Environmental Resources Management

The Towers at Wildwood
3200 Windy Hill Road SE
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Atlanta, Georgia 30339
Phone (678) 486-2700
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August 3, 2016

Mr. Barrett Fischer
Georgia Environmental Protection Division
Response and Remediation Program
2 Martin Luther King, Jr. Drive, Southeast
Suite 1054 East
Atlanta, Georgia 30334

Subject: Vapor Intrusion Assessment Report
Former I. Schneid Facility, HSI Site No. 10753
1429 Fairmount Avenue, N.W.
Atlanta, Georgia

Dear Mr. Fischer:

Attached please find one hard copy and two CD Copies of the *Vapor Intrusion Assessment Report* for the former I-Schneid Facility Site located in Atlanta, Georgia.

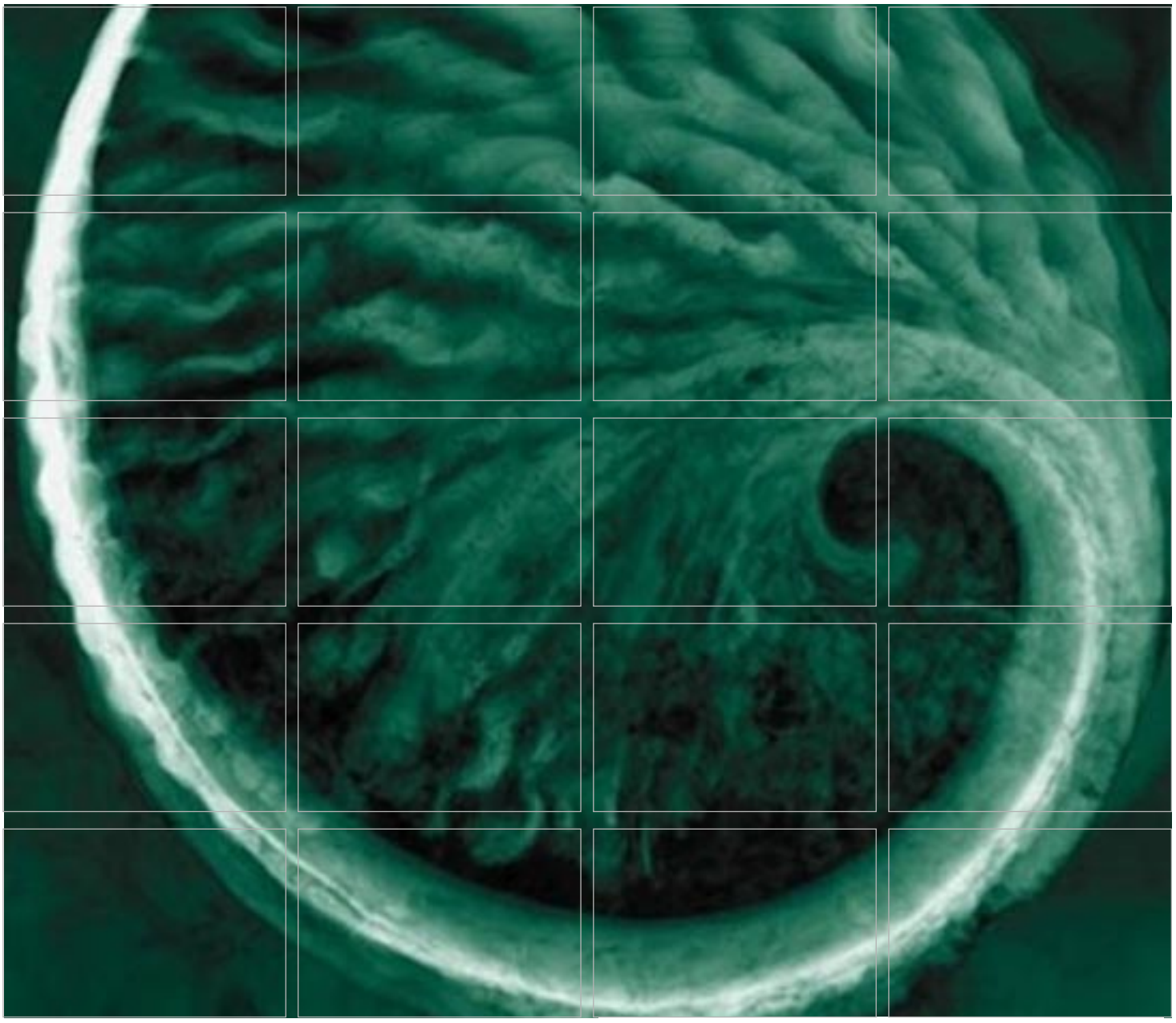
Sincerely,
Please contact us with questions or comments concerning this matter.

Sincerely,

Adria Reimer. P.G.
Georgia P.G. No. 2004

Jeffrey N. Bilkert
Principal

cc: Mr. Stephen Chapman – I.S. Liquidation, LLC



VAPOR INTRUSION ASSESSMENT REPORT

Former I. Schneid Facility

I. Schneid Liquidation, LLC
Atlanta, Georgia

ERM Project No.: 0121021

August 3, 2016

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GROUNDWATER SCIENTIST CERTIFICATION STATEMENT

I certify that I am a qualified ground-water scientist who has received a baccalaureate or post-graduate degree in the natural sciences or engineering, and have sufficient training and experience in groundwater hydrology and related fields, as demonstrated by state registration and completion of accredited university courses, that enable me to make sound professional judgments regarding groundwater monitoring and contaminant fate and transport. I further certify that this report was prepared by myself or by a subordinate working under my direction.

Adria L. Reimer, PG#2004

August 3, 2016

1.0 INTRODUCTION

Environmental Resources Management (ERM) has prepared this *Vapor Intrusion Assessment Report* (VIAR) on behalf of I. Schneid Liquidation, LLC (I-Schneid). The report presents the results of a vapor intrusion (VI) assessment performed at the former I. Schneid facility located at 1420 Fairmont Avenue in Atlanta, Fulton County, Georgia (the "Site"). The Site is listed on Georgia's Hazardous Site Inventory (HS I) and is currently regulated under Georgia's Voluntary Remediation Act. The purpose of the assessment was to evaluate the potential for VI of volatile organic compounds (VOCs) into the building and evaluate whether there is an unacceptable VI risk to future workers within this building that warrants additional actions (i.e., assessment and/or mitigation of risk). The assessment was performed as part of the Voluntary Remediation Program (VRP) requirements and in cooperation with the current owners of the property. The assessment was conducted in accordance with ERM's May 25, 2016 *Vapor Intrusion Evaluation Work Plan* (Work Plan, copy included as Appendix A) approved by the Georgia Environmental Protection Division (GAEPD) by email on May 23, 2016.

The VI assessment described in this report included two sampling events: June 8, 2016 and July 5, 2016. The June 2016 event included three sub-slab soil gas samples and two sub-slab multi-depth soil gas samples. The July 2016 sampling event included five indoor air samples and one outdoor air sample at the Site. The June 2016 sampling event was completed to evaluate concentrations of VOCs in soil gas and to evaluate if indoor air sampling was warranted. The July 2016 sampling was completed to evaluate potential impacts to indoor air. The procedures, results and conclusions of the VI assessment are presented in this VIAR.

1.1 OBJECTIVES

The primary objective of the VI assessment was to evaluate whether there is an unacceptable VI risk to future workers in the commercial building due to VOCs or naphthalene in groundwater at the Site that may warrant further action to assess or mitigate.

1.2 REPORT CONTENT AND ORGANIZATION

The remaining sections of this VIAR and a summary of their content are as follows:

Section 2 – provides a description of the procedures used in the assessment;

Section 3 – presents the results of the assessment including the screening levels used for each media and their rationale, and the analytical results of the collected samples; and

Section 4 – provides conclusions derived from the assessment and recommended path forward concerning VI at the former I-Schneid Facility.

2.0 INVESTIGATION PROCEDURES

This section of the VIAR describes the procedures employed during the assessment for conducting Site surveys, sub-slab soil gas sampling and indoor/outdoor ambient air sampling. The procedures were conducted in accordance with the GAEPD-approved *Vapor Intrusion Evaluation Work Plan* unless otherwise indicated in this section of the report.

The location of the former I. Schneid facility is shown on Figure 1.

In summary, the VI assessment consisted of the following:

- Visually surveyed the building to identify and assess sampling locations and building interior conditions to identify potential underground utilities, potential preferential pathways, and materials that could potentially contribute VOCs to indoor air.
- Collected a total of four sub-slab soil vapor samples (three locations and one duplicate sample) and three samples each from two sub-slab multi-depth soil gas sampling locations at the Site to assess VOCs in sub-slab soil vapor.
- Collect a total of five indoor air samples to evaluate VOCs inside the building. An outdoor, ambient air sample was also collected.
- Compared analytical results to applicable screening levels to evaluate whether additional assessment and/or other action is required.

2.1 COMMERCIAL BUILDING SURVEY

Prior to initiation of the field sampling program, ERM completed a building survey to evaluate property-specific conditions that may affect the design and/or results of the sampling program. The building survey included an evaluation of the foundation type and condition, and identification of potential preferential pathways.

2.2 SUB-SLAB SOIL VAPOR SAMPLING

Three sub-slab soil vapor sampling points and two multi-depth soil gas probes [3, 7, and 11 feet below ground surface (ft bgs)] were installed inside the building. The locations of these points and probes are shown on Figure 2. They were selected to be in proximity to groundwater with

the highest level of impact by VOCs and naphthalene. In general, all were located in proximity for former source areas identified previously at the Site. These included the former solvent mixing room, floor drain and sump.

Sub-surface clearance activities were conducted prior to installation activities. Georgia 811 was contacted in accordance with local regulations. Additionally, ERM retained a private utility locator to conduct geophysical surveys utilizing ground penetrating radar (GPR) and cable avoidance tools (CAT) to evaluate potential subsurface utilities in the areas where sub-slab soil vapor sampling points/probes were to be installed. Sample locations were moved as necessary to avoid potential underground utilities.

The June 2016 soil gas sampling event was completed on June 7 and 8, 2016 in accordance with the approved Work Plan. A photo-log of the sampling locations is included in Appendix B. Following sampling point installation, leak checks were performed as described in the approved Work Plan (i.e., water dam and shut-in test). No leaks were observed in the nine sub-slab sampling locations. Prior to sub-slab sampling, a GEM 2000 was used to purge the equivalent volume of the tubing and sand pack to remove any atmospheric air entrained during installation and to obtain soil gas readings for oxygen, CO_2, and methane. Sub-slab soil vapor samples were collected approximately 24 hours after installation of each sampling point. Sampling information, including quality control information, was recorded on the air sampling data sheet (Appendix C). This information included starting and ending vacuum reading of each canister.

Prior to and following collection of sub-slab soil vapor samples, differential pressure measurements were collected. A digital micro-manometer was used at each location to take instantaneous differential pressure readings at each location. Differential pressure readings (i.e., sub-slab pressure relative to indoor air pressure) are included in the results (Section 3.0).

Upon completion of soil vapor sample collection, sub-slab sampling points were capped and left in place.

2.3 INDOOR AIR SAMPLING

The July 2016 sampling event was conducted on July 5, 2016, and included indoor air samples collected at five sampling locations. Approximate

sampling locations are shown on Figure 2. Three samples were co-located at the three sub-slab soil vapor locations in the building and two additional sampling locations were completed in areas of the building further downgradient from the former source area. Indoor air samples were collected concurrently with an outdoor air sample (see Section 2.4). A photo-log of the sampling locations is included in Appendix B. At the time of the indoor air sampling, the building was essentially vacant and had been closed up over the July 4th holiday weekend. No operational HVAC system was present in the building at the time leading up to and during the sampling.

Indoor air samples were collected with 2.7-liter Summa® canisters equipped with 8-hour flow regulators. The canisters and flow regulators were batch certified clean by the laboratory prior to use. The indoor air samples were collected away from exterior windows and doors to the extent possible to avoid potential influence from air exchanges with outdoor air. They were collected at a breathing zone height of approximately 3 to 5 feet above the floor surface.

ERM personnel periodically checked on the Summa® canisters over the 8-hour sampling period to monitor changes in vacuum. Sampling information, including vacuum readings, was recorded on the air sampling data sheet and is included in Appendix C.

2.4 OUTDOOR AIR SAMPLING

The July 2016 sampling event included outdoor ambient air sampling in addition to the indoor air sampling described in Section 2.3. One outdoor ambient air sample was collected on July 5, 2016. The wind on the day of the sampling was estimated to be blowing from the southwest, so the sample was collected on the southwest side of the building approximately 10 feet away from the building wall. The outdoor ambient air sample location is shown on Figure 2 and a photo-log of the sampling location is included in Appendix A.

The outdoor ambient air sample collection was completed in accordance with the Work Plan. The outdoor ambient air sample was collected over an 8-hour period to reflect a commercial exposure scenario. Sample collection procedures were as describe in Section 2.3. The air intake of the Summa® canister was positioned facing downward to protect against rainwater. ERM personnel periodically checked on the Summa® canister over the 8-hour sampling period to monitor changes in vacuum and note activity in the vicinity of the sample location. Sampling information,

including vacuum readings, was recorded on the air sampling data sheet and is included in Appendix C.

2.5 ANALYTICAL METHODS

Samples were analyzed by Alpha Analytical Laboratory of Mansfield, Massachusetts, which is approved by Georgia through the National Environmental Laboratory Accreditation Program (NELAP). Sub-slab soil vapor samples were analyzed for VOCs using USEPA TO-15 Full Scan. Indoor and outdoor air samples were analyzed for VOCs using USEPA TO-15 selective ion monitoring (SIM). Analytical results were reported for a Site-specific list of VOCs, including naphthalene, as detailed in the Work Plan.

3.0 RESULTS

This section of the VIAR summarizes the results of the building survey, and sub-slab soil vapor, indoor and outdoor ambient air sampling. Laboratory analytical results from June 2016 sub-slab sampling event are summarized in Table 1 and Figure 3. Laboratory analytical results from July 2016 indoor air sampling event are summarized in Table 2 and Figure 4. Laboratory analytical reports for both events are provided in Appendix D.

3.1 BUILDING SURVEY RESULTS

A visual survey of the former I-Schneid facility building was conducted prior to the June 2016 sampling event. Building survey information was primarily used to facilitate evaluation of indoor air data. The following summarizes the observations from the survey:

- the building is vacant;
- numerous cracks, drains, groundwater monitoring wells are located within the building's concrete floor creating potential vapor intrusion preferential pathways; and
- drums filled with soil from environmental investigations were staged inside the building. Drum covers were in place, however.

3.2 DIFFERENTIAL PRESSURE READINGS

Differential pressure readings (i.e., sub-slab pressure relative to indoor air pressure) were collected both before each sub-slab soil vapor sample was collected. Readings at each sub-slab sample location were as follows:

June 2016

- SG-1-3′ = +0.008 inches water column (inWC),
- SG-1-7′ = +0.003 inWC,
- SG-1-11′ = -0.007 inWC,
- SG-2-3′ = -0.002 inWC,
- SG-2-7′ = +0.002 inWC,
- SG-2-11′ = +0.006 inWC,

- SSV-1 = +0.002 inWC,
- SSV-2 = -0.001 inWC, and
- SSV-3 = +0.001 inWC.

Differential pressure measurements recorded little to no positive pressure in the sub-surface as compared to indoor air. Advective air flow moves from areas of higher pressure to areas of lower pressure. The data in the building support the indication that there is not a significant preference for air to flow from the subsurface to the indoor air.

3.3 ANALYTICAL RESULTS

3.3.1 Screening Levels

Analytical results for sub-slab soil vapor and indoor air were compared to USEPA Vapor Intrusion Screening Levels. Screening levels for the sub-slab assessment were derived using the USEPA VISL Calculator Version 3.4 dated June 2015. Screening levels for the indoor air assessment were derived using the USEPA VISL Calculator Version 3.5.1 dated May 2016. A commercial exposure scenario was selected within the VISL calculator. A $1x10^{-5}$ target risk for carcinogens was selected and a target hazard quotient of 1.0 was used for non-carcinogens. The derived values for the VISLs for each Site-specific VOC and sample media are included in their respective analytical results tables (Table 1 and Table 2).

3.3.2 Sub-Slab

The June 2016 sub-slab soil vapor analytical results are presented in Table 1. Also shown in Table 1 are the commercial and residential VISL for sub-slab soil gas calculated as described in Section 3.3.1. A summary of the results is as follows:

- 1,4-Dichlorobenzene (1,4-DCB), ethylbenzene, naphthalene, o-xylene, and m/p xylene were detected in sub-slab and multi-depth soil gas samples at concentrations higher than their respective residential VISL.
- To a greater extent, 1,4-DCB, ethylbenzene, naphthalene, o-xylene, and m/p xylene were detected in sub-slab and multi-depth soil gas samples at concentrations higher than their respective commercial VISL.

- Chlorobenzene was detected on one multi-depth soil gas sample (SG-1, 11 ft bgs) at a concentration higher than its residential VISL.

These results indicated that additional assessment activities were required to obtain analytical data for indoor air samples to evaluate whether sub-slab VOC concentrations in soil gas were affecting indoor air quality and to determine if there is an unacceptable VI risk to future building occupants. This additional sampling in the building was performed in July 2016 and the results are presented below in Section 3.3.3.

3.3.3 Indoor Air

Results of the July 2016 indoor/outdoor ambient air analytical results are presented in Table 2. Also shown in Table 2 are the commercial and residential VISL for indoor air calculated as described in Section 3.3.1. A summary of the results is as follows:

- No exceedences of residential or commercial VISLs;
- Chorobenzene was not detected in any of the samples collected.
- Concentrations of ethylbenzene and xylenes were higher in the outdoor air than in indoor air indicating that the indoor air concentration were likely attributable to upwind sources ; and
- The Target Risk for Carcinogens (R) associated with the highest detected concentrations of 1,4-DCE and naphthalene were at least 1.5 orders of magnitude below commercial VISLs ($R = 1 \times 10^{-5}$) at a calculated $R = 8.8 \times 10^{-6}$ and $R = 5.3 \times 10^{-6}$, respectively.

These results indicate that VOCs detected in the sub-slab soil vapor samples do not currently present an unacceptable VI risk to future occupants of the I. Schneid facility building. Consequently, no further action is related to VI is warranted. Nevertheless, ERM understands that the concrete floor slab will be repaired/patched, and all trench drains and sumps will be filled with concrete as part future building renovations. Furthermore, a new HVAC system will be installed in the building. These renovations will serve to further decrease the potential for vapor intrusion.

4.0 CONCLUSIONS

Sub-slab soil vapor sampling and analyses were conducted at the former I. Schneid facility in June 2016. The results of the sampling/analyses indicated that further VI assessment was warranted. This conclusion was based on the reported concentrations of 1,4-DCE, ethylbenzene, naphthalene, and xylenes exceeding their respective commercial VISLs for sub-slab soil gas.

Although there are sub-slab VISL exceedances, the results of the July 2016 indoor air sampling/analyses indicate that VOCs detected in the sub-slab soil vapor samples do not present a VI risk to future building occupants. This conclusion is based on the following:

- None of the VOCs detected in sub-slab soil gas at concentrations above their respective soil vapor VISLs were detected in indoor air samples above their indoor air VISL; and
- Only two VOCs were detected in indoor air samples at concentrations above outdoor air concentrations, and the calculated R associated with the highest detected concentrations for each were at least 1.5 orders of magnitude below commercial VISLs.

The results of the VI assessment indicate that no further assessment at the former I. Schneid facility building is warranted. Future building renovations, including improvements to the concrete floor slab and installation of a new HVAC system will further decrease any VI risk.

Tables

August 2016
Project No. 0121021
I. Schneid Liquidation
Atlanta, GA

Environmental Resources Management
3200 Windy Hill Rd. Suite 1500W
Atlanta, GA 30339
(678) 486-2700

Table 1
Vapor Intrusion Assessment - Soil Gas Results
Former I. Schnied Facility
Atlanta, Georgia

Site-Specific VOCs	Soil Gas		Multi-Depth Soil Gas ID, Depth (ft bgs), and Sampling Date						Sub-Slab Soil Gas ID and Sampling Date		
	EPA VISLs Sub-Slab $R=10^{-5}$, HI=1.0	EPA VISLs Sub-Slab $R=10^{-5}$, HI=1.0	SG-1			SG-2					
	Residential [µg/m^3]	Commercial [µg/m^3]	11'	7'	3'	11'	7'	3'	SSV-1	SSV-2	SSV-3
			8-Jun-16	8-Jun-16	8-Jun-16	8-Jun-16	8-Jun-16	8-Jun-16	8-Jun-16	8-Jun-16	8-Jun-16
Chlorobenzene	1,700	7,300	2,650	< 89.3	< 228	636	295	310	5.43	< 4.61	0.539
1,4-Dichlorobenzene	85	370	16,800	35,200	95,600	848	536	372	66.1	127	52.2
Naphthalene	28	120	3,160	13,500	19,500	241	417	126	58.7	128	81.8
Ethylbenzene	370	1,600	9,340	15,800	64,700	1,380	116	109	24.8	32.3	4.56
o-Xylene	3,500	15,000	19,000	23,500	85,100	3,680	1,720	2,660	40.1	72.1	13.6
p/m-Xylene	3,500	15,000	37,900	73,400	82,100	6,250	1,250	2,000	133	170	28.7

Notes:

EPA Screening Levels calculated using EPA's Vapor Intrusion Screening Level Calculator Version 3.4 June 2015.

Bold and highlighted - exceeds Commercial screening level.

Bold and highlighted - exceeds Residential screening level.

Soil gas results reporting in µg/m^3.

µg/m^3 = micrograms per cubic meter.

Table 2
Vapor Intrusion Assessment - Indoor Air Results
Former I-Schnied Facility
Atlanta, Georgia

Site-Specific VOCs	Indoor Air EPA VISLs $R=10^{-5}$, HI=1.0	Indoor Air EPA VISLs $R=10^{-5}$, HI=1.0	Indoor Air Sample ID and Sampling Date					Outdoor Ambient Air Sample ID and Sampling Date	VI Carcinogenic Risk	VI Hazard
	Residential [µg/m3]	Commercial [µg/m3]	IA-01 5-Jul-16	IA-02 5-Jul-16	IA-03 5-Jul-16	IA-04 5-Jul-16	IA-05 5-Jul-16	OA-01 5-Jul-16	Carcinogenic Risk	Hazard Quotient
Chlorobenzene	52	220	< 0.461	< 0.461	< 0.461	< 0.461	< 0.461	< 0.461	NA	NA
1,4-Dichlorobenzene	2.6	11	0.475	0.559	0.343	2.25	0.709	< 0.120	8.8E-06	2.7E-03
Naphthalene	0.83	3.6	0.304	< 0.262	0.346	0.440	< 0.262	< 0.262	5.3E-06	1.4E-01
Ethylbenzene	11	49	0.143	0.126	0.143	0.265	0.204	0.764	NA	NA
o-Xylene	100	440	0.182	0.161	0.182	0.291	0.235	0.595	NA	NA
p/m-Xylene	100	440	0.430	0.391	0.473	0.856	0.647	2.1	NA	NA

Notes:

EPA Screening Levels calculated using EPA's Vapor Intrusion Screening Level Calculator Version 3.5.1 May 2016.

Indoor/Outdoor air results reporting in $\mu g/m^3$.

$\mu g/m^3$ = micrograms per cubic meter.

NA - not applicable - indoor air concentrations were either below detection limits or below outdoor air concentrations.

