



# Revised Remedial Action Options and Design Report

for

Bright Cleaners Tenant Space  
7249 South 76th Street  
Franklin, Milwaukee County, Wisconsin

DNR FID #241928940  
DNR BRRTS #02-41-580017

July 24, 2018

Apex Project No. PECO\_2017-101

Prepared for:

Franklin Station LLC, c/o Phillips Edison & Company  
11501 Northlake Drive  
Cincinnati, Ohio 45249



July 24, 2018

Mr. Eric Amadi  
State of Wisconsin  
Department of Natural Resources  
Southeast Region Headquarters  
2300 N. Dr. Martin Luther King, Jr. Drive  
Milwaukee, Wisconsin 53212-3128

Re: Revised Remedial Action Options and Design Report  
Bright Cleaners Tenant Space  
7249 South 79<sup>th</sup> Street, Franklin, Wisconsin  
Wisconsin DNR Facility Identification #241928940  
Wisconsin DNR BRRTS Activity #02-41-580017

Dear Mr. Amadi:

Franklin Station LLC retained Apex to prepare this Revised Remedial Action Options and Design Report for the dry cleaner tenant space at 7249 South 76th Street in Franklin, Wisconsin. This tenant space is located within Franklin Centre, a multi-tenant retail strip mall.

Historical records show dry cleaning operations have been conducted in the tenant space from 1995 to present. Soil-gas testing identified volatile organic compounds (VOCs) impacts beneath the floor slab of the tenant space. To close this release, some form of mitigation will be required.

Enclosed is Apex's Revised Remedial Action Options and Design Report. This is an addendum to our original Remedial Action Options and Design Report and is intended to address comments in your letter dated June 7, 2018. A check for \$1,050 was previously sent for the review of the Remedial Action Options and Design Report

If you have any questions regarding our findings, please contact Steve Newlin at (847) 956-8589 x 3201. Thank you for attention to this matter.  
Respectfully Submitted,

**Apex Companies, LLC**

Handwritten signature of Jane Allan in black ink.

Jane Allan  
Senior Project Manager

Handwritten signature of Steve Newlin in black ink.

Steve Newlin  
Senior Project Manager

cc: Mr. Tom Meyers, Franklin Station LLC

Attachments

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**REVISED REMEDIAL ACTION OPTIONS AND DESIGN REPORT  
FRANKLIN CLEANERS TENANT SPACE, FRANKLIN CENTRE  
7249 SOUTH 76<sup>TH</sup> STREET  
FRANKLIN, MILWAUKEE COUNTY, WISCONSIN**

## **1.0 BACKGROUND**

Franklin Station LLC (Client) retained Apex Companies, LLC (Apex) to prepare this report in association with the dry cleaner tenant space at 7249 South 76th Street in Franklin, Wisconsin (the Site). This Site is located within Client's Franklin Centre, a retail strip mall located at 7199-7255 South 76th Street in Franklin, Milwaukee County, Wisconsin. The general vicinity of the Site is shown in **Figure 1**.

As directed by the Wisconsin Department of Natural Resources (DNR), in its letter dated August 22, 2017, Franklin Station LLC has submitted a Site Remediation Report to the DNR and is required to submit a remedial actions options and design report for pursuing closure for volatile organic compounds (VOCs) exceeding applicable standards for soil-gas in the immediate vicinity of the Site. Apex has prepared this report to describe the interim steps for media-specific remediation for the pursuit of agency closure. A Remedial Action Options and Design Report (RAOR) dated January 24, 2018 was submitted to the DNR.

In response to the RAOR, the DNR issued a letter dated June 7, 2018 with comments regarding the proposed work. This revised RAOR is intended to address the DNR comments from their June 2018 letter.

### **1.1 Site Description**

The Site is located within the Franklin Centre (the Parent Tract) that consists of a 14.6-acre parcel of land developed with a 120,000-square foot (SF) multi-tenant shopping center, asphalt-paved parking and landscaped areas. Franklin Centre is bounded to the north by an outparcel bank, restaurant, and a multi-tenant commercial retail building followed by W Rawson Avenue; to the east by two outparcel banks and a restaurant followed by S 76th Street; to the south by undeveloped properties and condominium properties followed by Terrace Drive; and to the west by undeveloped properties followed by W Loomis Road/Wisconsin 36. The Site configuration and the adjoining properties are shown in the Site Plan provided as **Figure 2**. Photographs of the Site are included in Appendix A.

### **1.2 Site History**

Historical records show two dry cleaning businesses have operated dry cleaning plants at the Site: Sun Cleaners in 1995 and Bright Cleaners from 1999 to present. Analysis of soil and soil-gas samples detected VOCs at concentration in excess of Soil Residual Contaminant Levels (RCLs) and sub-slab Vapor Action Levels (VALs) cited in Wisconsin regulations. Analysis of groundwater samples did not detect VOCs at concentrations in excess of Groundwater Quality Standards (GQSs) cited in Wisconsin regulations, and it is Apex's opinion that additional groundwater investigation is not warranted. The results of environmental testing were described in Apex's report titled Site Investigation Report, Bright

Cleaners Tenant Space, Franklin Centre, 7249 South 76th Street, Franklin, Wisconsin, dated November 3, 2017.

The Wisconsin DNR requires that closure be obtained for VOCs exceeding applicable standards. To meet the agency requirements, remedial action will be required to achieve the applicable cleanup criteria and to mitigate potential vapor intrusion of VOCs to indoor air. Additionally, periodic reporting to the Wisconsin DNR will be needed to show compliance and to pursue agency closure.

### 1.3 Previous Reports & Agency Correspondence

**Phase I ESA (2016).** Apex's September 2016 Phase I ESA report included review of a previous reports by Weaver Boos Consultants North Central, LLC (Weaver) titled *Phase I and Phase II Environmental Site Assessment, Franklin Centre – Parcel 1, 7201 76<sup>th</sup> Street, Franklin, Wisconsin 53132*, dated May 6, 2001; *Phase I Environmental Site Assessment, 7201 South 76<sup>th</sup> Street, Franklin, Wisconsin*, dated May 27, 2011; *Limited Phase II Environmental Site Assessment Report, Bright Cleaners, 7249 South 76<sup>th</sup> Street, Franklin, Wisconsin*, dated June 17, 2011; and, *Supplemental Response Activities, Bright Cleaners, 7249 South 76<sup>th</sup> Street, Franklin, Wisconsin*, dated June 28, 2011. The use of dry cleaning solvents at Bright Cleaners was identified as a Recognized Environmental Condition (REC).

**Phase I ESA (2001 and 2011).** In its 2011 Phase I ESA report, Weaver identified the potential presence of subsurface impacts associated with an active drycleaner facility at the Site. Weaver referenced a previous Phase I and Phase II ESA that they conducted at the Site in 2001. According to the 2001 Phase I ESA, Weaver observed staining on the floor in proximity of the dry cleaning machine and improperly stored hazardous materials.

**Results of Soil Analysis (2001).** Weaver advanced three soil borings in the vicinity of the dry cleaning machine and outside of the tenant space. Soil samples were analyzed for volatile organic compounds (VOCs). Analytical results were below laboratory detection limits.

**Results of Soil Analysis (2011).** Weaver conducted a Limited Phase II ESA in June 2011 that included the collection of six soil samples from three soil boring locations for VOC analysis. Weaver compared the laboratory results to the Wisconsin Department of Natural Resources' (Wisconsin DNR) Residual Contaminant Levels (RCLs). One soil sample located outside of the Bright Cleaners by the rear door (SP-1 / 2-4') was found to have concentrations of 1,1,1 trichloroethane (1,1,1-TCA) that exceed the RCLs. The deeper sample from SP-1 had 1,1,1-TCA concentrations below RCLs. Weaver did not encounter groundwater during the Limited Phase II ESA. Weaver concluded that VOC impacts appear to be limited to shallow subsurface soils near SP-1.

**Supplemental Response Activities (2011).** Weaver conducted additional activities at the Site in response to the results of the Limited Phase II ESA in June 2011. Weaver collected six additional shallow soil samples that were analyzed for VOCs to delineate the extent of contamination beyond SP-1. VOCs were not detected at concentrations in excess of laboratory Method Detection Limits (MDLs). Weaver excavated approximately 58 tons of soil in the vicinity of SP-1. Five confirmatory soil samples were collected from the excavation and analyzed for VOCs. Concentrations of VOCs

were not found above RCLs in the five confirmatory samples. Weaver concluded that mitigation of the VOC impacts at the Site was successful.

**Correspondence from Wisconsin DNR (2013).** Apex reviewed a letter from the Wisconsin DNR<sup>1</sup> titled *Final Case Closure, Bright Cleaners, 7249 South 76<sup>th</sup> Street, Franklin, WI, DNR BRRTS Activity #: 02-41-557111, FID #: 241928940*, dated December 27, 2013. In its letter, the Wisconsin DNR stated that the release at Bright Cleaners is closed and no further investigation or remediation was required at that time. Apex notes that Bright Cleaners continued to operate the dry cleaning plant from 2011 to the present.

**Phase II Limited Subsurface Investigation (2016).** To assess the risk of subsurface impacts associated with the continued use of dry cleaning solvents at the Bright Cleaners tenant space since 2011, Apex conducted subsurface assessment on August 31, 2016.

Subsurface assessment included collection of soil samples from three exterior borings (TW-1 through TW-3); collection of groundwater samples from two temporary monitoring wells (TW-1 and TW-3); and collection of sub-slab soil-gas samples from three locations (SV-1 through SV-3). The soil, groundwater and soil-gas samples were submitted for VOC analysis. Apex notes that groundwater was not encountered in one temporary well (TW-2). The locations of the soil borings, temporary monitoring well locations and soil-gas samples are shown in **Figure 3**.

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<sup>1</sup> Source: Wisconsin Department of Natural Resources (DNR) Bureau for Remediation and Redevelopment Tracking System (BRRTS) data repository.

## 2.0 SUMMARY OF RESULTS

To date seven soil borings have been advanced in the area of the Franklin Cleaners store in response to a release of dry cleaner solvent into the subsurface. Six groundwater monitoring wells have been installed to assess the groundwater quality in the vicinity of the store. Additionally, six soil vapor samples were collected beneath the floor slab of the building to assess the potential for indoor vapor intrusion.

The locations of the soil borings, monitoring wells and sub-slab sample locations are shown in **Figure 3**. Photographs taken at the time of fieldwork are included in **Appendix A**. Apex's field protocols are described in **Appendix B**.

### 2.1 Soil Conditions

The soil borings encountered the following generalized lithologic sequence:

- Asphalt approximately 4 inches thick was encountered at ground surface in the exterior borings (MW-1 through MW-3). Concrete approximately 5 inches thick was encountered in the interior boring (B-1). Topsoil, asphalt pavements and concrete were generally underlain by approximately 3 inches of crushed stone.
- Silty clay/clayey silt was encountered below the crushed stone/aggregate to a depth of 20 feet bgs, the maximum depth explored.
- A discontinuous silty/clayey sand lens was encountered in MW-2 at depths ranging from 10 to 11 feet bgs.
- Gravel, sand and/or crushed stone was comingled with clay in MW-2 at depths ranging from 4 to 10 feet bgs and may be backfilled material from construction activities.

Refer to boring logs included in **Appendix C** for additional information regarding the soil conditions. A cross section of the Site is provided as **Figure 4**.

Six soil samples were analyzed for VOCs by EPA Method 5035/8260. The results of the soil analysis were compared to Non-Industrial and Industrial RCLs for Direct Contact and the soil (leaching) component to groundwater cited in the U.S. Environmental Protection Agency's (USEPA) Regional Screening Level Web-Calculator (June 2016) in accordance with Wisconsin Administrative Code NR 720 (WAC 720).

The soil analysis detected one VOC, methylene chloride, at concentrations that slightly exceed the RCL for the soil (leaching) component to groundwater exposure pathway. The soil analysis did not detect any VOCs at concentrations in excess of RCLs for direct-contact (non-industrial and industrial), and no additional VOCs at concentrations in excess of RCLs for the soil component to groundwater per WAC 720.

Apex notes that methylene chloride is a common laboratory contaminant and was detected in the method blank associated with sample TW-1. Therefore, it is Apex's opinion that methylene chloride detected in sample TW-1 is a laboratory artifact and does not reflect contamination from historical Site operations.

The results of the soil analysis, RCLs and sample depths are summarized in **Table 1** and the sample locations are shown in **Figure 3**. Copies of the laboratory reports and the chain-of custody form are included in **Appendix E**.

## 2.2 Groundwater Conditions

Groundwater at the Site occurs in an unconfined (water table) aquifer. Groundwater was generally encountered at depths ranging from 10 to 16 feet bgs at the time of drilling. The top of the monitoring well casings were surveyed for lateral and vertical control by Spaceco, Inc., a licensed surveyor. Stabilized groundwater was measured at depths ranging from 8.40 to 11.97 feet bgs (756.82 to 760.91 feet above mean sea level). Based upon water level measurements, Apex calculates groundwater flows to the south-southwest west at a gradient of 0.03 ft./ft. (horizontal to vertical). Groundwater elevation contours measured on August 17, 2017 are shown in **Figure 5**. The top of the well casings, water level measurements and groundwater elevations are summarized in a table included in **Appendix D**.

The Bouwer & Rice Method<sup>2</sup> was used to calculate a hydraulic conductivity (K) which ranged from  $1.45 \times 10^{-3}$  centimeters/second (for MW-2) to  $3.10 \times 10^{-6}$  centimeters/second (for MW-3) which shows that the hydraulic conductivity is highly variable at the Site. The test parameters, field measurements, and head verses time data generated during the test runs are included as **Attachment D**.

Apex collected two groundwater samples from two temporary monitoring wells (TW-1 and TW-3) and three groundwater samples from three dedicated monitoring wells (MW-1 through MW-3). Apex also collected one duplicate sample (from MW-1) and one trip blank. The groundwater samples were analyzed for VOCs by EPA Method 8260.

The results of the groundwater analysis were compared to GQS (Enforcement Standards and Preventative Action Limits) cited in WAC NR 140.10 Table 1 (WAC 140) and Vapor Risk Screening Levels (VRSLs) for groundwater for a commercial property use based on the USEPA Vapor Intrusion Screening Level Calculator (VISLC, Version 3.5.2, October 2017) with an excess lifetime cancer risk of  $1 \times 10^{-5}$  in accordance with WAC NR 716 (WAC 716).

The groundwater analysis did not detect VOCs at concentrations in excess of GQSs or VRSLs. Apex notes that methylene chloride was detected in two soil samples at concentrations in excess of the soil component to groundwater RCL; however, the groundwater analysis did not detect methylene chloride at concentrations in excess of MDLs in the corresponding monitoring wells.

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<sup>2</sup> Bouwer, Herman. 1989. The Bouwer and Rice Slug Test – An Update. *Groundwater*, Vol. 27, No. 3: 304-309.



The results of the groundwater analysis, GQSs and VRSLs are summarized in **Table 2** and the sample locations are shown in **Figure 3**. Copies of the laboratory reports and the chain-of-custody form are included in **Appendix E**.

### **2.3 Soil-Gas Analysis**

Apex collected 6 soil-gas samples immediately below the concrete floor slab in and adjacent to the dry cleaner tenant space at the locations shown in Figure 3. One soil-gas sample was collected near the center of the Bright Cleaners tenant space (SV-1), one adjacent to the dry cleaning plant (SV-2), one adjacent to chemical storage (SV-3) and three samples (SV-4 through SV-6) were used to assess the lateral extent of VOCs in sub-slab soil-gas. The soil-gas samples were analyzed for VOCs by EPA Method TO-15.

The results of the soil-gas analysis were compared to sub-slab Vapor Action Levels (VALs) for a commercial property use based on the USEPA VISL (Version 3.5.1, May 2016) with an excess lifetime cancer risk of  $1 \times 10^{-5}$  in accordance with WAC 716.

The soil-gas analysis detected PCE in two samples at concentrations in excess of commercial VALs per WAC 716. The results of the soil-gas analysis and VALs are summarized in **Table 3**. The sample locations with VOC concentrations in excess of VALs are summarized and shown in **Figure 6**. Copies of the laboratory reports and the chain-of custody form are included in **Appendix E**.

### **2.4 Source Assessment**

No specific details have been documented on the incident causing the release of dry cleaner solvent. Based on the results of the 2005 investigation and the more recent SIR performed by Apex, it appears that the incident(s) occurred after 2005 and before 2017.

The exact location of the release is not known either. However, based on the distribution of the chlorinated solvent compounds beneath the building, it appears that the general operations, handling and storage of the solvents south of the dry cleaning machine is likely the source of the impacts beneath the building.

The floor slab was observed to be in relatively good condition, free of cracks and holes. No plumbing drawings were made available and no floor drains were observed in the area of SV-3 or SV-4, the two vapor points with the highest detected concentrations of chlorinated solvents. During the performance of the two investigations, ground penetrating radar (GPR) was used to clear utilities prior to drilling into the subsurface. No indications of subsurface utilities were identified beneath the floor slab during the GPR survey.

It is well documented that chlorinated solvents can penetrate (leach) through concrete floors over time. Given the lack of other possible conduits being identified, Apex believes spilled solvent leached through the floor slab and likely impacted the subsurface beneath the building. For this reason, Apex does not believe additional source assessment is warranted. The estimated area of exceedance of the VAL is illustrated on **Figure 6**.

### 3.0 REMEDIAL OPTIONS

The objective for the proposed remediation at the Site consist of the mitigation of potential indoor vapor intrusion associated with the release of dry cleaning solvent at the Site. Remedial options considered for the Site included the following:

1. No Action
2. In-situ Injections (biodegradation or chemical degradation)
3. Vapor Extraction System (VES) to mitigate vapor intrusion to indoor air

Given that the first two options do not address the short-term risk to human health of the occupants of the building, Apex proposes Option number 3. Natural attenuation associated with Option 1 and the degradation associated with Option 2 require time to take effect and leave current tenants of the building exposed to potential inhalation risk until the attenuation/degradation occurs. These two options would likely require years to achieve regulatory compliance.

The mitigation approach provided by Option 3 will prevent potential vapors from entering the building once the VES is installed and operational. This option will reduce the potential health risk to building occupants immediately upon installation. Option 3 mitigates potential indoor vapor intrusion both in the short and long term.

Other more intrusive remedial options are available, however with the existence of the on-site building, these options are not feasible for this Site.

## 4.0 REMEDIAL DESIGN

It is Apex's opinion that the VOCs detected in soil-gas have been delineated. However, to assess for potential seasonal fluctuations of the vapor concentration beneath the building, Apex proposes to conduct additional sub-slab vapor sampling during the heating season. An additional three to four vapor points will be installed/sampled prior to the remedial system being installed. The locations of the vapor points will be installed at locations based on accessibility within the store. However, we believe the locations will be somewhat similar to the original locations surround SV-1 and SV-2 where the Vapor Action Levels exceedances have been identified. This additional vapor sampling will assist in designing the system detailed below.

To eliminate the soil-gas exposure pathway for building occupants, mitigation will be required. In order to address this exposure route, a VES will be installed and follow-up monitoring will be conducted to verify the system is effectively mitigating vapor intrusion to indoor air.

Apex designed a VES intended to draw the soil-vapor from below the floor slab in the areas of soil-gas exceedances creating a vacuum beneath the slab which will immediately reduce potential vapor intrusion from the sub-slab to indoor air. The extraction of sub-slab soil vapors and venting to the outside will also decrease the concentrations of VOCs in sub-slab soil vapors over time. The design includes post-installation communication test to determine the radius of influence for the VES. The proposed VES installation, the post-installation soil-gas sampling/analysis are described below.

### 4.1 Installation of Vapor Extraction System

Prior to VES installation, a communication test will be performed using a high suction centrifugal vent fan (similar to that to be installed in each exhaust vent) and a micro manometer will be used to determine how easily air can move from one point to another beneath the slab and the radius of depressurization achieved by each extraction sump. During the test a centrifugal fan will be installed in a hole that is cored in the floor slab. Small holes will be cored in strategic locations through the slab and a micro manometer will be used to gauge how the air flow is affected by the force of the fan. Monitoring pressure differentials during the soil communication test will determine the most efficient configuration for the active venting system.

The VES will be installed to address the potential indoor vapor intrusion and also reduce the chlorinated vapor concentrations beneath the building. The VES will include the following:

1. An extraction sump is installed that is at least two cubic feet and extends at least 6 inches below the slab (larger extraction sumps may be excavated as needed to achieve the performance criteria described below);
2. A PVC pipe of at least 3 inches in diameter extends from the extraction sump to the intake side of an in-line fan (Specifications enclosed in **Appendix F**) capable of achieving a static vacuum of at least 0.25 inches water column (wc) at the suction point and measurable vacuum at the farthest edges of the area served by the suction pit under worst case conditions (all exhaust fans and heating systems running, during cold weather) as determined by a differential pressure reading of at least -0.003 inches wc below the slab or visible downward flow of air at test holes using chemical or smoke sticks;

3. All visible cracks and joints in the slab (including the location where the PVC pipe exits the slab) and foundation walls are sealed;
4. The pipe will exhaust outside the building at least 10 feet above ground and at least 10 feet from any door or window; and
5. Additional extraction sumps meeting the requirements described above shall be installed as necessary to achieve measurable vacuum below the slab in all areas that demonstrate the potential for vapor intrusion, including in any area where subsurface or foundation conditions (e.g., a sub-slab grade beam) prevent adequate suction field extension.

Following VES installation, an additional communication test will be performed to confirm that the extraction system is performing as intended. These tests will be performed approximately one month and six months after the system has been put into operation. Since there are indoor sources of PCE in the Bright Cleaners, no sampling of indoor air will be conducted.

Following VES installation and post-installation performance testing, Apex will prepare an VES installation letter report documenting installation and testing activities with guidelines for visual monitoring of the system on a regular basis by local maintenance staff. We will also provide an annual check list to document system operation for use by maintenance staff.

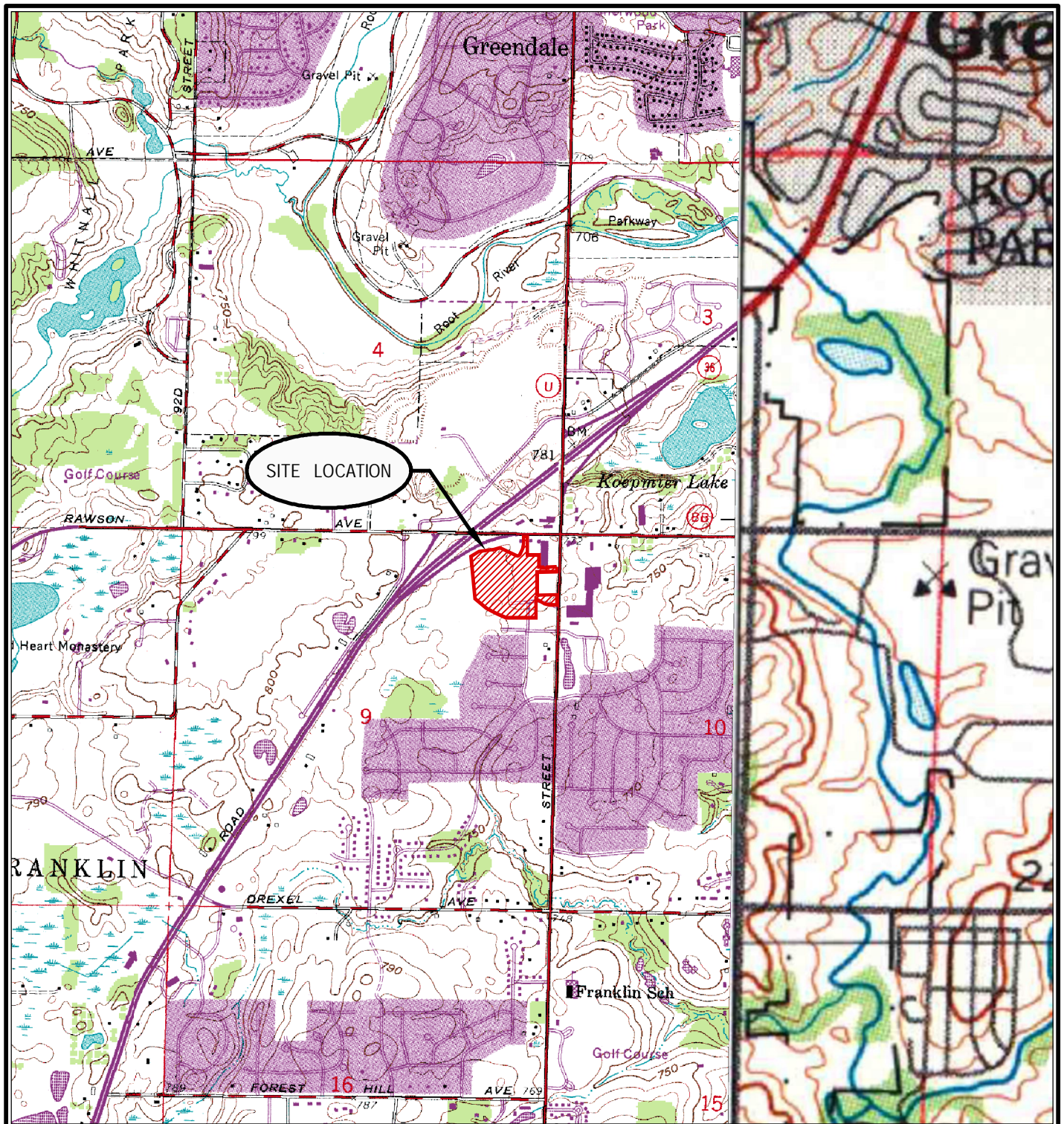
To better define the area that warrants treatment, Apex proposes to operate the VES for a period of four months and then conduct an additional round of post-operation soil-gas sampling. The objective of this additional round of sampling would be to assess whether the VES has reduced the target analytes near previous soil-gas samples SV-1 and SV-2 to concentrations below VALs.

Apex proposes that three additional soil-gas samples be collected in the area around SV-1 and SV-2 for analysis. Discrete soil-gas samples will be analyzed for the target analytes by EPA Method TO-15. The soil-gas analysis will be performed by a National Environmental Laboratory Accreditation Conference certified laboratory.

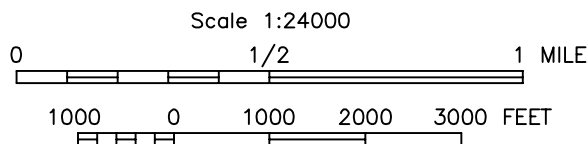
Based on the performance monitoring detailed above, Apex will determine the need for continued operation of the VES and/or additional verification sampling of soil-gas.

## Figures





QUADRANGLE LOCATION



(SOURCE OF MAP IS USGS 7.5 MINUTE QUADRANGLE MAP, HALES CORNERS (1994), WISCONSIN)



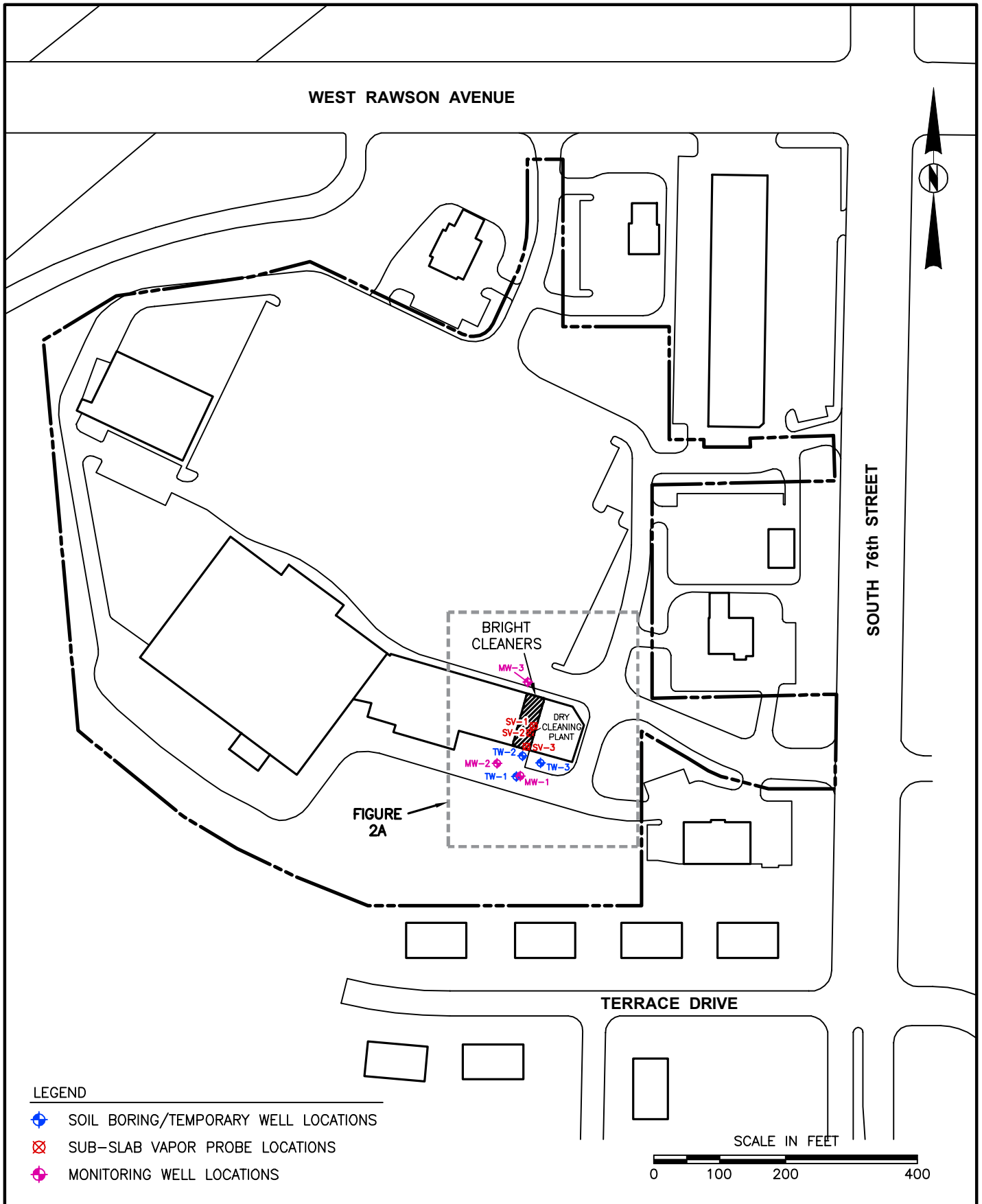
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SCALE	AS SHOWN
CAD NO.	PECO_2016.78A
PRJ NO.	PECO_2016.78

SITE LOCATION MAP  
 BRIGHT CLEANERS – FRANKLIN  
 7249 SOUTH 76th STREE  
 FRANKLIN, WISCONSIN



FIGURE

1

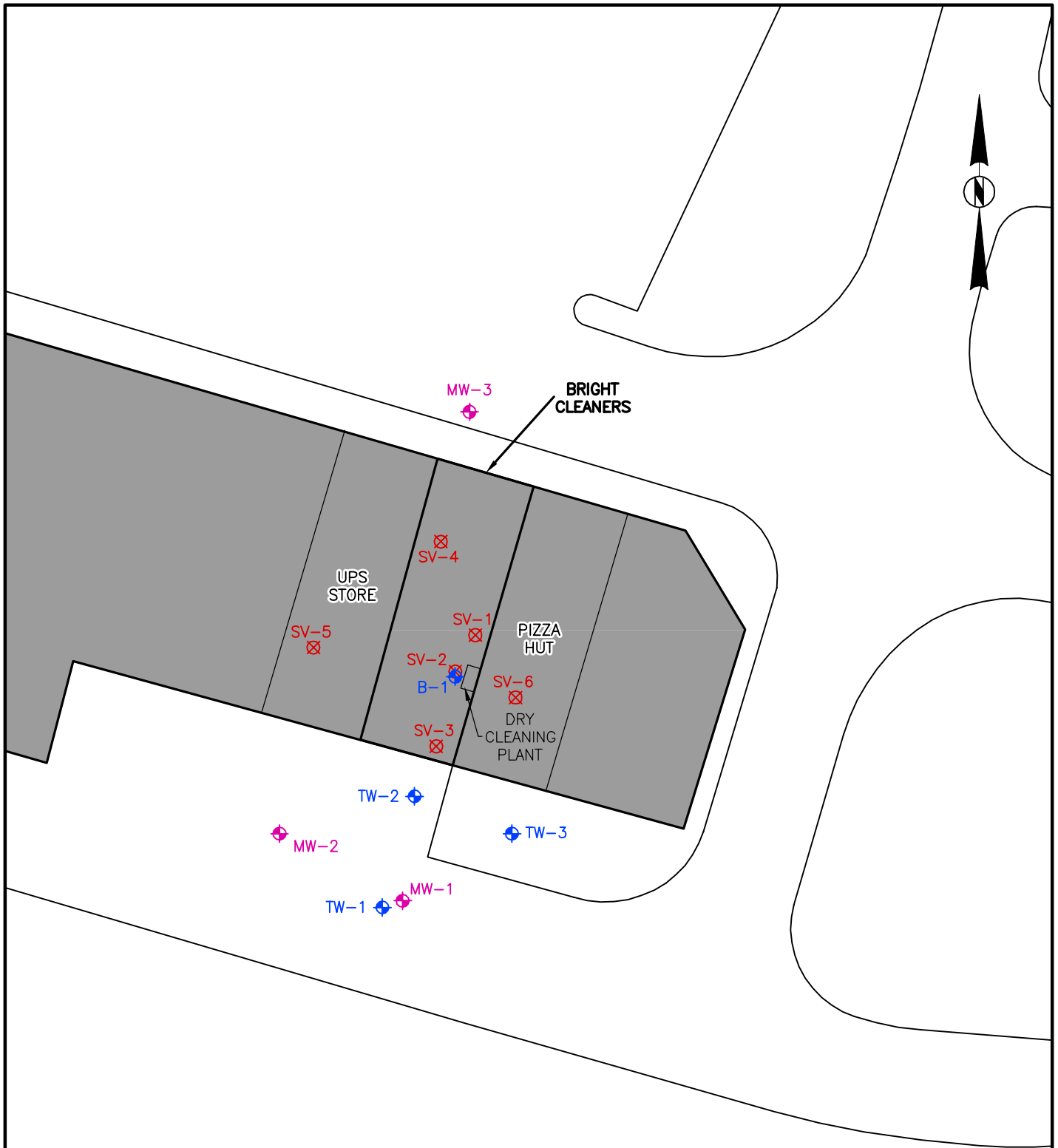


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SCALE	AS SHOWN
CAD NO.	PECO_2017.68A
PRJ NO.	PECO_2017.68




SITE PLAN  
 BRIGHT CLEANERS – FRANKLIN  
 7249 SOUTH 76th STREET  
 FRANKLIN, WISCONSIN

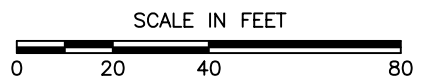


FIGURE  
 2



LEGEND

-  SOIL BORING/TEMPORARY WELL LOCATIONS
-  SUB-SLAB VAPOR PROBE LOCATIONS
-  MONITORING WELL LOCATIONS



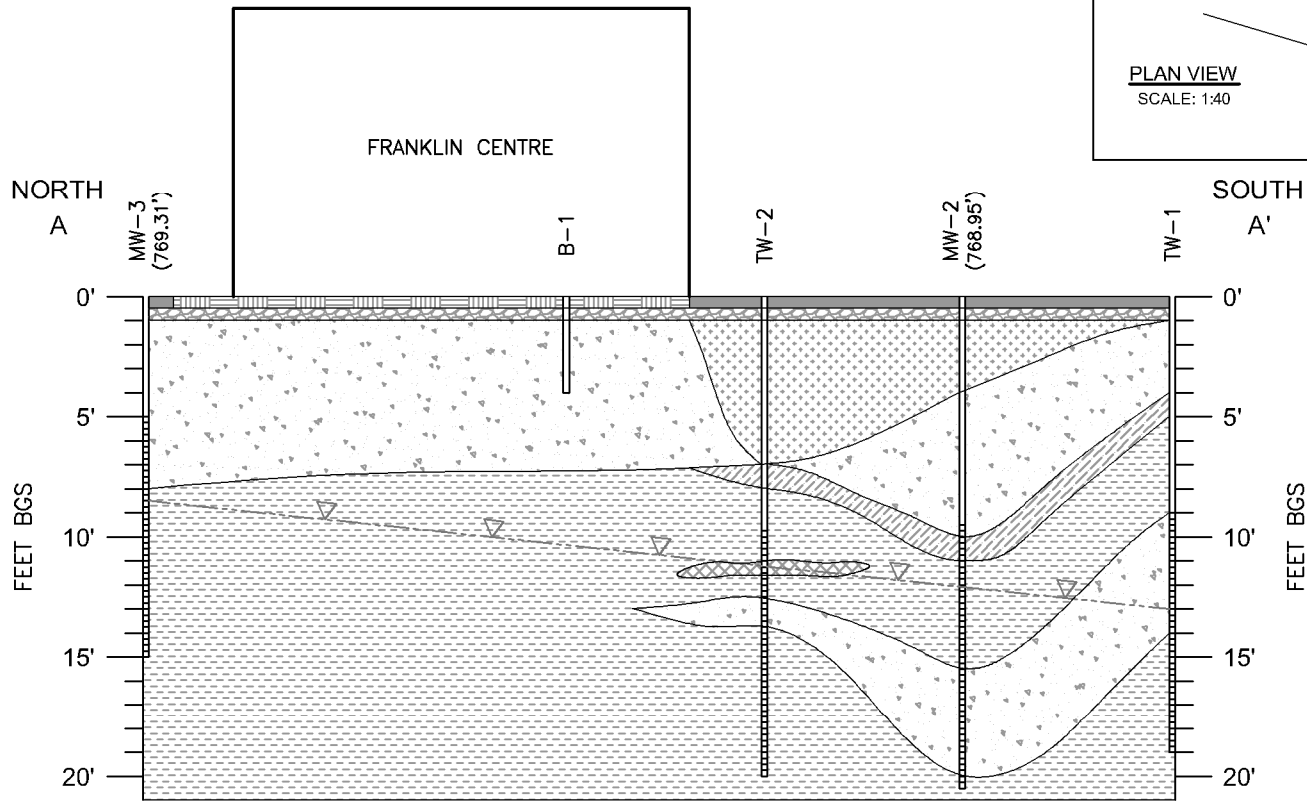
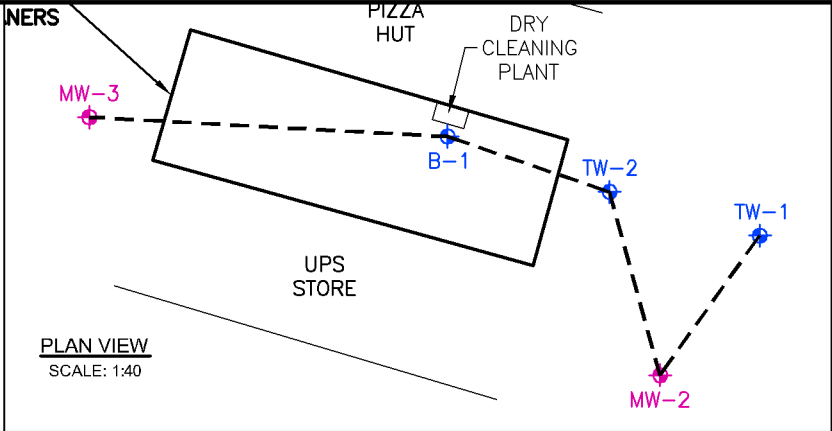
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PRJ NO.	PECO_2017.68

