Annual Soil Vapor and Indoor Air Monitoring Report for December 2013

Citizen Development Company / Flower Fashion Site
47 Northern Boulevard
Great Neck, New York

NYSDEC Site # 1-30-070

February 2014

Prepared for:

Citizen Development Company
111-15 Queens Boulevard
P.O. Box 10
Forest Hills, NY 11375

Prepared by:

CA Rich Consultants, Inc.
17 Dupont Street
Plainview, NY 11803

February 25, 2014

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION
At SUNY
50 Circle Road
Stony Brook, New York 11794

Attention: Mr. Jamie Ascher

Re: Annual Report
December 2013 Soil Vapor & Indoor Air Monitoring Results
The Citizens Development Company / Flower Fashion Site (the Site)
47 Northern Boulevard, Great Neck, New York

Dear Mr. Ascher:

In accordance with our Site Management Plan (SMP), attached is a copy of the Annual Soil Vapor & Indoor Air Monitoring Report and Certification (the Report) for the above-referenced Site. This document follows the Department's new "Periodic Review Report General Guidance" outline included in the NYSDEC's 45 – Day Reminder Notice. It also includes a signed Institutional and Engineering Controls Certification Form.

The findings presented in this Report indicate that the remedial activities completed remain effective in reducing the concentrations of perchloroethene (PCE) in the soil vapor and indoor air at the Site and in the basements of the adjacent buildings.

During this December's sampling round, an elevated PCE level (130 ug/m^3) was detected in the first floor of the AT&T store. The basement sample, however, contained 8.9 ug/m^3 of PCE. Upon receipt of this data, an HVAC contractor was contacted and asked to check the make-up air damper. During that inspection, the damper was found to be closed. On January 27, 2014, the damper was opened allowing fresh outdoor air to be blended with the interior air. The indoor air from the first floor of the AT&T store was re-sampled on February 16, 2014. The PCE concentration measured on that date had decreased to 0.76 ug/m^3.

The two samples from the basement of 55 Northern Blvd. (which is currently vacant) contained PCE at 51 and 48 ug/m^3. While these levels are below the former indoor air standard of 100 ug/m^3, they are slightly above the recently updated standard of 30 ug/m^3.

As described in detail within our Report, we recommend the following for this Site:

- We recommend that the program of indoor air monitoring and inspection of the SSD systems at the AT&T store continue on an annual basis in accordance with the SMP.

- We also recommend continued monitoring of the indoor air at 55 Northern Blvd. in accordance with the SMP.

If there are any questions regarding this Report, please do not hesitate to call our Office.

Sincerely,

CA RICH CONSULTANTS, INC.

Eric Weinstock

Eric A. Weinstock
Vice President

cc: Rosalie K. Rusinko, Esq., NYSDEC-Tarrytown
Charlotte Biblow, Esq., Farrell Fritz
Sal Panico, Cord Meyer Development, LLC
Jacqueline Nealon, NYSDOH

Table of Contents

Periodic Review Report (PRR) – December 2013
Citizen Development Company /Flower Fashion Site
47 Northern Boulevard
Great Neck, New York
NYSDEC Site # 1-30-070

1.0 Introduction

The Citizen Development Corp./Fashion Flower (CDC/FF) site (the Site), located at 47 Northern Boulevard in Great Neck, New York (Figure 1), is currently occupied by an AT&T cellular telephone store. Previous tenants of this Property were: a Cingular cellular telephone store; a florist; and a dry cleaner. For the purposes of this document, the contaminant of concern is tetrachloroethene (a.k.a perchloroethene or "PCE") which is a remnant of the operations of the former dry cleaner. The media that were impacted included soil, soil vapor, groundwater and indoor air.

During this December's sampling round, an elevated PCE level (130 ug/m^3) was detected in the first floor of the AT&T store. The basement sample, however, contained 8.9 ug/m^3 of PCE. Upon receipt of this data, an HVAC contractor was contacted and asked to check the make-up air damper. During that inspection, the damper was found to be closed. On January 27, 2014, the damper was opened allowing fresh outdoor air to be blended with the interior air. The indoor air from the first floor of the AT&T store was re-sampled on February 16, 2014. The PCE concentration measured on that date had decreased to 0.76 ug/m^3.

A. Nature & Extent of Contamination and Remedial History

During the 1980's and 1990's, a series of investigative and remedial activities including soil borings, well installations & sampling, soil vapor surveys, a soil excavation, soil vapor extraction (SVE) system and groundwater pump & treat systems were employed at the CDC/FF Site to address a release of the dry cleaning chemical perchloroethene and its degradation products. During the 2000's, this was followed by a Sub-Slab Depressurization (SSD) system below the building, an additional soil vapor survey, a second soil removal effort, a program of in-situ chemical oxidation, the operation of a second SVE system, the installation of additional monitoring wells and the installation/conversion to a second SSD system.

As displayed in the chronologic tabulation included in Section 2 of this report, this Site has a long history of environmental investigative and remedial activities. A list of references for the work performed is included at the end of this Report. For the purposes of this periodic review, this Report will focus on the more recent investigative and remedial efforts as outlined in the Site Management Plan (SMP) (Ref 12). These are: in-situ chemical oxidation; operation of an SVE – converted to SSD system in the rear of the Property; operation of the SSD system below the building; and post remediation groundwater and indoor air monitoring.

B. Effectiveness of Remedial Program

The effectiveness of the corrective actions implemented at this Site has been evaluated by reviewing data collected regarding the following components of the remedial program. These are discussed in detail in Section 3 of this Report.

<u>In-Situ Chemical Oxidation</u> – The last in-situ chemical oxidation application was applied during the summer of 2006. Based on the results of samples collected from the monitoring wells downgradient of the application Site, this remedial effort is deemed to have been effective. In response to our 2010 Annual Monitoring Report (Ref. 16), the NYSDEC has agreed that groundwater monitoring at this site may be discontinued. A copy of the letter (Ref 17) is attached.

Operation of the SVE System in the Rear of the Property – The SVE system has remained in operation from January 2005 to July 2011. A final post remediation soil boring was performed in December 2010 and the results included in the Annual Monitoring Report for that year. Based on those results, the NYSDEC concurred that the SVE system could be turned off and converted to an SSD system by replacing the blower with an energy efficient vapor abatement fan (Ref. 17). This conversion was performed in July 2011. The layout of the SSD systems are illustrated on Figure 2.

Operation of the SSD System Below the Building – The operation of the SSD fan is checked on a regular basis. No operational problems have been reported during 2013. Based on the results of the indoor air samples collected in the AT&T store, the SSD system is deemed to have been effective and protective.

Post Remediation Groundwater and Indoor Air Monitoring – The results of the indoor air monitoring program are discussed in Section 2 of this Report. The indoor air PCE results collected in December 2013 were below the former action level of 100 ug/m^3. The two samples from the basement of 55 Northern Blvd. (which is currently vacant) contained PCE at 51 and 48 ug/m^3. While these levels are below the former indoor air standard of 100 ug/m^3, they are slightly above the recently updated standard of 30 ug/m^3.

Groundwater monitoring is no longer required or performed at this site.

C. Compliance

The Site is currently in compliance with the Site Management Plan (SMP)

D. Recommendations

We recommend that the program of indoor air monitoring and inspection of the SSD systems continue on an annual basis in accordance with the SMP.

2.0 Site Overview

A. Chronology of Investigative and Remedial Activities

During the 1980's and 1990's, a series of investigative and remedial activities including soil borings, well installations & sampling, soil vapor surveys, soil excavation, soil vapor extraction (SVE) system and groundwater pump & treat systems were employed at the CDC/FF Site to address a release of the dry cleaning chemical perchloroethene and its degradation products. During the 2000's, this was followed by a sub-slab depressurization (SSD) system below the building, an additional soil vapor survey, a second soil removal effort, a program of in-situ chemical oxidation, the operation of a second SVE system and the installation of additional monitoring wells.

As displayed in the chronologic tabulation below, this Site has a long history of environmental investigative and remedial activities. A list of references for the work performed is included at the end of this Report.

A chronology of the Site activities is presented in the following tabulation.

Action	Time Period
Initial subsurface investigations	1983 – 1984
Initial soil removal action in northwest corner of Property	1984
Operation of the initial SVE and groundwater pump and treat systems	1986 – 1990
Post remediation groundwater monitoring	1990 – 2010
Installation and operation of a SSD system below the building	2002 – Present
Post remediation indoor air monitoring	2002 – Present
Performance of a second soil vapor survey	2003
Second soil removal action in northeast corner of Property	2004
Application of in-situ chemical oxidation in rear of Property	2004 – 2006
Installation of additional deep monitoring wells	2005
Operation of second SVE system	2005 – 2011
Preparation of a Site Management Plan	2006
Performance of post-remediation borings	2009
Installation of two new shallow SVE wells	2009
Performance of additional post-remediation borings	2010
Conversion of SVE system to SSD system	2011

B. Nature and Extent of Contamination

As the source of contamination was the operation of a former dry cleaning facility, the contaminant of concern is tetrachloroethene (a.k.a perchloroethene, PCE or "Perc") which is the trade name for dry cleaning fluid. The media that were impacted included soil, soil vapor, groundwater and indoor air. The extent of contamination in each of these media is discussed below.

Soil – Two known areas of soil contamination existed below the rear of the Property in the past. One portion of contaminated soil located below the northwest portion of the property was removed in 1984 under the oversight of the Nassau County Department of Health.

A second soil removal action was performed in the northeast portion of the Property in 2004 under the oversight of the NYSDEC (Ref. 8). This was followed by in-situ treatments with permanganate, a chemical oxidant, followed by the operation of a SVE system (Ref. 9).

Soil Vapor – In the past, elevated PCE levels were measured in the rear of the Property. During 2004, concentrations as high as 2,400,000 ug/m^3 of PCE were recorded in the rear yard of the Property. Since that time, a soil removal effort followed by chemical oxidation treatment and the operation of an SVE system have been employed. The concentration of PCE in the exhaust of the SVE system during our December 2010 sampling event was 4,342 ug/m^3, a significant improvement since the 2004 sample collection. The historical results of the VOCs detected in the exhaust of the SVE system are included in the 2010 Annual Monitoring Report (Ref. 16). Based on decreasing concentrations of the SVE exhaust and the results of the post remediation borings, the SVE system was converted to an SSD system in July 2011.

Indoor Air Quality – Indoor air sampling was initiated in 2002. Samples were collected from the basement and ground floor level of 47 Northern Blvd.; the basement of 55 Northern Blvd.; the ground floor level of 45 Northern Blvd. (an adjoining strip-type shopping center which has no basement); and from a designated outdoor sampling point. PCE was detected above the NYSDOH background level of 10 ug/m^3 and action level of 100 ug/m^3 in both 47 and 55 Northern Blvd. locations during the initial 2002 sampling event. Results decreased after the SSD and SVE systems were placed into operation. During the Winter 2013/2014 sampling event, the PCE levels at all locations were below the former NYSDOH action level of 100 ug/m^3. The two samples from the basement of 55 Northern Blvd. (which is currently vacant) contained PCE at 51 and 48 ug/m^3. While these levels are below the former indoor air standard of 100 ug/m^3, they are slightly above the recently updated standard of 30 ug/m^3.

Sub-Slab Vapor - On December 17, 2012, a sub-slab soil vapor sampling point was installed at 55 Northen Blvd. and a soil gas sample collected. The sub-slab soil vapor PCE results of this sample was 42 ug/m^3 which is below the NYSDOH Matrix 2 Mitigation level of 100 ug/m^3. The historical results of PCE detected in the indoor air and this sample are included on Table 1.

Groundwater – A series of groundwater wells had been installed at the Site. Wells MW-1A, 1B, 1C, and 1D are all upgradient water table monitoring wells. These have historically shown low, but measurable, levels of PCE entering the Property. The locations of the wells are illustrated on Figure 4.

Wells MW-2, 3, 4 are downgradient water table monitoring wells located along the northern boundary of the Site. In the past, these have contained PCE levels in the range of 100 to 1,000 ug/l with well MW-4 displaying the highest concentrations. Since the completion of the chemical oxidation program, the PCE levels decreased significantly. In fact, during the December 2009 sampling round, the PCE concentrations in wells MW-2 and 3 were 2.0 ug/l and 0.85 ug/l. Well MW-4, the well that has historically had the highest PCE levels at the site, contained 7.1 ug/l in December 2010, just slightly above the groundwater standard of 5.0 ug/l.

A series of multi-depth monitoring wells were installed in the area of MW-4. These are identified as MW-4(75) which is 75 feet deep, MW-4(90) which is 90 feet deep, and MW-4D which is 146 feet deep. During the December 2009 monitoring event, PCE was not detected in the water samples from any of these wells.

There were also a series of off-site wells installed for this Site. These are identified as wells MW-5, 6, 7, 8 and 10. The off-site wells were last sampled in 2005. At that time, the PCE detections were all relatively low, between 1 and 13 ug/l.

Based on the low levels of PCE detected in the 2010 sampling round, the NYSDEC agreed that groundwater monitoring could be discontinued at this Site. As such, groundwater monitoring is no longer performed.

3.0 Evaluation of Remedy Performance, Effectiveness and Protectiveness

For the purposes of our periodic review, this report will evaluate the most recent investigative and remedial efforts as outlined in the SMP. These are: in-situ chemical oxidation; operation of an SVE – converted SSD system in the rear of the Property; operation of the SSD system below the building; and post remediation groundwater and indoor air monitoring.

In-Situ Chemical Oxidation – Permanganate is a strong oxidizer that has a long history of application for the control of odors at wastewater treatment plants. The application of permanganate directly to subsurface soils and groundwater has been proven successful for the remediation of PCE. Once in contact with PCE, the permanganate converts the contaminant to harmless by-products as shown below:

$$2NaMnO4 + C2HCl4 \rightarrow 2CO2 + 2MnO2 + 2H+ + 2Na- +4Cl -$$

(Permanganate + Perchloroethene → Carbon Dioxide Gas + Manganese Dioxide + Hydrogen ions + Sodium ions + Chlorine ions)

During the Fall of 2004, liquid permanganate was applied to a series of 27 shallow injection points and two water table injection points located in the rear of the Property. Additional applications of permanganate were applied to the water table injection points during the Summers of 2005 and 2006 (Ref 9).

The monitoring wells downgradient of the permanganate application site, wells MW-2, 3 and 4, were monitored periodically after the application program. The PCE levels in these wells have declined as a result of this treatment. During the December 2010 sampling round, the PCE concentrations in wells MW-2 and 3 were 2.0 ug/l and 0.85 ug/l. Well MW-4, the well that has historically had the highest PCE levels at the Site, contained 7.1 ug/l, just slightly above the groundwater standard of 5.0 ug/l.

Based on these results, the chemical oxidation program is deemed to have been effective and protective.

Operation of the SVE – converted to SSD System in the Rear of the Property – After the permanganate application program was completed, an SVE system was placed in the northeast portion of the rear yard to remove the remnant PCE vapors that were not addressed by the soil removal and in-situ chemical oxidation programs. The SVE system for this Site included three shallow horizontal SVE wells installed in the backfilled excavation area. Five of the shallow permanganate injection points were also converted in SVE wells. A description of the SVE system is included in Reference 9.

The SVE system remained in operation from January 2005 to July 2011 except for periodic repairs. Over that period of time, it has been effective in reducing the concentration of remnant PCE soil vapors below the rear portion of the Property. The initial PCE concentration in the untreated or "raw" soil vapor in January 2005 was 540,000 ug/m^3. During the December 2010 sampling round, this was reduced to 4,342 ug/m^3.

With respect to termination of the SVE system, the SMP states that once the levels of total VOCs in the SVE wells decreases to a near constant or asymptotic concentration, operation of the system will be suspended. In addition it states that three soil borings will then be placed in the rear yard. Soil samples will be collected at a level of 3 to 4 feet below grade in the native soil below the imported fill and analyzed for halogenated volatile organics. If the concentration of

PCE and its degradation products in these samples do not exceed the NYSDEC TAGM (Ref.11) Cleanup Objectives, the SVE blower will be replaced with a smaller SSD blower.

Three post-remediation soil borings were installed in the rear of the Property (Ref. 13). In 2009, the soil samples in two of these borings were below the TAGM. Two new shallow SVE wells were installed later that year in the area of the third boring, the boring that exceeded the TAGM (Ref. 14). The boring in the third location was re-installed and tested for VOCs in March 2010 (Ref. 15) and December 2010 (Ref. 16). Based on those results, the termination criteria had been achieved and the SVE blower was replaced with a more energy efficient SSD fan as outlined in the SMP.

Operation of the SSD System Below the Building – The operation of the SSD fans is checked on a regular basis. No operational problems have been reported during 2013.

Based on the results of the indoor air samples collected in the AT&T store, the SSD systems are deemed to have been effective and protective.

Post Remediation Groundwater and Indoor Air Monitoring – The results of the indoor air monitoring program are discussed in Section 5 of this Report. The PCE indoor air sample results are all below the former action level of 100 ug/m^3. The indoor air samples from the AT&T store were below the recently enacted indoor air standard of 30 ug/m3, however, the indoor air samples from the basement of 55 Northern Blvd. (which is currently vacant) were slightly above this level. The groundwater monitoring portion of this project has been completed and monitoring of the groundwater is no longer performed.