Figures

August 2016
Project No. 0121021
I. Schneid Liquidation
Atlanta, GA

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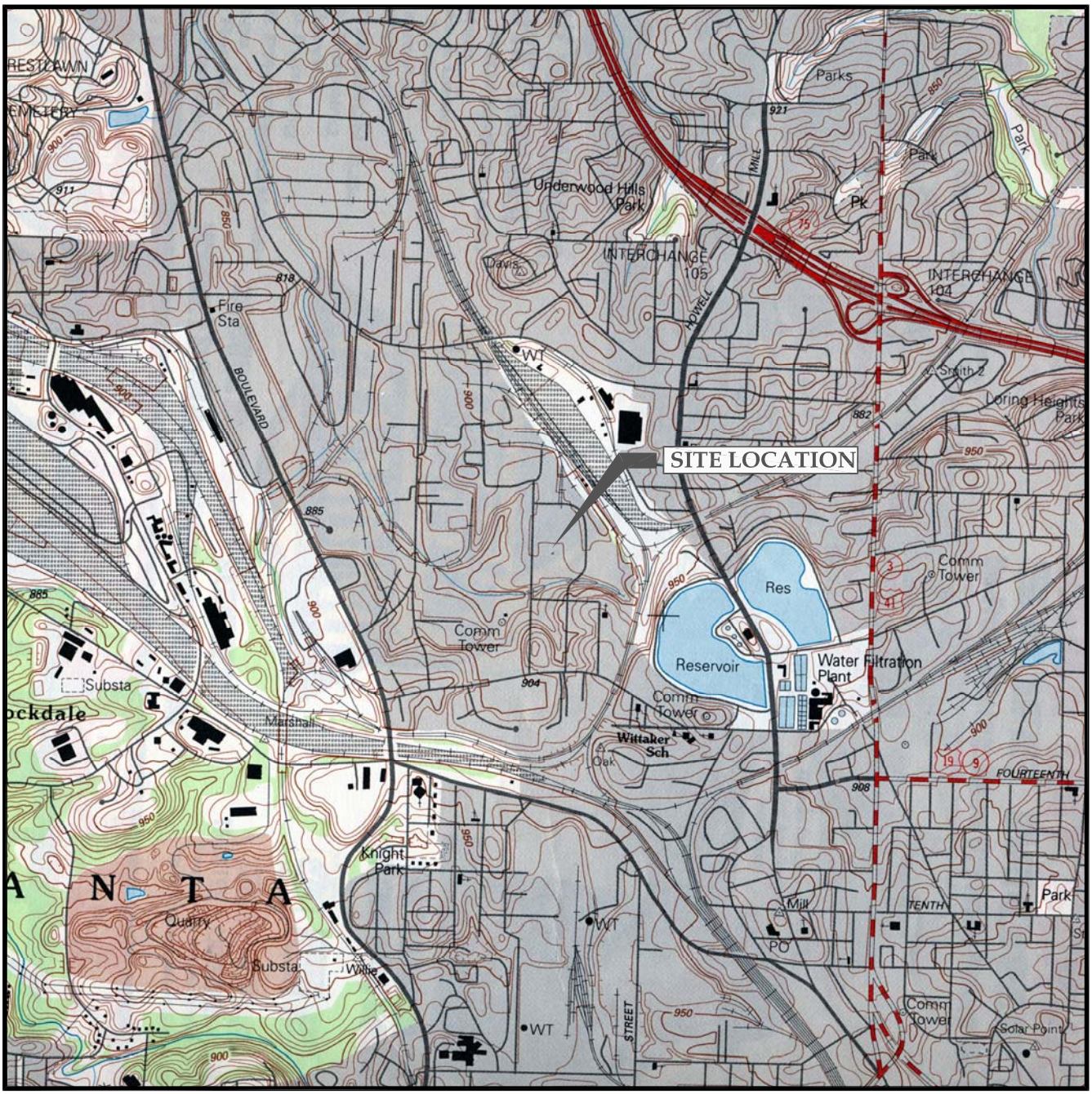


SOURCE: USGS 7.5 MINUTE TOPOGRAPHIC QUADRANGLE: NORTHWEST ATLANTA, GA – 1993

SCALE 1:24000

1 1/2 0 1 MILE

1000 0 1000 2000 3000 4000 5000 6000 7000 FEET

N

GEORGIA

QUADRANGLE LOCATION

CONTOUR INTERVAL 10 FEET

DOTTED LINES REPRESENT 5-FOOT CONTOURS

NATIONAL GEODETIC VERTICAL DATUM OF 1929

REV SPV 7/21/16 121021Site0.DWG

ERM Environmental Resources Management

SITE LOCATION MAP

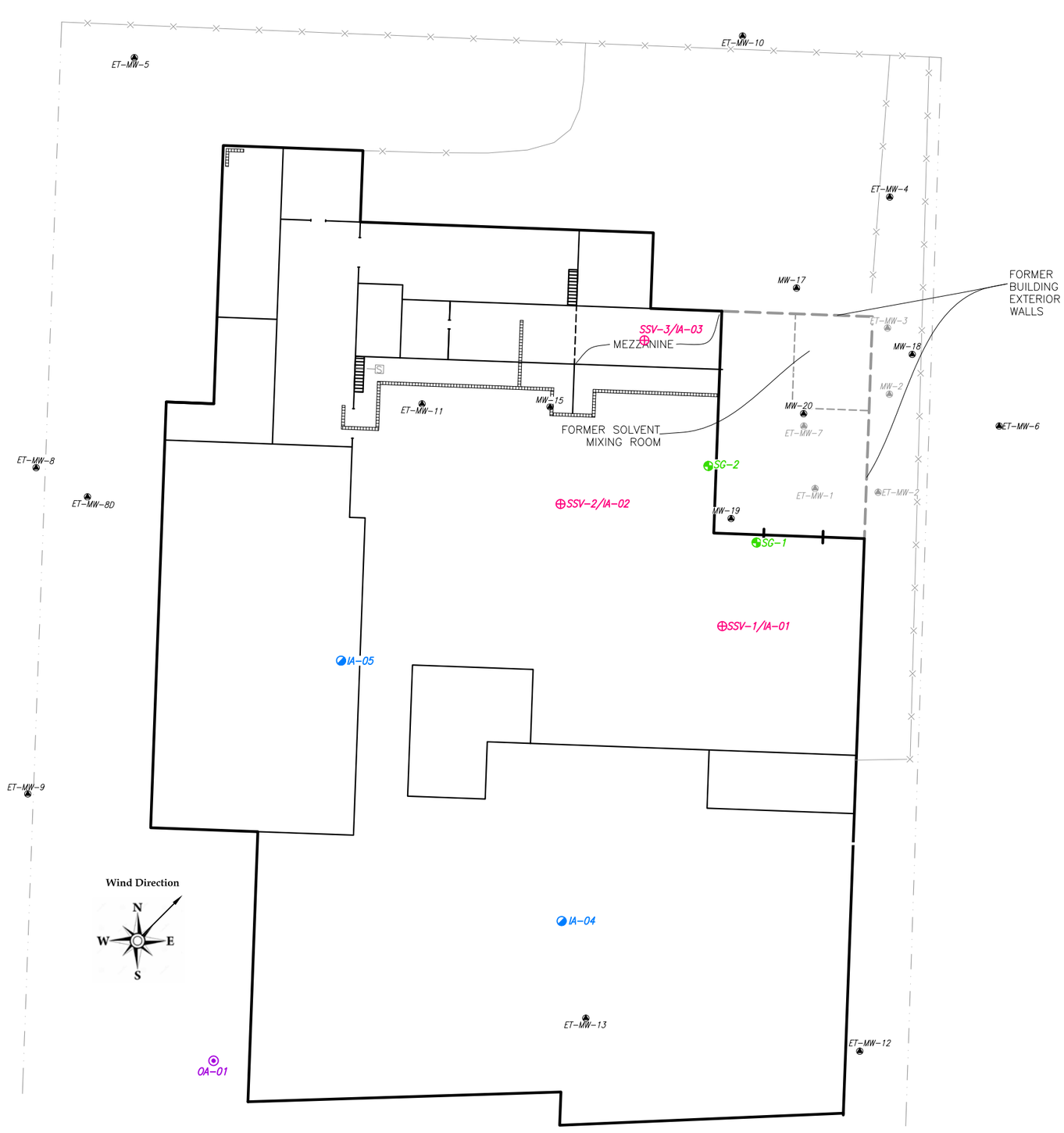
VAPOR INTRUSION ASSESSMENT REPORT

I. SCHNEID FACILITY

ATLANTA, GEORGIA

FIGURE

1



LEGEND

- ET-MW-8 — MONITOR WELL LOCATION
- ET-MW-1 — ABANDONED MONITOR WELL LOCATION
- FLOOR DRAIN
- SUMP
- STAIRS
- FENCE LINE
- PROPERTY LINE
- MULTI-DEPTH SAMPLE LOCATION
- SUB-SLAB AND INDOOR AIR SAMPLE LOCATION
- INDOOR AIR SAMPLE LOCATION
- OUTDOOR AIR SAMPLE LOCATION

N

0 40 80
SCALE FEET

Environmental Resources Management

FIGURE 2
SAMPLE LOCATION MAP
VAPOR INTRUSION ASSESSMENT REPORT
I. SCHNEID FACILITY
ATLANTA, FULTON COUNTY, GEORGIA

DESIGN: SV	DRAWN: SV	CHKD.: NV
DATE: 7/25/2016	SCALE: AS SHOWN	REV.: 0

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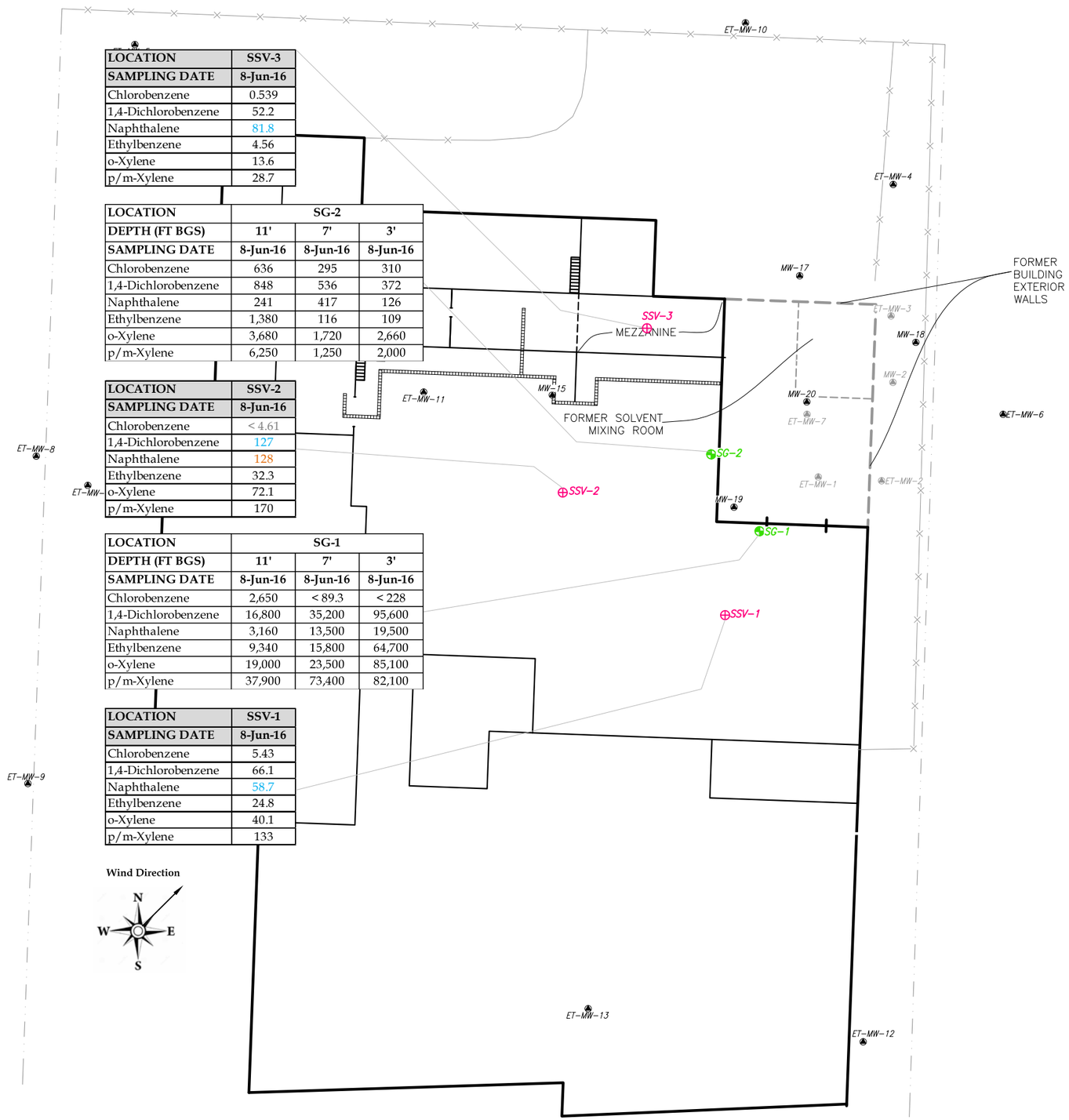
ERM



LOCATION	SSV-3
SAMPLING DATE	8-Jun-16
Chlorobenzene	0.539
1,4-Dichlorobenzene	52.2
Naphthalene	81.8
Ethylbenzene	4.56
o-Xylene	13.6
p/m-Xylene	28.7

LOCATION	SG-2		
DEPTH (FT BGS)	11'	7'	3'
SAMPLING DATE	8-Jun-16	8-Jun-16	8-Jun-16
Chlorobenzene	636	295	310
1,4-Dichlorobenzene	848	536	372
Naphthalene	241	417	126
Ethylbenzene	1,380	116	109
o-Xylene	3,680	1,720	2,660
p/m-Xylene	6,250	1,250	2,000

LOCATION	SSV-2
SAMPLING DATE	8-Jun-16
Chlorobenzene	< 4.61
1,4-Dichlorobenzene	127
Naphthalene	128
Ethylbenzene	32.3
o-Xylene	72.1
p/m-Xylene	170

LOCATION	SG-1		
DEPTH (FT BGS)	11'	7'	3'
SAMPLING DATE	8-Jun-16	8-Jun-16	8-Jun-16
Chlorobenzene	2,650	< 89.3	< 228
1,4-Dichlorobenzene	16,800	35,200	95,600
Naphthalene	3,160	13,500	19,500
Ethylbenzene	9,340	15,800	64,700
o-Xylene	19,000	23,500	85,100
p/m-Xylene	37,900	73,400	82,100

LOCATION	SSV-1
SAMPLING DATE	8-Jun-16
Chlorobenzene	5.43
1,4-Dichlorobenzene	66.1
Naphthalene	58.7
Ethylbenzene	24.8
o-Xylene	40.1
p/m-Xylene	133

LEGEND

- ET-MW-8 — MONITOR WELL LOCATION
- ET-MW-1 — ABANDONED MONITOR WELL LOCATION
- FLOOR DRAIN
- SUMP
- STAIRS
- FENCE LINE
- PROPERTY LINE
- MULTI-DEPTH SAMPLE LOCATION
- SUB-SLAB SAMPLE LOCATION

N

2,650 > RESIDENTIAL VISL, < COMMERCIAL VISL (BLUE TEXT)

16,800 > COMMERCIAL VISL (ORANGE TEXT)

	Soil Gas VISL	
	EPA VISLs Sub-Slab $R=10^{-5}$, HI=1.0	EPA VISLs Sub-Slab $R=10^{-5}$, HI=1.0
	Residential	Commercial
	[µg/m^3]	[µg/m^3]
Chlorobenzene	1,700	7,300
1,4-Dichlorobenzene	85	370
Naphthalene	28	120
Ethylbenzene	370	1,600
o-Xylene	3,500	15,000
p/m-Xylene	3,500	15,000

Results are µg/m^3

0 40 80

SCALE FEET

Environmental Resources Management

FIGURE 3
SUB-SLAB SOIL GAS ANALYTICAL RESULTS - JUNE 2016
VAPOR INTRUSION ASSESSMENT REPORT
I. SCHNEID FACILITY
ATLANTA, FULTON COUNTY, GEORGIA

DESIGN: SV	DRAWN: SV	CHKD.: NV
DATE: 7/25/2016	SCALE: AS SHOWN	REV.: 0

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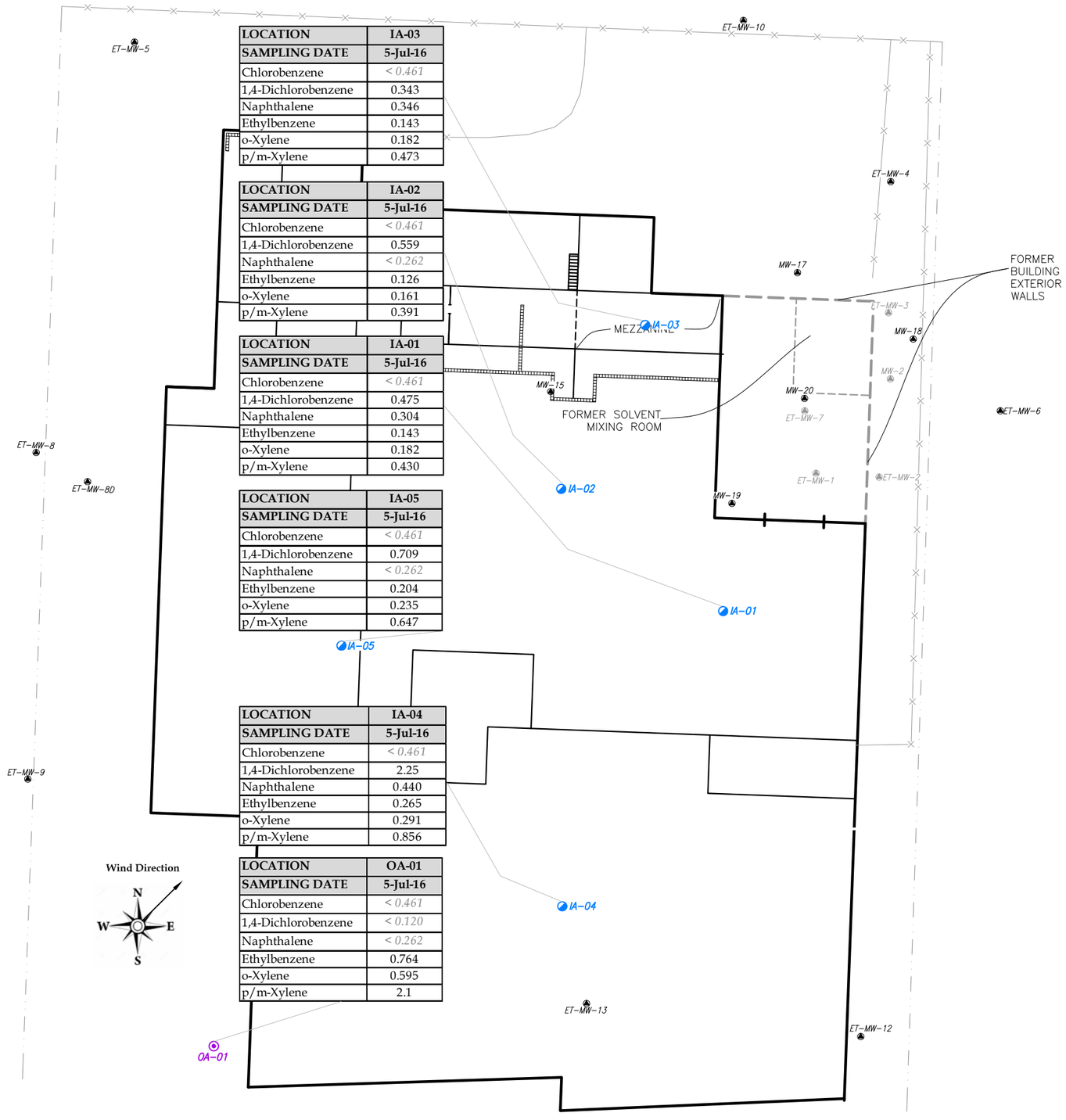


LOCATION	IA-03
SAMPLING DATE	5-Jul-16
Chlorobenzene	< 0.461
1,4-Dichlorobenzene	0.343
Naphthalene	0.346
Ethylbenzene	0.143
o-Xylene	0.182
p/m-Xylene	0.473

LOCATION	IA-02
SAMPLING DATE	5-Jul-16
Chlorobenzene	< 0.461
1,4-Dichlorobenzene	0.559
Naphthalene	< 0.262
Ethylbenzene	0.126
o-Xylene	0.161
p/m-Xylene	0.391

LOCATION	IA-01
SAMPLING DATE	5-Jul-16
Chlorobenzene	< 0.461
1,4-Dichlorobenzene	0.475
Naphthalene	0.304
Ethylbenzene	0.143
o-Xylene	0.182
p/m-Xylene	0.430

LOCATION	IA-05
SAMPLING DATE	5-Jul-16
Chlorobenzene	< 0.461
1,4-Dichlorobenzene	0.709
Naphthalene	< 0.262
Ethylbenzene	0.204
o-Xylene	0.235
p/m-Xylene	0.647

LOCATION	IA-04
SAMPLING DATE	5-Jul-16
Chlorobenzene	< 0.461
1,4-Dichlorobenzene	2.25
Naphthalene	0.440
Ethylbenzene	0.265
o-Xylene	0.291
p/m-Xylene	0.856

LOCATION	OA-01
SAMPLING DATE	5-Jul-16
Chlorobenzene	< 0.461
1,4-Dichlorobenzene	< 0.120
Naphthalene	< 0.262
Ethylbenzene	0.764
o-Xylene	0.595
p/m-Xylene	2.1

LEGEND

- MONITOR WELL LOCATION
- ABANDONED MONITOR WELL LOCATION
- FLOOR DRAIN
- SUMP
- STAIRS
- FENCE LINE
- PROPERTY LINE

- INDOOR AIR SAMPLE LOCATION
- OUTDOOR AIR SAMPLE LOCATION

N

	Indoor Air VISL EPA VISLs Sub-Slab Soil Gas $R=10^{-5}$, HI=1.0	Indoor Air VISL EPA VISLs Sub-Slab Soil Gas $R=10^{-5}$, HI=1.0
	Residential	Commercial
	[µg/m3]	[µg/m3]
Chlorobenzene	52	220
1,4-Dichlorobenzene	2.6	11
Naphthalene	0.83	3.6
Ethylbenzene	11	49
o-Xylene	100	440
p/m-Xylene	100	440

Results are µg/m^3

0 40 80

SCALE FEET

Environmental Resources Management

FIGURE 4
INDOOR AND OUTDOOR AIR
ANALYTICAL RESULTS - JUNE 2016
VAPOR INTRUSION ASSESSMENT REPORT
I. SCHNEID FACILITY
ATLANTA, FULTON COUNTY, GEORGIA

DESIGN: SV	DRAWN: SV	CHKD.: NV
DATE: 7/25/2016	SCALE: AS SHOWN	REV.: 0

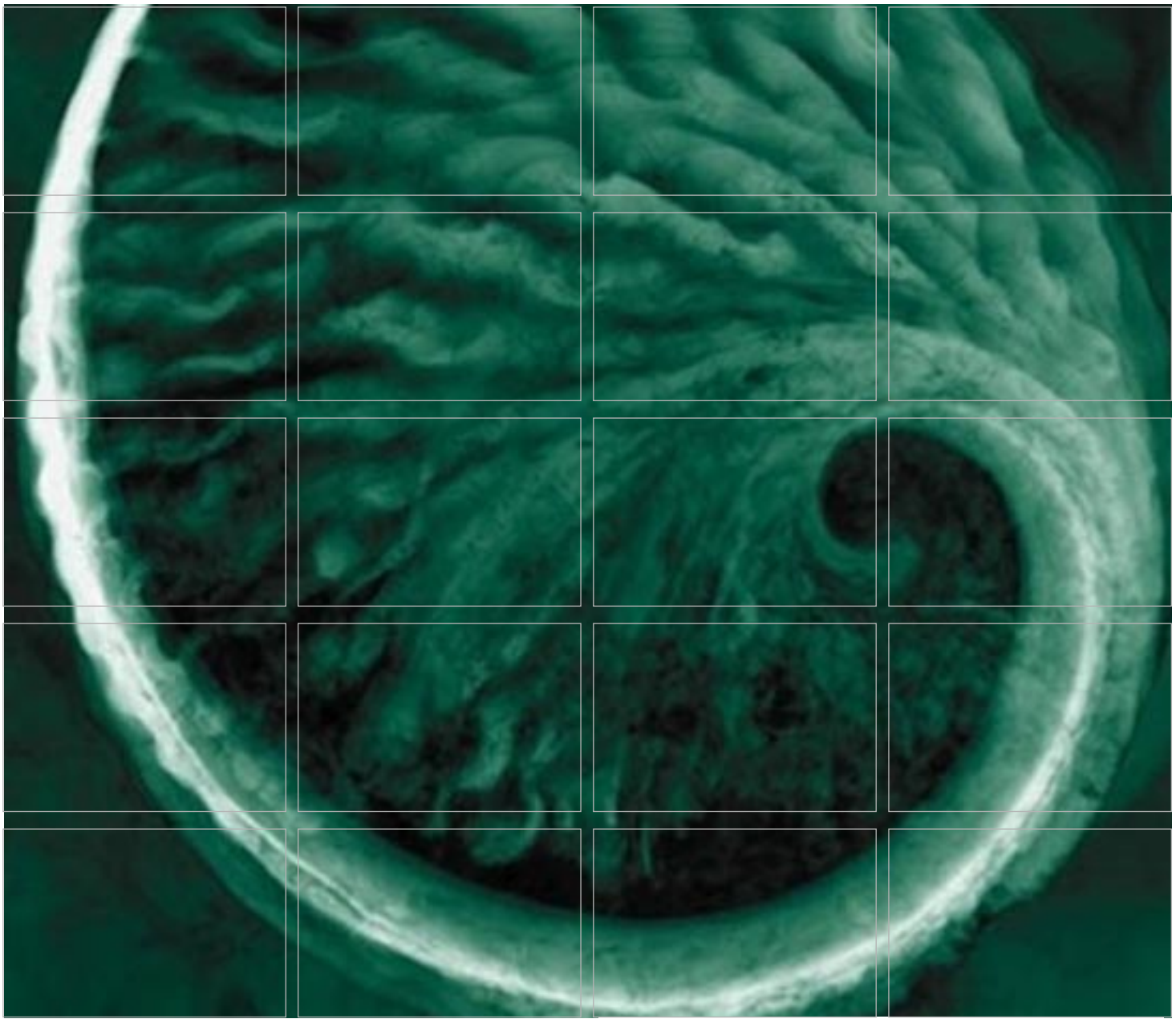
W.O.NO.: S:\0121021 - I Schneid\Files\FIGURES\121021 ISL\2016\07 2016\121021Site.dwg

Vapor Intrusion Evaluation Work Plan

Appendix A

August 2016
Project No. 0121021
I. Schneid Liquidation
Atlanta, GA

Environmental Resources Management
3200 Windy Hill Rd. Suite 1500W
Atlanta, GA 30339
(678) 486-2700



VAPOR INTRUSION EVALUATION WORK PLAN

Former I-Schneid Facility
HSI #10753 in Atlanta, Fulton County, Georgia
ERM Project No.: 0121021

May 25, 2016

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FIGURES

APPENDICES

1.0 PURPOSE AND SCOPE

The purpose of this Vapor Intrusion Evaluation Work Plan ("Work Plan") is to document the field procedures that will be used collect/analyze samples to evaluate the potential for vapor intrusion (VI) at the former I-Schneid Facility located at 1420 Fairmont Avenue in Atlanta, Fulton County, Georgia (Site).

