0.89	Not Detected	3.5	Not Detected
1,1,1-Trichloroethane	0.89	12	4.8	64
Trichloroethene	0.89	280	4.8	1500
Tetrachloroethene	0.89	2.4	6.0	16
trans-1,2-Dichloroethene	0.89	Not Detected	3.5	Not Detected

Container Type: 1 Liter Summa Canister (100% Certified)

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	84	70-130
Toluene-d8	99	70-130
4-Bromofluorobenzene	103	70-130

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Client Sample ID: EN0426D082613 Lab Duplicate

Lab ID#: 1308717-05AA

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**17090516**	**Date of Collection: 8/26/13 6:20:00 PM**	
Dil. Factor:	**2.33**	**Date of Analysis: 9/5/13 03:10 PM**	

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Vinyl Chloride	1.2	Not Detected	3.0	Not Detected
Chloroethane	4.7	Not Detected	12	Not Detected
1,1-Dichloroethene	1.2	Not Detected	4.6	Not Detected
Freon 113	1.2	Not Detected	8.9	Not Detected
Methylene Chloride	12	Not Detected	40	Not Detected
1,1-Dichloroethane	1.2	Not Detected	4.7	Not Detected
cis-1,2-Dichloroethene	1.2	Not Detected	4.6	Not Detected
1,1,1-Trichloroethane	1.2	12	6.4	64
Trichloroethene	1.2	270	6.3	1500
Tetrachloroethene	1.2	2.4	7.9	16
trans-1,2-Dichloroethene	1.2	Not Detected	4.6	Not Detected

Container Type: 1 Liter Summa Canister (100% Certified)

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	84	70-130
Toluene-d8	99	70-130
4-Bromofluorobenzene	101	70-130

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Client Sample ID: EN0426S082613

Lab ID#: 1308717-06A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**17090515**	**Date of Collection: 8/26/13 6:15:00 PM**	
Dil. Factor:	**3.05**	**Date of Analysis: 9/5/13 02:48 PM**	

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Vinyl Chloride	1.5	Not Detected	3.9	Not Detected
Chloroethane	6.1	Not Detected	16	Not Detected
1,1-Dichloroethene	1.5	Not Detected	6.0	Not Detected
Freon 113	1.5	Not Detected	12	Not Detected
Methylene Chloride	15	Not Detected	53	Not Detected
1,1-Dichloroethane	1.5	Not Detected	6.2	Not Detected
cis-1,2-Dichloroethene	1.5	Not Detected	6.0	Not Detected
1,1,1-Trichloroethane	1.5	10	8.3	57
Trichloroethene	1.5	180	8.2	960
Tetrachloroethene	1.5	2.5	10	17
trans-1,2-Dichloroethene	1.5	Not Detected	6.0	Not Detected

Container Type: 1 Liter Summa Canister (100% Certified)

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	85	70-130
Toluene-d8	101	70-130
4-Bromofluorobenzene	97	70-130

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Client Sample ID: EN0426S082613 Lab Duplicate

Lab ID#: 1308717-06AA

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**17090510**	**Date of Collection: 8/26/13 6:15:00 PM**	
Dil. Factor:	**2.21**	**Date of Analysis: 9/5/13 11:57 AM**	

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Vinyl Chloride	1.1	Not Detected	2.8	Not Detected
Chloroethane	4.4	Not Detected	12	Not Detected
1,1-Dichloroethene	1.1	Not Detected	4.4	Not Detected
Freon 113	1.1	Not Detected	8.5	Not Detected
Methylene Chloride	11	Not Detected	38	Not Detected
1,1-Dichloroethane	1.1	Not Detected	4.5	Not Detected
cis-1,2-Dichloroethene	1.1	Not Detected	4.4	Not Detected
1,1,1-Trichloroethane	1.1	7.8	6.0	43
Trichloroethene	1.1	140	5.9	730
Tetrachloroethene	1.1	2.0	7.5	13
trans-1,2-Dichloroethene	1.1	Not Detected	4.4	Not Detected

Container Type: 1 Liter Summa Canister (100% Certified)

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	86	70-130
Toluene-d8	99	70-130
4-Bromofluorobenzene	100	70-130

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Client Sample ID: EN0427S082613