SITE DETAIL  
 BRIGHT CLEANERS – FRANKLIN CENTRE  
 7249 SOUTH 76th STREET  
 FRANKLIN, WISCONSIN



FIGURE  
3





LEGEND

- AGGREGATE
- ASPHALT
- CLAYEY SAND
- CLAYEY SILT
- CONCRETE
- FILL MATERIAL
- SILTY CLAY
- SILTY SAND

---▽--- GROUNDWATER ELEVATION MEASURED ON SEPTEMBER 15, 2017



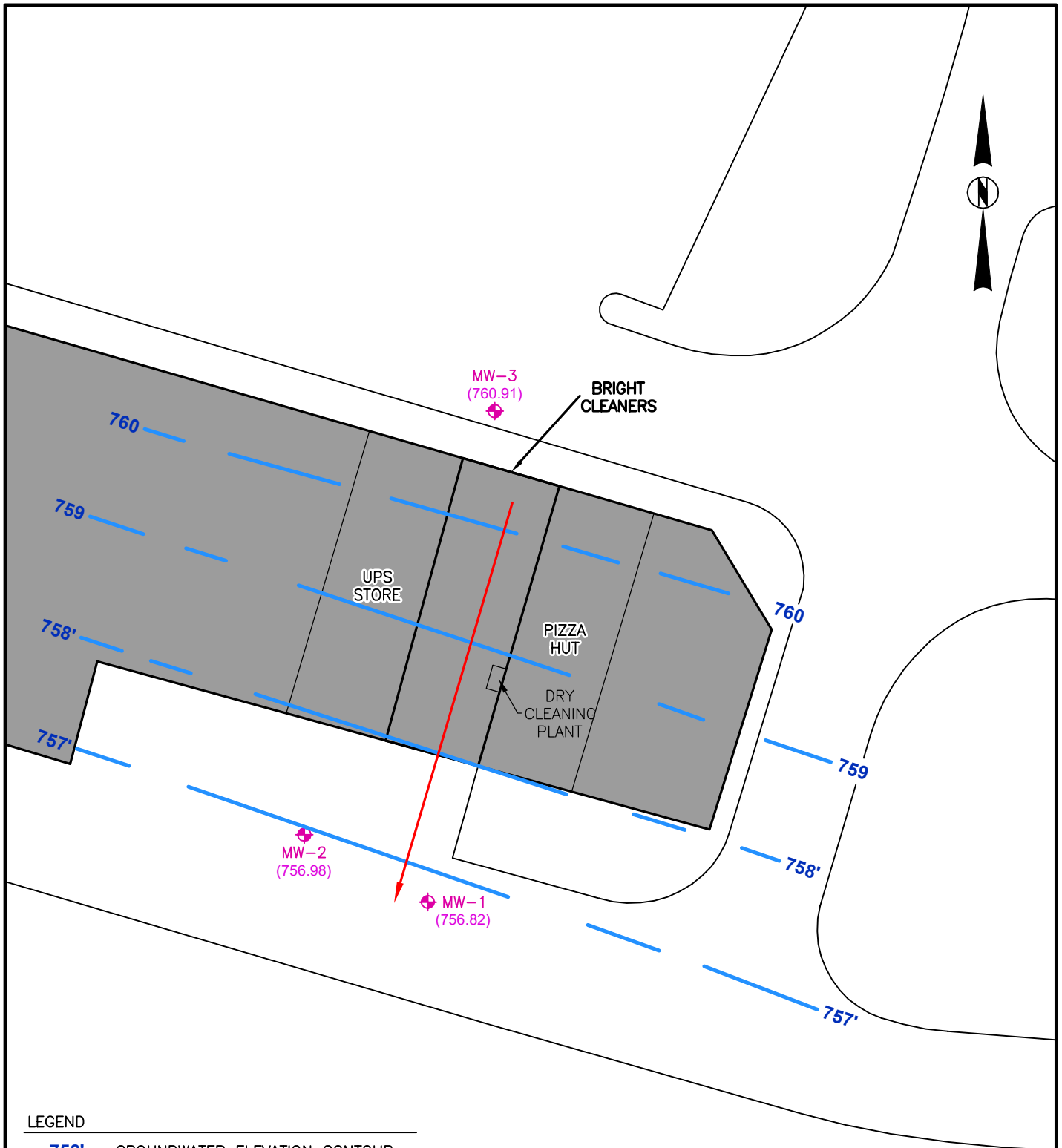
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DWN BY	EM
DATE	10-23-17
SCALE	AS SHOWN
CAD NO.	PECO_2017-68
PRJ NO.	PECO.2017.68B

CROSS SECTION A-A'  
BRIGHT CLEANERS – FRANKLIN  
7249 SOUTH 76TH STREET  
FRANKLIN, WISCONSIN



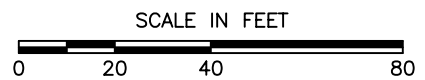
FIGURE

4



**LEGEND**

- **758'** — GROUNDWATER ELEVATION CONTOUR
- + (756.82) GROUNDWATER ELEVATION AMSL
- + MONITORING WELL LOCATIONS
- GROUNDWATER FLOW DIRECTION
- CONTOUR INTERVAL=1'



CHECK BY	JB
DRAWN BY	OS
DATE	08-30-17
SCALE	AS SHOWN
CAD NO.	PECO_2017.68A
PRJ NO.	PECO_2017.68

SITE DETAIL SHOWING GROUNDWATER CONTOUR  
 LEVELS MEASURED ON AUGUST 17, 20016  
  
 BRIGHT CLEANERS – FRANKLIN CENTRE  
 7249 SOUTH 76th STREET  
 FRANKLIN, WISCONSIN

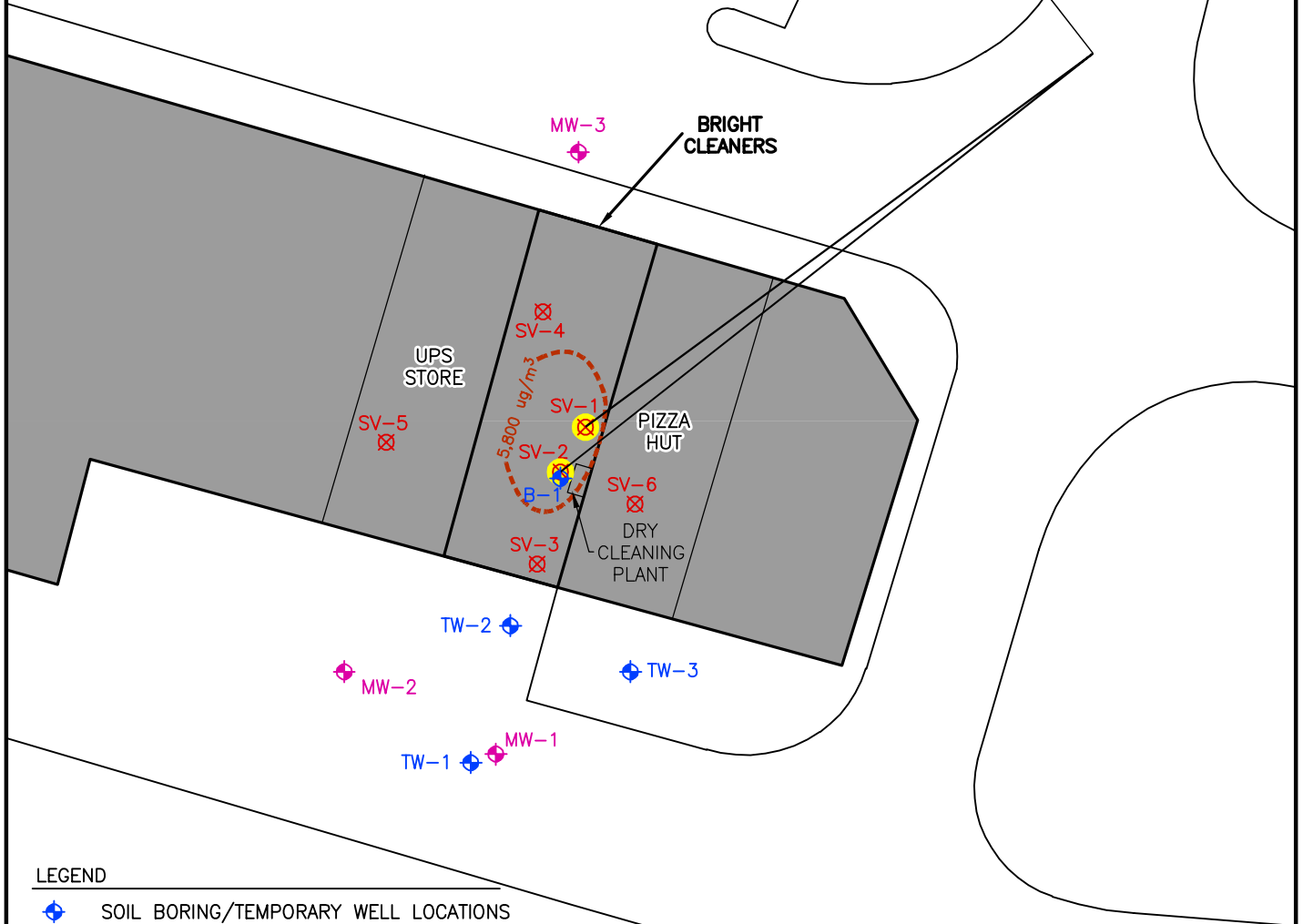


FIGURE

5

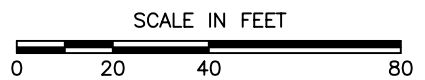


Compound	SV-1	SV-2	Sub-Slab Vapor Action Levels
Tetrachloroethene	12,000	44,000	5,800



**LEGEND**

- SOIL BORING/TEMPORARY WELL LOCATIONS
- SUB-SLAB VAPOR PROBE LOCATIONS
- MONITORING WELL LOCATIONS
- TETRACHLOROETHENE (PCE) EXCEEDS SUB-SLAB VAPOR ACTION LEVELS (VAL)
- CONCENTRATIONS IN MICROGRAMS PER CUBIC METER ( $\mu\text{g}/\text{m}^3$ )
- CONCENTRATIONS EXCEEDING THE VAL ARE SHOWN IN BOLD
- ESTIMATED AREA OF EXCEEDANCE OF SUB-SLAB VACs



CHECK BY	JB
DRAWN BY	EM
DATE	7-27-18
SCALE	AS SHOWN
CAD NO.	PECO_2017.68C
PRJ NO.	PECO_2017.68

SITE DETAIL SHOWING SOIL VAPOR SAMPLE LOCATIONS WHERE PCE EXCEEDS THE VAL

BRIGHT CLEANERS – FRANKLIN CENTRE  
7249 SOUTH 76th STREET  
FRANKLIN, WISCONSIN



FIGURE

6

## Data Tables

**Table 1**  
**Summary of Soil Data for**  
**Volatile Organic Compounds (VOCs)**  
**EPA Method 5035/8260B**  
**Bright Cleaners - Franklin Centre**  
**7249 South 76th Street, Franklin, Wisconsin**  
concentrations in milligrams per kilogram (mg/kg)

Boring Number	TW-1	TW-2	TW-3	Residual Contaminant Levels		
				Direct Contact		Soil to Groundwater
				Non-Industrial	Industrial	
Sample Depth (feet bgs)	14	11	12			
Date Collected	8/31/2016					
Acetone	0.029	< 0.0016	< 0.0018	63,400	100,000	1.8383
Benzene	0.0018	0.00044	0.00045	1.6	7.07	0.0026
Bromodichloromethane	< 0.00039	< 0.00028	< 0.00031	0.418	1.83	0.0002
Bromoform	< 0.00039	< 0.00028	< 0.00031	25.4	113	0.0012
Bromomethane	< 0.00049	< 0.00035	< 0.00039	9.6	43	0.0025
2-Butanone	< 0.0015	< 0.0011	< 0.0012	28,400	28,400	0.833
Carbon disulfide	0.00019	0.00051	< 0.00015	738	738	0.2959
Carbon tetrachloride	< 0.00029	< 0.00021	< 0.00023	0.916	4.03	0.0019
Chlorobenzene	< 0.00019	< 0.00014	< 0.00015	370	761	0.0679
Chloroethane	< 0.00039	< 0.00028	< 0.00031	2,120	2,120	0.1133
Chloroform	< 0.00019	< 0.00014	< 0.00015	0.454	1.98	0.0017
Chloromethane	< 0.00029	< 0.00021	< 0.00023	159	669	0.0078
Dibromochloromethane	< 0.00039	< 0.00028	< 0.00031	8.28	38.9	0.016
1,1-Dichloroethane	< 0.00029	< 0.00021	< 0.00023	5.06	22.2	0.2417
1,2-Dichloroethane	< 0.00058	< 0.00042	< 0.00046	0.652	2.87	0.0014
1,1-Dichloroethene	< 0.00029	< 0.00021	< 0.00023	320	1,190	0.0025
cis-1,2-Dichloroethene	< 0.00029	< 0.00021	< 0.00023	156	2,340	0.0206
trans-1,2-Dichloroethene	< 0.00029	< 0.00021	< 0.00023	1,560	1,850	0.0313
1,2-Dichloropropane	< 0.00039	< 0.00028	< 0.00031	0.406	1.78	0.0017
cis-1,3-Dichloropropene	< 0.00019	< 0.00014	< 0.00015	1,210	1,210	0.0001
trans-1,3-Dichloropropene	< 0.00029	< 0.00021	< 0.00023	1,510	1,510	0.0001
Ethylbenzene	0.00026	< 0.00007	< 0.000077	8.02	35.4	0.785
2-Hexanone	< 0.00078	< 0.00056	< 0.00062	237	1,760	NE
4-Methyl-2-pentanone	< 0.00029	< 0.00021	< 0.00023	2,450	2,450	0.1126
Methylene Chloride	0.0019	< 0.00056	< 0.00062	61.8	1,150	0.0013
Methyl tertiary-butyl ether	< 0.00019	< 0.00014	< 0.00015	63.8	282	0.0135
Styrene	< 0.00019	< 0.00014	< 0.00015	867	867	0.11
1,1,2,2-Tetrachloroethane	< 0.00019	< 0.00014	< 0.00015	0.81	3.6	0.0000782
Tetrachloroethene	< 0.00029	< 0.00021	< 0.00023	33	145	0.0023
Toluene	0.0017	0.00046	0.00041	818	818	0.5536
1,1,1-Trichloroethane	< 0.00019	< 0.00014	< 0.00015	640	640	0.0701
1,1,2-Trichloroethane	< 0.00049	< 0.00035	< 0.00039	1.59	7.01	0.0016
Trichloroethene	< 0.00019	< 0.00014	< 0.00015	1.3	8.41	0.0018
Vinyl chloride	< 0.00039	< 0.00028	< 0.00031	0.067	2.08	0.000069
Xylenes (total)	< 0.00039	< 0.00028	< 0.00031	260	260	1.98

**Table 1 (Continued)**  
**Summary of Soil Data for**  
**Volatile Organic Compounds (VOCs)**  
**EPA Method 5035/8260B**  
**Bright Cleaners - Franklin Centre**  
**7249 South 76th Street, Franklin, Wisconsin**  
**concentrations in milligrams per kilogram (mg/kg)**

Boring Number	MW-1	MW-2	B-1	Residual Contaminant Levels		
				Direct Contact		Soil to Groundwater
				Non-Industrial	Industrial	
Sample Depth (feet bgs)	4	6	2			
Date Collected	8/11/2017					
Acetone	<b>0.075</b>	<b>0.025</b>	<b>0.064</b>	63,400	100,000	1.8383
Benzene	<b>0.0025</b>	<b>0.0021</b>	<b>0.0015</b>	1.6	7.07	0.0026
Bromodichloromethane	< 0.00036	< 0.00035	< 0.0003	0.418	1.83	0.0002
Bromoform	< 0.00036	< 0.00035	< 0.0003	25.4	113	0.0012
Bromomethane	< 0.00045	< 0.00043	< 0.00037	9.6	43	0.0025
2-Butanone	<b>0.011</b>	<b>0.0040</b>	<b>0.0099</b>	28,400	28,400	0.833
Carbon disulfide	< 0.00018	< 0.00017	< 0.00015	738	738	0.2959
Carbon tetrachloride	< 0.00027	< 0.00026	< 0.00022	0.916	4.03	0.0019
Chlorobenzene	< 0.00018	< 0.00017	< 0.00015	370	761	0.0679
Chloroethane	< 0.00036	< 0.00035	< 0.0003	2,120	2,120	0.1133
Chloroform	< 0.00018	< 0.00017	< 0.00015	0.454	1.98	0.0017
Chloromethane	< 0.00027	< 0.00026	< 0.00022	159	669	0.0078
Dibromochloromethane	< 0.00036	< 0.00035	< 0.0003	8.28	38.9	0.016
1,1-Dichloroethane	< 0.00027	< 0.00026	< 0.00022	5.06	22.2	0.2417
1,2-Dichloroethane	< 0.00054	< 0.00052	< 0.00045	0.652	2.87	0.0014
1,1-Dichloroethene	< 0.00027	< 0.00026	< 0.00022	320	1,190	0.0025
cis-1,2-Dichloroethene	< 0.00027	< 0.00026	< 0.00022	156	2,340	0.0206
trans-1,2-Dichloroethene	< 0.00027	< 0.00026	< 0.00022	1,560	1,850	0.0313
1,2-Dichloropropane	< 0.00036	< 0.00035	< 0.0003	0.406	1.78	0.0017
cis-1,3-Dichloropropene	< 0.00018	< 0.00017	< 0.00015	1,210	1,210	0.0001
trans-1,3-Dichloropropene	< 0.00027	< 0.00026	< 0.00022	1,510	1,510	0.0001
Ethylbenzene	<b>0.0013</b>	<b>0.00088</b>	<b>0.0010</b>	8.02	35.4	0.785
2-Hexanone	< 0.00072	< 0.00069	< 0.0006	237	1,760	NE
4-Methyl-2-pentanone	< 0.00027	< 0.00026	< 0.00022	2,450	2,450	0.1126
Methylene Chloride	<b>0.0015</b>	< 0.00069	< 0.0006	61.8	1,150	0.0013
Methyl tertiary-butyl ether	< 0.00018	< 0.00017	< 0.00015	63.8	282	0.0135
Styrene	< 0.00018	< 0.00017	< 0.00015	867	867	0.11
1,1,2,2-Tetrachloroethane	< 0.00018	< 0.00017	< 0.00015	0.81	3.6	0.0000782
Tetrachloroethene	< 0.00027	< 0.00026	<b>0.00067</b>	33	145	0.0023
Toluene	<b>0.0044</b>	<b>0.0028</b>	<b>0.0028</b>	818	818	0.5536
1,1,1-Trichloroethane	< 0.00018	< 0.00017	< 0.00015	640	640	0.0701
1,1,2-Trichloroethane	< 0.00045	< 0.00043	< 0.00037	1.59	7.01	0.0016
Trichloroethene	< 0.00018	< 0.00017	<b>0.0010</b>	1.3	8.41	0.0018
Vinyl chloride	< 0.00036	< 0.00035	< 0.0003	0.067	2.08	0.000069
Xylenes (total)	<b>0.0025</b>	<b>0.0012</b>	<b>0.0014</b>	260	260	1.98

Notes:

bgs = feet below ground surface

TW-2 = Soil boring

< = Not Detected: Concentration less than the indicated laboratory detection limit



Detected compounds are shown as **bold**

NE = Remedial Objective not established

RCLs (Non-Industrial Direct-Contact) = Residual Contaminant Levels per the U.S. EPA's Regional Screening Level Web-Calculator (updated March 2017) in accordance with Wisconsin Administrative Code NR 720

RCLs (Industrial Direct-Contact) = Residual Contaminant Levels per the U.S. EPA's Regional Screening Level Web-Calculator (updated March 2017) in accordance with Wisconsin Administrative Code NR 720

RCLs (Soil to Groundwater) = Soil to Groundwater Residual Contaminant Levels per the U.S. EPA Regional Screening Level Web-Calculator (updated June 2016) in accordance with Wisconsin Administrative Code NR 720

 Concentrations in excess of RCLs are shaded yellow  
 Exceeded RCLs are shaded green

**Table 2**  
**Summary of Groundwater Data for**  
**Volatile Organic Compounds (VOCs)**  
**EPA Method 8260B**  
**Bright Cleaners - Franklin Centre**  
**7249 South 76th Street, Franklin, Wisconsin**  
concentrations in milligrams per liter (µg/L)

Well Number	TW-1	TW-3	MW-1	Duplicate (MW-1)	Groundwater Quality Standards		Vapor Risk Screening
					Enforcement Standards	Preventative Action Limit	Commercial
Date Collected	8/31/2016		8/17/2017				
Acetone	< 3.1	<b>12</b>	< 3.1	< 3.1	9,000	1,800	95,000,000
Benzene	< 0.2	<b>0.24</b>	< 0.2	< 0.2	5	0.5	69
Bromodichloromethane	< 0.2	< 0.2	< 0.2	< 0.2	0.6	0.06	38
Bromoform	< 0.3	< 0.3	< 0.3	< 0.3	4.4	0.44	5,100
Bromomethane	< 2	< 2	< 2	< 2	10	1	73
2-Butanone	< 1.6	< 1.6	< 1.6	< 1.6	4,000	800	9,400,000
Carbon disulfide	< 0.3	<b>0.34</b>	< 0.3	< 0.3	1,000	200	5,200
Carbon tetrachloride	< 1	< 1	< 1	< 1	5	0.5	18
Chlorobenzene	< 0.2	< 0.2	< 0.2	< 0.2	100	20	1,700
Chloroethane	< 0.5	< 0.5	< 0.5	< 0.5	400	80	97,000
Chloroform	< 0.1	< 0.1	< 0.1	< 0.1	6	0.6	36
Chloromethane	< 0.3	< 0.3	< 0.3	< 0.3	30	3	1,100
Dibromochloromethane	< 0.2	< 0.2	< 0.2	< 0.2	60	6	NE
1,1-Dichloroethane	< 0.2	< 0.2	< 0.2	< 0.2	850	85	330
1,2-Dichloroethane	< 0.2	< 0.2	< 0.2	< 0.2	5	0.5	98
1,1-Dichloroethene	< 0.4	< 0.4	< 0.4	< 0.4	7	0.7	820
cis-1,2-Dichloroethene	< 0.2	< 0.2	< 0.2	< 0.2	70	7	NE
trans-1,2-Dichloroethene	< 0.5	< 0.5	< 0.5	< 0.5	100	20	NE
1,2-Dichloropropane	< 0.1	< 0.1	< 0.1	< 0.1	5	0.5	150
cis-1,3-Dichloropropene	< 0.2	< 0.2	< 0.2	< 0.2	0.4	0.04	210
trans-1,3-Dichloropropene	< 0.1	< 0.1	< 0.1	< 0.1	0.4	0.04	210
Ethylbenzene	< 0.3	< 0.3	< 0.3	< 0.3	700	140	150
2-Hexanone	< 0.2	< 0.2	< 0.2	< 0.2	NE	NE	34,000
4-Methyl-2-pentanone	< 0.7	< 0.7	< 0.7	< 0.7	500	50	2,300,000
Methylene Chloride	< 0.2	< 0.2	< 0.2	< 0.2	5	0.5	20,000
Methyl tertiary-butyl ether	< 0.3	< 0.3	< 0.3	< 0.3	60	12	20,000
Styrene	< 0.3	< 0.3	< 0.3	< 0.3	100	10	39,000
1,1,2,2-Tetrachloroethane	< 0.1	< 0.1	< 0.1	< 0.1	0.2	0.02	140
Tetrachloroethene	< 0.3	< 0.3	< 0.3	< 0.3	5	0.5	240
Toluene	< 0.4	< 0.4	< 0.4	< 0.4	800	160	81,000
1,1,1-Trichloroethane	< 0.2	< 0.2	< 0.2	< 0.2	200	40	31,000
1,1,2-Trichloroethane	< 0.1	< 0.1	< 0.1	< 0.1	5	0.5	26
Trichloroethene	< 0.3	< 0.3	< 0.3	< 0.3	5	0.5	22
Vinyl chloride	< 0.3	< 0.3	< 0.3	< 0.3	0.2	0.02	25
Xylenes (total)	< 1	< 1	< 1	< 1	2,000	400	1,600

**Table 2 (Continued)**  
**Summary of Groundwater Data for**  
**Volatile Organic Compounds (VOCs)**  
**EPA Method 8260B**  
**Bright Cleaners - Franklin Centre**  
**7249 South 76th Street, Franklin, Wisconsin**  
concentrations in milligrams per liter (µg/L)

Well Number	MW-2	MW-3	Trip Blank	Groundwater Quality Standards		Vapor Risk Screening
				Enforcement Standards	Preventative Action Limit	Commercial
<b>Date Collected</b>	<b>8/17/2017</b>					
Acetone	< 3.1	< 3.1	< 3.1	9,000	1,800	95,000,000
Benzene	< 0.2	< 0.2	< 0.2	5	0.5	69
Bromodichloromethane	< 0.2	< 0.2	< 0.2	0.6	0.06	38
Bromoform	< 0.3	< 0.3	< 0.3	4.4	0.44	5,100
Bromomethane	< 2	< 2	< 2	10	1	73
2-Butanone	< 1.6	< 1.6	< 1.6	4,000	800	9,400,000
Carbon disulfide	< 0.3	< 0.3	< 0.3	1,000	200	5,200
Carbon tetrachloride	< 1	< 1	< 1	5	0.5	18
Chlorobenzene	< 0.2	< 0.2	< 0.2	100	20	1,700
Chloroethane	< 0.5	< 0.5	< 0.5	400	80	97,000
Chloroform	< 0.1	< 0.1	< 0.1	6	0.6	36
Chloromethane	< 0.3	< 0.3	< 0.3	30	3	1,100
Dibromochloromethane	< 0.2	< 0.2	< 0.2	60	6	NE
1,1-Dichloroethane	< 0.2	< 0.2	< 0.2	850	85	330
1,2-Dichloroethane	< 0.2	< 0.2	< 0.2	5	0.5	98
1,1-Dichloroethene	< 0.4	< 0.4	< 0.4	7	0.7	820
cis-1,2-Dichloroethene	< 0.2	< 0.2	< 0.2	70	7	NE
trans-1,2-Dichloroethene	< 0.5	< 0.5	< 0.5	100	20	NE
1,2-Dichloropropane	< 0.1	< 0.1	< 0.1	5	0.5	150
cis-1,3-Dichloropropene	< 0.2	< 0.2	< 0.2	0.4	0.04	210
trans-1,3-Dichloropropene	< 0.1	< 0.1	< 0.1	0.4	0.04	210
Ethylbenzene	< 0.3	< 0.3	< 0.3	700	140	150
2-Hexanone	< 0.2	< 0.2	< 0.2	NE	NE	34,000
4-Methyl-2-pentanone	< 0.7	< 0.7	< 0.7	500	50	2,300,000
Methylene Chloride	< 0.2	< 0.2	< 0.2	5	0.5	20,000
Methyl tertiary-butyl ether	< 0.3	< 0.3	< 0.3	60	12	20,000
Styrene	< 0.3	< 0.3	< 0.3	100	10	39,000
1,1,2,2-Tetrachloroethane	< 0.1	< 0.1	< 0.1	0.2	0.02	140
Tetrachloroethene	< 0.3	< 0.3	< 0.3	5	0.5	240
Toluene	< 0.4	< 0.4	< 0.4	800	160	81,000
1,1,1-Trichloroethane	< 0.2	< 0.2	< 0.2	200	40	31,000
1,1,2-Trichloroethane	< 0.1	< 0.1	< 0.1	5	0.5	26
Trichloroethene	< 0.3	< 0.3	< 0.3	5	0.5	22
Vinyl chloride	< 0.3	< 0.3	< 0.3	0.2	0.02	25
Xylenes (total)	< 1	< 1	< 1	2,000	400	1,600

Notes:

TW-3 = Temporary monitoring well

< = Not Detected: Concentration less than the indicated laboratory detection limit.

Detected concentrations are shown in **bold**.

NE = Remedial Objective not established.

Groundwater Quality Standards cited in Wisconsin Administrative Code NR 140.10 Table 1

Vapor Risk Screening Levels for groundwater with a commercial property use based on the U.S. EPA Vapor Intrusion Screening Level Calculator (Version 3.5.2, October 2017) with an excess lifetime cancer risk of  $1 \times 10^{-5}$  in accordance with Wisconsin Administrative Code NR 716

- Concentrations in excess of GQs and/or VRSLs are shaded yellow (none detected)
- Exceeded GQs and/or VRSLs are shaded green



**Table 3**  
**Summary of Soil Gas Data for**  
**Volatile Organic Compounds (VOCs)**  
**EPA Method TO-15**  
**Bright Cleaners - Franklin Centre**  
**7249 South 76th Street, Franklin, Wisconsin**  
concentrations in micrograms per cubic meter ( $\mu\text{g}/\text{m}^3$ )

Sub-slab Sample Number	SV-1	SV-2	SV-3	SV-4	SV-5	SV-6	Sub-Slab Vapor Action Levels
	8/31/2016			8/14/2017			
Date Collected							
Acetone	82	140	100	16	14	5.3	4,500,000
Benzene	2.9	1.4	3.4	0.26	0.26	0.12	520
Benzyl chloride	< 2.4	< 1.9	< 2.6	< 1.3	< 1.3	< 0.59	83
Bromodichloromethane	< 0.21	< 0.17	< 0.23	< 0.28	< 0.28	< 0.13	110
Bromoform	< 0.25	< 0.2	< 0.28	< 0.41	< 0.41	< 0.19	3,700
Bromomethane	0.54	0.50	0.79	0.47	< 0.37	0.22	730
1,3-Butadiene	< 0.13	< 0.11	< 0.14	< 0.42	< 0.42	< 0.19	140
2-Butanone	6.7	7.7	12	1.7	< 0.99	0.72	730,000
Carbon disulfide	0.50	< 0.29	0.48	< 0.26	< 0.26	< 0.12	100,000
Carbon tetrachloride	< 0.41	< 0.33	< 0.45	< 1.2	< 1.1	< 0.53	680
Chlorobenzene	< 0.13	< 0.11	< 0.14	< 0.94	< 3.7	< 0.43	7,300
Chloroethane	< 1.2	< 0.98	< 1.3	< 0.44	< 0.43	< 0.2	1,500,000
Chloroform	0.22	0.36	0.62	< 0.22	< 0.22	0.37	180
Chloromethane	< 0.24	< 0.19	< 2.6	< 0.95	< 0.95	< 0.44	13,000
Cyclohexane	2.5	1.3	4.6	< 0.6	< 0.59	< 0.27	880,000
Dibromochloromethane	< 0.32	< 0.25	< 0.35	< 0.43	< 0.43	< 0.2	NE
1,2-Dibromoethane	< 0.4	< 0.32	< 0.44	< 0.68	< 0.68	< 0.31	6.8
1,1-Dichloroethane	< 0.09	< 0.073	< 0.1	< 0.14	< 0.14	< 0.066	2,600
1,2-Dichlorobenzene	0.42	< 0.19	< 0.26	< 0.39	< 0.39	< 0.18	29,000
1,3-Dichlorobenzene	1.9	1.1	4.9	< 0.37	< 0.36	< 0.17	NE
1,4-Dichlorobenzene	< 0.29	< 0.24	< 0.32	< 0.42	< 0.42	< 0.19	370
Dichlorodifluoromethane	2.3	2.3	2.1	2.0	2.0	2.2	15,000
1,2-Dichloroethane	< 0.21	< 0.17	< 0.23	< 0.38	< 0.68	< 0.18	160
1,1-Dichloroethene	< 0.12	< 0.093	< 0.13	< 0.2	< 0.2	< 0.094	29,000
cis-1,2-Dichloroethene	1.7	1.8	3.2	< 0.63	< 0.62	< 0.29	NE
trans-1,2-Dichloroethene	< 0.13	0.15	< 0.14	< 0.22	< 0.22	< 0.1	NE
1,2-Dichloropropane	< 0.15	< 0.12	< 0.16	< 0.7	< 0.69	< 0.32	580
cis-1,3-Dichloropropene	< 0.25	< 0.2	< 0.27	< 0.44	< 0.44	< 0.2	1,000
trans-1,3-Dichloropropene	< 0.28	< 0.23	< 0.32	< 3.7	< 3.7	< 1.7	1,000
1,4-Dioxane	< 0.48	2.7	2.4	< 1.2	< 1.1	< 0.54	820
Ethyl acetate	< 0.33	< 0.27	< 0.37	< 1	< 1	< 0.48	10,000
Ethylbenzene	3.9	2.8	6.1	< 0.26	< 0.26	< 0.12	1,600
4-Ethyltoluene	1.4	0.91	1.6	< 0.42	< 0.42	< 0.19	NE
Freon-113	< 0.13	0.57	0.59	0.31	0.62	0.57	730,000
Freon-114	< 0.46	< 0.37	< 0.51	< 0.29	< 0.29	< 0.13	NE
Heptane	5.5	2.7	13	< 0.28	< 0.28	< 0.13	NE
Hexachlorobutadiene	0.74	< 0.45	< 0.61	< 0.9	< 0.9	< 0.41	190
Hexane	6.4	2.7	11	< 0.5	< 0.5	< 0.23	100,000
2-Hexanone	3.1	2.9	4.9	< 2.1	< 2.1	< 0.97	4,400
Isopropyl alcohol	310	110	65	50	36	0.64	29,000
4-Methyl-2-pentanone	12	6.1	9.4	< 1.1	< 1.1	< 0.52	440,000
Methylene Chloride	0.96	< 0.69	< 0.95	4.0	3.8	2.0	88,000
Methyl tertiary-butyl ether	0.25	0.33	0.28	< 0.17	< 0.17	< 0.076	16,000
Naphthalene	2.8	1.8	4.1	< 1.2	< 1.1	0.59	120
Propene	6.3	3.6	5.5	0.42	< 0.39	0.23	440,000
Styrene	0.78	0.32	0.54	< 0.82	< 0.81	< 0.38	150,000
1,1,2,2-Tetrachloroethane	< 0.22	< 0.18	< 0.24	< 0.38	< 0.38	< 0.18	70
Tetrachloroethene	12,000	44,000	1,900	2,400	520	26	5,800
Tetrahydrofuran	8.4	4.1	5.6	< 1.1	< 1.1	< 0.52	290,000
Toluene	81	46	47	< 0.35	< 0.34	< 0.16	730,000
1,2,4-Trichlorobenzene	1.9	0.96	1.1	< 1.1	< 1.1	< 0.53	290
1,1,1-Trichloroethane	< 0.13	< 0.11	< 0.14	< 0.21	0.88	< 0.098	730,000
1,1,2-Trichloroethane	< 0.24	< 0.19	< 0.26	< 0.56	< 0.56	< 0.26	29
Trichloroethene	22	41	26	12	26	< 0.15	290
Trichlorofluoromethane	1.6	1.6	1.3	1.4	1.8	1.4	NE
1,2,4-Trimethylbenzene	5.1	3.9	7.5	0.40	< 0.22	0.37	8,800
1,3,5-Trimethylbenzene	1.4	0.91	2.0	< 0.28	< 0.27	< 0.13	NE
Vinyl acetate	< 0.22	< 0.18	< 0.24	< 1.1	< 1.1	< 0.53	29,000
Vinyl chloride	< 0.099	< 0.08	< 0.11	< 0.18	< 0.17	< 0.081	930
m,p-Xylene	8.8	6.0	12	< 0.44	< 0.44	0.24	15,000
o-Xylene	3.6	2.4	4.8	< 0.23	< 0.22	0.16	15,000
Xylenes (total)	12	8.5	17	< 0.65	< 0.65	0.41	15,000

Notes:

SV-2 = Sub-slab vapor sample

< = Not Detected: Concentration less than the indicated laboratory detection limit.

Detected concentrations are shown in **bold**.

NE = Remedial Objective not established.

Sub-Slab Vapor Action Levels for a commercial property use based on the U.S. EPA Vapor Intrusion Screening Level Calculator (Version 3.5.2, October 2017) with an excess lifetime cancer risk of  $1 \times 10^{-5}$  in accordance with Wisconsin Administrative Code NR 716

	Concentrations in excess of Remediation Objectives are shaded yellow
	Exceeded Remediation Objectives are shaded green

Appendix A  
Site Photographs

**PHOTO LOG FOR  
BRIGHT CLEANERS – FRANLIN CENTRE  
7249 SOUTH 76<sup>TH</sup> STREET, FRANKLIN, WISCONSIN**

Photo No. 1 showing front of the Bright Cleaners tenant space, view to the south.



Photo No. 2 showing the clearance of underground utilities in the rear of the Bright Cleaners tenant space using ground penetrating radar, view to the northeast.



August 31, 2016

Photo No. 3 showing the advancement of a boring (TW-1) in the driveway south of the Bright Cleaners tenant space, view to the east.



August 31, 2016

**PHOTO LOG FOR  
BRIGHT CLEANERS – FRANLIN CENTRE  
7249 SOUTH 76<sup>TH</sup> STREET, FRANKLIN, WISCONSIN**

Photo No. 4 showing a temporary well (TW-1, red arrow) in the driveway south of the Bright Cleaners tenant space in the foreground and the advancement of a boring (TW-3) in the background, view to the northeast.

August 31, 2016



Photo No. 5 showing a temporary well (TW-2, red arrow) located near the rear door of the Bright Cleaners tenant space, view to the north.

August 31, 2016



Photo No. 6 showing the interior of the Bright Cleaners tenant space with the dry cleaning plant on the right, view to the north.



**PHOTO LOG FOR  
BRIGHT CLEANERS – FRANLIN CENTRE  
7249 SOUTH 76<sup>TH</sup> STREET, FRANKLIN, WISCONSIN**

Photo No. 7 showing a sub-slab vapor probe (SV-2) installed next to the dry cleaning plant. Leak testing is being performed on the probe by mechanical means using the water dam method.

August 31, 2016

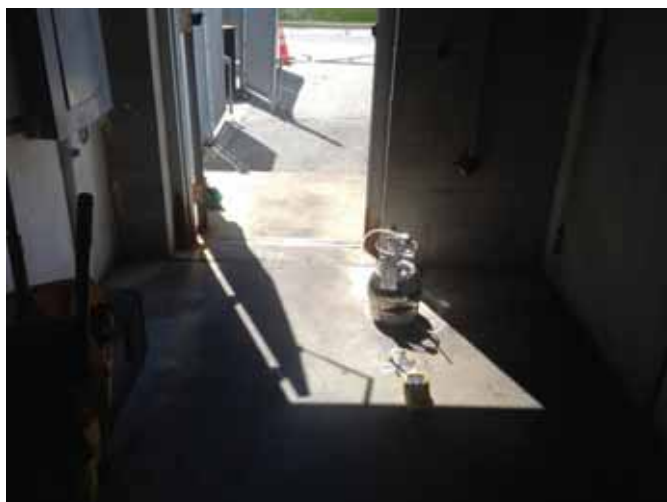


Photo No. 8 showing a Summa® canister sample train being leak tested with a shut-in test by applying a negative pressure using a syringe and plunger.



Photo No. 9 showing a vapor probe (SV-3) located near the rear door of the Bright Cleaners tenant space being purged and screened for volatile emissions using a photoionization detector prior to sample collection, view to the south.

August 31, 2016





**PHOTO LOG FOR  
BRIGHT CLEANERS – FRANLIN CENTRE  
7249 SOUTH 76<sup>TH</sup> STREET, FRANKLIN, WISCONSIN**

Photo No. 10 showing a sub-slab vapor probe installed north of the dry cleaning plant (SV-1) in the foreground and a second installed next to the plan (SV-2), view to the south.

August 31, 2016



Photo No. 11 showing the collection of a sub-slab vapor sample (SV-1) located north of the dry cleaning plant in the Bright Cleaners tenant space, view to the north.

August 31, 2016



Photo No. 12 showing the collection of a sub-slab vapor sample (SV-2) located adjacent to the dry cleaning plant in the Bright Cleaners tenant space, view to the north.

August 31, 2016



**PHOTO LOG FOR  
BRIGHT CLEANERS – FRANLIN CENTRE  
7249 SOUTH 76<sup>TH</sup> STREET, FRANKLIN, WISCONSIN**

Photo No. 13 showing a monitoring well (MW-1) being installed south of the Bright Cleaners tenant space, view to the west.

August 11, 2017



Photo No. 14 showing a monitoring well (MW-2) being installed southwest of the Bright Cleaners tenant space, view to the northeast.

August 11, 2017



Photo No. 15 showing a monitoring well (MW-3) being installed north of the Bright Cleaners tenant space, view to the south.

August 11, 2017



**PHOTO LOG FOR  
BRIGHT CLEANERS – FRANLIN CENTRE  
7249 SOUTH 76<sup>TH</sup> STREET, FRANKLIN, WISCONSIN**

Photo No. 16 showing a vapor probe (SV-4) located in the northern portion of the Bright Cleaners tenant space being purged and screened for volatile emissions using a photoionization detector prior to sample collection, view to the south.

August 14, 2017



Photo No. 17 showing a vapor probe (SV-6) located in the Pizza Hut tenant space being purged and screened for volatile emissions using a photoionization detector prior to sample collection, view to the west.

August 14, 2017





Appendix B  
Field Protocols, Soil-Gas Sample Logs & Well Data Sheets

**SUMMARY OF FIELD PROTOCOLS**  
**ADDITIONAL SUBSURFACE INVESTIGATION**  
**BRIGHT CLEANERS – FRANKLIN CENTRE**  
**7249 SOUTH 76<sup>TH</sup> STREET**  
**FRANKLIN, MILWAUKEE COUNTY, WISCONSIN**

Franklin Station LLC (Client) retained Apex Companies, LLC (Apex) to perform subsurface environmental assessment and pursue agency closure for the Bright Cleaners tenant at a 14.6-acre multi-tenant shopping center located at 7249 South 76<sup>th</sup> Street in Franklin, Wisconsin (the Site). We understand that Client recently acquired the Site for continued use as a multi-tenant retail shopping center.

Apex previously conducted a Limited Phase II Subsurface Investigation in the vicinity of the current dry cleaner tenant space in August 2016. The subsurface investigation detected tetrachloroethene (PCE) in soil gas at concentrations in excess of Wisconsin remediation objectives in two sub-slab soil gas samples. The additional subsurface investigation was conducted to delineate subsurface impacts due to the presence of the current Bright Cleaners operations, and to pursue agency closure regarding the release.