1.1 VAPOR INTRUSION EVALUATION OVERVIEW

The Georgia Environmental Protection Division (EPD) has not developed guidance regarding implementation of VI investigations; therefore, ERM has relied on the following documents to prepare this Work Plan in a manner consistent with the current state of the practice:

- Interstate Technical Regulatory Council's (ITRC's) *Vapor Intrusion Pathway: A Practical Guideline*, dated January 2007.
- United States Environmental Protection Agency (US EPA) Office of Solid Waste and Emergency Response (OSWER) *Technical Guide for Assessing and Mitigating the Vapor Intrusion Pathway from Subsurface Vapor Sources to Indoor Air,* June 2015.
- Generally accepted best management practices.

The Work Plan describes the following activities:

- implementation of sampling activities, including the following:
    - sub-slab soil gas sampling (indoors); and
    - sub-slab multi-depth soil gas sampling (indoors).

The general locations and number of planned samples are shown on Figure 1. Locations may be adjusted upon completion of site surveys conducted prior to sample collection (i.e., utility locate surveys). Details regarding sampling methodology and analysis are included in the following sections.

2.0 SAMPLE COLLECTION PROCEDURES

The following sections describe the procedures for sub-slab soil gas and sub-slab multi-depth soil gas sample collection. In addition, field documentation, analytical needs, and sample identification methods are outlined. Sample collection scheduling will take into consideration weather conditions at the time of sampling. Sampling will not occur during or immediately following (i.e., within 24 hours) a high wind/rain/storm event. Sampling events may need to be postponed or rescheduled to accommodate these weather conditions. Efforts will be made to complete the sampling before major renovations to the building commence (i.e., within the next four to six weeks).

2.1 SUB-SLAB SOIL GAS

Sub-slab soil gas samples will be collected from beneath the foundation slab as the building is a slab on grade structure. Samples will be collected from the approximate locations shown on Figure 1. Sub-slab sample locations have been selected so as to be in general proximity to former source areas. Sample locations will generally be located away from building edges. Locations may be modified based on access/building plans, equipment locations and utilities. Locations may need to be modified to avoid sub-surface utilities, cracks in the floor slab or other features that may limit the reliability of the sampling results.

2.1.1 Sub-Surface Clearance

Sub-surface clearance activities will be conducted prior to installation of sampling points. Geophysical surveys (ground penetrating radar (GPR), radio frequency line location or similar) will be conducted at the Site in an effort to locate potential subsurface utilities. As-built drawings of the building will be reviewed, if available, and utilities will be marked prior to sampling point installation. Georgia 811 will also be contacted in accordance with local regulations.

2.1.2 *Sub-Slab Soil Gas Point Installation*

Prior to sub-slab sampling, a PID will be used as a general check for the presence of potential sources of VOC vapors in the vicinity of the sampling location (e.g., paints, adhesives, etc.). If VOC-containing products are observed at the time of sampling, they will be documented with a photograph and on the air sample data sheet (Appendix A).

Sub-slab sampling points will be installed as follows:

- a 5/8-inch diameter hole will be drilled through the thickness of the slab and approximately 1-inch into the sub-slab material to form a void;
- the hole will be cleaned of concrete cuttings and dust using a pipe brush;
- a Vapor Pin™ with a silicone sleeve will be placed over the hole and tapped into place using a dead blow hammer (the silicone sleeve will form a water and air tight seal with the concrete);
- a syringe will be used to conduct a purge check of the sample point (soil gas should be relatively easy to extract without generation of a significant vacuum); and
- sub-slab sampling points will be left in place for ~2 hours to allow for re-equilibration with the surrounding soil prior to quality assurance checks and soil gas sampling.

2.1.3 *Leak Check and Shut-in Test*

After installation of the sampling point, a water dam will be placed around the point and filled with water. The water will be monitored for 5 minutes to check for leaks in the seal between the concrete and the Vapor Pin™. If leaks are observed based on water draining into the sampling point, the sampling point will be extracted and reset. The water dam will be used until the seal is determined to be adequate.

Nylon (or Teflon) tubing will be attached from the sampling point to a 2.7-liter Summa® canister. A shut-in test will be completed to determine the security of the sampling train between the sampling point and the sampling canister. The shut-in test is performed by generating a vacuum inside the sample tubing while keeping the sampling point and the sampling canister closed. A vacuum of approximately 100 inches of water

is generated using a plastic syringe and the vacuum is monitored for 1 minute. If vacuum is maintained for the observed period, then the sampling train is deemed adequate and sampling can begin.

2.1.4 Sub-Slab Soil Gas Sample Collection

After completion of quality control activities, the sampling point will be opened and access to the plastic syringe will be closed. The Summa® canister will be equipped with a flow controller limiting flow to approximately 200 milliliters/minute (i.e., approximately a 13.5 minute sampling time into a 2.7-liter sampling canister). The canister will be opened and the vacuum in the canister will be monitored during sampling collection. Sampling will be complete when vacuum measurements indicate approximately no vacuum in the canister (approximately 13.5 minutes). Residual vacuum is not required in the 2.7-liter sampling canisters because the full sampling period (i.e., 13.5 minutes) will be actively monitored by field personnel (i.e., a witnessed sample). If residual vacuum remains in the 2.7-liter sampling canisters, it cannot exceed 15 inches of mercury (in Hg) or laboratory reporting limits will be affected. Residual vacuum, if any, will be confirmed and recorded by the laboratory after receipt of the canisters.

The Summa® canisters and flow regulators will be batched-certified clean by the laboratory prior to use. Sampling information will be recorded on the appropriate air sampling data sheet including starting and ending vacuum reading of each canister. A copy of a template air sampling data sheet is included in Appendix A.

2.2 SUB-SLAB MULTI-DEPTH SOIL GAS PROBE INSTALLATION

Two multi-depth soil gas probes will be installed immediately inside the building walls at the northeastern portion of the building (Figure 1). These locations are in proximity to the area where a significant volume of contaminated soil was removed in 2014 and 2015. Each multi-depth probe will collect soil gas at approximately 13 feet, 8 feet and 3 feet below ground surface. Depths of the soil gas probe may be adjusted depending on depth to groundwater and subsurface conditions at the time of the sampling. The three sampling depths of the multi-depth probe will be installed either as a nested soil gas point (SGP) in one borehole or each

SGP depth will be installed inside separate and boreholes. Boreholes will be completed using a Geoprobe punch point or hand auger.
SGPs will consist of ¼-inch Nylaflow® or Teflon® tubing connected via a barb fitting to a 6-inch-long, ¼-inch-diameter stainless steel sampling screen. A sand filter pack will be placed in the annulus to a height of 6 inches above the screen. Three inches of granular or chip bentonite will be placed above the sand filter pack on top of which 3 inches of a thick slurry of powered bentonite and water will be placed. After approximately 15 minutes, thick slurry of powdered bentonite and water will be added to seal the remainder of the borehole annulus to the ground surface. The SGPs will be fitted at the ground surface with valves to maintain an air-tight seal between installation and sampling. The SGPs will be left in place for 24 hours to allow for subsurface equilibration prior to sampling. After installation of the SGPs, a plastic syringe will be used to conduct a purge check of each sample point. The syringe plunger should be relatively easy to pull back indicating that soil gas can be extracted without generation of a significant vacuum. If the plunger is not easy to pull back or it retracts after it is released, the soil may be too "tight" and there is likely too little permeability to collect an uncompromised sample. If this is the case, additional evaluation of the use of SGPs may be necessary.

Prior to sampling, the SPGs will be purged the equivalent volume of the tubing and sand pack with a 5-gas meter or GEM 3000 to remove any atmospheric air entrained during installation. During purging the readings on the meter will be monitored until stabilized.

2.2.1 Leak Check and Shut-in Test

Helium will be used as a tracer gas during the leak checks to evaluate if significant amounts of atmospheric air are entering the soil gas sample. During the purging and field screening processes, a shroud will be placed over each SGP and helium will be injected into the shroud. The concentration of helium in the shroud will be maintained at a minimum of 10% helium. A portable helium detector (MDG-2202 or similar) will be connected to the SGP port to monitor helium concentrations in the subsurface. If helium concentrations in the purged volumes are less than 5% of the minimum concentration in the shroud, the SGP will be considered satisfactory and indicative of no significant leakage in the sample train.

A shut-in test will also be completed on the above ground portion of the sample train. The shut-in test will be conducted using the same procedures as the sub-slab soil gas shut-in test (Section 3.1.3).

2.2.2 Multi-Depth Soil Gas Probe Sampling

After completion of quality control activities, access to the plastic syringe will be closed. Sampling will then be conducted using Summa® canisters as described in Section 3.1.4. The canisters and flow regulators will be batched-certified clean by the laboratory prior to use. Sampling information will be recorded on the appropriate air sampling data sheet including starting and ending vacuum reading of each canister. A copy of a template air sampling data sheet is included in Appendix A.

Upon completion of sample collection, SGPs will remain in place until the investigation has been completed unless the property owner requests that they be removed.

2.3 ANALYTICAL

Sub-slab and multi-depth soil gas samples will be analyzed by USEPA Method TO-15 Selective Ion Monitoring (SIM). The TO-15 SIM analysis is used to achieve lower laboratory reporting limits necessary for residential vapor intrusion screening levels (VISLs). Samples will be submitted to Alpha Analytical Laboratory of Mansfield, Massachusetts which is Georgia approved via the National Environmental Laboratory Accreditation Program (NELAP).

Analytical results for sub-slab soil gas and sub-slab multi-depth soil gas samples will be reported for the five analytes (naphthalene, ethylbenzene, xylenes, chlorobenzene, and 1,4-dichlorobenzene) that have had a concentration in the last five years that have exceeded residential groundwater screening levels using the USEPA Vapor Intrusion Screening Level (VISL) calculator (see Appendix B). The analytical results will be compared to target screening levels calculated for residential and commercial sub-slab soil gas and exterior soil gas, using the USEPA VISL calculator as an initial assessment of the data.

Figure 1

May 2016
Project No. 0121021

Environmental Resources Management
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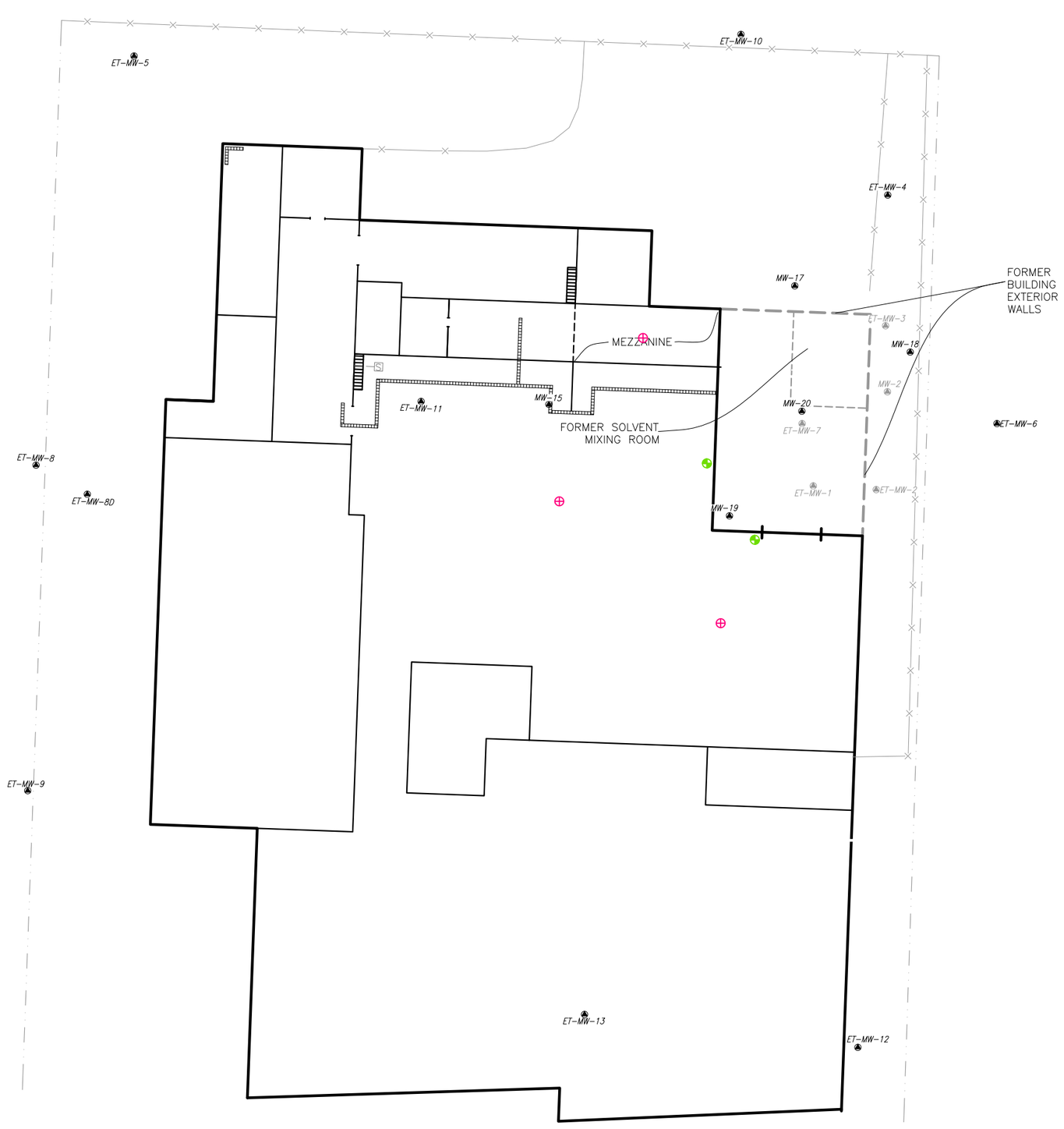
Atlanta, GA 30339
(678) 486-2700



LEGEND

- ET-MW-8 — MONITOR WELL LOCATION
- ET-MW-1 — ABANDONED MONITOR WELL LOCATION
- FLOOR DRAIN
- SUMP
- STAIRS
- FENCE LINE
- PROPERTY LINE
- PROPOSED MULTI-DEPTH SAMPLE LOCATION
- PROPOSED SUB-SLAB SAMPLE LOCATION

N

0 40 80
SCALE FEET

Environmental Resources Management

PROPOSED VI SAMPLING LOCATION MAP
VOLUNTARY REMEDIATION PLAN
I. SCHNEID FACILITY
ATLANTA, FULTON COUNTY, GEORGIA

DESIGN: SV	DRAWN: SV	CHKD.: NV
DATE: 5/16/2016	SCALE: AS SHOWN	REV.: 0

W.O.NO.: S:\0121021 - I Schneid\Files\FIGURES\121021 ISL\2016\05 2016\121021Site.dwg

Air Sampling Data Sheet

Appendix A

May 2016
Project No. 0121021

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Atlanta, GA 30339
(678) 486-2700

Environmental Resources Management
The Towers at Wildwood Plaza
3200 Windy Hill Road, SE
Atlanta, Geogia 30339
Phone: (678) 486-2700

Project #:
Project Name:
Location:
Project Manager:

Sample Location:		**Collector(s):**	
Address:			
PID Meter Used: (Model, Serial #)		**Date:**	

Sample ID:

Duplicate Sample? (Y/N) **Duplicate Sample ID:**

Type of sample (circle one): INDOOR AIR AMBIENT AIR SOIL GAS

Photograph description:

Summa® Information

Canister Serial Number:	Flow Controller Number:
Start Date/Time:	Stop Date/Time:
Start Pressure: (inches Hg) [1]	Stop Pressure: (inches Hg) [2]

Other Sampling Information:

Story/Level		Ground Surface (pavement, flooring)		Depth of Vapor Probe (if applicable)	
Room		Slab thickness (if applicable)		Distance from Building (if applicable)	
Indoor Air Temp (ºF)		Potential Vapor Pathways Observed?		Distance to nearest Roadway (ft.)	
Intake Height Above Ground Level (ft.)		Noticeable Odor?		Weather	
Barometric Pressure Initial ("Hg or mb)		Barometric Pressure Final ("Hg or mb)		Wind Speed (mph)	

Interim Monitoring

Initial Sample Purge (soil gas only):	PID Reading (ppm):		Noticeable Odor? (Y/N)	
Reading #1:	Time:	Summa Vacuum ("Hg):	Noticeable Odor? (Y/N)	
Reading #2:	Time:	Summa Vacuum ("Hg):	Noticeable Odor? (Y/N)	
Reading #3:	Time:	Summa Vacuum ("Hg):	Noticeable Odor? (Y/N)	
Reading #4:	Time:	Summa Vacuum ("Hg):	Noticeable Odor? (Y/N)	
Reading #5:	Time:	Summa Vacuum ("Hg):	Noticeable Odor? (Y/N)	

Sketch of Sample Location:

Comments:

1 - Verify pressure did not decrease noticeably from laboratory reported value.

2 - If final pressure does not change much from initial pressure, send the sample to the laboratory and indicate "HOLD" on the chain-of-custody. Also request that the laboratory determine the final pressure and contact the ERM coordinator for further instruction.

Groundwater VISL Calculator Screening Results

Appendix B

May 2016
Project No. 0121021

Environmental Resources Management
3200 Windy Hill Rd. Suite 1500W
Atlanta, GA 30339
(678) 486-2700

OSWER VAPOR INTRUSION ASSESSMENT
Groundwater Concentration to Indoor Air Concentration (GWC-IAC) Calculator Version 3.45, November 2015 RSLs

Parameter	Symbol	Value	Instructions
Exposure Scenario	Scenario	Commercial	Select residential or commercial scenario from pull down list
Target Risk for Carcinogens	TCR	1.00E-05	Enter target risk for carcinogens (for comparison to the calculated VI carcinogenic risk in column F)
Target Hazard Quotient for Non-Carcinogens	THQ	1	Enter target hazard quotient for non-carcinogens (for comparison to the calculated VI hazard in column G)
Average Groundwater Temperature (°C)	Tgw	20	Enter average of the stabilized groundwater temperature to correct Henry's Law Constant for groundwater target concentrations

	CAS	Chemical Name	Site Groundwater Concentration Cgw (ug/L)	Calculated Indoor Air Concentration Cia (ug/m^3)	VI Carcinogenic Risk CR	VI Hazard HQ	Inhalation Unit Risk IUR (ug/m^3)$^{-1}$	IUR Source*	Reference Concentration RfC (mg/m^3)	RFC Source*	Mutagenic Indicator i
x	67-64-1	Acetone	1.5E+02	1.73E-01	No IUR	1.3E-06			3.10E+01	A	
x	71-43-2	Benzene	5.6E+00	1.01E+00	6.4E-07	7.7E-03	7.80E-06	I	3.00E-02	I	
x	108-90-7	Chlorobenzene	1.3E+03	1.25E+02	No IUR	5.7E-01			5.00E-02	P	
x	98-82-8	Cumene	2.5E+01	8.20E+00	No IUR	4.7E-03			4.00E-01	I	
x	95-50-1	Dichlorobenzene, 1,2-	5.8E+02	3.26E+01	No IUR	3.7E-02			2.00E-01	H	
x	106-46-7	Dichlorobenzene, 1,4-	7.1E+01	5.08E+00	4.6E-06	1.4E-03	1.10E-05	CA	8.00E-01	I	
x	75-34-3	Dichloroethane, 1,1-	6.7E+01	1.25E+01	1.6E-06	No RfC	1.60E-06	CA			
x	75-35-4	Dichloroethylene, 1,1-	1.4E+01	1.24E+01	No IUR	1.4E-02			2.00E-01	I	
x	100-41-4	Ethylbenzene	2.0E+02	4.82E+01	9.8E-06	1.1E-02	2.50E-06	CA	1.00E+00	I	
x	75-09-2	Methylene Chloride	6.0E+00	6.53E-01	5.3E-10	2.5E-04	1.00E-08	I	6.00E-01	I	Mut
x	91-20-3	Naphthalene	9.0E+02	1.12E+01	**3.1E-05**	8.5E-01	3.40E-05	CA	3.00E-03	I	
x	108-88-3	Toluene	9.4E+01	1.97E+01	No IUR	9.0E-04			5.00E+00	I	
x	71-55-6	Trichloroethane, 1,1,1-	4.7E+01	2.64E+01	No IUR	1.2E-03			5.00E+00	I	
x	1330-20-7	Xylenes	1.3E+03	2.63E+02	No IUR	6.0E-01			1.00E-01	I	

Notes:

(1) **Inhalation Pathway Exposure Parameters (RME):**

Exposure Scenario	Units	Residential Symbol	Residential Value	Commercial Symbol	Commercial Value	Selected (based on scenario) Symbol	Selected (based on scenario) Value
Averaging time for carcinogens	(yrs)	ATc_R_GW	70	ATc_C_GW	70	ATc_GW	70
Averaging time for non-carcinogens	(yrs)	ATnc_R_GW	26	ATnc_C_GW	25	Atnc_GW	25
Exposure duration	(yrs)	ED_R_GW	26	ED_C_GW	25	ED_GW	25
Exposure frequency	(days/yr)	EF_R_GW	350	EF_C_GW	250	EF_GW	250
Exposure time	(hr/day)	ET_R_GW	24	ET_C_GW	8	ET_GW	8

(2) **Generic Attenuation Factors:**

Source Medium of Vapors	Residential Symbol	Residential Value	Commercial Symbol	Commercial Value	Selected (based on scenario) Symbol	Selected (based on scenario) Value
Groundwater (-)	AFgw_R_GW	0.001	AFgw_C_GW	0.001	AFgw_GW	0.001
Sub-Slab and Exterior Soil Gas (-)	AFss_R_GW	0.03	AFss_C_GW	0.03	AFss_GW	0.03

(3) **Formulas**

Cia, target = MIN(Cia,c; Cia,nc)
Cia,c (ug/m3) = TCR x ATc x (365 days/yr) x (24 hrs/day) / (ED x EF x ET x IUR)
Cia,nc (ug/m3) = THQ x ATnc x (365 days/yr) x (24 hrs/day) x RfC x (1000 ug/mg) / (ED x EF x ET)

(4) **Special Case Chemicals**

Trichloroethylene

	Residential Symbol	Residential Value	Commercial Symbol	Commercial Value	Selected (based on scenario) Symbol	Selected (based on scenario) Value
	mIURTCE_R_GW	1.00E-06	mIURTCE_C_GW	0.00E+00	mIURTCE_GW	0.00E+00
	IURTCE_R_GW	3.10E-06	IURTCE_C_GW	4.10E-06	IURTCE_GW	4.10E-06

Mutagenic Chemicals — The exposure durations and age-dependent adjustment factors for mutagenic-mode-of-action are listed in the table below:

Note: This section applies to trichloroethylene and other mutagenic chemicals, but not to vinyl chloride.

Age Cohort	Exposure Duration	Age-dependent adjustment factor
0 - 2 years	2	10
2 - 6 years	4	3
6 - 16 years	10	3
16 - 26 years	10	1

Mutagenic-mode-of-action (MMOA) adjustment factor 25 This factor is used in the equations for mutagenic chemicals.

Vinyl Chloride — See the Navigation Guide equation for Cia,c for vinyl chloride.