Lab ID#: 1308717-07A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**17090511**	**Date of Collection: 8/26/13 6:40:00 PM**	
Dil. Factor:	**1.66**	**Date of Analysis: 9/5/13 12:19 PM**	

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Vinyl Chloride	0.83	Not Detected	2.1	Not Detected
Chloroethane	3.3	Not Detected	8.8	Not Detected
1,1-Dichloroethene	0.83	Not Detected	3.3	Not Detected
Freon 113	0.83	Not Detected	6.4	Not Detected
Methylene Chloride	8.3	Not Detected	29	Not Detected
1,1-Dichloroethane	0.83	Not Detected	3.4	Not Detected
cis-1,2-Dichloroethene	0.83	Not Detected	3.3	Not Detected
1,1,1-Trichloroethane	0.83	19	4.5	100
Trichloroethene	0.83	88	4.5	470
Tetrachloroethene	0.83	18	5.6	120
trans-1,2-Dichloroethene	0.83	Not Detected	3.3	Not Detected

Container Type: 1 Liter Summa Canister (100% Certified)

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	86	70-130
Toluene-d8	98	70-130
4-Bromofluorobenzene	104	70-130

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Client Sample ID: EN042D082713

Lab ID#: 1308717-08A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**17090512**	**Date of Collection: 8/27/13 9:47:00 AM**	
Dil. Factor:	**1.78**	**Date of Analysis: 9/5/13 12:40 PM**	

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Vinyl Chloride	0.89	Not Detected	2.3	Not Detected
Chloroethane	3.6	Not Detected	9.4	Not Detected
1,1-Dichloroethene	0.89	Not Detected	3.5	Not Detected
Freon 113	0.89	Not Detected	6.8	Not Detected
Methylene Chloride	8.9	Not Detected	31	Not Detected
1,1-Dichloroethane	0.89	Not Detected	3.6	Not Detected
cis-1,2-Dichloroethene	0.89	Not Detected	3.5	Not Detected
1,1,1-Trichloroethane	0.89	2.7	4.8	14
Trichloroethene	0.89	18	4.8	99
Tetrachloroethene	0.89	3.0	6.0	20
trans-1,2-Dichloroethene	0.89	Not Detected	3.5	Not Detected

Container Type: 1 Liter Summa Canister (100% Certified)

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	86	70-130
Toluene-d8	100	70-130
4-Bromofluorobenzene	104	70-130

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Client Sample ID: EN042S082713

Lab ID#: 1308717-09A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**17090513**	**Date of Collection: 8/27/13 9:37:00 AM**	
Dil. Factor:	**1.70**	**Date of Analysis: 9/5/13 01:02 PM**	

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Vinyl Chloride	0.85	Not Detected	2.2	Not Detected
Chloroethane	3.4	Not Detected	9.0	Not Detected
1,1-Dichloroethene	0.85	Not Detected	3.4	Not Detected
Freon 113	0.85	Not Detected	6.5	Not Detected
Methylene Chloride	8.5	Not Detected	30	Not Detected
1,1-Dichloroethane	0.85	Not Detected	3.4	Not Detected
cis-1,2-Dichloroethene	0.85	Not Detected	3.4	Not Detected
1,1,1-Trichloroethane	0.85	Not Detected	4.6	Not Detected
Trichloroethene	0.85	2.0	4.6	11
Tetrachloroethene	0.85	Not Detected	5.8	Not Detected
trans-1,2-Dichloroethene	0.85	Not Detected	3.4	Not Detected

Container Type: 1 Liter Summa Canister (100% Certified)

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	86	70-130
Toluene-d8	100	70-130
4-Bromofluorobenzene	104	70-130

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Client Sample ID: EN0431S082713

Lab ID#: 1308717-10A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**17090514**	**Date of Collection: 8/27/13 11:24:00 AM**	
Dil. Factor:	**1.81**	**Date of Analysis: 9/5/13 01:24 PM**	