Additional subsurface assessment included performance of a non-invasive geophysical survey to clear underground utilities in the vicinity of soil borings; the collection of soil samples from three soil borings; installation/sampling of groundwater from three dedicated groundwater monitoring wells; installation/sampling of three permanent soil vapor extraction points; an elevation survey of the monitoring wells; water level measurement; and hydraulic conductivity testing.

### **Geophysical Survey**

In an effort to avoid damaging substructures such as buried utilities at the Site, Apex retained Ground Penetrating Systems, Inc. (GPRS) to perform a non-invasive geophysical survey. The geophysical survey was performed using a combination of ground-penetrating radar (GPR) and radio detection (RD) techniques.

GPR transmits an electromagnetic pulse using a 400 MHz antenna through the ground and displays the reflection on a screen for immediate interpretation. GPR data was collected to evaluate the presence, depth and shape of subsurface targets (USTs, piping, buried foundations, etc.). The depth of exploration for GPR is typically limited to 5-7± feet below ground surface (bgs), depending on soil conditions.

RD techniques (RD-7000 Locator, or similar) are used to gauge the location of the buried metallic piping or conduits such as drain pipes. Radio detection involves induction of an electrical signal on metal objects (such as the ends of the piping or conduits) and tracing this signal using a hand-held detector.

### **Soil Sampling Using a Hydraulic Probe**

To assess the presence of potential chemical impacts in shallow soil in the vicinity of the dry cleaner tenant space, Apex used a truck-mounted hydraulic probe (Geoprobe™ rig) and/or an electric jack

hammer with Geoprobe® rods to collect soil samples from four soil borings (B-1 and MW-1 through MW-3). Each of the borings was advanced to probe refusal, encountered at depths ranging from 4 to 18 feet bgs; copies of the boring logs are included in **Appendix C**.

Soil samples were collected continuously from ground surface to the bottom of each boring by pushing a 2-inch diameter by 5-foot long hollow-barreled sampler into/through the soil. Soil samples were collected in dedicated, disposable plastic liners contained in the sampler.

### **Lithologic Description**

Soil samples were collected continuously from ground surface to the bottom of each boring for lithologic description and soil screening. An experienced geologist documented the subsurface conditions (soil type, photo-ionization detector [PID] measurements, the presence of staining, odors etc.). Our field observations and lithologic descriptions are summarized in the boring logs included in **Appendix C**.

### **Sample Screening/Selection**

Soil samples were screened in the field for chemical odors, evidence of staining and volatile organic emissions using a PID equipped with a 10.6 eV PID lamp. The PID was calibrated using isobutylene calibration gas in accordance with the manufacturer's protocols prior to the start of fieldwork. Soil collected from various depth intervals in each boring was broken apart, placed and sealed in plastic 'ziploc' bags and after a few minutes volatile emissions were measured in the headspace using the PID. In the absence of such indications three representative soil samples were submitted for analysis. The results of the field screening are shown in Apex's boring logs, and Wisconsin DNR Soil Boring Log Information forms (Form 4400-122) in accordance with WAC NR 716.15(4)(g)(4), included in **Appendix C**.

### **Soil Sample Handling Procedures**

A total of three soil samples were analyzed for volatile organic compounds (VOCs) by EPA Method 5035/8260. The samples were collected by pushing an Encore® sampler syringe into the soil to collect a 10 gram sample, the Encore® plunger was used to extrude the soil sample into clean, laboratory-supplied 40 milliliter (ml) VOA vials with methanol preservative. The VOA was immediately capped, labeled and placed in a chilled cooler for transport to the analytical laboratory. Soil samples for additional parameters were placed in clean, 4-ounce laboratory-supplied jars. Chain-of-custody protocols were maintained throughout the sample handling process.

### **Monitoring Well Construction**

A Geoprobe rig was used to advance a borehole at each monitoring well location to document the soil conditions and to collect soil samples. A truck-mounted hollow-stem auger drill rig was then used at three locations (MW-1 through MW-3) to advance an 8-inch diameter borehole into the underlying aquifer zone; each well was installed to depths ranging from 15 to 20 feet bgs.

The monitoring wells were constructed using 2-inch diameter (schedule 40) PVC casing consisting of a 10-foot length of 0.010-inch factory slotted well screen with a blank riser. The filter pack, consisting of a sand pack, was placed around the well screen/riser extending 2-feet above the top of the screen.

The annulus of the borehole was then filled with bentonite chips (hydrated in place) to a depth of approximately 1-foot bgs, the remainder of the borehole was filled with cement. The wells were completed at ground surface using flush-mount well vaults set in cement. A magnet was placed in the void between the cover and the annular space seal in accordance with NR 716.13(14)(b). Copies of Apex's boring logs and well construction diagrams, and Wisconsin DNR Groundwater Monitoring Well Information form (Form 4400-89) and Monitoring Well Construction forms (Form 4400-113A) in accordance with WAC NR 716.15(4)(g)(2), are included in **Appendix C**.

### **Monitoring Well Development**

Following installation, the monitoring wells were developed to remove sediment, consolidate the filter pack around the well screen and to improve hydraulic communication with the aquifer. Well development procedures consisted of the removal of approximately 2 to 6 well casing volumes of groundwater, and are documented in Wisconsin DNR Monitoring Well Development forms (Form 4400-113B) in accordance with WAC NR 716.15(4)(g)(3), included in **Appendix C**. Groundwater sampling was performed one week following well development.

### **Groundwater Sampling**

Apex used a low-flow, peristaltic suction lift pump to purge two to three volumes of water from the well casing at a rate of ¼ gallon per minute prior to sampling. Clean, dedicated tubing was used at each well for well purging and water sampling. A multi-probe water quality meter was used to simultaneously measure pH, temperature, conductivity, dissolved oxygen and Oxidation-Reduction Potential. Once these parameters stabilized to within 10 percent on three consecutive measurements, the peristaltic pump was used to collect water samples. Groundwater parameter measurements are included in **Appendix B**.

Water samples collected for volatile organic compound (VOC) analysis were collected by filling 40-ml vials in a manner to minimize turbulence, air entrapment and overfilling. VOCs sample vials contained a hydrochloric acid preservative. The bottles were filled completely leaving a positive meniscus at the top of the vial. After capping, the vial was inverted and was tapped with a finger to confirm that air bubbles were not present. Effervesce was not observed in the vials following collection. Chain of custody documentation was maintained throughout the sample handling process. The sample vials and jars were then labeled and placed in a chilled cooler for transport to the analytical laboratory. As a quality assurance/quality control, Apex submitted one duplicate sample (from MW-1) and one trip blank for analysis.

### **Soil-Gas Sampling Procedures**

Soil-gas samples were collected for analysis of VOCs including tetrachloroethene (PCE) and associated breakdown products from immediately below the concrete floor slab within the dry cleaner tenant space.

Apex advanced three soil-gas probes (SV-4 through SV-6) through the concrete floor slab at each location. A rotary hammer drill was used to advance a small diameter hole (5/8-inch) through the concrete slab or pavement into the underlying gravel-aggregate layer, approximately nine inches below the top of the hard surface. A 1-inch diameter hole was drilled in the same location to

approximately ½-inch below the top of the concrete floor for leak testing. The hole was then cleared of any debris prior to installing the soil gas probe. The soil gas probes consisted of a brass MIP adapter/compression coupling, covered with a silicone tube, which was inserted and seated firmly into the 5/8-inch diameter hole drilled through the hard surface. Leak testing was performed on each soil gas probe by mechanical means using the larger diameter hole as a water dam. The annulus of the 1-inch hole was filled with distilled water and monitored for fluctuations prior to and during sampling to verify that a leak had not occurred. Apex installed vapor pins in the concrete slab in 4 locations to allow for future sample collection, if warranted.

Prior to sample collection, the sub-slab gas probes were purged a minimum of three probe volumes of air from the sampling media to ensure representative samples of sub-slab soil gas and field screened for volatile organic emissions using a photoionization detector (PID) equipped with a 10.6 eV PID lamp. Soil gas samples were collected using batch-certified 6-liter Summa® canisters (evacuated stainless steel canister) with (30-minute) flow control valves with a flow rate of less than 200 milliliters per minute (mL/min). The laboratory-supplied regulator assembly was attached to the Summa® canister and a 3-foot section of 0.25-inch Teflon-lined polyethylene tubing was connected to the regulator using Swagelock® compression fittings. Leak testing was performed on each Summa® canister sample train prior to sample collection by performing a shut-in test. The shut-in test was performed by connecting the sample train tubing to a syringe and plunger. With the Summa® canister valve closed, a vacuum of approximately 20-inches mercury was applied to the sample train and maintained for 30 seconds. The pressure was observed to remain stable for the duration of the test. A photo log including photographs of the sub-slab soil gas sampling locations are included as **Appendix A**; soil-gas sampling details (i.e., results of field screening and leak testing; sample duration, initial and final canister pressures; and laboratory identification numbers) are recorded in the soil-gas sample logs included in **Appendix B**.

In areas where vapor pins were installed, the pins were capped to prevent transmission and covered with a secure stainless steel cover. The sample canisters were shipped to the analytical laboratory via Federal Express, accompanied by a completed chain-of-custody form. The samples were analyzed for VOCs by U.S. Environmental Protection Agency (EPA) Method TO-15 with a standard 5-day turnaround time.

### **Well Surveying and Water Level Measurement**

The top of each monitoring well casing was surveyed for vertical control to an accuracy of 0.01-foot by SPACECO, Inc., a Wisconsin licensed surveyor. An electronic well sounder was used to measure to depth to groundwater from the top of the well casing to the top of shallow groundwater within an accuracy of 0.01-foot. The depth to water measurements was recorded in each well on August 14, August 17, and September 12, 2017. Stabilized water levels occurred at depths ranging from 8½ to 12 feet bgs, or 756.65 to 760.77 feet mean seal level (MSL). A summary of the well elevations provided by SPACECO, Inc., and the depth to groundwater and stabilized groundwater elevations are included in **Appendix D**.

### **Hydraulic Testing**

To determine the hydraulic conductivity of the underlying aquifer Apex performed hydraulic testing in three dedicated monitoring wells (MW-1 through MW-3). A pressure transducer/data logger was

lowered below the water table and the water level was allowed to stabilize. The transducer/data logger was then connected to a Rugged Reader® using a waterproof coaxial cable. A quantity of water ('slug') was quickly removed from the well and rising head recovery rates were measured over time, until the water level recovered over the duration of the test. Due to the slow recovery, the test was performed only once in two monitoring wells (MW-1 and MW-3). A copy of the test parameters, field measurements, and head verses time data generated during the test runs are included in **Appendix D**.

## Appendix C

# Boring Logs, Well Construction Diagrams & Wisconsin DNR Well and Borehole Forms



### SUB-SLAB SOIL GAS SAMPLE LOG

Project Name: <u>Bright Cleaners - Franklin Centre</u>	Project Number: <u>PECO_2016-78</u>
Vapor Point Installation Date: <u>August 31, 2016</u>	Project Address: <u>7249 South 76th Street</u>
Sub-Slab Sample Date: <u>August 31, 2016</u>	<u>Franklin, Wisconsin</u>

#### SAMPLING INFORMATION

Soil Gas Implant Purge Air: <u>0</u> <u>3</u> Stabilized PID Reading (PPM) Volume (liters)	Sample Start Time: <u>August 31, 2016</u> <u>12:28</u> DATE TIME
Leak Test Method: <u>Shut-in Test</u> <u>Water Dam</u> Sample Train Soil Gas Implant	Sample End Time: <u>August 31, 2016</u> <u>12:58</u> DATE TIME
Shut-in Test: <u>-20</u> <u>30</u> Max. Vacuum (inches Hg) Test Duration (seconds)	Initial Canister Vacuum: <u>-35</u> <u>12:28</u> Inches Hg TIME
Leak Test Notes: <u>No Loss</u> <u>No Loss</u> Shut-in Test Water Dam	Final Canister Vacuum: <u>-15</u> <u>12:58</u> Inches Hg TIME
Sample Depth: <u>&lt; 1</u> Feet	Sample Delivery: <u>August 31, 2016</u> <u>16:45</u> DATE TIME
Sample Container Details: <u>6</u> <u>30</u> Volume (liters) Flow Controller (minutes)	Delivery Method (FedEx, courier, etc.): <u>Delivered in person</u>

#### METEOROLOGICAL CONDITIONS FOR SAMPLING DAY

Ambient Temperature (°F): <u>64</u> <u>74</u> Low High	Sea Level Pressure (Inches) <u>30.08</u>
Average Wind: <u>North-northeast</u> <u>11</u> Direction Velocity (mph)	Average Humidity (%): <u>67</u>

#### ADDITIONAL DETAILS

Other details for tenant space (e.g. recent construction/renovation, cleaning activities, chemical storage, slab/foundation cracks, HVAC status etc.):

Sample was collected north of the dry cleaning plant.

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Problems or inconsistencies encountered during sampling:

Not applicable

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\* Include a site sketch on separate sheet noting sample locations (with measurements), chemical storage areas, former operations areas, etc.

Sample Number: SV-1

Analyses: VOCs by EPA Sample Method TO-15

SUMMA ID Number: 4723 (60319)

Requested Turnaround Time: 1 Week TAT

Regulator ID Number: B-07

Sample Crew: Joe Becker





### SUB-SLAB SOIL GAS SAMPLE LOG

Project Name: <u>Bright Cleaners - Franklin Centre</u>	Project Number: <u>PECO_2016-78</u>
Vapor Point Installation Date: <u>August 31, 2016</u>	Project Address: <u>7249 South 76th Street</u>
Sub-Slab Sample Date: <u>August 31, 2016</u>	<u>Franklin, Wisconsin</u>

#### SAMPLING INFORMATION

Soil Gas Implant Purge Air: <u>0</u> <u>3</u> Stabilized PID Reading (PPM) Volume (liters)	Sample Start Time: <u>August 31, 2016</u> <u>12:32</u> DATE TIME
Leak Test Method: <u>Shut-in Test</u> <u>Water Dam</u> Sample Train Soil Gas Implant	Sample End Time: <u>August 31, 2016</u> <u>13:02</u> DATE TIME
Shut-in Test: <u>-18</u> <u>30</u> Max. Vacuum (inches Hg) Test Duration (seconds)	Initial Canister Vacuum: <u>-30</u> <u>12:32</u> Inches Hg TIME
Leak Test Notes: <u>No Loss</u> <u>No Loss</u> Shut-in Test Water Dam	Final Canister Vacuum: <u>-7 1/2</u> <u>13:02</u> Inches Hg TIME
Sample Depth: <u>&lt; 1</u> Feet	Sample Delivery: <u>August 31, 2016</u> <u>16:45</u> DATE TIME
Sample Container Details: <u>6</u> <u>30</u> Volume (liters) Flow Controller (minutes)	Delivery Method (FedEx, courier, etc.): <u>Delivered in person</u>

#### METEOROLOGICAL CONDITIONS FOR SAMPLING DAY

Ambient Temperature (°F): <u>64</u> <u>74</u> Low High	Sea Level Pressure (Inches) <u>30.08</u>
Average Wind: <u>North-northeast</u> <u>11</u> Direction Velocity (mph)	Average Humidity (%): <u>67</u>

#### ADDITIONAL DETAILS

Other details for tenant space (e.g. recent construction/renovation, cleaning activities, chemical storage, slab/foundation cracks, HVAC status etc.):

Sample was collected next to the dry cleaning plant.

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Problems or inconsistencies encountered during sampling:

Not applicable

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\* Include a site sketch on separate sheet noting sample locations (with measurements), chemical storage areas, former operations areas, etc.

Sample Number: SV-2

Analyses: VOCs by EPA Sample Method TO-15

SUMMA ID Number: 6054 (60339)

Requested Turnaround Time: 1 Week TAT

Regulator ID Number: B-03

Sample Crew: Joe Becker



### SUB-SLAB SOIL GAS SAMPLE LOG

Project Name: <u>Bright Cleaners - Franklin Centre</u>	Project Number: <u>PECO_2016-78</u>
Vapor Point Installation Date: <u>August 31, 2016</u>	Project Address: <u>7249 South 76th Street</u>
Sub-Slab Sample Date: <u>August 31, 2016</u>	<u>Franklin, Wisconsin</u>

#### SAMPLING INFORMATION

Soil Gas Implant Purge Air: <u>0</u> <u>3</u> <small>Stabilized PID Reading (PPM)      Volume (liters)</small>	Sample Start Time: <u>August 31, 2016</u> <u>12:34</u> <small>DATE      TIME</small>
Leak Test Method: <u>Shut-in Test</u> <u>Water Dam</u> <small>Sample Train      Soil Gas Implant</small>	Sample End Time: <u>August 31, 2016</u> <u>13:04</u> <small>DATE      TIME</small>
Shut-in Test: <u>-16</u> <u>30</u> <small>Max. Vacuum (inches Hg)      Test Duration (seconds)</small>	Initial Canister Vacuum: <u>-32</u> <u>12:34</u> <small>Inches Hg      TIME</small>
Leak Test Notes: <u>No Loss</u> <u>No Loss</u> <small>Shut-in Test      Water Dam</small>	Final Canister Vacuum: <u>-14</u> <u>13:04</u> <small>Inches Hg      TIME</small>
Sample Depth: <u>&lt; 1</u> <small>Feet</small>	Sample Delivery: <u>August 31, 2016</u> <u>16:45</u> <small>DATE      TIME</small>
Sample Container Details: <u>6</u> <u>30</u> <small>Volume (liters)      Flow Controller (minutes)</small>	Delivery Method (FedEx, courier, etc.): <u>Delivered in person</u>

#### METEOROLOGICAL CONDITIONS FOR SAMPLING DAY

Ambient Temperature (°F): <u>64</u> <u>74</u> <small>Low      High</small>	Sea Level Pressure (Inches) <u>30.08</u>
Average Wind: <u>North-northeast</u> <u>11</u> <small>Direction      Velocity (mph)</small>	Average Humidity (%): <u>67</u>

#### ADDITIONAL DETAILS

Other details for tenant space (e.g. recent construction/renovation, cleaning activities, chemical storage, slab/foundation cracks, HVAC status etc.):

Sample was collected south of the dry cleaning plant near the rear door.

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Problems or inconsistencies encountered during sampling:

Not applicable

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\* Include a site sketch on separate sheet noting sample locations (with measurements), chemical storage areas, former operations areas, etc.

Sample Number: SV-3

Analyses: VOCs by EPA Sample Method TO-15

SUMMA ID Number: 2469 (60268)

Requested Turnaround Time: 1 Week TAT

Regulator ID Number: B-23

Sample Crew: Joe Becker



### SUB-SLAB SOIL GAS SAMPLE LOG

Project Name: <u>Bright Cleaners - Franklin Centre</u>	Project Number: <u>PECO_2017-68</u>
Vapor Point Installation Date: <u>August 11, 2017</u>	Project Address: <u>7201 South 76th Street</u>
Sub-Slab Sample Date: <u>August 14, 2017</u>	<u>Franklin, Wisconsin</u>

#### SAMPLING INFORMATION

Soil Gas Implant Purge Air: <u>0.9</u> <u>2</u> <small>Stabilized PID Reading (PPM)      Volume (liters)</small>	Sample Start Time: <u>August 14, 2014</u> <u>12:24</u> <small>DATE      TIME</small>
Leak Test Method: <u>Shut-in Test</u> <u>Water Dam</u> <small>Sample Train      Soil Gas Implant</small>	Sample End Time: <u>August 14, 2014</u> <u>12:54</u> <small>DATE      TIME</small>
Shut-in Test: <u>-17</u> <u>30</u> <small>30      Test Duration (seconds)</small>	Canister Vacuum: <u>-28 1/2</u> <u>-7</u> <small>Initial (Inches Hg)      Final (Inches Hg)</small>
Leak Test Notes: <u>No Loss</u> <u>No Loss</u> <small>Shut-in Test      Water Dam</small>	Analysis Details: <u>STAT Analysis Corporation</u> <u>Chicago, IL</u> <small>Laboratory      Location</small>
Sample Depth: <u>&lt; 1</u> <small>Feet</small>	Sample Delivery: <u>August 13, 2017</u> <u>13:30</u> <small>DATE      TIME</small>
Sample Container Details: <u>6</u> <u>30</u> <small>Volume (liters)      Flow Controller (minutes)</small>	Delivery Method (FedEx, courier, etc.): <u>Delivered in person</u>

#### METEOROLOGICAL CONDITIONS FOR SAMPLING DAY

Ambient Temperature (°F): <u>64</u> <u>78</u> <small>Low      High</small>	Barometric Pressure / Humidity <u>985.54</u> <u>51</u> <small>mBar      %</small>
Average Wind: <u>7</u> <u>South-southwest</u> <small>Velocity (mph)      Direction</small>	Precipitation (Inches): <u>0.00</u> <u>0.00</u> <small>Day of Sampling      Previous 48 Hours</small>

#### ADDITIONAL DETAILS

Other details for tenant space (e.g. recent construction/renovation, cleaning activities, chemical storage, slab/foundation cracks, HVAC status etc.):

Sample was collected near the front of the dry cleaner tenant space.

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Problems or inconsistencies encountered during sampling:

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\* Include a site sketch on separate sheet noting sample locations (with measurements), chemical storage areas, former operations areas, etc.

Sample Number: SV-4

Analyses: VOCs by EPA Sample Method TO-15

SUMMA ID Number: 60256

Requested Turnaround Time: 1 Week TAT

Regulator ID Number: 7248443

Sample Crew: Joe Becker



### SUB-SLAB SOIL GAS SAMPLE LOG

Project Name: <u>Bright Cleaners - Franklin Centre</u>	Project Number: <u>PECO_2017-68</u>
Vapor Point Installation Date: <u>August 11, 2017</u>	Project Address: <u>7201 South 76th Street</u>
Sub-Slab Sample Date: <u>August 14, 2017</u>	<u>Franklin, Wisconsin</u>

#### SAMPLING INFORMATION

Soil Gas Implant Purge Air: <u>0.1</u> <u>2</u> Stabilized PID Reading (PPM) Volume (liters)	Sample Start Time: <u>August 14, 2014</u> <u>12:35</u> DATE TIME
Leak Test Method: <u>Shut-in Test</u> <u>Water Dam</u> Sample Train Soil Gas Implant	Sample End Time: <u>August 14, 2014</u> <u>13:06</u> DATE TIME
Shut-in Test: <u>-17</u> <u>30</u> 30 Test Duration (seconds)	Canister Vacuum: <u>-27</u> <u>-6 1/2</u> Initial (Inches Hg) Final (Inches Hg)
Leak Test Notes: <u>No Loss</u> <u>No Loss</u> Shut-in Test Water Dam	Analysis Details: <u>STAT Analysis Corporation</u> <u>Chicago, IL</u> Laboratory Location
Sample Depth: <u>&lt; 1</u> Feet	Sample Delivery: <u>August 13, 2017</u> <u>13:30</u> DATE TIME
Sample Container Details: <u>6</u> <u>30</u> Volume (liters) Flow Controller (minutes)	Delivery Method (FedEx, courier, etc.): <u>Delivered in person</u>

#### METEOROLOGICAL CONDITIONS FOR SAMPLING DAY

Ambient Temperature (°F): <u>64</u> <u>78</u> Low High	Barometric Pressure / Humidity <u>985.54</u> <u>51</u> mBar %
Average Wind: <u>7</u> <u>South-southwest</u> Velocity (mph) Direction	Precipitation (Inches): <u>0.00</u> <u>0.00</u> Day of Sampling Previous 48 Hours

#### ADDITIONAL DETAILS

Other details for tenant space (e.g. recent construction/renovation, cleaning activities, chemical storage, slab/foundation cracks, HVAC status etc.):

Sample was collected near the rear of the UPS tenant space to the west of the dry cleaning tenant space.

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Problems or inconsistencies encountered during sampling:

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\* Include a site sketch on separate sheet noting sample locations (with measurements), chemical storage areas, former operations areas, etc.

Sample Number: SV-5

Analyses: VOCs by EPA Sample Method TO-15

SUMMA ID Number: 60230

Requested Turnaround Time: 1 Week TAT

Regulator ID Number: A0171584-1

Sample Crew: Joe Becker



### SUB-SLAB SOIL GAS SAMPLE LOG

Project Name: <u>Bright Cleaners - Franklin Centre</u>	Project Number: <u>PECO_2017-68</u>
Vapor Point Installation Date: <u>August 11, 2017</u>	Project Address: <u>7201 South 76th Street</u>
Sub-Slab Sample Date: <u>August 14, 2017</u>	<u>Franklin, Wisconsin</u>

#### SAMPLING INFORMATION

Soil Gas Implant Purge Air: <u>0.0</u> <u>2</u> <small>Stabilized PID Reading (PPM)      Volume (liters)</small>	Sample Start Time: <u>August 14, 2014</u> <u>12:30</u> <small>DATE      TIME</small>
Leak Test Method: <u>Shut-in Test</u> <u>Water Dam</u> <small>Sample Train      Soil Gas Implant</small>	Sample End Time: <u>August 14, 2014</u> <u>13:01</u> <small>DATE      TIME</small>
Shut-in Test: <u>-13</u> <u>30</u> <small>30      Test Duration (seconds)</small>	Canister Vacuum: <u>-30</u> <u>-7 1/2</u> <small>Initial (Inches Hg)      Final (Inches Hg)</small>
Leak Test Notes: <u>No Loss</u> <u>No Loss</u> <small>Shut-in Test      Water Dam</small>	Analysis Details: <u>STAT Analysis Corporation</u> <u>Chicago, IL</u> <small>Laboratory      Location</small>
Sample Depth: <u>&lt; 1</u> <small>Feet</small>	Sample Delivery: <u>August 13, 2017</u> <u>13:30</u> <small>DATE      TIME</small>
Sample Container Details: <u>6</u> <u>30</u> <small>Volume (liters)      Flow Controller (minutes)</small>	Delivery Method (FedEx, courier, etc.): <u>Delivered in person</u>

#### METEOROLOGICAL CONDITIONS FOR SAMPLING DAY

Ambient Temperature (°F): <u>64</u> <u>78</u> <small>Low      High</small>	Barometric Pressure / Humidity: <u>985.54</u> <u>51</u> <small>mBar      %</small>
Average Wind: <u>7</u> <u>South-southwest</u> <small>Velocity (mph)      Direction</small>	Precipitation (Inches): <u>0.00</u> <u>0.00</u> <small>Day of Sampling      Previous 48 Hours</small>

#### ADDITIONAL DETAILS

Other details for tenant space (e.g. recent construction/renovation, cleaning activities, chemical storage, slab/foundation cracks, HVAC status etc.):

Sample was collected near the rear of the Pizza Hut tenant space to the east of the dry cleaning tenant space.

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Problems or inconsistencies encountered during sampling:

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\* Include a site sketch on separate sheet noting sample locations (with measurements), chemical storage areas, former operations areas, etc.

Sample Number: SV-6

Analyses: VOCs by EPA Sample Method TO-15

SUMMA ID Number: 60223

Requested Turnaround Time: 1 Week TAT

Regulator ID Number: A01158-4

Sample Crew: Joe Becker



Well I.D.:	MW-1	Job Number:	PECO_2017-68
Client:	Phillips Edison & Company	Date:	Thursday, August 17, 2017
Project:	Franklin Centre	Sampler:	Joe Becker
Weather:	75°, Mostly Cloudy	Time In/Out:	11:25 / 12:10

**WELL DATA**

Well Depth (f):	19.5	Well Diameter (in):	2	Water Height (ft):	7.62
Depth to Water (ft):	11.88	Screened Interval (ft bgs):	9-1/2 to 19-1/2	x Multiplier	0.163
Water Column Length (ft):	7.62	Depth to Free Product:	Not Encountered	x Casing Volumes	3
Purge Volume (L):	14 1/2	Free Product Thickness:	N/A	=Purge Volumes (L)	14
Water Height Multipliers (gal)	1-inch = 0.041	2-inch = 0.162	4-inch = 0.653	1 gallon = 3.785 liters	

**PURGING DATA**

Purge Method:		Peristaltic Pump			Pump Intake Depth (ft):		19			Comments:		
Sampling Method:		Peristaltic Pump			Tubing Type:		Low Density Polyethylene					
Time	Volume Purged (liters)	Cumulative Volume Purged (liters)	DTW (btc)	Purge Rate (L/min)	pH	Temp (°C)	Cond (mS/cm)	DO (ppm)	ORP (mV)	Turbidity (NTU's)	Clarity/Color Other Remarks	
					+/-0.2	+/-0.5°C	+/-5%	+/-0.5	+/-20mV	+/-10%	<--Stabilization Criterial	
11:34	1	1	12.42	1/2	7.14	18.30	5.7	0.31	-59.7	--	Clear	
11:37	1 1/2	2 1/2	13.07	1/2	6.89	17.20	5.9	0.30	-46.7	--	Clear	
11:40	1 1/2	4	13.41	1/2	6.83	17.20	5.9	0.48	-40.1	--	Clear	
11:43	1 1/2	5 1/2	13.79	1/2	6.81	16.89	6.0	0.56	-40.6	--	Clear	
11:46	1 1/2	7	13.92	1/2	6.81	16.91	6.0	0.63	-41.2	--	Clear	
11:49	1 1/2	8 1/2	14.37	1/2	6.80	16.80	5.9	0.76	-41.3	--	Clear	
11:52	1 1/2	10	14.70	1/2	6.81	16.93	5.9	0.75	-18.4	--	Clear	
11:55	1 1/2	11 1/2	14.85	1/2	6.81	16.84	5.8	0.75	-41.1	--	Clear	
11:58	1 1/2	13	15.02	1/2	6.81	17.06	5.8	0.78	-42.8	--	Clear	
12:01	1 1/2	14 1/2	15.15	1/2	6.82	17.20	5.7	0.80	-42.2	--	Clear	

Clarity: VC = very cloudy, CL = cloudy, SC = slightly cloudy, AC = almost clear, C = clear

**SAMPLING DATA**

Sample ID:	MW-1	Sampling Flow Rate:	250 mL/min	Analytical Laboratory:	Pace Analytical
Sample Time:	12:05	Final Depth to Water:	15.15	Did Well Dewater?	No
# Containers/Type	Perservative	Analysis/ Method	Field Filtered	Filter Size	MS/MSD Duplicate ID
3 / 40 mL Glass	HCl	VOCs	No	Not Applicable	Duplicate

**COMMENTS**




Well I.D.:	MW-2	Job Number:	PECO_2017-68
Client:	Phillips Edison & Company	Date:	Thursday, August 17, 2017
Project:	Franklin Centre	Sampler:	Joe Becker
Weather:	75°, Mostly Cloudy	Time In/Out:	10:40 / 11:20

**WELL DATA**

Well Depth (f):	19.5	Well Diameter (in):	2	Water Height (ft):	7.53
Depth to Water (ft):	11.97	Screened Interval (ft bgs):	9-1/2 to 19-1/2	x Multiplier	0.163
Water Column Length (ft):	7.53	Depth to Free Product:	Not Encountered	x Casing Volumes	3
Purge Volume (L):	14 1/2	Free Product Thickness:	N/A	=Purge Volumes (L)	14
Water Height Multipliers (gal)	1-inch = 0.041	2-inch = 0.162	4-inch = 0.653	1 gallon = 3.785 liters	

**PURGING DATA**

Purge Method:		Peristaltic Pump			Pump Intake Depth (ft):		19			Comments:	
Sampling Method:		Peristaltic Pump			Tubing Type:		Low Density Polyethylene				
Time	Volume Purged (liters)	Cumulative Volume Purged (liters)	DTW (btc)	Purge Rate (L/min)	pH	Temp (°C)	Cond (mS/cm)	DO (ppm)	ORP (mV)	Turbidity (NTU's)	Clarity/Color Other Remarks
					+/-0.2	+/-0.5°C	+/-5%	+/-0.5	+/-20mV	+/-10%	<--Stabilization Criterial
10:51	1	1	12.02	1/2	7.81	19.03	3.6	0.86	27.9	--	Cloudy - Brown
10:54	1 1/2	2 1/2	12.05	1/2	7.59	17.65	3.7	0.79	19.8	--	Almost Clear
10:57	1 1/2	4	12.07	1/2	7.49	17.87	3.8	0.79	16.8	--	Clear
11:00	1 1/2	5 1/2	12.07	1/2	7.42	18.46	3.9	1.42	15.5	--	Clear
11:03	1 1/2	7	12.10	1/2	7.37	19.02	3.7	2.10	16.5	--	Clear
11:06	1 1/2	8 1/2	12.12	1/2	7.37	18.32	3.6	2.65	18.0	--	Clear
11:09	1 1/2	10	12.14	1/2	7.35	18.36	3.5	3.38	20.6	--	Clear
11:12	1 1/2	11 1/2	12.13	1/2	7.33	18.94	3.4	3.42	20.6	--	Clear
11:15	1 1/2	13	12.13	1/2	7.32	18.98	3.4	3.75	20.6	--	Clear
11:18	1 1/2	14 1/2	12.13	1/2	7.31	19.20	3.3	4.01	21.1	--	Clear

Clarity: VC = very cloudy, CL = cloudy, SC = slightly cloudy, AC = almost clear, C = clear

**SAMPLING DATA**

Sample ID:	MW-2	Sampling Flow Rate:	250 mL/min	Analytical Laboratory:	Pace Analytical	
Sample Time:	11:20	Final Depth to Water:	12.13	Did Well Dewater?	No	
# Containers/Type	Perservative	Analysis/ Method	Field Filtered	Filter Size	MS/MSD	Duplicate ID
3 / 40 mL Glass	HCl	VOCs	No	Not Applicable		Not Applicable

**COMMENTS**




Well I.D.:	MW-3	Job Number:	PECO_2017-68
Client:	Phillips Edison & Company	Date:	Thursday, August 17, 2017
Project:	Franklin Centre	Sampler:	Joe Becker
Weather:	75°, Mostly Cloudy	Time In/Out:	10:05 / 10:40

**WELL DATA**

Well Depth (ft):	15	Well Diameter (in):	2	Water Height (ft):	6.60
Depth to Water (ft):	8.40	Screened Interval (ft bgs):	5 to 15	x Multiplier	0.163
Water Column Length (ft):	6.60	Depth to Free Product:	Not Encountered	x Casing Volumes	3
Purge Volume (L):	10	Free Product Thickness:	N/A	=Purge Volumes (L)	12
Water Height Multipliers (gal)	1-inch = 0.041	2-inch = 0.162	4-inch = 0.653	1 gallon = 3.785 liters	

**PURGING DATA**

Purge Method:		Peristaltic Pump			Pump Intake Depth (ft):		14 1/2			Comments:	
Sampling Method:		Peristaltic Pump			Tubing Type:		Low Density Polyethylene				
Time	Volume Purged (liters)	Cumulative Volume Purged (liters)	DTW (btc)	Purge Rate (L/min)	pH	Temp (°C)	Cond (mS/cm)	DO (ppm)	ORP (mV)	Turbidity (NTU's)	Clarity/Color Other Remarks
					+/-0.2	+/-0.5°C	+/-5%	+/-0.5	+/-20mV	+/-10%	<--Stabilization Criterial
10:15	1	1	8.90	1/2	7.13	18.72	15.1	4.78	68.4	--	Clear
10:17	1	2	9.11	1/2	7.03	18.58	15.4	4.92	71.1	--	Clear
10:19	1	3	9.54	1/2	6.98	18.75	15.6	5.70	75.4	--	Clear
10:21	1	4	10.02	1/2	6.97	18.40	15.6	5.52	75.4	--	Clear
10:23	1	5	10.32	1/2	6.96	18.02	15.5	5.29	75.0	--	Clear
10:25	1	6	10.60	1/2	6.95	17.92	15.5	5.18	78.3	--	Clear
10:27	1	7	11.01	1/2	6.93	17.80	15.7	5.12	82.4	--	Clear
10:29	1	8	11.21	1/2	6.92	17.83	15.6	5.13	76.6	--	Clear
10:31	1	9	11.50	1/2	6.92	17.96	15.6	5.04	74.1	--	Clear
10:33	1	10	11.69	1/2	6.91	18.09	15.5	4.71	68.5	--	Clear

Clarity: VC = very cloudy, CL = cloudy, SC = slightly cloudy, AC = almost clear, C = clear

**SAMPLING DATA**

Sample ID:	MW-3	Sampling Flow Rate:	250 mL/min	Analytical Laboratory:	Pace Analytical	
Sample Time:	10:35	Final Depth to Water:	11.69	Did Well Dewater?	No	
# Containers/Type	Perservative	Analysis/ Method	Field Filtered	Filter Size	MS/MSD	Duplicate ID
3 / 40 mL Glass	HCl	VOCs	No	Not Applicable		Not Applicable

**COMMENTS**




Appendix D  
Groundwater Elevation Measurements & Slug Test Analysis

**Groundwater Elevation Measurements  
Franklin Centre  
7249 South 76th Street, Franklin, Wisconsin**

Apex Project No.: PECO\_2017-68

Well Number	Top of Casing Elevation (ft - MSL)	Well Depth (ft)	Screened Interval (ft)	Date	Depth to Groundwater (ft)	Groundwater Elevation (ft - MSL)	Difference (ft)
MW-1	768.70	19.5	9.5 to 19.5	August 14, 2017	11.88	756.82	--
				August 17, 2017	11.88	756.82	0.00
				September 12, 2017	12.05	756.65	-0.17
MW-2	768.95	19.5	9.5 to 19.5	August 14, 2017	11.96	756.99	--
				August 17, 2017	11.97	756.98	-0.01
				September 12, 2017	11.97	756.98	0.00
MW-3	769.31	15.0	5 to 15	August 14, 2017	8.40	760.91	--
				August 17, 2017	8.40	760.91	0.00
				September 12, 2017	8.54	760.77	-0.14

Notes: MSL - Mean Sea Level

**Greentree Centre  
7201 South 76th Street  
Franklin, Wisconsin  
Apex Project No.: PECO\_2017-68**

**Results of Hydraulic Slug Testing: MW-1**

**WELL INFORMATION**

Well ID:	MW-1
Date:	Tuesday, September 12, 2017
Test No.:	1
Start Time:	16:00
Test Type:	Rising Head
Test Method:	Bail down
Ground Elev.:	-- feet AMSL
TOC Elev.:	768.70 feet AMSL
Lithology:	3 inches asphalt; 4 inches aggregate; silty clay (CL) to a depth of 3 feet bgs; a 3 inch clayey silt (ML) lens at 3 feet bgs; silty clay (CL) with trace gravel to a depth of 15 feet bgs, where refusal was encountered.

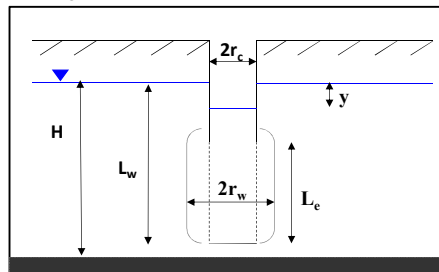
**INPUT PARAMETERS**

<b>Well Construction:</b>	
Borehole Radius ( $r_w$ ) =	4 inch
Casing Radius ( $r_c$ ) =	1 inch
Screen Length ( $L_s$ ) =	10 feet
Screen Slot Open =	0.01 inch
Filter Pack:	7-1/2 to 19-1/2 feet bgs 00 Silica Sand
Annular Fill:	Bentonite
<b>Depths:</b>	
Well =	19.5 feet bgs
Stabilized Water Level ( $L_w$ ) =	7.97 feet
Top of Screen =	9.5 feet bgs
Top of Aquifer =	1 feet bgs
Base of Aquifer (H) =	19.5 feet bgs
<b>Dimensionless Parameters</b>	
$\log(L_w/r_w)$ =	1.5
A =	2.5
B =	0.4
C =	2.1

**CALCULATIONS**

<b>Effective Radius of Influence (Partially Penetrating)</b>	
$\ln(R_e/r_w)$ =	2.67
Slope =	-2.88E-04

**WELL DIAGRAM**



**BOUWER & RICE SLUG TEST EQUATIONS<sup>1</sup>**

**Hydraulic Conductivity**

$$K = \frac{r_c^2 \ln\left(\frac{R_e}{r_w}\right)}{2L_e} \frac{1}{t} \ln \frac{y_0}{y_t}$$

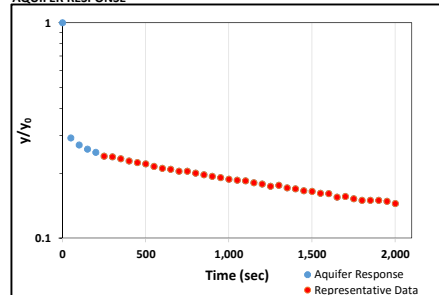
**Effective Radius of Influence**  
Partially Penetrating Well ( $L_w < H$ ):

$$\ln\left(\frac{R_e}{r_w}\right) = \left[ \frac{1.1}{\ln\left(\frac{L_w}{r_w}\right)} + \frac{A + B \ln\left(\frac{H - L_w}{r_w}\right)}{\left(\frac{L_e}{r_w}\right)} \right]^{-1}$$

Fully Penetrating Well ( $L_w = H$ ):

$$\ln\left(\frac{R_e}{r_w}\right) = \left[ \frac{1.1}{\ln\left(\frac{L_w}{r_w}\right)} + \frac{C}{\left(\frac{L_e}{r_w}\right)} \right]^{-1}$$

**AQUIFER RESPONSE**



**AQUIFER RESPONSE**

Time (sec)	Hydraulic Head (ft)	y (ft)	y/y <sub>0</sub> (ft)
0	6.78	1.20	1.00
50	7.62	0.35	0.29
100	7.65	0.32	0.27
150	7.66	0.31	0.26
200	7.67	0.30	0.25
250	7.68	0.29	0.24
300	7.69	0.29	0.24
350	7.69	0.28	0.23
400	7.70	0.27	0.23
450	7.70	0.27	0.22
500	7.71	0.26	0.22
550	7.71	0.26	0.22
600	7.72	0.25	0.21
650	7.72	0.25	0.21
700	7.73	0.24	0.20
750	7.73	0.24	0.20
800	7.73	0.24	0.20
850	7.74	0.23	0.20
900	7.74	0.23	0.19
950	7.74	0.23	0.19
1,000	7.75	0.22	0.19
1,050	7.75	0.22	0.19
1,100	7.75	0.22	0.18
1,150	7.75	0.22	0.18
1,200	7.76	0.21	0.18
1,250	7.76	0.21	0.17
1,300	7.76	0.21	0.18
1,350	7.77	0.20	0.17
1,400	7.77	0.20	0.17
1,450	7.77	0.20	0.17
1,500	7.77	0.20	0.16
1,550	7.78	0.19	0.16
1,600	7.78	0.19	0.16
1,650	7.79	0.19	0.15
1,700	7.78	0.19	0.16
1,750	7.79	0.18	0.15
1,800	7.79	0.18	0.15
1,850	7.79	0.18	0.15
1,900	7.79	0.18	0.15
1,950	7.79	0.18	0.15
2,000	7.80	0.17	0.14

**RESULTS**

<b>Hydraulic Conductivity</b>	
K =	2.67E-07 feet/second
	8.13E-06 centimeters/second

<sup>1</sup> Bouwer, Herman. 1989. The Bouwer and Rice Slug Test - An Update. Ground Water, Vol. 27, No. 3: 304-309.