Based on these results, we believe the remedy and the post remediation monitoring program have been effective and protective.

4.0 Institutional Controls/Engineering Controls (IC/EC) Plan Compliance

A. Requirements and Compliance

Institutional Controls – Two institutional controls have been implemented for the site: 1) development of a deed restriction; and 2) groundwater beneath the Site cannot be used for potable or industrial purposes without treatment unless first obtaining permission to do so from NYSDEC. The deed restriction was signed on November 26, 2013 and recorded on January 22, 2014. The groundwater beneath the Site is not being used for potable or industrial purposes.

Engineering Controls – There are two SSD systems operating at the site. The SSD systems are performing properly as described in Section 3 of this Report.

B. Certification

An annual inspection of the Site is performed, and an Annual Certification is provided to the NYSDEC as required in the SMP.

5.0 Monitoring Plan Compliance

The following monitoring programs are described in the SMP and include: groundwater monitoring, soil vapor monitoring, and indoor air quality monitoring.

5.1 Groundwater Monitoring

Groundwater monitoring is no longer required at this site.

5.2 Soil Vapor

Soil vapor monitoring is no longer required at this site.

5.3 Sub-Slab Depressurization Systems

Monitoring of the SSD systems will consist of checking to confirm that the SSD blowers are operating. A field technician visited the Site in June and December and confirmed that there was a flow of air out of the SSD systems and that the fans were functioning.

Termination Criteria - The SSD systems will be terminated when monitoring of the indoor air confirms that there are no impacts to the indoor quality of the Cingular store (now an AT&T store) and the 3 adjoining stores after the SSD fans have been turned off for a period of 30 days during winter conditions.

5.4 Indoor Air Quality

Indoor air samples were collected at the following locations on an annual basis during the winter heating season.

BUILDING	SAMPLE LOCATION & IDENTIFICATION
CDC/FF Site (Cingular Store) 47 Northern Blvd.	Ground Floor and Basement (Sample ID: PDM-1 and PDM-2)
Health Nut Store 45 Northern Blvd.	No longer sampled
Cambridge Educational Center 55 Northern Blvd.	Basement (waiting room and NW Test Center) (Sample ID: PDM-4 and PDM-5)
Outdoor Ambient Air	Behind Site Building (Sample ID: PDM-6)

As recommended by the New York State Department of health (NYSDOH), all of the indoor air samples were collected via Summa canisters and were analyzed via Method T0-15 in accordance with the sampling protocols outlined in the NYSDOH's "Guidance for Evaluating Soil Vapor Intrusion in the State of New York", dated October 2006. The Summa canisters were brought out to the Site sampling locations, opened and exposed for an approximate 8-hour period via laboratory calibrated regulators. The samples were analyzed by ELAP-approved York Analytical Laboratories, Inc. for the analysis of PCE via Method T0-15. Monitoring of the indoor air quality at locations PDM-1 through 2 and 4 through 6 will continue as long as the soil vapor extraction and sub-slab depressurization systems are in operation or the NYSDEC indicates monitoring is no longer required.

During this December's sampling round, a PCE level of 130 ug/m^3 was detected in the first floor of the AT&T store. The basement sample, however, contained 8.9 ug/m^3 of PCE. Upon receipt of this data, an HVAC contractor was contacted and asked to check the make-up air damper. During that inspection, the damper was found to be closed. On January 27, 2014, the damper was opened allowing fresh outdoor air to be blended with the interior air. The indoor air from the

first floor of the AT&T store was re-sampled on February 16, 2014. The PCE concentration measured on that date had decreased to 0.76 ug/m^3.

The two samples from the basement of 55 Northern Blvd. (which is currently vacant) contained PCE at 51 and 48 ug/m^3. While these levels are below the former indoor air standard of 100 ug/m^3, they are slightly above the recently updated standard of 30 ug/m^3.

The December 2013 monitoring round results are included on Table 1.

Termination Criteria - Once the air quality in the Cingular store (now an AT&T store) and the three adjoining stores remains at or below the established NYS background level for PCE (which is currently 10 ug/m^3) during one round of sampling during the winter heating season with the SSD system turned off for a period of 30 days, the indoor air monitoring program will be terminated and the Site will be eligible for delisting from the Registry.

6.0 Operations & Maintenance Plan Compliance

Currently there are two a sub-slab depressurization systems operating at the site.

6.1 Sub-Slab Depressurization Systems

Currently, there is a Sub-Slab Depressurization (SSD) system operating in the basement of the existing building. The system consists of a perforated pipe buried beneath the basement floor that is connected to a Fantech® low pressure SSD blower that exhausts extracted soil vapor at a rate of approximately 150 cfm. A second SSD system is connected to the horizontal and shallow vertical vents that were installed for the SVE system. Indoor air quality tests currently indicate that this system is effectively controlling sub-slab PCE vapors.

Operations & Maintenance procedures that apply to the Fantec® fans includes a physical inspection of the fans to confirm that air is being discharged and that the fans are operating. These inspections were performed during 2013.

7.0 Overall Periodic Review Report Conclusions and Recommendations

The corrective actions implemented at this Site have been evaluated by reviewing data collected at the Site, and they are deemed to be effective and protective.

- The operation of the existing SSD fans are checked on a regular basis. No operational problems have been reported during 2013. Based on the results of the indoor air samples collected in the AT&T store the SSD system is deemed to have been effective and protective. No modifications to the SSD systems are recommended at this time.

- We recommend that the program of indoor air monitoring and inspection of the SSD systems at the AT&T store continue on an annual basis in accordance with the SMP.

- We also recommend continued monitoring of the indoor air at 55 Northern Blvd. in accordance with the SMP.

REFERENCES

1. Cabot Kilburn, (1979), Hydrogeology of the Town of North Hempstead, Nassau County, Long Island, New York, USGS Long Island Water Resources Bulletin 12.

2. JR Kolmer + Associates, (February 1998), Citizen Development Company Final RI/FS Report.

3. JR Kolmer + Associates, (June 1999), Remedial Investigation Work Plan OU 2, Citizen Development Company.

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5. CEC, Inc., (June 2002), Supplemental Remedial Investigation Work Plan Citizen Development Company, Great Neck, New York.

6. CEC, Inc., (October 2002), Groundwater Quality Data for the Flower Fashion Site.

7. CA RICH, (2003 thru 2008), Annual Groundwater Monitoring Reports, Citizen Development Company, Flower Fashion Site, 47 Northern Blvd., Great Neck, New York.

8. CA RICH, (January 2005), Interim Remedial Measures Report – Part A, The Citizens Development Company / Flower Fashion Site, 47 Northern Blvd., Great Neck, New York.

9. CA RICH, (April 2005), Interim Remedial Measures Report – Part B, Final Engineering Report and Operations, Maintenance & Monitoring Plan, The Citizens Development Company / Flower Fashion Site, 47 Northern Blvd., Great Neck, New York.

10. CA RICH, (January 2006), Annual Groundwater and Indoor Air Monitoring Report – December 2005, The Citizens Development Company / Flower Fashion Site, 47 Northern Blvd., Great Neck, New York.

11. NYSDEC, (January 24, 1994), Technical and Administrative Guidance Memorandum: Determination of Soil Cleanup Objectives and Cleanup Levels.

12. CA RICH, (June 2006), Site Management Plan, The Citizens Development Company / Flower Fashion Site, 47 Northern Blvd., Great Neck, New York.

13. CA RICH, (July 2009), Post-Remediation Borings Report, The Citizens Development Company / Flower Fashion Site, 47 Northern Blvd., Great Neck, New York.

14. CA RICH, (August 2009), Additional SVE Well Installation Report, The Citizens Development Company / Flower Fashion Site, 47 Northern Blvd., Great Neck, New York.

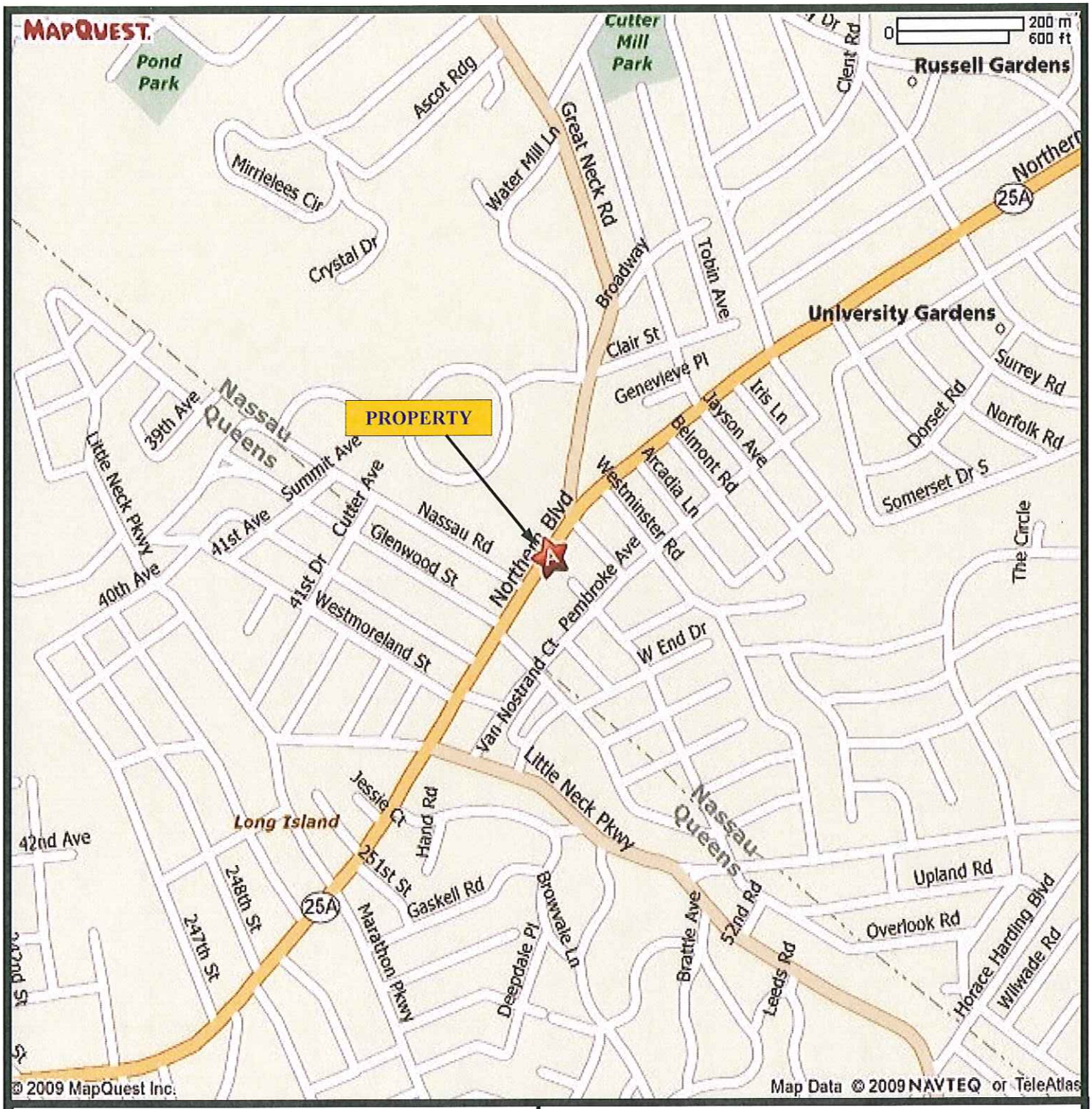
15. CA RICH (April 2010) Additional Post-Remediation Borings Report, The Citizens Development Company / Flower Fashion Site, 47 Northern Boulevard, Great Neck, New York

16. CA RICH (April 2011) Annual Groundwater, Soil Vapor and Indoor Air Monitoring Report, The Citizens Development Company / Flower Fashion Site, 47 Northern Boulevard, Great Neck, New York

17. NYSDEC (May 16, 2011) Citizens Development Company Site #1-30-070 Site Management/Periodic Review Report Response Letter

18. NYSDEC (July 19, 2012) Citizens Development Company Site #1-30-070 Site Management/Periodic Review Report Response Letter

Figures



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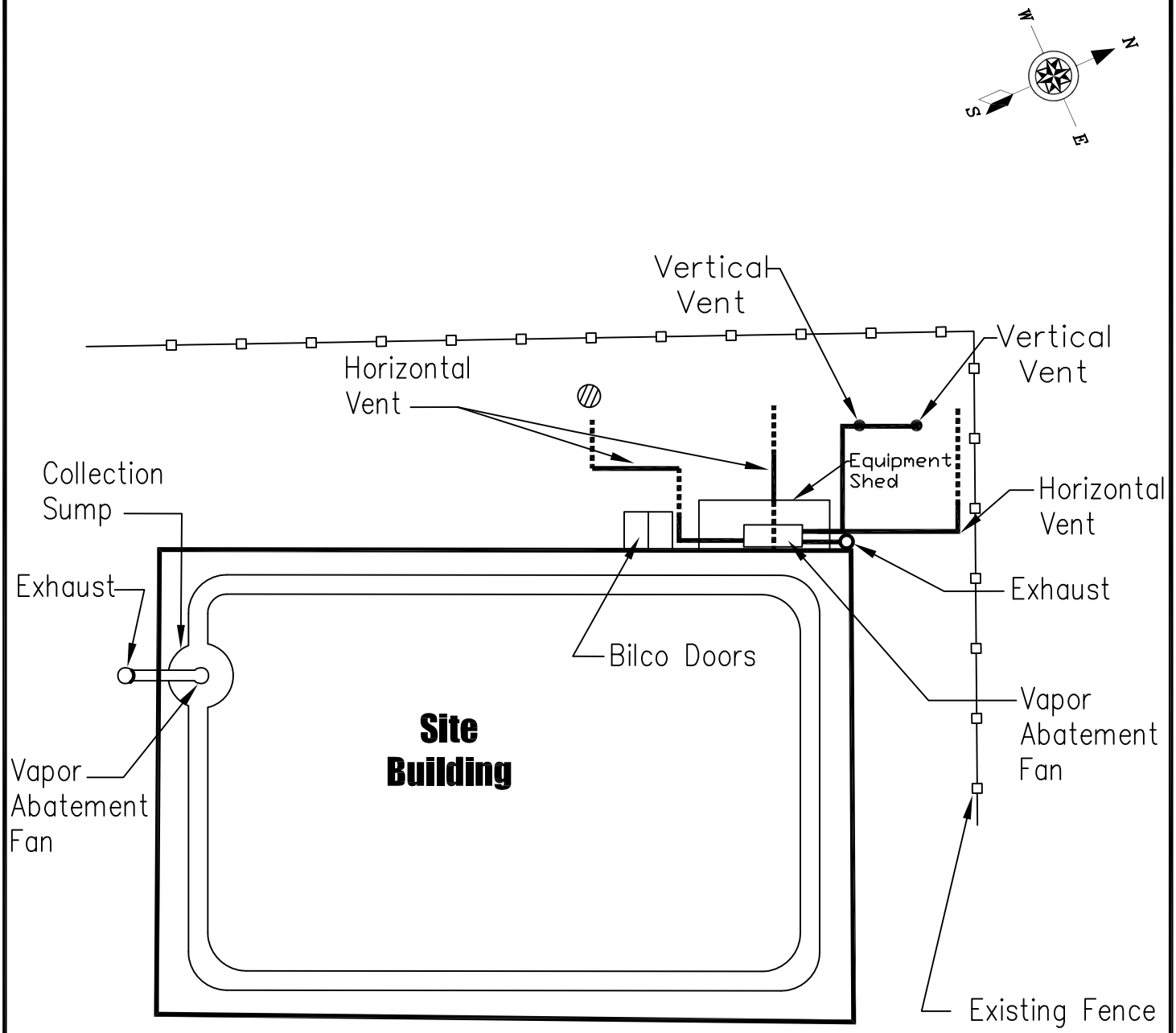
Map Adapted from Mapquest

CA RICH CONSULTANTS, INC.
17 Dupont Street,
Plainview, NY 11803

TITLE: **PROPERTY LOCATION MAP**		DATE: **3/19/09**
		SCALE: **AS SHOWN**
FIGURE: **1**	**47 Northern Boulevard Great Neck, New York**	DRAWN BY: **JTC**
DRAWING:		APPR. BY: **EAW**



LEGEND

- FORMER STORM WATER DRYWELL
- 2-INCH DIAMETER 20 SLOT PVC PIPE
- 2-INCH DIAMETER PVC PIPE
- PERFORATED DUCT
- VERTICAL VENT