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Vinyl Chloride	0.90	Not Detected	2.3	Not Detected
Chloroethane	3.6	Not Detected	9.6	Not Detected
1,1-Dichloroethene	0.90	Not Detected	3.6	Not Detected
Freon 113	0.90	Not Detected	6.9	Not Detected
Methylene Chloride	9.0	Not Detected	31	Not Detected
1,1-Dichloroethane	0.90	Not Detected	3.7	Not Detected
cis-1,2-Dichloroethene	0.90	Not Detected	3.6	Not Detected
1,1,1-Trichloroethane	0.90	Not Detected	4.9	Not Detected
Trichloroethene	0.90	Not Detected	4.9	Not Detected
Tetrachloroethene	0.90	Not Detected	6.1	Not Detected
trans-1,2-Dichloroethene	0.90	Not Detected	3.6	Not Detected

Container Type: 1 Liter Summa Canister (100% Certified)

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	84	70-130
Toluene-d8	99	70-130
4-Bromofluorobenzene	102	70-130

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Client Sample ID: EN044S082713

Lab ID#: 1308717-11A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**17090518**	**Date of Collection: 8/27/13 5:30:00 PM**	
Dil. Factor:	**1.78**	**Date of Analysis: 9/5/13 04:47 PM**	

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Vinyl Chloride	0.89	Not Detected	2.3	Not Detected
Chloroethane	3.6	Not Detected	9.4	Not Detected
1,1-Dichloroethene	0.89	Not Detected	3.5	Not Detected
Freon 113	0.89	Not Detected	6.8	Not Detected
Methylene Chloride	8.9	Not Detected	31	Not Detected
1,1-Dichloroethane	0.89	Not Detected	3.6	Not Detected
cis-1,2-Dichloroethene	0.89	Not Detected	3.5	Not Detected
1,1,1-Trichloroethane	0.89	Not Detected	4.8	Not Detected
Trichloroethene	0.89	Not Detected	4.8	Not Detected
Tetrachloroethene	0.89	1.9	6.0	13
trans-1,2-Dichloroethene	0.89	Not Detected	3.5	Not Detected

Container Type: 1 Liter Summa Canister (100% Certified)

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	85	70-130
Toluene-d8	100	70-130
4-Bromofluorobenzene	100	70-130

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Client Sample ID: EN045D082713

Lab ID#: 1308717-12A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**17090519**	**Date of Collection: 8/27/13 3:24:00 PM**	
Dil. Factor:	**1.69**	**Date of Analysis: 9/5/13 05:09 PM**	

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Vinyl Chloride	0.84	Not Detected	2.2	Not Detected
Chloroethane	3.4	Not Detected	8.9	Not Detected
1,1-Dichloroethene	0.84	Not Detected	3.4	Not Detected
Freon 113	0.84	Not Detected	6.5	Not Detected
Methylene Chloride	8.4	Not Detected	29	Not Detected
1,1-Dichloroethane	0.84	Not Detected	3.4	Not Detected
cis-1,2-Dichloroethene	0.84	Not Detected	3.4	Not Detected
1,1,1-Trichloroethane	0.84	9.7	4.6	53
Trichloroethene	0.84	36	4.5	190
Tetrachloroethene	0.84	Not Detected	5.7	Not Detected
trans-1,2-Dichloroethene	0.84	Not Detected	3.4	Not Detected

Container Type: 1 Liter Summa Canister (100% Certified)

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	84	70-130
Toluene-d8	99	70-130
4-Bromofluorobenzene	99	70-130

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Client Sample ID: EN045S082713

Lab ID#: 1308717-13A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**17090520**	**Date of Collection: 8/27/13 3:24:00 PM**	
Dil. Factor:	**1.68**	**Date of Analysis: 9/5/13 05:31 PM**	

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Vinyl Chloride	0.84	Not Detected	2.1	Not Detected
Chloroethane	3.4	Not Detected	8.9	Not Detected
1,1-Dichloroethene	0.84	Not Detected	3.3	Not Detected
Freon 113	0.84	Not Detected	6.4	Not Detected
Methylene Chloride	8.4	Not Detected	29	Not Detected
1,1-Dichloroethane	0.84	Not Detected	3.4	Not Detected
cis-1,2-Dichloroethene	0.84	Not Detected	3.3	Not Detected
1,1,1-Trichloroethane	0.84	1.8	4.6	9.7
Trichloroethene	0.84	32	4.5	170
Tetrachloroethene	0.84	Not Detected	5.7	Not Detected
trans-1,2-Dichloroethene	0.84	Not Detected	3.3	Not Detected