**Greentree Centre  
7201 South 76th Street  
Franklin, Wisconsin  
Apex Project No.: PECO\_2017-68**

**Results of Hydraulic Slug Testing: MW-2**

**WELL INFORMATION**

Well ID:	MW-2
Date:	Tuesday, September 12, 2017
Test No.:	1
Start Time:	17:00
Test Type:	Rising Head
Test Method:	Bail down
Ground Elev.:	-- feet AMSL
TOC Elev.:	768.95 feet AMSL
Lithology:	3 inches asphalt; 4 inches aggregate; clayey gravelly sand (SW) to a depth of 4 feet bgs; gravelly silty clay (CL) to a depth of 10 feet bgs; clayey gravelly sand (SW) to a depth of 11 feet bgs; clayey silt (ML) with trace gravel to a depth of 15-1/2 feet; and silty clay (CL) to a depth of 18 feet bgs, where refusal was encountered.

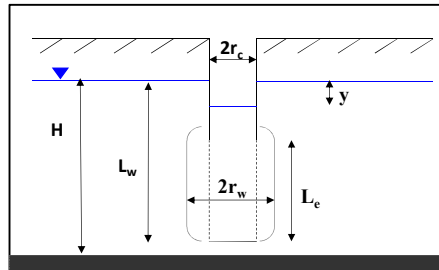
**INPUT PARAMETERS**

<b>Well Construction:</b>	
Borehole Radius ( $r_w$ ) =	4 inch
Casing Radius ( $r_c$ ) =	1 inch
Screen Length ( $L_s$ ) =	10 feet
Screen Slot Open =	0.01 inch
Filter Pack:	7-1/2 to 19-1/2 feet bgs 00 Silica Sand
Annular Fill:	Bentonite
<b>Depths:</b>	
Well =	19.5 feet bgs
Stabilized Water Level ( $L_w$ ) =	7.28 feet
Top of Screen =	9.5 feet bgs
Top of Aquifer =	1 feet bgs
Base of Aquifer ( $H$ ) =	19.5 feet bgs
<b>Dimensionless Parameters</b>	
$\log(L_w/r_w)$ =	1.5
A =	2.5
B =	0.4
C =	2.1

**CALCULATIONS**

<b>Effective Radius of Influence (Partially Penetrating)</b>	
$\ln(R_e/r_w)$ =	2.63
Slope =	-5.13E-02

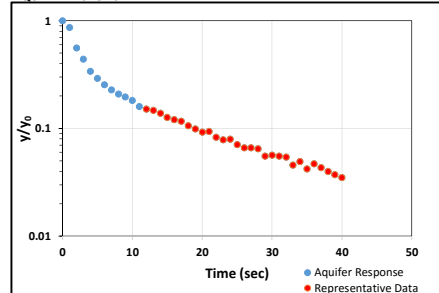
**WELL DIAGRAM**



**BOUWER & RICE SLUG TEST EQUATIONS<sup>1</sup>**

<b>Hydraulic Conductivity</b>	
$K = \frac{r_c^2 \ln\left(\frac{R_e}{r_w}\right)}{2L_e} \frac{1}{t} \ln \frac{y_0}{y_t}$	
<b>Effective Radius of Influence</b>	
Partially Penetrating Well ( $L_w < H$ ):	
$\ln\left(\frac{R_e}{r_w}\right) = \left[ \frac{1.1}{\ln\left(\frac{L_w}{r_w}\right)} + \frac{A + B \ln\left(\frac{H - L_w}{r_w}\right)}{\left(\frac{L_e}{r_w}\right)} \right]^{-1}$	
Fully Penetrating Well ( $L_w = H$ ):	
$\ln\left(\frac{R_e}{r_w}\right) = \left[ \frac{1.1}{\ln\left(\frac{L_w}{r_w}\right)} + \frac{C}{\left(\frac{L_e}{r_w}\right)} \right]^{-1}$	

**AQUIFER RESPONSE**



**AQUIFER RESPONSE**

Time (sec)	Hydraulic Head (ft)	y (ft)	y/y <sub>0</sub> (ft)
0	6.45	0.83	1.00
1	6.56	0.72	0.86
2	6.82	0.46	0.56
3	6.91	0.37	0.44
4	7.00	0.28	0.34
5	7.04	0.24	0.29
6	7.07	0.21	0.25
7	7.09	0.19	0.23
8	7.11	0.17	0.21
9	7.12	0.16	0.20
10	7.13	0.15	0.18
11	7.15	0.13	0.16
12	7.15	0.13	0.15
13	7.16	0.12	0.15
14	7.17	0.12	0.14
15	7.18	0.11	0.13
16	7.18	0.10	0.12
17	7.18	0.10	0.12
18	7.19	0.09	0.11
19	7.20	0.08	0.10
20	7.20	0.08	0.09
21	7.20	0.08	0.09
22	7.21	0.07	0.08
23	7.22	0.07	0.08
24	7.21	0.07	0.08
25	7.22	0.06	0.07
26	7.23	0.06	0.07
27	7.23	0.06	0.07
28	7.23	0.05	0.06
29	7.23	0.05	0.06
30	7.23	0.05	0.06
31	7.23	0.05	0.06
32	7.24	0.04	0.05
33	7.24	0.04	0.05
34	7.24	0.04	0.05
35	7.25	0.04	0.04
36	7.24	0.04	0.05
37	7.24	0.04	0.04
38	7.25	0.03	0.04
39	7.25	0.03	0.04
40	7.25	0.03	0.03

**RESULTS**

<b>Hydraulic Conductivity</b>	
K =	4.68E-05 feet/second
	1.43E-03 centimeters/second

<sup>1</sup> Bouwer, Herman. 1989. The Bouwer and Rice Slug Test - An Update. Ground Water, Vol. 27, No. 3: 304-309.

**Greentree Centre**  
**7201 South 76th Street**  
**Franklin, Wisconsin**  
**Apex Project No.: PECO\_2017-68**

**Results of Hydraulic Slug Testing: MW-2**

**WELL INFORMATION**

Well ID:	MW-2
Date:	Tuesday, September 12, 2017
Test No.:	2
Start Time:	17:08
Test Type:	Rising Head
Test Method:	Bail down
Ground Elev.:	-- feet AMSL
TOC Elev.:	768.95 feet AMSL
Lithology:	3 inches asphalt; 4 inches aggregate; clayey gravelly sand (SW) to a depth of 4 feet bgs; gravelly silty clay (CL) to a depth of 10 feet bgs; clayey gravelly sand (SW) to a depth of 11 feet bgs; clayey silt (ML) with trace gravel to a depth of 15-1/2 feet; and silty clay (CL) to a depth of 18 feet bgs, where refusal was encountered.

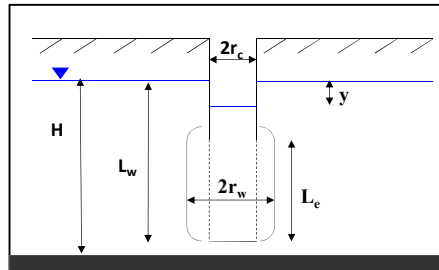
**INPUT PARAMETERS**

<b>Well Construction:</b>	
Borehole Radius ( $r_w$ ) =	4 inch
Casing Radius ( $r_c$ ) =	1 inch
Screen Length ( $L_s$ ) =	10 feet
Screen Slot Open =	0.01 inch
Filter Pack:	7-1/2 to 19-1/2 feet bgs 00 Silica Sand
Annular Fill:	Bentonite
<b>Depths:</b>	
Well =	19.5 feet bgs
Stabilized Water Level ( $L_w$ ) =	7.28 feet
Top of Screen =	9.5 feet bgs
Top of Aquifer =	1 feet bgs
Base of Aquifer (H) =	19.5 feet bgs
<b>Dimensionless Parameters</b>	
$\log(L_w/r_w) =$	1.5
A =	2.5
B =	0.4
C =	2.1

**CALCULATIONS**

<b>Effective Radius of Influence (Partially Penetrating)</b>	
$\ln(R_e/r_w) =$	2.63
Slope =	-3.97E-02

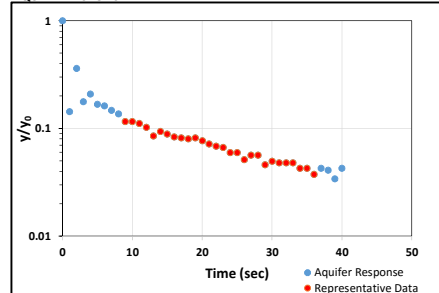
**WELL DIAGRAM**



**BOUWER & RICE SLUG TEST EQUATIONS<sup>1</sup>**

<b>Hydraulic Conductivity</b>	
$K = \frac{r_c^2 \ln\left(\frac{R_e}{r_w}\right)}{2L_e} \frac{1}{t} \ln \frac{y_o}{y_t}$	
<b>Effective Radius of Influence</b>	
Partially Penetrating Well ( $L_w < H$ ):	
$\ln\left(\frac{R_e}{r_w}\right) = \left[ \frac{1.1}{\ln\left(\frac{L_w}{r_w}\right)} + \frac{A + B \ln\left[\frac{(H - L_w)}{r_w}\right]}{\left(\frac{L_e}{r_w}\right)} \right]^{-1}$	
Fully Penetrating Well ( $L_w = H$ ):	
$\ln\left(\frac{R_e}{r_w}\right) = \left[ \frac{1.1}{\ln\left(\frac{L_w}{r_w}\right)} + \frac{C}{\left(\frac{L_e}{r_w}\right)} \right]^{-1}$	

**AQUIFER RESPONSE**



**AQUIFER RESPONSE**

Time (sec)	Hydraulic Head (ft)	y (ft)	y/y <sub>0</sub> (ft)
0	6.69	0.59	1.00
1	7.20	0.08	0.14
2	7.07	0.21	0.36
3	7.18	0.10	0.18
4	7.16	0.12	0.21
5	7.18	0.10	0.17
6	7.19	0.10	0.16
7	7.19	0.09	0.15
8	7.20	0.08	0.14
9	7.21	0.07	0.12
10	7.21	0.07	0.12
11	7.22	0.07	0.11
12	7.22	0.06	0.10
13	7.23	0.05	0.09
14	7.23	0.06	0.09
15	7.23	0.05	0.09
16	7.23	0.05	0.08
17	7.23	0.05	0.08
18	7.23	0.05	0.08
19	7.23	0.05	0.08
20	7.24	0.04	0.08
21	7.24	0.04	0.07
22	7.24	0.04	0.07
23	7.24	0.04	0.07
24	7.25	0.04	0.06
25	7.25	0.04	0.06
26	7.25	0.03	0.05
27	7.25	0.03	0.06
28	7.25	0.03	0.06
29	7.25	0.03	0.05
30	7.25	0.03	0.05
31	7.25	0.03	0.05
32	7.25	0.03	0.05
33	7.25	0.03	0.05
34	7.26	0.03	0.04
35	7.26	0.03	0.04
36	7.26	0.02	0.04
37	7.26	0.03	0.04
38	7.26	0.02	0.04
39	7.26	0.02	0.03
40	7.26	0.03	0.04

**RESULTS**

<b>Hydraulic Conductivity</b>	
K =	3.62E-05 feet/second
	1.10E-03 centimeters/second

<sup>1</sup> Bouwer, Herman. 1989. The Bouwer and Rice Slug Test - An Update. Ground Water, Vol. 27, No. 3: 304-309.

**Greentree Centre**  
**7201 South 76th Street**  
**Franklin, Wisconsin**  
**Apex Project No.: PECO\_2017-68**

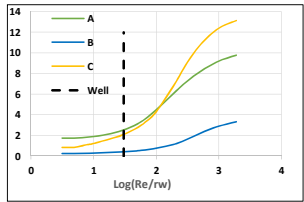
**Results of Hydraulic Slug Testing: MW-2**

**WELL INFORMATION**

Well ID:	MW-2
Date:	Tuesday, September 12, 2017
Test No.:	3
Start Time:	17:15
Test Type:	Rising Head
Test Method:	Bail down
Ground Elev.:	-- feet AMSL
TOC Elev.:	768.95 feet AMSL
Lithology:	3 inches asphalt; 4 inches aggregate; clayey gravelly sand (SW) to a depth of 4 feet bgs; gravelly silty clay (CL) to a depth of 10 feet bgs; clayey gravelly sand (SW) to a depth of 11 feet bgs; clayey silt (ML) with trace gravel to a depth of 15-1/2 feet; and silty clay (CL) to a depth of 18 feet bgs, where refusal was encountered.

**INPUT PARAMETERS**

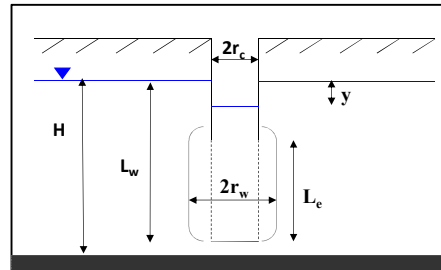
<b>Well Construction:</b>	
Borehole Radius ( $r_w$ ) =	4 inch
Casing Radius ( $r_c$ ) =	1 inch
Screen Length ( $L_s$ ) =	10 feet
Screen Slot Open =	0.01 inch
Filter Pack:	7-1/2 to 19-1/2 feet bgs 00 Silica Sand
Annular Fill:	Bentonite
<b>Depths:</b>	
Well =	19.5 feet bgs
Stabilized Water Level ( $L_w$ ) =	7.27 feet
Top of Screen =	9.5 feet bgs
Top of Aquifer =	1 feet bgs
Base of Aquifer (H) =	19.5 feet bgs
<b>Dimensionless Parameters</b>	
$\log(L_w/r_w)$ =	1.5
A =	2.5
B =	0.4
C =	2.1



**CALCULATIONS**

<b>Effective Radius of Influence (Partially Penetrating)</b>	
$\ln(R_e/r_w)$ =	2.63
Slope =	-5.20E-02

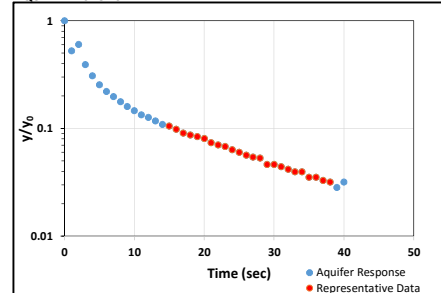
**WELL DIAGRAM**



**BOUWER & RICE SLUG TEST EQUATIONS<sup>1</sup>**

<b>Hydraulic Conductivity</b>	
$K = \frac{r_c^2 \ln\left(\frac{R_e}{r_w}\right)}{2L_e} \frac{1}{t} \ln \frac{y_o}{y_t}$	
<b>Effective Radius of Influence</b>	
Partially Penetrating Well ( $L_w < H$ ):	
$\ln\left(\frac{R_e}{r_w}\right) = \left[ \frac{1.1}{\ln\left(\frac{L_w}{r_w}\right)} + \frac{A + B \ln\left[\frac{(H - L_w)}{r_w}\right]}{\left(\frac{L_e}{r_w}\right)} \right]^{-1}$	
Fully Penetrating Well ( $L_w = H$ ):	
$\ln\left(\frac{R_e}{r_w}\right) = \left[ \frac{1.1}{\ln\left(\frac{L_w}{r_w}\right)} + \frac{C}{\left(\frac{L_e}{r_w}\right)} \right]^{-1}$	

**AQUIFER RESPONSE**



**AQUIFER RESPONSE**

Time (sec)	Hydraulic Head (ft)	y (ft)	y/y <sub>0</sub> (ft)
0	6.39	0.89	1.00
1	6.81	0.47	0.53
2	6.74	0.53	0.60
3	6.93	0.35	0.39
4	7.00	0.27	0.31
5	7.05	0.23	0.25
6	7.08	0.19	0.22
7	7.10	0.17	0.20
8	7.11	0.16	0.18
9	7.13	0.14	0.16
10	7.14	0.13	0.15
11	7.15	0.12	0.13
12	7.16	0.11	0.13
13	7.17	0.10	0.12
14	7.17	0.10	0.11
15	7.18	0.09	0.11
16	7.18	0.09	0.10
17	7.19	0.08	0.09
18	7.19	0.08	0.09
19	7.20	0.07	0.08
20	7.20	0.07	0.08
21	7.21	0.06	0.07
22	7.21	0.06	0.07
23	7.21	0.06	0.07
24	7.21	0.06	0.06
25	7.22	0.05	0.06
26	7.22	0.05	0.06
27	7.22	0.05	0.05
28	7.22	0.05	0.05
29	7.23	0.04	0.05
30	7.23	0.04	0.05
31	7.23	0.04	0.04
32	7.23	0.04	0.04
33	7.24	0.03	0.04
34	7.24	0.03	0.04
35	7.24	0.03	0.04
36	7.24	0.03	0.04
37	7.24	0.03	0.03
38	7.24	0.03	0.03
39	7.25	0.02	0.03
40	7.24	0.03	0.03

**RESULTS**

<b>Hydraulic Conductivity</b>	
K =	4.74E-05 feet/second
	1.45E-03 centimeters/second

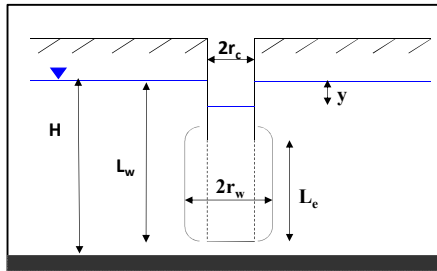
<sup>1</sup> Bouwer, Herman. 1989. The Bouwer and Rice Slug Test - An Update. Ground Water, Vol. 27, No. 3: 304-309.

Greentree Centre  
7201 South 76th Street  
Franklin, Wisconsin  
Apex Project No.: PECO\_2017-68  
Results of Hydraulic Slug Testing: MW-3

**WELL INFORMATION**

Well ID:	MW-3
Date:	Tuesday, September 12, 2017
Test No.:	1
Start Time:	17:20
Test Type:	Rising Head
Test Method:	Bail down
Ground Elev.:	-- feet AMSL
TOC Elev.:	769.31 feet AMSL
Lithology:	5 inches asphalt; 8 inches aggregate; silty clay (CL) to a depth of 8 feet bgs; clayey silt (ML) to a depth of 12 feet bgs, where refusal was encountered.

**WELL DIAGRAM**



**AQUIFER RESPONSE**

Time (sec)	Hydraulic Head (ft)	y (ft)	y/y <sub>0</sub> (ft)
0	6.03	0.51	1.00
50	6.29	0.25	0.49
100	6.30	0.24	0.48
150	6.30	0.24	0.47
200	6.31	0.24	0.46
250	6.31	0.23	0.45
300	6.31	0.23	0.44
350	6.31	0.23	0.45
400	6.31	0.23	0.44
450	6.32	0.23	0.44
500	6.32	0.22	0.44
550	6.32	0.22	0.44
600	6.32	0.22	0.42
650	6.32	0.22	0.42
700	6.32	0.22	0.42
750	6.32	0.22	0.43
800	6.33	0.21	0.42
850	6.33	0.21	0.42
900	6.33	0.21	0.41
950	6.33	0.21	0.41
1,000	6.33	0.21	0.40
1,050	6.33	0.21	0.41
1,100	6.33	0.21	0.41
1,150	6.33	0.21	0.41
1,200	6.34	0.20	0.40
1,250	6.34	0.21	0.40
1,300	6.34	0.20	0.40
1,350	6.34	0.20	0.39
1,400	6.34	0.20	0.40
1,450	6.34	0.20	0.39
1,500	6.34	0.20	0.39
1,550	6.34	0.20	0.39
1,600	6.34	0.20	0.38
1,650	6.34	0.20	0.38
1,700	6.35	0.20	0.38
1,750	6.35	0.20	0.38
1,800	6.35	0.20	0.38
1,850	6.35	0.19	0.38
1,900	6.35	0.19	0.37
1,950	6.35	0.19	0.37
2,000	6.35	0.19	0.37

**INPUT PARAMETERS**

**Well Construction:**

Borehole Radius (r <sub>w</sub> ) =	4	inch
Casing Radius (r <sub>c</sub> ) =	1	inch
Screen Length (L <sub>w</sub> ) =	10	feet
Screen Slot Open =	0.01	inch
Filter Pack:	3 to 15	feet bgs
	00 Silica Sand	
Annular Fill:	Bentonite	

**Depths:**

Well =	15	feet bgs
Stabilized Water Level (L <sub>w</sub> ) =	6.54	feet
Top of Screen =	5	feet bgs
Top of Aquifer =	8	feet bgs
Base of Aquifer (H) =	15	feet bgs

**Dimensionless Parameters**

log(L <sub>w</sub> /r <sub>w</sub> ) =	1.5
A =	2.5
B =	0.4
C =	2.1

**BOUWER & RICE SLUG TEST EQUATIONS<sup>1</sup>**

**Hydraulic Conductivity**

$$K = \frac{r_c^2 \ln\left(\frac{R_e}{r_w}\right)}{2L_w} \frac{1}{t} \ln \frac{y_0}{y_t}$$

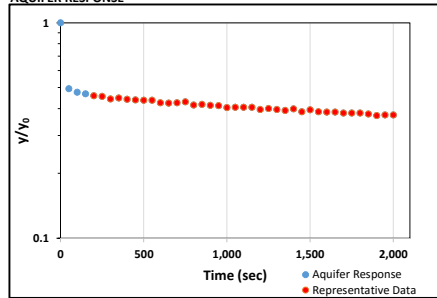
**Effective Radius of Influence**  
Partially Penetrating Well (L<sub>w</sub> < H):

$$\ln\left(\frac{R_e}{r_w}\right) = \left[ \frac{1.1}{\ln\left(\frac{L_w}{r_w}\right)} + \frac{A + B \ln\left(\frac{H - L_w}{r_w}\right)}{\left(\frac{L_w}{r_w}\right)} \right]^{-1}$$

Fully Penetrating Well (L<sub>w</sub> = H):

$$\ln\left(\frac{R_e}{r_w}\right) = \left[ \frac{1.1}{\ln\left(\frac{L_w}{r_w}\right)} + \frac{C}{\left(\frac{L_w}{r_w}\right)} \right]^{-1}$$

**AQUIFER RESPONSE**



**RESULTS**

**Hydraulic Conductivity**

K =	1.02E-07	feet/second
	3.10E-06	centimeters/second

<sup>1</sup> Bouwer, Herman. 1989. The Bouwer and Rice Slug Test - An Update. Ground Water, Vol. 27, No. 3: 304-309.

Appendix E  
Laboratory Reports



**STAT** Analysis Corporation

2242 West Harrison St., Suite 200, Chicago, IL 60612-3766

Tel: (312) 733-0551 Fax: (312) 733-2386 STATinfo@STATAnalysis.com

Accreditations: IEPA ELAP 100445; ORELAP IL300001; AIHA-LAP, LLC 101160; NVLAP LabCode 101202-0

September 09, 2016

Apex Companies, LLC  
1701 East Woodfield Rd, Suite 333  
Schaumburg, IL 60173  
Telephone: (847) 956-8589  
Fax: (847) 956-8619

Analytical Report for STAT Work Order: 16081298 Revision 0

RE: PECO-216-78, Bright Cleaners-Franklin Centre, 7249 S. 76th St., Franklin

Dear Joseph Becker:

STAT Analysis received 8 samples for the referenced project on 8/31/2016 4:45:00 PM. The analytical results are presented in the following report.

All analyses were performed in accordance with the requirements specified in WAC DNR Chapter NR 149 (Certification Number 399099910). Analyses were performed in accordance with methods as referenced on the analytical report.

All analyses were performed within established holding time criteria, and all Quality Control criteria met EPA or laboratory specifications except when noted in the Case Narrative or Analytical Report. A listing of accredited methods/parameters can also be provided.

For sample results requiring adjustment for dilutions, the detection and reporting limits are adjusted for the corresponding dilution factor. Analytical results expressed on a dry weight basis have units of mg/Kg-dry or µg/Kg-dry on the analytical report. Corresponding reporting limits are adjusted for dry weight.

Thank you for the opportunity to serve you and I look forward to working with you in the future. If you have any questions regarding the enclosed materials, please contact me at (312) 733-0551.

Sincerely,



Craig Chawla  
Project Manager

*The information contained in this report and any attachments is confidential information intended only for the use of the individual or entities named above. The results of this report relate only to the samples tested. If you have received this report in error, please notify us immediately by phone. This report shall not be reproduced, except in its entirety, unless written approval has been obtained from the laboratory. This analytical report shall become property of the Customer upon payment in full. Otherwise, STAT will be under no obligation to support, defend or discuss the analytical report.*

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**Client:** Apex Companies, LLC**Project:** PECO-216-78, Bright Cleaners-Franklin Centre, 7249**Work Order Sample Summary****Work Order:** 16081298 Revision 0

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<b>Lab Sample ID</b>	<b>Client Sample ID</b>	<b>Tag Number</b>	<b>Collection Date</b>	<b>Date Received</b>
16081298-001A	TW-1 @ 14'		8/31/2016 10:00:00 AM	8/31/2016
16081298-001B	TW-1 @ 14'		8/31/2016 10:00:00 AM	8/31/2016
16081298-002A	TW-2 @ 11'		8/31/2016 10:30:00 AM	8/31/2016
16081298-002B	TW-2 @ 11'		8/31/2016 10:30:00 AM	8/31/2016
16081298-003A	TW-3 @ 12'		8/31/2016 11:00:00 AM	8/31/2016
16081298-003B	TW-3 @ 12'		8/31/2016 11:00:00 AM	8/31/2016
16081298-004A	TW-1		8/31/2016 11:15:00 AM	8/31/2016
16081298-005A	TW-3		8/31/2016 12:40:00 PM	8/31/2016
16081298-006A	SV-1		8/31/2016 12:28:00 PM	8/31/2016
16081298-007A	SV-2		8/31/2016 12:32:00 PM	8/31/2016
16081298-008A	SV-3		8/31/2016 12:34:00 PM	8/31/2016

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**CLIENT:** Apex Companies, LLC**Project:** PECO-216-78, Bright Cleaners-Franklin Centre, 7249 S. 76t**Work Order:** 16081298 Revision 0**CASE NARRATIVE**

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TO-15 results that are reported in mg/m<sup>3</sup> are calculated based on a temperature of 25°C, atmospheric pressure of 760 mm Hg, and the molecular weight of the analyte.

The TO-15 LCS analyzed 09/06/2016 had the following outside of control limits:

1,2,4-Trimethylbenzene: 133.6% (LCS) recovery (QC Limits 70-130%)

1,3-Dichlorobenzene: 131.2% (LCS) recovery (QC Limits 70-130%)

Ethylbenzene: 134.8% (LCS) recovery (QC Limits 70-130%)

Naphthalene: 138.8% (LCS) recovery (QC Limits 70-130%)

Total Xylenes: 132.5% (LCS) recovery (QC Limits 70-130%)

**STAT Analysis Corporation**

2242 West Harrison St., Suite 200, Chicago, IL 60612-3766

Tel: (312) 733-0551 Fax: (312) 733-2386 STATinfo@STATAnalysis.com

Accreditations: IEPA ELAP 100445; ORELAP IL300001; AIHA-LAP, LLC 101160; NVLAP LabCode 101202-0

Date Reported: September 09, 2016

**ANALYTICAL RESULTS**

Date Printed: September 09, 2016

CLIENT: Apex Companies, LLC

Work Order: 16081298 Revision 0

Project: PECO-216-78, Bright Cleaners-Franklin Centre, 7249

Lab ID: 16081298-001

Client Sample ID: TW-1 @ 14'

Collection Date: 8/31/2016 10:00:00 AM

Matrix: SOIL

Analyses	Result	RL	MDL	Qualifier	Units	DF	Date Analyzed
<b>Volatile Organic Compounds by GC/MS</b>		<b>SW5035/8260B</b>		Prep Date: <b>8/31/2016</b>		Analyst: <b>PS</b>	
Acetone	0.029	0.073	0.0022	JB	mg/Kg-dry	1	9/2/2016
Benzene	0.0018	0.0049	0.00019	J	mg/Kg-dry	1	9/2/2016
Bromodichloromethane	ND	0.0049	0.00039		mg/Kg-dry	1	9/2/2016
Bromoform	ND	0.0049	0.00039		mg/Kg-dry	1	9/2/2016
Bromomethane	ND	0.0097	0.00049		mg/Kg-dry	1	9/2/2016
2-Butanone	ND	0.073	0.0015		mg/Kg-dry	1	9/2/2016
Carbon disulfide	0.00019	0.049	0.00019	J	mg/Kg-dry	1	9/2/2016
Carbon tetrachloride	ND	0.0049	0.00029		mg/Kg-dry	1	9/2/2016
Chlorobenzene	ND	0.0049	0.00019		mg/Kg-dry	1	9/2/2016
Chloroethane	ND	0.0097	0.00039		mg/Kg-dry	1	9/2/2016
Chloroform	ND	0.0049	0.00019		mg/Kg-dry	1	9/2/2016
Chloromethane	ND	0.0097	0.00029		mg/Kg-dry	1	9/2/2016
Dibromochloromethane	ND	0.0049	0.00039		mg/Kg-dry	1	9/2/2016
1,1-Dichloroethane	ND	0.0049	0.00029		mg/Kg-dry	1	9/2/2016
1,2-Dichloroethane	ND	0.0049	0.00058		mg/Kg-dry	1	9/2/2016
1,1-Dichloroethene	ND	0.0049	0.00029		mg/Kg-dry	1	9/2/2016
cis-1,2-Dichloroethene	ND	0.0049	0.00029		mg/Kg-dry	1	9/2/2016
trans-1,2-Dichloroethene	ND	0.0049	0.00029		mg/Kg-dry	1	9/2/2016
1,2-Dichloropropane	ND	0.0049	0.00039		mg/Kg-dry	1	9/2/2016
cis-1,3-Dichloropropene	ND	0.0019	0.00019		mg/Kg-dry	1	9/2/2016
trans-1,3-Dichloropropene	ND	0.0019	0.00029		mg/Kg-dry	1	9/2/2016
Ethylbenzene	0.00026	0.0049	0.000097	J	mg/Kg-dry	1	9/2/2016
2-Hexanone	ND	0.019	0.00078		mg/Kg-dry	1	9/2/2016
4-Methyl-2-pentanone	ND	0.019	0.00029		mg/Kg-dry	1	9/2/2016
Methylene chloride	0.0019	0.0097	0.00078	JB	mg/Kg-dry	1	9/2/2016
Methyl tert-butyl ether	ND	0.0049	0.00019		mg/Kg-dry	1	9/2/2016
Styrene	ND	0.0049	0.00019		mg/Kg-dry	1	9/2/2016
1,1,2,2-Tetrachloroethane	ND	0.0049	0.00019		mg/Kg-dry	1	9/2/2016
Tetrachloroethene	ND	0.0049	0.00029		mg/Kg-dry	1	9/2/2016
Toluene	0.0017	0.0049	0.00019	J	mg/Kg-dry	1	9/2/2016
1,1,1-Trichloroethane	ND	0.0049	0.00019		mg/Kg-dry	1	9/2/2016
1,1,2-Trichloroethane	ND	0.0049	0.00049		mg/Kg-dry	1	9/2/2016
Trichloroethene	ND	0.0049	0.00019		mg/Kg-dry	1	9/2/2016
Vinyl chloride	ND	0.0049	0.00039		mg/Kg-dry	1	9/2/2016
Xylenes, Total	ND	0.015	0.00039		mg/Kg-dry	1	9/2/2016
<b>Percent Moisture</b>		<b>D2974</b>		Prep Date: <b>9/1/2016</b>		Analyst: <b>GH</b>	
Percent Moisture	13.5	0.2	0.1	*	wt%	1	9/2/2016

**Qualifiers:**

ND - Not Detected at the Reporting Limit

J - Analyte detected below reporting limit

B - Analyte detected in the associated Method Blank

HT - Sample received past holding time

\* - Non-accredited parameter

RL/MDL - Reporting Limit / Method Detection Limit for the analysis

S - Spike Recovery outside accepted recovery limits

R - RPD outside accepted recovery limits

E - Value above quantitation range

H - Holding time exceeded

**STAT Analysis Corporation**

2242 West Harrison St., Suite 200, Chicago, IL 60612-3766

Tel: (312) 733-0551 Fax: (312) 733-2386 STATinfo@STATAnalysis.com

Accreditations: IEPA ELAP 100445; ORELAP IL300001; AIHA-LAP, LLC 101160; NVLAP LabCode 101202-0

Date Reported: September 09, 2016

**ANALYTICAL RESULTS**

Date Printed: September 09, 2016

CLIENT: Apex Companies, LLC

Client Sample ID: TW-2 @ 11'

Work Order: 16081298 Revision 0

Collection Date: 8/31/2016 10:30:00 AM

Project: PECO-216-78, Bright Cleaners-Franklin Centre, 7249

Matrix: SOIL

Lab ID: 16081298-002

Analyses	Result	RL	MDL	Qualifier	Units	DF	Date Analyzed
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**Volatile Organic Compounds by GC/MS****SW5035/8260B**

Prep Date: 8/31/2016

Analyst: JNM

Acetone	ND	0.053	0.0016		mg/Kg-dry	1	9/6/2016
Benzene	0.00044	0.0035	0.00014	J	mg/Kg-dry	1	9/6/2016
Bromodichloromethane	ND	0.0035	0.00028		mg/Kg-dry	1	9/6/2016
Bromoform	ND	0.0035	0.00028		mg/Kg-dry	1	9/6/2016
Bromomethane	ND	0.0070	0.00035		mg/Kg-dry	1	9/6/2016
2-Butanone	ND	0.053	0.0011		mg/Kg-dry	1	9/6/2016
Carbon disulfide	0.00051	0.035	0.00014	J	mg/Kg-dry	1	9/6/2016
Carbon tetrachloride	ND	0.0035	0.00021		mg/Kg-dry	1	9/6/2016
Chlorobenzene	ND	0.0035	0.00014		mg/Kg-dry	1	9/6/2016
Chloroethane	ND	0.0070	0.00028		mg/Kg-dry	1	9/6/2016
Chloroform	ND	0.0035	0.00014		mg/Kg-dry	1	9/6/2016
Chloromethane	ND	0.0070	0.00021		mg/Kg-dry	1	9/6/2016
Dibromochloromethane	ND	0.0035	0.00028		mg/Kg-dry	1	9/6/2016
1,1-Dichloroethane	ND	0.0035	0.00021		mg/Kg-dry	1	9/6/2016
1,2-Dichloroethane	ND	0.0035	0.00042		mg/Kg-dry	1	9/6/2016
1,1-Dichloroethene	ND	0.0035	0.00021		mg/Kg-dry	1	9/6/2016
cis-1,2-Dichloroethene	ND	0.0035	0.00021		mg/Kg-dry	1	9/6/2016
trans-1,2-Dichloroethene	ND	0.0035	0.00021		mg/Kg-dry	1	9/6/2016
1,2-Dichloropropane	ND	0.0035	0.00028		mg/Kg-dry	1	9/6/2016
cis-1,3-Dichloropropene	ND	0.0014	0.00014		mg/Kg-dry	1	9/6/2016
trans-1,3-Dichloropropene	ND	0.0014	0.00021		mg/Kg-dry	1	9/6/2016
Ethylbenzene	ND	0.0035	0.00007		mg/Kg-dry	1	9/6/2016
2-Hexanone	ND	0.014	0.00056		mg/Kg-dry	1	9/6/2016
4-Methyl-2-pentanone	ND	0.014	0.00021		mg/Kg-dry	1	9/6/2016
Methylene chloride	ND	0.0070	0.00056		mg/Kg-dry	1	9/6/2016
Methyl tert-butyl ether	ND	0.0035	0.00014		mg/Kg-dry	1	9/6/2016
Styrene	ND	0.0035	0.00014		mg/Kg-dry	1	9/6/2016
1,1,2,2-Tetrachloroethane	ND	0.0035	0.00014		mg/Kg-dry	1	9/6/2016
Tetrachloroethene	ND	0.0035	0.00021		mg/Kg-dry	1	9/6/2016
Toluene	0.00046	0.0035	0.00014	J	mg/Kg-dry	1	9/6/2016
1,1,1-Trichloroethane	ND	0.0035	0.00014		mg/Kg-dry	1	9/6/2016
1,1,2-Trichloroethane	ND	0.0035	0.00035		mg/Kg-dry	1	9/6/2016
Trichloroethene	ND	0.0035	0.00014		mg/Kg-dry	1	9/6/2016
Vinyl chloride	ND	0.0035	0.00028		mg/Kg-dry	1	9/6/2016
Xylenes, Total	ND	0.011	0.00028		mg/Kg-dry	1	9/6/2016

**Percent Moisture****D2974**

Prep Date: 9/1/2016

Analyst: GH

Percent Moisture	6.7	0.2	0.1	*	wt%	1	9/2/2016
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**Qualifiers:**

ND - Not Detected at the Reporting Limit

RL/MDL - Reporting Limit / Method Detection Limit for the analysis

J - Analyte detected below reporting limit

S - Spike Recovery outside accepted recovery limits

B - Analyte detected in the associated Method Blank

R - RPD outside accepted recovery limits

HT - Sample received past holding time

E - Value above quantitation range

\* - Non-accredited parameter

H - Holding time exceeded

**STAT Analysis Corporation**

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Accreditations: IEPA ELAP 100445; ORELAP IL300001; AIHA-LAP, LLC 101160; NVLAP LabCode 101202-0

Date Reported: September 09, 2016

**ANALYTICAL RESULTS**

Date Printed: September 09, 2016

CLIENT: Apex Companies, LLC

Client Sample ID: TW-3 @ 12'

Work Order: 16081298 Revision 0

Collection Date: 8/31/2016 11:00:00 AM

Project: PECO-216-78, Bright Cleaners-Franklin Centre, 7249

Matrix: SOIL

Lab ID: 16081298-003

Analyses	Result	RL	MDL	Qualifier	Units	DF	Date Analyzed
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**Volatile Organic Compounds by GC/MS****SW5035/8260B**