0 10 20 30 40

GRAPHIC SCALE IN FEET

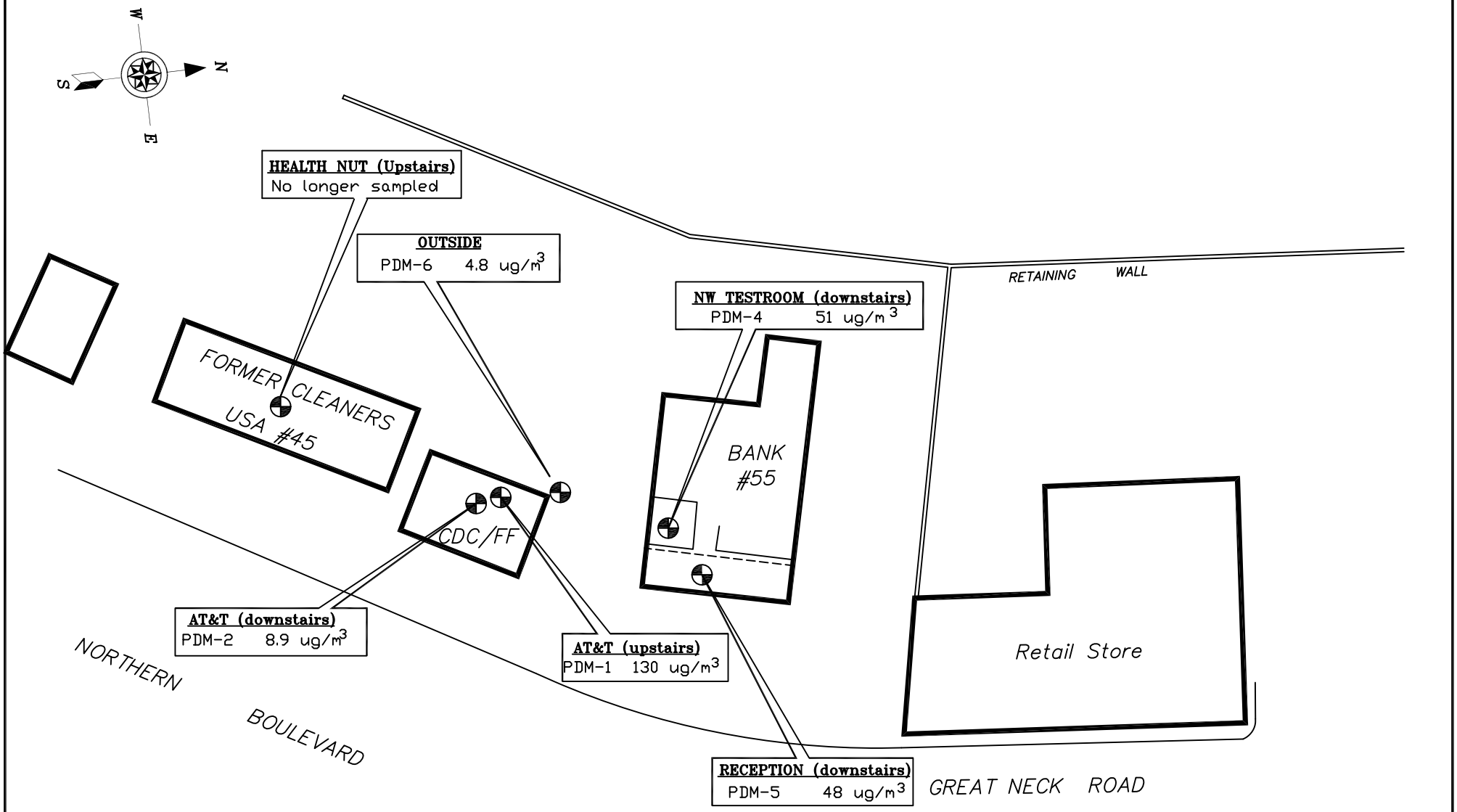
CA RICH CONSULTANTS, INC.

Environmental Specialists Since 1982
17 Dupont Street, Plainview, New York 11803

Stephen J. Osmundsen, P.E.

Consulting Engineer
514 Pantigo Road # 16, East Hampton New York 11937

TITLE: LOCATION OF SUBSURFACE PIPING LAYOUT FOR SSD SYSTEMS		DATE: 1/30/2012
		SCALE: 1" = 16'
FIGURE: 2	CDC/FLOWER FASHION 47 NORTHERN BLVD. GREAT NECK, NY 11020	DRAWN BY: J.T.C.
DRAWING NO: 2009-2		APPR. BY: S.J.O.



0 25 50 100 150

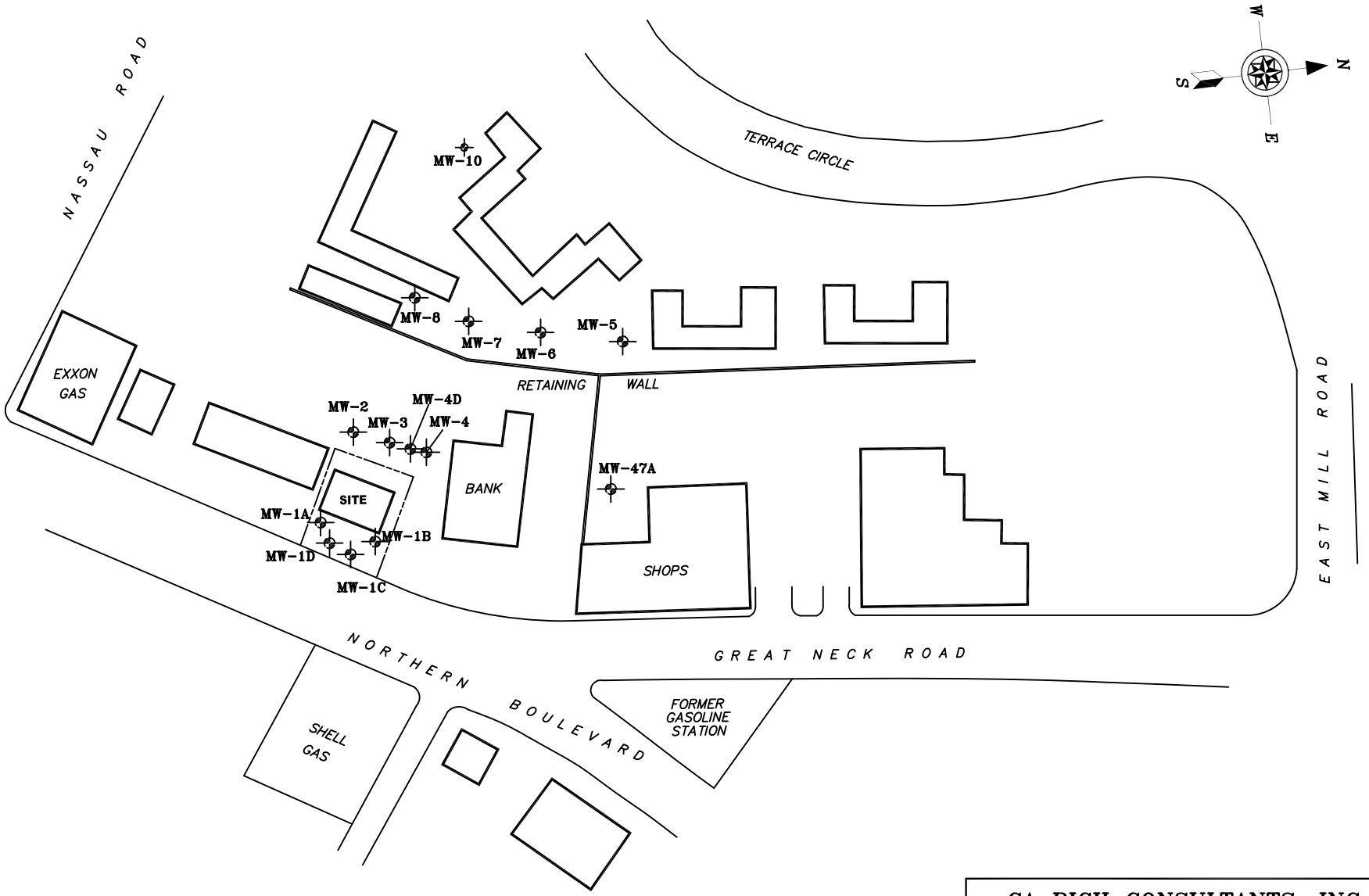
GRAPHIC SCALE IN FEET

Legend

AIR SAMPLE LOCATIONS

Note:
Map adapted from Civil and Environmental Engineers, Inc.
Site Area Map dated May 16, 2002.

CA RICH CONSULTANTS, INC.		
Environmental Specialists Since 1982 17 Dupont Street, Plainview, New York 11803		
TITLE: PERCHLOROETHENE IN AIR SAMPLES DECEMBER 2013		DATE: 1/9/14
		SCALE: As Shown
FIGURE: 3	CDC/FLOWER FASHION 47 NORTHERN BLVD. GREAT NECK, N Y 11020	DRAWN BY: T.R.B.
DRAWING NO: 1192-1bc.8		APPR. BY: E.A.W.



Legend

GROUNDWATER MONITORING WELL

0 50 100 150 300

GRAPHIC SCALE IN FEET

Note:
Map adapted from Civil and Environmental Engineers, Inc.
Site Area Map dated May 16, 2002.

CA RICH CONSULTANTS, INC.		
Environmental Specialists Since 1982 17 Dupont Street, Plainview, New York 11803		
TITLE: Locations of Monitoring Wells		DATE: 1/30/2012 SCALE: As Shown
FIGURE: 4 DRAWING NO: 2009-3a	CDC/FLOWER FASHION 47 NORTHERN BLVD. GREAT NECK, N Y 11020	DRAWN BY: S.T.M. APPR. BY: E.A.W.

Tables

Table 1
Citizens Development Co./Flower Fashion Site
Summary of Perchloroethene Indoor Air Readings
Units - ug/m3

Sample #:	PDM-1	PDM-2	PDM-3	PDM-4	PDM-5	PDM-6*	SS-01
Location:	Cingular/AT&T	Cingular/AT&T	Health Nut	55 No. Blvd. NW test rm.	55 No. Blvd. Reception	Outdoors	Sub-Slab
Level:	(Ground Fl.)	(Downstairs)	(Ground Fl.)	(Downstairs)	(Downstairs)	NA	NA
Date							
11/20/02	120	280	NA	170	150	7	NA
12/02/03	27	18	4	47	47	6.4	NA
06/15/04	22	27	6.6	39	39	10	NA
12/17/04	47	52	5.5	70	91	2.6	NA
06/23/05	4.5	8.3	1.4	8.8	10	5.7	NA
12/13/05	2.5	1.6	<0.5	6.2	6.2	<0.5	NA
12/04/06	2.3	1.4	<1.4	9.7	8.9	<1.4	NA
12/27/07	8.5	3.4	2.0	59	48	15	NA
02/06/08	5.2	3.9	2.6	22	48	6.1	NA
03/27/08	NA	NA	NA	21	17	3	NA
04/29/08	NA	NA	NA	29	34	7.1	NA
05/29/08	NA	NA	NA	14	17	11	NA
12/05/08	3.1	2.0	<1	19	11	2.9	NA
12/17/09	<1	<1	NA	30	32	<1	NA
12/02/10	2	3.1	NA	40	37	<1	NA
12/21/11	8.1	4.6	NA	59	38	3.2	NA
12/17/12	53	15	NA	37	48	2	42
12/23/13	130	8.9	NA	51	48	4.8	NA
01/27/14	Damper on HVAC system at the AT&T store openned to allow more fresh air into building						
02/16/14	0.76	1.2	NA	NA	NA	NA	NA

Notes:
1-AT&T store also known as Cingular
2-Subslab venting system in basement of AT&T installed during the Spring of 2002
3-November 20, 2002 samples collected and analyzed by NYSDOH
4-SVE system in rear yard installed January 2005
5-December 27, 2007 - SVE system shut down for unknown time period (<1 month)
6-January 25, 2008 - SVE repairs completed and system restarted
7-Additonal SVE wells added during August 2009
8-SVE System turned off and converted to a SSD System on 7/21/11
* - Outdoor air sample NA - Not Analyzed

See attached Figure 4 for sample locations

Enclosures

Enclosure 2

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION
Site Management Periodic Review Report Notice
Institutional and Engineering Controls Certification Form

Site Details **Box 1**

Site No. 130070

Site Name Citizens Development Co.

Site Address: 47 Northern Boulevard Zip Code: 11020
City/Town: Great Neck
County: Nassau
Site Acreage: 1.0

Reporting Period: May 01, 2012 to March 31, 2013

	YES	NO
1. Is the information above correct?	☒	☐
If NO, include handwritten above or on a separate sheet.		
2. Has some or all of the site property been sold, subdivided, merged, or undergone a tax map amendment during this Reporting Period?	☐	☒
3. Has there been any change of use at the site during this Reporting Period (see 6NYCRR 375-1.11(d))?	☐	☒
4. Have any federal, state, and/or local permits (e.g., building, discharge) been issued for or at the property during this Reporting Period?	☐	☒
If you answered YES to questions 2 thru 4, include documentation or evidence that documentation has been previously submitted with this certification form.		
5. Is the site currently undergoing development?	☐	☒

Box 2

	YES	NO
6. Is the current site use consistent with the use(s) listed below? Industrial	☒	☐
7. Are all ICs/ECs in place and functioning as designed?	☒	☐

IF THE ANSWER TO EITHER QUESTION 6 OR 7 IS NO, sign and date below and DO NOT COMPLETE THE REST OF THIS FORM. Otherwise continue.

A Corrective Measures Work Plan must be submitted along with this form to address these issues.

Signature of Owner, Remedial Party or Designated Representative

Date

SITE NO. 130070

Box 3

Description of Institutional Controls

Parcel	Owner	Institutional Control
0020051202	Citizen's Development Company	O&M Plan

Box 4

Description of Engineering Controls

Parcel	Engineering Control
0020051202	Vapor Mitigation

Engineering Control Details for Site No. 130070

Parcel: 0020051202

Continued OM&M of the soil vapor extraction system and the active sub-slab depressurization system have been implemented per the March 2006 OU-2 ROD. A deed restriction has not yet been filed with the county clerk.

Box 5

Periodic Review Report (PRR) Certification Statements

1. I certify by checking "YES" below that:

   a) the Periodic Review report and all attachments were prepared under the direction of, and reviewed by, the party making the certification;

   b) to the best of my knowledge and belief, the work and conclusions described in this certification are in accordance with the requirements of the site remedial program, and generally accepted engineering practices; and the information presented is accurate and compete.

YES	NO
☒	☐

2. If this site has an IC/EC Plan (or equivalent as required in the Decision Document), for each Institutional or Engineering control listed in Boxes 3 and/or 4, I certify by checking "YES" below that all of the following statements are true:

   (a) the Institutional Control and/or Engineering Control(s) employed at this site is unchanged since the date that the Control was put in-place, or was last approved by the Department;

   (b) nothing has occurred that would impair the ability of such Control, to protect public health and the environment;

   (c) access to the site will continue to be provided to the Department, to evaluate the remedy, including access to evaluate the continued maintenance of this Control;

   (d) nothing has occurred that would constitute a violation or failure to comply with the Site Management Plan for this Control; and

   (e) if a financial assurance mechanism is required by the oversight document for the site, the mechanism remains valid and sufficient for its intended purpose established in the document.

YES	NO
☒	☐

IF THE ANSWER TO QUESTION 2 IS NO, sign and date below and DO NOT COMPLETE THE REST OF THIS FORM. Otherwise continue.

A Corrective Measures Work Plan must be submitted along with this form to address these issues.

Signature of Owner, Remedial Party or Designated Representative

Date

IC CERTIFICATIONS
SITE NO. 130070

Box 6

SITE OWNER OR DESIGNATED REPRESENTATIVE SIGNATURE

I certify that all information and statements in Boxes 1,2, and 3 are true. I understand that a false statement made herein is punishable as a Class "A" misdemeanor, pursuant to Section 210.45 of the Penal Law.

I Peter Galetta (print name) at CDC, 111-15 Queens Blvd, Forest Hills, NY 11375 (print business address).

am certifying as Owner (Owner or Remedial Party)

for the Site named in the Site Details Section of this form.

Peter Galetta
Signature of Owner, Remedial Party, or Designated Representative Rendering Certification

2/26/14
Date

IC/EC CERTIFICATIONS

Box 7

Signature

I certify that all information in Boxes 4 and 5 are true. I understand that a false statement made herein is punishable as a Class "A" misdemeanor, pursuant to Section 210.45 of the Penal Law.

I Eric Weinstock (print name) at CARich Consultants, Inc. 17 Dupont Street, Plainview, NY (print business address),

am certifying as a QEP for the CDC, the Owner (Owner or Remedial Party)

Eric Weinstock

Signature of , ~~for the Owner or Remedial Party~~, QEP Rendering Certification

Stamp (Required for PE)

2/24/14

Date

Appendix A
Indoor Air Laboratory Data

L.A.B. Validation Corp. 14 West Point Drive, East Northport, N.Y. 11731

DATA USABILITY SUMMARY REPORT (DUSR)

ORGANIC ANALYSIS

EPA Compendium Method TO-15
VOLATILES BY GC/MS

For Indoor Air/Soil Gas Samples Collected
December 23, 2013
For Citizen Development Company/Flower Fashion Site
47 Northern Boulevard, Great Neck, New York
By CA Rich Consultants, Inc.