Notation:
I = IRIS: EPA Integrated Risk Information System (IRIS). Available online at: http://www.epa.gov/iris/subst/index.html
P = PPRTV. EPA Provisional Peer Reviewed Toxicity Values (PPRTVs). Available online at: http://hhpprtv.ornl.gov/pprtv.shtml

OSWER VAPOR INTRUSION ASSESSMENT
Groundwater Concentration to Indoor Air Concentration (GWC-IAC) Calculator Version 3.45, November 2015 RSLs

Parameter	Symbol	Value	Instructions
Exposure Scenario	Scenario	Residential	Select residential or commercial scenario from pull down list
Target Risk for Carcinogens	TCR	1.00E-05	Enter target risk for carcinogens (for comparison to the calculated VI carcinogenic risk in column F)
Target Hazard Quotient for Non-Carcinogens	THQ	1	Enter target hazard quotient for non-carcinogens (for comparison to the calculated VI hazard in column G)
Average Groundwater Temperature (°C)	Tgw	20	Enter average of the stabilized groundwater temperature to correct Henry's Law Constant for groundwater target concentrations

	CAS	Chemical Name	Site Groundwater Concentration Cgw (ug/L)	Calculated Indoor Air Concentration Cia (ug/m^3)	VI Carcinogenic Risk CR	VI Hazard HQ	Inhalation Unit Risk IUR (ug/m^3)$^{-1}$	IUR Source*	Reference Concentration RfC (mg/m^3)	RFC Source*	Mutagenic Indicator i
x	67-64-1	Acetone	1.5E+02	1.73E-01	No IUR	5.4E-06			3.10E+01	A	
x	71-43-2	Benzene	5.6E+00	1.01E+00	2.8E-06	3.2E-02	7.80E-06	I	3.00E-02	I	
x	108-90-7	Chlorobenzene	1.3E+03	1.25E+02	No IUR	**2.4E+00**			5.00E-02	P	
x	98-82-8	Cumene	2.5E+01	8.20E+00	No IUR	2.0E-02			4.00E-01	I	
x	95-50-1	Dichlorobenzene, 1,2-	5.8E+02	3.26E+01	No IUR	1.6E-01			2.00E-01	H	
x	106-46-7	Dichlorobenzene, 1,4-	7.1E+01	5.08E+00	**2.0E-05**	6.1E-03	1.10E-05	CA	8.00E-01	I	
x	75-34-3	Dichloroethane, 1,1-	6.7E+01	1.25E+01	7.1E-06	No RfC	1.60E-06	CA			
x	75-35-4	Dichloroethylene, 1,1-	1.4E+01	1.24E+01	No IUR	6.0E-02			2.00E-01	I	
x	100-41-4	Ethylbenzene	2.0E+02	4.82E+01	**4.3E-05**	4.6E-02	2.50E-06	CA	1.00E+00	I	
x	75-09-2	Methylene Chloride	6.0E+00	6.53E-01	6.4E-09	1.0E-03	1.00E-08	I	6.00E-01	I	Mut
x	91-20-3	Naphthalene	9.0E+02	1.12E+01	**1.4E-04**	**3.6E+00**	3.40E-05	CA	3.00E-03	I	
x	108-88-3	Toluene	9.4E+01	1.97E+01	No IUR	3.8E-03			5.00E+00	I	
x	71-55-6	Trichloroethane, 1,1,1-	4.7E+01	2.64E+01	No IUR	5.1E-03			5.00E+00	I	
x	1330-20-7	Xylenes	1.3E+03	2.63E+02	No IUR	**2.5E+00**			1.00E-01	I	

Notes:

(1) **Inhalation Pathway Exposure Parameters (RME):**

Exposure Scenario	Units	Residential Symbol	Residential Value	Commercial Symbol	Commercial Value	Selected (based on scenario) Symbol	Selected (based on scenario) Value
Averaging time for carcinogens	(yrs)	ATc_R_GW	70	ATc_C_GW	70	ATc_GW	70
Averaging time for non-carcinogens	(yrs)	ATnc_R_GW	26	ATnc_C_GW	25	Atnc_GW	26
Exposure duration	(yrs)	ED_R_GW	26	ED_C_GW	25	ED_GW	26
Exposure frequency	(days/yr)	EF_R_GW	350	EF_C_GW	250	EF_GW	350
Exposure time	(hr/day)	ET_R_GW	24	ET_C_GW	8	ET_GW	24

(2) **Generic Attenuation Factors:**

Source Medium of Vapors	Residential Symbol	Residential Value	Commercial Symbol	Commercial Value	Selected (based on scenario) Symbol	Selected (based on scenario) Value
Groundwater (-)	AFgw_R_GW	0.001	AFgw_C_GW	0.001	AFgw_GW	0.001
Sub-Slab and Exterior Soil Gas (-)	AFss_R_GW	0.03	AFss_C_GW	0.03	AFss_GW	0.03

(3) **Formulas**

Cia, target = MIN(Cia,c; Cia,nc)
Cia,c (ug/m3) = TCR x ATc x (365 days/yr) x (24 hrs/day) / (ED x EF x ET x IUR)
Cia,nc (ug/m3) = THQ x ATnc x (365 days/yr) x (24 hrs/day) x RfC x (1000 ug/mg) / (ED x EF x ET)

(4) **Special Case Chemicals**

Trichloroethylene	Residential Symbol	Residential Value	Commercial Symbol	Commercial Value	Selected (based on scenario) Symbol	Selected (based on scenario) Value
	mIURTCE_R_GW	1.00E-06	mIURTCE_C_GW	0.00E+00	mIURTCE_GW	1.00E-06
	IURTCE_R_GW	3.10E-06	IURTCE_C_GW	4.10E-06	IURTCE_GW	3.10E-06

Mutagenic Chemicals — The exposure durations and age-dependent adjustment factors for mutagenic-mode-of-action are listed in the table below:

Note: This section applies to trichloroethylene and other mutagenic chemicals, but not to vinyl chloride.

Age Cohort	Exposure Duration	Age-dependent adjustment factor
0 - 2 years	2	10
2 - 6 years	4	3
6 - 16 years	10	3
16 - 26 years	10	1

Mutagenic-mode-of-action (MMOA) adjustment factor 72 This factor is used in the equations for mutagenic chemicals.

Vinyl Chloride — See the Navigation Guide equation for Cia,c for vinyl chloride.

Notation:
I = IRIS: EPA Integrated Risk Information System (IRIS). Available online at: http://www.epa.gov/iris/subst/index.html
P = PPRTV. EPA Provisional Peer Reviewed Toxicity Values (PPRTVs). Available online at: http://hhpprtv.ornl.gov/pprtv.shtml

Sampling Location Photo-Log

Appendix B

August 2016
Project No. 0121021
I. Schneid Liquidation
Atlanta, GA

Environmental Resources Management
3200 Windy Hill Rd. Suite 1500W
Atlanta, GA 30339
(678) 486-2700

Photograph: *1*	***SG-1 sampling location at former I-Schneid Facility***

I-Schneid Liquidation *Atlanta, GA*	ERM	*Vapor Intrusion Assessment*

Photograph: *2*	***SG-2 sampling location at former I-Schneid Facility***

I-Schneid Liquidation *Atlanta, GA*	ERM	*Vapor Intrusion Assessment*

Photograph: *3*	***Dam test performed to test for leaks in seal to sub-slab***

I-Schneid Liquidation *Atlanta, GA*	ERM	*Vapor Intrusion Assessment*

Photograph: *4*	***SSV-1 and DUP-1 sampling location at former I-Schneid Facility***

I-Schneid Liquidation *Atlanta, GA*	ERM	*Vapor Intrusion Assessment*

Photograph: *5*	***SSV-02 sampling location at former I-Schneid Facility***

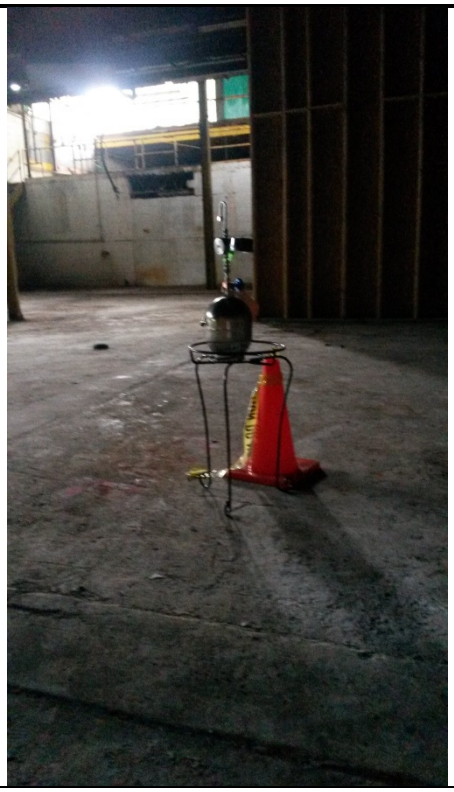
I-Schneid Liquidation *Atlanta, GA*	ERM	*Vapor Intrusion Assessment*

Photograph: *5*	***SSV-03 dam test sampling location at former I-Schneid Facility***

I-Schneid Liquidation *Atlanta, GA*	ERM	*Vapor Intrusion Assessment*

Photograph: *9*	***IA-01 and DUP-01 sampling location at former I-Schneid Facility***

I-Schneid Liquidation *Atlanta, GA*	ERM	*Vapor Intrusion Assessment*

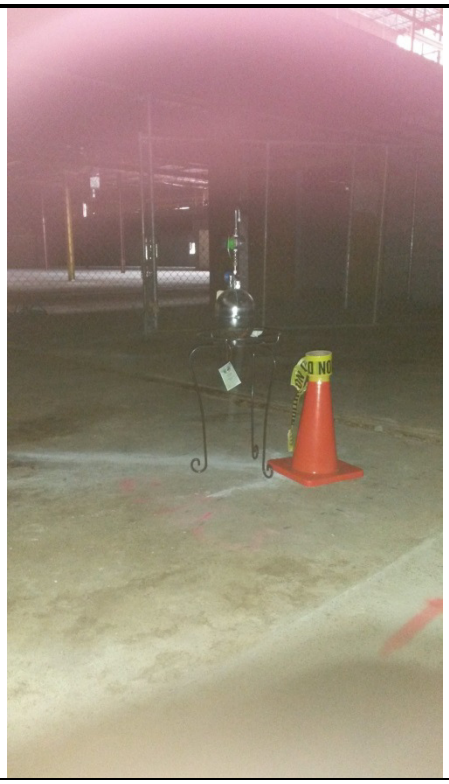


Photograph: *10*	***IA-02-20160705-01 sampling location at former I-Schneid Facility***

I-Schneid Liquidation *Atlanta, GA*	ERM	*Vapor Intrusion Assessment*

Photograph: *11*	***IA-03 sampling location at former I-Schneid Facility***	
I-Schneider, USA *Atlanta*	ERM	*Vapor Intrusion Assessment*

Photograph: *12*	***IA-04 sampling location at former I-Schneid Facility***	
I-Schneider, USA *Atlanta*	ERM	*Vapor Intrusion Assessment*



Photograph: *13*	***IA-05-sampling location at former I-Schneid Facility***	
I-Schneider, USA *Atlanta*	ERM	*Vapor Intrusion Assessment*

Photograph: *14*	***OA-01 sampling location upwind SW of former I-Schneid facility***	
I-Schneid Liquidation *Atlanta, GA*	ERM	*Vapor Intrusion Assessment*

Air Sampling Data Sheets

Appendix C

August 2016
Project No. 0121021
I. Schneid Liquidation
Atlanta, GA

Environmental Resources Management
3200 Windy Hill Rd. Suite 1500W
Atlanta, GA 30339
(678) 486-2700

Environmental Resources Management
The Towers at Wildwood Plaza
3200 Windy Hill Road, SE
Atlanta, Geogia 30339
Phone: (678) 486-2700

Project #:	0121021
Project Name:	ISL
Location:	1420 Fairmont Avenue
	Atlanta, Fulton County, GA
Project Manager:	J. Bilkert

Sample Location:	SG-1-3'	Collector(s):	C. Brooks
Address:	Former I-Schneid 1420 Fairmont Ave, Atlanta, GA		A. Reimer
PID Meter Used: (Model, Serial #)		Date:	6/8/2016

Sample ID: SG-1-3'
Duplicate Sample? (Y/N) N **Duplicate Sample ID:**
Type of sample (circle one): INDOOR AIR AMBIENT AIR (SOIL GAS)

Photograph description:

Summa® Information

Canister Serial Number: 141 Batch cleaning L1615757-02	Flow Controller Number: 0650
Start Date/Time: 6/8/16 / 0905	Stop Date/Time: 6/8/16 ~~0910~~ 09/20 09:20
Start Pressure: (inches Hg) [1] -28.98	Stop Pressure: (inches Hg) [2] -0.66

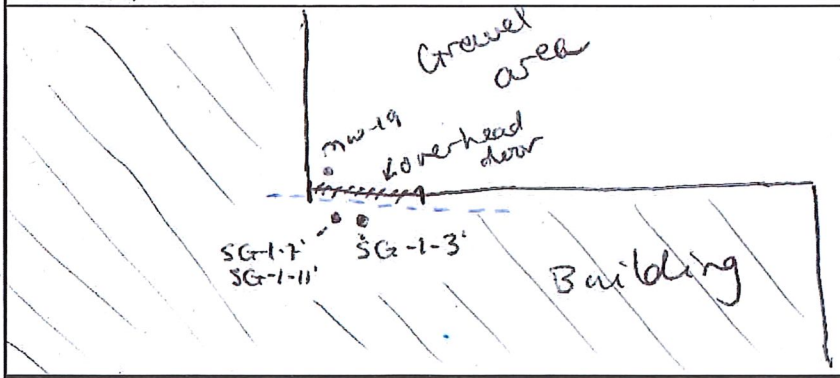
Other Sampling Information:

Story/Level	Ground	Ground Surface (pavement, flooring)	Concrete	Depth of Vapor Probe (if applicable)	3' bgs
Room		Slab thickness (if applicable)	~ 2.5"	Distance from Building (if applicable)	
Indoor Air Temp (°F)	~60°	Potential Vapor Pathways Observed?	& cracks in concrete	Distance to nearest Roadway (ft.)	
Intake Height Above Ground Level (ft.)	NA	Noticeable Odor?	No	Weather	Warm, clear, ~68° sunny
Barometric Pressure Initial ("Hg or mb)	29.07 "Hg	Barometric Pressure Final ("Hg or mb)	29.01 "Hg	Wind Speed (mph)	

Interim Monitoring

Initial Sample Purge (soil gas only):	PID Reading (ppm):	Noticeable Odor? (Y/N) No	
Reading #1:	Time: 0909	Summa Vacuum ("Hg): -22.07	Noticeable Odor? (Y/N)
Reading #2:	Time: 0913	Summa Vacuum ("Hg): -12.26	Noticeable Odor? (Y/N)
Reading #3:	Time: 0917	Summa Vacuum ("Hg): -4.10	Noticeable Odor? (Y/N)
Reading #4:	Time: 0919	Summa Vacuum ("Hg): -1.01	Noticeable Odor? (Y/N)
Reading #5:	Time:	Summa Vacuum ("Hg):	Noticeable Odor? (Y/N)

Sketch of Sample Location:



Comments:

1 - Verify pressure did not decrease noticeably from laboratory reported value.

2 - If final pressure does not change much from initial pressure, send the sample to the laboratory and indicate "HOLD" on the chain-of-custody. Also request that the laboratory determine the final pressure and contact the ERM coordinator for further instruction.

Environmental Resources Management
The Towers at Wildwood Plaza
3200 Windy Hill Road, SE
Atlanta, Geogia 30339
Phone: (678) 486-2700

Project #:	0121021
Project Name:	ISL
Location:	1420 Fairmont Avenue Atlanta, Fulton County, GA
Project Manager:	J. Bilkert

Sample Location:	SG-1-7'	Collector(s):	C. Brooks A. Reimer
Address:	Former I-Schneid 1420 Fairmont Ave, Atlanta, GA		
PID Meter Used: (Model, Serial #)		Date:	6/8/2016

Sample ID: SG-1-7'
Duplicate Sample? (Y/N) N **Duplicate Sample ID:**
Type of sample (circle one): INDOOR AIR AMBIENT AIR (SOIL GAS)

Photograph description:

Summa® Information

Canister Serial Number:	502	Flow Controller Number:	0511
Start Date/Time:	6/8/16 / 0930	Stop Date/Time:	6/8/16 / 0945
Start Pressure: (inches Hg) [1]	-28.86	Stop Pressure: (inches Hg) [2]	-0.33

Other Sampling Information:

Story/Level	Ground	Ground Surface (pavement, flooring)	Concrete	Depth of Vapor Probe (if applicable)	6.8' bgs
Room		Slab thickness (if applicable)	~ 2.5"	Distance from Building (if applicable)	
Indoor Air Temp (°F)	~65°	Potential Vapor Pathways Observed?	cracks in slab	Distance to nearest Roadway (ft.)	
Intake Height Above Ground Level (ft.)	NA	Noticeable Odor?	No	Weather	warm, clear ~70°
Barometric Pressure Initial ("Hg or mb)	29.0	Barometric Pressure Final ("Hg or mb)	29.0	Wind Speed (mph)	

Interim Monitoring

Initial Sample Purge (soil gas only):	PID Reading (ppm):	Noticeable Odor? (Y/N)	NO
Reading #1:	Time: 0931	Summa Vacuum ("Hg): -25.98	Noticeable Odor? (Y/N)
Reading #2:	Time: 0934	Summa Vacuum ("Hg): -18.69	Noticeable Odor? (Y/N)
Reading #3:	Time: 0936	Summa Vacuum ("Hg): -13.61	Noticeable Odor? (Y/N)
Reading #4:	Time: 0939	Summa Vacuum ("Hg): -6.61	Noticeable Odor? (Y/N)
Reading #5:	Time: 0944	Summa Vacuum ("Hg): -1.25	Noticeable Odor? (Y/N)

Sketch of Sample Location:

see SG-1-3' sketch

Comments:

1 - Verify pressure did not decrease noticeably from laboratory reported value.

2 - If final pressure does not change much from initial pressure, send the sample to the laboratory and indicate "HOLD" on the chain-of-custody. Also request that the laboratory determine the final pressure and contact the ERM coordinator for further instruction.

Environmental Resources Management
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3200 Windy Hill Road, SE
Atlanta, Geogia 30339
Phone: (678) 486-2700

Project #:	0121021
Project Name:	ISL
Location:	1420 Fairmont Avenue Atlanta, Fulton County, GA
Project Manager:	J. Bilkert

Sample Location:	SG-1-11'	Collector(s):	C. Brooks A. Reimer
Address:	Former I-Schneid 1420 Fairmont Ave, Atlanta, GA		
PID Meter Used: (Model, Serial #)		Date:	6/8/2016

Sample ID: SG-1-11'
Duplicate Sample? (Y/N) N **Duplicate Sample ID:**
Type of sample (circle one): INDOOR AIR AMBIENT AIR (SOIL GAS)

Photograph description:

Summa® Information

Canister Serial Number:	1804	Flow Controller Number:	0602
Start Date/Time:	6/8/16 09:39	Stop Date/Time:	6/8/16 0955
Start Pressure: (inches Hg) [1]	-29.22	Stop Pressure: (inches Hg) [2]	-0.89

Other Sampling Information:

Story/Level	Ground	Ground Surface (pavement, flooring)	Concrete	Depth of Vapor Probe (if applicable)	11' bgs
Room		Slab thickness (if applicable)	~ 2.5"	Distance from Building (if applicable)	
Indoor Air Temp (°F)	~65°	Potential Vapor Pathways Observed?	cracks in slab	Distance to nearest Roadway (ft.)	
Intake Height Above Ground Level (ft.)	NA	Noticeable Odor?	No	Weather	clear, sunny ~72°
Barometric Pressure Initial ("Hg or mb)	29.0	Barometric Pressure Final ("Hg or mb)	29.0	Wind Speed (mph)	

Interim Monitoring

Initial Sample Purge (soil gas only):	PID Reading (ppm):		Noticeable Odor? (Y/N)
Reading #1:	Time: 0941	Summa Vacuum ("Hg): -24.88	Noticeable Odor? (Y/(N))
Reading #2:	Time: 0946	Summa Vacuum ("Hg): -14.38	Noticeable Odor? (Y/(N))
Reading #3:	Time: 0950	Summa Vacuum ("Hg): -9.31	Noticeable Odor? (Y/(N))
Reading #4:	Time: 0952	Summa Vacuum ("Hg): -4.93	Noticeable Odor? (Y/N)
Reading #5:	Time: 0954	Summa Vacuum ("Hg): -1.01	Noticeable Odor? (Y/N)

Sketch of Sample Location:

See SG-1-3' sketch

Comments:

1 - Verify pressure did not decrease noticeably from laboratory reported value.

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3200 Windy Hill Road, SE
Atlanta, Geogia 30339
Phone: (678) 486-2700

Project #:	0121021
Project Name:	ISL
Location:	1420 Fairmont Avenue Atlanta, Fulton County, GA
Project Manager:	J. Bilkert

Sample Location:	SG-2-3'	Collector(s):	C. Brooks A. Reimer
Address:	Former I-Schneid 1420 Fairmont Ave, Atlanta, GA		
PID Meter Used: (Model, Serial #)		Date:	6/8/2016

Sample ID: SG-2-3'
Duplicate Sample? (Y/N) N **Duplicate Sample ID:**
Type of sample (circle one): INDOOR AIR AMBIENT AIR (SOIL GAS)

Photograph description:

Summa® Information

Canister Serial Number: 446	Flow Controller Number: 0658
Start Date/Time: 6/8/16 1028	Stop Date/Time: 6/8/16 1045
Start Pressure: (inches Hg) [1] -29.33	Stop Pressure: (inches Hg) [2] -0.09

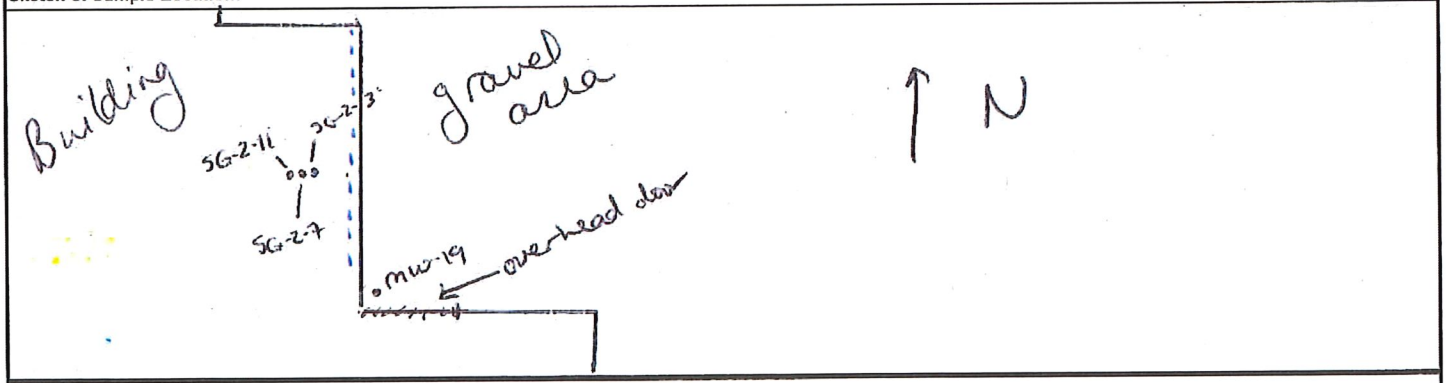
Other Sampling Information:

Story/Level	Ground	Ground Surface (pavement, flooring)	Concrete	Depth of Vapor Probe (if applicable)	3' bgs
Room		Slab thickness (if applicable)	~ 2.5"	Distance from Building (if applicable)	
Indoor Air Temp (°F)	~70'	Potential Vapor Pathways Observed?	cracks in slab	Distance to nearest Roadway (ft.)	
Intake Height Above Ground Level (ft.)	NA	Noticeable Odor?	No	Weather	warm, clear, ~80°
Barometric Pressure Initial ("Hg or mb)	28.28	Barometric Pressure Final ("Hg or mb)	28.28	Wind Speed (mph)	

Interim Monitoring

Initial Sample Purge (soil gas only):	PID Reading (ppm):	Noticeable Odor? (Y/N)	
Reading #1:	Time: 1030 Summa Vacuum ("Hg): -21.56	Noticeable Odor? (Y/N)	
Reading #2:	Time: 1039 Summa Vacuum ("Hg): -8.84	Noticeable Odor? (Y/N)	
Reading #3:	Time: 1041 Summa Vacuum ("Hg): -4.67	Noticeable Odor? (Y/N)	
Reading #4:	Time: 1043 Summa Vacuum ("Hg): -2.27	Noticeable Odor? (Y/N)	
Reading #5:	Time: 1044 Summa Vacuum ("Hg): -0.96	Noticeable Odor? (Y/N)	

Sketch of Sample Location:



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Environmental Resources Management
The Towers at Wildwood Plaza
3200 Windy Hill Road, SE
Atlanta, Geogia 30339
Phone: (678) 486-2700

Project #:	0121021
Project Name:	ISL
Location:	1420 Fairmont Avenue
	Atlanta, Fulton County, GA
Project Manager:	J. Bilkert

Sample Location:	SG-2-7'	Collector(s):	C. Brooks
Address:	Former I-Schneid 1420 Fairmont Ave, Atlanta, GA		A. Reimer
PID Meter Used: (Model, Serial #)		Date:	6/8/2016

Sample ID: SG-2-7'
Duplicate Sample? (Y/N) N **Duplicate Sample ID:**
Type of sample (circle one): INDOOR AIR AMBIENT AIR (SOIL GAS)

Photograph description:

Summa® Information

Canister Serial Number:	1518	Flow Controller Number:	0689
Start Date/Time:	6/8/16 1046	Stop Date/Time:	6/8/16 1101
Start Pressure: (inches Hg) [1]	-28.88	Stop Pressure: (inches Hg) [2]	-0.21

Other Sampling Information:

Story/Level	Ground	Ground Surface (pavement, flooring)	Concrete	Depth of Vapor Probe (if applicable)	7' bgs
Room		Slab thickness (if applicable)	~ 2.5"	Distance from Building (if applicable)	
Indoor Air Temp (°F)	~70°	Potential Vapor Pathways Observed?	cracks in slab	Distance to nearest Roadway (ft.)	
Intake Height Above Ground Level (ft.)	NA	Noticeable Odor?	No	Weather	warm, clear, ~800
Barometric Pressure Initial ("Hg or mb)	28.98	Barometric Pressure Final ("Hg or mb)	28.98	Wind Speed (mph)	

Interim Monitoring

Initial Sample Purge (soil gas only):	PID Reading (ppm):		Noticeable Odor? (Y/N)	
Reading #1:	Time: 1050	Summa Vacuum ("Hg): -17.73	Noticeable Odor? (Y/N)	
Reading #2:	Time: 1054	Summa Vacuum ("Hg): -7.61	Noticeable Odor? (Y/N)	
Reading #3:	Time: 1057	Summa Vacuum ("Hg): -3.11	Noticeable Odor? (Y/N)	
Reading #4:	Time: 1059	Summa Vacuum ("Hg): -1.69	Noticeable Odor? (Y/N)	
Reading #5:	Time: 1100	Summa Vacuum ("Hg): -0.75	Noticeable Odor? (Y/N)	