Prep Date: 8/31/2016

Analyst: JNM

Acetone	ND	0.058	0.0018		mg/Kg-dry	1	9/6/2016
Benzene	0.00045	0.0039	0.00015	J	mg/Kg-dry	1	9/6/2016
Bromodichloromethane	ND	0.0039	0.00031		mg/Kg-dry	1	9/6/2016
Bromoform	ND	0.0039	0.00031		mg/Kg-dry	1	9/6/2016
Bromomethane	ND	0.0077	0.00039		mg/Kg-dry	1	9/6/2016
2-Butanone	ND	0.058	0.0012		mg/Kg-dry	1	9/6/2016
Carbon disulfide	ND	0.039	0.00015		mg/Kg-dry	1	9/6/2016
Carbon tetrachloride	ND	0.0039	0.00023		mg/Kg-dry	1	9/6/2016
Chlorobenzene	ND	0.0039	0.00015		mg/Kg-dry	1	9/6/2016
Chloroethane	ND	0.0077	0.00031		mg/Kg-dry	1	9/6/2016
Chloroform	ND	0.0039	0.00015		mg/Kg-dry	1	9/6/2016
Chloromethane	ND	0.0077	0.00023		mg/Kg-dry	1	9/6/2016
Dibromochloromethane	ND	0.0039	0.00031		mg/Kg-dry	1	9/6/2016
1,1-Dichloroethane	ND	0.0039	0.00023		mg/Kg-dry	1	9/6/2016
1,2-Dichloroethane	ND	0.0039	0.00046		mg/Kg-dry	1	9/6/2016
1,1-Dichloroethene	ND	0.0039	0.00023		mg/Kg-dry	1	9/6/2016
cis-1,2-Dichloroethene	ND	0.0039	0.00023		mg/Kg-dry	1	9/6/2016
trans-1,2-Dichloroethene	ND	0.0039	0.00023		mg/Kg-dry	1	9/6/2016
1,2-Dichloropropane	ND	0.0039	0.00031		mg/Kg-dry	1	9/6/2016
cis-1,3-Dichloropropene	ND	0.0015	0.00015		mg/Kg-dry	1	9/6/2016
trans-1,3-Dichloropropene	ND	0.0015	0.00023		mg/Kg-dry	1	9/6/2016
Ethylbenzene	ND	0.0039	0.000077		mg/Kg-dry	1	9/6/2016
2-Hexanone	ND	0.015	0.00062		mg/Kg-dry	1	9/6/2016
4-Methyl-2-pentanone	ND	0.015	0.00023		mg/Kg-dry	1	9/6/2016
Methylene chloride	ND	0.0077	0.00062		mg/Kg-dry	1	9/6/2016
Methyl tert-butyl ether	ND	0.0039	0.00015		mg/Kg-dry	1	9/6/2016
Styrene	ND	0.0039	0.00015		mg/Kg-dry	1	9/6/2016
1,1,2,2-Tetrachloroethane	ND	0.0039	0.00015		mg/Kg-dry	1	9/6/2016
Tetrachloroethene	ND	0.0039	0.00023		mg/Kg-dry	1	9/6/2016
Toluene	0.00041	0.0039	0.00015	J	mg/Kg-dry	1	9/6/2016
1,1,1-Trichloroethane	ND	0.0039	0.00015		mg/Kg-dry	1	9/6/2016
1,1,2-Trichloroethane	ND	0.0039	0.00039		mg/Kg-dry	1	9/6/2016
Trichloroethene	ND	0.0039	0.00015		mg/Kg-dry	1	9/6/2016
Vinyl chloride	ND	0.0039	0.00031		mg/Kg-dry	1	9/6/2016
Xylenes, Total	ND	0.012	0.00031		mg/Kg-dry	1	9/6/2016

**Percent Moisture****D2974**

Prep Date: 9/1/2016

Analyst: GH

Percent Moisture	11.1	0.2	0.1	*	wt%	1	9/2/2016
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**Qualifiers:**

ND - Not Detected at the Reporting Limit

RL/MDL - Reporting Limit / Method Detection Limit for the analysis

J - Analyte detected below reporting limit

S - Spike Recovery outside accepted recovery limits

B - Analyte detected in the associated Method Blank

R - RPD outside accepted recovery limits

HT - Sample received past holding time

E - Value above quantitation range

\* - Non-accredited parameter

H - Holding time exceeded

**STAT Analysis Corporation**

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Accreditations: IEPA ELAP 100445; ORELAP IL300001; AIHA-LAP, LLC 101160; NVLAP LabCode 101202-0

Date Reported: September 09, 2016

**ANALYTICAL RESULTS**

Date Printed: September 09, 2016

CLIENT: Apex Companies, LLC

Work Order: 16081298 Revision 0

Project: PECO-216-78, Bright Cleaners-Franklin Centre, 7249

Lab ID: 16081298-004

Client Sample ID: TW-1

Collection Date: 8/31/2016 11:15:00 AM

Matrix: AQUEOUS

Analyses	Result	RL	MDL	Qualifier	Units	DF	Date Analyzed
<b>Volatile Organic Compounds by GC/MS</b>	<b>SW8260B (SW5030B)</b>		Prep Date:		Analyst: RRS		
Acetone	ND	0.020	0.0031		mg/L	1	9/1/2016
Benzene	ND	0.00050	0.0002		mg/L	1	9/1/2016
Bromodichloromethane	ND	0.00050	0.0002		mg/L	1	9/1/2016
Bromoform	ND	0.0010	0.0003		mg/L	1	9/1/2016
Bromomethane	ND	0.0050	0.002		mg/L	1	9/1/2016
2-Butanone	ND	0.010	0.0016		mg/L	1	9/1/2016
Carbon disulfide	ND	0.0050	0.0003		mg/L	1	9/1/2016
Carbon tetrachloride	ND	0.00050	0.001		mg/L	1	9/1/2016
Chlorobenzene	ND	0.00050	0.0002		mg/L	1	9/1/2016
Chloroethane	ND	0.0050	0.0005		mg/L	1	9/1/2016
Chloroform	ND	0.00050	0.0001		mg/L	1	9/1/2016
Chloromethane	ND	0.0050	0.0003		mg/L	1	9/1/2016
Dibromochloromethane	ND	0.00050	0.0002		mg/L	1	9/1/2016
1,1-Dichloroethane	ND	0.00050	0.0002		mg/L	1	9/1/2016
1,2-Dichloroethane	ND	0.0010	0.0002		mg/L	1	9/1/2016
1,1-Dichloroethene	ND	0.0010	0.0004		mg/L	1	9/1/2016
cis-1,2-Dichloroethene	ND	0.0010	0.0002		mg/L	1	9/1/2016
trans-1,2-Dichloroethene	ND	0.0010	0.0005		mg/L	1	9/1/2016
1,2-Dichloropropane	ND	0.0010	0.0001		mg/L	1	9/1/2016
cis-1,3-Dichloropropene	ND	0.0010	0.0002		mg/L	1	9/1/2016
trans-1,3-Dichloropropene	ND	0.0010	0.0001		mg/L	1	9/1/2016
Ethylbenzene	ND	0.00050	0.0003		mg/L	1	9/1/2016
2-Hexanone	ND	0.010	0.0002		mg/L	1	9/1/2016
4-Methyl-2-pentanone	ND	0.010	0.0007		mg/L	1	9/1/2016
Methylene chloride	ND	0.0050	0.0002		mg/L	1	9/1/2016
Methyl tert-butyl ether	ND	0.00050	0.0003		mg/L	1	9/1/2016
Styrene	ND	0.0010	0.0003		mg/L	1	9/1/2016
1,1,2,2-Tetrachloroethane	ND	0.00050	0.0001		mg/L	1	9/1/2016
Tetrachloroethene	ND	0.0010	0.0003		mg/L	1	9/1/2016
Toluene	ND	0.00050	0.0004		mg/L	1	9/1/2016
1,1,1-Trichloroethane	ND	0.0010	0.0002		mg/L	1	9/1/2016
1,1,2-Trichloroethane	ND	0.00050	0.0001		mg/L	1	9/1/2016
Trichloroethene	ND	0.0010	0.0003		mg/L	1	9/1/2016
Vinyl chloride	ND	0.0010	0.0003		mg/L	1	9/1/2016
Xylenes, Total	ND	0.0030	0.001		mg/L	1	9/1/2016

<b>Qualifiers:</b>	ND - Not Detected at the Reporting Limit	RL/MDL - Reporting Limit / Method Detection Limit for the analysis
	J - Analyte detected below reporting limit	S - Spike Recovery outside accepted recovery limits
	B - Analyte detected in the associated Method Blank	R - RPD outside accepted recovery limits
	HT - Sample received past holding time	E - Value above quantitation range
	* - Non-accredited parameter	H - Holding time exceeded



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Accreditations: IEPA ELAP 100445; ORELAP IL300001; AIHA-LAP, LLC 101160; NVLAP LabCode 101202-0

Date Reported: September 09, 2016

**ANALYTICAL RESULTS**

Date Printed: September 09, 2016

CLIENT: Apex Companies, LLC

Work Order: 16081298 Revision 0

Project: PECO-216-78, Bright Cleaners-Franklin Centre, 7249

Lab ID: 16081298-005

Client Sample ID: TW-3

Collection Date: 8/31/2016 12:40:00 PM

Matrix: AQUEOUS

Analyses	Result	RL	MDL	Qualifier	Units	DF	Date Analyzed
<b>Volatile Organic Compounds by GC/MS</b>		<b>SW8260B (SW5030B)</b>		Prep Date:		Analyst: RRS	
Acetone	0.012	0.020	0.0031	J	mg/L	1	9/1/2016
Benzene	0.00024	0.00050	0.0002	J	mg/L	1	9/1/2016
Bromodichloromethane	ND	0.00050	0.0002		mg/L	1	9/1/2016
Bromoform	ND	0.0010	0.0003		mg/L	1	9/1/2016
Bromomethane	ND	0.0050	0.002		mg/L	1	9/1/2016
2-Butanone	ND	0.010	0.0016		mg/L	1	9/1/2016
Carbon disulfide	0.00034	0.0050	0.0003	J	mg/L	1	9/1/2016
Carbon tetrachloride	ND	0.00050	0.001		mg/L	1	9/1/2016
Chlorobenzene	ND	0.00050	0.0002		mg/L	1	9/1/2016
Chloroethane	ND	0.0050	0.0005		mg/L	1	9/1/2016
Chloroform	ND	0.00050	0.0001		mg/L	1	9/1/2016
Chloromethane	ND	0.0050	0.0003		mg/L	1	9/1/2016
Dibromochloromethane	ND	0.00050	0.0002		mg/L	1	9/1/2016
1,1-Dichloroethane	ND	0.00050	0.0002		mg/L	1	9/1/2016
1,2-Dichloroethane	ND	0.0010	0.0002		mg/L	1	9/1/2016
1,1-Dichloroethene	ND	0.0010	0.0004		mg/L	1	9/1/2016
cis-1,2-Dichloroethene	ND	0.0010	0.0002		mg/L	1	9/1/2016
trans-1,2-Dichloroethene	ND	0.0010	0.0005		mg/L	1	9/1/2016
1,2-Dichloropropane	ND	0.0010	0.0001		mg/L	1	9/1/2016
cis-1,3-Dichloropropene	ND	0.0010	0.0002		mg/L	1	9/1/2016
trans-1,3-Dichloropropene	ND	0.0010	0.0001		mg/L	1	9/1/2016
Ethylbenzene	ND	0.00050	0.0003		mg/L	1	9/1/2016
2-Hexanone	ND	0.010	0.0002		mg/L	1	9/1/2016
4-Methyl-2-pentanone	ND	0.010	0.0007		mg/L	1	9/1/2016
Methylene chloride	ND	0.0050	0.0002		mg/L	1	9/1/2016
Methyl tert-butyl ether	ND	0.00050	0.0003		mg/L	1	9/1/2016
Styrene	ND	0.0010	0.0003		mg/L	1	9/1/2016
1,1,2,2-Tetrachloroethane	ND	0.00050	0.0001		mg/L	1	9/1/2016
Tetrachloroethene	ND	0.0010	0.0003		mg/L	1	9/1/2016
Toluene	ND	0.00050	0.0004		mg/L	1	9/1/2016
1,1,1-Trichloroethane	ND	0.0010	0.0002		mg/L	1	9/1/2016
1,1,2-Trichloroethane	ND	0.00050	0.0001		mg/L	1	9/1/2016
Trichloroethene	ND	0.0010	0.0003		mg/L	1	9/1/2016
Vinyl chloride	ND	0.0010	0.0003		mg/L	1	9/1/2016
Xylenes, Total	ND	0.0030	0.001		mg/L	1	9/1/2016

**Qualifiers:**

ND - Not Detected at the Reporting Limit

J - Analyte detected below reporting limit

B - Analyte detected in the associated Method Blank

HT - Sample received past holding time

\* - Non-accredited parameter

RL/MDL - Reporting Limit / Method Detection Limit for the analysis

S - Spike Recovery outside accepted recovery limits

R - RPD outside accepted recovery limits

E - Value above quantitation range

H - Holding time exceeded

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Accreditations: IEPA ELAP 100445; ORELAP IL300001; AIHA-LAP, LLC 101160; NVLAP LabCode 101202-0

Date Reported: September 09, 2016

**ANALYTICAL RESULTS**

Date Printed: September 09, 2016

CLIENT: Apex Companies, LLC

Client Sample ID: SV-1

Work Order: 16081298 Revision 0

Collection Date: 8/31/2016 12:28:00 PM

Project: PECO-216-78, Bright Cleaners-Franklin Centre, 7249

Matrix: AIR

Lab ID: 16081298-006

Analyses	Result	RL	MDL	Qualifier	Units	DF	Date Analyzed
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Volatile Organic Compounds in Air by GC/MS	TO-15	Prep Date: 9/2/2016			Analyst: NLM		
1,1,1-Trichloroethane	ND	0.46	0.024		ppbv	1	9/6/2016
1,1,2,2-Tetrachloroethane	ND	0.46	0.032		ppbv	1	9/6/2016
1,1,2-Trichloroethane	ND	0.46	0.045		ppbv	1	9/6/2016
1,1-Dichloroethane	ND	0.46	0.022		ppbv	1	9/6/2016
1,1-Dichloroethene	ND	0.46	0.029		ppbv	1	9/6/2016
1,2,4-Trichlorobenzene	0.25	0.46	0.1	J	ppbv	1	9/6/2016
1,2,4-Trimethylbenzene	1.0	0.46	0.042		ppbv	1	9/6/2016
1,2-Dibromoethane	ND	0.46	0.052		ppbv	1	9/6/2016
1,2-Dichlorobenzene	0.069	0.46	0.038	J	ppbv	1	9/6/2016
1,2-Dichloroethane	ND	0.46	0.053		ppbv	1	9/6/2016
1,2-Dichloropropane	ND	0.46	0.032		ppbv	1	9/6/2016
1,3,5-Trimethylbenzene	0.28	0.46	0.032	J	ppbv	1	9/6/2016
1,3-Butadiene	ND	0.46	0.059		ppbv	1	9/6/2016
1,3-Dichlorobenzene	0.32	0.46	0.039	J	ppbv	1	9/6/2016
1,4-Dichlorobenzene	ND	0.46	0.049		ppbv	1	9/6/2016
1,4-Dioxane	ND	1.2	0.13		ppbv	1	9/6/2016
2-Butanone	2.3	1.2	0.11		ppbv	1	9/6/2016
2-Hexanone	0.76	2.3	0.13	J	ppbv	1	9/6/2016
4-Ethyltoluene	0.28	0.46	0.048	J	ppbv	1	9/6/2016
4-Methyl-2-pentanone	3.0	2.3	0.069		ppbv	1	9/6/2016
Acetone	34	4.6	0.16	*	ppbv	1	9/6/2016
Benzene	0.92	0.46	0.033		ppbv	1	9/6/2016
Benzyl chloride	ND	1.2	0.46		ppbv	1	9/6/2016
Bromodichloromethane	ND	0.46	0.032		ppbv	1	9/6/2016
Bromoform	ND	1.2	0.024		ppbv	1	9/6/2016
Bromomethane	0.14	1.2	0.054	J	ppbv	1	9/6/2016
Carbon disulfide	0.16	0.46	0.12	J	ppbv	1	9/6/2016
Carbon tetrachloride	ND	0.46	0.064		ppbv	1	9/6/2016
Chlorobenzene	ND	0.46	0.029		ppbv	1	9/6/2016
Chloroethane	ND	0.46	0.46		ppbv	1	9/6/2016
Chloroform	0.046	0.46	0.025	J	ppbv	1	9/6/2016
Chloromethane	ND	1.2	0.11		ppbv	1	9/6/2016
cis-1,2-Dichloroethene	0.44	0.46	0.034	J	ppbv	1	9/6/2016
cis-1,3-Dichloropropene	ND	0.46	0.054		ppbv	1	9/6/2016
Cyclohexane	0.71	0.46	0.098		ppbv	1	9/6/2016
Dibromochloromethane	ND	0.46	0.037		ppbv	1	9/6/2016
Dichlorodifluoromethane	0.46	0.46	0.015		ppbv	1	9/6/2016
Ethyl acetate	ND	1.2	0.092		ppbv	1	9/6/2016

ND - Not Detected at the Reporting Limit

RL/MDL - Reporting Limit / Method Detection Limit for the analysis

Qualifiers: J - Analyte detected below reporting limit

S - Spike Recovery outside accepted recovery limits

B - Analyte detected in the associated Method Blank

R - RPD outside accepted recovery limits

HT - Sample received past holding time

E - Value above quantitation range

\* - Non-accredited parameter

H - Holding time exceeded

**STAT Analysis Corporation**

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Accreditations: IEPA ELAP 100445; ORELAP IL300001; AIHA-LAP, LLC 101160; NVLAP LabCode 101202-0

Date Reported: September 09, 2016

**ANALYTICAL RESULTS**

Date Printed: September 09, 2016

CLIENT: Apex Companies, LLC

Work Order: 16081298 Revision 0

Project: PECO-216-78, Bright Cleaners-Franklin Centre, 7249

Lab ID: 16081298-006

Client Sample ID: SV-1

Collection Date: 8/31/2016 12:28:00 PM

Matrix: AIR

Analyses	Result	RL	MDL	Qualifier	Units	DF	Date Analyzed
<b>Volatile Organic Compounds in Air by GC/MS</b>		<b>TO-15</b>		Prep Date: 9/2/2016		Analyst: NLM	
Ethylbenzene	0.90	0.46	0.036		ppbv	1	9/6/2016
Freon-113	ND	0.46	0.017		ppbv	1	9/6/2016
Freon-114	ND	2.3	0.066		ppbv	1	9/6/2016
Heptane	1.3	0.46	0.045		ppbv	1	9/6/2016
Hexachlorobutadiene	0.069	0.46	0.052	J	ppbv	1	9/6/2016
Hexane	1.8	1.2	0.032		ppbv	1	9/6/2016
Isopropyl Alcohol	130	58	4.5		ppbv	25	9/7/2016
m,p-Xylene	2.0	0.92	0.068		ppbv	1	9/6/2016
Methyl tert-butyl ether	0.069	0.46	0.038	J	ppbv	1	9/6/2016
Methylene chloride	0.28	4.6	0.25	J	ppbv	1	9/6/2016
Naphthalene	0.53	0.46	0.13		ppbv	1	9/6/2016
o-Xylene	0.83	0.46	0.029		ppbv	1	9/6/2016
Propene	3.7	4.6	0.46	J	ppbv	1	9/6/2016
Styrene	0.18	0.46	0.049	J	ppbv	1	9/6/2016
Tetrachloroethene	1800	12	0.83		ppbv	25	9/7/2016
Tetrahydrofuran	2.8	1.2	0.1		ppbv	1	9/6/2016
Toluene	22	0.46	0.052		ppbv	1	9/6/2016
trans-1,2-Dichloroethene	ND	0.46	0.032		ppbv	1	9/6/2016
trans-1,3-Dichloropropene	ND	0.46	0.063		ppbv	1	9/6/2016
Trichloroethene	4.0	0.46	0.035		ppbv	1	9/6/2016
Trichlorofluoromethane	0.28	0.46	0.029	J	ppbv	1	9/6/2016
Vinyl acetate	ND	4.6	0.062		ppbv	1	9/6/2016
Vinyl chloride	ND	0.46	0.039		ppbv	1	9/6/2016
Xylenes, Total	2.9	1.4	0.096		ppbv	1	9/6/2016

<b>Volatile Organic Compounds in Air by GC/MS</b>		<b>TO-15</b>		Prep Date: 9/2/2016		Analyst: NLM	
1,1,1-Trichloroethane	ND	0.0025	0.00013		mg/m <sup>3</sup>	1	9/6/2016
1,1,2,2-Tetrachloroethane	ND	0.0032	0.00022		mg/m <sup>3</sup>	1	9/6/2016
1,1,2-Trichloroethane	ND	0.0025	0.00024		mg/m <sup>3</sup>	1	9/6/2016
1,1-Dichloroethane	ND	0.0019	0.00009		mg/m <sup>3</sup>	1	9/6/2016
1,1-Dichloroethene	ND	0.0018	0.00012		mg/m <sup>3</sup>	1	9/6/2016
1,2,4-Trichlorobenzene	0.0019	0.0034	0.00076	J	mg/m <sup>3</sup>	1	9/6/2016
1,2,4-Trimethylbenzene	0.0051	0.0023	0.00021		mg/m <sup>3</sup>	1	9/6/2016
1,2-Dibromoethane	ND	0.0035	0.0004		mg/m <sup>3</sup>	1	9/6/2016
1,2-Dichlorobenzene	0.00042	0.0028	0.00023	J	mg/m <sup>3</sup>	1	9/6/2016
1,2-Dichloroethane	ND	0.0019	0.00021		mg/m <sup>3</sup>	1	9/6/2016
1,2-Dichloropropane	ND	0.0021	0.00015		mg/m <sup>3</sup>	1	9/6/2016
1,3,5-Trimethylbenzene	0.0014	0.0023	0.00016	J	mg/m <sup>3</sup>	1	9/6/2016
1,3-Butadiene	ND	0.0010	0.00013		mg/m <sup>3</sup>	1	9/6/2016

<b>Qualifiers:</b>	ND - Not Detected at the Reporting Limit	RL/MDL - Reporting Limit / Method Detection Limit for the analysis
	J - Analyte detected below reporting limit	S - Spike Recovery outside accepted recovery limits
	B - Analyte detected in the associated Method Blank	R - RPD outside accepted recovery limits
	HT - Sample received past holding time	E - Value above quantitation range
	* - Non-accredited parameter	H - Holding time exceeded

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Date Reported: September 09, 2016

**ANALYTICAL RESULTS**

Date Printed: September 09, 2016

CLIENT: Apex Companies, LLC

Client Sample ID: SV-1

Work Order: 16081298 Revision 0

Collection Date: 8/31/2016 12:28:00 PM

Project: PECO-216-78, Bright Cleaners-Franklin Centre, 7249

Matrix: AIR

Lab ID: 16081298-006

Analyses	Result	RL	MDL	Qualifier	Units	DF	Date Analyzed
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Volatile Organic Compounds in Air by GC/MS	TO-15	Prep Date: 9/2/2016			Analyst: NLM		
1,3-Dichlorobenzene	0.0019	0.0028	0.00023	J	mg/m <sup>3</sup>	1	9/6/2016
1,4-Dichlorobenzene	ND	0.0028	0.00029		mg/m <sup>3</sup>	1	9/6/2016
1,4-Dioxane	ND	0.0041	0.00048		mg/m <sup>3</sup>	1	9/6/2016
2-Butanone	0.0067	0.0034	0.00031		mg/m <sup>3</sup>	1	9/6/2016
2-Hexanone	0.0031	0.0094	0.00051	J	mg/m <sup>3</sup>	1	9/6/2016
4-Ethyltoluene	0.0014	0.0023	0.00024	J	mg/m <sup>3</sup>	1	9/6/2016
4-Methyl-2-pentanone	0.012	0.0094	0.00028		mg/m <sup>3</sup>	1	9/6/2016
Acetone	0.082	0.011	0.00039	*	mg/m <sup>3</sup>	1	9/6/2016
Benzene	0.0029	0.0015	0.00011		mg/m <sup>3</sup>	1	9/6/2016
Benzyl chloride	ND	0.0060	0.0024		mg/m <sup>3</sup>	1	9/6/2016
Bromodichloromethane	ND	0.0031	0.00021		mg/m <sup>3</sup>	1	9/6/2016
Bromoform	ND	0.012	0.00025		mg/m <sup>3</sup>	1	9/6/2016
Bromomethane	0.00054	0.0045	0.00021	J	mg/m <sup>3</sup>	1	9/6/2016
Carbon disulfide	0.00050	0.0014	0.00036	J	mg/m <sup>3</sup>	1	9/6/2016
Carbon tetrachloride	ND	0.0029	0.00041		mg/m <sup>3</sup>	1	9/6/2016
Chlorobenzene	ND	0.0021	0.00013		mg/m <sup>3</sup>	1	9/6/2016
Chloroethane	ND	0.0012	0.0012		mg/m <sup>3</sup>	1	9/6/2016
Chloroform	0.00022	0.0022	0.00012	J	mg/m <sup>3</sup>	1	9/6/2016
Chloromethane	ND	0.0024	0.00024		mg/m <sup>3</sup>	1	9/6/2016
cis-1,2-Dichloroethene	0.0017	0.0018	0.00013	J	mg/m <sup>3</sup>	1	9/6/2016
cis-1,3-Dichloropropene	ND	0.0021	0.00025		mg/m <sup>3</sup>	1	9/6/2016
Cyclohexane	0.0025	0.0016	0.00034		mg/m <sup>3</sup>	1	9/6/2016
Dibromochloromethane	ND	0.0039	0.00032		mg/m <sup>3</sup>	1	9/6/2016
Dichlorodifluoromethane	0.0023	0.0022	0.000074		mg/m <sup>3</sup>	1	9/6/2016
Ethyl acetate	ND	0.0041	0.00033		mg/m <sup>3</sup>	1	9/6/2016
Ethylbenzene	0.0039	0.0020	0.00016		mg/m <sup>3</sup>	1	9/6/2016
Freon-113	ND	0.0035	0.00013		mg/m <sup>3</sup>	1	9/6/2016
Freon-114	ND	0.016	0.00046		mg/m <sup>3</sup>	1	9/6/2016
Heptane	0.0055	0.0019	0.00019		mg/m <sup>3</sup>	1	9/6/2016
Hexachlorobutadiene	0.00074	0.0049	0.00055	J	mg/m <sup>3</sup>	1	9/6/2016
Hexane	0.0064	0.0041	0.00011		mg/m <sup>3</sup>	1	9/6/2016
Isopropyl Alcohol	0.31	0.14	0.011		mg/m <sup>3</sup>	25	9/7/2016
m,p-Xylene	0.0088	0.0040	0.00029		mg/m <sup>3</sup>	1	9/6/2016
Methyl tert-butyl ether	0.00025	0.0017	0.00014	J	mg/m <sup>3</sup>	1	9/6/2016
Methylene chloride	0.00096	0.016	0.00086	J	mg/m <sup>3</sup>	1	9/6/2016
Naphthalene	0.0028	0.0024	0.00069		mg/m <sup>3</sup>	1	9/6/2016
o-Xylene	0.0036	0.0020	0.00013		mg/m <sup>3</sup>	1	9/6/2016
Propene	0.0063	0.0079	0.00079	J	mg/m <sup>3</sup>	1	9/6/2016

**Qualifiers:**

ND - Not Detected at the Reporting Limit

RL/MDL - Reporting Limit / Method Detection Limit for the analysis

J - Analyte detected below reporting limit

S - Spike Recovery outside accepted recovery limits

B - Analyte detected in the associated Method Blank

R - RPD outside accepted recovery limits

HT - Sample received past holding time

E - Value above quantitation range

\* - Non-accredited parameter

H - Holding time exceeded

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Date Reported: September 09, 2016

**ANALYTICAL RESULTS**

Date Printed: September 09, 2016

CLIENT: Apex Companies, LLC

Work Order: 16081298 Revision 0

Project: PECO-216-78, Bright Cleaners-Franklin Centre, 7249

Lab ID: 16081298-006

Client Sample ID: SV-1

Collection Date: 8/31/2016 12:28:00 PM

Matrix: AIR

Analyses	Result	RL	MDL	Qualifier	Units	DF	Date Analyzed
<b>Volatile Organic Compounds in Air by GC/MS</b>		<b>TO-15</b>		Prep Date: 9/2/2016		Analyst: NLM	
Styrene	0.00078	0.0020	0.00021	J	mg/m <sup>3</sup>	1	9/6/2016
Tetrachloroethene	12	0.078	0.0056		mg/m <sup>3</sup>	25	9/7/2016
Tetrahydrofuran	0.0084	0.0034	0.00031		mg/m <sup>3</sup>	1	9/6/2016
Toluene	0.081	0.0017	0.0002		mg/m <sup>3</sup>	1	9/6/2016
trans-1,2-Dichloroethene	ND	0.0018	0.00013		mg/m <sup>3</sup>	1	9/6/2016
trans-1,3-Dichloropropene	ND	0.0021	0.00028		mg/m <sup>3</sup>	1	9/6/2016
Trichloroethene	0.022	0.0025	0.00019		mg/m <sup>3</sup>	1	9/6/2016
Trichlorofluoromethane	0.0016	0.0026	0.00016	J	mg/m <sup>3</sup>	1	9/6/2016
Vinyl acetate	ND	0.016	0.00022		mg/m <sup>3</sup>	1	9/6/2016
Vinyl chloride	ND	0.0012	0.000099		mg/m <sup>3</sup>	1	9/6/2016
Xylenes, Total	0.012	0.0060	0.00042		mg/m <sup>3</sup>	1	9/6/2016

**Qualifiers:**

ND - Not Detected at the Reporting Limit

J - Analyte detected below reporting limit

B - Analyte detected in the associated Method Blank

HT - Sample received past holding time

\* - Non-accredited parameter

RL/MDL - Reporting Limit / Method Detection Limit for the analysis

S - Spike Recovery outside accepted recovery limits

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E - Value above quantitation range

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Date Reported: September 09, 2016

**ANALYTICAL RESULTS**

Date Printed: September 09, 2016

CLIENT: Apex Companies, LLC

Client Sample ID: SV-2

Work Order: 16081298 Revision 0

Collection Date: 8/31/2016 12:32:00 PM

Project: PECO-216-78, Bright Cleaners-Franklin Centre, 7249

Matrix: AIR

Lab ID: 16081298-007

Analyses	Result	RL	MDL	Qualifier	Units	DF	Date Analyzed
<b>Volatile Organic Compounds in Air by GC/MS</b>		<b>TO-15</b>		Prep Date: 9/2/2016		Analyst: NLM	
1,1,1-Trichloroethane	ND	0.37	0.019		ppbv	1	9/6/2016
1,1,2,2-Tetrachloroethane	ND	0.37	0.026		ppbv	1	9/6/2016
1,1,2-Trichloroethane	ND	0.37	0.036		ppbv	1	9/6/2016
1,1-Dichloroethane	ND	0.37	0.018		ppbv	1	9/6/2016
1,1-Dichloroethene	ND	0.37	0.023		ppbv	1	9/6/2016
1,2,4-Trichlorobenzene	0.13	0.37	0.082	J	ppbv	1	9/6/2016
1,2,4-Trimethylbenzene	0.80	0.37	0.034		ppbv	1	9/6/2016
1,2-Dibromoethane	ND	0.37	0.042		ppbv	1	9/6/2016
1,2-Dichlorobenzene	ND	0.37	0.031		ppbv	1	9/6/2016
1,2-Dichloroethane	ND	0.37	0.043		ppbv	1	9/6/2016
1,2-Dichloropropane	ND	0.37	0.025		ppbv	1	9/6/2016
1,3,5-Trimethylbenzene	0.19	0.37	0.026	J	ppbv	1	9/6/2016
1,3-Butadiene	ND	0.37	0.048		ppbv	1	9/6/2016
1,3-Dichlorobenzene	0.19	0.37	0.031	J	ppbv	1	9/6/2016
1,4-Dichlorobenzene	ND	0.37	0.039		ppbv	1	9/6/2016
1,4-Dioxane	0.74	0.93	0.11	J	ppbv	1	9/6/2016
2-Butanone	2.6	0.93	0.085		ppbv	1	9/6/2016
2-Hexanone	0.70	1.9	0.1	J	ppbv	1	9/6/2016
4-Ethyltoluene	0.19	0.37	0.039	J	ppbv	1	9/6/2016
4-Methyl-2-pentanone	1.5	1.9	0.056	J	ppbv	1	9/6/2016
Acetone	61	3.7	0.13	*	ppbv	1	9/6/2016
Benzene	0.45	0.37	0.027		ppbv	1	9/6/2016
Benzyl chloride	ND	0.93	0.37		ppbv	1	9/6/2016
Bromodichloromethane	ND	0.37	0.025		ppbv	1	9/6/2016
Bromoform	ND	0.93	0.02		ppbv	1	9/6/2016
Bromomethane	0.13	0.93	0.043	J	ppbv	1	9/6/2016
Carbon disulfide	ND	0.37	0.093		ppbv	1	9/6/2016
Carbon tetrachloride	ND	0.37	0.052		ppbv	1	9/6/2016
Chlorobenzene	ND	0.37	0.023		ppbv	1	9/6/2016
Chloroethane	ND	0.37	0.37		ppbv	1	9/6/2016
Chloroform	0.074	0.37	0.02	J	ppbv	1	9/6/2016
Chloromethane	ND	0.93	0.092		ppbv	1	9/6/2016
cis-1,2-Dichloroethene	4.5	0.37	0.027		ppbv	1	9/6/2016
cis-1,3-Dichloropropene	ND	0.37	0.044		ppbv	1	9/6/2016
Cyclohexane	0.37	0.37	0.079		ppbv	1	9/6/2016
Dibromochloromethane	ND	0.37	0.03		ppbv	1	9/6/2016
Dichlorodifluoromethane	0.46	0.37	0.012		ppbv	1	9/6/2016
Ethyl acetate	ND	0.93	0.074		ppbv	1	9/6/2016

ND - Not Detected at the Reporting Limit

RL/MDL - Reporting Limit / Method Detection Limit for the analysis

Qualifiers: J - Analyte detected below reporting limit

S - Spike Recovery outside accepted recovery limits

B - Analyte detected in the associated Method Blank

R - RPD outside accepted recovery limits

HT - Sample received past holding time

E - Value above quantitation range

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H - Holding time exceeded

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Date Reported: September 09, 2016

**ANALYTICAL RESULTS**

Date Printed: September 09, 2016

CLIENT: Apex Companies, LLC

Work Order: 16081298 Revision 0

Project: PECO-216-78, Bright Cleaners-Franklin Centre, 7249

Lab ID: 16081298-007

Client Sample ID: SV-2

Collection Date: 8/31/2016 12:32:00 PM

Matrix: AIR

Analyses	Result	RL	MDL	Qualifier	Units	DF	Date Analyzed
<b>Volatile Organic Compounds in Air by GC/MS</b>		<b>TO-15</b>		Prep Date: 9/2/2016		Analyst: NLM	
Ethylbenzene	0.65	0.37	0.029		ppbv	1	9/6/2016
Freon-113	0.074	0.37	0.014	J	ppbv	1	9/6/2016
Freon-114	ND	1.9	0.053		ppbv	1	9/6/2016
Heptane	0.65	0.37	0.037		ppbv	1	9/6/2016
Hexachlorobutadiene	ND	0.37	0.042		ppbv	1	9/6/2016
Hexane	0.76	0.93	0.026	J	ppbv	1	9/6/2016
Isopropyl Alcohol	43	1.9	0.15		ppbv	1	9/6/2016
m,p-Xylene	1.4	0.74	0.055		ppbv	1	9/6/2016
Methyl tert-butyl ether	0.093	0.37	0.03	J	ppbv	1	9/6/2016
Methylene chloride	ND	3.7	0.2		ppbv	1	9/6/2016
Naphthalene	0.33	0.37	0.11	J	ppbv	1	9/6/2016
o-Xylene	0.56	0.37	0.024		ppbv	1	9/6/2016
Propene	2.1	3.7	0.37	J	ppbv	1	9/6/2016
Styrene	0.074	0.37	0.039	J	ppbv	1	9/6/2016
Tetrachloroethene	6500	190	13		ppbv	500	9/7/2016
Tetrahydrofuran	1.4	0.93	0.084		ppbv	1	9/6/2016
Toluene	12	0.37	0.042		ppbv	1	9/6/2016
trans-1,2-Dichloroethene	0.037	0.37	0.025	J	ppbv	1	9/6/2016
trans-1,3-Dichloropropene	ND	0.37	0.05		ppbv	1	9/6/2016
Trichloroethene	7.6	0.37	0.028		ppbv	1	9/6/2016
Trichlorofluoromethane	0.28	0.37	0.023	J	ppbv	1	9/6/2016
Vinyl acetate	ND	3.7	0.05		ppbv	1	9/6/2016
Vinyl chloride	ND	0.37	0.031		ppbv	1	9/6/2016
Xylenes, Total	1.9	1.1	0.078		ppbv	1	9/6/2016

<b>Volatile Organic Compounds in Air by GC/MS</b>		<b>TO-15</b>		Prep Date: 9/2/2016		Analyst: NLM	
1,1,1-Trichloroethane	ND	0.0020	0.00011		mg/m <sup>3</sup>	1	9/6/2016
1,1,2,2-Tetrachloroethane	ND	0.0025	0.00018		mg/m <sup>3</sup>	1	9/6/2016
1,1,2-Trichloroethane	ND	0.0020	0.0002		mg/m <sup>3</sup>	1	9/6/2016
1,1-Dichloroethane	ND	0.0015	0.000073		mg/m <sup>3</sup>	1	9/6/2016
1,1-Dichloroethene	ND	0.0015	0.000093		mg/m <sup>3</sup>	1	9/6/2016
1,2,4-Trichlorobenzene	0.00096	0.0028	0.00061	J	mg/m <sup>3</sup>	1	9/6/2016
1,2,4-Trimethylbenzene	0.0039	0.0018	0.00017		mg/m <sup>3</sup>	1	9/6/2016
1,2-Dibromoethane	ND	0.0029	0.00032		mg/m <sup>3</sup>	1	9/6/2016
1,2-Dichlorobenzene	ND	0.0022	0.00019		mg/m <sup>3</sup>	1	9/6/2016
1,2-Dichloroethane	ND	0.0015	0.00017		mg/m <sup>3</sup>	1	9/6/2016
1,2-Dichloropropane	ND	0.0017	0.00012		mg/m <sup>3</sup>	1	9/6/2016
1,3,5-Trimethylbenzene	0.00091	0.0018	0.00013	J	mg/m <sup>3</sup>	1	9/6/2016
1,3-Butadiene	ND	0.00082	0.00011		mg/m <sup>3</sup>	1	9/6/2016

<b>Qualifiers:</b>	ND - Not Detected at the Reporting Limit	RL/MDL - Reporting Limit / Method Detection Limit for the analysis
	J - Analyte detected below reporting limit	S - Spike Recovery outside accepted recovery limits
	B - Analyte detected in the associated Method Blank	R - RPD outside accepted recovery limits
	HT - Sample received past holding time	E - Value above quantitation range
	* - Non-accredited parameter	H - Holding time exceeded



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Accreditations: IEPA ELAP 100445; ORELAP IL300001; AIHA-LAP, LLC 101160; NVLAP LabCode 101202-0

Date Reported: September 09, 2016

**ANALYTICAL RESULTS**

Date Printed: September 09, 2016

CLIENT: Apex Companies, LLC

Client Sample ID: SV-2

Work Order: 16081298 Revision 0

Collection Date: 8/31/2016 12:32:00 PM

Project: PECO-216-78, Bright Cleaners-Franklin Centre, 7249

Matrix: AIR

Lab ID: 16081298-007

Analyses	Result	RL	MDL	Qualifier	Units	DF	Date Analyzed
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Volatile Organic Compounds in Air by GC/MS			TO-15	Prep Date: 9/2/2016			Analyst: NLM
1,3-Dichlorobenzene	0.0011	0.0022	0.00019	J	mg/m <sup>3</sup>	1	9/6/2016
1,4-Dichlorobenzene	ND	0.0022	0.00024		mg/m <sup>3</sup>	1	9/6/2016
1,4-Dioxane	0.0027	0.0033	0.00039	J	mg/m <sup>3</sup>	1	9/6/2016
2-Butanone	0.0077	0.0027	0.00025		mg/m <sup>3</sup>	1	9/6/2016
2-Hexanone	0.0029	0.0076	0.00041	J	mg/m <sup>3</sup>	1	9/6/2016
4-Ethyltoluene	0.00091	0.0018	0.00019	J	mg/m <sup>3</sup>	1	9/6/2016
4-Methyl-2-pentanone	0.0061	0.0076	0.00023	J	mg/m <sup>3</sup>	1	9/6/2016
Acetone	0.14	0.0088	0.00031	*	mg/m <sup>3</sup>	1	9/6/2016
Benzene	0.0014	0.0012	0.000085		mg/m <sup>3</sup>	1	9/6/2016
Benzyl chloride	ND	0.0048	0.0019		mg/m <sup>3</sup>	1	9/6/2016
Bromodichloromethane	ND	0.0025	0.00017		mg/m <sup>3</sup>	1	9/6/2016
Bromoform	ND	0.0096	0.0002		mg/m <sup>3</sup>	1	9/6/2016
Bromomethane	0.00050	0.0036	0.00017	J	mg/m <sup>3</sup>	1	9/6/2016
Carbon disulfide	ND	0.0012	0.00029		mg/m <sup>3</sup>	1	9/6/2016
Carbon tetrachloride	ND	0.0023	0.00033		mg/m <sup>3</sup>	1	9/6/2016
Chlorobenzene	ND	0.0017	0.00011		mg/m <sup>3</sup>	1	9/6/2016
Chloroethane	ND	0.00098	0.00098		mg/m <sup>3</sup>	1	9/6/2016
Chloroform	0.00036	0.0018	0.000099	J	mg/m <sup>3</sup>	1	9/6/2016
Chloromethane	ND	0.0019	0.00019		mg/m <sup>3</sup>	1	9/6/2016
cis-1,2-Dichloroethene	0.018	0.0015	0.00011		mg/m <sup>3</sup>	1	9/6/2016
cis-1,3-Dichloropropene	ND	0.0017	0.0002		mg/m <sup>3</sup>	1	9/6/2016
Cyclohexane	0.0013	0.0012	0.00027		mg/m <sup>3</sup>	1	9/6/2016
Dibromochloromethane	ND	0.0032	0.00025		mg/m <sup>3</sup>	1	9/6/2016
Dichlorodifluoromethane	0.0023	0.0018	0.00006		mg/m <sup>3</sup>	1	9/6/2016
Ethyl acetate	ND	0.0033	0.00027		mg/m <sup>3</sup>	1	9/6/2016
Ethylbenzene	0.0028	0.0016	0.00013		mg/m <sup>3</sup>	1	9/6/2016
Freon-113	0.00057	0.0028	0.00011	J	mg/m <sup>3</sup>	1	9/6/2016
Freon-114	ND	0.013	0.00037		mg/m <sup>3</sup>	1	9/6/2016
Heptane	0.0027	0.0015	0.00015		mg/m <sup>3</sup>	1	9/6/2016
Hexachlorobutadiene	ND	0.0040	0.00045		mg/m <sup>3</sup>	1	9/6/2016
Hexane	0.0027	0.0033	0.000092	J	mg/m <sup>3</sup>	1	9/6/2016
Isopropyl Alcohol	0.11	0.0046	0.00036		mg/m <sup>3</sup>	1	9/6/2016
m,p-Xylene	0.0060	0.0032	0.00024		mg/m <sup>3</sup>	1	9/6/2016
Methyl tert-butyl ether	0.00033	0.0013	0.00011	J	mg/m <sup>3</sup>	1	9/6/2016
Methylene chloride	ND	0.013	0.00069		mg/m <sup>3</sup>	1	9/6/2016
Naphthalene	0.0018	0.0019	0.00056	J	mg/m <sup>3</sup>	1	9/6/2016
o-Xylene	0.0024	0.0016	0.0001		mg/m <sup>3</sup>	1	9/6/2016
Propene	0.0036	0.0064	0.00064	J	mg/m <sup>3</sup>	1	9/6/2016