SAMPLE DELIVERY GROUP NUMBER: 13L0817
York Analytical Laboratories (ELAP #10854)

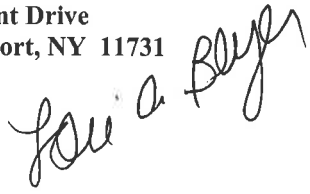
SUBMITTED TO:

Mr. Eric Weinstock
CA Rich Consultants, Inc.
17 Dupont Street
Plainview, New York 11803

January 13, 2014

PREPARED BY:

Lori A. Beyer/President
L.A.B. Validation Corp.
14 West Point Drive
East Northport, NY 11731



Phone (516) 523-7891 email LABValidation@aol.com

CDC/Flower Fashion Site, 47 Northern Boulevard, Great Neck, New York; December 2013.
Data Validation Report: Volatile Organics

Table of Contents:

Introduction:

A validation was performed on five (5) air samples for Volatile Organic analysis collected by CA Rich Consultants and submitted to York Analytical Laboratories for subsequent analysis under chain of custody documentation. This report contains the laboratory and validation results for the five (5) field samples itemized below. The samples were collected on December 23, 2013.

The samples were analyzed by York utilizing EPA Method TO-15 and in accordance with NYSDEC Analytical Services Protocol (2005) and submitted under NYSDEC ASP Category B equivalent deliverable requirements for the associated analytical methodology employed. The analytical testing consisted of the selected TO-15 Target Compound List (TCL) of analytes for Volatile Organics listed in Appendix A.

The data was evaluated in accordance with the USEPA Contract Laboratory Program National Functional Guidelines for Organic Data Review (Publication 9240.1-05), EPA SOP #HW31 (Revision 4-Updated 2009) and in conjunction with the analytical methodology for which the samples were analyzed, where applicable and relevant.

The data validation report pertains to the following field soil gas/air samples:

Sample Identification	Laboratory Identification(s)	Sample Matrix (Air Type)	Collection Date
PDM-1	13L0817-01	Indoor Ambient Air	12/23/13
PDM-2	13L0817-02	Indoor Ambient Air	12/23/13
PDM-4	13L0817-03	Indoor Ambient Air	12/23/13
PDM-5	13L0817-04	Indoor Ambient Air	12/23/13
PDM-6	13L0817-05	Outdoor Ambient Air	12/23/13

Data Qualifier Definitions:

The following definitions provide brief explanations of the qualifiers assigned to results in the data review process.

U - The analyte was analyzed for, but was not detected above the reported sample quantitation limit.

J - The analyte was positively identified; the associated numerical value is the approximate concentration of the analyte in the sample.

UJ - The analyte was not detected above the reported sample quantitation limit. However, the reported quantitation limit is approximate and may or may not represent the actual limit of quantitation necessary to accurately and precisely measure the analyte in the sample.

R - The sample results are rejected due to deficiencies in the ability to analyze the sample and meet quality control criteria. The presence or absence of the analyte cannot be verified.

N - The analysis indicates the presence of an analyte for which there is presumptive evidence to make a "tentative identification."

NJ - The analysis indicates the presence of an analyte that has been "tentatively identified" and the associated numerical value represents its approximate quantity.

K - The analyte is present. The reported value may be biased high. The actual value is expected to be lower than reported.

L - The analyte is present. The reported value may be biased low. The actual value is expected to be higher than reported.

UL - The analyte was not detected and the reported quantitation limit is most likely higher than reported.

Sample Receipt:

The Chain of Custody document from 12/23/13 indicates that five (5) air samples were delivered to York and received on 12/24/13 following completion of the sampling event. Sample login notes and the chain of custody indicate that at the Validated Time of Sample Receipt (VTSR) at the laboratory no discrepancies were notated and therefore the integrity of the summa canister samples is assumed to be good.

The data summary tables included in Appendix A includes all usable (qualified) and unusable (rejected) results for the samples identified above. These tables summarize the detailed narrative section of the report. All data validation qualifications have been reported on the Form I's for ease of review and verification.

NOTE:
L.A.B. Validation Corp. believes it is appropriate to note that the data validation criteria utilized for data evaluation is different than the method requirements utilized by the laboratory. Qualified data does not necessarily mean that the laboratory was non-compliant in the analysis that was performed.

Volatile Organics by EPA Compendium Method TO-15

The following method criteria were reviewed: holding times, surrogate standards, LCS, Blanks, Tunes, Calibrations, Internal Standards, Target Component Identification and Quantitation, Reported Quantitation Limits and Overall System Performance. The volatile results were considered to be valid and useable as noted on the data summary tables in Appendix A and within the following text:

1.1 Holding Time

The amount of an analyte in a sample can change with time due to chemical instability, degradation, volatilization, etc. If the technical holding time is exceeded, the data may not be considered valid. Those analytes detected in the samples whose holding time has been exceeded will be qualified as estimates, "J". The non-detects (sample quantitation limits) are required to be flagged as estimated, "J", or unusable, "R", if the holding times are grossly exceeded.

Air samples pertaining to this SDG were performed within the method and technical required holding times of thirty (30) days from sample collection for analysis. No qualifications were required based upon holding time criteria.

Canister pressure gauge was within requirements of 30 psi prior to sampling.

1.2 Surrogate Standards

All samples are spiked with surrogate compounds prior to sample analysis to evaluate overall laboratory performance and efficiency of the analytical technique. If the measure of surrogate concentrations is outside contract specification, qualifications are required to be applied to associated samples and analytes.

Recoveries for 4-Bromofluorobenzene fell within in house established ranges of 70-130% for all analyses pertaining to this SDG with the exception of the method blank applicable to 1/2/14 batch analysis (68.4%). No qualifications were applied since all sample surrogate recovery values met acceptance criteria.

1.3 Matrix Spikes (MS)/ Matrix Spike Duplicates (MSD)/Duplicate Analysis

The MS/MSD data are generated to determine the long-term precision and accuracy of the analytical method in various matrices.

Matrix Spike/Matrix Spike Duplicate analysis was not performed on samples pertaining to this SDG. The laboratory performed a blank spike/LCS and all recovery values were determined to be acceptable for all compounds with the exception of Isopropanol which recovered low (52.3%), Carbon Tetrachloride low at 69.4% and Trichlorofluoromethane low at 55.6%. Non-detects for all samples must be considered estimated (biased low), "UL." Detected concentrations must also be considered estimated, biased low, "L."

Field Duplicate analysis was not collected for this SDG. Laboratory duplicate analysis was performed on PDM-1 ATT. Acceptable precision for air samples is 25% and all detected analytes were within acceptance criteria. The following criteria are utilized for Field Duplicate analysis:

Criteria	Detected Compounds	Non-Detected Compounds
The RPD is within the limits of 0 and 25%	No qualification	No qualification
The RPD >25%	J in the parent and duplicate samples	Not applicable
The RPD could not be calculated since the compound was only detected in either the parent of duplicate sample. However, the detected concentration was </=2x the reporting limit	No qualification	No qualification
The RPD could not be calculated since the compound was only detected in either the parent or duplicate sample However, the detected concentration was >2x the reporting limit.	J in the parent or duplicate sample	UJ in the parent of duplicate sample

1.4 Laboratory Control Sample

The LCS data for laboratory control samples (LCS) are generated to provide information on the accuracy of the analytical method and on the laboratory performance.

Additional QC samples were not analyzed which is acceptable per the method since a blank spike/LCS was analyzed. Qualified data is discussed in Section 1.3 above.

1.5 Blank Contamination

Quality assurance (QA) blanks; i.e. method, trip and field blanks are prepared to identify any contamination which may have been introduced into the samples during sample preparation or field activity. Method blanks measure laboratory contamination. Trip blanks measure cross-contamination of samples during shipment. Field blanks measure cross-contamination of samples during field operations. Storage blanks measure cross-contamination during sample storage of the field samples. Canister blanks measure cross-contamination from the sampling media.

The following table was utilized to qualify target analyte results due to contamination. The largest value from all the associated blanks is required to be utilized:

For:	Flag Sample Result with a "U" when:	Report CRQL & Qualify "U" when:	No Qualification is Needed when:
Methylene Chloride, Acetone, Toluene & 2-Butanone	Sample Conc. Is >CRQL, but </=10x blank value	Sample Conc. is <CRQL and </=10x blank value	Sample Conc. is >CRQL and >10x blank value
Other Contaminants	Sample Conc. Is >CRQL, but </=5x blank value	Sample Conc. Is <CRQL and </=5x blank value	Sample Conc. is >CRQL and >5x blank value

Below is a summary of the compounds in the sample and the associated qualifications that have been applied:

A) **Method Blank Contamination:**

Method blanks were determined to contain acceptable levels of methylene chloride. Sample results were evaluated based on the above criteria and negated where required (when laboratory reported concentrations are not due to sample matrix constituents). Sample dilutions were considered when comparing blank and sample results.

Canister cleaning documentation was not submitted in the data package.

B) **Field Blank Contamination:**

Field Blank analysis was not conducted for this SDG.

C) **Trip Blank Contamination:**

Trip Blank analysis was not submitted with this SDG.

D) **Storage Blank Contamination:**

Storage blanks were not submitted for this SDG. It should be noted that storage blanks are not mandated by EPA Method TO-15.

1.6 GC/MS Instrument Performance Check

Tuning and performance criteria are established to ensure adequate mass resolution, proper identification of compounds and to some degree, sufficient instrument sensitivity. These criteria are not sample specific. Instrument performance is determined using standard materials. Therefore, these criteria should be met in all circumstances. The Tuning standard for volatile organics is Bromofluorobenzene (BFB).

Instrument performance was generated within acceptable limits and frequency (24 hours) for Bromofluorobenzene (BFB) for all analyses conducted for this SDG.

1.7 Initial and Continuing Calibrations

Satisfactory instrument calibration is established to ensure that the instrument is capable of producing acceptable quantitative data. An initial calibration demonstrates that the instrument is capable of giving acceptable performance at the beginning of an experimental sequence. The continuing calibration checks document that the instrument is giving satisfactory daily performance.

A) Response Factor GC/MS:
The response factor measures the instrument's response to specific chemical compounds. The response factor for all compounds must be >/= 0.05 in both initial and continuing calibrations. A value <0.05 indicates a serious detection and quantitation problem (poor sensitivity). Analytes detected in the sample will be qualified as estimated, "J". All non-detects for that compound in the corresponding samples will be rejected, "R".

The following compounds are allowed to be >0.01 without qualification:
2-Butanone
Carbon Disulfide
Chloroethane
Chloromethane
1,2-Dibromoethane
1,2-Dichloropropane
1,4-Dioxane
1,2-Dibromo-3-chloroproane
Methylene Chloride

All the response factors for the target analytes reported were found to be within acceptable limits (>/=0.05) [or >/=0.01 for the 9 compounds above], for the initial and continuing calibrations.

B) Percent Relative Standard Deviation (%RSD) and Percent Difference (%D):
Percent RSD is calculated from the initial calibration and is used to indicate the stability of the specific compound response factor over increasing concentrations. Percent D compares the response factor of the continuing calibration check to the mean response factor (RRF) from the initial calibration. Percent D is a measure of the instrument's daily performance. Percent RSD must be <30% and

%D must be <30%. A value outside of these limits indicates potential detection and quantitation errors. For these reasons, all positive results are flagged as estimated, "J" and non-detects are flagged "UJ". If %RSD and %D grossly exceed QC criteria (>90%), non-detect data may be qualified, "R", unusable. Additionally, in cases where the %RSD is >30% and eliminating either the high or the low point of the curve does not restore the %RSD to less than or equal to 30% then positive results are qualified, "J". In cases where removal of either the low or high point restores the linearity, then only low or high level results will be qualified, "J" in the portion of the curve where non linearity exists.

Initial Calibrations: The initial calibrations provided and the %RSD were within acceptable limits (30%) for all target compounds.

Continuing Calibrations: The continuing calibrations provided and the %D was within acceptable limits (30%) for all target compounds.

1.8 Internal Standards

Internal Standards (IS) performance criteria ensure that the GC/MS sensitivity and response are stable during every experimental run. The internal standard area count must not vary by more than a factor of 2 (-40% to +40%) from the associated continuing calibration standard. The retention time of the internal standard must not vary more than +/- 20 seconds from the associated continuing calibration standard. If the area count is outside the (-40% to +40%) range of the associated standard, all of the positive results for compounds quantitated using that IS are qualified as estimated, "J", and all non-detects as "UJ", or "R" if there is a severe loss of sensitivity.

If an internal standard retention time varies by more than 20 seconds, professional judgment will be used to determine either partial or total rejection of the data for that sample fraction.

Internal Standard area responses met QC requirements for all analysis pertaining to this data set.

1.9 Target Compound List Identification

TCL compounds are identified on the GC/MS by using the analyte's relative retention time (RRT) and by comparison to the ion spectra obtained from known standards. For the results to be a positive hit, the sample peak must be within =/- 0.06RRT units of the standard compound and have an ion spectra which has a ratio of the primary and secondary m/e intensities within 20% of that in the standard compound.

GC/MS spectra met the qualitative criteria for identification. All retention times were within required specifications.

1.10 Tentatively Identified Compounds (TICs)

TICs were reported in accordance with the project requirements. The identification must be considered tentative (both quantitative and qualitative) due to the lack of required compound specific response factors. Consequently all concentrations should be considered estimated, "J" and as a result of the qualitative uncertainty should be qualified, "N" where an identification has been made.

TICs were not submitted with this data set.

1.11 Compound Quantification and Reported Detection Limits

GC/MS quantitative analysis is considered to be acceptable. Correct internal standards and response factors and air volumes were used to calculate final concentrations.

Sample results have been presented in ug/m3 by the laboratory on the Form I's.

PDM-1 Att 1st was analyzed at 1:20 dilution.

PDM-4 BLC Test was analyzed at 1:2 dilutions. Isopropanol was determined to be over the instruments calibration range and qualified "E" as required by the laboratory. A diluted reanalysis was not performed. The laboratory reported concentration must be considered estimated, biased low, "L."

PDM-5 BLC Rec was performed undiluted. Isopropanol and Acetone were determined to be higher than the high calibration limit. A diluted reanalysis was not performed. Results must be considered estimated, biased low, "L."

The laboratory software has qualified all detected compounds for all samples with a "D" qualifier since the calculated "factor" was not 1 and all "D" qualifiers should be negated/ignored for sample analysis.

1.12 Overall System Performance

GC/MS analytical methodology was acceptable for this analysis except where explained in the laboratory SDG Narrative and the detailed validation report. The data reported agrees with the raw data provided in the final report. The laboratory provided a complete data package and reported all data using acceptable protocols and laboratory qualifiers as defined in the report package.

Reviewer's Signature Lori A. Beyer **Date** 01/13/14

Appendix A
Data Summary
Form I's
With Qualifications

FORM I

ORGANIC ANALYSIS DATA SHEET

EPA TO-15

PDM-1 ATT 1st

Laboratory: York Analytical Laboratories, Inc. SDG: 13L0817

Client: C.A. Rich Associates Project: FF-CDC

Matrix: Indoor Ambient Air Laboratory ID: 13L0817-01 File ID: TO09931.D

Sampled: 12/23/13 15:00 Prepared: 12/30/13 23:22 Analyzed: 12/30/13 23:22

Solids: Preparation: EPA TO15 PREP Initial/Final: 400 mL / 400 mL

Batch: BA40029 Sequence: Y4A0705 Calibration: YK30002 Instrument: 5975C

CAS NO.	COMPOUND	DILUTION	CONC. (ug/m³)	Q
75-01-4	Vinyl Chloride	20	5.2	U
108-05-4	Vinyl acetate	20	7.2	U
79-01-6	Trichloroethylene	20	630	D
10061-02-6	trans-1,3-Dichloropropylene	20	9.2	U
156-60-5	trans-1,2-Dichloroethylene	20	8.1	U
108-88-3	Toluene	20	26	D
109-99-9	Tetrahydrofuran	20	6.0	U
127-18-4	Tetrachloroethylene	20	130	D
100-42-5	Styrene	20	8.7	U
115-07-1	Propylene	20	13	D
622-96-8	p-Ethyltoluene	20	50	U
179601-23-1	p- & m- Xylenes	20	25	D
95-47-6	o-Xylene	20	11	D
110-54-3	n-Hexane	20	27	D
142-82-5	n-Heptane	20	8.3	U
75-09-2	Methylene chloride	20	32	BD U
1634-04-4	Methyl tert-butyl ether (MTBE)	20	7.3	U
108-10-1	4-Methyl-2-pentanone	20	8.3	U
67-63-0	Isopropanol	20	5.0	U L
87-68-3	Hexachlorobutadiene	20	22	U
100-41-4	Ethyl Benzene	20	8.8	D
141-78-6	Ethyl acetate	20	7.3	U
110-82-7	Cyclohexane	20	7.0	U
10061-01-5	cis-1,3-Dichloropropylene	20	9.2	U
156-59-2	cis-1,2-Dichloroethylene	20	8.1	U
74-87-3	Chloromethane	20	4.2	U
67-66-3	Chloroform	20	9.9	U
75-00-3	Chloroethane	20	5.4	U
56-23-5	Carbon tetrachloride	20	6.4	U L
75-15-0	Carbon disulfide	20	6.3	U
74-83-9	Bromomethane	20	7.9	U
75-25-2	Bromoform	20	21	U
75-27-4	Bromodichloromethane	20	13	U
100-44-7	Benzyl chloride	20	11	U
71-43-2	Benzene	20	6.5	U
67-64-1	Acetone	20	200	D
591-78-6	2-Hexanone	20	8.3	U
78-93-3	2-Butanone	20	35	D
123-91-1	1,4-Dioxane	20	7.3	U
106-46-7	1,4-Dichlorobenzene	20	12	U