Container Type: 1 Liter Summa Canister (100% Certified)

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	88	70-130
Toluene-d8	100	70-130
4-Bromofluorobenzene	100	70-130

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Client Sample ID: EN049D082713

Lab ID#: 1308717-14A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**17090521**	**Date of Collection: 8/27/13 8:40:00 AM**	
Dil. Factor:	**16.8**	**Date of Analysis: 9/5/13 05:51 PM**	

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Vinyl Chloride	8.4	Not Detected	21	Not Detected
Chloroethane	34	Not Detected	89	Not Detected
1,1-Dichloroethene	8.4	35	33	140
Freon 113	8.4	8.6	64	66
Methylene Chloride	84	Not Detected	290	Not Detected
1,1-Dichloroethane	8.4	44	34	180
cis-1,2-Dichloroethene	8.4	170	33	670
1,1,1-Trichloroethane	8.4	200	46	1100
Trichloroethene	8.4	1800	45	9500
Tetrachloroethene	8.4	110	57	760
trans-1,2-Dichloroethene	8.4	Not Detected	33	Not Detected

Container Type: 1 Liter Summa Canister (100% Certified)

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	84	70-130
Toluene-d8	99	70-130
4-Bromofluorobenzene	94	70-130

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Client Sample ID: EN049S082713

Lab ID#: 1308717-15A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**17090522**	**Date of Collection: 8/27/13 9:02:00 AM**	
Dil. Factor:	**9.66**	**Date of Analysis: 9/5/13 06:13 PM**	

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Vinyl Chloride	4.8	Not Detected	12	Not Detected
Chloroethane	19	Not Detected	51	Not Detected
1,1-Dichloroethene	4.8	Not Detected	19	Not Detected
Freon 113	4.8	Not Detected	37	Not Detected
Methylene Chloride	48	Not Detected	170	Not Detected
1,1-Dichloroethane	4.8	Not Detected	20	Not Detected
cis-1,2-Dichloroethene	4.8	Not Detected	19	Not Detected
1,1,1-Trichloroethane	4.8	58	26	320
Trichloroethene	4.8	1000	26	5600
Tetrachloroethene	4.8	26	33	180
trans-1,2-Dichloroethene	4.8	Not Detected	19	Not Detected

Container Type: 1 Liter Summa Canister (100% Certified)

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	86	70-130
Toluene-d8	99	70-130
4-Bromofluorobenzene	99	70-130

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Client Sample ID: EN0534D082613

Lab ID#: 1308717-16A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**17090523**	**Date of Collection: 8/26/13 6:10:00 PM**	
Dil. Factor:	**1.75**	**Date of Analysis: 9/5/13 06:36 PM**	

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Vinyl Chloride	0.88	Not Detected	2.2	Not Detected
Chloroethane	3.5	Not Detected	9.2	Not Detected
1,1-Dichloroethene	0.88	Not Detected	3.5	Not Detected
Freon 113	0.88	Not Detected	6.7	Not Detected
Methylene Chloride	8.8	Not Detected	30	Not Detected
1,1-Dichloroethane	0.88	Not Detected	3.5	Not Detected
cis-1,2-Dichloroethene	0.88	Not Detected	3.5	Not Detected
1,1,1-Trichloroethane	0.88	1.6	4.8	8.5
Trichloroethene	0.88	18	4.7	94
Tetrachloroethene	0.88	2.1	5.9	14
trans-1,2-Dichloroethene	0.88	Not Detected	3.5	Not Detected

Container Type: 1 Liter Summa Canister (100% Certified)

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	85	70-130
Toluene-d8	100	70-130
4-Bromofluorobenzene	102	70-130

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Client Sample ID: EN0534S082613

Lab ID#: 1308717-17A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**17090524**	**Date of Collection: 8/26/13 6:35:00 PM**	
Dil. Factor:	**1.63**	**Date of Analysis: 9/5/13 06:57 PM**	