**Qualifiers:**

ND - Not Detected at the Reporting Limit

RL/MDL - Reporting Limit / Method Detection Limit for the analysis

J - Analyte detected below reporting limit

S - Spike Recovery outside accepted recovery limits

B - Analyte detected in the associated Method Blank

R - RPD outside accepted recovery limits

HT - Sample received past holding time

E - Value above quantitation range

\* - Non-accredited parameter

H - Holding time exceeded

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Accreditations: IEPA ELAP 100445; ORELAP IL300001; AIHA-LAP, LLC 101160; NVLAP LabCode 101202-0

Date Reported: September 09, 2016

**ANALYTICAL RESULTS**

Date Printed: September 09, 2016

CLIENT: Apex Companies, LLC

Work Order: 16081298 Revision 0

Project: PECO-216-78, Bright Cleaners-Franklin Centre, 7249

Lab ID: 16081298-007

Client Sample ID: SV-2

Collection Date: 8/31/2016 12:32:00 PM

Matrix: AIR

Analyses	Result	RL	MDL	Qualifier	Units	DF	Date Analyzed
<b>Volatile Organic Compounds in Air by GC/MS</b>		<b>TO-15</b>		Prep Date: 9/2/2016		Analyst: NLM	
Styrene	0.00032	0.0016	0.00017	J	mg/m <sup>3</sup>	1	9/6/2016
Tetrachloroethene	44	1.3	0.091		mg/m <sup>3</sup>	500	9/7/2016
Tetrahydrofuran	0.0041	0.0027	0.00025		mg/m <sup>3</sup>	1	9/6/2016
Toluene	0.046	0.0014	0.00016		mg/m <sup>3</sup>	1	9/6/2016
trans-1,2-Dichloroethene	0.00015	0.0015	0.0001	J	mg/m <sup>3</sup>	1	9/6/2016
trans-1,3-Dichloropropene	ND	0.0017	0.00023		mg/m <sup>3</sup>	1	9/6/2016
Trichloroethene	0.041	0.0020	0.00015		mg/m <sup>3</sup>	1	9/6/2016
Trichlorofluoromethane	0.0016	0.0021	0.00013	J	mg/m <sup>3</sup>	1	9/6/2016
Vinyl acetate	ND	0.013	0.00018		mg/m <sup>3</sup>	1	9/6/2016
Vinyl chloride	ND	0.00095	0.00008		mg/m <sup>3</sup>	1	9/6/2016
Xylenes, Total	0.0085	0.0048	0.00034		mg/m <sup>3</sup>	1	9/6/2016

**Qualifiers:**

ND - Not Detected at the Reporting Limit

J - Analyte detected below reporting limit

B - Analyte detected in the associated Method Blank

HT - Sample received past holding time

\* - Non-accredited parameter

RL/MDL - Reporting Limit / Method Detection Limit for the analysis

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Date Reported: September 09, 2016

**ANALYTICAL RESULTS**

Date Printed: September 09, 2016

CLIENT: Apex Companies, LLC

Client Sample ID: SV-3

Work Order: 16081298 Revision 0

Collection Date: 8/31/2016 12:34:00 PM

Project: PECO-216-78, Bright Cleaners-Franklin Centre, 7249

Matrix: AIR

Lab ID: 16081298-008

Analyses	Result	RL	MDL	Qualifier	Units	DF	Date Analyzed
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Volatile Organic Compounds in Air by GC/MS	TO-15	Prep Date: 9/2/2016			Analyst: NLM		
1,1,1-Trichloroethane	ND	0.51	0.027		ppbv	1	9/6/2016
1,1,2,2-Tetrachloroethane	ND	0.51	0.035		ppbv	1	9/6/2016
1,1,2-Trichloroethane	ND	0.51	0.049		ppbv	1	9/6/2016
1,1-Dichloroethane	ND	0.51	0.025		ppbv	1	9/6/2016
1,1-Dichloroethene	ND	0.51	0.032		ppbv	1	9/6/2016
1,2,4-Trichlorobenzene	0.15	0.51	0.11	J	ppbv	1	9/6/2016
1,2,4-Trimethylbenzene	1.5	0.51	0.046		ppbv	1	9/6/2016
1,2-Dibromoethane	ND	0.51	0.057		ppbv	1	9/6/2016
1,2-Dichlorobenzene	ND	0.51	0.042		ppbv	1	9/6/2016
1,2-Dichloroethane	ND	0.51	0.059		ppbv	1	9/6/2016
1,2-Dichloropropane	ND	0.51	0.035		ppbv	1	9/6/2016
1,3,5-Trimethylbenzene	0.41	0.51	0.035	J	ppbv	1	9/6/2016
1,3-Butadiene	ND	0.51	0.065		ppbv	1	9/6/2016
1,3-Dichlorobenzene	0.82	0.51	0.043		ppbv	1	9/6/2016
1,4-Dichlorobenzene	ND	0.51	0.054		ppbv	1	9/6/2016
1,4-Dioxane	0.66	1.3	0.15	J	ppbv	1	9/6/2016
2-Butanone	4.1	1.3	0.12		ppbv	1	9/6/2016
2-Hexanone	1.2	2.6	0.14	J	ppbv	1	9/6/2016
4-Ethyltoluene	0.33	0.51	0.053	J	ppbv	1	9/6/2016
4-Methyl-2-pentanone	2.3	2.6	0.077	J	ppbv	1	9/6/2016
Acetone	44	5.1	0.18	*	ppbv	1	9/6/2016
Benzene	1.1	0.51	0.037		ppbv	1	9/6/2016
Benzyl chloride	ND	1.3	0.51		ppbv	1	9/6/2016
Bromodichloromethane	ND	0.51	0.035		ppbv	1	9/6/2016
Bromoform	ND	1.3	0.027		ppbv	1	9/6/2016
Bromomethane	0.20	1.3	0.06	J	ppbv	1	9/6/2016
Carbon disulfide	0.15	0.51	0.13	J	ppbv	1	9/6/2016
Carbon tetrachloride	ND	0.51	0.071		ppbv	1	9/6/2016
Chlorobenzene	ND	0.51	0.032		ppbv	1	9/6/2016
Chloroethane	ND	0.51	0.51		ppbv	1	9/6/2016
Chloroform	0.13	0.51	0.028	J	ppbv	1	9/6/2016
Chloromethane	ND	1.3	0.13		ppbv	1	9/6/2016
cis-1,2-Dichloroethene	8.1	0.51	0.038		ppbv	1	9/6/2016
cis-1,3-Dichloropropene	ND	0.51	0.06		ppbv	1	9/6/2016
Cyclohexane	1.3	0.51	0.11		ppbv	1	9/6/2016
Dibromochloromethane	ND	0.51	0.041		ppbv	1	9/6/2016
Dichlorodifluoromethane	0.43	0.51	0.017	J	ppbv	1	9/6/2016
Ethyl acetate	ND	1.3	0.1		ppbv	1	9/6/2016

ND - Not Detected at the Reporting Limit

RL/MDL - Reporting Limit / Method Detection Limit for the analysis

Qualifiers: J - Analyte detected below reporting limit

S - Spike Recovery outside accepted recovery limits

B - Analyte detected in the associated Method Blank

R - RPD outside accepted recovery limits

HT - Sample received past holding time

E - Value above quantitation range

\* - Non-accredited parameter

H - Holding time exceeded

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Accreditations: IEPA ELAP 100445; ORELAP IL300001; AIHA-LAP, LLC 101160; NVLAP LabCode 101202-0

Date Reported: September 09, 2016

**ANALYTICAL RESULTS**

Date Printed: September 09, 2016

CLIENT: Apex Companies, LLC

Client Sample ID: SV-3

Work Order: 16081298 Revision 0

Collection Date: 8/31/2016 12:34:00 PM

Project: PECO-216-78, Bright Cleaners-Franklin Centre, 7249

Matrix: AIR

Lab ID: 16081298-008

Analyses	Result	RL	MDL	Qualifier	Units	DF	Date Analyzed
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Volatile Organic Compounds in Air by GC/MS	TO-15	Prep Date: 9/2/2016			Analyst: NLM		
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Ethylbenzene	1.4	0.51	0.04		ppbv	1	9/6/2016
Freon-113	0.077	0.51	0.019	J	ppbv	1	9/6/2016
Freon-114	ND	2.6	0.073		ppbv	1	9/6/2016
Heptane	3.1	0.51	0.05		ppbv	1	9/6/2016
Hexachlorobutadiene	ND	0.51	0.058		ppbv	1	9/6/2016
Hexane	3.2	1.3	0.036		ppbv	1	9/6/2016
Isopropyl Alcohol	26	2.6	0.2		ppbv	1	9/6/2016
m,p-Xylene	2.7	1.0	0.075		ppbv	1	9/6/2016
Methyl tert-butyl ether	0.077	0.51	0.042	J	ppbv	1	9/6/2016
Methylene chloride	ND	5.1	0.27		ppbv	1	9/6/2016
Naphthalene	0.79	0.51	0.15		ppbv	1	9/6/2016
o-Xylene	1.1	0.51	0.033		ppbv	1	9/6/2016
Propene	3.2	5.1	0.51	J	ppbv	1	9/6/2016
Styrene	0.13	0.51	0.054	J	ppbv	1	9/6/2016
Tetrachloroethene	280	260	18		ppbv	500	9/7/2016
Tetrahydrofuran	1.9	1.3	0.12		ppbv	1	9/6/2016
Toluene	13	0.51	0.058		ppbv	1	9/6/2016
trans-1,2-Dichloroethene	ND	0.51	0.035		ppbv	1	9/6/2016
trans-1,3-Dichloropropene	ND	0.51	0.069		ppbv	1	9/6/2016
Trichloroethene	4.7	0.51	0.039		ppbv	1	9/6/2016
Trichlorofluoromethane	0.23	0.51	0.032	J	ppbv	1	9/6/2016
Vinyl acetate	ND	5.1	0.069		ppbv	1	9/6/2016
Vinyl chloride	ND	0.51	0.043		ppbv	1	9/6/2016
Xylenes, Total	3.8	1.5	0.11		ppbv	1	9/6/2016

Volatile Organic Compounds in Air by GC/MS	TO-15	Prep Date: 9/2/2016			Analyst: NLM		
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1,1,1-Trichloroethane	ND	0.0028	0.00015		mg/m <sup>3</sup>	1	9/6/2016
1,1,2,2-Tetrachloroethane	ND	0.0035	0.00024		mg/m <sup>3</sup>	1	9/6/2016
1,1,2-Trichloroethane	ND	0.0028	0.00027		mg/m <sup>3</sup>	1	9/6/2016
1,1-Dichloroethane	ND	0.0021	0.0001		mg/m <sup>3</sup>	1	9/6/2016
1,1-Dichloroethene	ND	0.0020	0.00013		mg/m <sup>3</sup>	1	9/6/2016
1,2,4-Trichlorobenzene	0.0011	0.0038	0.00084	J	mg/m <sup>3</sup>	1	9/6/2016
1,2,4-Trimethylbenzene	0.0075	0.0025	0.00023		mg/m <sup>3</sup>	1	9/6/2016
1,2-Dibromoethane	ND	0.0039	0.00044		mg/m <sup>3</sup>	1	9/6/2016
1,2-Dichlorobenzene	ND	0.0031	0.00026		mg/m <sup>3</sup>	1	9/6/2016
1,2-Dichloroethane	ND	0.0021	0.00024		mg/m <sup>3</sup>	1	9/6/2016
1,2-Dichloropropane	ND	0.0024	0.00016		mg/m <sup>3</sup>	1	9/6/2016
1,3,5-Trimethylbenzene	0.0020	0.0025	0.00017	J	mg/m <sup>3</sup>	1	9/6/2016
1,3-Butadiene	ND	0.0011	0.00014		mg/m <sup>3</sup>	1	9/6/2016

ND - Not Detected at the Reporting Limit

RL/MDL - Reporting Limit / Method Detection Limit for the analysis

Qualifiers: J - Analyte detected below reporting limit

S - Spike Recovery outside accepted recovery limits

B - Analyte detected in the associated Method Blank

R - RPD outside accepted recovery limits

HT - Sample received past holding time

E - Value above quantitation range

\* - Non-accredited parameter

H - Holding time exceeded

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Date Reported: September 09, 2016

**ANALYTICAL RESULTS**

Date Printed: September 09, 2016

CLIENT: Apex Companies, LLC

Client Sample ID: SV-3

Work Order: 16081298 Revision 0

Collection Date: 8/31/2016 12:34:00 PM

Project: PECO-216-78, Bright Cleaners-Franklin Centre, 7249

Matrix: AIR

Lab ID: 16081298-008

Analyses	Result	RL	MDL	Qualifier	Units	DF	Date Analyzed
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Volatile Organic Compounds in Air by GC/MS			TO-15	Prep Date: 9/2/2016		Analyst: NLM	
1,3-Dichlorobenzene	0.0049	0.0031	0.00026		mg/m <sup>3</sup>	1	9/6/2016
1,4-Dichlorobenzene	ND	0.0031	0.00032		mg/m <sup>3</sup>	1	9/6/2016
1,4-Dioxane	0.0024	0.0046	0.00054	J	mg/m <sup>3</sup>	1	9/6/2016
2-Butanone	0.012	0.0038	0.00034		mg/m <sup>3</sup>	1	9/6/2016
2-Hexanone	0.0049	0.010	0.00057	J	mg/m <sup>3</sup>	1	9/6/2016
4-Ethyltoluene	0.0016	0.0025	0.00026	J	mg/m <sup>3</sup>	1	9/6/2016
4-Methyl-2-pentanone	0.0094	0.010	0.00031	J	mg/m <sup>3</sup>	1	9/6/2016
Acetone	0.10	0.012	0.00043	*	mg/m <sup>3</sup>	1	9/6/2016
Benzene	0.0034	0.0016	0.00012		mg/m <sup>3</sup>	1	9/6/2016
Benzyl chloride	ND	0.0066	0.0026		mg/m <sup>3</sup>	1	9/6/2016
Bromodichloromethane	ND	0.0034	0.00023		mg/m <sup>3</sup>	1	9/6/2016
Bromoform	ND	0.013	0.00028		mg/m <sup>3</sup>	1	9/6/2016
Bromomethane	0.00079	0.0050	0.00023	J	mg/m <sup>3</sup>	1	9/6/2016
Carbon disulfide	0.00048	0.0016	0.0004	J	mg/m <sup>3</sup>	1	9/6/2016
Carbon tetrachloride	ND	0.0032	0.00045		mg/m <sup>3</sup>	1	9/6/2016
Chlorobenzene	ND	0.0024	0.00015		mg/m <sup>3</sup>	1	9/6/2016
Chloroethane	ND	0.0013	0.0013		mg/m <sup>3</sup>	1	9/6/2016
Chloroform	0.00062	0.0025	0.00014	J	mg/m <sup>3</sup>	1	9/6/2016
Chloromethane	ND	0.0026	0.00026		mg/m <sup>3</sup>	1	9/6/2016
cis-1,2-Dichloroethene	0.032	0.0020	0.00015		mg/m <sup>3</sup>	1	9/6/2016
cis-1,3-Dichloropropene	ND	0.0023	0.00027		mg/m <sup>3</sup>	1	9/6/2016
Cyclohexane	0.0046	0.0018	0.00037		mg/m <sup>3</sup>	1	9/6/2016
Dibromochloromethane	ND	0.0043	0.00035		mg/m <sup>3</sup>	1	9/6/2016
Dichlorodifluoromethane	0.0021	0.0025	0.000082	J	mg/m <sup>3</sup>	1	9/6/2016
Ethyl acetate	ND	0.0046	0.00037		mg/m <sup>3</sup>	1	9/6/2016
Ethylbenzene	0.0061	0.0022	0.00017		mg/m <sup>3</sup>	1	9/6/2016
Freon-113	0.00059	0.0039	0.00015	J	mg/m <sup>3</sup>	1	9/6/2016
Freon-114	ND	0.018	0.00051		mg/m <sup>3</sup>	1	9/6/2016
Heptane	0.013	0.0021	0.00021		mg/m <sup>3</sup>	1	9/6/2016
Hexachlorobutadiene	ND	0.0054	0.00061		mg/m <sup>3</sup>	1	9/6/2016
Hexane	0.011	0.0045	0.00013		mg/m <sup>3</sup>	1	9/6/2016
Isopropyl Alcohol	0.065	0.0063	0.00049		mg/m <sup>3</sup>	1	9/6/2016
m,p-Xylene	0.012	0.0044	0.00033		mg/m <sup>3</sup>	1	9/6/2016
Methyl tert-butyl ether	0.00028	0.0018	0.00015	J	mg/m <sup>3</sup>	1	9/6/2016
Methylene chloride	ND	0.018	0.00095		mg/m <sup>3</sup>	1	9/6/2016
Naphthalene	0.0041	0.0027	0.00076		mg/m <sup>3</sup>	1	9/6/2016
o-Xylene	0.0048	0.0022	0.00014		mg/m <sup>3</sup>	1	9/6/2016
Propene	0.0055	0.0088	0.00088	J	mg/m <sup>3</sup>	1	9/6/2016

**Qualifiers:**

ND - Not Detected at the Reporting Limit

RL/MDL - Reporting Limit / Method Detection Limit for the analysis

J - Analyte detected below reporting limit

S - Spike Recovery outside accepted recovery limits

B - Analyte detected in the associated Method Blank

R - RPD outside accepted recovery limits

HT - Sample received past holding time

E - Value above quantitation range

\* - Non-accredited parameter

H - Holding time exceeded

**STAT Analysis Corporation**

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Accreditations: IEPA ELAP 100445; ORELAP IL300001; AIHA-LAP, LLC 101160; NVLAP LabCode 101202-0

Date Reported: September 09, 2016

**ANALYTICAL RESULTS**

Date Printed: September 09, 2016

CLIENT: Apex Companies, LLC

Client Sample ID: SV-3

Work Order: 16081298 Revision 0

Collection Date: 8/31/2016 12:34:00 PM

Project: PECO-216-78, Bright Cleaners-Franklin Centre, 7249

Matrix: AIR

Lab ID: 16081298-008

Analyses	Result	RL	MDL	Qualifier	Units	DF	Date Analyzed
<b>Volatile Organic Compounds in Air by GC/MS</b>		<b>TO-15</b>		Prep Date: 9/2/2016		Analyst: NLM	
Styrene	0.00054	0.0022	0.00023	J	mg/m <sup>3</sup>	1	9/6/2016
Tetrachloroethene	1.9	1.7	0.13		mg/m <sup>3</sup>	500	9/7/2016
Tetrahydrofuran	0.0056	0.0038	0.00034		mg/m <sup>3</sup>	1	9/6/2016
Toluene	0.047	0.0019	0.00022		mg/m <sup>3</sup>	1	9/6/2016
trans-1,2-Dichloroethene	ND	0.0020	0.00014		mg/m <sup>3</sup>	1	9/6/2016
trans-1,3-Dichloropropene	ND	0.0023	0.00032		mg/m <sup>3</sup>	1	9/6/2016
Trichloroethene	0.026	0.0027	0.00021		mg/m <sup>3</sup>	1	9/6/2016
Trichlorofluoromethane	0.0013	0.0029	0.00018	J	mg/m <sup>3</sup>	1	9/6/2016
Vinyl acetate	ND	0.018	0.00024		mg/m <sup>3</sup>	1	9/6/2016
Vinyl chloride	ND	0.0013	0.00011		mg/m <sup>3</sup>	1	9/6/2016
Xylenes, Total	0.017	0.0066	0.00046		mg/m <sup>3</sup>	1	9/6/2016

**Qualifiers:**

ND - Not Detected at the Reporting Limit

J - Analyte detected below reporting limit

B - Analyte detected in the associated Method Blank

HT - Sample received past holding time

\* - Non-accredited parameter

RL/MDL - Reporting Limit / Method Detection Limit for the analysis

S - Spike Recovery outside accepted recovery limits

R - RPD outside accepted recovery limits

E - Value above quantitation range

H - Holding time exceeded

CHAIN OF CUSTODY RECORD

N<sup>o</sup>: 903397

Page: 1 of 1

Company: Apex Companies  
 Project Number: PECO-2016-78 Client Tracking No.:  
 Project Name: Bright Cleaners - Franklin Centre  
 Project Location: 7249 S. 76<sup>th</sup> St., Franklin WI  
 Sampler(s): Joe Becker  
 Report To: Joe Becker Phone: 847-756-8589  
 Steve Newlin Fax: snewlin@apexcos.com  
 QC Level: 1 2 3 4 e-mail: jbecker@apexcos.com

Client Sample Number/Description:	Date Taken	Time Taken	Matrix	Comp.	Grab	Preserv.	No. of Containers
TW-1 @ 14'	8-31-16	10:00	Soil		X	F	4
TW-2 @ 11'		10:30				F	4
TW-3 @ 12'		11:00				F	4
<del>TW-1</del>		11:15	GW			F	3
<del>TW-2</del>						F	3
TW-3		12:40				F	3
SU-1		12:28	Air			A	1
SU-2		12:32				A	1
SU-3		12:34				A	1

Quote No.:	P.O. No.:	Turn Around Time (Days):	Results Needed:	Additional Information:	Lab. No.:
		1 2 3 4 (5-7) 10			001
					002
					003
					004
					005
				Summary 60319	006
				60339	007
				60268	008

VOCs - 8260  
 VOCs - 70-15

Relinquished by: (Signature) \_\_\_\_\_ Date/Time: 8/31/16/16:45

Received by: (Signature) *Sammy M...* Date/Time: 8/31/16 16:48

Relinquished by: (Signature) \_\_\_\_\_ Date/Time: \_\_\_\_\_

Received by: (Signature) \_\_\_\_\_ Date/Time: \_\_\_\_\_

Relinquished by: (Signature) \_\_\_\_\_ Date/Time: \_\_\_\_\_

Received by: (Signature) \_\_\_\_\_ Date/Time: \_\_\_\_\_

Comments: \_\_\_\_\_

Laboratory Work Order No.: 16081298

Received on Ice: Yes  No

Temperature: 4.7 °C

Preservation Code: A = None B = HNO<sub>3</sub> C = NaOH  
 D = H<sub>2</sub>SO<sub>4</sub> E = HCl F = 5035/EnCore G = Other

**Sample Receipt Checklist**

Client Name **APEX**

Date and Time Received: **8/31/2016 4:45:00 PM**

Work Order Number **16081298**

Received by: **JDR**

Checklist completed by:

*[Signature]* 8/31/16  
Signature Date

Reviewed by:

*[Initials]* 8/31/16  
Initials Date

Matrix: \_\_\_\_\_ Carrier name Client Delivered

- Shipping container/cooler in good condition? Yes  No  Not Present
- Custody seals intact on shipping container/cooler? Yes  No  Not Present
- Custody seals intact on sample bottles? Yes  No  Not Present
- Chain of custody present? Yes  No
- Chain of custody signed when relinquished and received? Yes  No
- Chain of custody agrees with sample labels/containers? Yes  No
- Samples in proper container/bottle? Yes  No
- Sample containers intact? Yes  No
- Sufficient sample volume for indicated test? Yes  No
- All samples received within holding time? Yes  No
- Container or Temp Blank temperature in compliance? Yes  No  Temperature **4.7 °C** *[Handwritten mark]*
- Water - VOA vials have zero headspace? No VOA vials submitted  Yes  No
- Water - Samples pH checked? Yes  No  Checked by: \_\_\_\_\_
- Water - Samples properly preserved? Yes  No  pH Adjusted? \_\_\_\_\_

Any No response must be detailed in the comments section below.

Comments: To-cans received at ambient temperature.

Client / Person contacted: \_\_\_\_\_ Date contacted: \_\_\_\_\_ Contacted by: \_\_\_\_\_

Response: \_\_\_\_\_



**STAT** Analysis Corporation

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August 25, 2017

Apex Companies, LLC  
1701 East Woodfield Rd, Suite 333  
Schaumburg, IL 60173  
Telephone: (847) 956-8589  
Fax: (847) 956-8619

Analytical Report for STAT Work Order: 17080520 Revision 0

RE: PELO-2017-68, Franklin Centre, 7201 S. 76th St., Franklin, WI

Dear Joseph Becker:

STAT Analysis received 6 samples for the referenced project on 8/15/2017 1:30:00 PM. The analytical results are presented in the following report.

All analyses were performed in accordance with the requirements specified in WI DNR Chapter NR 149 (Certification Number 399099910). Analyses were performed in accordance with methods as referenced on the analytical report.

All analyses were performed within established holding time criteria, and all Quality Control criteria met EPA or laboratory specifications except when noted in the Case Narrative or Analytical Report. A listing of accredited methods/parameters can also be provided.

For sample results requiring adjustment for dilutions, the detection and reporting limits are adjusted for the corresponding dilution factor. Analytical results expressed on a dry weight basis have units of mg/Kg-dry or µg/Kg-dry on the analytical report. Corresponding reporting limits are adjusted for dry weight.

Thank you for the opportunity to serve you and I look forward to working with you in the future. If you have any questions regarding the enclosed materials, please contact me at (312) 733-0551.

Sincerely,



Craig Chawla  
Project Manager

*The information contained in this report and any attachments is confidential information intended only for the use of the individual or entities named above. The results of this report relate only to the samples tested. If you have received this report in error, please notify us immediately by phone. This report shall not be reproduced, except in its entirety, unless written approval has been obtained from the laboratory. This analytical report shall become property of the Customer upon payment in full. Otherwise, STAT will be under no obligation to support, defend or discuss the analytical report.*

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**Client:** Apex Companies, LLC**Project:** PELO-2017-68, Franklin Centre, 7201 S. 76th St., Fra**Work Order Sample Summary****Work Order:** 17080520 Revision 0

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Lab Sample ID	Client Sample ID	Tag Number	Collection Date	Date Received
17080520-001A	MW-1 @ 4'		8/11/2017 8:00:00 AM	8/15/2017
17080520-001B	MW-1 @ 4'		8/11/2017 8:00:00 AM	8/15/2017
17080520-002A	MW-2 @ 6'		8/11/2017 10:40:00 AM	8/15/2017
17080520-002B	MW-2 @ 6'		8/11/2017 10:40:00 AM	8/15/2017
17080520-003A	B-1 @ 2'		8/11/2017 9:10:00 AM	8/15/2017
17080520-003B	B-1 @ 2'		8/11/2017 9:10:00 AM	8/15/2017
17080520-004A	SV-4		8/14/2017 12:24:00 PM	8/15/2017
17080520-005A	SV-5		8/14/2017 12:30:00 PM	8/15/2017
17080520-006A	SV-6		8/14/2017 12:35:00 PM	8/15/2017

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**CLIENT:** Apex Companies, LLC

**Project:** PELO-2017-68, Franklin Centre, 7201 S. 76th St., Franklin,

**Work Order:** 17080520 Revision 0

**CASE NARRATIVE**

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STAT Analysis Corp is accredited for TO-15 analysis by Oregon Environmental Accreditation Program (ORELAP, Accreditation Number IL300001).

TO-15 results that are reported in mg/m<sup>3</sup> are calculated based on a temperature of 25°C, atmospheric pressure of 760 mm Hg, and the molecular weight of the analyte.

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Accreditations: IEPA ELAP 100445; ORELAP IL300001; AIHA-LAP, LLC 101160; NVLAP LabCode 101202-0

Date Reported: August 25, 2017

Date Printed: August 25, 2017

**ANALYTICAL RESULTS**

CLIENT: Apex Companies, LLC

Work Order: 17080520 Revision 0

Project: PELO-2017-68, Franklin Centre, 7201 S. 76th St., Fr

Lab ID: 17080520-001

Client Sample ID: MW-1 @ 4'

Collection Date: 8/11/2017 8:00:00 AM

Matrix: SOIL

Analyses	Result	RL	MDL	Qualifier	Units	DF	Date Analyzed
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**Volatile Organic Compounds by GC/MS****SW5035/8260B**

Prep Date: 8/16/2017

Analyst: RRS

Acetone	0.075	0.068	0.0021		mg/Kg-dry	1	8/22/2017
Benzene	0.0025	0.0045	0.00018	J	mg/Kg-dry	1	8/22/2017
Bromodichloromethane	ND	0.0045	0.00036		mg/Kg-dry	1	8/22/2017
Bromoform	ND	0.0045	0.00036		mg/Kg-dry	1	8/22/2017
Bromomethane	ND	0.0090	0.00045		mg/Kg-dry	1	8/22/2017
2-Butanone	0.011	0.068	0.0014	J	mg/Kg-dry	1	8/22/2017
Carbon disulfide	ND	0.045	0.00018		mg/Kg-dry	1	8/22/2017
Carbon tetrachloride	ND	0.0045	0.00027		mg/Kg-dry	1	8/22/2017
Chlorobenzene	ND	0.0045	0.00018		mg/Kg-dry	1	8/22/2017
Chloroethane	ND	0.0090	0.00036		mg/Kg-dry	1	8/22/2017
Chloroform	ND	0.0045	0.00018		mg/Kg-dry	1	8/22/2017
Chloromethane	ND	0.0090	0.00027		mg/Kg-dry	1	8/22/2017
Dibromochloromethane	ND	0.0045	0.00036		mg/Kg-dry	1	8/22/2017
1,1-Dichloroethane	ND	0.0045	0.00027		mg/Kg-dry	1	8/22/2017
1,2-Dichloroethane	ND	0.0045	0.00054		mg/Kg-dry	1	8/22/2017
1,1-Dichloroethene	ND	0.0045	0.00027		mg/Kg-dry	1	8/22/2017
cis-1,2-Dichloroethene	ND	0.0045	0.00027		mg/Kg-dry	1	8/22/2017
trans-1,2-Dichloroethene	ND	0.0045	0.00027		mg/Kg-dry	1	8/22/2017
1,2-Dichloropropane	ND	0.0045	0.00036		mg/Kg-dry	1	8/22/2017
cis-1,3-Dichloropropene	ND	0.0018	0.00018		mg/Kg-dry	1	8/22/2017
trans-1,3-Dichloropropene	ND	0.0018	0.00027		mg/Kg-dry	1	8/22/2017
Ethylbenzene	0.0013	0.0045	0.00009	J	mg/Kg-dry	1	8/22/2017
2-Hexanone	ND	0.018	0.00072		mg/Kg-dry	1	8/22/2017
4-Methyl-2-pentanone	ND	0.018	0.00027		mg/Kg-dry	1	8/22/2017
Methylene chloride	0.0015	0.0090	0.00072	J	mg/Kg-dry	1	8/22/2017
Methyl tert-butyl ether	ND	0.0045	0.00018		mg/Kg-dry	1	8/22/2017
Styrene	ND	0.0045	0.00018		mg/Kg-dry	1	8/22/2017
1,1,2,2-Tetrachloroethane	ND	0.0045	0.00018		mg/Kg-dry	1	8/22/2017
Tetrachloroethene	ND	0.0045	0.00027		mg/Kg-dry	1	8/22/2017
Toluene	0.0044	0.0045	0.00018	J	mg/Kg-dry	1	8/22/2017
1,1,1-Trichloroethane	ND	0.0045	0.00018		mg/Kg-dry	1	8/22/2017
1,1,2-Trichloroethane	ND	0.0045	0.00045		mg/Kg-dry	1	8/22/2017
Trichloroethene	ND	0.0045	0.00018		mg/Kg-dry	1	8/22/2017
Vinyl chloride	ND	0.0045	0.00036		mg/Kg-dry	1	8/22/2017
Xylenes, Total	0.0025	0.014	0.00036	J	mg/Kg-dry	1	8/22/2017

**Percent Moisture****D2974**

Prep Date: 8/17/2017

Analyst: KKA

Percent Moisture	15.8	0.2	0.1	*	wt%	1	8/18/2017
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**Qualifiers:**

ND - Not Detected at the Reporting Limit

J - Analyte detected below reporting limit

B - Analyte detected in the associated Method Blank

HT - Sample received past holding time

\* - Non-accredited parameter

RL/MDL - Reporting Limit / Method Detection Limit for the analysis

S - Spike Recovery outside accepted recovery limits

R - RPD outside accepted recovery limits

E - Value above quantitation range

H - Holding time exceeded

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Accreditations: IEPA ELAP 100445; ORELAP IL300001; AIHA-LAP, LLC 101160; NVLAP LabCode 101202-0

Date Reported: August 25, 2017

Date Printed: August 25, 2017

**ANALYTICAL RESULTS**

CLIENT: Apex Companies, LLC

Work Order: 17080520 Revision 0

Project: PELO-2017-68, Franklin Centre, 7201 S. 76th St., Fr

Lab ID: 17080520-002

Client Sample ID: MW-2 @ 6'

Collection Date: 8/11/2017 10:40:00 AM

Matrix: SOIL

Analyses	Result	RL	MDL	Qualifier	Units	DF	Date Analyzed
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**Volatile Organic Compounds by GC/MS****SW5035/8260B**

Prep Date: 8/16/2017

Analyst: RRS

Acetone	0.025	0.065	0.002	J	mg/Kg-dry	1	8/22/2017
Benzene	0.0021	0.0043	0.00017	J	mg/Kg-dry	1	8/22/2017
Bromodichloromethane	ND	0.0043	0.00035		mg/Kg-dry	1	8/22/2017
Bromoform	ND	0.0043	0.00035		mg/Kg-dry	1	8/22/2017
Bromomethane	ND	0.0087	0.00043		mg/Kg-dry	1	8/22/2017
2-Butanone	0.0040	0.065	0.0013	J	mg/Kg-dry	1	8/22/2017
Carbon disulfide	ND	0.043	0.00017		mg/Kg-dry	1	8/22/2017
Carbon tetrachloride	ND	0.0043	0.00026		mg/Kg-dry	1	8/22/2017
Chlorobenzene	ND	0.0043	0.00017		mg/Kg-dry	1	8/22/2017
Chloroethane	ND	0.0087	0.00035		mg/Kg-dry	1	8/22/2017
Chloroform	ND	0.0043	0.00017		mg/Kg-dry	1	8/22/2017
Chloromethane	ND	0.0087	0.00026		mg/Kg-dry	1	8/22/2017
Dibromochloromethane	ND	0.0043	0.00035		mg/Kg-dry	1	8/22/2017
1,1-Dichloroethane	ND	0.0043	0.00026		mg/Kg-dry	1	8/22/2017
1,2-Dichloroethane	ND	0.0043	0.00052		mg/Kg-dry	1	8/22/2017
1,1-Dichloroethene	ND	0.0043	0.00026		mg/Kg-dry	1	8/22/2017
cis-1,2-Dichloroethene	ND	0.0043	0.00026		mg/Kg-dry	1	8/22/2017
trans-1,2-Dichloroethene	ND	0.0043	0.00026		mg/Kg-dry	1	8/22/2017
1,2-Dichloropropane	ND	0.0043	0.00035		mg/Kg-dry	1	8/22/2017
cis-1,3-Dichloropropene	ND	0.0017	0.00017		mg/Kg-dry	1	8/22/2017
trans-1,3-Dichloropropene	ND	0.0017	0.00026		mg/Kg-dry	1	8/22/2017
Ethylbenzene	0.00088	0.0043	0.000087	J	mg/Kg-dry	1	8/22/2017
2-Hexanone	ND	0.017	0.00069		mg/Kg-dry	1	8/22/2017
4-Methyl-2-pentanone	ND	0.017	0.00026		mg/Kg-dry	1	8/22/2017
Methylene chloride	ND	0.0087	0.00069		mg/Kg-dry	1	8/22/2017
Methyl tert-butyl ether	ND	0.0043	0.00017		mg/Kg-dry	1	8/22/2017
Styrene	ND	0.0043	0.00017		mg/Kg-dry	1	8/22/2017
1,1,2,2-Tetrachloroethane	ND	0.0043	0.00017		mg/Kg-dry	1	8/22/2017
Tetrachloroethene	ND	0.0043	0.00026		mg/Kg-dry	1	8/22/2017
Toluene	0.0028	0.0043	0.00017	J	mg/Kg-dry	1	8/22/2017
1,1,1-Trichloroethane	ND	0.0043	0.00017		mg/Kg-dry	1	8/22/2017
1,1,2-Trichloroethane	ND	0.0043	0.00043		mg/Kg-dry	1	8/22/2017
Trichloroethene	ND	0.0043	0.00017		mg/Kg-dry	1	8/22/2017
Vinyl chloride	ND	0.0043	0.00035		mg/Kg-dry	1	8/22/2017
Xylenes, Total	0.0012	0.013	0.00035	J	mg/Kg-dry	1	8/22/2017

**Percent Moisture****D2974**

Prep Date: 8/17/2017

Analyst: KKA

Percent Moisture	16.6	0.2	0.1	*	wt%	1	8/18/2017
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**Qualifiers:**

ND - Not Detected at the Reporting Limit

J - Analyte detected below reporting limit

B - Analyte detected in the associated Method Blank

HT - Sample received past holding time

\* - Non-accredited parameter

RL/MDL - Reporting Limit / Method Detection Limit for the analysis

S - Spike Recovery outside accepted recovery limits

R - RPD outside accepted recovery limits

E - Value above quantitation range

H - Holding time exceeded

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Accreditations: IEPA ELAP 100445; ORELAP IL300001; AIHA-LAP, LLC 101160; NVLAP LabCode 101202-0

Date Reported: August 25, 2017

Date Printed: August 25, 2017

**ANALYTICAL RESULTS**

CLIENT: Apex Companies, LLC

Work Order: 17080520 Revision 0

Project: PELO-2017-68, Franklin Centre, 7201 S. 76th St., Fr

Lab ID: 17080520-003

Client Sample ID: B-1 @ 2'

Collection Date: 8/11/2017 9:10:00 AM

Matrix: SOIL

Analyses	Result	RL	MDL	Qualifier	Units	DF	Date Analyzed
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**Volatile Organic Compounds by GC/MS****SW5035/8260B**