1/12/14

FORM I **ORGANIC ANALYSIS DATA SHEET**

EPA TO-15

PDM-1 ATT 1st

Laboratory:	York Analytical Laboratories, Inc.			SDG:	13L0817
Client:	C.A. Rich Associates			Project:	FF-CDC
Matrix:	Indoor Ambient Air	Laboratory ID:	13L0817-01	File ID:	TO09931.D
Sampled:	12/23/13 15:00	Prepared:	12/30/13 23:22	Analyzed:	12/30/13 23:22
Solids:		Preparation:	EPA TO15 PREP	Initial/Final:	400 mL / 400 mL
Batch:	BA40029	Sequence:	Y4A0705	Calibration:	YK30002
Instrument:	5975C				

CAS NO.	COMPOUND	DILUTION	CONC. (ug/m³)	Q
541-73-1	1,3-Dichlorobenzene	20	12	U
106-99-0	1,3-Butadiene	20	8.8	U
108-67-8	1,3,5-Trimethylbenzene	20	10	U
76-14-2	1,2-Dichlorotetrafluoroethane	20	14	U
78-87-5	1,2-Dichloropropane	20	9.4	U
107-06-2	1,2-Dichloroethane	20	8.2	U
95-50-1	1,2-Dichlorobenzene	20	12	U
95-63-6	1,2,4-Trimethylbenzene	20	12	D
120-82-1	1,2,4-Trichlorobenzene	20	15	U
75-35-4	1,1-Dichloroethylene	20	8.1	U
75-34-3	1,1-Dichloroethane	20	8.2	U
75-69-4	Trichlorofluoromethane (Freon 11)	20	11	U L
79-00-5	1,1,2-Trichloroethane	20	11	U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	20	16	U
79-34-5	1,1,2,2-Tetrachloroethane	20	14	U
71-55-6	1,1,1-Trichloroethane	20	19	D
75-71-8	Dichlorodifluoromethane	20	10	U
106-93-4	1,2-Dibromoethane	20	16	U
124-48-1	Dibromochloromethane	20	16	U
80-62-6	Methyl Methacrylate	20	8.3	U
108-90-7	Chlorobenzene	20	9.4	U

SYSTEM MONITORING COMPOUND	ADDED (ppbv)	CONC (ppbv)	% REC	QC LIMITS	Q
p-Bromofluorobenzene	10.0	9.58	95.8	70 - 130	

INTERNAL STANDARD	AREA	RT	REF AREA	REF RT	Q
Bromochloromethane	1859268	12.372	1360894	12.378	
1,4-Difluorobenzene	3264148	13.939	3958888	13.945	
d5-Chlorobenzene	2975049	19.176	3663055	19.176	

* Values outside of QC limits

1/12/14

FORM I **ORGANIC ANALYSIS DATA SHEET**

EPA TO-15

PDM-2 ATT Bsmt

Laboratory: York Analytical Laboratories, Inc. SDG: 13L0817

Client: C.A. Rich Associates Project: FF-CDC

Matrix: Indoor Ambient Air Laboratory ID: 13L0817-02 File ID: TO10007.D

Sampled: 12/23/13 15:00 Prepared: 01/03/14 11:10 Analyzed: 01/03/14 11:10

Solids: Preparation: EPA TO15 PREP Initial/Final: 400 mL / 400 mL

Batch: BA40073 Sequence: Y4A0706 Calibration: YK30002 Instrument: 5975C

CAS NO.	COMPOUND	DILUTION	CONC. (ug/m³)	Q
75-01-4	Vinyl Chloride	1	0.26	U
108-05-4	Vinyl acetate	1	0.36	U
79-01-6	Trichloroethylene	1	0.27	U
10061-02-6	trans-1,3-Dichloropropylene	1	0.46	U
156-60-5	trans-1,2-Dichloroethylene	1	0.40	U
108-88-3	Toluene	1	26	
109-99-9	Tetrahydrofuran	1	0.30	U
127-18-4	Tetrachloroethylene	1	8.9	
100-42-5	Styrene	1	0.43	U
115-07-1	Propylene	1	0.18	U
622-96-8	p-Ethyltoluene	1	4.0	
179601-23-1	p- & m- Xylenes	1	9.5	
95-47-6	o-Xylene	1	4.9	
110-54-3	n-Hexane	1	3.7	
142-82-5	n-Heptane	1	3.0	
75-09-2	Methylene chloride	1	5.3	~~B~~ U
1634-04-4	Methyl tert-butyl ether (MTBE)	1	0.37	U
108-10-1	4-Methyl-2-pentanone	1	0.42	U
67-63-0	Isopropanol	1	5.9	L
87-68-3	Hexachlorobutadiene	1	1.1	U
100-41-4	Ethyl Benzene	1	4.3	
141-78-6	Ethyl acetate	1	0.37	U
110-82-7	Cyclohexane	1	1.5	
10061-01-5	cis-1,3-Dichloropropylene	1	0.46	U
156-59-2	cis-1,2-Dichloroethylene	1	0.40	U
74-87-3	Chloromethane	1	1.8	
67-66-3	Chloroform	1	0.50	U
75-00-3	Chloroethane	1	0.27	U
56-23-5	Carbon tetrachloride	1	0.58	L
75-15-0	Carbon disulfide	1	0.32	U
74-83-9	Bromomethane	1	0.39	U
75-25-2	Bromoform	1	1.1	U
75-27-4	Bromodichloromethane	1	0.63	U
100-44-7	Benzyl chloride	1	0.53	U
71-43-2	Benzene	1	2.3	
67-64-1	Acetone	1	28	
591-78-6	2-Hexanone	1	0.42	U
78-93-3	2-Butanone	1	5.7	
123-91-1	1,4-Dioxane	1	0.37	U
106-46-7	1,4-Dichlorobenzene	1	0.61	U

1/12/14

FORM I **ORGANIC ANALYSIS DATA SHEET**

EPA TO-15

PDM-2 ATT Bsmt

Laboratory:	York Analytical Laboratories, Inc.			SDG:	13L0817
Client:	C.A. Rich Associates			Project:	FF-CDC
Matrix:	Indoor Ambient Air	Laboratory ID:	13L0817-02	File ID:	TO10007.D
Sampled:	12/23/13 15:00	Prepared:	01/03/14 11:10	Analyzed:	01/03/14 11:10
Solids:		Preparation:	EPA TO15 PREP	Initial/Final:	400 mL / 400 mL
Batch:	BA40073	Sequence:	Y4A0706	Calibration:	YK30002
Instrument:	5975C				

CAS NO.	COMPOUND	DILUTION	CONC. (ug/m³)	Q
541-73-1	1,3-Dichlorobenzene	1	0.61	
106-99-0	1,3-Butadiene	1	0.44	U
108-67-8	1,3,5-Trimethylbenzene	1	1.8	
76-14-2	1,2-Dichlorotetrafluoroethane	1	0.71	U
78-87-5	1,2-Dichloropropane	1	0.47	U
107-06-2	1,2-Dichloroethane	1	0.41	U
95-50-1	1,2-Dichlorobenzene	1	0.61	U
95-63-6	1,2,4-Trimethylbenzene	1	3.6	
120-82-1	1,2,4-Trichlorobenzene	1	0.75	U
75-35-4	1,1-Dichloroethylene	1	0.40	U
75-34-3	1,1-Dichloroethane	1	0.41	U
75-69-4	Trichlorofluoromethane (Freon 11)	1	1.3	L
79-00-5	1,1,2-Trichloroethane	1	0.55	U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	1	0.86	
79-34-5	1,1,2,2-Tetrachloroethane	1	0.70	U
71-55-6	1,1,1-Trichloroethane	1	0.55	U
75-71-8	Dichlorodifluoromethane	1	2.7	
106-93-4	1,2-Dibromoethane	1	0.78	U
124-48-1	Dibromochloromethane	1	0.82	U
80-62-6	Methyl Methacrylate	1	0.42	U
108-90-7	Chlorobenzene	1	0.47	U

SYSTEM MONITORING COMPOUND	ADDED (ppbv)	CONC (ppbv)	% REC	QC LIMITS	Q
p-Bromofluorobenzene	10.0	8.41	84.1	70 - 130	

INTERNAL STANDARD	AREA	RT	REF AREA	REF RT	Q
Bromochloromethane	1281236	12.372	1256567	12.372	
1,4-Difluorobenzene	3365968	13.939	3333179	13.939	
d5-Chlorobenzene	2841846	19.176	2774413	19.175	

* Values outside of QC limits

1/12/14

FORM I **ORGANIC ANALYSIS DATA SHEET**

EPA TO-15

PDM-4 BLC Test

Laboratory: York Analytical Laboratories, Inc. SDG: 13L0817

Client: C.A. Rich Associates Project: FF-CDC

Matrix: Indoor Ambient Air Laboratory ID: 13L0817-03 File ID: TO10010.D

Sampled: 12/23/13 15:00 Prepared: 01/03/14 13:24 Analyzed: 01/03/14 13:24

Solids: Preparation: EPA TO15 PREP Initial/Final: 400 mL / 400 mL

Batch: BA40073 Sequence: Y4A0706 Calibration: YK30002 Instrument: 5975C

CAS NO.	COMPOUND	DILUTION	CONC. (ug/m³)	Q
75-01-4	Vinyl Chloride	2	0.52	U
108-05-4	Vinyl acetate	2	0.72	U
79-01-6	Trichloroethylene	2	0.55	U
10061-02-6	trans-1,3-Dichloropropylene	2	0.92	U
156-60-5	trans-1,2-Dichloroethylene	2	0.81	U
108-88-3	Toluene	2	14	D
109-99-9	Tetrahydrofuran	2	8.6	D
127-18-4	Tetrachloroethylene	2	51	D
100-42-5	Styrene	2	0.87	U
115-07-1	Propylene	2	0.35	U
622-96-8	p-Ethyltoluene	2	5.0	U
179601-23-1	p- & m- Xylenes	2	10	D
95-47-6	o-Xylene	2	3.3	D
110-54-3	n-Hexane	2	5.7	D
142-82-5	n-Heptane	2	3.8	D
75-09-2	Methylene chloride	2	11	~~BD~~ U
1634-04-4	Methyl tert-butyl ether (MTBE)	2	0.73	U
108-10-1	4-Methyl-2-pentanone	2	0.83	U
67-63-0	Isopropanol	2	250	~~DE~~ L
87-68-3	Hexachlorobutadiene	2	2.2	U
100-41-4	Ethyl Benzene	2	2.8	D
141-78-6	Ethyl acetate	2	0.73	U
110-82-7	Cyclohexane	2	1.5	D
10061-01-5	cis-1,3-Dichloropropylene	2	0.92	U
156-59-2	cis-1,2-Dichloroethylene	2	0.81	U
74-87-3	Chloromethane	2	1.8	D
67-66-3	Chloroform	2	0.99	U
75-00-3	Chloroethane	2	0.54	U
56-23-5	Carbon tetrachloride	2	0.64	U L
75-15-0	Carbon disulfide	2	0.63	U
74-83-9	Bromomethane	2	0.79	U
75-25-2	Bromoform	2	2.1	U
75-27-4	Bromodichloromethane	2	1.3	U
100-44-7	Benzyl chloride	2	1.1	U
71-43-2	Benzene	2	3.0	D
67-64-1	Acetone	2	49	D
591-78-6	2-Hexanone	2	0.83	U
78-93-3	2-Butanone	2	14	D
123-91-1	1,4-Dioxane	2	0.73	U
106-46-7	1,4-Dichlorobenzene	2	1.2	U

1/12/14

FORM I **ORGANIC ANALYSIS DATA SHEET**

EPA TO-15

PDM-4 BLC Test

Laboratory:	York Analytical Laboratories, Inc.			SDG:	13L0817
Client:	C.A. Rich Associates			Project:	FF-CDC
Matrix:	Indoor Ambient Air	Laboratory ID:	13L0817-03	File ID:	TO10010.D
Sampled:	12/23/13 15:00	Prepared:	01/03/14 13:24	Analyzed:	01/03/14 13:24
Solids:		Preparation:	EPA TO15 PREP	Initial/Final:	400 mL / 400 mL
Batch:	BA40073	Sequence:	Y4A0706	Calibration:	YK30002
Instrument:	5975C				

CAS NO.	COMPOUND	DILUTION	CONC. (ug/m³)	Q
541-73-1	1,3-Dichlorobenzene	2	1.2	U
106-99-0	1,3-Butadiene	2	0.88	U
108-67-8	1,3,5-Trimethylbenzene	2	1.1	D
76-14-2	1,2-Dichlorotetrafluoroethane	2	1.4	U
78-87-5	1,2-Dichloropropane	2	0.94	U
107-06-2	1,2-Dichloroethane	2	0.82	U
95-50-1	1,2-Dichlorobenzene	2	1.2	U
95-63-6	1,2,4-Trimethylbenzene	2	3.3	D
120-82-1	1,2,4-Trichlorobenzene	2	1.5	U
75-35-4	1,1-Dichloroethylene	2	0.81	U
75-34-3	1,1-Dichloroethane	2	0.82	U
75-69-4	Trichlorofluoromethane (Freon 11)	2	1.7	D L
79-00-5	1,1,2-Trichloroethane	2	1.1	U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	2	1.6	U
79-34-5	1,1,2,2-Tetrachloroethane	2	1.4	U
71-55-6	1,1,1-Trichloroethane	2	1.1	U
75-71-8	Dichlorodifluoromethane	2	3.3	D
106-93-4	1,2-Dibromoethane	2	1.6	U
124-48-1	Dibromochloromethane	2	1.6	U
80-62-6	Methyl Methacrylate	2	0.83	U
108-90-7	Chlorobenzene	2	0.94	U

SYSTEM MONITORING COMPOUND	ADDED (ppbv)	CONC (ppbv)	% REC	QC LIMITS	Q
p-Bromofluorobenzene	10.0	9.70	97.0	70 - 130	

INTERNAL STANDARD	AREA	RT	REF AREA	REF RT	Q
Bromochloromethane	1273279	12.372	1256567	12.372	
1,4-Difluorobenzene	3334780	13.939	3333179	13.939	
d5-Chlorobenzene	2340176	19.175	2774413	19.175	

* Values outside of QC limits

JAP 1/12/14

FORM I **ORGANIC ANALYSIS DATA SHEET**

EPA TO-15

PDM-5 BLC Rec

Laboratory: York Analytical Laboratories, Inc. SDG: 13L0817

Client: C.A. Rich Associates Project: FF-CDC

Matrix: Indoor Ambient Air Laboratory ID: 13L0817-04 File ID: TO10011.D

Sampled: 12/23/13 15:00 Prepared: 01/03/14 14:09 Analyzed: 01/03/14 14:09

Solids: Preparation: EPA TO15 PREP Initial/Final: 400 mL / 400 mL

Batch: BA40073 Sequence: Y4A0706 Calibration: YK30002 Instrument: 5975C

CAS NO.	COMPOUND	DILUTION	CONC. (ug/m³)	Q
75-01-4	Vinyl Chloride	1	0.26	U
108-05-4	Vinyl acetate	1	0.36	U
79-01-6	Trichloroethylene	1	1.4	
10061-02-6	trans-1,3-Dichloropropylene	1	0.46	U
156-60-5	trans-1,2-Dichloroethylene	1	0.40	U
108-88-3	Toluene	1	13	
109-99-9	Tetrahydrofuran	1	8.3	
127-18-4	Tetrachloroethylene	1	48	
100-42-5	Styrene	1	0.43	U
115-07-1	Propylene	1	0.18	U
622-96-8	p-Ethyltoluene	1	2.5	U
179601-23-1	p- & m- Xylenes	1	6.3	
95-47-6	o-Xylene	1	1.8	
110-54-3	n-Hexane	1	7.0	
142-82-5	n-Heptane	1	3.1	
75-09-2	Methylene chloride	1	11	~~B~~
1634-04-4	Methyl tert-butyl ether (MTBE)	1	0.37	U
108-10-1	4-Methyl-2-pentanone	1	0.42	U
67-63-0	Isopropanol	1	84	~~E~~ L
87-68-3	Hexachlorobutadiene	1	1.1	U
100-41-4	Ethyl Benzene	1	2.2	
141-78-6	Ethyl acetate	1	0.37	U
110-82-7	Cyclohexane	1	1.2	
10061-01-5	cis-1,3-Dichloropropylene	1	0.46	U
156-59-2	cis-1,2-Dichloroethylene	1	0.40	U
74-87-3	Chloromethane	1	1.4	
67-66-3	Chloroform	1	0.65	
75-00-3	Chloroethane	1	0.27	U
56-23-5	Carbon tetrachloride	1	0.32	U L
75-15-0	Carbon disulfide	1	0.32	U
74-83-9	Bromomethane	1	0.39	U
75-25-2	Bromoform	1	1.1	U
75-27-4	Bromodichloromethane	1	0.63	U
100-44-7	Benzyl chloride	1	0.53	U
71-43-2	Benzene	1	2.6	
67-64-1	Acetone	1	52	~~E~~ L
591-78-6	2-Hexanone	1	0.42	U
78-93-3	2-Butanone	1	15	
123-91-1	1,4-Dioxane	1	0.37	U
106-46-7	1,4-Dichlorobenzene	1	0.61	U