Sketch of Sample Location:

Comments:

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Environmental Resources Management
The Towers at Wildwood Plaza
3200 Windy Hill Road, SE
Atlanta, Geogia 30339
Phone: (678) 486-2700

Project #:	0121021
Project Name:	ISL
Location:	1420 Fairmont Avenue
	Atlanta, Fulton County, GA
Project Manager:	J. Bilkert

Sample Location:	SG-2-11'	Collector(s):	C. Brooks
Address:	Former I-Schneid 1420 Fairmont Ave, Atlanta, GA		A. Reimer
PID Meter Used: (Model, Serial #)		Date:	6/8/2016

Sample ID: SG-2-11'
Duplicate Sample? (Y/N) N **Duplicate Sample ID:**
Type of sample (circle one): INDOOR AIR AMBIENT AIR (SOIL GAS)

Photograph description:

Summa® Information

Canister Serial Number:	391	Flow Controller Number:	0686
Start Date/Time:	6/8/16 10:55	Stop Date/Time:	6/8/16 1109
Start Pressure: (inches Hg) [1]	-28.44	Stop Pressure: (inches Hg) [2]	ø

Other Sampling Information:

Story/Level	Ground	Ground Surface (pavement, flooring)	Concrete	Depth of Vapor Probe (if applicable)	11' bgs
Room		Slab thickness (if applicable)	~ 2.5"	Distance from Building (if applicable)	
Indoor Air Temp (°F)	~ 70°	Potential Vapor Pathways Observed?	cracks in slab	Distance to nearest Roadway (ft.)	
Intake Height Above Ground Level (ft.)	NA	Noticeable Odor?	No	Weather	warm clear ~80
Barometric Pressure Initial ("Hg or mb)	28.98	Barometric Pressure Final ("Hg or mb)	28.98	Wind Speed (mph)	

Interim Monitoring

Initial Sample Purge (soil gas only):	PID Reading (ppm):		Noticeable Odor? (Y/N)	
Reading #1:	Time: 1057	Summa Vacuum ("Hg): -21.09	Noticeable Odor? (Y/N)	
Reading #2:	Time: 1100	Summa Vacuum ("Hg): -13.43	Noticeable Odor? (Y/N)	
Reading #3:	Time: 1104	Summa Vacuum ("Hg): -5.83	Noticeable Odor? (Y/N)	
Reading #4:	Time: 1107	Summa Vacuum ("Hg): -1.66	Noticeable Odor? (Y/N)	
Reading #5:	Time: 1109	Summa Vacuum ("Hg): ø	Noticeable Odor? (Y/N)	

Sketch of Sample Location:

Comments:

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Environmental Resources Management
The Towers at Wildwood Plaza
3200 Windy Hill Road, SE
Atlanta, Geogia 30339
Phone: (678) 486-2700

Project #:	0121021
Project Name:	ISL
Location:	1420 Fairmont Avenue
	Atlanta, Fulton County, GA
Project Manager:	J. Bilkert

Sample Location:	SSV-1	Collector(s):	C. Brooks
Address:	Former I-Schneid 1420 Fairmont Ave, Atlanta, GA		A. Reimer
PID Meter Used: (Model, Serial #)		Date:	6/8/2016

Sample ID: SSV-1
Duplicate Sample? (Y/N) **Duplicate Sample ID:** Dup-01
Type of sample (circle one): INDOOR AIR AMBIENT AIR (SOIL GAS)

Photograph description:

Summa® Information

Canister Serial Number:	212	Dup 527	Flow Controller Number:	0604	Dup 0596
Start Date/Time:	6/8/16 1133	6/8/16 1147	Stop Date/Time:	6/8/16 1147	1203
Start Pressure: (inches Hg) [1]	-29.03	-28.81	Stop Pressure: (inches Hg) [2]	-0.28	-0.14

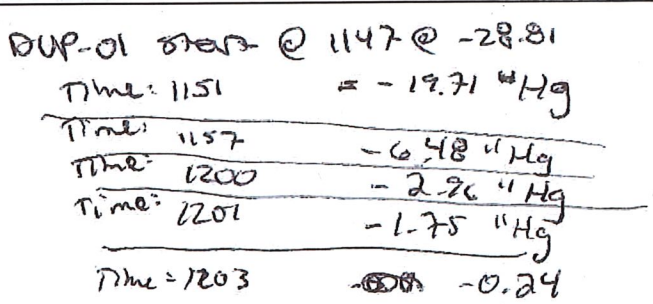
Other Sampling Information:

Story/Level	Ground	Ground Surface (pavement, flooring)	Concrete	Depth of Vapor Probe (if applicable)	sub-slab
Room		Slab thickness (if applicable)	~ 2.5"	Distance from Building (if applicable)	
Indoor Air Temp (°F)	~70°	Potential Vapor Pathways Observed?	cracks in slab	Distance to nearest Roadway (ft.)	
Intake Height Above Ground Level (ft.)	NA	Noticeable Odor?	No	Weather	warm, clear, ~80°
Barometric Pressure Initial ("Hg or mb)	28.98	Barometric Pressure Final ("Hg or mb)	28.98	Wind Speed (mph)	

Interim Monitoring

Initial Sample Purge (soil gas only):	PID Reading (ppm):		Noticeable Odor? (Y/N)
Reading #1:	Time: 1137	Summa Vacuum ("Hg): -18.66	Noticeable Odor? (Y/N)
Reading #2:	Time: 1141	Summa Vacuum ("Hg): -7.84	Noticeable Odor? (Y/N)
Reading #3:	Time: 1145	Summa Vacuum ("Hg): -2.58	Noticeable Odor? (Y/N)
Reading #4:	Time: 1146	Summa Vacuum ("Hg): -0.86	Noticeable Odor? (Y/N)
Reading #5:	Time:	Summa Vacuum ("Hg):	Noticeable Odor? (Y/N)

Sketch of Sample Location:



Comments:

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Environmental Resources Management
The Towers at Wildwood Plaza
3200 Windy Hill Road, SE
Atlanta, Geogia 30339
Phone: (678) 486-2700

Project #:	0121021
Project Name:	ISL
Location:	1420 Fairmont Avenue
	Atlanta, Fulton County, GA
Project Manager:	J. Bilkert

Sample Location:	SSV-2	Collector(s):	C. Brooks
Address:	Former I-Schneid 1420 Fairmont Ave, Atlanta, GA		A. Reimer
PID Meter Used: (Model, Serial #)		Date:	6/8/2016

Sample ID: SSV-2

Duplicate Sample? (Y/N) N **Duplicate Sample ID:**

Type of sample (circle one): INDOOR AIR AMBIENT AIR (SOIL GAS)

Photograph description:

Summa® Information

Canister Serial Number: 546	Flow Controller Number: 0707
Start Date/Time: 6/8/16 1221	Stop Date/Time: 6/8/16 1236
Start Pressure: (inches Hg) [1] -28.65	Stop Pressure: (inches Hg) [2] -0.17

Other Sampling Information:

Story/Level	Ground	Ground Surface (pavement, flooring)	Concrete	Depth of Vapor Probe (if applicable)	sub-slab
Room		Slab thickness (if applicable)	~ 2.5"	Distance from Building (if applicable)	
Indoor Air Temp (°F)	~70°	Potential Vapor Pathways Observed?	cracks in slab	Distance to nearest Roadway (ft.)	
Intake Height Above Ground Level (ft.)	NA	Noticeable Odor?	No	Weather	warm, clear ~80°
Barometric Pressure Initial ("Hg or mb)	28.99	Barometric Pressure Final ("Hg or mb)	28.99	Wind Speed (mph)	

Interim Monitoring

Initial Sample Purge (soil gas only):	PID Reading (ppm):		Noticeable Odor? (Y/N)	
Reading #1:	Time: 1224	Summa Vacuum ("Hg): -19.78	Noticeable Odor? (Y/N)	
Reading #2:	Time: 1228	Summa Vacuum ("Hg): -12.16	Noticeable Odor? (Y/N)	
Reading #3:	Time: 1235	Summa Vacuum ("Hg): -0.43	Noticeable Odor? (Y/N)	
Reading #4:	Time:	Summa Vacuum ("Hg):	Noticeable Odor? (Y/N)	
Reading #5:	Time:	Summa Vacuum ("Hg):	Noticeable Odor? (Y/N)	

Sketch of Sample Location:

Comments:

1 - Verify pressure did not decrease noticeably from laboratory reported value.

2 - If final pressure does not change much from initial pressure, send the sample to the laboratory and indicate "HOLD" on the chain-of-custody. Also request that the laboratory determine the final pressure and contact the ERM coordinator for further instruction.

Environmental Resources Management
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3200 Windy Hill Road, SE
Atlanta, Geogia 30339
Phone: (678) 486-2700

Project #:	0121021
Project Name:	ISL
Location:	1420 Fairmont Avenue
	Atlanta, Fulton County, GA
Project Manager:	J. Bilkert

Sample Location:	SSV-3	Collector(s):	C. Brooks
Address:	Former I-Schneid 1420 Fairmont Ave, Atlanta, GA		A. Reimer
PID Meter Used: (Model, Serial #)		Date:	6/8/2016

Sample ID: SSV-3

Duplicate Sample? (Y/N) N **Duplicate Sample ID:**

Type of sample (circle one): INDOOR AIR AMBIENT AIR (SOIL GAS)

Photograph description:

Summa® Information

Canister Serial Number:	352	Flow Controller Number:	0520
Start Date/Time:	6/8/16 1250	Stop Date/Time:	6/8/16 1305
Start Pressure: (inches Hg) [1]	-29.34	Stop Pressure: (inches Hg) [2]	-0.82

Other Sampling Information:

Story/Level	Ground	Ground Surface (pavement, flooring)	Concrete	Depth of Vapor Probe (if applicable)	sub-slab
Room		Slab thickness (if applicable)	~ 2.5"	Distance from Building (if applicable)	
Indoor Air Temp (°F)	~70°	Potential Vapor Pathways Observed?	cracks in slab	Distance to nearest Roadway (ft.)	
Intake Height Above Ground Level (ft.)	NA	Noticeable Odor?	No	Weather	warm clear, 80
Barometric Pressure Initial ("Hg or mb)	28.97	Barometric Pressure Final ("Hg or mb)		Wind Speed (mph)	

Interim Monitoring

Initial Sample Purge (soil gas only):	PID Reading (ppm):		Noticeable Odor? (Y/N)	
Reading #1:	Time: ~~1251~~ 1253	Summa Vacuum ("Hg): -19.88	Noticeable Odor? (Y/N)	
Reading #2:	Time: 1301	Summa Vacuum ("Hg): -4.52	Noticeable Odor? (Y/N)	
Reading #3:	Time: 1304	Summa Vacuum ("Hg): -0.95	Noticeable Odor? (Y/N)	
Reading #4:	Time:	Summa Vacuum ("Hg):	Noticeable Odor? (Y/N)	
Reading #5:	Time:	Summa Vacuum ("Hg):	Noticeable Odor? (Y/N)	

Sketch of Sample Location:

Comments:

1 - Verify pressure did not decrease noticeably from laboratory reported value.

2 - If final pressure does not change much from initial pressure, send the sample to the laboratory and indicate "HOLD" on the chain-of-custody. Also request that the laboratory determine the final pressure and contact the ERM coordinator for further instruction.

Environmental Resources Management
The Towers at Wildwood Plaza
3200 Windy Hill Road, SE
Atlanta, Geogia 30339
Phone: (678) 486-2700

Project #: 0121021
Project Name: I-Schneid
Location:
Project Manager: Jeff Bilkert

Sample Location:		Collector(s):	Kevin Spevicek
Address:			
PID Meter Used: (Model, Serial #)		Date:	7/5/16

Sample ID: IA-01-20160705-01
Duplicate Sample? (Y/N)
Duplicate Sample ID: DUP-01-20160705-01
Type of sample (circle one): INDOOR AIR AMBIENT AIR SOIL GAS

Photograph description:

Summa® Information

Canister Serial Number:	2197 / 2203	Flow Controller Number:	0155 / 0915
Start Date/Time:	7/5/16 1000	Stop Date/Time:	7/5/16
Start Pressure: (inches Hg) [1]	-29.53 / -28.95	Stop Pressure: (inches Hg) [2]	

Other Sampling Information:

Story/Level	1	Ground Surface (pavement, flooring)	concrete slab	Depth of Vapor Probe (if applicable)	/
Room		Slab thickness (if applicable)	~ 4.5"	Distance from Building (if applicable)	/
Indoor Air Temp (°F)	~ 85°	Potential Vapor Pathways Observed?		Distance to nearest Roadway (ft.)	
Intake Height Above Ground Level (ft.)	2'10"	Noticeable Odor?	No	Weather	partly cloudy 81-85°
Barometric Pressure Initial ("Hg or mb)		Barometric Pressure Final ("Hg or mb)		Wind Speed (mph)	10 mph SE

Interim Monitoring

Initial Sample Purge (soil gas only):	PID Reading (ppm):		Noticeable Odor? (Y/N)	
Reading #1:	Time: 1100	Summa Vacuum ("Hg): -26.63 / -26.54	Noticeable Odor? (Y/N)	
Reading #2:	Time: 1200	Summa Vacuum ("Hg): -23.75 / -24.1	Noticeable Odor? (Y/N)	
Reading #3:	Time: 1300	Summa Vacuum ("Hg): -20.78 / -21.5	Noticeable Odor? (Y/N)	
Reading #4:	Time: 1400	Summa Vacuum ("Hg): -17.44 / -19.13	Noticeable Odor? (Y/N)	
Reading #5:	Time: 1500	Summa Vacuum ("Hg): -15.22 / -16.82	Noticeable Odor? (Y/N)	

Sketch of Sample Location:

1600 -12.20 / -14.25
1700 -9.17 / -11.62
1800 -6.04 / -8.97
1830 -4.76 / -7.84 - Sample complete valve closed

Comments:

1 - Verify pressure did not decrease noticeably from laboratory reported value.

2 - If final pressure does not change much from initial pressure, send the sample to the laboratory and indicate "HOLD" on the chain-of-custody. Also request that the laboratory determine the final pressure and contact the ERM coordinator for further instruction.

Environmental Resources Management
The Towers at Wildwood Plaza
3200 Windy Hill Road, SE
Atlanta, Geogia 30339
Phone: (678) 486-2700

Project #: 0121021
Project Name: I-Schneid
Location:
Project Manager: Jeff Bilkert

Sample Location:		Collector(s):	Kevin Spevack
Address:			
PID Meter Used: (Model, Serial #)		Date: 7/5/16	

Sample ID: IA-02-20160705-0
Duplicate Sample? (Y/(N)) Duplicate Sample ID: N/A
Type of sample (circle one): (INDOOR AIR) AMBIENT AIR SOIL GAS

Photograph description:

Summa® Information

Canister Serial Number: 196	Flow Controller Number: 0387
Start Date/Time: 7/5/16 1005	Stop Date/Time: 7/5/16
Start Pressure: (inches Hg) [1] -29.23	Stop Pressure: (inches Hg) [2]

Other Sampling Information:

Story/Level	1	Ground Surface (pavement, flooring)	Concrete	Depth of Vapor Probe (if applicable)	—
Room		Slab thickness (if applicable)	~4.5"	Distance from Building (if applicable)	—
Indoor Air Temp (°F)	~85°	Potential Vapor Pathways Observed?		Distance to nearest Roadway (ft.)	
Intake Height Above Ground Level (ft.)	2' 10"	Noticeable Odor?	No	Weather	Partly cloudy
Barometric Pressure Initial ("Hg or mb)		Barometric Pressure Final ("Hg or mb)		Wind Speed (mph)	10 mph ~~W~~ SE

Interim Monitoring

Initial Sample Purge (soil gas only):	PID Reading (ppm):		Noticeable Odor? (Y/N)	
Reading #1:	Time: 1109	Summa Vacuum ("Hg): -25.35	Noticeable Odor? (Y/(N))	
Reading #2:	Time: 1205	Summa Vacuum ("Hg): -21.30	Noticeable Odor? (Y/(N))	
Reading #3:	Time: 1305	Summa Vacuum ("Hg): -17.11	Noticeable Odor? (Y/(N))	
Reading #4:	Time: 1409	Summa Vacuum ("Hg): -13.20	Noticeable Odor? (Y/(N))	
Reading #5:	Time: 1505	Summa Vacuum ("Hg): -9.42	Noticeable Odor? (Y/(N))	

Sketch of Sample Location:

1605 -5.26
1640 -3.86 — Sample complete valve closed

Comments:

1 - Verify pressure did not decrease noticeably from laboratory reported value.

2 - If final pressure does not change much from initial pressure, send the sample to the laboratory and indicate "HOLD" on the chain-of-custody. Also request that the laboratory determine the final pressure and contact the ERM coordinator for further instruction.

Environmental Resources Management
The Towers at Wildwood Plaza
3200 Windy Hill Road, SE
Atlanta, Geogia 30339
Phone: (678) 486-2700

Project #: 0121021
Project Name: I-Schneid
Location:
Project Manager: Jeff Bilkert

Sample Location:		Collector(s):	Kevin Spevack
Address:			
PID Meter Used: (Model, Serial #)		Date:	7/6/16

Sample ID: IA-03-20160705-01
Duplicate Sample? (Y/(N))
Duplicate Sample ID: NA
Type of sample (circle one): (INDOOR AIR) AMBIENT AIR SOIL GAS

Photograph description:

Summa® Information

Canister Serial Number: 2015	Flow Controller Number: 0264
Start Date/Time: 7/6/2016 1010	Stop Date/Time: 7/5/2016
Start Pressure: (inches Hg) [1] -29.28	Stop Pressure: (inches Hg) [2]

Other Sampling Information:

Story/Level	1	Ground Surface (pavement, flooring)	Concrete	Depth of Vapor Probe (if applicable)	/
Room		Slab thickness (if applicable)	~4.5"	Distance from Building (if applicable)	/
Indoor Air Temp (°F)	~85	Potential Vapor Pathways Observed?		Distance to nearest Roadway (ft.)	
Intake Height Above Ground Level (ft.)		Noticeable Odor?	No	Weather	partly cloudy 81-85°
Barometric Pressure Initial ("Hg or mb)		Barometric Pressure Final ("Hg or mb)		Wind Speed (mph)	10 mi/L SE

Interim Monitoring

Initial Sample Purge (soil gas only):	PID Reading (ppm):		Noticeable Odor? (Y/N)
Reading #1:	Time: 1110	Summa Vacuum ("Hg): -26.36	Noticeable Odor? (Y/(N))
Reading #2:	Time: 1210	Summa Vacuum ("Hg): -23.14	Noticeable Odor? (Y/(N))
Reading #3:	Time: 1310	Summa Vacuum ("Hg): -19.98	Noticeable Odor? (Y/(N))
Reading #4:	Time: 1410	Summa Vacuum ("Hg): -16.99	Noticeable Odor? (Y/(N))
Reading #5:	Time: 1510	Summa Vacuum ("Hg): -14.05	Noticeable Odor? (Y/(N))

Sketch of Sample Location:

1610 -10.60
1710 -7.17
1810 -4.18 - Sample Complete valve closed

Comments:

1 - Verify pressure did not decrease noticeably from laboratory reported value.

2 - If final pressure does not change much from initial pressure, send the sample to the laboratory and indicate "HOLD" on the chain-of-custody. Also request that the laboratory determine the final pressure and contact the ERM coordinator for further instruction.

Environmental Resources Management
The Towers at Wildwood Plaza
3200 Windy Hill Road, SE
Atlanta, Geogia 30339
Phone: (678) 486-2700

Project #: 0121021
Project Name: I-Schield
Location:
Project Manager: Jeff Bilkert

Sample Location:		Collector(s):	Kevin Spevack
Address:			
PID Meter Used: (Model, Serial #)		Date:	7/5/16

Sample ID: IA-04-20160705-01
Duplicate Sample? (Y/N)
Duplicate Sample ID: NA
Type of sample (circle one): INDOOR AIR AMBIENT AIR SOIL GAS

Photograph description:

Summa® Information

Canister Serial Number:	506	Flow Controller Number:	0952
Start Date/Time:	7/5/16 1015	Stop Date/Time:	7/5/16
Start Pressure: (inches Hg) [1]	-28.81	Stop Pressure: (inches Hg) [2]	

Other Sampling Information:

Story/Level	1	Ground Surface (pavement, flooring)	Concrete	Depth of Vapor Probe (if applicable)	✓
Room	Warehouse	Slab thickness (if applicable)	~4.5"	Distance from Building (if applicable)	✓
Indoor Air Temp (°F)	~85°	Potential Vapor Pathways Observed?		Distance to nearest Roadway (ft.)	
Intake Height Above Ground Level (ft.)	4'0"	Noticeable Odor?	No	Weather	partly cloudy 81-85°
Barometric Pressure Initial ("Hg or mb)	✓	Barometric Pressure Final ("Hg or mb)	✓	Wind Speed (mph)	10 mph SE

Interim Monitoring

Initial Sample Purge (soil gas only):	PID Reading (ppm):	Noticeable Odor? (Y/N)	
Reading #1:	Time: 1115	Summa Vacuum ("Hg): -26.15	Noticeable Odor? (Y/N)
Reading #2:	Time: 1215	Summa Vacuum ("Hg): -22.35	Noticeable Odor? (Y/N)
Reading #3:	Time: 1315	Summa Vacuum ("Hg): -19.85	Noticeable Odor? (Y/N)
Reading #4:	Time: 1415	Summa Vacuum ("Hg): -16.84	Noticeable Odor? (Y/N)
Reading #5:	Time: 1515	Summa Vacuum ("Hg): -13.99	Noticeable Odor? (Y/N)

Sketch of Sample Location:

1615 -10.61
1715 -7.56
1815 -4.64 - sample complete valve closed

Comments:

1- Verify pressure did not decrease noticeably from laboratory reported value.

2- If final pressure does not change much from initial pressure, send the sample to the laboratory and indicate "HOLD" on the chain-of-custody. Also request that the laboratory determine the final pressure and contact the ERM coordinator for further instruction.

Environmental Resources Management
The Towers at Wildwood Plaza
3200 Windy Hill Road, SE
Atlanta, Geogia 30339
Phone: (678) 486-2700

Project #: 0121021
Project Name: I-Schneid
Location:
Project Manager: Jeff Bilkert

Sample Location:		Collector(s):	Kevin Spevack
Address:			
PID Meter Used: (Model, Serial #)		Date:	7/5/16

Sample ID: IA-05-20160705-01
Duplicate Sample? (Y/(N))
Duplicate Sample ID:
Type of sample (circle one): (INDOOR AIR) AMBIENT AIR SOIL GAS

Photograph description:

Summa® Information

Canister Serial Number:	508	Flow Controller Number:	0236
Start Date/Time:	7/5/16 1020	Stop Date/Time:	7/5/16
Start Pressure: (inches Hg) [1]	-24.73	Stop Pressure: (inches Hg) [2]	

Other Sampling Information:

Story/Level	1	Ground Surface (pavement, flooring)	Concrete	Depth of Vapor Probe (if applicable)	/
Room		Slab thickness (if applicable)	~4.5"	Distance from Building (if applicable)	/
Indoor Air Temp (°F)	~85°	Potential Vapor Pathways Observed?		Distance to nearest Roadway (ft.)	
Intake Height Above Ground Level (ft.)	4'0"	Noticeable Odor?	No	Weather	partly cloudy 80-85°
Barometric Pressure Initial ("Hg or mb)	/	Barometric Pressure Final ("Hg or mb)	/	Wind Speed (mph)	10 mph SE

Interim Monitoring

Initial Sample Purge (soil gas only):	PID Reading (ppm): /		Noticeable Odor? (Y/(N)) N	
Reading #1:	Time: 1120	Summa Vacuum ("Hg): -27.33	Noticeable Odor? (Y/(N))	
Reading #2:	Time: 1220	Summa Vacuum ("Hg): -24.24	Noticeable Odor? (Y/(N))	
Reading #3:	Time: 1320	Summa Vacuum ("Hg): -21.48	Noticeable Odor? (Y/(N))	
Reading #4:	Time: 1420	Summa Vacuum ("Hg): -18.65	Noticeable Odor? (Y/(N))	
Reading #5:	Time: 1520	Summa Vacuum ("Hg): -13.92	Noticeable Odor? (Y/(N))	

Sketch of Sample Location:

1620 -12.61
1720 -9.57
1820 -6.21
1840 -5.36 Sample complete valve closed

Comments:

1 - Verify pressure did not decrease noticeably from laboratory reported value.

2 - If final pressure does not change much from initial pressure, send the sample to the laboratory and indicate "HOLD" on the chain-of-custody. Also request that the laboratory determine the final pressure and contact the ERM coordinator for further instruction.