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Vinyl Chloride	0.82	Not Detected	2.1	Not Detected
Chloroethane	3.3	Not Detected	8.6	Not Detected
1,1-Dichloroethene	0.82	Not Detected	3.2	Not Detected
Freon 113	0.82	Not Detected	6.2	Not Detected
Methylene Chloride	8.2	Not Detected	28	Not Detected
1,1-Dichloroethane	0.82	Not Detected	3.3	Not Detected
cis-1,2-Dichloroethene	0.82	Not Detected	3.2	Not Detected
1,1,1-Trichloroethane	0.82	Not Detected	4.4	Not Detected
Trichloroethene	0.82	2.1	4.4	11
Tetrachloroethene	0.82	Not Detected	5.5	Not Detected
trans-1,2-Dichloroethene	0.82	Not Detected	3.2	Not Detected

Container Type: 1 Liter Summa Canister (100% Certified)

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	86	70-130
Toluene-d8	100	70-130
4-Bromofluorobenzene	100	70-130

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Client Sample ID: EN0431D082713

Lab ID#: 1308717-18A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**17090525**	**Date of Collection: 8/27/13 11:10:00 AM**	
Dil. Factor:	**1.73**	**Date of Analysis: 9/5/13 07:19 PM**	

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Vinyl Chloride	0.86	Not Detected	2.2	Not Detected
Chloroethane	3.5	Not Detected	9.1	Not Detected
1,1-Dichloroethene	0.86	Not Detected	3.4	Not Detected
Freon 113	0.86	Not Detected	6.6	Not Detected
Methylene Chloride	8.6	Not Detected	30	Not Detected
1,1-Dichloroethane	0.86	Not Detected	3.5	Not Detected
cis-1,2-Dichloroethene	0.86	Not Detected	3.4	Not Detected
1,1,1-Trichloroethane	0.86	Not Detected	4.7	Not Detected
Trichloroethene	0.86	37	4.6	200
Tetrachloroethene	0.86	Not Detected	5.9	Not Detected
trans-1,2-Dichloroethene	0.86	Not Detected	3.4	Not Detected

Container Type: 1 Liter Summa Canister (100% Certified)

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	84	70-130
Toluene-d8	99	70-130
4-Bromofluorobenzene	102	70-130

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Client Sample ID: Lab Blank

Lab ID#: 1308717-19A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**17090505**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 9/5/13 09:51 AM**	

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Vinyl Chloride	0.50	Not Detected	1.3	Not Detected
Chloroethane	2.0	Not Detected	5.3	Not Detected
1,1-Dichloroethene	0.50	Not Detected	2.0	Not Detected
Freon 113	0.50	Not Detected	3.8	Not Detected
Methylene Chloride	5.0	Not Detected	17	Not Detected
1,1-Dichloroethane	0.50	Not Detected	2.0	Not Detected
cis-1,2-Dichloroethene	0.50	Not Detected	2.0	Not Detected
1,1,1-Trichloroethane	0.50	Not Detected	2.7	Not Detected
Trichloroethene	0.50	Not Detected	2.7	Not Detected
Tetrachloroethene	0.50	Not Detected	3.4	Not Detected
trans-1,2-Dichloroethene	0.50	Not Detected	2.0	Not Detected

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	88	70-130
Toluene-d8	100	70-130
4-Bromofluorobenzene	102	70-130

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Client Sample ID: Lab Blank

Lab ID#: 1308717-19B

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**j090906**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 9/9/13 12:05 PM**	

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Vinyl Chloride	0.50	Not Detected	1.3	Not Detected
Chloroethane	2.0	Not Detected	5.3	Not Detected
1,1-Dichloroethene	0.50	Not Detected	2.0	Not Detected
Freon 113	0.50	Not Detected	3.8	Not Detected
Methylene Chloride	5.0	Not Detected	17	Not Detected
1,1-Dichloroethane	0.50	Not Detected	2.0	Not Detected
cis-1,2-Dichloroethene	0.50	Not Detected	2.0	Not Detected
1,1,1-Trichloroethane	0.50	Not Detected	2.7	Not Detected
Trichloroethene	0.50	Not Detected	2.7	Not Detected
Tetrachloroethene	0.50	Not Detected	3.4	Not Detected
trans-1,2-Dichloroethene	0.50	Not Detected	2.0	Not Detected

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	93	70-130
Toluene-d8	97	70-130
4-Bromofluorobenzene	102	70-130

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Client Sample ID: CCV

Lab ID#: 1308717-20A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**17090502**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 9/5/13 08:38 AM**	