1/12/14

FORM I **ORGANIC ANALYSIS DATA SHEET**

EPA TO-15

PDM-5 BLC Rec

Laboratory:	York Analytical Laboratories, Inc.			SDG:	13L0817
Client:	C.A. Rich Associates			Project:	FF-CDC
Matrix:	Indoor Ambient Air	Laboratory ID:	13L0817-04	File ID:	TO10011.D
Sampled:	12/23/13 15:00	Prepared:	01/03/14 14:09	Analyzed:	01/03/14 14:09
Solids:		Preparation:	EPA TO15 PREP	Initial/Final:	400 mL / 400 mL
Batch:	BA40073	Sequence:	Y4A0706	Calibration:	YK30002
Instrument:	5975C				

CAS NO.	COMPOUND	DILUTION	CONC. (ug/m³)	Q
541-73-1	1,3-Dichlorobenzene	1	0.61	U
106-99-0	1,3-Butadiene	1	0.44	U
108-67-8	1,3,5-Trimethylbenzene	1	0.50	U
76-14-2	1,2-Dichlorotetrafluoroethane	1	0.71	U
78-87-5	1,2-Dichloropropane	1	0.47	U
107-06-2	1,2-Dichloroethane	1	0.41	U
95-50-1	1,2-Dichlorobenzene	1	0.61	U
95-63-6	1,2,4-Trimethylbenzene	1	0.55	
120-82-1	1,2,4-Trichlorobenzene	1	0.75	U
75-35-4	1,1-Dichloroethylene	1	0.40	U
75-34-3	1,1-Dichloroethane	1	0.41	U
75-69-4	Trichlorofluoromethane (Freon 11)	1	1.5	L
79-00-5	1,1,2-Trichloroethane	1	0.55	U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	1	0.78	U
79-34-5	1,1,2,2-Tetrachloroethane	1	0.70	U
71-55-6	1,1,1-Trichloroethane	1	0.55	U
75-71-8	Dichlorodifluoromethane	1	3.0	
106-93-4	1,2-Dibromoethane	1	0.78	U
124-48-1	Dibromochloromethane	1	0.82	U
80-62-6	Methyl Methacrylate	1	0.42	U
108-90-7	Chlorobenzene	1	0.47	U

SYSTEM MONITORING COMPOUND	ADDED (ppbv)	CONC (ppbv)	% REC	QC LIMITS	Q
p-Bromofluorobenzene	10.0	9.97	99.7	70 - 130	

INTERNAL STANDARD	AREA	RT	REF AREA	REF RT	Q
Bromochloromethane	1457954	12.372	1256567	12.372	
1,4-Difluorobenzene	3714144	13.939	3333179	13.939	
d5-Chlorobenzene	2759136	19.175	2774413	19.175	

* Values outside of QC limits

1/12/14

FORM I **ORGANIC ANALYSIS DATA SHEET**

EPA TO-15

PDM-6 Ambient

Laboratory: York Analytical Laboratories, Inc. SDG: 13L0817

Client: C.A. Rich Associates Project: FF-CDC

Matrix: Outdoor Ambient Air Laboratory ID: 13L0817-05 File ID: TO10009.D

Sampled: 12/23/13 15:00 Prepared: 01/03/14 12:41 Analyzed: 01/03/14 12:41

Solids: Preparation: EPA TO15 PREP Initial/Final: 400 mL / 400 mL

Batch: BA40073 Sequence: Y4A0706 Calibration: YK30002 Instrument: 5975C

CAS NO.	COMPOUND	DILUTION	CONC. (ug/m³)	Q
75-01-4	Vinyl Chloride	1	0.26	U
108-05-4	Vinyl acetate	1	0.36	U
79-01-6	Trichloroethylene	1	0.82	
10061-02-6	trans-1,3-Dichloropropylene	1	0.46	U
156-60-5	trans-1,2-Dichloroethylene	1	0.40	U
108-88-3	Toluene	1	3.6	
109-99-9	Tetrahydrofuran	1	0.30	U
127-18-4	Tetrachloroethylene	1	4.8	
100-42-5	Styrene	1	0.43	U
115-07-1	Propylene	1	0.18	U
622-96-8	p-Ethyltoluene	1	2.5	U
179601-23-1	p- & m- Xylenes	1	1.8	
95-47-6	o-Xylene	1	0.71	
110-54-3	n-Hexane	1	1.6	
142-82-5	n-Heptane	1	0.88	
75-09-2	Methylene chloride	1	1.7	~~B~~ U
1634-04-4	Methyl tert-butyl ether (MTBE)	1	0.37	U
108-10-1	4-Methyl-2-pentanone	1	0.42	U
67-63-0	Isopropanol	1	1.3	L
87-68-3	Hexachlorobutadiene	1	1.1	U
100-41-4	Ethyl Benzene	1	0.62	
141-78-6	Ethyl acetate	1	0.37	U
110-82-7	Cyclohexane	1	0.49	
10061-01-5	cis-1,3-Dichloropropylene	1	0.46	U
156-59-2	cis-1,2-Dichloroethylene	1	0.40	U
74-87-3	Chloromethane	1	1.4	
67-66-3	Chloroform	1	0.50	U
75-00-3	Chloroethane	1	0.27	U
56-23-5	Carbon tetrachloride	1	0.58	L
75-15-0	Carbon disulfide	1	0.32	U
74-83-9	Bromomethane	1	0.39	U
75-25-2	Bromoform	1	1.1	U
75-27-4	Bromodichloromethane	1	0.63	U
100-44-7	Benzyl chloride	1	0.53	U
71-43-2	Benzene	1	1.6	
67-64-1	Acetone	1	9.1	
591-78-6	2-Hexanone	1	0.42	U
78-93-3	2-Butanone	1	3.5	
123-91-1	1,4-Dioxane	1	0.37	U
106-46-7	1,4-Dichlorobenzene	1	0.61	U

1/12/14

FORM I **ORGANIC ANALYSIS DATA SHEET**

EPA TO-15

PDM-6 Ambient

Laboratory: York Analytical Laboratories, Inc. SDG: 13L0817

Client: C.A. Rich Associates Project: FF-CDC

Matrix: Outdoor Ambient Air Laboratory ID: 13L0817-05 File ID: TO10009.D

Sampled: 12/23/13 15:00 Prepared: 01/03/14 12:41 Analyzed: 01/03/14 12:41

Solids: Preparation: EPA TO15 PREP Initial/Final: 400 mL / 400 mL

Batch: BA40073 Sequence: Y4A0706 Calibration: YK30002 Instrument: 5975C

CAS NO.	COMPOUND	DILUTION	CONC. (ug/m³)	Q
541-73-1	1,3-Dichlorobenzene	1	0.61	U
106-99-0	1,3-Butadiene	1	0.44	U
108-67-8	1,3,5-Trimethylbenzene	1	0.50	U
76-14-2	1,2-Dichlorotetrafluoroethane	1	0.71	U
78-87-5	1,2-Dichloropropane	1	0.47	U
107-06-2	1,2-Dichloroethane	1	0.41	U
95-50-1	1,2-Dichlorobenzene	1	0.61	U
95-63-6	1,2,4-Trimethylbenzene	1	0.75	
120-82-1	1,2,4-Trichlorobenzene	1	0.75	U
75-35-4	1,1-Dichloroethylene	1	0.40	U
75-34-3	1,1-Dichloroethane	1	0.41	U
75-69-4	Trichlorofluoromethane (Freon 11)	1	1.1	L
79-00-5	1,1,2-Trichloroethane	1	0.55	U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	1	0.86	
79-34-5	1,1,2,2-Tetrachloroethane	1	0.70	U
71-55-6	1,1,1-Trichloroethane	1	0.55	U
75-71-8	Dichlorodifluoromethane	1	2.4	
106-93-4	1,2-Dibromoethane	1	0.78	U
124-48-1	Dibromochloromethane	1	0.82	U
80-62-6	Methyl Methacrylate	1	0.42	U
108-90-7	Chlorobenzene	1	0.47	U

SYSTEM MONITORING COMPOUND	ADDED (ppbv)	CONC (ppbv)	% REC	QC LIMITS	Q
p-Bromofluorobenzene	10.0	7.79	77.9	70 - 130	

INTERNAL STANDARD	AREA	RT	REF AREA	REF RT	Q
Bromochloromethane	1366533	12.372	1256567	12.372	
1,4-Difluorobenzene	3570133	13.939	3333179	13.939	
d5-Chlorobenzene	3042538	19.176	2774413	19.175	

* Values outside of QC limits

Appendix B
Chain of Custody

YORK
ANALYTICAL LABORATORIES, INC.

120 RESEARCH DR. STRATFORD, CT 06615
(203) 325-1371 FAX (203) 357-0166

Field Chain-of-Custody Record - AIR

NOTE: York's Std. Terms & Conditions are listed on the back side of this document.
This document serves as your written authorization to York to proceed with the analyses requested and your signature binds you to York's Std. Terms & Conditions unless superseded by written contract.

York Project No. 13L0817

YOUR Information

Company: CA Rich Consultants, Inc.
Address: 17 Dupont St.
Plainview, NY 11803
Phone No: 516 576 8844
Contact Person: Eric Weinstock
E-Mail Address: eweinstock@carichinc.com

Report To:

Company: Same
Address:
Phone No:
Attention:
E-Mail Address:

Invoice To:

Company: Same
Address:
Phone No:
Attention:
E-Mail Address:

YOUR Project ID

FF - CDC

Purchase Order No.

Samples from: CT__ NY__ NJ__

Turn-Around Time

- RUSH - Same Day ☐
- RUSH - Next Day ☐
- RUSH - Two Day ☐
- RUSH - Three Day ☐
- RUSH - Four Day ☐
- Standard(5-7 Days) ☒

Report Type/Deliverables

- Summary Report
- Summary w/ QA Summary
- CT RCP Package
- NY ASP A Package
- NY ASP B/CLP Pkg X
- NJDEP Reduced
- *Electronic Deliverables:*
- EDD (Specify Type)
- Standard Excel
- Regulatory Comparison Excel

Print Clearly and Legibly. All Information must be complete. Samples will NOT be logged in and the turn-around time clock will not begin until any questions by York are resolved.

Michael Yager
Samples Collected/Authorized By (Signature)

Michael Yager
Name (printed)

Air Matrix Codes

- AI - INDOOR Ambient Air
- AO- OUTDOOR Amb. Air
- AE- Vapor Extraction Well/ Process Gas/Effluent
- AS- SOIL Vapor/Sub-Slab

TO15 Volatiles and Other Gas Analyses

- EPA TO-15 List
- EPA TO-14A List
- NYSDEC VI list
- Tentatively Identified Compounds
- NYSDEC STARS List
- Air VPH
- Project Specific List by TO-15
- Helium
- NJDEP Target List
- Methane
- CTDEP RCP Target List
- OTHER

Detection Limits Required

- ≤ 1 ug/m³
- NYSDEC VI Limits (VI project only)
- NJDEP low level
- Routine Survey
- Other

Special Instructions

Sample Identification	Date Sampled	AIR Matrix	Canister Vacuum Before Sampling (in. Hg)	Canister Vacuum After Sampling (in. Hg)	Choose Analytes Needed from the Menu Above and Enter Below	Sampling Media
PDM-1	12/23/13	AI	30	9	EPA - TO-15 List	6 Liter Summa canister X / Tedlar Bag
PDM-2	12/23/13	AI	30	17	EPA TO-15 List	6 Liter Summa canister X / Tedlar Bag
PDM-4	12/23/13	AI	29	9	EPA TO-15 List	6 Liter Summa canister X / Tedlar Bag
PDM-5	12/23/13	AI	30	5	EPA TO-15 List	6 Liter Summa canister X / Tedlar Bag
PDM-6	12/23/13	AO	30	10	EPA TO-15 List	6 Liter Summa canister X / Tedlar Bag
						6 Liter Summa canister ___ / Tedlar Bag ___
						6 Liter Summa canister ___ / Tedlar Bag ___
						6 Liter Summa canister ___ / Tedlar Bag ___
						6 Liter Summa canister ___ / Tedlar Bag ___
						6 Liter Summa canister ___ / Tedlar Bag ___

30 of 245

Comments

Michael Yager 12/23/13
Samples Relinquished By Date/Time

Samples Relinquished By Date/Time

KBaker 12/24/13 940 AM
Samples Received By Date/Time

Grace 12-24-13 1520
Samples Received in LAB by Date/Time

13L0817

Air Sampling Log
CDC
47 Northern Blvd, Great Neck, NY

Sample ID - Location	Summa Can ID	Train ID	Date / Time Start	Vac Start	Date / Time End	Vac End
Brown Rec Rm (PDM-5)	Y81	Y24	12/23/13 - 0843	30	12/23/13 - 1510	5
Brown Test Rm (PDM-4)	Max 21	7360	12/23/13 - 0844	29	12/23/13 - 1620	9
AT+T 1st F (PDM-1)	S23	5030	12/23/13 - 0908	30	12/23/13 - 1630	9
AT+T Bsmt (PDM-2)	S10	Y28	12/23/13 - 0904	30	12/23/13 - 1635	17
Ambient/outside (PDM-6)	Y70	Y17	12/23/13 - 0857	30	12/23/13 - 1640	10

CA RICH Work Staff: M. Yager

Weather / Temperature: Light Rain ≈ 60°F → Heavy Showers ≈ 50°F

Laboratory Chain-of-Custody Record

York Project (SDG) No.: 13L0817

Samples Received: 12/24/2013 15:20 **By:** Paul Grace **Logged In:** 12/24/2013 9:51 **By:** Erienne Schneck

Sample Conditions:

- [x] Custody Seals
- [x] Containers Intact
- [x] COC/Labels Agree
- [x] Preservation Confirmed
- [x] Cooler Temperature Confirmed
- [ ] COC Complete
- [x] Chain of Custody Form Received
- [x] Appropriate Sample Volumes Received
- [x] Appropriate Sample Containers Submitted
- [x] Samples Submitted within Holding Times
- [ ] Corrective Action Form Required

Preparation Chain-of-Custody

Sample ID	Reason Prep	Prep Start Date	Prep End Date	Prep Analyst
13L0817-01	EPA TO15 PREP	12/30/2013 23:22	12/30/2013 23:22	Robert Q. Bradley
13L0817-02	EPA TO15 PREP	01/03/2014 11:10	01/03/2014 11:10	Amanda DeBiase
13L0817-03	EPA TO15 PREP	01/03/2014 13:24	01/03/2014 13:24	Amanda DeBiase
13L0817-04	EPA TO15 PREP	01/03/2014 14:09	01/03/2014 14:09	Amanda DeBiase
13L0817-05	EPA TO15 PREP	01/03/2014 12:41	01/03/2014 12:41	Amanda DeBiase

Analysis Chain-of-Custody

Sample ID	Reason Analysis	Analysis Start Date	Analysis End Date	Analyst
13L0817-01	Volatile Organics, EPA TO15 Full List	12/30/2013 23:22	12/30/2013 23:22	Amanda DeBiase

Appendix C
SDG Narrative

Case Narrative

Client: C.A. Rich Associates
Client Project ID: FF-CDC
Prepared for: Jason Cooper

Introduction

This Case Narrative applies only to the following samples submitted to our laboratory on **12/24/2013 3:20:00 PM** :

PDM-1 ATT 1st	**Air**
PDM-2 ATT Bsmt	**Air**
PDM-4 BLC Test	**Air**
PDM-5 BLC Rec	**Air**
PDM-6 Ambient	**Air**

The 5 sample(s) were received intact. Chain-of-custody was maintained from receipt through analysis in the laboratory.

Methodology

All preparation and analyses were conducted according to the methods referenced in the body of the lab report.

Sample and Analysis Qualifiers

PDM-1 ATT 1st	Air	No qualifiers
PDM-2 ATT Bsmt	Air	No qualifiers
PDM-4 BLC Test	Air	No qualifiers
PDM-5 BLC Rec	Air	No qualifiers
PDM-6 Ambient	Air	No qualifiers

Analysis Issues (Calibration, Others)

No problems encountered.

York Project/SDG no.: 13L0817 Statement

We certify that these data are in compliance with SOP requirements both technically and for completeness for other than the conditions stated above. Release of the data contained in the hard copy report and any electronic deliverables has been authorized by the Laboratory Manager as verified by the signature on this laboratory report.

Approved by: *Ben Gulizia*

Laboratory Director

Date: January 7, 2014

York Analytical Laboratories, Inc.

Formulae Used for Sample Calculations

VOLATILE ORGANICS

1. Volatiles in Air-ppbv

Cx (ppbv) = Compound concentration, ppbv (parts per billion by volume)

$$Cx = \frac{(Ax)(Cis)(DF)}{(Ais)(RRF)}$$

2. Volatiles in Air-ug/m3

Cx (ug/m3)= Compound concentration in ug/m3

$$Cx\ (ug/m3) = \frac{(ppbv \times Molecular\ wt.)}{(24.040)}$$

3. Volatile Organics (water and soil), ug/L or ug/kG

Soils/Waters

$$Cx = \frac{(Ax)(IS)(DF)}{(Ais)(RRF)(V)(\%solids)}$$

Medium Level Soils

$$Cx = \frac{(Ax)(IS)(VT)(1000)(DF)}{(Ais)(RRF)(VA)(V)(\%solids)}$$

4. Semi-Volatiles (waters and soils)

$$Cx = \frac{(Ax)(IS)(VE)(DF)}{(Ais)(RRF)(Volume\ injected,\ uL)(V)(\%solids)}$$

5. Pesticides/PCB (waters and soils), DRO, CTETPH

$$Cx = \frac{(Ax)(VE)(DF)}{(CF)(Volume\ injected,\ uL)(V)(\%solids)}$$

WHERE:

Cx = concentration of analyte as ug/L or ug/kG
Ax = Area of the characteristic ion for the compound to be measured, counts.