Environmental Resources Management
The Towers at Wildwood Plaza
3200 Windy Hill Road, SE
Atlanta, Geogia 30339
Phone: (678) 486-2700

Project #: 0121021
Project Name: I-Schneid
Location:
Project Manager: Jeff Bilkert

Sample Location:		Collector(s):	Kevin Gerrard
Address:			
PID Meter Used: (Model, Serial #)		Date:	7/5/16

Sample ID: OA-01-20160705-01
Duplicate Sample? (Y/(N))
Duplicate Sample ID:
Type of sample (circle one): INDOOR AIR | AMBIENT AIR | SOIL GAS

Photograph description:

Summa® Information

Canister Serial Number: 221	Flow Controller Number: 0702
Start Date/Time: 7/5/16 0955	Stop Date/Time: 7/5/16
Start Pressure: (inches Hg) [1] -29.19	Stop Pressure: (inches Hg) [2]

Other Sampling Information:

Story/Level	outdoors	Ground Surface (pavement, flooring)	Asphalt	Depth of Vapor Probe (if applicable)	/
Room	outdoors	Slab thickness (if applicable)	/	Distance from Building (if applicable)	10.2'
Indoor Air Temp (°F)	NA	Potential Vapor Pathways Observed?	/	Distance to nearest Roadway (ft.)	75.0'
Intake Height Above Ground Level (ft.)	3.0	Noticeable Odor?	No	Weather	partly cloudy 81-85°
Barometric Pressure Initial ("Hg or mb)	/	Barometric Pressure Final ("Hg or mb)	/	Wind Speed (mph)	10 mph SE

Interim Monitoring

Initial Sample Purge (soil gas only):	PID Reading (ppm): /		Noticeable Odor? (Y/N)
Reading #1:	Time: 1055	Summa Vacuum ("Hg): -27.08	Noticeable Odor? (Y/(N))
Reading #2:	Time: 1155	Summa Vacuum ("Hg): -24.87	Noticeable Odor? (Y/(N))
Reading #3:	Time: 1255	Summa Vacuum ("Hg): -23.07	Noticeable Odor? (Y/(N))
Reading #4:	Time: 1355	Summa Vacuum ("Hg): -21.11	Noticeable Odor? (Y/(N))
Reading #5:	Time: 1455	Summa Vacuum ("Hg): -19.10	Noticeable Odor? (Y/(N))

Sketch of Sample Location:

1555 -16.75
1655 -14.37
1755 -11.72
[redacted] [redacted]
1845 -10.18 Sample complete valve closed

Comments:

1- Verify pressure did not decrease noticeably from laboratory reported value.

2 - If final pressure does not change much from initial pressure, send the sample to the laboratory and indicate "HOLD" on the chain-of-custody. Also request that the laboratory determine the final pressure and contact the ERM coordinator for further instruction.

Laboratory Reports

Appendix D

August 2016
Project No. 0121021
I. Schneid Liquidation
Atlanta, GA

Environmental Resources Management
3200 Windy Hill Rd. Suite 1500W
Atlanta, GA 30339
(678) 486-2700

ANALYTICAL REPORT

Lab Number:	L1617940
Client:	ERM, Inc. 3200 Windy Hill Road, SE Suite 1500W Atlanta, GA 30339
ATTN:	Nicolas Vrey
Phone:	(678) 486-2762
Project Name:	I-SCHNEID
Project Number:	0121021
Report Date:	06/17/16

Certifications & Approvals: NY (11627), CT (PH-0141), NH (2206), NJ NELAP (MA015), RI (LAO00299), ME (MA00030), PA (68-02089), VA (460194), LA NELAP (03090), FL (E87814), TX (T104704419), WA (C954), USFWS (Permit #LE2069641), USDA (Permit #P330-11-00109), US Army Corps of Engineers.

320 Forbes Boulevard, Mansfield, MA 02048-1806
508-822-9300 (Fax) 508-822-3288 800-624-9220 - www.alphalab.com

Project Name: I-SCHNEID
Project Number: 0121021

Lab Number: L1617940
Report Date: 06/17/16

Alpha Sample ID	Client ID	Matrix	Sample Location	Collection Date/Time	Receive Date
L1617940-01	SG-1-3'	SOIL_VAPOR	ATLANTA, GA	06/08/16 09:20	06/10/16
L1617940-02	SG-1-7'	SOIL_VAPOR	ATLANTA, GA	06/08/16 09:45	06/10/16
L1617940-03	SG-1-11'	SOIL_VAPOR	ATLANTA, GA	06/08/16 09:55	06/10/16
L1617940-04	SG-2-3'	SOIL_VAPOR	ATLANTA, GA	06/08/16 10:45	06/10/16
L1617940-05	SG-2-7'	SOIL_VAPOR	ATLANTA, GA	06/08/16 11:01	06/10/16
L1617940-06	SG-2-11'	SOIL_VAPOR	ATLANTA, GA	06/08/16 11:09	06/10/16
L1617940-07	SSV-1	SOIL_VAPOR	ATLANTA, GA	06/08/16 11:47	06/10/16
L1617940-08	SSV-2	SOIL_VAPOR	ATLANTA, GA	06/08/16 12:36	06/10/16
L1617940-09	SSV-3	SOIL_VAPOR	ATLANTA, GA	06/08/16 13:05	06/10/16
L1617940-10	DUP-01	SOIL_VAPOR	ATLANTA, GA	06/08/16 00:00	06/10/16
L1617940-11	UNUSED CAN#472	SOIL_VAPOR	ATLANTA, GA		06/10/16

Project Name: I-SCHNEID
Project Number: 0121021

Lab Number: L1617940
Report Date: 06/17/16

Case Narrative

The samples were received in accordance with the Chain of Custody and no significant deviations were encountered during the preparation or analysis unless otherwise noted. Sample Receipt, Container Information, and the Chain of Custody are located at the back of the report.

Results contained within this report relate only to the samples submitted under this Alpha Lab Number and meet NELAP requirements for all NELAP accredited parameters unless otherwise noted in the following narrative. The data presented in this report is organized by parameter (i.e. VOC, SVOC, etc.). Sample specific Quality Control data (i.e. Surrogate Spike Recovery) is reported at the end of the target analyte list for each individual sample, followed by the Laboratory Batch Quality Control at the end of each parameter. Tentatively Identified Compounds (TICs), if requested, are reported for compounds identified to be present and are not part of the method/program Target Compound List, even if only a subset of the TCL are being reported. If a sample was re-analyzed or re-extracted due to a required quality control corrective action and if both sets of data are reported, the Laboratory ID of the re-analysis or re-extraction is designated with an "R" or "RE", respectively. When multiple Batch Quality Control elements are reported (e.g. more than one LCS), the associated samples for each element are noted in the grey shaded header line of each data table. Any Laboratory Batch, Sample Specific % recovery or RPD value that is outside the listed Acceptance Criteria is bolded in the report. All specific QC information is also incorporated in the Data Usability format of our Data Merger tool where it can be reviewed along with any associated usability implications. Soil/sediments, solids and tissues are reported on a dry weight basis unless otherwise noted. Definitions of all data qualifiers and acronyms used in this report are provided in the Glossary located at the back of the report.

In reference to questions H (CAM) or 4 (RCP) when "NO" is checked, the performance criteria for CAM and RCP methods allow for some quality control failures to occur and still be within method compliance. In these instances the specific failure is not narrated but noted in the associated QC table. The information is also incorporated in the Data Usability format of our Data Merger tool where it can be reviewed along with any associated usability implications.

Please see the associated ADEx data file for a comparison of laboratory reporting limits that were achieved with the regulatory Numerical Standards requested on the Chain of Custody.

HOLD POLICY
For samples submitted on hold, Alpha's policy is to hold samples (with the exception of Air canisters) free of charge for 21 calendar days from the date the project is completed. After 21 calendar days, we will dispose of all samples submitted including those put on hold unless you have contacted your Client Service Representative and made arrangements for Alpha to continue to hold the samples. Air canisters will be disposed after 3 business days from the date the project is completed.

Please contact Client Services at 800-624-9220 with any questions.

Project Name: I-SCHNEID
Project Number: 0121021

Lab Number: L1617940
Report Date: 06/17/16

Case Narrative (continued)

Volatile Organics in Air

Canisters were released from the laboratory on June 3, 2016. The canister certification results are provided as an addendum.

Samples L1617940-01, -02, -03, and -06: The samples have elevated detection limits due to the dilution required by the elevated concentrations of target compounds in the sample.

Sample L1617940-01: The sample was diluted and re-analyzed to quantify the results within the calibration range. The result(s) should be considered estimated, and are qualified with an E flag, for any compound(s) that exceeded the calibration range in the initial analysis. The re-analysis was performed only for the compound(s) that exceeded the calibration range.

Samples L1617940-04, -05, -07, -08, and -10: The samples have elevated detection limits due to the dilution required by the elevated concentrations of non-target compounds in the samples.

WG904730-5: The internal standard (IS) response for Chlorobenzene-d5 (143%) was above the acceptance criteria; since the response for the target compounds are within duplicate criteria, no other action was taken. Since the IS response was above method criteria, all associated compounds are considered to have a potentially low bias

I, the undersigned, attest under the pains and penalties of perjury that, to the best of my knowledge and belief and based upon my personal inquiry of those responsible for providing the information contained in this analytical report, such information is accurate and complete. This certificate of analysis is not complete unless this page accompanies any and all pages of this report.

Authorized Signature: Christopher J. Anderson

Title: Technical Director/Representative Date: 06/17/16

AIR

Project Name: I-SCHNEID
Project Number: 0121021

Lab Number: L1617940
Report Date: 06/17/16

SAMPLE RESULTS

Lab ID: L1617940-01 D
Client ID: SG-1-3'
Sample Location: ATLANTA, GA
Matrix: Soil_Vapor
Anaytical Method: 48,TO-15-SIM
Analytical Date: 06/17/16 07:29
Analyst: RY

Date Collected: 06/08/16 09:20
Date Received: 06/10/16
Field Prep: Not Specified

	ppbV			ug/m3				
Parameter	**Results**	**RL**	**MDL**	**Results**	**RL**	**MDL**	**Qualifier**	**Dilution Factor**
Volatile Organics in Air by SIM - Mansfield Lab								
Chlorobenzene	ND	49.4	--	ND	228	--		493.7
Ethylbenzene	14900	9.87	--	64700	42.9	--		493.7
p/m-Xylene	70300	19.7	--	305000	85.6	--	E	493.7
o-Xylene	19600	9.87	--	85100	42.9	--		493.7
1,4-Dichlorobenzene	15900	9.87	--	95600	59.3	--		493.7
Naphthalene	3710	24.7	--	19500	130	--		493.7

Internal Standard	**% Recovery**	**Qualifier**	**Acceptance Criteria**
1,4-difluorobenzene	110		60-140
bromochloromethane	104		60-140
chlorobenzene-d5	116		60-140

Project Name: I-SCHNEID
Project Number: 0121021

Lab Number: L1617940
Report Date: 06/17/16

SAMPLE RESULTS

Lab ID: L1617940-01 D2
Client ID: SG-1-3'
Sample Location: ATLANTA, GA
Matrix: Soil_Vapor
Anaytical Method: 48,TO-15-SIM
Analytical Date: 06/17/16 08:09
Analyst: RY

Date Collected: 06/08/16 09:20
Date Received: 06/10/16
Field Prep: Not Specified

	ppbV			ug/m3				
Parameter	**Results**	**RL**	**MDL**	**Results**	**RL**	**MDL**	**Qualifier**	**Dilution Factor**
Volatile Organics in Air by SIM - Mansfield Lab								
p/m-Xylene	82100	39.5	--	357000	172	--		987.4
Xylenes, Total	103000	19.7	--	447000	85.6	--		987.4

Internal Standard	**% Recovery**	**Qualifier**	**Acceptance Criteria**
1,4-difluorobenzene	109		60-140
bromochloromethane	101		60-140
chlorobenzene-d5	112		60-140

Project Name: I-SCHNEID
Project Number: 0121021

Lab Number: L1617940
Report Date: 06/17/16

SAMPLE RESULTS

Lab ID: L1617940-02 D
Client ID: SG-1-7'
Sample Location: ATLANTA, GA
Matrix: Soil_Vapor
Anaytical Method: 48,TO-15-SIM
Analytical Date: 06/16/16 21:28
Analyst: RY

Date Collected: 06/08/16 09:45
Date Received: 06/10/16
Field Prep: Not Specified

	ppbV			ug/m3				
Parameter	**Results**	**RL**	**MDL**	**Results**	**RL**	**MDL**	**Qualifier**	**Dilution Factor**
Volatile Organics in Air by SIM - Mansfield Lab								
Chlorobenzene	ND	19.4	--	ND	89.3	--		193.6
Ethylbenzene	3640	3.87	--	15800	16.8	--		193.6
p/m-Xylene	16900	7.74	--	73400	33.6	--		193.6
o-Xylene	5420	3.87	--	23500	16.8	--		193.6
1,4-Dichlorobenzene	5860	3.87	--	35200	23.3	--		193.6
Naphthalene	2580	9.68	--	13500	50.8	--		193.6
Xylenes, Total	22300	3.87	--	96900	16.8	--		193.6

Internal Standard	**% Recovery**	**Qualifier**	**Acceptance Criteria**
1,4-difluorobenzene	135		60-140
bromochloromethane	126		60-140
chlorobenzene-d5	139		60-140

Project Name: I-SCHNEID
Project Number: 0121021

Lab Number: L1617940
Report Date: 06/17/16

SAMPLE RESULTS

Lab ID: L1617940-03 D
Client ID: SG-1-11'
Sample Location: ATLANTA, GA
Matrix: Soil_Vapor
Anaytical Method: 48,TO-15-SIM
Analytical Date: 06/16/16 22:00
Analyst: RY

Date Collected: 06/08/16 09:55
Date Received: 06/10/16
Field Prep: Not Specified

	ppbV			ug/m3				
Parameter	**Results**	**RL**	**MDL**	**Results**	**RL**	**MDL**	**Qualifier**	**Dilution Factor**
Volatile Organics in Air by SIM - Mansfield Lab								
Chlorobenzene	576	20.2	--	2650	93.0	--		201.9
Ethylbenzene	2150	4.04	--	9340	17.5	--		201.9
p/m-Xylene	8720	8.08	--	37900	35.1	--		201.9
o-Xylene	4380	4.04	--	19000	17.5	--		201.9
1,4-Dichlorobenzene	2790	4.04	--	16800	24.3	--		201.9
Naphthalene	603	10.1	--	3160	53.0	--		201.9
Xylenes, Total	13100	4.04	--	56900	17.5	--		201.9

Internal Standard	**% Recovery**	**Qualifier**	**Acceptance Criteria**
1,4-difluorobenzene	125		60-140
bromochloromethane	117		60-140
chlorobenzene-d5	125		60-140

Project Name: I-SCHNEID
Project Number: 0121021

Lab Number: L1617940
Report Date: 06/17/16

SAMPLE RESULTS

Lab ID: L1617940-04 D
Client ID: SG-2-3'
Sample Location: ATLANTA, GA
Matrix: Soil_Vapor
Anaytical Method: 48,TO-15-SIM
Analytical Date: 06/16/16 16:40
Analyst: RY

Date Collected: 06/08/16 10:45
Date Received: 06/10/16
Field Prep: Not Specified

	ppbV			ug/m3				
Parameter	**Results**	**RL**	**MDL**	**Results**	**RL**	**MDL**	**Qualifier**	**Dilution Factor**
Volatile Organics in Air by SIM - Mansfield Lab								
Chlorobenzene	67.4	2.01	--	310	9.26	--		20.07
Ethylbenzene	25.2	0.401	--	109	1.74	--		20.07
p/m-Xylene	461	0.803	--	2000	3.49	--		20.07
o-Xylene	612	0.401	--	2660	1.74	--		20.07
1,4-Dichlorobenzene	61.8	0.401	--	372	2.41	--		20.07
Naphthalene	24.0	1.00	--	126	5.24	--		20.07
Xylenes, Total	1070	0.401	--	4650	1.74	--		20.07

Internal Standard	**% Recovery**	**Qualifier**	**Acceptance Criteria**
1,4-difluorobenzene	98		60-140
bromochloromethane	100		60-140
chlorobenzene-d5	118		60-140

Project Name: I-SCHNEID
Project Number: 0121021

Lab Number: L1617940
Report Date: 06/17/16

SAMPLE RESULTS

Lab ID: L1617940-05 D
Client ID: SG-2-7'
Sample Location: ATLANTA, GA
Matrix: Soil_Vapor
Anaytical Method: 48,TO-15-SIM
Analytical Date: 06/16/16 17:11
Analyst: RY

Date Collected: 06/08/16 11:01
Date Received: 06/10/16
Field Prep: Not Specified

	ppbV			ug/m3				
Parameter	**Results**	**RL**	**MDL**	**Results**	**RL**	**MDL**	**Qualifier**	**Dilution Factor**
Volatile Organics in Air by SIM - Mansfield Lab								
Chlorobenzene	64.1	2.01	--	295	9.26	--		20.07
Ethylbenzene	26.7	0.401	--	116	1.74	--		20.07
p/m-Xylene	288	0.803	--	1250	3.49	--		20.07
o-Xylene	396	0.401	--	1720	1.74	--		20.07
1,4-Dichlorobenzene	89.1	0.401	--	536	2.41	--		20.07
Naphthalene	79.6	1.00	--	417	5.24	--		20.07
Xylenes, Total	684	0.401	--	2970	1.74	--		20.07

Internal Standard	**% Recovery**	**Qualifier**	**Acceptance Criteria**
1,4-difluorobenzene	114		60-140
bromochloromethane	108		60-140
chlorobenzene-d5	133		60-140

Project Name: I-SCHNEID
Project Number: 0121021

Lab Number: L1617940
Report Date: 06/17/16

SAMPLE RESULTS

Lab ID: L1617940-06 D
Client ID: SG-2-11'
Sample Location: ATLANTA, GA
Matrix: Soil_Vapor
Anaytical Method: 48,TO-15-SIM
Analytical Date: 06/17/16 06:57
Analyst: RY

Date Collected: 06/08/16 11:09
Date Received: 06/10/16
Field Prep: Not Specified

	ppbV			ug/m3				
Parameter	**Results**	**RL**	**MDL**	**Results**	**RL**	**MDL**	**Qualifier**	**Dilution Factor**
Volatile Organics in Air by SIM - Mansfield Lab								
Chlorobenzene	138	2.01	--	636	9.26	--		20.07
Ethylbenzene	317	0.401	--	1380	1.74	--		20.07
p/m-Xylene	1440	0.803	--	6250	3.49	--		20.07
o-Xylene	848	0.401	--	3680	1.74	--		20.07
1,4-Dichlorobenzene	141	0.401	--	848	2.41	--		20.07
Naphthalene	45.9	1.00	--	241	5.24	--		20.07
Xylenes, Total	2290	0.401	--	9950	1.74	--		20.07

Internal Standard	**% Recovery**	**Qualifier**	**Acceptance Criteria**
1,4-difluorobenzene	107		60-140
bromochloromethane	103		60-140
chlorobenzene-d5	116		60-140

Project Name: I-SCHNEID
Project Number: 0121021

Lab Number: L1617940
Report Date: 06/17/16

SAMPLE RESULTS

Lab ID: L1617940-07 D
Client ID: SSV-1
Sample Location: ATLANTA, GA
Matrix: Soil_Vapor
Anaytical Method: 48,TO-15-SIM
Analytical Date: 06/16/16 18:45
Analyst: RY

Date Collected: 06/08/16 11:47
Date Received: 06/10/16
Field Prep: Not Specified

	ppbV			ug/m3				
Parameter	**Results**	**RL**	**MDL**	**Results**	**RL**	**MDL**	**Qualifier**	**Dilution Factor**
Volatile Organics in Air by SIM - Mansfield Lab								
Chlorobenzene	1.18	0.500	--	5.43	2.30	--		5
Ethylbenzene	5.70	0.100	--	24.8	0.434	--		5
p/m-Xylene	30.6	0.200	--	133	0.869	--		5
o-Xylene	9.24	0.100	--	40.1	0.434	--		5
1,4-Dichlorobenzene	11.0	0.100	--	66.1	0.601	--		5
Naphthalene	11.2	0.250	--	58.7	1.31	--		5
Xylenes, Total	39.8	0.100	--	173	0.434	--		5

Internal Standard	**% Recovery**	**Qualifier**	**Acceptance Criteria**
1,4-difluorobenzene	130		60-140
bromochloromethane	123		60-140
chlorobenzene-d5	131		60-140

Project Name: I-SCHNEID
Project Number: 0121021

Lab Number: L1617940
Report Date: 06/17/16

SAMPLE RESULTS

Lab ID: L1617940-08 D
Client ID: SSV-2
Sample Location: ATLANTA, GA
Matrix: Soil_Vapor
Anaytical Method: 48,TO-15-SIM
Analytical Date: 06/16/16 19:16
Analyst: RY

Date Collected: 06/08/16 12:36
Date Received: 06/10/16
Field Prep: Not Specified

	ppbV			ug/m3				
Parameter	**Results**	**RL**	**MDL**	**Results**	**RL**	**MDL**	**Qualifier**	**Dilution Factor**
Volatile Organics in Air by SIM - Mansfield Lab								
Chlorobenzene	ND	1.00	--	ND	4.61	--		10
Ethylbenzene	7.44	0.200	--	32.3	0.869	--		10
p/m-Xylene	39.1	0.400	--	170	1.74	--		10
o-Xylene	16.6	0.200	--	72.1	0.869	--		10
1,4-Dichlorobenzene	21.1	0.200	--	127	1.20	--		10
Naphthalene	24.4	0.500	--	128	2.62	--		10
Xylenes, Total	55.7	0.200	--	242	0.869	--		10

Internal Standard	**% Recovery**	**Qualifier**	**Acceptance Criteria**
1,4-difluorobenzene	123		60-140
bromochloromethane	118		60-140
chlorobenzene-d5	126		60-140

Project Name: I-SCHNEID
Project Number: 0121021
Lab Number: L1617940
Report Date: 06/17/16

SAMPLE RESULTS

Lab ID: L1617940-09
Client ID: SSV-3
Sample Location: ATLANTA, GA
Matrix: Soil_Vapor
Anaytical Method: 48,TO-15-SIM
Analytical Date: 06/16/16 19:51
Analyst: RY

Date Collected: 06/08/16 13:05
Date Received: 06/10/16
Field Prep: Not Specified

	ppbV			ug/m3				
Parameter	**Results**	**RL**	**MDL**	**Results**	**RL**	**MDL**	**Qualifier**	**Dilution Factor**
Volatile Organics in Air by SIM - Mansfield Lab								
Chlorobenzene	0.117	0.100	--	0.539	0.461	--		1
Ethylbenzene	1.05	0.020	--	4.56	0.087	--		1
p/m-Xylene	6.60	0.040	--	28.7	0.174	--		1
o-Xylene	3.12	0.020	--	13.6	0.087	--		1
1,4-Dichlorobenzene	8.68	0.020	--	52.2	0.120	--		1
Naphthalene	15.6	0.050	--	81.8	0.262	--		1
Xylenes, Total	9.71	0.020	--	42.2	0.087	--		1

Internal Standard	**% Recovery**	**Qualifier**	**Acceptance Criteria**
1,4-difluorobenzene	127		60-140
bromochloromethane	117		60-140
chlorobenzene-d5	128		60-140

Project Name: I-SCHNEID
Project Number: 0121021

Lab Number: L1617940
Report Date: 06/17/16

SAMPLE RESULTS

Lab ID: L1617940-10 D
Client ID: DUP-01
Sample Location: ATLANTA, GA
Matrix: Soil_Vapor
Anaytical Method: 48,TO-15-SIM
Analytical Date: 06/16/16 20:23
Analyst: RY

Date Collected: 06/08/16 00:00
Date Received: 06/10/16
Field Prep: Not Specified

	ppbV			ug/m3				
Parameter	**Results**	**RL**	**MDL**	**Results**	**RL**	**MDL**	**Qualifier**	**Dilution Factor**
Volatile Organics in Air by SIM - Mansfield Lab								
Chlorobenzene	ND	0.500	--	ND	2.30	--		5
Ethylbenzene	5.09	0.100	--	22.1	0.434	--		5
p/m-Xylene	26.2	0.200	--	114	0.869	--		5
o-Xylene	8.90	0.100	--	38.7	0.434	--		5
1,4-Dichlorobenzene	9.99	0.100	--	60.1	0.601	--		5
Naphthalene	6.02	0.250	--	31.6	1.31	--		5
Xylenes, Total	35.1	0.100	--	152	0.434	--		5

Internal Standard	**% Recovery**	**Qualifier**	**Acceptance Criteria**
1,4-difluorobenzene	127		60-140
bromochloromethane	120		60-140
chlorobenzene-d5	126		60-140

Project Name: I-SCHNEID
Project Number: 0121021

Lab Number: L1617940
Report Date: 06/17/16

Method Blank Analysis
Batch Quality Control

Analytical Method: 48,TO-15-SIM
Analytical Date: 06/16/16 15:44

Parameter	ppbV Results	ppbV RL	ppbV MDL	ug/m3 Results	ug/m3 RL	ug/m3 MDL	Qualifier	Dilution Factor
Volatile Organics in Air by SIM - Mansfield Lab for sample(s): 01-10 Batch: WG904730-4								
Xylenes, Total	ND	0.020	--	ND	0.087	--		1
Chlorobenzene	ND	0.100	--	ND	0.461	--		1
Ethylbenzene	ND	0.020	--	ND	0.087	--		1
p/m-Xylene	ND	0.040	--	ND	0.174	--		1
o-Xylene	ND	0.020	--	ND	0.087	--		1
1,4-Dichlorobenzene	ND	0.020	--	ND	0.120	--		1
Naphthalene	ND	0.050	--	ND	0.262	--		1