Prep Date: 8/16/2017

Analyst: RRS

Acetone	0.064	0.056	0.0017		mg/Kg-dry	1	8/22/2017
Benzene	0.0015	0.0037	0.00015	J	mg/Kg-dry	1	8/22/2017
Bromodichloromethane	ND	0.0037	0.0003		mg/Kg-dry	1	8/22/2017
Bromoform	ND	0.0037	0.0003		mg/Kg-dry	1	8/22/2017
Bromomethane	ND	0.0075	0.00037		mg/Kg-dry	1	8/22/2017
2-Butanone	0.0099	0.056	0.0011	J	mg/Kg-dry	1	8/22/2017
Carbon disulfide	ND	0.037	0.00015		mg/Kg-dry	1	8/22/2017
Carbon tetrachloride	ND	0.0037	0.00022		mg/Kg-dry	1	8/22/2017
Chlorobenzene	ND	0.0037	0.00015		mg/Kg-dry	1	8/22/2017
Chloroethane	ND	0.0075	0.0003		mg/Kg-dry	1	8/22/2017
Chloroform	ND	0.0037	0.00015		mg/Kg-dry	1	8/22/2017
Chloromethane	ND	0.0075	0.00022		mg/Kg-dry	1	8/22/2017
Dibromochloromethane	ND	0.0037	0.0003		mg/Kg-dry	1	8/22/2017
1,1-Dichloroethane	ND	0.0037	0.00022		mg/Kg-dry	1	8/22/2017
1,2-Dichloroethane	ND	0.0037	0.00045		mg/Kg-dry	1	8/22/2017
1,1-Dichloroethene	ND	0.0037	0.00022		mg/Kg-dry	1	8/22/2017
cis-1,2-Dichloroethene	ND	0.0037	0.00022		mg/Kg-dry	1	8/22/2017
trans-1,2-Dichloroethene	ND	0.0037	0.00022		mg/Kg-dry	1	8/22/2017
1,2-Dichloropropane	ND	0.0037	0.0003		mg/Kg-dry	1	8/22/2017
cis-1,3-Dichloropropene	ND	0.0015	0.00015		mg/Kg-dry	1	8/22/2017
trans-1,3-Dichloropropene	ND	0.0015	0.00022		mg/Kg-dry	1	8/22/2017
Ethylbenzene	0.0010	0.0037	0.000075	J	mg/Kg-dry	1	8/22/2017
2-Hexanone	ND	0.015	0.0006		mg/Kg-dry	1	8/22/2017
4-Methyl-2-pentanone	ND	0.015	0.00022		mg/Kg-dry	1	8/22/2017
Methylene chloride	ND	0.0075	0.0006		mg/Kg-dry	1	8/22/2017
Methyl tert-butyl ether	ND	0.0037	0.00015		mg/Kg-dry	1	8/22/2017
Styrene	ND	0.0037	0.00015		mg/Kg-dry	1	8/22/2017
1,1,2,2-Tetrachloroethane	ND	0.0037	0.00015		mg/Kg-dry	1	8/22/2017
Tetrachloroethene	0.00067	0.0037	0.00022	J	mg/Kg-dry	1	8/22/2017
Toluene	0.0028	0.0037	0.00015	J	mg/Kg-dry	1	8/22/2017
1,1,1-Trichloroethane	ND	0.0037	0.00015		mg/Kg-dry	1	8/22/2017
1,1,2-Trichloroethane	ND	0.0037	0.00037		mg/Kg-dry	1	8/22/2017
Trichloroethene	0.0010	0.0037	0.00015	J	mg/Kg-dry	1	8/22/2017
Vinyl chloride	ND	0.0037	0.0003		mg/Kg-dry	1	8/22/2017
Xylenes, Total	0.0014	0.011	0.0003	J	mg/Kg-dry	1	8/22/2017

**Percent Moisture****D2974**

Prep Date: 8/17/2017

Analyst: KKA

Percent Moisture	10.2	0.2	0.1	*	wt%	1	8/18/2017
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**Qualifiers:**

ND - Not Detected at the Reporting Limit

J - Analyte detected below reporting limit

B - Analyte detected in the associated Method Blank

HT - Sample received past holding time

\* - Non-accredited parameter

RL/MDL - Reporting Limit / Method Detection Limit for the analysis

S - Spike Recovery outside accepted recovery limits

R - RPD outside accepted recovery limits

E - Value above quantitation range

H - Holding time exceeded

**STAT Analysis Corporation**

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Accreditations: IEPA ELAP 100445; ORELAP IL300001; AIHA-LAP, LLC 101160; NVLAP LabCode 101202-0

Date Reported: August 25, 2017

**ANALYTICAL RESULTS**

Date Printed: August 25, 2017

CLIENT: Apex Companies, LLC

Client Sample ID: SV-4

Work Order: 17080520 Revision 0

Collection Date: 8/14/2017 12:24:00 PM

Project: PELO-2017-68, Franklin Centre, 7201 S. 76th St., Fr

Matrix: AIR

Lab ID: 17080520-004

Analyses	Result	RL	MDL	Qualifier	Units	DF	Date Analyzed
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Volatile Organic Compounds in Air by GC/MS			TO-15	Prep Date: 8/16/2017			Analyst: AOA
1,1,1-Trichloroethane	ND	0.81	0.039		ppbv	2	8/16/2017
1,1,2,2-Tetrachloroethane	ND	0.81	0.056		ppbv	2	8/16/2017
1,1,2-Trichloroethane	ND	0.81	0.1		ppbv	2	8/16/2017
1,1-Dichloroethane	ND	0.81	0.035		ppbv	2	8/16/2017
1,1-Dichloroethene	ND	0.81	0.051		ppbv	2	8/16/2017
1,2,4-Trichlorobenzene	ND	0.81	0.15		ppbv	2	8/16/2017
1,2,4-Trimethylbenzene	0.081	0.81	0.045	J	ppbv	2	8/16/2017
1,2-Dibromoethane	ND	0.81	0.089		ppbv	2	8/16/2017
1,2-Dichlorobenzene	ND	0.81	0.065		ppbv	2	8/16/2017
1,2-Dichloroethane	ND	0.81	0.094		ppbv	2	8/16/2017
1,2-Dichloropropane	ND	0.81	0.15		ppbv	2	8/16/2017
1,3,5-Trimethylbenzene	ND	0.81	0.056		ppbv	2	8/16/2017
1,3-Butadiene	ND	0.81	0.19		ppbv	2	8/16/2017
1,3-Dichlorobenzene	ND	0.81	0.061		ppbv	2	8/16/2017
1,4-Dichlorobenzene	ND	0.81	0.07		ppbv	2	8/16/2017
1,4-Dioxane	ND	2.0	0.32		ppbv	2	8/16/2017
2-Butanone	0.57	2.0	0.34	J	ppbv	2	8/16/2017
2-Hexanone	ND	4.1	0.52		ppbv	2	8/16/2017
4-Ethyltoluene	ND	0.81	0.085		ppbv	2	8/16/2017
4-Methyl-2-pentanone	ND	4.1	0.28		ppbv	2	8/16/2017
Acetone	6.6	8.1	0.75	J*	ppbv	2	8/16/2017
Benzene	0.081	0.81	0.068	J	ppbv	2	8/16/2017
Benzyl chloride	ND	2.0	0.25		ppbv	2	8/16/2017
Bromodichloromethane	ND	0.81	0.042		ppbv	2	8/16/2017
Bromoform	ND	2.0	0.04		ppbv	2	8/16/2017
Bromomethane	0.12	2.0	0.095	J	ppbv	2	8/16/2017
Carbon disulfide	ND	0.81	0.084		ppbv	2	8/16/2017
Carbon tetrachloride	ND	0.81	0.18		ppbv	2	8/16/2017
Chlorobenzene	ND	0.81	0.2		ppbv	2	8/16/2017
Chloroethane	ND	0.81	0.17		ppbv	2	8/16/2017
Chloroform	ND	0.81	0.045		ppbv	2	8/16/2017
Chloromethane	ND	2.0	0.46		ppbv	2	8/16/2017
cis-1,2-Dichloroethene	ND	0.81	0.16		ppbv	2	8/16/2017
cis-1,3-Dichloropropene	ND	0.81	0.097		ppbv	2	8/16/2017
Cyclohexane	ND	0.81	0.17		ppbv	2	8/16/2017
Dibromochloromethane	ND	0.81	0.051		ppbv	2	8/16/2017
Dichlorodifluoromethane	0.41	0.81	0.05	J	ppbv	2	8/16/2017
Ethyl acetate	ND	2.0	0.29		ppbv	2	8/16/2017

ND - Not Detected at the Reporting Limit

RL/MDL - Reporting Limit / Method Detection Limit for the analysis

Qualifiers: J - Analyte detected below reporting limit

S - Spike Recovery outside accepted recovery limits

B - Analyte detected in the associated Method Blank

R - RPD outside accepted recovery limits

HT - Sample received past holding time

E - Value above quantitation range

\* - Non-accredited parameter

H - Holding time exceeded

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Date Reported: August 25, 2017

**ANALYTICAL RESULTS**

Date Printed: August 25, 2017

CLIENT: Apex Companies, LLC

Work Order: 17080520 Revision 0

Project: PELO-2017-68, Franklin Centre, 7201 S. 76th St., Fr

Lab ID: 17080520-004

Client Sample ID: SV-4

Collection Date: 8/14/2017 12:24:00 PM

Matrix: AIR

Analyses	Result	RL	MDL	Qualifier	Units	DF	Date Analyzed
<b>Volatile Organic Compounds in Air by GC/MS</b>		<b>TO-15</b>		Prep Date: 8/16/2017		Analyst: AOA	
Ethylbenzene	ND	0.81	0.059		ppbv	2	8/16/2017
Freon-113	0.041	0.81	0.031	J	ppbv	2	8/16/2017
Freon-114	ND	4.1	0.042		ppbv	2	8/16/2017
Heptane	ND	0.81	0.068		ppbv	2	8/16/2017
Hexachlorobutadiene	ND	0.81	0.085		ppbv	2	8/16/2017
Hexane	ND	2.0	0.14		ppbv	2	8/16/2017
Isopropyl Alcohol	20	4.1	0.31		ppbv	2	8/16/2017
m,p-Xylene	ND	1.6	0.1		ppbv	2	8/16/2017
Methyl tert-butyl ether	ND	0.81	0.046		ppbv	2	8/16/2017
Methylene chloride	1.1	8.1	0.81	J	ppbv	2	8/16/2017
Naphthalene	ND	0.81	0.23		ppbv	2	8/16/2017
o-Xylene	ND	0.81	0.052		ppbv	2	8/16/2017
Propene	0.24	8.1	0.23	J	ppbv	2	8/16/2017
Styrene	ND	0.81	0.19		ppbv	2	8/16/2017
Tetrachloroethene	350	10	0.74		ppbv	25	8/16/2017
Tetrahydrofuran	ND	2.0	0.39		ppbv	2	8/16/2017
Toluene	ND	0.81	0.092		ppbv	2	8/16/2017
trans-1,2-Dichloroethene	ND	0.81	0.056		ppbv	2	8/16/2017
trans-1,3-Dichloropropene	ND	0.81	0.81		ppbv	2	8/16/2017
Trichloroethene	2.2	0.81	0.062		ppbv	2	8/16/2017
Trichlorofluoromethane	0.24	0.81	0.051	J	ppbv	2	8/16/2017
Vinyl acetate	ND	8.1	0.33		ppbv	2	8/16/2017
Vinyl chloride	ND	0.81	0.069		ppbv	2	8/16/2017
Xylenes, Total	ND	2.4	0.15		ppbv	2	8/16/2017

<b>Volatile Organic Compounds in Air by GC/MS</b>		<b>TO-15</b>		Prep Date: 8/16/2017		Analyst: AOA	
1,1,1-Trichloroethane	ND	0.0044	0.00021		mg/m <sup>3</sup>	2	8/16/2017
1,1,2,2-Tetrachloroethane	ND	0.0056	0.00038		mg/m <sup>3</sup>	2	8/16/2017
1,1,2-Trichloroethane	ND	0.0044	0.00056		mg/m <sup>3</sup>	2	8/16/2017
1,1-Dichloroethane	ND	0.0033	0.00014		mg/m <sup>3</sup>	2	8/16/2017
1,1-Dichloroethene	ND	0.0032	0.0002		mg/m <sup>3</sup>	2	8/16/2017
1,2,4-Trichlorobenzene	ND	0.0060	0.0011		mg/m <sup>3</sup>	2	8/16/2017
1,2,4-Trimethylbenzene	0.00040	0.0040	0.00022	J	mg/m <sup>3</sup>	2	8/16/2017
1,2-Dibromoethane	ND	0.0063	0.00068		mg/m <sup>3</sup>	2	8/16/2017
1,2-Dichlorobenzene	ND	0.0049	0.00039		mg/m <sup>3</sup>	2	8/16/2017
1,2-Dichloroethane	ND	0.0033	0.00038		mg/m <sup>3</sup>	2	8/16/2017
1,2-Dichloropropane	ND	0.0038	0.0007		mg/m <sup>3</sup>	2	8/16/2017
1,3,5-Trimethylbenzene	ND	0.0040	0.00028		mg/m <sup>3</sup>	2	8/16/2017
1,3-Butadiene	ND	0.0018	0.00042		mg/m <sup>3</sup>	2	8/16/2017

**Qualifiers:**

ND - Not Detected at the Reporting Limit

J - Analyte detected below reporting limit

B - Analyte detected in the associated Method Blank

HT - Sample received past holding time

\* - Non-accredited parameter

RL/MDL - Reporting Limit / Method Detection Limit for the analysis

S - Spike Recovery outside accepted recovery limits

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E - Value above quantitation range

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Accreditations: IEPA ELAP 100445; ORELAP IL300001; AIHA-LAP, LLC 101160; NVLAP LabCode 101202-0

Date Reported: August 25, 2017

Date Printed: August 25, 2017

**ANALYTICAL RESULTS**

CLIENT: Apex Companies, LLC

Work Order: 17080520 Revision 0

Project: PELO-2017-68, Franklin Centre, 7201 S. 76th St., Fr

Lab ID: 17080520-004

Client Sample ID: SV-4

Collection Date: 8/14/2017 12:24:00 PM

Matrix: AIR

Analyses	Result	RL	MDL	Qualifier	Units	DF	Date Analyzed
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Volatile Organic Compounds in Air by GC/MS	TO-15	Prep Date: 8/16/2017			Analyst: AOA		
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1,3-Dichlorobenzene	ND	0.0049	0.00037		mg/m <sup>3</sup>	2	8/16/2017
1,4-Dichlorobenzene	ND	0.0049	0.00042		mg/m <sup>3</sup>	2	8/16/2017
1,4-Dioxane	ND	0.0073	0.0012		mg/m <sup>3</sup>	2	8/16/2017
2-Butanone	0.0017	0.0060	0.00099	J	mg/m <sup>3</sup>	2	8/16/2017
2-Hexanone	ND	0.017	0.0021		mg/m <sup>3</sup>	2	8/16/2017
4-Ethyltoluene	ND	0.0040	0.00042		mg/m <sup>3</sup>	2	8/16/2017
4-Methyl-2-pentanone	ND	0.017	0.0011		mg/m <sup>3</sup>	2	8/16/2017
Acetone	0.016	0.019	0.0018	J*	mg/m <sup>3</sup>	2	8/16/2017
Benzene	0.00026	0.0026	0.00022	J	mg/m <sup>3</sup>	2	8/16/2017
Benzyl chloride	ND	0.011	0.0013		mg/m <sup>3</sup>	2	8/16/2017
Bromodichloromethane	ND	0.0055	0.00028		mg/m <sup>3</sup>	2	8/16/2017
Bromoform	ND	0.021	0.00041		mg/m <sup>3</sup>	2	8/16/2017
Bromomethane	0.00047	0.0079	0.00037	J	mg/m <sup>3</sup>	2	8/16/2017
Carbon disulfide	ND	0.0025	0.00026		mg/m <sup>3</sup>	2	8/16/2017
Carbon tetrachloride	ND	0.0051	0.0012		mg/m <sup>3</sup>	2	8/16/2017
Chlorobenzene	ND	0.0038	0.00094		mg/m <sup>3</sup>	2	8/16/2017
Chloroethane	ND	0.0021	0.00044		mg/m <sup>3</sup>	2	8/16/2017
Chloroform	ND	0.0040	0.00022		mg/m <sup>3</sup>	2	8/16/2017
Chloromethane	ND	0.0042	0.00095		mg/m <sup>3</sup>	2	8/16/2017
cis-1,2-Dichloroethene	ND	0.0032	0.00063		mg/m <sup>3</sup>	2	8/16/2017
cis-1,3-Dichloropropene	ND	0.0037	0.00044		mg/m <sup>3</sup>	2	8/16/2017
Cyclohexane	ND	0.0028	0.0006		mg/m <sup>3</sup>	2	8/16/2017
Dibromochloromethane	ND	0.0069	0.00043		mg/m <sup>3</sup>	2	8/16/2017
Dichlorodifluoromethane	0.0020	0.0040	0.00025	J	mg/m <sup>3</sup>	2	8/16/2017
Ethyl acetate	ND	0.0073	0.001		mg/m <sup>3</sup>	2	8/16/2017
Ethylbenzene	ND	0.0035	0.00026		mg/m <sup>3</sup>	2	8/16/2017
Freon-113	0.00031	0.0062	0.00023	J	mg/m <sup>3</sup>	2	8/16/2017
Freon-114	ND	0.028	0.00029		mg/m <sup>3</sup>	2	8/16/2017
Heptane	ND	0.0033	0.00028		mg/m <sup>3</sup>	2	8/16/2017
Hexachlorobutadiene	ND	0.0087	0.0009		mg/m <sup>3</sup>	2	8/16/2017
Hexane	ND	0.0072	0.0005		mg/m <sup>3</sup>	2	8/16/2017
Isopropyl Alcohol	0.050	0.010	0.00077		mg/m <sup>3</sup>	2	8/16/2017
m,p-Xylene	ND	0.0071	0.00044		mg/m <sup>3</sup>	2	8/16/2017
Methyl tert-butyl ether	ND	0.0029	0.00017		mg/m <sup>3</sup>	2	8/16/2017
Methylene chloride	0.0040	0.028	0.0028	J	mg/m <sup>3</sup>	2	8/16/2017
Naphthalene	ND	0.0043	0.0012		mg/m <sup>3</sup>	2	8/16/2017
o-Xylene	ND	0.0035	0.00023		mg/m <sup>3</sup>	2	8/16/2017
Propene	0.00042	0.014	0.00039	J	mg/m <sup>3</sup>	2	8/16/2017

**Qualifiers:**

ND - Not Detected at the Reporting Limit

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B - Analyte detected in the associated Method Blank

HT - Sample received past holding time

\* - Non-accredited parameter

RL/MDL - Reporting Limit / Method Detection Limit for the analysis

S - Spike Recovery outside accepted recovery limits

R - RPD outside accepted recovery limits

E - Value above quantitation range

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Date Reported: August 25, 2017

**ANALYTICAL RESULTS**

Date Printed: August 25, 2017

CLIENT: Apex Companies, LLC

Work Order: 17080520 Revision 0

Project: PELO-2017-68, Franklin Centre, 7201 S. 76th St., Fr

Lab ID: 17080520-004

Client Sample ID: SV-4

Collection Date: 8/14/2017 12:24:00 PM

Matrix: AIR

Analyses	Result	RL	MDL	Qualifier	Units	DF	Date Analyzed
<b>Volatile Organic Compounds in Air by GC/MS</b>		<b>TO-15</b>		Prep Date: <b>8/16/2017</b>		Analyst: <b>AOA</b>	
Styrene	ND	0.0035	0.00082		mg/m <sup>3</sup>	2	8/16/2017
Tetrachloroethene	2.4	0.069	0.005		mg/m <sup>3</sup>	25	8/16/2017
Tetrahydrofuran	ND	0.0060	0.0011		mg/m <sup>3</sup>	2	8/16/2017
Toluene	ND	0.0031	0.00035		mg/m <sup>3</sup>	2	8/16/2017
trans-1,2-Dichloroethene	ND	0.0032	0.00022		mg/m <sup>3</sup>	2	8/16/2017
trans-1,3-Dichloropropene	ND	0.0037	0.0037		mg/m <sup>3</sup>	2	8/16/2017
Trichloroethene	0.012	0.0044	0.00033		mg/m <sup>3</sup>	2	8/16/2017
Trichlorofluoromethane	0.0014	0.0046	0.00029	J	mg/m <sup>3</sup>	2	8/16/2017
Vinyl acetate	ND	0.029	0.0011		mg/m <sup>3</sup>	2	8/16/2017
Vinyl chloride	ND	0.0021	0.00018		mg/m <sup>3</sup>	2	8/16/2017
Xylenes, Total	ND	0.011	0.00065		mg/m <sup>3</sup>	2	8/16/2017

**Qualifiers:**

ND - Not Detected at the Reporting Limit

J - Analyte detected below reporting limit

B - Analyte detected in the associated Method Blank

HT - Sample received past holding time

\* - Non-accredited parameter

RL/MDL - Reporting Limit / Method Detection Limit for the analysis

S - Spike Recovery outside accepted recovery limits

R - RPD outside accepted recovery limits

E - Value above quantitation range

H - Holding time exceeded

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Date Reported: August 25, 2017

**ANALYTICAL RESULTS**

Date Printed: August 25, 2017

CLIENT: Apex Companies, LLC

Client Sample ID: SV-5

Work Order: 17080520 Revision 0

Collection Date: 8/14/2017 12:30:00 PM

Project: PELO-2017-68, Franklin Centre, 7201 S. 76th St., Fr

Matrix: AIR

Lab ID: 17080520-005

Analyses	Result	RL	MDL	Qualifier	Units	DF	Date Analyzed
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Volatile Organic Compounds in Air by GC/MS			TO-15	Prep Date: 8/16/2017			Analyst: AOA
1,1,1-Trichloroethane	0.16	0.81	0.039	J	ppbv	2	8/16/2017
1,1,2,2-Tetrachloroethane	ND	0.81	0.056		ppbv	2	8/16/2017
1,1,2-Trichloroethane	ND	0.81	0.1		ppbv	2	8/16/2017
1,1-Dichloroethane	ND	0.81	0.035		ppbv	2	8/16/2017
1,1-Dichloroethene	ND	0.81	0.051		ppbv	2	8/16/2017
1,2,4-Trichlorobenzene	ND	0.81	0.15		ppbv	2	8/16/2017
1,2,4-Trimethylbenzene	ND	0.81	0.045		ppbv	2	8/16/2017
1,2-Dibromoethane	ND	0.81	0.088		ppbv	2	8/16/2017
1,2-Dichlorobenzene	ND	0.81	0.064		ppbv	2	8/16/2017
1,2-Dichloroethane	ND	0.81	0.094		ppbv	2	8/16/2017
1,2-Dichloropropane	ND	0.81	0.15		ppbv	2	8/16/2017
1,3,5-Trimethylbenzene	ND	0.81	0.056		ppbv	2	8/16/2017
1,3-Butadiene	ND	0.81	0.19		ppbv	2	8/16/2017
1,3-Dichlorobenzene	ND	0.81	0.061		ppbv	2	8/16/2017
1,4-Dichlorobenzene	ND	0.81	0.069		ppbv	2	8/16/2017
1,4-Dioxane	ND	2.0	0.32		ppbv	2	8/16/2017
2-Butanone	ND	2.0	0.33		ppbv	2	8/16/2017
2-Hexanone	ND	4.0	0.51		ppbv	2	8/16/2017
4-Ethyltoluene	ND	0.81	0.084		ppbv	2	8/16/2017
4-Methyl-2-pentanone	ND	4.0	0.27		ppbv	2	8/16/2017
Acetone	5.8	8.1	0.74	J*	ppbv	2	8/16/2017
Benzene	0.081	0.81	0.067	J	ppbv	2	8/16/2017
Benzyl chloride	ND	2.0	0.25		ppbv	2	8/16/2017
Bromodichloromethane	ND	0.81	0.041		ppbv	2	8/16/2017
Bromoform	ND	2.0	0.039		ppbv	2	8/16/2017
Bromomethane	ND	2.0	0.095		ppbv	2	8/16/2017
Carbon disulfide	ND	0.81	0.083		ppbv	2	8/16/2017
Carbon tetrachloride	ND	0.81	0.18		ppbv	2	8/16/2017
Chlorobenzene	ND	0.81	0.2		ppbv	2	8/16/2017
Chloroethane	ND	0.81	0.16		ppbv	2	8/16/2017
Chloroform	ND	0.81	0.044		ppbv	2	8/16/2017
Chloromethane	ND	2.0	0.46		ppbv	2	8/16/2017
cis-1,2-Dichloroethene	ND	0.81	0.16		ppbv	2	8/16/2017
cis-1,3-Dichloropropene	ND	0.81	0.096		ppbv	2	8/16/2017
Cyclohexane	ND	0.81	0.17		ppbv	2	8/16/2017
Dibromochloromethane	ND	0.81	0.05		ppbv	2	8/16/2017
Dichlorodifluoromethane	0.40	0.81	0.05	J	ppbv	2	8/16/2017
Ethyl acetate	ND	2.0	0.29		ppbv	2	8/16/2017

ND - Not Detected at the Reporting Limit

RL/MDL - Reporting Limit / Method Detection Limit for the analysis

Qualifiers: J - Analyte detected below reporting limit

S - Spike Recovery outside accepted recovery limits

B - Analyte detected in the associated Method Blank

R - RPD outside accepted recovery limits

HT - Sample received past holding time

E - Value above quantitation range

\* - Non-accredited parameter

H - Holding time exceeded

**STAT Analysis Corporation**

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Tel: (312) 733-0551 Fax: (312) 733-2386 STATinfo@STATAnalysis.com

Accreditations: IEPA ELAP 100445; ORELAP IL300001; AIHA-LAP, LLC 101160; NVLAP LabCode 101202-0

Date Reported: August 25, 2017

**ANALYTICAL RESULTS**

Date Printed: August 25, 2017

CLIENT: Apex Companies, LLC

Client Sample ID: SV-5

Work Order: 17080520 Revision 0

Collection Date: 8/14/2017 12:30:00 PM

Project: PELO-2017-68, Franklin Centre, 7201 S. 76th St., Fr

Matrix: AIR

Lab ID: 17080520-005

Analyses	Result	RL	MDL	Qualifier	Units	DF	Date Analyzed
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Volatile Organic Compounds in Air by GC/MS	TO-15	Prep Date: 8/16/2017			Analyst: AOA		
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Ethylbenzene	ND	0.81	0.059		ppbv	2	8/16/2017
Freon-113	0.081	0.81	0.03	J	ppbv	2	8/16/2017
Freon-114	ND	4.0	0.042		ppbv	2	8/16/2017
Heptane	ND	0.81	0.067		ppbv	2	8/16/2017
Hexachlorobutadiene	ND	0.81	0.084		ppbv	2	8/16/2017
Hexane	ND	2.0	0.14		ppbv	2	8/16/2017
Isopropyl Alcohol	14	4.0	0.31		ppbv	2	8/16/2017
m,p-Xylene	ND	1.6	0.1		ppbv	2	8/16/2017
Methyl tert-butyl ether	ND	0.81	0.046		ppbv	2	8/16/2017
Methylene chloride	1.1	8.1	0.81	J	ppbv	2	8/16/2017
Naphthalene	ND	0.81	0.23		ppbv	2	8/16/2017
o-Xylene	ND	0.81	0.052		ppbv	2	8/16/2017
Propene	ND	8.1	0.22		ppbv	2	8/16/2017
Styrene	ND	0.81	0.19		ppbv	2	8/16/2017
Tetrachloroethene	76	0.81	0.059		ppbv	2	8/16/2017
Tetrahydrofuran	ND	2.0	0.38		ppbv	2	8/16/2017
Toluene	ND	0.81	0.091		ppbv	2	8/16/2017
trans-1,2-Dichloroethene	ND	0.81	0.056		ppbv	2	8/16/2017
trans-1,3-Dichloropropene	ND	0.81	0.81		ppbv	2	8/16/2017
Trichloroethene	4.8	0.81	0.062		ppbv	2	8/16/2017
Trichlorofluoromethane	0.32	0.81	0.051	J	ppbv	2	8/16/2017
Vinyl acetate	ND	8.1	0.32		ppbv	2	8/16/2017
Vinyl chloride	ND	0.81	0.068		ppbv	2	8/16/2017
Xylenes, Total	ND	2.4	0.15		ppbv	2	8/16/2017

Volatile Organic Compounds in Air by GC/MS	TO-15	Prep Date: 8/16/2017			Analyst: AOA		
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1,1,1-Trichloroethane	0.00088	0.0044	0.00021	J	mg/m <sup>3</sup>	2	8/16/2017
1,1,2,2-Tetrachloroethane	ND	0.0056	0.00038		mg/m <sup>3</sup>	2	8/16/2017
1,1,2-Trichloroethane	ND	0.0044	0.00056		mg/m <sup>3</sup>	2	8/16/2017
1,1-Dichloroethane	ND	0.0033	0.00014		mg/m <sup>3</sup>	2	8/16/2017
1,1-Dichloroethene	ND	0.0032	0.0002		mg/m <sup>3</sup>	2	8/16/2017
1,2,4-Trichlorobenzene	ND	0.0060	0.0011		mg/m <sup>3</sup>	2	8/16/2017
1,2,4-Trimethylbenzene	ND	0.0040	0.00022		mg/m <sup>3</sup>	2	8/16/2017
1,2-Dibromoethane	ND	0.0062	0.00068		mg/m <sup>3</sup>	2	8/16/2017
1,2-Dichlorobenzene	ND	0.0049	0.00039		mg/m <sup>3</sup>	2	8/16/2017
1,2-Dichloroethane	ND	0.0033	0.00038		mg/m <sup>3</sup>	2	8/16/2017
1,2-Dichloropropane	ND	0.0037	0.00069		mg/m <sup>3</sup>	2	8/16/2017
1,3,5-Trimethylbenzene	ND	0.0040	0.00027		mg/m <sup>3</sup>	2	8/16/2017
1,3-Butadiene	ND	0.0018	0.00042		mg/m <sup>3</sup>	2	8/16/2017

ND - Not Detected at the Reporting Limit

RL/MDL - Reporting Limit / Method Detection Limit for the analysis

Qualifiers: J - Analyte detected below reporting limit

S - Spike Recovery outside accepted recovery limits

B - Analyte detected in the associated Method Blank

R - RPD outside accepted recovery limits

HT - Sample received past holding time

E - Value above quantitation range

\* - Non-accredited parameter

H - Holding time exceeded

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Accreditations: IEPA ELAP 100445; ORELAP IL300001; AIHA-LAP, LLC 101160; NVLAP LabCode 101202-0

Date Reported: August 25, 2017

**ANALYTICAL RESULTS**

Date Printed: August 25, 2017

CLIENT: Apex Companies, LLC

Client Sample ID: SV-5

Work Order: 17080520 Revision 0

Collection Date: 8/14/2017 12:30:00 PM

Project: PELO-2017-68, Franklin Centre, 7201 S. 76th St., Fr

Matrix: AIR

Lab ID: 17080520-005

Analyses	Result	RL	MDL	Qualifier	Units	DF	Date Analyzed
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Volatile Organic Compounds in Air by GC/MS			TO-15	Prep Date: 8/16/2017		Analyst: AOA	
1,3-Dichlorobenzene	ND	0.0049	0.00036		mg/m <sup>3</sup>	2	8/16/2017
1,4-Dichlorobenzene	ND	0.0049	0.00042		mg/m <sup>3</sup>	2	8/16/2017
1,4-Dioxane	ND	0.0073	0.0012		mg/m <sup>3</sup>	2	8/16/2017
2-Butanone	ND	0.0060	0.00099		mg/m <sup>3</sup>	2	8/16/2017
2-Hexanone	ND	0.017	0.0021		mg/m <sup>3</sup>	2	8/16/2017
4-Ethyltoluene	ND	0.0040	0.00041		mg/m <sup>3</sup>	2	8/16/2017
4-Methyl-2-pentanone	ND	0.017	0.0011		mg/m <sup>3</sup>	2	8/16/2017
Acetone	0.014	0.019	0.0018	J*	mg/m <sup>3</sup>	2	8/16/2017
Benzene	0.00026	0.0026	0.00022	J	mg/m <sup>3</sup>	2	8/16/2017
Benzyl chloride	ND	0.010	0.0013		mg/m <sup>3</sup>	2	8/16/2017
Bromodichloromethane	ND	0.0054	0.00028		mg/m <sup>3</sup>	2	8/16/2017
Bromoform	ND	0.021	0.00041		mg/m <sup>3</sup>	2	8/16/2017
Bromomethane	ND	0.0079	0.00037		mg/m <sup>3</sup>	2	8/16/2017
Carbon disulfide	ND	0.0025	0.00026		mg/m <sup>3</sup>	2	8/16/2017
Carbon tetrachloride	ND	0.0051	0.0011		mg/m <sup>3</sup>	2	8/16/2017
Chlorobenzene	ND	0.0037	0.00093		mg/m <sup>3</sup>	2	8/16/2017
Chloroethane	ND	0.0021	0.00043		mg/m <sup>3</sup>	2	8/16/2017
Chloroform	ND	0.0039	0.00022		mg/m <sup>3</sup>	2	8/16/2017
Chloromethane	ND	0.0042	0.00095		mg/m <sup>3</sup>	2	8/16/2017
cis-1,2-Dichloroethene	ND	0.0032	0.00062		mg/m <sup>3</sup>	2	8/16/2017
cis-1,3-Dichloropropene	ND	0.0037	0.00044		mg/m <sup>3</sup>	2	8/16/2017
Cyclohexane	ND	0.0028	0.00059		mg/m <sup>3</sup>	2	8/16/2017
Dibromochloromethane	ND	0.0069	0.00043		mg/m <sup>3</sup>	2	8/16/2017
Dichlorodifluoromethane	0.0020	0.0040	0.00025	J	mg/m <sup>3</sup>	2	8/16/2017
Ethyl acetate	ND	0.0073	0.001		mg/m <sup>3</sup>	2	8/16/2017
Ethylbenzene	ND	0.0035	0.00026		mg/m <sup>3</sup>	2	8/16/2017
Freon-113	0.00062	0.0062	0.00023	J	mg/m <sup>3</sup>	2	8/16/2017
Freon-114	ND	0.028	0.00029		mg/m <sup>3</sup>	2	8/16/2017
Heptane	ND	0.0033	0.00028		mg/m <sup>3</sup>	2	8/16/2017
Hexachlorobutadiene	ND	0.0086	0.0009		mg/m <sup>3</sup>	2	8/16/2017
Hexane	ND	0.0071	0.0005		mg/m <sup>3</sup>	2	8/16/2017
Isopropyl Alcohol	0.036	0.0099	0.00077		mg/m <sup>3</sup>	2	8/16/2017
m,p-Xylene	ND	0.0070	0.00044		mg/m <sup>3</sup>	2	8/16/2017
Methyl tert-butyl ether	ND	0.0029	0.00017		mg/m <sup>3</sup>	2	8/16/2017
Methylene chloride	0.0038	0.028	0.0028	J	mg/m <sup>3</sup>	2	8/16/2017
Naphthalene	ND	0.0042	0.0012		mg/m <sup>3</sup>	2	8/16/2017
o-Xylene	ND	0.0035	0.00022		mg/m <sup>3</sup>	2	8/16/2017
Propene	ND	0.014	0.00039		mg/m <sup>3</sup>	2	8/16/2017

**Qualifiers:**

ND - Not Detected at the Reporting Limit

RL/MDL - Reporting Limit / Method Detection Limit for the analysis

J - Analyte detected below reporting limit

S - Spike Recovery outside accepted recovery limits

B - Analyte detected in the associated Method Blank

R - RPD outside accepted recovery limits

HT - Sample received past holding time

E - Value above quantitation range

\* - Non-accredited parameter

H - Holding time exceeded

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Accreditations: IEPA ELAP 100445; ORELAP IL300001; AIHA-LAP, LLC 101160; NVLAP LabCode 101202-0

Date Reported: August 25, 2017

**ANALYTICAL RESULTS**

Date Printed: August 25, 2017

CLIENT: Apex Companies, LLC

Work Order: 17080520 Revision 0

Project: PELO-2017-68, Franklin Centre, 7201 S. 76th St., Fr

Lab ID: 17080520-005

Client Sample ID: SV-5

Collection Date: 8/14/2017 12:30:00 PM

Matrix: AIR

Analyses	Result	RL	MDL	Qualifier	Units	DF	Date Analyzed
<b>Volatile Organic Compounds in Air by GC/MS</b>		<b>TO-15</b>		Prep Date: 8/16/2017		Analyst: AOA	
Styrene	ND	0.0034	0.00081		mg/m <sup>3</sup>	2	8/16/2017
Tetrachloroethene	0.52	0.0055	0.0004		mg/m <sup>3</sup>	2	8/16/2017
Tetrahydrofuran	ND	0.0060	0.0011		mg/m <sup>3</sup>	2	8/16/2017
Toluene	ND	0.0030	0.00034		mg/m <sup>3</sup>	2	8/16/2017
trans-1,2-Dichloroethene	ND	0.0032	0.00022		mg/m <sup>3</sup>	2	8/16/2017
trans-1,3-Dichloropropene	ND	0.0037	0.0037		mg/m <sup>3</sup>	2	8/16/2017
Trichloroethene	0.026	0.0043	0.00033		mg/m <sup>3</sup>	2	8/16/2017
Trichlorofluoromethane	0.0018	0.0045	0.00029	J	mg/m <sup>3</sup>	2	8/16/2017
Vinyl acetate	ND	0.028	0.0011		mg/m <sup>3</sup>	2	8/16/2017
Vinyl chloride	ND	0.0021	0.00017		mg/m <sup>3</sup>	2	8/16/2017
Xylenes, Total	ND	0.011	0.00065		mg/m <sup>3</sup>	2	8/16/2017

**Qualifiers:**

ND - Not Detected at the Reporting Limit

J - Analyte detected below reporting limit

B - Analyte detected in the associated Method Blank

HT - Sample received past holding time

\* - Non-accredited parameter

RL/MDL - Reporting Limit / Method Detection Limit for the analysis

S - Spike Recovery outside accepted recovery limits

R - RPD outside accepted recovery limits

E - Value above quantitation range

H - Holding time exceeded

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Date Reported: August 25, 2017

**ANALYTICAL RESULTS**

Date Printed: August 25, 2017

CLIENT: Apex Companies, LLC

Client Sample ID: SV-6

Work Order: 17080520 Revision 0

Collection Date: 8/14/2017 12:35:00 PM

Project: PELO-2017-68, Franklin Centre, 7201 S. 76th St., Fr

Matrix: AIR

Lab ID: 17080520-006

Analyses	Result	RL	MDL	Qualifier	Units	DF	Date Analyzed
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Volatile Organic Compounds in Air by GC/MS	TO-15	Prep Date: 8/16/2017			Analyst: AOA		
1,1,1-Trichloroethane	ND	0.37	0.018		ppbv	1	8/16/2017
1,1,2,2-Tetrachloroethane	ND	0.37	0.026		ppbv	1	8/16/2017
1,1,2-Trichloroethane	ND	0.37	0.048		ppbv	1	8/16/2017
1,1-Dichloroethane	ND	0.37	0.016		ppbv	1	8/16/2017
1,1-Dichloroethene	ND	0.37	0.024		ppbv	1	8/16/2017
1,2,4-Trichlorobenzene	ND	0.37	0.071		ppbv	1	8/16/2017
1,2,4-Trimethylbenzene	0.075	0.37	0.021	J	ppbv	1	8/16/2017
1,2-Dibromoethane	ND	0.37	0.041		ppbv	1	8/16/2017
1,2-Dichlorobenzene	ND	0.37	0.03		ppbv	1	8/16/2017
1,2-Dichloroethane	ND	0.37	0.043		ppbv	1	8/16/2017
1,2-Dichloropropane	ND	0.37	0.069		ppbv	1	8/16/2017
1,3,5-Trimethylbenzene	ND	0.37	0.026		ppbv	1	8/16/2017
1,3-Butadiene	ND	0.37	0.088		ppbv	1	8/16/2017
1,3-Dichlorobenzene	ND	0.37	0.028		ppbv	1	8/16/2017
1,4-Dichlorobenzene	ND	0.37	0.032		ppbv	1	8/16/2017
1,4-Dioxane	ND	0.94	0.15		ppbv	1	8/16/2017
2-Butanone	0.24	0.94	0.16	J	ppbv	1	8/16/2017
2-Hexanone	ND	1.9	0.24		ppbv	1	8/16/2017
4-Ethyltoluene	ND	0.37	0.039		ppbv	1	8/16/2017
4-Methyl-2-pentanone	ND	1.9	0.13		ppbv	1	8/16/2017
Acetone	2.2	3.7	0.34	J*	ppbv	1	8/16/2017
Benzene	0.037	0.37	0.031	J	ppbv	1	8/16/2017
Benzyl chloride	ND	0.94	0.11		ppbv	1	8/16/2017
Bromodichloromethane	ND	0.37	0.019		ppbv	1	8/16/2017
Bromoform	ND	0.94	0.018		ppbv	1	8/16/2017
Bromomethane	0.056	0.94	0.044	J	ppbv	1	8/16/2017
Carbon disulfide	ND	0.37	0.038		ppbv	1	8/16/2017
Carbon tetrachloride	ND	0.37	0.084		ppbv	1	8/16/2017
Chlorobenzene	ND	0.37	0.094		ppbv	1	8/16/2017
Chloroethane	ND	0.37	0.076		ppbv	1	8/16/2017
Chloroform	0.075	0.37	0.021	J	ppbv	1	8/16/2017
Chloromethane	ND	0.94	0.21		ppbv	1	8/16/2017
cis-1,2-Dichloroethene	ND	0.37	0.073		ppbv	1	8/16/2017
cis-1,3-Dichloropropene	ND	0.37	0.045		ppbv	1	8/16/2017
Cyclohexane	ND	0.37	0.08		ppbv	1	8/16/2017
Dibromochloromethane	ND	0.37	0.023		ppbv	1	8/16/2017
Dichlorodifluoromethane	0.45	0.37	0.023		ppbv	1	8/16/2017
Ethyl acetate	ND	0.94	0.13		ppbv	1	8/16/2017

ND - Not Detected at the Reporting Limit

RL/MDL - Reporting Limit / Method Detection Limit for the analysis

Qualifiers: J - Analyte detected below reporting limit

S - Spike Recovery outside accepted recovery limits

B - Analyte detected in the associated Method Blank

R - RPD outside accepted recovery limits

HT - Sample received past holding time

E - Value above quantitation range

\* - Non-accredited parameter

H - Holding time exceeded

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Accreditations: IEPA ELAP 100445; ORELAP IL300001; AIHA-LAP, LLC 101160; NVLAP LabCode 101202-0