Ais = Area of the characteristic ion for the specific internal standard, counts.
IS = Concentration of the internal standard spiking mixture, ng
RRF= Mean relative response factor from the initial calibration.
DF = Dilution factor calculated as described in section 2. If no dilution is performed, DF= 1
V= Volume for liquids in ml, weight for soils/solids in grams.
VA= volume of MeOH aliquot for medium level soils
VE= final volume of concentrated extract
VT= volume of MeOH for volatiles medium level soils
CF= calibration factor for external calibration used in GC pest/pcb
Cis = Concentration of the internal standard spiking mixture, ppbv

Report Date: 01/08/2014
Client Project ID: FF-CDC
York Project (SDG) No.: 13L0817

C.A. Rich Associates
17 Dupont Street
Plainview NY, 11803
Attention: Jason Cooper

Purpose and Results

This report contains the analytical data for the sample(s) identified on the attached chain-of-custody received in our laboratory on December 24, 2013 and listed below. The project was identified as your project: **FF-CDC**.

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

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

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

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

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

York Sample ID	Client Sample ID	Matrix	Date Collected	Date Received
13L0817-01	PDM-1 ATT 1st	Indoor Ambient Air	12/23/2013	12/24/2013
13L0817-02	PDM-2 ATT Bsmt	Indoor Ambient Air	12/23/2013	12/24/2013
13L0817-03	PDM-4 BLC Test	Indoor Ambient Air	12/23/2013	12/24/2013
13L0817-04	PDM-5 BLC Rec	Indoor Ambient Air	12/23/2013	12/24/2013
13L0817-05	PDM-6 Ambient	Outdoor Ambient Air	12/23/2013	12/24/2013

General Notes for York Project (SDG) No.: 13L0817

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

Approved By: 

Date: 01/08/2014

Benjamin Gulizia
Laboratory Director

YORK

L.A.B. Validation Corp. 14 West Point Drive, East Northport, N.Y. 11731

DATA USABILITY SUMMARY REPORT (DUSR)

ORGANIC ANALYSIS

EPA Compendium Method TO-15
VOLATILES BY GC/MS

For Indoor Air/Soil Gas Samples Collected
February 06, 2014
For Citizen Development Company/Flower Fashion Site
47 Northern Boulevard, Great Neck, New York
By CA Rich Consultants, Inc.

SAMPLE DELIVERY GROUP NUMBER: 14B0233
York Analytical Laboratories (ELAP #10854)

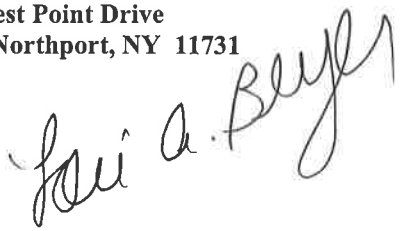
SUBMITTED TO:

Mr. Eric Weinstock
CA Rich Consultants, Inc.
17 Dupont Street
Plainview, New York 11803

February 24, 2014

PREPARED BY:

Lori A. Beyer/President
L.A.B. Validation Corp.
14 West Point Drive
East Northport, NY 11731



Phone (516) 523-7891 email LABValidation@aol.com

CDC/Flower Fashion Site, 47 Northern Boulevard, Great Neck, New York; February 2014.
Data Validation Report: Volatile Organics

Table of Contents:

Introduction:

A validation was performed on two (2) air samples for Volatile Organic analysis collected by CA Rich Consultants and submitted to York Analytical Laboratories for subsequent analysis under chain of custody documentation. This report contains the laboratory and validation results for the two (2) field samples itemized below. The samples were collected on February 06, 2014.

The samples were analyzed by York utilizing EPA Method TO-15 and in accordance with NYSDEC Analytical Services Protocol (2005) and submitted under NYSDEC ASP Category B equivalent deliverable requirements for the associated analytical methodology employed. The analytical testing consisted of the selected TO-15 Target Compound List (TCL) of analytes for Volatile Organics listed in Appendix A.

The data was evaluated in accordance with the USEPA Contract Laboratory Program National Functional Guidelines for Organic Data Review (Publication 9240.1-05), EPA SOP #HW31 (Revision 4-Updated 2009) and in conjunction with the analytical methodology for which the samples were analyzed, where applicable and relevant.

The data validation report pertains to the following field soil gas/air samples:

Sample Identification	Laboratory Identification(s)	Sample Matrix (Air Type)	Collection Date
PDM-1	14B0233-01	Indoor Ambient Air	02/06/14
PDM-2	14B0233-02	Indoor Ambient Air	02/06/14

Data Qualifier Definitions:

The following definitions provide brief explanations of the qualifiers assigned to results in the data review process.

U - The analyte was analyzed for, but was not detected above the reported sample quantitation limit.

J - The analyte was positively identified; the associated numerical value is the approximate concentration of the analyte in the sample.

UJ - The analyte was not detected above the reported sample quantitation limit. However, the reported quantitation limit is approximate and may or may not represent the actual limit of quantitation necessary to accurately and precisely measure the analyte in the sample.

R - The sample results are rejected due to deficiencies in the ability to analyze the sample and meet quality control criteria. The presence or absence of the analyte cannot be verified.

N - The analysis indicates the presence of an analyte for which there is presumptive evidence to make a "tentative identification."

NJ - The analysis indicates the presence of an analyte that has been "tentatively identified" and the associated numerical value represents its approximate quantity.

K - The analyte is present. The reported value may be biased high. The actual value is expected to be lower than reported.

L - The analyte is present. The reported value may be biased low. The actual value is expected to be higher than reported.

UL - The analyte was not detected and the reported quantitation limit is most likely higher than reported.

D - Analyte concentration was obtained from diluted analysis.

Sample Receipt:

The Chain of Custody document from 02/06/14 indicates that two (2) air samples were delivered to York and received on 02/11/14 following completion of the sampling event. Sample login notes and the chain of custody indicate that at the Validated Time of Sample Receipt (VTSR) at the laboratory no discrepancies were notated and therefore the integrity of the summa canister samples is assumed to be good.

The data summary tables included in Appendix A includes all usable (qualified) and unusable (rejected) results for the samples identified above. These tables summarize the detailed narrative section of the report. All data validation qualifications have been reported on the Form I's for ease of review and verification.

NOTE:
L.A.B. Validation Corp. believes it is appropriate to note that the data validation criteria utilized for data evaluation is different than the method requirements utilized by the laboratory. Qualified data does not necessarily mean that the laboratory was non-compliant in the analysis that was performed.

Volatile Organics by EPA Compendium Method TO-15

The following method criteria were reviewed: holding times, surrogate standards, LCS, Blanks, Tunes, Calibrations, Internal Standards, Target Component Identification and Quantitation, Reported Quantitation Limits and Overall System Performance. The volatile results were considered to be valid and useable as noted on the data summary tables in Appendix A and within the following text:

1.1 Holding Time

The amount of an analyte in a sample can change with time due to chemical instability, degradation, volatilization, etc. If the technical holding time is exceeded, the data may not be considered valid. Those analytes detected in the samples whose holding time has been exceeded will be qualified as estimates, "J". The non-detects (sample quantitation limits) are required to be flagged as estimated, "J", or unusable, "R", if the holding times are grossly exceeded.

Air samples pertaining to this SDG were performed within the method and technical required holding times of thirty (30) days from sample collection for analysis. No qualifications were required based upon holding time criteria.

Canister pressure gauge was within requirements of 30 psi prior to sampling.

1.2 Surrogate Standards

All samples are spiked with surrogate compounds prior to sample analysis to evaluate overall laboratory performance and efficiency of the analytical technique. If the measure of surrogate concentrations is outside contract specification, qualifications are required to be applied to associated samples and analytes.

Recoveries for 4-Bromofluorobenzene fell within in house established ranges of 70-130% for all analyses pertaining to this SDG.

1.3 Matrix Spikes (MS)/ Matrix Spike Duplicates (MSD)/Duplicate Analysis

The MS/MSD data are generated to determine the long-term precision and accuracy of the analytical method in various matrices.

Matrix Spike/Matrix Spike Duplicate analysis was not performed on samples pertaining to this SDG. The laboratory performed a blank spike/LCS and all recovery values were determined to be acceptable for all compounds.

Field Duplicate analysis was not collected for this SDG. Laboratory duplicate analysis was performed on PDM-1. Acceptable precision for air samples is 25% and all detected analytes were within acceptance criteria with the exception of Isopropanol (35.3%). The following criteria are utilized for Field Duplicate analysis:

Criteria	Detected Compounds	Non-Detected Compounds
The RPD is within the limits of 0 and 25%	No qualification	No qualification
The RPD >25%	J in the parent and duplicate samples	Not applicable
The RPD could not be calculated since the compound was only detected in either the parent of duplicate sample. However, the detected concentration was </=2x the reporting limit	No qualification	No qualification
The RPD could not be calculated since the compound was only detected in either the parent or duplicate sample However, the detected concentration was >2x the reporting limit.	J in the parent or duplicate sample	UJ in the parent of duplicate sample

1.4 Laboratory Control Sample

The LCS data for laboratory control samples (LCS) are generated to provide information on the accuracy of the analytical method and on the laboratory performance.

Acceptable LCS was analyzed.

1.5 Blank Contamination

Quality assurance (QA) blanks; i.e. method, trip and field blanks are prepared to identify any contamination which may have been introduced into the samples during sample preparation or field activity. Method blanks measure laboratory contamination. Trip blanks measure cross-contamination of samples during shipment. Field blanks measure cross-contamination of samples during field operations. Storage blanks measure cross-contamination during sample storage of the field samples. Canister blanks measure cross-contamination from the sampling media.

The following table was utilized to qualify target analyte results due to contamination. The largest value from all the associated blanks is required to be utilized:

For:	Flag Sample Result with a "U" when:	Report CRQL & Qualify "U" when:	No Qualification is Needed when:
Methylene Chloride, Acetone, Toluene & 2-Butanone	Sample Conc. Is >CRQL, but </=10x blank value	Sample Conc. is <CRQL and </=10x blank value	Sample Conc. is >CRQL and >10x blank value
Other Contaminants	Sample Conc. Is >CRQL, but </=5x blank value	Sample Conc. Is <CRQL and </=5x blank value	Sample Conc. is >CRQL and >5x blank value

Below is a summary of the compounds in the sample and the associated qualifications that have been applied:

A) **Method Blank Contamination:**

Method blanks were determined to contain acceptable levels of methylene chloride. Sample results were evaluated based on the above criteria and negated where required (when laboratory reported concentrations are not due to sample matrix constituents) – PDM-1. The laboratory reported concentration of Methylene Chloride in PDM-2 must be considered real. The "B" qualifier has been deleted as part of the review process.

Canister cleaning documentation was not submitted in the data package.

B) **Field Blank Contamination:**

Field Blank analysis was not conducted for this SDG.

C) **Trip Blank Contamination:**

Trip Blank analysis was not submitted with this SDG.

D) **Storage Blank Contamination:**

Storage blanks were not submitted for this SDG. It should be noted that storage blanks are not mandated by EPA Method TO-15.

1.6 GC/MS Instrument Performance Check

Tuning and performance criteria are established to ensure adequate mass resolution, proper identification of compounds and to some degree, sufficient instrument sensitivity. These criteria are not sample specific. Instrument performance is determined using standard materials. Therefore, these criteria should be met in all circumstances. The Tuning standard for volatile organics is Bromofluorobenzene (BFB).

Instrument performance was generated within acceptable limits and frequency (24 hours) for Bromofluorobenzene (BFB) for all analyses conducted for this SDG.

1.7 Initial and Continuing Calibrations

Satisfactory instrument calibration is established to ensure that the instrument is capable of producing acceptable quantitative data. An initial calibration demonstrates that the instrument is capable of giving acceptable performance at the beginning of an experimental sequence. The continuing calibration checks document that the instrument is giving satisfactory daily performance.

A) Response Factor GC/MS:
The response factor measures the instrument's response to specific chemical compounds. The response factor for all compounds must be >/= 0.05 in both initial and continuing calibrations. A value <0.05 indicates a serious detection and quantitation problem (poor sensitivity). Analytes detected in the sample will be qualified as estimated, "J". All non-detects for that compound in the corresponding samples will be rejected, "R".

The following compounds are allowed to be >0.01 without qualification:
2-Butanone
Carbon Disulfide
Chloroethane
Chloromethane
1,2-Dibromoethane
1,2-Dichloropropane
1,4-Dioxane
1,2-Dibromo-3-chloroproane
Methylene Chloride

All the response factors for the target analytes reported were found to be within acceptable limits (>/=0.05) [or >/=0.01 for the 9 compounds above], for the initial and continuing calibrations.

B) Percent Relative Standard Deviation (%RSD) and Percent Difference (%D):
Percent RSD is calculated from the initial calibration and is used to indicate the stability of the specific compound response factor over increasing concentrations. Percent D compares the response factor of the continuing calibration check to the mean response factor (RRF) from the initial calibration. Percent D is a measure of the instrument's daily performance. Percent RSD must be <30% and %D must be <30%. A value outside of these limits indicates potential detection and quantitation errors. For these reasons, all positive results are flagged as estimated, "J" and non-detects are flagged "UJ". If %RSD and %D grossly exceed QC criteria (>90%), non-detect data may be qualified, "R", unusable. Additionally, in cases where the %RSD is >30% and eliminating either the high or the low point of the curve does not restore the %RSD to less than or equal to 30% then positive results are qualified, "J". In cases where removal of either the low or high

point restores the linearity, then only low or high level results will be qualified, "J" in the portion of the curve where non linearity exists.

Initial Calibrations: The initial calibrations provided and the %RSD were within acceptable limits (30%) for all target compounds with the exception of Isopropanol (30.07%). The laboratory reported concentrations for this analyte has been qualified, "J" in both PDM-1 and PDM-2.

Continuing Calibrations: The continuing calibrations provided and the %D was within acceptable limits (30%) for all target compounds.

1.8 Internal Standards

Internal Standards (IS) performance criteria ensure that the GC/MS sensitivity and response are stable during every experimental run. The internal standard area count must not vary by more than a factor of 2 (-40% to +40%) from the associated continuing calibration standard. The retention time of the internal standard must not vary more than +/- 20 seconds from the associated continuing calibration standard. If the area count is outside the (-40% to +40%) range of the associated standard, all of the positive results for compounds quantitated using that IS are qualified as estimated, "J", and all non-detects as "UJ", or "R" if there is a severe loss of sensitivity.

If an internal standard retention time varies by more than 20 seconds, professional judgment will be used to determine either partial or total rejection of the data for that sample fraction.

Internal Standard area responses met QC requirements for all analysis pertaining to this data set.

1.9 Target Compound List Identification

TCL compounds are identified on the GC/MS by using the analyte's relative retention time (RRT) and by comparison to the ion spectra obtained from known standards. For the results to be a positive hit, the sample peak must be within =/- 0.06RRT units of the standard compound and have an ion spectra which has a ratio of the primary and secondary m/e intensities within 20% of that in the standard compound.

GC/MS spectra met the qualitative criteria for identification. All retention times were within required specifications.

1.10 Tentatively Identified Compounds (TICs)

TICs were reported in accordance with the project requirements. The identification must be considered tentative (both quantitative and qualitative) due to the lack of required compound specific response factors. Consequently all concentrations should be considered estimated, "J" and as a result of the qualitative uncertainty should be qualified, "N" where an identification has been made.

TICs were not submitted with this data set.

1.11 Compound Quantification and Reported Detection Limits

GC/MS quantitative analysis is considered to be acceptable. Correct internal standards and response factors and air volumes were used to calculate final concentrations.

Sample results have been presented in ug/m3 by the laboratory on the Form I's.

Samples were analyzed undiluted (400mls).

1.12 Overall System Performance

GC/MS analytical methodology was acceptable for this analysis except where explained in the laboratory SDG Narrative and the detailed validation report. The data reported agrees with the raw data provided in the final report. The laboratory provided a complete data package and reported all data using acceptable protocols and laboratory qualifiers as defined in the report package.