Compound	**%Recovery**
Vinyl Chloride	86
Chloroethane	89
1,1-Dichloroethene	93
Freon 113	96
Methylene Chloride	85
1,1-Dichloroethane	92
cis-1,2-Dichloroethene	88
1,1,1-Trichloroethane	93
Trichloroethene	92
Tetrachloroethene	92
trans-1,2-Dichloroethene	95

Container Type: NA - Not Applicable

Surrogates	**%Recovery**	**Method Limits**
1,2-Dichloroethane-d4	92	70-130
Toluene-d8	101	70-130
4-Bromofluorobenzene	100	70-130

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Client Sample ID: CCV

Lab ID#: 1308717-20B

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**j090902**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 9/9/13 09:47 AM**	

Compound	**%Recovery**
Vinyl Chloride	106
Chloroethane	101
1,1-Dichloroethene	101
Freon 113	105
Methylene Chloride	92
1,1-Dichloroethane	96
cis-1,2-Dichloroethene	104
1,1,1-Trichloroethane	96
Trichloroethene	100
Tetrachloroethene	100
trans-1,2-Dichloroethene	104

Container Type: NA - Not Applicable

Surrogates	**%Recovery**	**Method Limits**
1,2-Dichloroethane-d4	96	70-130
Toluene-d8	99	70-130
4-Bromofluorobenzene	108	70-130

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Client Sample ID: LCS

Lab ID#: 1308717-21A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**17090503**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 9/5/13 08:59 AM**	

Compound	%Recovery	Method Limits
Vinyl Chloride	87	70-130
Chloroethane	91	70-130
1,1-Dichloroethene	98	70-130
Freon 113	97	70-130
Methylene Chloride	84	70-130
1,1-Dichloroethane	91	70-130
cis-1,2-Dichloroethene	89	70-130
1,1,1-Trichloroethane	94	70-130
Trichloroethene	91	70-130
Tetrachloroethene	92	70-130
trans-1,2-Dichloroethene	107	70-130

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	92	70-130
Toluene-d8	99	70-130
4-Bromofluorobenzene	94	70-130

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Client Sample ID: LCSD

Lab ID#: 1308717-21AA

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**17090504**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 9/5/13 09:20 AM**	

Compound	%Recovery	Method Limits
Vinyl Chloride	85	70-130
Chloroethane	88	70-130
1,1-Dichloroethene	97	70-130
Freon 113	97	70-130
Methylene Chloride	83	70-130
1,1-Dichloroethane	90	70-130
cis-1,2-Dichloroethene	87	70-130
1,1,1-Trichloroethane	93	70-130
Trichloroethene	93	70-130
Tetrachloroethene	94	70-130
trans-1,2-Dichloroethene	106	70-130

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	91	70-130
Toluene-d8	102	70-130
4-Bromofluorobenzene	96	70-130

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Client Sample ID: LCS

Lab ID#: 1308717-21B

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**j090903**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 9/9/13 10:19 AM**	

Compound	%Recovery	Method Limits
Vinyl Chloride	101	70-130
Chloroethane	95	70-130
1,1-Dichloroethene	107	70-130
Freon 113	105	70-130
Methylene Chloride	89	70-130
1,1-Dichloroethane	88	70-130
cis-1,2-Dichloroethene	100	70-130
1,1,1-Trichloroethane	93	70-130
Trichloroethene	95	70-130
Tetrachloroethene	95	70-130
trans-1,2-Dichloroethene	108	70-130

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	95	70-130
Toluene-d8	100	70-130
4-Bromofluorobenzene	107	70-130

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Client Sample ID: LCSD

Lab ID#: 1308717-21BB

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**j090904**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 9/9/13 10:41 AM**	

Compound	%Recovery	Method Limits
Vinyl Chloride	99	70-130
Chloroethane	89	70-130
1,1-Dichloroethene	101	70-130
Freon 113	97	70-130
Methylene Chloride	82	70-130
1,1-Dichloroethane	86	70-130
cis-1,2-Dichloroethene	92	70-130
1,1,1-Trichloroethane	89	70-130
Trichloroethene	92	70-130
Tetrachloroethene	93	70-130
trans-1,2-Dichloroethene	107	70-130

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	91	70-130
Toluene-d8	100	70-130
4-Bromofluorobenzene	105	70-130