Lab Control Sample Analysis

Batch Quality Control

Project Name: I-SCHNEID

Project Number: 0121021

Lab Number: L1617940

Report Date: 06/17/16

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics in Air by SIM - Mansfield Lab Associated sample(s): 01-10 Batch: WG904730-3								
Propylene	88		-		70-130	-		25
Dichlorodifluoromethane	77		-		70-130	-		25
Chloromethane	86		-		70-130	-		25
1,2-Dichloro-1,1,2,2-tetrafluoroethane	84		-		70-130	-		25
Vinyl chloride	85		-		70-130	-		25
1,3-Butadiene	91		-		70-130	-		25
Bromomethane	86		-		70-130	-		25
Chloroethane	85		-		70-130	-		25
Ethyl Alcohol	96		-		70-130	-		25
Vinyl bromide	80		-		70-130	-		25
Acetone	90		-		70-130	-		25
Trichlorofluoromethane	84		-		70-130	-		25
iso-Propyl Alcohol	89		-		70-130	-		25
Acrylonitrile	85		-		70-130	-		25
1,1-Dichloroethene	84		-		70-130	-		25
Methylene chloride	93		-		70-130	-		25
3-Chloropropene	86		-		70-130	-		25
Carbon disulfide	77		-		70-130	-		25
1,1,2-Trichloro-1,2,2-Trifluoroethane	79		-		70-130	-		25
Halothane	79		-		70-130	-		25
trans-1,2-Dichloroethene	**68**	Q	-		70-130	-		25

Lab Control Sample Analysis
Batch Quality Control

Project Name: I-SCHNEID
Project Number: 0121021

Lab Number: L1617940
Report Date: 06/17/16

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics in Air by SIM - Mansfield Lab Associated sample(s): 01-10 Batch: WG904730-3								
1,1-Dichloroethane	91		-		70-130	-		25
Methyl tert butyl ether	83		-		70-130	-		25
Vinyl acetate	**29**	Q	-		70-130	-		25
2-Butanone	94		-		70-130	-		25
cis-1,2-Dichloroethene	93		-		70-130	-		25
Ethyl Acetate	96		-		70-130	-		25
Chloroform	93		-		70-130	-		25
Tetrahydrofuran	96		-		70-130	-		25
1,2-Dichloroethane	92		-		70-130	-		25
n-Hexane	102		-		70-130	-		25
1,1,1-Trichloroethane	111		-		70-130	-		25
Benzene	101		-		70-130	-		25
Carbon tetrachloride	113		-		70-130	-		25
Cyclohexane	100		-		70-130	-		25
1,2-Dichloropropane	109		-		70-130	-		25
Bromodichloromethane	113		-		70-130	-		25
1,4-Dioxane	104		-		70-130	-		25
Trichloroethene	103		-		70-130	-		25
2,2,4-Trimethylpentane	114		-		70-130	-		25
cis-1,3-Dichloropropene	100		-		70-130	-		25
4-Methyl-2-pentanone	119		-		70-130	-		25

Lab Control Sample Analysis

Batch Quality Control

Project Name: I-SCHNEID

Project Number: 0121021

Lab Number: L1617940

Report Date: 06/17/16

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics in Air by SIM - Mansfield Lab Associated sample(s): 01-10 Batch: WG904730-3								
trans-1,3-Dichloropropene	93		-		70-130	-		25
1,1,2-Trichloroethane	109		-		70-130	-		25
Toluene	97		-		70-130	-		25
2-Hexanone	122		-		70-130	-		25
Dibromochloromethane	107		-		70-130	-		25
1,2-Dibromoethane	101		-		70-130	-		25
Tetrachloroethene	96		-		70-130	-		25
1,1,1,2-Tetrachloroethane	99		-		70-130	-		25
Chlorobenzene	99		-		70-130	-		25
Ethylbenzene	99		-		70-130	-		25
p/m-Xylene	108		-		70-130	-		25
Bromoform	107		-		70-130	-		25
Styrene	104		-		70-130	-		25
1,1,2,2-Tetrachloroethane	105		-		70-130	-		25
o-Xylene	108		-		70-130	-		25
Isopropylbenzene	102		-		70-130	-		25
4-Ethyltoluene	112		-		70-130	-		25
1,3,5-Trimethylbenzene	107		-		70-130	-		25
1,2,4-Trimethylbenzene	115		-		70-130	-		25
Benzyl chloride	115		-		70-130	-		25
1,3-Dichlorobenzene	111		-		70-130	-		25

Lab Control Sample Analysis
Batch Quality Control

Project Name: I-SCHNEID
Project Number: 0121021

Lab Number: L1617940
Report Date: 06/17/16

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics in Air by SIM - Mansfield Lab Associated sample(s): 01-10 Batch: WG904730-3								
1,4-Dichlorobenzene	101		-		70-130	-		25
sec-Butylbenzene	109		-		70-130	-		25
p-Isopropyltoluene	97		-		70-130	-		25
1,2-Dichlorobenzene	107		-		70-130	-		25
n-Butylbenzene	114		-		70-130	-		25
1,2,4-Trichlorobenzene	101		-		70-130	-		25
Naphthalene	104		-		70-130	-		25
1,2,3-Trichlorobenzene	102		-		70-130	-		25
Hexachlorobutadiene	108		-		70-130	-		25

Lab Duplicate Analysis
Batch Quality Control

Project Name: I-SCHNEID
Project Number: 0121021

Lab Number: L1617940
Report Date: 06/17/16

Parameter	Native Sample	Duplicate Sample	Units	RPD	Qual	RPD Limits
Volatile Organics in Air by SIM - Mansfield Lab Associated sample(s): 01-10 QC Batch ID: WG904730-5 QC Sample: L1617940-05 Client ID: SG-2-7'						
Chlorobenzene	64.1	62.1	ppbV	3		25
Ethylbenzene	26.7	26.4	ppbV	1		25
p/m-Xylene	288	282	ppbV	2		25
o-Xylene	396	380	ppbV	4		25
1,4-Dichlorobenzene	89.1	84.6	ppbV	5		25
Naphthalene	79.6	79.8	ppbV	0		25
Xylenes, Total	684	662	ppbV	3		25

Project Name: I-SCHNEID

Project Number: 0121021

Lab Number: L1617940

Report Date: 06/17/16

Canister and Flow Controller Information

Samplenum	Client ID	Media ID	Media Type	Date Prepared	Bottle Order	Cleaning Batch ID	Can Leak Check	Initial Pressure (in. Hg)	Pressure on Receipt (in. Hg)	Flow Controler Leak Chk	Flow Out mL/min	Flow In mL/min	% RPD
L1617940-01	SG-1-3'	0650	SV200	06/03/16	222919		-	-	-	Pass	210	204	3
L1617940-01	SG-1-3'	141	2.7L Can	06/03/16	222919	L1615757-02	Pass	-30.0	-1.5	-	-	-	-
L1617940-02	SG-1-7'	0511	SV200	06/03/16	222919		-	-	-	Pass	218	204	7
L1617940-02	SG-1-7'	502	2.7L Can	06/03/16	222919	L1615757-02	Pass	-30.0	-1.1	-	-	-	-
L1617940-03	SG-1-11'	0602	SV200	06/03/16	222919		-	-	-	Pass	210	203	3
L1617940-03	SG-1-11'	1804	2.7L Can	06/03/16	222919	L1615757-02	Pass	-29.5	-2.1	-	-	-	-
L1617940-04	SG-2-3'	0658	SV200	06/03/16	222919		-	-	-	Pass	222	208	7
L1617940-04	SG-2-3'	446	2.7L Can	06/03/16	222919	L1615757-02	Pass	-30.0	-0.9	-	-	-	-
L1617940-05	SG-2-7'	0689	SV200	06/03/16	222919		-	-	-	Pass	217	206	5
L1617940-05	SG-2-7'	151B	2.7L Can	06/03/16	222919	L1615757-02	Pass	-30.0	-1.1	-	-	-	-
L1617940-06	SG-2-11'	0686	SV200	06/03/16	222919		-	-	-	Pass	210	201	4
L1617940-06	SG-2-11'	391	2.7L Can	06/03/16	222919	L1615757-02	Pass	-30.0	-1.1	-	-	-	-
L1617940-07	SSV-1	0604	SV200	06/03/16	222919		-	-	-	Pass	210	203	3
L1617940-07	SSV-1	212	2.7L Can	06/03/16	222919	L1615757-02	Pass	-30.0	-1.4	-	-	-	-
L1617940-08	SSV-2	0707	SV200	06/03/16	222919		-	-	-	Pass	213	205	4

Project Name: I-SCHNEID

Project Number: 0121021

Lab Number: L1617940

Report Date: 06/17/16

Canister and Flow Controller Information

Samplenum	Client ID	Media ID	Media Type	Date Prepared	Bottle Order	Cleaning Batch ID	Can Leak Check	Initial Pressure (in. Hg)	Pressure on Receipt (in. Hg)	Flow Controler Leak Chk	Flow Out mL/min	Flow In mL/min	% RPD
L1617940-08	SSV-2	546	2.7L Can	06/03/16	222919	L1615757-02	Pass	-30.0	-1.2	-	-	-	-
L1617940-09	SSV-3	0520	SV200	06/03/16	222919		-	-	-	Pass	210	204	3
L1617940-09	SSV-3	352	2.7L Can	06/03/16	222919	L1615757-02	Pass	-30.0	-1.5	-	-	-	-
L1617940-10	DUP-01	0596	SV200	06/03/16	222919		-	-	-	Pass	213	203	5
L1617940-10	DUP-01	527	2.7L Can	06/03/16	222919	L1615757-02	Pass	-30.0	-1.3	-	-	-	-
L1617940-11	UNUSED CAN#472	0688	SV200	06/03/16	222919		-	-	-	Pass	220	200	10
L1617940-11	UNUSED CAN#472	472	2.7L Can	06/03/16	222919	L1615757-02	Pass	-30.0	-29.4	-	-	-	-

Project Name: BATCH CANISTER CERTIFICATION
Project Number: CANISTER QC BAT
Lab Number: L1615757
Report Date: 06/17/16

Air Canister Certification Results

Lab ID: L1615757-02
Client ID: CAN 1727 SHELF 13
Sample Location:
Matrix: Air
Anaytical Method: 48,TO-15
Analytical Date: 05/25/16 17:21
Analyst: RY

Date Collected: 05/24/16 16:00
Date Received: 05/25/16
Field Prep: Not Specified

Parameter	ppbV Results	ppbV RL	ppbV MDL	ug/m3 Results	ug/m3 RL	ug/m3 MDL	Qualifier	Dilution Factor
Volatile Organics in Air - Mansfield Lab								
Chlorodifluoromethane	ND	0.200	--	ND	0.707	--		1
Propylene	ND	0.500	--	ND	0.861	--		1
Propane	ND	0.500	--	ND	0.902	--		1
Dichlorodifluoromethane	ND	0.200	--	ND	0.989	--		1
Chloromethane	ND	0.200	--	ND	0.413	--		1
Freon-114	ND	0.200	--	ND	1.40	--		1
Methanol	ND	5.00	--	ND	6.55	--		1
Vinyl chloride	ND	0.200	--	ND	0.511	--		1
1,3-Butadiene	ND	0.200	--	ND	0.442	--		1
Butane	ND	0.200	--	ND	0.475	--		1
Bromomethane	ND	0.200	--	ND	0.777	--		1
Chloroethane	ND	0.200	--	ND	0.528	--		1
Ethanol	ND	5.00	--	ND	9.42	--		1
Dichlorofluoromethane	ND	0.200	--	ND	0.842	--		1
Vinyl bromide	ND	0.200	--	ND	0.874	--		1
Acrolein	ND	0.500	--	ND	1.15	--		1
Acetone	ND	1.00	--	ND	2.38	--		1
Acetonitrile	ND	0.200	--	ND	0.336	--		1
Trichlorofluoromethane	ND	0.200	--	ND	1.12	--		1
Isopropanol	ND	0.500	--	ND	1.23	--		1
Acrylonitrile	ND	0.500	--	ND	1.09	--		1
Pentane	ND	0.200	--	ND	0.590	--		1
Ethyl ether	ND	0.200	--	ND	0.606	--		1
1,1-Dichloroethene	ND	0.200	--	ND	0.793	--		1
Tertiary butyl Alcohol	ND	0.500	--	ND	1.52	--		1

Project Name: BATCH CANISTER CERTIFICATION
Project Number: CANISTER QC BAT
Lab Number: L1615757
Report Date: 06/17/16

Air Canister Certification Results

Lab ID: L1615757-02
Client ID: CAN 1727 SHELF 13
Sample Location:
Date Collected: 05/24/16 16:00
Date Received: 05/25/16
Field Prep: Not Specified

	ppbV			ug/m3				
Parameter	**Results**	**RL**	**MDL**	**Results**	**RL**	**MDL**	**Qualifier**	**Dilution Factor**
Volatile Organics in Air - Mansfield Lab								
Methylene chloride	ND	0.500	--	ND	1.74	--		1
3-Chloropropene	ND	0.200	--	ND	0.626	--		1
Carbon disulfide	ND	0.200	--	ND	0.623	--		1
Freon-113	ND	0.200	--	ND	1.53	--		1
trans-1,2-Dichloroethene	ND	0.200	--	ND	0.793	--		1
1,1-Dichloroethane	ND	0.200	--	ND	0.809	--		1
Methyl tert butyl ether	ND	0.200	--	ND	0.721	--		1
Vinyl acetate	ND	1.00	--	ND	3.52	--		1
2-Butanone	ND	0.500	--	ND	1.47	--		1
cis-1,2-Dichloroethene	ND	0.200	--	ND	0.793	--		1
Ethyl Acetate	ND	0.500	--	ND	1.80	--		1
Chloroform	ND	0.200	--	ND	0.977	--		1
Tetrahydrofuran	ND	0.500	--	ND	1.47	--		1
2,2-Dichloropropane	ND	0.200	--	ND	0.924	--		1
1,2-Dichloroethane	ND	0.200	--	ND	0.809	--		1
n-Hexane	ND	0.200	--	ND	0.705	--		1
Diisopropyl ether	ND	0.200	--	ND	0.836	--		1
tert-Butyl Ethyl Ether	ND	0.200	--	ND	0.836	--		1
1,1,1-Trichloroethane	ND	0.200	--	ND	1.09	--		1
1,1-Dichloropropene	ND	0.200	--	ND	0.908	--		1
Benzene	ND	0.200	--	ND	0.639	--		1
Carbon tetrachloride	ND	0.200	--	ND	1.26	--		1
Cyclohexane	ND	0.200	--	ND	0.688	--		1
tert-Amyl Methyl Ether	ND	0.200	--	ND	0.836	--		1
Dibromomethane	ND	0.200	--	ND	1.42	--		1
1,2-Dichloropropane	ND	0.200	--	ND	0.924	--		1
Bromodichloromethane	ND	0.200	--	ND	1.34	--		1
1,4-Dioxane	ND	0.200	--	ND	0.721	--		1

Project Name: BATCH CANISTER CERTIFICATION
Project Number: CANISTER QC BAT
Lab Number: L1615757
Report Date: 06/17/16

Air Canister Certification Results

Lab ID: L1615757-02
Client ID: CAN 1727 SHELF 13
Sample Location:
Date Collected: 05/24/16 16:00
Date Received: 05/25/16
Field Prep: Not Specified

	ppbV			ug/m3				
Parameter	**Results**	**RL**	**MDL**	**Results**	**RL**	**MDL**	**Qualifier**	**Dilution Factor**
Volatile Organics in Air - Mansfield Lab								
Trichloroethene	ND	0.200	--	ND	1.07	--		1
2,2,4-Trimethylpentane	ND	0.200	--	ND	0.934	--		1
Methyl Methacrylate	ND	0.500	--	ND	2.05	--		1
Heptane	ND	0.200	--	ND	0.820	--		1
cis-1,3-Dichloropropene	ND	0.200	--	ND	0.908	--		1
4-Methyl-2-pentanone	ND	0.500	--	ND	2.05	--		1
trans-1,3-Dichloropropene	ND	0.200	--	ND	0.908	--		1
1,1,2-Trichloroethane	ND	0.200	--	ND	1.09	--		1
Toluene	ND	0.200	--	ND	0.754	--		1
1,3-Dichloropropane	ND	0.200	--	ND	0.924	--		1
2-Hexanone	ND	0.200	--	ND	0.820	--		1
Dibromochloromethane	ND	0.200	--	ND	1.70	--		1
1,2-Dibromoethane	ND	0.200	--	ND	1.54	--		1
Butyl acetate	ND	0.500	--	ND	2.38	--		1
Octane	ND	0.200	--	ND	0.934	--		1
Tetrachloroethene	ND	0.200	--	ND	1.36	--		1
1,1,1,2-Tetrachloroethane	ND	0.200	--	ND	1.37	--		1
Chlorobenzene	ND	0.200	--	ND	0.921	--		1
Ethylbenzene	ND	0.200	--	ND	0.869	--		1
p/m-Xylene	ND	0.400	--	ND	1.74	--		1
Bromoform	ND	0.200	--	ND	2.07	--		1
Styrene	ND	0.200	--	ND	0.852	--		1
1,1,2,2-Tetrachloroethane	ND	0.200	--	ND	1.37	--		1
o-Xylene	ND	0.200	--	ND	0.869	--		1
1,2,3-Trichloropropane	ND	0.200	--	ND	1.21	--		1
Nonane	ND	0.200	--	ND	1.05	--		1
Isopropylbenzene	ND	0.200	--	ND	0.983	--		1
Bromobenzene	ND	0.200	--	ND	0.793	--		1

Project Name: BATCH CANISTER CERTIFICATION
Project Number: CANISTER QC BAT
Lab Number: L1615757
Report Date: 06/17/16

Air Canister Certification Results

Lab ID: L1615757-02
Client ID: CAN 1727 SHELF 13
Sample Location:
Date Collected: 05/24/16 16:00
Date Received: 05/25/16
Field Prep: Not Specified

Parameter	ppbV Results	ppbV RL	ppbV MDL	ug/m3 Results	ug/m3 RL	ug/m3 MDL	Qualifier	Dilution Factor
Volatile Organics in Air - Mansfield Lab								
2-Chlorotoluene	ND	0.200	--	ND	1.04	--		1
n-Propylbenzene	ND	0.200	--	ND	0.983	--		1
4-Chlorotoluene	ND	0.200	--	ND	1.04	--		1
4-Ethyltoluene	ND	0.200	--	ND	0.983	--		1
1,3,5-Trimethylbenzene	ND	0.200	--	ND	0.983	--		1
tert-Butylbenzene	ND	0.200	--	ND	1.10	--		1
1,2,4-Trimethylbenzene	ND	0.200	--	ND	0.983	--		1
Decane	ND	0.200	--	ND	1.16	--		1
Benzyl chloride	ND	0.200	--	ND	1.04	--		1
1,3-Dichlorobenzene	ND	0.200	--	ND	1.20	--		1
1,4-Dichlorobenzene	ND	0.200	--	ND	1.20	--		1
sec-Butylbenzene	ND	0.200	--	ND	1.10	--		1
p-Isopropyltoluene	ND	0.200	--	ND	1.10	--		1
1,2-Dichlorobenzene	ND	0.200	--	ND	1.20	--		1
n-Butylbenzene	ND	0.200	--	ND	1.10	--		1
1,2-Dibromo-3-chloropropane	ND	0.200	--	ND	1.93	--		1
Undecane	ND	0.200	--	ND	1.28	--		1
Dodecane	ND	0.200	--	ND	1.39	--		1
1,2,4-Trichlorobenzene	ND	0.200	--	ND	1.48	--		1
Naphthalene	ND	0.200	--	ND	1.05	--		1
1,2,3-Trichlorobenzene	ND	0.200	--	ND	1.48	--		1
Hexachlorobutadiene	ND	0.200	--	ND	2.13	--		1

	Results	Qualifier	Units	RDL	Dilution Factor
Tentatively Identified Compounds					
No Tentatively Identified Compounds					

Project Name: BATCH CANISTER CERTIFICATION
Project Number: CANISTER QC BAT
Lab Number: L1615757
Report Date: 06/17/16

Air Canister Certification Results

Lab ID: L1615757-02
Client ID: CAN 1727 SHELF 13
Sample Location:
Date Collected: 05/24/16 16:00
Date Received: 05/25/16
Field Prep: Not Specified

Parameter	ppbV Results	ppbV RL	ppbV MDL	ug/m3 Results	ug/m3 RL	ug/m3 MDL	Qualifier	Dilution Factor
Volatile Organics in Air - Mansfield Lab								

Internal Standard	% Recovery	Qualifier	Acceptance Criteria
1,4-Difluorobenzene	89		60-140
Bromochloromethane	94		60-140
chlorobenzene-d5	85		60-140

Project Name: BATCH CANISTER CERTIFICATION
Project Number: CANISTER QC BAT
Lab Number: L1615757
Report Date: 06/17/16

Air Canister Certification Results

Lab ID: L1615757-02
Client ID: CAN 1727 SHELF 13
Sample Location:
Matrix: Air
Anaytical Method: 48,TO-15-SIM
Analytical Date: 05/25/16 17:21
Analyst: RY

Date Collected: 05/24/16 16:00
Date Received: 05/25/16
Field Prep: Not Specified

Parameter	ppbV Results	ppbV RL	ppbV MDL	ug/m3 Results	ug/m3 RL	ug/m3 MDL	Qualifier	Dilution Factor
Volatile Organics in Air by SIM - Mansfield Lab								
Dichlorodifluoromethane	ND	0.200	--	ND	0.989	--		1
Chloromethane	ND	0.200	--	ND	0.413	--		1
Freon-114	ND	0.050	--	ND	0.349	--		1
Vinyl chloride	ND	0.020	--	ND	0.051	--		1
1,3-Butadiene	ND	0.020	--	ND	0.044	--		1
Bromomethane	ND	0.020	--	ND	0.078	--		1
Chloroethane	ND	0.020	--	ND	0.053	--		1
Acetone	ND	1.00	--	ND	2.38	--		1
Trichlorofluoromethane	ND	0.050	--	ND	0.281	--		1
Acrylonitrile	ND	0.500	--	ND	1.09	--		1
1,1-Dichloroethene	ND	0.020	--	ND	0.079	--		1
Methylene chloride	ND	0.500	--	ND	1.74	--		1
Freon-113	ND	0.050	--	ND	0.383	--		1
trans-1,2-Dichloroethene	ND	0.020	--	ND	0.079	--		1
1,1-Dichloroethane	ND	0.020	--	ND	0.081	--		1
Methyl tert butyl ether	ND	0.200	--	ND	0.721	--		1
2-Butanone	ND	0.500	--	ND	1.47	--		1
cis-1,2-Dichloroethene	ND	0.020	--	ND	0.079	--		1
Chloroform	ND	0.020	--	ND	0.098	--		1
1,2-Dichloroethane	ND	0.020	--	ND	0.081	--		1
1,1,1-Trichloroethane	ND	0.020	--	ND	0.109	--		1
Benzene	ND	0.100	--	ND	0.319	--		1
Carbon tetrachloride	ND	0.020	--	ND	0.126	--		1
1,2-Dichloropropane	ND	0.020	--	ND	0.092	--		1
Bromodichloromethane	ND	0.020	--	ND	0.134	--		1

Project Name: BATCH CANISTER CERTIFICATION
Project Number: CANISTER QC BAT
Lab Number: L1615757
Report Date: 06/17/16

Air Canister Certification Results

Lab ID: L1615757-02
Client ID: CAN 1727 SHELF 13
Sample Location:
Date Collected: 05/24/16 16:00
Date Received: 05/25/16
Field Prep: Not Specified

	ppbV			ug/m3				
Parameter	**Results**	**RL**	**MDL**	**Results**	**RL**	**MDL**	**Qualifier**	**Dilution Factor**
Volatile Organics in Air by SIM - Mansfield Lab								
1,4-Dioxane	ND	0.100	--	ND	0.360	--		1
Trichloroethene	ND	0.020	--	ND	0.107	--		1
cis-1,3-Dichloropropene	ND	0.020	--	ND	0.091	--		1
4-Methyl-2-pentanone	ND	0.500	--	ND	2.05	--		1
trans-1,3-Dichloropropene	ND	0.020	--	ND	0.091	--		1
1,1,2-Trichloroethane	ND	0.020	--	ND	0.109	--		1
Toluene	ND	0.050	--	ND	0.188	--		1
Dibromochloromethane	ND	0.020	--	ND	0.170	--		1
1,2-Dibromoethane	ND	0.020	--	ND	0.154	--		1
Tetrachloroethene	ND	0.020	--	ND	0.136	--		1
1,1,1,2-Tetrachloroethane	ND	0.020	--	ND	0.137	--		1
Chlorobenzene	ND	0.100	--	ND	0.461	--		1
Ethylbenzene	ND	0.020	--	ND	0.087	--		1
p/m-Xylene	ND	0.040	--	ND	0.174	--		1
Bromoform	ND	0.020	--	ND	0.207	--		1
Styrene	ND	0.020	--	ND	0.085	--		1
1,1,2,2-Tetrachloroethane	ND	0.020	--	ND	0.137	--		1
o-Xylene	ND	0.020	--	ND	0.087	--		1
Isopropylbenzene	ND	0.200	--	ND	0.983	--		1
4-Ethyltoluene	ND	0.020	--	ND	0.098	--		1
1,3,5-Trimethybenzene	ND	0.020	--	ND	0.098	--		1
1,2,4-Trimethylbenzene	ND	0.020	--	ND	0.098	--		1
Benzyl chloride	ND	0.200	--	ND	1.04	--		1
1,3-Dichlorobenzene	ND	0.020	--	ND	0.120	--		1
1,4-Dichlorobenzene	ND	0.020	--	ND	0.120	--		1
sec-Butylbenzene	ND	0.200	--	ND	1.10	--		1
p-Isopropyltoluene	ND	0.200	--	ND	1.10	--		1
1,2-Dichlorobenzene	ND	0.020	--	ND	0.120	--		1