Reviewer's Signature Lou A. Bell **Date** 02/24/14

Appendix A
Data Summary
Form I's
With Qualifications

FORM I

ORGANIC ANALYSIS DATA SHEET

EPA TO-15

PDM-1

Laboratory: York Analytical Laboratories, Inc. SDG: 14B0233

Client: C.A. Rich Associates Project: CDC-FF

Matrix: Indoor Ambient Air Laboratory ID: 14B0233-01 File ID: TO10344.D

Sampled: 02/06/14 09:30 Prepared: 02/12/14 16:38 Analyzed: 02/12/14 20:37

Solids: Preparation: EPA TO15 PREP Initial/Final: 400 mL / 400 mL

Batch: BB40434 Sequence: Y4B1404 Calibration: YA40002 Instrument: 5975C

CAS NO.	COMPOUND	DILUTION	CONC. (ug/m³)	Q
75-01-4	Vinyl Chloride	1	0.26	U
108-05-4	Vinyl acetate	1	0.36	U
79-01-6	Trichloroethylene	1	0.27	U
10061-02-6	trans-1,3-Dichloropropylene	1	0.46	U
156-60-5	trans-1,2-Dichloroethylene	1	0.40	U
108-88-3	Toluene	1	1.5	
109-99-9	Tetrahydrofuran	1	0.30	U
127-18-4	Tetrachloroethylene	1	0.76	
100-42-5	Styrene	1	0.43	U
115-07-1	Propylene	1	0.18	U
622-96-8	p-Ethyltoluene	1	0.50	U
179601-23-1	p- & m- Xylenes	1	0.88	U
95-47-6	o-Xylene	1	0.44	U
110-54-3	n-Hexane	1	0.43	
142-82-5	n-Heptane	1	0.42	U
75-09-2	Methylene chloride	1	1.6	~~B~~ U
1634-04-4	Methyl tert-butyl ether (MTBE)	1	0.37	U
108-10-1	4-Methyl-2-pentanone	1	0.42	U
67-63-0	Isopropanol	1	49	J
87-68-3	Hexachlorobutadiene	1	1.1	U
100-41-4	Ethyl Benzene	1	0.44	U
141-78-6	Ethyl acetate	1	0.37	U
110-82-7	Cyclohexane	1	0.35	U
10061-01-5	cis-1,3-Dichloropropylene	1	0.46	U
156-59-2	cis-1,2-Dichloroethylene	1	0.40	U
74-87-3	Chloromethane	1	1.2	
67-66-3	Chloroform	1	0.50	U
75-00-3	Chloroethane	1	0.27	U
56-23-5	Carbon tetrachloride	1	0.45	
75-15-0	Carbon disulfide	1	0.32	U
74-83-9	Bromomethane	1	0.39	U
75-25-2	Bromoform	1	1.1	U
75-27-4	Bromodichloromethane	1	0.63	U
100-44-7	Benzyl chloride	1	0.53	U
71-43-2	Benzene	1	0.71	
67-64-1	Acetone	1	11	
591-78-6	2-Hexanone	1	0.83	U
78-93-3	2-Butanone	1	1.2	
123-91-1	1,4-Dioxane	1	0.37	U
106-46-7	1,4-Dichlorobenzene	1	0.61	U

2/23/14

FORM I **ORGANIC ANALYSIS DATA SHEET**

EPA TO-15

PDM-1

Laboratory:	York Analytical Laboratories, Inc.			SDG:	14B0233
Client:	C.A. Rich Associates			Project:	CDC-FF
Matrix:	Indoor Ambient Air	Laboratory ID:	14B0233-01	File ID:	TO10344.D
Sampled:	02/06/14 09:30	Prepared:	02/12/14 16:38	Analyzed:	02/12/14 20:37
Solids:		Preparation:	EPA TO15 PREP	Initial/Final:	400 mL / 400 mL

Batch: BB40434 Sequence: Y4B1404 Calibration: YA40002 Instrument: 5975C

CAS NO.	COMPOUND	DILUTION	CONC. (ug/m³)	Q
541-73-1	1,3-Dichlorobenzene	1	0.61	U
106-99-0	1,3-Butadiene	1	0.44	U
108-67-8	1,3,5-Trimethylbenzene	1	0.50	U
76-14-2	1,2-Dichlorotetrafluoroethane	1	0.71	U
78-87-5	1,2-Dichloropropane	1	0.47	U
107-06-2	1,2-Dichloroethane	1	0.41	U
95-50-1	1,2-Dichlorobenzene	1	0.61	U
95-63-6	1,2,4-Trimethylbenzene	1	0.50	U
120-82-1	1,2,4-Trichlorobenzene	1	0.75	U
75-35-4	1,1-Dichloroethylene	1	0.40	U
75-34-3	1,1-Dichloroethane	1	0.41	U
75-69-4	Trichlorofluoromethane (Freon 11)	1	1.3	
79-00-5	1,1,2-Trichloroethane	1	0.55	U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	1	0.78	U
79-34-5	1,1,2,2-Tetrachloroethane	1	0.70	U
71-55-6	1,1,1-Trichloroethane	1	0.55	U
75-71-8	Dichlorodifluoromethane	1	2.4	
106-93-4	1,2-Dibromoethane	1	0.78	U
124-48-1	Dibromochloromethane	1	0.82	U
80-62-6	Methyl Methacrylate	1	0.42	U
108-90-7	Chlorobenzene	1	0.47	U

SYSTEM MONITORING COMPOUND	ADDED (ppbv)	CONC (ppbv)	% REC	QC LIMITS	Q
p-Bromofluorobenzene	10.0	8.72	87.2	70 - 130	

INTERNAL STANDARD	AREA	RT	REF AREA	REF RT	Q
Bromochloromethane	1041537	12.372	1146595	12.372	
1,4-Difluorobenzene	2577470	13.933	2898623	13.939	
d5-Chlorobenzene	2203651	19.17	2581467	19.169	

* Values outside of QC limits

FORM I **ORGANIC ANALYSIS DATA SHEET**

EPA TO-15

PDM-2

Laboratory: York Analytical Laboratories, Inc. SDG: 14B0233

Client: C.A. Rich Associates Project: CDC-FF

Matrix: Indoor Ambient Air Laboratory ID: 14B0233-02 File ID: TO10346.D

Sampled: 02/06/14 10:40 Prepared: 02/12/14 16:38 Analyzed: 02/12/14 22:08

Solids: Preparation: EPA TO15 PREP Initial/Final: 400 mL / 400 mL

Batch: BB40434 Sequence: Y4B1404 Calibration: YA40002 Instrument: 5975C

CAS NO.	COMPOUND	DILUTION	CONC. (ug/m³)	Q
75-01-4	Vinyl Chloride	1	0.26	U
108-05-4	Vinyl acetate	1	0.36	U
79-01-6	Trichloroethylene	1	0.27	U
10061-02-6	trans-1,3-Dichloropropylene	1	0.46	U
156-60-5	trans-1,2-Dichloroethylene	1	0.40	U
108-88-3	Toluene	1	10	
109-99-9	Tetrahydrofuran	1	0.30	U
127-18-4	Tetrachloroethylene	1	1.2	
100-42-5	Styrene	1	0.43	U
115-07-1	Propylene	1	0.18	U
622-96-8	p-Ethyltoluene	1	1.2	
179601-23-1	p- & m- Xylenes	1	3.3	
95-47-6	o-Xylene	1	1.4	
110-54-3	n-Hexane	1	8.2	
142-82-5	n-Heptane	1	4.1	
75-09-2	Methylene chloride	1	16	B
1634-04-4	Methyl tert-butyl ether (MTBE)	1	0.37	U
108-10-1	4-Methyl-2-pentanone	1	0.42	U
67-63-0	Isopropanol	1	1.2	J
87-68-3	Hexachlorobutadiene	1	1.1	U
100-41-4	Ethyl Benzene	1	1.1	
141-78-6	Ethyl acetate	1	0.37	U
110-82-7	Cyclohexane	1	1.6	
10061-01-5	cis-1,3-Dichloropropylene	1	0.46	U
156-59-2	cis-1,2-Dichloroethylene	1	0.40	U
74-87-3	Chloromethane	1	1.3	
67-66-3	Chloroform	1	0.50	U
75-00-3	Chloroethane	1	0.27	U
56-23-5	Carbon tetrachloride	1	0.51	
75-15-0	Carbon disulfide	1	0.32	U
74-83-9	Bromomethane	1	0.39	U
75-25-2	Bromoform	1	1.1	U
75-27-4	Bromodichloromethane	1	0.63	U
100-44-7	Benzyl chloride	1	0.53	U
71-43-2	Benzene	1	1.7	
67-64-1	Acetone	1	15	
591-78-6	2-Hexanone	1	0.83	U
78-93-3	2-Butanone	1	2.6	
123-91-1	1,4-Dioxane	1	0.37	U
106-46-7	1,4-Dichlorobenzene	1	0.61	U

FORM I **ORGANIC ANALYSIS DATA SHEET**

EPA TO-15

PDM-2

Laboratory:	York Analytical Laboratories, Inc.			SDG:	14B0233
Client:	C.A. Rich Associates			Project:	CDC-FF
Matrix:	Indoor Ambient Air	Laboratory ID:	14B0233-02	File ID:	TO10346.D
Sampled:	02/06/14 10:40	Prepared:	02/12/14 16:38	Analyzed:	02/12/14 22:08
Solids:		Preparation:	EPA TO15 PREP	Initial/Final:	400 mL / 400 mL
Batch:	BB40434	Sequence:	Y4B1404	Calibration:	YA40002
Instrument:	5975C				

CAS NO.	COMPOUND	DILUTION	CONC. (ug/m³)	Q
541-73-1	1,3-Dichlorobenzene	1	0.61	U
106-99-0	1,3-Butadiene	1	0.44	U
108-67-8	1,3,5-Trimethylbenzene	1	0.50	U
76-14-2	1,2-Dichlorotetrafluoroethane	1	0.71	U
78-87-5	1,2-Dichloropropane	1	0.47	U
107-06-2	1,2-Dichloroethane	1	0.41	U
95-50-1	1,2-Dichlorobenzene	1	0.61	U
95-63-6	1,2,4-Trimethylbenzene	1	1.1	
120-82-1	1,2,4-Trichlorobenzene	1	0.75	U
75-35-4	1,1-Dichloroethylene	1	0.40	U
75-34-3	1,1-Dichloroethane	1	0.41	U
75-69-4	Trichlorofluoromethane (Freon 11)	1	2.2	
79-00-5	1,1,2-Trichloroethane	1	0.55	U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	1	0.78	U
79-34-5	1,1,2,2-Tetrachloroethane	1	0.70	U
71-55-6	1,1,1-Trichloroethane	1	0.55	U
75-71-8	Dichlorodifluoromethane	1	2.7	
106-93-4	1,2-Dibromoethane	1	0.78	U
124-48-1	Dibromochloromethane	1	0.82	U
80-62-6	Methyl Methacrylate	1	0.42	U
108-90-7	Chlorobenzene	1	0.47	U

SYSTEM MONITORING COMPOUND	ADDED (ppbv)	CONC (ppbv)	% REC	QC LIMITS	Q
p-Bromofluorobenzene	10.0	9.78	97.8	70 - 130	

INTERNAL STANDARD	AREA	RT	REF AREA	REF RT	Q
Bromochloromethane	971045	12.372	1146595	12.372	
1,4-Difluorobenzene	2420286	13.939	2898623	13.939	
d5-Chlorobenzene	1892287	19.17	2581467	19.169	

* Values outside of QC limits

Appendix B
Chain of Custody

YORK
ANALYTICAL LABORATORIES, INC.

120 RESEARCH DR. STRATFORD, CT 06615
(203) 325-1371 FAX (203) 357-0166

Field Chain-of-Custody Record - AIR

NOTE: York's Std. Terms & Conditions are listed on the back side of this document.
This document serves as your written authorization to York to proceed with the analyses requested and your signature binds you to York's Std. Terms & Conditions unless superseded by written contract.

York Project No. 14B0233

YOUR Information	Report To:	Invoice To:	YOUR Project ID	Turn-Around Time	Report Type/Deliverables
Company: CA Rich Consultants Inc.	Company: CA Rich Consultants	Company:	CDC-FF	RUSH - Same Day ☐	Summary Report ___
Address: 17 Dupont St Plainview NY 11803	Address: 17 Dupont St Plainview, NY 11803	Address: Same	Purchase Order No.	RUSH - Next Day ☐	Summary w/ QA Summary ___
Phone No. 516 576 8844	Phone No. 516-576-8844	Phone No.		RUSH - Two Day ☐	CT RCP Package ___
Contact Person: Eric Weinstock	Attention: Eric Weinstock	Attention:		RUSH - Three Day ☐	NY ASP A Package ___
E-Mail Address: eweinstock@carichinc.com	E-Mail Address: eweinstock@carichinc.com	E-Mail Address:	Samples from: CT___ NY X NJ___	RUSH - Four Day ☐	NY ASP B/CLP Pkg X
				Standard(5-7 Days) ☒	NJDEP Reduced ___
					Electronic Deliverables:
					EDD (Specify Type) ___
					Standard Excel ___
					Regulatory Comparison Excel ___

Print Clearly and Legibly. All Information must be complete. Samples will NOT be logged in and the turn-around time clock will not begin until any questions by York are resolved.

Michael Yager
Samples Collected/Authorized By (Signature)

Michael Yager
Name (printed)

Air Matrix Codes

AI - INDOOR Ambient Air
AO- OUTDOOR Amb. Air
AE- Vapor Extraction Well/ Process Gas/Effluent
AS- SOIL Vapor/Sub-Slab

TO15 Volatiles and Other Gas Analyses

EPA TO-15 List	EPA TO-14A List
NYSDEC VI list	Tentatively Identified Compounds
NYSDEC STARS List	Air VPH
Project Specific List by TO-15	Helium
NJDEP Target List	Methane
CTDEP RCP Target List	OTHER___

Detection Limits Required

≤ 1 ug/m³ ___
NYSDEC VI Limits ___
(VI vapor intrusion)
NJDEP low level ___
Routine Survey ___
Other___

Special Instructions

Sample Identification	Date Sampled	AIR Matrix	Canister Vacuum Before Sampling (in. Hg)	Canister Vacuum Afer Sampling (in. Hg)	Choose Analyses Needed from the Menu Above and Enter Below	Sampling Media
PDM-1	2/6/14	AI	30	9	EPA TO-15 List	6 Liter Summa canister X / Tedlar Bag
PDM-2	2/6/14	AI	25	7	EPA TO-15 List	6 Liter Summa canister X / Tedlar Bag
						6 Liter Summa canister ___ / Tedlar Bag
						6 Liter Summa canister ___ / Tedlar Bag
						6 Liter Summa canister ___ / Tedlar Bag
						6 Liter Summa canister ___ / Tedlar Bag
						6 Liter Summa canister ___ / Tedlar Bag
						6 Liter Summa canister ___ / Tedlar Bag
						6 Liter Summa canister ___ / Tedlar Bag
						6 Liter Summa canister ___ / Tedlar Bag

17 of 140

Comments 0930 - PDM-1 AT+T 1st Fl CAN# 505 Controller# 433
1040 - PDM-2 AT+T Bsmt CAN# 442 Controller # 432

Michael Yager 2/10/13
Samples Relinquished By Date/Time

Samples Relinquished By Date/Time

KBarke 2/11/
Samples Received By Date/Time

J. [illegible] 2/11/14 - 1820
Samples Received in LAB by Date/Time

Laboratory Chain-of-Custody Record

York Project (SDG) No.: 14B0233

Samples Received: 02/11/2014 18:20 **By:** John Gale **Logged In:** 02/11/2014 13:37 **By:** Erienne Schneck

Sample Conditions:

- [ ] Custody Seals
- [x] Containers Intact
- [x] COC/Labels Agree
- [x] Preservation Confirmed
- [x] Cooler Temperature Confirmed
- [ ] COC Complete
- [x] Chain of Custody Form Received
- [x] Appropriate Sample Volumes Received
- [x] Appropriate Sample Containers Submitted
- [x] Samples Submitted within Holding Times
- [ ] Corrective Action Form Required

Preparation Chain-of-Custody

Sample ID	Reason Prep	Prep Start Date	Prep End Date	Prep Analyst
14B0233-01	EPA TO15 PREP	02/12/2014 16:38	02/12/2014 16:38	Amanda DeBiase
14B0233-02	EPA TO15 PREP	02/12/2014 16:38	02/12/2014 16:38	Amanda DeBiase

Analysis Chain-of-Custody

Sample ID	Reason Analysis	Analysis Start Date	Analysis End Date	Analyst
14B0233-01	Volatile Organics, EPA TO15 Full List	02/12/2014 16:38	02/12/2014 20:37	Amanda DeBiase
14B0233-02	Volatile Organics, EPA TO15 Full List	02/12/2014 16:38	02/12/2014 22:08	Amanda DeBiase

Appendix C
SDG Narrative

Case Narrative

Client: C.A. Rich Associates
Client Project ID: CDC-FF
Prepared for: Eric Weinstock

Introduction

This Case Narrative applies only to the following samples submitted to our laboratory on **2/11/2014 6:20:00 PM** :

PDM-1 Air
PDM-2 Air

The 2 sample(s) were received intact. Chain-of-custody was maintained from receipt through analysis in the laboratory.

Methodology

All preparation and analyses were conducted according to the methods referenced in the body of the lab report.

Sample and Analysis Qualifiers

PDM-1	Air	No qualifiers
PDM-2	Air	No qualifiers

Analysis Issues (Calibration, Others)

No problems encountered.

York Project/SDG no.: 14B0233 Statement

We certify that these data are in compliance with SOP requirements both technically and for completeness for other than the conditions stated above. Release of the data contained in the hard copy report and any electronic deliverables has been authorized by the Laboratory Manager as verified by the signature on this laboratory report.

Approved by: *Ben Gulizia*
Laboratory Director

Date: February 14, 2014