Date Reported: August 25, 2017

**ANALYTICAL RESULTS**

Date Printed: August 25, 2017

CLIENT: Apex Companies, LLC

Client Sample ID: SV-6

Work Order: 17080520 Revision 0

Collection Date: 8/14/2017 12:35:00 PM

Project: PELO-2017-68, Franklin Centre, 7201 S. 76th St., Fr

Matrix: AIR

Lab ID: 17080520-006

Analyses	Result	RL	MDL	Qualifier	Units	DF	Date Analyzed
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Volatile Organic Compounds in Air by GC/MS	TO-15	Prep Date: 8/16/2017			Analyst: AOA		
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Ethylbenzene	ND	0.37	0.027		ppbv	1	8/16/2017
Freon-113	0.075	0.37	0.014	J	ppbv	1	8/16/2017
Freon-114	ND	1.9	0.019		ppbv	1	8/16/2017
Heptane	ND	0.37	0.031		ppbv	1	8/16/2017
Hexachlorobutadiene	ND	0.37	0.039		ppbv	1	8/16/2017
Hexane	ND	0.94	0.066		ppbv	1	8/16/2017
Isopropyl Alcohol	0.26	1.9	0.14	J	ppbv	1	8/16/2017
m,p-Xylene	0.056	0.75	0.047	J	ppbv	1	8/16/2017
Methyl tert-butyl ether	ND	0.37	0.021		ppbv	1	8/16/2017
Methylene chloride	0.56	3.7	0.37	J	ppbv	1	8/16/2017
Naphthalene	0.11	0.37	0.11	J	ppbv	1	8/16/2017
o-Xylene	0.037	0.37	0.024	J	ppbv	1	8/16/2017
Propene	0.13	3.7	0.1	J	ppbv	1	8/16/2017
Styrene	ND	0.37	0.088		ppbv	1	8/16/2017
Tetrachloroethene	3.8	0.37	0.027		ppbv	1	8/16/2017
Tetrahydrofuran	ND	0.94	0.18		ppbv	1	8/16/2017
Toluene	ND	0.37	0.042		ppbv	1	8/16/2017
trans-1,2-Dichloroethene	ND	0.37	0.026		ppbv	1	8/16/2017
trans-1,3-Dichloropropene	ND	0.37	0.37		ppbv	1	8/16/2017
Trichloroethene	ND	0.37	0.029		ppbv	1	8/16/2017
Trichlorofluoromethane	0.24	0.37	0.024	J	ppbv	1	8/16/2017
Vinyl acetate	ND	3.7	0.15		ppbv	1	8/16/2017
Vinyl chloride	ND	0.37	0.032		ppbv	1	8/16/2017
Xylenes, Total	0.094	1.1	0.069	J	ppbv	1	8/16/2017

Volatile Organic Compounds in Air by GC/MS	TO-15	Prep Date: 8/16/2017			Analyst: AOA		
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1,1,1-Trichloroethane	ND	0.0020	0.000098		mg/m <sup>3</sup>	1	8/16/2017
1,1,2,2-Tetrachloroethane	ND	0.0026	0.00018		mg/m <sup>3</sup>	1	8/16/2017
1,1,2-Trichloroethane	ND	0.0020	0.00026		mg/m <sup>3</sup>	1	8/16/2017
1,1-Dichloroethane	ND	0.0015	0.000066		mg/m <sup>3</sup>	1	8/16/2017
1,1-Dichloroethene	ND	0.0015	0.000094		mg/m <sup>3</sup>	1	8/16/2017
1,2,4-Trichlorobenzene	ND	0.0028	0.00053		mg/m <sup>3</sup>	1	8/16/2017
1,2,4-Trimethylbenzene	0.00037	0.0018	0.0001	J	mg/m <sup>3</sup>	1	8/16/2017
1,2-Dibromoethane	ND	0.0029	0.00031		mg/m <sup>3</sup>	1	8/16/2017
1,2-Dichlorobenzene	ND	0.0023	0.00018		mg/m <sup>3</sup>	1	8/16/2017
1,2-Dichloroethane	ND	0.0015	0.00018		mg/m <sup>3</sup>	1	8/16/2017
1,2-Dichloropropane	ND	0.0017	0.00032		mg/m <sup>3</sup>	1	8/16/2017
1,3,5-Trimethylbenzene	ND	0.0018	0.00013		mg/m <sup>3</sup>	1	8/16/2017
1,3-Butadiene	ND	0.00083	0.00019		mg/m <sup>3</sup>	1	8/16/2017

ND - Not Detected at the Reporting Limit

RL/MDL - Reporting Limit / Method Detection Limit for the analysis

Qualifiers: J - Analyte detected below reporting limit

S - Spike Recovery outside accepted recovery limits

B - Analyte detected in the associated Method Blank

R - RPD outside accepted recovery limits

HT - Sample received past holding time

E - Value above quantitation range

\* - Non-accredited parameter

H - Holding time exceeded



**STAT Analysis Corporation**

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Tel: (312) 733-0551 Fax: (312) 733-2386 STATinfo@STATAnalysis.com

Accreditations: IEPA ELAP 100445; ORELAP IL300001; AIHA-LAP, LLC 101160; NVLAP LabCode 101202-0

Date Reported: August 25, 2017

**ANALYTICAL RESULTS**

Date Printed: August 25, 2017

CLIENT: Apex Companies, LLC

Work Order: 17080520 Revision 0

Project: PELO-2017-68, Franklin Centre, 7201 S. 76th St., Fr

Lab ID: 17080520-006

Client Sample ID: SV-6

Collection Date: 8/14/2017 12:35:00 PM

Matrix: AIR

Analyses	Result	RL	MDL	Qualifier	Units	DF	Date Analyzed
<b>Volatile Organic Compounds in Air by GC/MS</b>		<b>TO-15</b>		Prep Date: 8/16/2017		Analyst: AOA	
1,3-Dichlorobenzene	ND	0.0023	0.00017		mg/m <sup>3</sup>	1	8/16/2017
1,4-Dichlorobenzene	ND	0.0023	0.00019		mg/m <sup>3</sup>	1	8/16/2017
1,4-Dioxane	ND	0.0034	0.00054		mg/m <sup>3</sup>	1	8/16/2017
2-Butanone	0.00072	0.0028	0.00046	J	mg/m <sup>3</sup>	1	8/16/2017
2-Hexanone	ND	0.0077	0.00097		mg/m <sup>3</sup>	1	8/16/2017
4-Ethyltoluene	ND	0.0018	0.00019		mg/m <sup>3</sup>	1	8/16/2017
4-Methyl-2-pentanone	ND	0.0077	0.00052		mg/m <sup>3</sup>	1	8/16/2017
Acetone	0.0053	0.0089	0.00082	J*	mg/m <sup>3</sup>	1	8/16/2017
Benzene	0.00012	0.0012	0.0001	J	mg/m <sup>3</sup>	1	8/16/2017
Benzyl chloride	ND	0.0048	0.00059		mg/m <sup>3</sup>	1	8/16/2017
Bromodichloromethane	ND	0.0025	0.00013		mg/m <sup>3</sup>	1	8/16/2017
Bromoform	ND	0.0097	0.00019		mg/m <sup>3</sup>	1	8/16/2017
Bromomethane	0.00022	0.0036	0.00017	J	mg/m <sup>3</sup>	1	8/16/2017
Carbon disulfide	ND	0.0012	0.00012		mg/m <sup>3</sup>	1	8/16/2017
Carbon tetrachloride	ND	0.0024	0.00053		mg/m <sup>3</sup>	1	8/16/2017
Chlorobenzene	ND	0.0017	0.00043		mg/m <sup>3</sup>	1	8/16/2017
Chloroethane	ND	0.00099	0.0002		mg/m <sup>3</sup>	1	8/16/2017
Chloroform	0.00037	0.0018	0.0001	J	mg/m <sup>3</sup>	1	8/16/2017
Chloromethane	ND	0.0019	0.00044		mg/m <sup>3</sup>	1	8/16/2017
cis-1,2-Dichloroethene	ND	0.0015	0.00029		mg/m <sup>3</sup>	1	8/16/2017
cis-1,3-Dichloropropene	ND	0.0017	0.0002		mg/m <sup>3</sup>	1	8/16/2017
Cyclohexane	ND	0.0013	0.00027		mg/m <sup>3</sup>	1	8/16/2017
Dibromochloromethane	ND	0.0032	0.0002		mg/m <sup>3</sup>	1	8/16/2017
Dichlorodifluoromethane	0.0022	0.0019	0.00011		mg/m <sup>3</sup>	1	8/16/2017
Ethyl acetate	ND	0.0034	0.00048		mg/m <sup>3</sup>	1	8/16/2017
Ethylbenzene	ND	0.0016	0.00012		mg/m <sup>3</sup>	1	8/16/2017
Freon-113	0.00057	0.0029	0.00011	J	mg/m <sup>3</sup>	1	8/16/2017
Freon-114	ND	0.013	0.00013		mg/m <sup>3</sup>	1	8/16/2017
Heptane	ND	0.0015	0.00013		mg/m <sup>3</sup>	1	8/16/2017
Hexachlorobutadiene	ND	0.0040	0.00041		mg/m <sup>3</sup>	1	8/16/2017
Hexane	ND	0.0033	0.00023		mg/m <sup>3</sup>	1	8/16/2017
Isopropyl Alcohol	0.00064	0.0046	0.00036	J	mg/m <sup>3</sup>	1	8/16/2017
m,p-Xylene	0.00024	0.0033	0.0002	J	mg/m <sup>3</sup>	1	8/16/2017
Methyl tert-butyl ether	ND	0.0014	0.000076		mg/m <sup>3</sup>	1	8/16/2017
Methylene chloride	0.0020	0.013	0.0013	J	mg/m <sup>3</sup>	1	8/16/2017
Naphthalene	0.00059	0.0020	0.00056	J	mg/m <sup>3</sup>	1	8/16/2017
o-Xylene	0.00016	0.0016	0.0001	J	mg/m <sup>3</sup>	1	8/16/2017
Propene	0.00023	0.0064	0.00018	J	mg/m <sup>3</sup>	1	8/16/2017

**Qualifiers:**

ND - Not Detected at the Reporting Limit

J - Analyte detected below reporting limit

B - Analyte detected in the associated Method Blank

HT - Sample received past holding time

\* - Non-accredited parameter

RL/MDL - Reporting Limit / Method Detection Limit for the analysis

S - Spike Recovery outside accepted recovery limits

R - RPD outside accepted recovery limits

E - Value above quantitation range

H - Holding time exceeded

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Accreditations: IEPA ELAP 100445; ORELAP IL300001; AIHA-LAP, LLC 101160; NVLAP LabCode 101202-0

Date Reported: August 25, 2017

**ANALYTICAL RESULTS**

Date Printed: August 25, 2017

CLIENT: Apex Companies, LLC

Work Order: 17080520 Revision 0

Project: PELO-2017-68, Franklin Centre, 7201 S. 76th St., Fr

Lab ID: 17080520-006

Client Sample ID: SV-6

Collection Date: 8/14/2017 12:35:00 PM

Matrix: AIR

Analyses	Result	RL	MDL	Qualifier	Units	DF	Date Analyzed
<b>Volatile Organic Compounds in Air by GC/MS</b>		<b>TO-15</b>		Prep Date: 8/16/2017		Analyst: AOA	
Styrene	ND	0.0016	0.00038		mg/m <sup>3</sup>	1	8/16/2017
Tetrachloroethene	0.026	0.0025	0.00018		mg/m <sup>3</sup>	1	8/16/2017
Tetrahydrofuran	ND	0.0028	0.00052		mg/m <sup>3</sup>	1	8/16/2017
Toluene	ND	0.0014	0.00016		mg/m <sup>3</sup>	1	8/16/2017
trans-1,2-Dichloroethene	ND	0.0015	0.0001		mg/m <sup>3</sup>	1	8/16/2017
trans-1,3-Dichloropropene	ND	0.0017	0.0017		mg/m <sup>3</sup>	1	8/16/2017
Trichloroethene	ND	0.0020	0.00015		mg/m <sup>3</sup>	1	8/16/2017
Trichlorofluoromethane	0.0014	0.0021	0.00013	J	mg/m <sup>3</sup>	1	8/16/2017
Vinyl acetate	ND	0.013	0.00053		mg/m <sup>3</sup>	1	8/16/2017
Vinyl chloride	ND	0.00096	0.000081		mg/m <sup>3</sup>	1	8/16/2017
Xylenes, Total	0.00041	0.0049	0.0003	J	mg/m <sup>3</sup>	1	8/16/2017

**Qualifiers:**

ND - Not Detected at the Reporting Limit

J - Analyte detected below reporting limit

B - Analyte detected in the associated Method Blank

HT - Sample received past holding time

\* - Non-accredited parameter

RL/MDL - Reporting Limit / Method Detection Limit for the analysis

S - Spike Recovery outside accepted recovery limits

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E - Value above quantitation range

H - Holding time exceeded

**CHAIN OF CUSTODY RECORD**

Company: Apex Companies Client Tracking No.: \_\_\_\_\_  
 Project Number: PEL0-2017-68  
 Project Name: Franklin Centre  
 Project Location: 7201 S. 76th St, Franklin, WI  
 Sampler(s): Joe Beuber  
 Report To: Joe Beuber Phone: 847-452-9782  
Steve Newton Fax: jbeuber@apex.com  
 QC Level: 1 2 3 4 e-mail: snewlin@apex.com

Client Sample Number/Description:	Date Taken	Time Taken	Matrix	Comp.	Grab	Preserv.	No. of Containers
MW-1 @ 4'	8-11-17	8:00	Soil	X	F		4
MW-2 @ 6'	↓	10:40	↓	X	↓		↓
B-1 @ 2'	↓	9:10	↓	X	↓		↓
SU-4	12-27	8:47	Air	X	A		1
SU-5	12-30	↓	↓	X	↓		↓
SU-6	12-35	↓	↓	X	↓		↓

Quote No.: \_\_\_\_\_  
 P.O. No.: \_\_\_\_\_  
 Turn Around Time (Days):  
 1 2 3 4 5-7 10  
 Results Needed: \_\_\_\_\_

Additional Information:	Lab No.:
	601
	602
	603
	604
	605
	606

Relinquished by: (Signature) \_\_\_\_\_ Date/Time: 8/15/17 15:30  
 Received by: (Signature) Steve Newton Date/Time: 8/15/17 13:30  
 Relinquished by: (Signature) \_\_\_\_\_ Date/Time: \_\_\_\_\_  
 Received by: (Signature) \_\_\_\_\_ Date/Time: \_\_\_\_\_  
 Relinquished by: (Signature) \_\_\_\_\_ Date/Time: \_\_\_\_\_  
 Received by: (Signature) \_\_\_\_\_ Date/Time: \_\_\_\_\_

Comments: \_\_\_\_\_

Preservation Code: A = None B = HNO<sub>3</sub> C = NaOH  
 D = H<sub>2</sub>SO<sub>4</sub> E = HCl F = 5035/EnCore G = Other

Laboratory Work Order No.: 17080520  
 Received on Ice: Yes  No   
 Temperature: 3.3 °C

**Sample Receipt Checklist**

Client Name **APEX**

Date and Time Received: **8/15/2017 1:30:00 PM**

Work Order Number **17080520**

Received by: **MGK**

Checklist completed by:

*[Handwritten Signature]*  
Signature

**8/15/17**  
Date

Reviewed by:

**MK**  
Initials

**8/15/17**  
Date

Matrix:

Carrier name Client Delivered

- Shipping container/cooler in good condition? Yes  No  Not Present
- Custody seals intact on shipping container/cooler? Yes  No  Not Present
- Custody seals intact on sample bottles? Yes  No  Not Present
- Chain of custody present? Yes  No
- Chain of custody signed when relinquished and received? Yes  No
- Chain of custody agrees with sample labels/containers? Yes  No
- Samples in proper container/bottle? Yes  No
- Sample containers intact? Yes  No
- Sufficient sample volume for indicated test? Yes  No
- All samples received within holding time? Yes  No
- Container or Temp Blank temperature in compliance? Yes  No  Temperature **3.3 °C\***
- Water - VOA vials have zero headspace? No VOA vials submitted  Yes  No
- Water - Samples pH checked? Yes  No  Checked by: \_\_\_\_\_
- Water - Samples properly preserved? Yes  No  pH Adjusted? \_\_\_\_\_

Any No response must be detailed in the comments section below.

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Comments: \* TO canisters were received in ambient conditions.

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Client / Person contacted: \_\_\_\_\_

Date contacted: \_\_\_\_\_

Contacted by: \_\_\_\_\_

Response: \_\_\_\_\_

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**STAT** Analysis Corporation

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Accreditations: IEPA ELAP 100445; ORELAP IL300001; AIHA-LAP, LLC 101160; NVLAP LabCode 101202-0

August 23, 2017

Apex Companies, LLC  
1701 East Woodfield Rd, Suite 333  
Schaumburg, IL 60173  
Telephone: (847) 956-8589  
Fax: (847) 956-8619

Analytical Report for STAT Work Order: 17080612 Revision 0

RE: PECO-2017-68, Franklin Centre, 7201 S. 76th St., Franklin, WI

Dear Joseph Becker:

STAT Analysis received 5 samples for the referenced project on 8/17/2017 4:55:00 PM. The analytical results are presented in the following report.

All analyses were performed in accordance with the requirements specified in WI DNR Chapter NR 149 (Certification Number 399099910). Analyses were performed in accordance with methods as referenced on the analytical report.

All analyses were performed within established holding time criteria, and all Quality Control criteria met EPA or laboratory specifications except when noted in the Case Narrative or Analytical Report. A listing of accredited methods/parameters can also be provided.

For sample results requiring adjustment for dilutions, the detection and reporting limits are adjusted for the corresponding dilution factor. Analytical results expressed on a dry weight basis have units of mg/Kg-dry or µg/Kg-dry on the analytical report. Corresponding reporting limits are adjusted for dry weight.

Thank you for the opportunity to serve you and I look forward to working with you in the future. If you have any questions regarding the enclosed materials, please contact me at (312) 733-0551.

Sincerely,



Martin Kucan  
Project Manager

*The information contained in this report and any attachments is confidential information intended only for the use of the individual or entities named above. The results of this report relate only to the samples tested. If you have received this report in error, please notify us immediately by phone. This report shall not be reproduced, except in its entirety, unless written approval has been obtained from the laboratory. This analytical report shall become property of the Customer upon payment in full. Otherwise, STAT will be under no obligation to support, defend or discuss the analytical report.*

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**Client:** Apex Companies, LLC  
**Project:** PECO-2017-68, Franklin Centre, 7201 S. 76th St., Frar **Work Order Sample Summary**  
**Work Order:** 17080612 Revision 0

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<b>Lab Sample ID</b>	<b>Client Sample ID</b>	<b>Tag Number</b>	<b>Collection Date</b>	<b>Date Received</b>
17080612-001A	MW-1		8/17/2017 12:05:00 PM	8/17/2017
17080612-002A	MW-2		8/17/2017 11:20:00 AM	8/17/2017
17080612-003A	MW-3		8/17/2017 10:35:00 AM	8/17/2017
17080612-004A	Duplicate		8/17/2017	8/17/2017
17080612-005A	Trip Blank			8/17/2017

**STAT Analysis Corporation**

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Accreditations: IEPA ELAP 100445; ORELAP IL300001; AIHA-LAP, LLC 101160; NVLAP LabCode 101202-0

Date Reported: August 23, 2017

**ANALYTICAL RESULTS**

Date Printed: August 23, 2017

CLIENT: Apex Companies, LLC

Client Sample ID: MW-1

Work Order: 17080612 Revision 0

Collection Date 8/17/2017 12:05:00 PM

Project: PECO-2017-68, Franklin Centre, 7201 S. 76th St., Fra

Matrix: AQUEOUS

Lab ID: 17080612-001

Analyses	Result	RL	MDL	Qualifier	Units	DF	Date Analyzed
<b>Volatile Organic Compounds by GC/MS</b>	<b>SW8260B (SW5030B)</b>		Prep Date:		Analyst: ART		
Acetone	ND	0.020	0.0031		mg/L	1	8/22/2017
Benzene	ND	0.0050	0.0002		mg/L	1	8/22/2017
Bromodichloromethane	ND	0.0050	0.0002		mg/L	1	8/22/2017
Bromoform	ND	0.0050	0.0003		mg/L	1	8/22/2017
Bromomethane	ND	0.010	0.002		mg/L	1	8/22/2017
2-Butanone	ND	0.020	0.0016		mg/L	1	8/22/2017
Carbon disulfide	ND	0.010	0.0003		mg/L	1	8/22/2017
Carbon tetrachloride	ND	0.0050	0.001		mg/L	1	8/22/2017
Chlorobenzene	ND	0.0050	0.0002		mg/L	1	8/22/2017
Chloroethane	ND	0.010	0.0005		mg/L	1	8/22/2017
Chloroform	ND	0.0050	0.0001		mg/L	1	8/22/2017
Chloromethane	ND	0.010	0.0003		mg/L	1	8/22/2017
Dibromochloromethane	ND	0.0050	0.0002		mg/L	1	8/22/2017
1,1-Dichloroethane	ND	0.0050	0.0002		mg/L	1	8/22/2017
1,2-Dichloroethane	ND	0.0050	0.0002		mg/L	1	8/22/2017
1,1-Dichloroethene	ND	0.0050	0.0004		mg/L	1	8/22/2017
cis-1,2-Dichloroethene	ND	0.0050	0.0002		mg/L	1	8/22/2017
trans-1,2-Dichloroethene	ND	0.0050	0.0005		mg/L	1	8/22/2017
1,2-Dichloropropane	ND	0.0050	0.0001		mg/L	1	8/22/2017
cis-1,3-Dichloropropene	ND	0.0010	0.0002		mg/L	1	8/22/2017
trans-1,3-Dichloropropene	ND	0.0010	0.0001		mg/L	1	8/22/2017
Ethylbenzene	ND	0.0050	0.0003		mg/L	1	8/22/2017
2-Hexanone	ND	0.020	0.0002		mg/L	1	8/22/2017
4-Methyl-2-pentanone	ND	0.020	0.0007		mg/L	1	8/22/2017
Methylene chloride	ND	0.0050	0.0002		mg/L	1	8/22/2017
Methyl tert-butyl ether	ND	0.0050	0.0003		mg/L	1	8/22/2017
Styrene	ND	0.0050	0.0003		mg/L	1	8/22/2017
1,1,2,2-Tetrachloroethane	ND	0.0050	0.0001		mg/L	1	8/22/2017
Tetrachloroethene	ND	0.0050	0.0003		mg/L	1	8/22/2017
Toluene	ND	0.0050	0.0004		mg/L	1	8/22/2017
1,1,1-Trichloroethane	ND	0.0050	0.0002		mg/L	1	8/22/2017
1,1,2-Trichloroethane	ND	0.0050	0.0001		mg/L	1	8/22/2017
Trichloroethene	ND	0.0050	0.0003		mg/L	1	8/22/2017
Vinyl chloride	ND	0.0020	0.0003		mg/L	1	8/22/2017
Xylenes, Total	ND	0.015	0.001		mg/L	1	8/22/2017

**Qualifiers:**

ND - Not Detected at the Reporting Limit

J - Analyte detected below reporting limit

B - Analyte detected in the associated Method Blank

HT - Sample received past holding time

\* - Non-accredited parameter

RL/MDL - Reporting Limit / Method Detection Limit for the analysis

S - Spike Recovery outside accepted recovery limits

R - RPD outside accepted recovery limits

E - Value above quantitation range

H - Holding time exceeded

**STAT Analysis Corporation**

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Accreditations: IEPA ELAP 100445; ORELAP IL300001; AIHA-LAP, LLC 101160; NVLAP LabCode 101202-0

Date Reported: August 23, 2017

**ANALYTICAL RESULTS**

Date Printed: August 23, 2017

CLIENT: Apex Companies, LLC

Client Sample ID: MW-2

Work Order: 17080612 Revision 0

Collection Date 8/17/2017 11:20:00 AM

Project: PECO-2017-68, Franklin Centre, 7201 S. 76th St., Fra

Matrix: AQUEOUS

Lab ID: 17080612-002

Analyses	Result	RL	MDL	Qualifier	Units	DF	Date Analyzed
<b>Volatile Organic Compounds by GC/MS</b>	<b>SW8260B (SW5030B)</b>		Prep Date:		Analyst: ART		
Acetone	ND	0.020	0.0031		mg/L	1	8/22/2017
Benzene	ND	0.0050	0.0002		mg/L	1	8/22/2017
Bromodichloromethane	ND	0.0050	0.0002		mg/L	1	8/22/2017
Bromoform	ND	0.0050	0.0003		mg/L	1	8/22/2017
Bromomethane	ND	0.010	0.002		mg/L	1	8/22/2017
2-Butanone	ND	0.020	0.0016		mg/L	1	8/22/2017
Carbon disulfide	ND	0.010	0.0003		mg/L	1	8/22/2017
Carbon tetrachloride	ND	0.0050	0.001		mg/L	1	8/22/2017
Chlorobenzene	ND	0.0050	0.0002		mg/L	1	8/22/2017
Chloroethane	ND	0.010	0.0005		mg/L	1	8/22/2017
Chloroform	ND	0.0050	0.0001		mg/L	1	8/22/2017
Chloromethane	ND	0.010	0.0003		mg/L	1	8/22/2017
Dibromochloromethane	ND	0.0050	0.0002		mg/L	1	8/22/2017
1,1-Dichloroethane	ND	0.0050	0.0002		mg/L	1	8/22/2017
1,2-Dichloroethane	ND	0.0050	0.0002		mg/L	1	8/22/2017
1,1-Dichloroethene	ND	0.0050	0.0004		mg/L	1	8/22/2017
cis-1,2-Dichloroethene	ND	0.0050	0.0002		mg/L	1	8/22/2017
trans-1,2-Dichloroethene	ND	0.0050	0.0005		mg/L	1	8/22/2017
1,2-Dichloropropane	ND	0.0050	0.0001		mg/L	1	8/22/2017
cis-1,3-Dichloropropene	ND	0.0010	0.0002		mg/L	1	8/22/2017
trans-1,3-Dichloropropene	ND	0.0010	0.0001		mg/L	1	8/22/2017
Ethylbenzene	ND	0.0050	0.0003		mg/L	1	8/22/2017
2-Hexanone	ND	0.020	0.0002		mg/L	1	8/22/2017
4-Methyl-2-pentanone	ND	0.020	0.0007		mg/L	1	8/22/2017
Methylene chloride	ND	0.0050	0.0002		mg/L	1	8/22/2017
Methyl tert-butyl ether	ND	0.0050	0.0003		mg/L	1	8/22/2017
Styrene	ND	0.0050	0.0003		mg/L	1	8/22/2017
1,1,2,2-Tetrachloroethane	ND	0.0050	0.0001		mg/L	1	8/22/2017
Tetrachloroethene	ND	0.0050	0.0003		mg/L	1	8/22/2017
Toluene	ND	0.0050	0.0004		mg/L	1	8/22/2017
1,1,1-Trichloroethane	ND	0.0050	0.0002		mg/L	1	8/22/2017
1,1,2-Trichloroethane	ND	0.0050	0.0001		mg/L	1	8/22/2017
Trichloroethene	ND	0.0050	0.0003		mg/L	1	8/22/2017
Vinyl chloride	ND	0.0020	0.0003		mg/L	1	8/22/2017
Xylenes, Total	ND	0.015	0.001		mg/L	1	8/22/2017

**Qualifiers:**  
 ND - Not Detected at the Reporting Limit  
 J - Analyte detected below reporting limit  
 B - Analyte detected in the associated Method Blank  
 HT - Sample received past holding time  
 \* - Non-accredited parameter

RL/MDL - Reporting Limit / Method Detection Limit for the analysis  
 S - Spike Recovery outside accepted recovery limits  
 R - RPD outside accepted recovery limits  
 E - Value above quantitation range  
 H - Holding time exceeded



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Accreditations: IEPA ELAP 100445; ORELAP IL300001; AIHA-LAP, LLC 101160; NVLAP LabCode 101202-0

Date Reported: August 23, 2017

**ANALYTICAL RESULTS**

Date Printed: August 23, 2017

CLIENT: Apex Companies, LLC

Client Sample ID: MW-3

Work Order: 17080612 Revision 0

Collection Date 8/17/2017 10:35:00 AM

Project: PECO-2017-68, Franklin Centre, 7201 S. 76th St., Fra

Matrix: AQUEOUS

Lab ID: 17080612-003

Analyses	Result	RL	MDL	Qualifier	Units	DF	Date Analyzed
<b>Volatile Organic Compounds by GC/MS</b>	<b>SW8260B (SW5030B)</b>		Prep Date:		Analyst: ART		
Acetone	ND	0.020	0.0031		mg/L	1	8/22/2017
Benzene	ND	0.0050	0.0002		mg/L	1	8/22/2017
Bromodichloromethane	ND	0.0050	0.0002		mg/L	1	8/22/2017
Bromoform	ND	0.0050	0.0003		mg/L	1	8/22/2017
Bromomethane	ND	0.010	0.002		mg/L	1	8/22/2017
2-Butanone	ND	0.020	0.0016		mg/L	1	8/22/2017
Carbon disulfide	ND	0.010	0.0003		mg/L	1	8/22/2017
Carbon tetrachloride	ND	0.0050	0.001		mg/L	1	8/22/2017
Chlorobenzene	ND	0.0050	0.0002		mg/L	1	8/22/2017
Chloroethane	ND	0.010	0.0005		mg/L	1	8/22/2017
Chloroform	ND	0.0050	0.0001		mg/L	1	8/22/2017
Chloromethane	ND	0.010	0.0003		mg/L	1	8/22/2017
Dibromochloromethane	ND	0.0050	0.0002		mg/L	1	8/22/2017
1,1-Dichloroethane	ND	0.0050	0.0002		mg/L	1	8/22/2017
1,2-Dichloroethane	ND	0.0050	0.0002		mg/L	1	8/22/2017
1,1-Dichloroethene	ND	0.0050	0.0004		mg/L	1	8/22/2017
cis-1,2-Dichloroethene	ND	0.0050	0.0002		mg/L	1	8/22/2017
trans-1,2-Dichloroethene	ND	0.0050	0.0005		mg/L	1	8/22/2017
1,2-Dichloropropane	ND	0.0050	0.0001		mg/L	1	8/22/2017
cis-1,3-Dichloropropene	ND	0.0010	0.0002		mg/L	1	8/22/2017
trans-1,3-Dichloropropene	ND	0.0010	0.0001		mg/L	1	8/22/2017
Ethylbenzene	ND	0.0050	0.0003		mg/L	1	8/22/2017
2-Hexanone	ND	0.020	0.0002		mg/L	1	8/22/2017
4-Methyl-2-pentanone	ND	0.020	0.0007		mg/L	1	8/22/2017
Methylene chloride	ND	0.0050	0.0002		mg/L	1	8/22/2017
Methyl tert-butyl ether	ND	0.0050	0.0003		mg/L	1	8/22/2017
Styrene	ND	0.0050	0.0003		mg/L	1	8/22/2017
1,1,2,2-Tetrachloroethane	ND	0.0050	0.0001		mg/L	1	8/22/2017
Tetrachloroethene	ND	0.0050	0.0003		mg/L	1	8/22/2017
Toluene	ND	0.0050	0.0004		mg/L	1	8/22/2017
1,1,1-Trichloroethane	ND	0.0050	0.0002		mg/L	1	8/22/2017
1,1,2-Trichloroethane	ND	0.0050	0.0001		mg/L	1	8/22/2017
Trichloroethene	ND	0.0050	0.0003		mg/L	1	8/22/2017
Vinyl chloride	ND	0.0020	0.0003		mg/L	1	8/22/2017
Xylenes, Total	ND	0.015	0.001		mg/L	1	8/22/2017

ND - Not Detected at the Reporting Limit

RL/MDL - Reporting Limit / Method Detection Limit for the analysis

Qualifiers: J - Analyte detected below reporting limit

S - Spike Recovery outside accepted recovery limits

B - Analyte detected in the associated Method Blank

R - RPD outside accepted recovery limits

HT - Sample received past holding time

E - Value above quantitation range

\* - Non-accredited parameter

H - Holding time exceeded

**STAT Analysis Corporation**

2242 West Harrison St., Suite 200, Chicago, IL 60612-3766

Tel: (312) 733-0551 Fax: (312) 733-2386 STATinfo@STATAnalysis.com

Accreditations: IEPA ELAP 100445; ORELAP IL300001; AIHA-LAP, LLC 101160; NVLAP LabCode 101202-0

Date Reported: August 23, 2017

**ANALYTICAL RESULTS**

Date Printed: August 23, 2017

CLIENT: Apex Companies, LLC

Client Sample ID: Duplicate

Work Order: 17080612 Revision 0

Collection Date 8/17/2017

Project: PECO-2017-68, Franklin Centre, 7201 S. 76th St., Fra

Matrix: AQUEOUS

Lab ID: 17080612-004

Analyses	Result	RL	MDL	Qualifier	Units	DF	Date Analyzed
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**Volatile Organic Compounds by GC/MS**

SW8260B (SW5030B)

Prep Date:

Analyst: ART

Acetone	ND	0.020	0.0031		mg/L	1	8/22/2017
Benzene	ND	0.0050	0.0002		mg/L	1	8/22/2017
Bromodichloromethane	ND	0.0050	0.0002		mg/L	1	8/22/2017
Bromoform	ND	0.0050	0.0003		mg/L	1	8/22/2017
Bromomethane	ND	0.010	0.002		mg/L	1	8/22/2017
2-Butanone	ND	0.020	0.0016		mg/L	1	8/22/2017
Carbon disulfide	ND	0.010	0.0003		mg/L	1	8/22/2017
Carbon tetrachloride	ND	0.0050	0.001		mg/L	1	8/22/2017
Chlorobenzene	ND	0.0050	0.0002		mg/L	1	8/22/2017
Chloroethane	ND	0.010	0.0005		mg/L	1	8/22/2017
Chloroform	ND	0.0050	0.0001		mg/L	1	8/22/2017
Chloromethane	ND	0.010	0.0003		mg/L	1	8/22/2017
Dibromochloromethane	ND	0.0050	0.0002		mg/L	1	8/22/2017
1,1-Dichloroethane	ND	0.0050	0.0002		mg/L	1	8/22/2017
1,2-Dichloroethane	ND	0.0050	0.0002		mg/L	1	8/22/2017
1,1-Dichloroethene	ND	0.0050	0.0004		mg/L	1	8/22/2017
cis-1,2-Dichloroethene	ND	0.0050	0.0002		mg/L	1	8/22/2017
trans-1,2-Dichloroethene	ND	0.0050	0.0005		mg/L	1	8/22/2017
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trans-1,3-Dichloropropene	ND	0.0010	0.0001		mg/L	1	8/22/2017
Ethylbenzene	ND	0.0050	0.0003		mg/L	1	8/22/2017
2-Hexanone	ND	0.020	0.0002		mg/L	1	8/22/2017
4-Methyl-2-pentanone	ND	0.020	0.0007		mg/L	1	8/22/2017
Methylene chloride	ND	0.0050	0.0002		mg/L	1	8/22/2017
Methyl tert-butyl ether	ND	0.0050	0.0003		mg/L	1	8/22/2017
Styrene	ND	0.0050	0.0003		mg/L	1	8/22/2017
1,1,2,2-Tetrachloroethane	ND	0.0050	0.0001		mg/L	1	8/22/2017
Tetrachloroethene	ND	0.0050	0.0003		mg/L	1	8/22/2017
Toluene	ND	0.0050	0.0004		mg/L	1	8/22/2017
1,1,1-Trichloroethane	ND	0.0050	0.0002		mg/L	1	8/22/2017
1,1,2-Trichloroethane	ND	0.0050	0.0001		mg/L	1	8/22/2017
Trichloroethene	ND	0.0050	0.0003		mg/L	1	8/22/2017
Vinyl chloride	ND	0.0020	0.0003		mg/L	1	8/22/2017
Xylenes, Total	ND	0.015	0.001		mg/L	1	8/22/2017

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Accreditations: IEPA ELAP 100445; ORELAP IL300001; AIHA-LAP, LLC 101160; NVLAP LabCode 101202-0

Date Reported: August 23, 2017

**ANALYTICAL RESULTS**

Date Printed: August 23, 2017

CLIENT: Apex Companies, LLC

Client Sample ID: Trip Blank

Work Order: 17080612 Revision 0

Collection Date

Project: PECO-2017-68, Franklin Centre, 7201 S. 76th St., Fra

Matrix: TRIP BLANK

Lab ID: 17080612-005

Analyses	Result	RL	MDL	Qualifier	Units	DF	Date Analyzed
<b>Volatile Organic Compounds by GC/MS</b>	<b>SW8260B (SW5030B)</b>		Prep Date:		Analyst: ART		
Acetone	ND	0.020	0.0031		mg/L	1	8/22/2017
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Styrene	ND	0.0050	0.0003		mg/L	1	8/22/2017
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Toluene	ND	0.0050	0.0004		mg/L	1	8/22/2017
1,1,1-Trichloroethane	ND	0.0050	0.0002		mg/L	1	8/22/2017
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Trichloroethene	ND	0.0050	0.0003		mg/L	1	8/22/2017
Vinyl chloride	ND	0.0020	0.0003		mg/L	1	8/22/2017
Xylenes, Total	ND	0.015	0.001		mg/L	1	8/22/2017

**Qualifiers:**

ND - Not Detected at the Reporting Limit

J - Analyte detected below reporting limit

B - Analyte detected in the associated Method Blank

HT - Sample received past holding time

\* - Non-accredited parameter

RL/MDL - Reporting Limit / Method Detection Limit for the analysis

S - Spike Recovery outside accepted recovery limits

R - RPD outside accepted recovery limits

E - Value above quantitation range

H - Holding time exceeded



### Sample Receipt Checklist

Client Name APEX

Date and Time Received: 8/17/2017 4:55:00 PM

Work Order Number 17080612

Received by: JNW

Checklist completed by:

[Signature] 8/17/17  
Signature Date

Reviewed by:

FE 8/18/17  
Initials Date

Matrix:

Carrier name Client Delivered

- Shipping container/cooler in good condition? Yes  No  Not Present
- Custody seals intact on shipping container/cooler? Yes  No  Not Present
- Custody seals intact on sample bottles? Yes  No  Not Present
- Chain of custody present? Yes  No
- Chain of custody signed when relinquished and received? Yes  No
- Chain of custody agrees with sample labels/containers? Yes  No
- Samples in proper container/bottle? Yes  No
- Sample containers intact? Yes  No
- Sufficient sample volume for indicated test? Yes  No
- All samples received within holding time? Yes  No
- Container or Temp Blank temperature in compliance? Yes  No  Temperature 4.7 °C
- Water - VOA vials have zero headspace? No VOA vials submitted  Yes  No
- Water - Samples pH checked? Yes  No  Checked by: \_\_\_\_\_
- Water - Samples properly preserved? Yes  No  pH Adjusted? \_\_\_\_\_

Any No response must be detailed in the comments section below.

Comments: \_\_\_\_\_

Client / Person contacted: \_\_\_\_\_

Date contacted: \_\_\_\_\_

Contacted by: \_\_\_\_\_

Response: \_\_\_\_\_

Appendix F  
Specifications for RadonAway Model GP501 Mitigation Fan



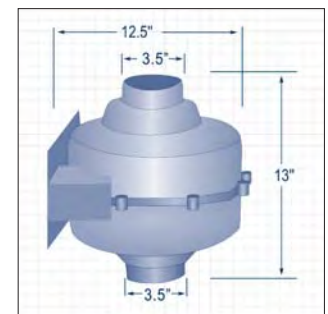
## Radon Mitigation Fan

All RadonAway<sup>TM</sup> fans are specifically designed for radon mitigation. GP Series Fans offer a wide range of performance options that make them ideal for most sub-slab radon mitigation systems.

## Features

- Quiet operation
- Water-hardened motor
- Seams sealed under negative pressure (to inhibit radon leakage)
- Mounts on duct pipe or with integral flange
- 3" diameter ducts for use with 3" or 4" pipe
- Electrical box for hard wire or plug in
- ETL Listed - for indoor or outdoor use
- 4 interchangeable GP models

MODEL	P/N	FAN DUCT DIAMETER	WATTS	MAX. PRESSURE <sup>4</sup> WC	TYPICAL CFM vs. STATIC PRESSURE WC							
					1.0"	1.5"	2.0"	2.5"	3.0"	3.5"	4.0"	
GP201	23007-1	3"	40-60	2.0	82	58	5	-	-	-	-	
GP301	23006-1	3"	55-90	2.6	92	77	45	10	-	-	-	
GP401	23009-1	3"	60-110	3.4	93	82	60	40	15	-	-	
GP501	23005-1	3"	70-140	4.2	95	87	80	70	57	30	10	



Made in USA with US and imported parts



ETL Listed



All RadonAway inline radon fans are covered by our 5-year, hassle-free warranty

For Further Information Contact