Project Name: BATCH CANISTER CERTIFICATION
Project Number: CANISTER QC BAT
Lab Number: L1615757
Report Date: 06/17/16

Air Canister Certification Results

Lab ID: L1615757-02
Client ID: CAN 1727 SHELF 13
Sample Location:
Date Collected: 05/24/16 16:00
Date Received: 05/25/16
Field Prep: Not Specified

	ppbV			ug/m3				
Parameter	**Results**	**RL**	**MDL**	**Results**	**RL**	**MDL**	**Qualifier**	**Dilution Factor**
Volatile Organics in Air by SIM - Mansfield Lab								
n-Butylbenzene	ND	0.200	--	ND	1.10	--		1
1,2,4-Trichlorobenzene	ND	0.050	--	ND	0.371	--		1
Naphthalene	ND	0.050	--	ND	0.262	--		1
1,2,3-Trichlorobenzene	ND	0.050	--	ND	0.371	--		1
Hexachlorobutadiene	ND	0.050	--	ND	0.533	--		1

Internal Standard	**% Recovery**	**Qualifier**	**Acceptance Criteria**
1,4-difluorobenzene	86		60-140
bromochloromethane	92		60-140
chlorobenzene-d5	86		60-140

Project Name: I-SCHNEID
Project Number: 0121021

Lab Number: L1617940
Report Date: 06/17/16

Sample Receipt and Container Information

Were project specific reporting limits specified? YES

Cooler Information **Custody Seal**
Cooler
N/A Present/Intact

Container Information

Container ID	Container Type	Cooler	pH	Temp deg C	Pres	Seal	Analysis(*)
L1617940-01A	Canister - 2.7 Liter	N/A	N/A		Y	Absent	TO15-SIM(30)
L1617940-02A	Canister - 2.7 Liter	N/A	N/A		Y	Absent	TO15-SIM(30)
L1617940-03A	Canister - 2.7 Liter	N/A	N/A		Y	Absent	TO15-SIM(30)
L1617940-04A	Canister - 2.7 Liter	N/A	N/A		Y	Absent	TO15-SIM(30)
L1617940-05A	Canister - 2.7 Liter	N/A	N/A		Y	Absent	TO15-SIM(30)
L1617940-06A	Canister - 2.7 Liter	N/A	N/A		Y	Absent	TO15-SIM(30)
L1617940-07A	Canister - 2.7 Liter	N/A	N/A		Y	Absent	TO15-SIM(30)
L1617940-08A	Canister - 2.7 Liter	N/A	N/A		Y	Absent	TO15-SIM(30)
L1617940-09A	Canister - 2.7 Liter	N/A	N/A		Y	Absent	TO15-SIM(30)
L1617940-10A	Canister - 2.7 Liter	N/A	N/A		Y	Absent	TO15-SIM(30)
L1617940-11A	Canister - 2.7 Liter	N/A	N/A		Y	Absent	CLEAN-FEE()

*Values in parentheses indicate holding time in days

Project Name:	I-SCHNEID	**Lab Number:**	L1617940
Project Number:	0121021	**Report Date:**	06/17/16

GLOSSARY

Acronyms

EDL	- Estimated Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The EDL includes any adjustments from dilutions, concentrations or moisture content, where applicable. The use of EDLs is specific to the analysis of PAHs using Solid-Phase Microextraction (SPME).
EPA	- Environmental Protection Agency.
LCS	- Laboratory Control Sample: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.
LCSD	- Laboratory Control Sample Duplicate: Refer to LCS.
LFB	- Laboratory Fortified Blank: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.
MDL	- Method Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The MDL includes any adjustments from dilutions, concentrations or moisture content, where applicable.
MS	- Matrix Spike Sample: A sample prepared by adding a known mass of target analyte to a specified amount of matrix sample for which an independent estimate of target analyte concentration is available.
MSD	- Matrix Spike Sample Duplicate: Refer to MS.
NA	- Not Applicable.
NC	- Not Calculated: Term is utilized when one or more of the results utilized in the calculation are non-detect at the parameter's reporting unit.
NDPA/DPA	- N-Nitrosodiphenylamine/Diphenylamine.
NI	- Not Ignitable.
NP	- Non-Plastic: Term is utilized for the analysis of Atterberg Limits in soil.
RL	- Reporting Limit: The value at which an instrument can accurately measure an analyte at a specific concentration. The RL includes any adjustments from dilutions, concentrations or moisture content, where applicable.
RPD	- Relative Percent Difference: The results from matrix and/or matrix spike duplicates are primarily designed to assess the precision of analytical results in a given matrix and are expressed as relative percent difference (RPD). Values which are less than five times the reporting limit for any individual parameter are evaluated by utilizing the absolute difference between the values; although the RPD value will be provided in the report.
SRM	- Standard Reference Material: A reference sample of a known or certified value that is of the same or similar matrix as the associated field samples.
STLP	- Semi-dynamic Tank Leaching Procedure per EPA Method 1315.
TIC	- Tentatively Identified Compound: A compound that has been identified to be present and is not part of the target compound list (TCL) for the method and/or program. All TICs are qualitatively identified and reported as estimated concentrations.

Footnotes

1	- The reference for this analyte should be considered modified since this analyte is absent from the target analyte list of the original method.

Terms

Total: With respect to Organic analyses, a 'Total' result is defined as the summation of results for individual isomers or Aroclors. If a 'Total' result is requested, the results of its individual components will also be reported. This is applicable to 'Total' results for methods 8260, 8081 and 8082.

Analytical Method: Both the document from which the method originates and the analytical reference method. (Example: EPA 8260B is shown as 1,8260B.) The codes for the reference method documents are provided in the References section of the Addendum.

Data Qualifiers

A	- Spectra identified as "Aldol Condensation Product".
B	- The analyte was detected above the reporting limit in the associated method blank. Flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For MCP-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For DOD-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank AND the analyte was detected above one-half the reporting limit (or above the reporting limit for common lab contaminants) in the associated method blank. For NJ-Air-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte above the reporting limit. For NJ-related projects (excluding Air), flag only applies to associated field samples that have detectable concentrations of the analyte, which was detected above the reporting limit in the associated method blank or above five times the

Report Format: Data Usability Report

Project Name:	I-SCHNEID	**Lab Number:**	L1617940
Project Number:	0121021	**Report Date:**	06/17/16

Data Qualifiers

reporting limit for common lab contaminants (Phthalates, Acetone, Methylene Chloride, 2-Butanone).

C - Co-elution: The target analyte co-elutes with a known lab standard (i.e. surrogate, internal standards, etc.) for co-extracted analyses.

D - Concentration of analyte was quantified from diluted analysis. Flag only applies to field samples that have detectable concentrations of the analyte.

E - Concentration of analyte exceeds the range of the calibration curve and/or linear range of the instrument.

G - The concentration may be biased high due to matrix interferences (i.e, co-elution) with non-target compound(s). The result should be considered estimated.

H - The analysis of pH was performed beyond the regulatory-required holding time of 15 minutes from the time of sample collection.

I - The lower value for the two columns has been reported due to obvious interference.

M - Reporting Limit (RL) exceeds the MCP CAM Reporting Limit for this analyte.

NJ - Presumptive evidence of compound. This represents an estimated concentration for Tentatively Identified Compounds (TICs), where the identification is based on a mass spectral library search.

P - The RPD between the results for the two columns exceeds the method-specified criteria.

Q - The quality control sample exceeds the associated acceptance criteria. For DOD-related projects, LCS and/or Continuing Calibration Standard exceedences are also qualified on all associated sample results. Note: This flag is not applicable for matrix spike recoveries when the sample concentration is greater than 4x the spike added or for batch duplicate RPD when the sample concentrations are less than 5x the RL. (Metals only.)

R - Analytical results are from sample re-analysis.

RE - Analytical results are from sample re-extraction.

S - Analytical results are from modified screening analysis.

J - Estimated value. This represents an estimated concentration for Tentatively Identified Compounds (TICs).

ND - Not detected at the reporting limit (RL) for the sample.

Report Format: Data Usability Report

REFERENCES

48 Compendium of Methods for the Determination of Toxic Organic Compounds in Ambient Air. Second Edition. EPA/625/R-96/010b, January 1999.

LIMITATION OF LIABILITIES

Alpha Analytical performs services with reasonable care and diligence normal to the analytical testing laboratory industry. In the event of an error, the sole and exclusive responsibility of Alpha Analytical shall be to re-perform the work at it's own expense. In no event shall Alpha Analytical be held liable for any incidental, consequential or special damages, including but not limited to, damages in any way connected with the use of, interpretation of, information or analysis provided by Alpha Analytical.

We strongly urge our clients to comply with EPA protocol regarding sample volume, preservation, cooling, containers, sampling procedures, holding time and splitting of samples in the field.

Certification Information

The following analytes are not included in our Primary NELAP Scope of Accreditation:

Westborough Facility
EPA 524.2: 1,2-Dibromo-3-chloropropane, 1,2-Dibromoethane, m/p-xylene, o-xylene
EPA 624: 2-Butanone (MEK), 1,4-Dioxane, tert-Amylmethyl Ether, tert-Butyl Alcohol, m/p-xylene, o-xylene
EPA 625: Aniline, Benzoic Acid, Benzyl Alcohol, 4-Chloroaniline, 3-Methylphenol, 4-Methylphenol.
EPA 1010A: NPW: Ignitability
EPA 6010C: NPW: Strontium; SCM: Strontium
EPA 8151A: NPW: 2,4-DB, Dicamba, Dichloroprop, MCPA, MCPP; SCM: 2,4-DB, Dichloroprop, MCPA, MCPP
EPA 8260C: NPW: 1,2,4,5-Tetramethylbenzene; 4-Ethyltoluene, Azobenzene, Isopropanol; SCM: Iodomethane (methyl iodide), Methyl methacrylate (soil); 1,2,4,5-Tetramethylbenzene; 4-Ethyltoluene.
EPA 8270D: NPW: Pentachloronitrobenzene, 1-Methylnaphthalene, Dimethylnaphthalene,1,4-Diphenylhydrazine; SCM: Pentachloronitrobenzene, 1-Methylnaphthalene, Dimethylnaphthalene,1,4-Diphenylhydrazine.
EPA 9010: NPW: Amenable Cyanide Distillation, Total Cyanide Distillation
EPA 9038: NPW: Sulfate
EPA 9050A: NPW: Specific Conductance
EPA 9056: NPW: Chloride, Nitrate, Sulfate
EPA 9065: NPW: Phenols
EPA 9251: NPW: Chloride
SM3500: NPW: Ferrous Iron
SM4500: NPW: Amenable Cyanide, Dissolved Oxygen; SCM: Total Phosphorus, TKN, NO2, NO3.
SM5310C: DW: Dissolved Organic Carbon

Mansfield Facility
EPA 8270D: NPW: Biphenyl; SCM: Biphenyl, Caprolactam
EPA 8270D-SIM Isotope Dilution: SCM: 1,4-Dioxane
SM 2540D: TSS
SM2540G: SCM: Percent Solids
EPA 1631E: SCM: Mercury
EPA 7474: SCM: Mercury
EPA 8081B: NPW and SCM: Mirex, Hexachlorobenzene.
EPA 8082A: NPW: PCB: 1, 5, 31, 87,101, 110, 141, 151, 153, 180, 183, 187.
EPA 8270-SIM: NPW and SCM: Alkylated PAHs.
EPA TO-15: Halothane, 2,4,4-Trimethyl-2-pentene, 2,4,4-Trimethyl-1-pentene, Thiophene, 2-Methylthiophene, 3-Methylthiophene, 2-Ethylthiophene, 1,2,3-Trimethylbenzene, Indan, Indene, 1,2,4,5-Tetramethylbenzene, Benzothiophene, 1-Methylnaphthalene, n-Butylbenzene, n-Propylbenzene, sec-Butylbenzene, tert-Butylbenzene.
Biological Tissue Matrix: ***8270D-SIM; 3050B; 3051A; 7471B; 8081B; 8082A; 6020A:*** Lead***; 8270D:*** bis(2-ethylhexyl)phthalate, Butylbenzylphthalate, Diethyl phthalate, Dimethyl phthalate, Di-n-butyl phthalate, Di-n-octyl phthalate, Fluoranthene, Pentachlorophenol.

The following analytes are included in our Massachusetts DEP Scope of Accreditation, Westborough Facility:

Drinking Water
EPA 200.8: Sb,As,Ba,Be,Cd,Cr,Cu,Pb,Ni,Se,Tl; **EPA 200.7**: Ba,Be,Ca,Cd,Cr,Cu,Na; **EPA 245.1:** Mercury;
EPA 300.0: Nitrate-N, Fluoride, Sulfate; **EPA 353.2**: Nitrate-N, Nitrite-N; **SM4500NO3-F**: Nitrate-N, Nitrite-N; **SM4500F-C, SM4500CN-CE, EPA 180.1, SM2130B, SM4500Cl-D, SM2320B, SM2540C, SM4500H-B**
EPA 332: Perchlorate.
Microbiology: **SM9215B; SM9223-P/A, SM9223B-Colilert-QT, Enterolert-QT.**

Non-Potable Water
EPA 200.8: Al,Sb,As,Be,Cd,Cr,Cu,Pb,Mn,Ni,Se,Ag,Tl,Zn;
EPA 200.7: Al,Sb,As,Be,Cd,Ca,Cr,Co,Cu,Fe,Pb,Mg,Mn,Mo,Ni,K,Se,Ag,Na,Sr,Ti,Tl,V,Zn;
EPA 245.1, SM4500H,B, EPA 120.1, SM2510B, SM2540C, SM2340B, SM2320B, SM4500CL-E, SM4500F-BC, SM426C, SM4500NH3-BH, **EPA 350.1**: Ammonia-N, **LACHAT 10-107-06-1-B**: Ammonia-N, **SM4500NO3-F,**
EPA 353.2: Nitrate-N**, SM4500NH3-BC-NES, EPA 351.1, SM4500P-E, SM4500P-B, E, SM5220D, EPA 410.4, SM5210B, SM5310C, SM4500CL-D, EPA 1664, SM14 510AC, EPA 420.1, SM4500-CN-CE, SM2540D.**
EPA 624: Volatile Halocarbons & Aromatics,
EPA 608: Chlordane, Toxaphene, Aldrin, alpha-BHC, beta-BHC, gamma-BHC, delta-BHC, Dieldrin, DDD, DDE, DDT, Endosulfan I, Endosulfan II, Endosulfan sulfate, Endrin, Endrin Aldehyde, Heptachlor, Heptachlor Epoxide, PCBs
EPA 625: SVOC (Acid/Base/Neutral Extractables), **EPA 600/4-81-045**: PCB-Oil.
Microbiology: **SM9223B-Colilert-QT; Enterolert-QT, SM9222D-MF**.

For a complete listing of analytes and methods, please contact your Alpha Project Manager.

AIR ANALYSIS

PAGE 1 OF 1

ALPHA ANALYTICAL — CHAIN OF CUSTODY

320 Forbes Blvd, Mansfield, MA 02048
TEL: 508-822-9300 FAX: 508-822-3288

Date Rec'd in Lab: 6/10/16

ALPHA Job #: L1617940

Client Information

Client: ERM
Address: 3200 Windy Hill Rd
Atlanta, GA 30339
Phone: 678-486-2700
Fax:
Email: jeff.bilkert@erm.com
☐ These samples have been previously analyzed by Alpha

Project Information

Project Name: I Schneid
Project Location: Atlanta, GA
Project #: 0121021
Project Manager: Jeff Bilkert
ALPHA Quote #:

Turn-Around Time

☐ Standard ☐ RUSH (only confirmed if pre-approved!)
Date Due: Time:

Report Information - Data Deliverables

☐ FAX
☐ ADEx
Criteria Checker:
(Default based on Regulatory Criteria Indicated)
Other Formats:
☑ EMAIL (standard pdf report)
☐ Additional Deliverables:
Report to: (if different than Project Manager)
Nic Vrey
nic.vrey@erm.com

Billing Information

☑ Same as Client info PO #:

Regulatory Requirements/Report Limits

State/Fed	Program	Res / Comm

Other Project Specific Requirements/Comments:

Project-Specific Target Compound List: ☐

All Columns Below Must Be Filled Out

ALPHA Lab ID (Lab Use Only)	Sample ID	COLLECTION End Date	Start Time	End Time	Initial Vacuum	Final Vacuum	Sample Matrix*	Sampler's Initials	Can Size	I D Can	I D - Flow Controller	TO-15	TO-15 SIM	APH Subtract Non-petroleum HCs ☐	Fixed Gases	Sulfides & Mercaptans by TO-15	Sample Comments (i.e. PID)
L1617940.01	SG-1-3'	6/8/16	0905	0920	-28.98	-0.66	SV	ALR/CB	2.7	141	0650	X					
02	SG-1-7'	6/8/16	0930	0945	-28.86	-0.33	SV	ALR/CB	2.7	502	0511	X					
03	SG-1-11'	6/8/16	0939	0955	-29.22 ~~-28.~~	-0.89	SV	ALR/CB	2.7	804	0602	X					
04	SG-2-3'	6/8/16	1028	1045	-29.33	-0.09	SV	ALR/CB	2.7	446	0658	X					
05	SG-2-7'	6/8/16	1046	~~NO~~ 1	-28.88	-0.21	SV	ALR/CB	2.7	1518	0689	X					
06	SG-2-11'	6/8/16	1055	1109	-28.44	-0.0	SV	ALR/CB	2.7	391	0686	X					
07	SSV-1	6/8/16	1133	~~1147~~ 1147	-29.03	-0.28	SV	ALR/CB	2.7	212	0604	X					
08	SSV-2	6/8/16	1221	1236	-28.65	-0.17	SV	ALR/CB	2.7	546	0707	X					
09	SSV-3	6/8/16	1250	1305	-29.34	-0.82	SV	ALR/CB	2.7	352	0520	X					
10	DUP-01	6/8/16			-28.81	-0.14	SV	ALR/CB	2.7	527	0596	X					Sample duration was 16 minutes

*SAMPLE MATRIX CODES
AA = Ambient Air (Indoor/Outdoor)
SV = Soil Vapor/Landfill Gas/SVE
Other = Please Specify

Container Type

Please print clearly, legibly and completely. Samples can not be logged in and turnaround time clock will not start until any ambiguities are resolved. All samples submitted are subject to Alpha's Terms and Conditions. See reverse side.

Relinquished By:	Date/Time	Received By:	Date/Time:
Charlie Brooks	6/8/16	FedEx	
Adria Reimer / Charlie Brooks FedEx			6/10/16 10:30

ANALYTICAL REPORT

Lab Number:	L1621168
Client:	ERM, Inc. 300 Chastain Center Boulevard Suite 375 Kennesaw, GA 35144
ATTN:	Jeff Bilkert
Phone:	(770) 590-8383
Project Name:	I-SCHNEID
Project Number:	0121021
Report Date:	07/15/16

Certifications & Approvals: NY (11627), CT (PH-0141), NH (2206), NJ NELAP (MA015), RI (LAO00299), ME (MA00030), PA (68-02089), VA (460194), LA NELAP (03090), FL (E87814), TX (T104704419), WA (C954), USFWS (Permit #LE2069641), USDA (Permit #P330-11-00109), US Army Corps of Engineers.

320 Forbes Boulevard, Mansfield, MA 02048-1806
508-822-9300 (Fax) 508-822-3288 800-624-9220 - www.alphalab.com

Project Name: I-SCHNEID
Project Number: 0121021

Lab Number: L1621168
Report Date: 07/15/16

Alpha Sample ID	Client ID	Matrix	Sample Location	Collection Date/Time	Receive Date
L1621168-01	OA-01-20160705-01	AIR	ATLANTA, GA	07/05/16 18:45	07/11/16
L1621168-02	IA-01-20160705-01	AIR	ATLANTA, GA	07/05/16 18:30	07/11/16
L1621168-03	IA-02-20160705-01	AIR	ATLANTA, GA	07/05/16 16:40	07/08/16
L1621168-04	IA-03-20160705-01	AIR	ATLANTA, GA	07/05/16 18:10	07/08/16
L1621168-05	IA-04-20160705-01	AIR	ATLANTA, GA	07/05/16 18:15	07/08/16
L1621168-06	IA-05-20160705-01	AIR	ATLANTA, GA	07/05/16 18:40	07/11/16
L1621168-07	DUP-01-20160705-01	AIR	ATLANTA, GA	07/05/16 00:00	07/11/16
L1621168-08	UNUSED CAN#388	AIR	ATLANTA, GA		07/11/16

Project Name: I-SCHNEID
Project Number: 0121021

Lab Number: L1621168
Report Date: 07/15/16

Case Narrative

The samples were received in accordance with the Chain of Custody and no significant deviations were encountered during the preparation or analysis unless otherwise noted. Sample Receipt, Container Information, and the Chain of Custody are located at the back of the report.

Results contained within this report relate only to the samples submitted under this Alpha Lab Number and meet NELAP requirements for all NELAP accredited parameters unless otherwise noted in the following narrative. The data presented in this report is organized by parameter (i.e. VOC, SVOC, etc.). Sample specific Quality Control data (i.e. Surrogate Spike Recovery) is reported at the end of the target analyte list for each individual sample, followed by the Laboratory Batch Quality Control at the end of each parameter. Tentatively Identified Compounds (TICs), if requested, are reported for compounds identified to be present and are not part of the method/program Target Compound List, even if only a subset of the TCL are being reported. If a sample was re-analyzed or re-extracted due to a required quality control corrective action and if both sets of data are reported, the Laboratory ID of the re-analysis or re-extraction is designated with an "R" or "RE", respectively. When multiple Batch Quality Control elements are reported (e.g. more than one LCS), the associated samples for each element are noted in the grey shaded header line of each data table. Any Laboratory Batch, Sample Specific % recovery or RPD value that is outside the listed Acceptance Criteria is bolded in the report. All specific QC information is also incorporated in the Data Usability format of our Data Merger tool where it can be reviewed along with any associated usability implications. Soil/sediments, solids and tissues are reported on a dry weight basis unless otherwise noted. Definitions of all data qualifiers and acronyms used in this report are provided in the Glossary located at the back of the report.

In reference to questions H (CAM) or 4 (RCP) when "NO" is checked, the performance criteria for CAM and RCP methods allow for some quality control failures to occur and still be within method compliance. In these instances the specific failure is not narrated but noted in the associated QC table. The information is also incorporated in the Data Usability format of our Data Merger tool where it can be reviewed along with any associated usability implications.

Please see the associated ADEx data file for a comparison of laboratory reporting limits that were achieved with the regulatory Numerical Standards requested on the Chain of Custody.

HOLD POLICY
For samples submitted on hold, Alpha's policy is to hold samples (with the exception of Air canisters) free of charge for 21 calendar days from the date the project is completed. After 21 calendar days, we will dispose of all samples submitted including those put on hold unless you have contacted your Client Service Representative and made arrangements for Alpha to continue to hold the samples. Air canisters will be disposed after 3 business days from the date the project is completed.

Please contact Client Services at 800-624-9220 with any questions.

Project Name:	I-SCHNEID	**Lab Number:**	L1621168
Project Number:	0121021	**Report Date:**	07/15/16

Case Narrative (continued)

Volatile Organics in Air

Canisters were released from the laboratory on June 30, 2016. The canister certification results are provided as an addendum.

I, the undersigned, attest under the pains and penalties of perjury that, to the best of my knowledge and belief and based upon my personal inquiry of those responsible for providing the information contained in this analytical report, such information is accurate and complete. This certificate of analysis is not complete unless this page accompanies any and all pages of this report.

Authorized Signature: Christopher J. Anderson

Title: Technical Director/Representative Date: 07/15/16

AIR

Project Name: I-SCHNEID
Project Number: 0121021
Lab Number: L1621168
Report Date: 07/15/16

SAMPLE RESULTS

Lab ID: L1621168-01
Client ID: OA-01-20160705-01
Sample Location: ATLANTA, GA
Matrix: Air
Anaytical Method: 48,TO-15-SIM
Analytical Date: 07/14/16 20:38
Analyst: MB

Date Collected: 07/05/16 18:45
Date Received: 07/11/16
Field Prep: Not Specified

	ppbV			ug/m3				
Parameter	**Results**	**RL**	**MDL**	**Results**	**RL**	**MDL**	**Qualifier**	**Dilution Factor**
Volatile Organics in Air by SIM - Mansfield Lab								
Chlorobenzene	ND	0.100	--	ND	0.461	--		1
Ethylbenzene	0.176	0.020	--	0.764	0.087	--		1
p/m-Xylene	0.484	0.040	--	2.10	0.174	--		1
o-Xylene	0.137	0.020	--	0.595	0.087	--		1
1,4-Dichlorobenzene	ND	0.020	--	ND	0.120	--		1
Naphthalene	ND	0.050	--	ND	0.262	--		1
Xylenes, Total	0.621	0.020	--	2.70	0.087	--		1

Internal Standard	**% Recovery**	**Qualifier**	**Acceptance Criteria**
1,4-difluorobenzene	82		60-140
bromochloromethane	87		60-140
chlorobenzene-d5	85		60-140

Project Name: I-SCHNEID
Project Number: 0121021

Lab Number: L1621168
Report Date: 07/15/16

SAMPLE RESULTS

Lab ID: L1621168-02
Client ID: IA-01-20160705-01
Sample Location: ATLANTA, GA
Matrix: Air
Anaytical Method: 48,TO-15-SIM
Analytical Date: 07/14/16 21:09
Analyst: MB

Date Collected: 07/05/16 18:30
Date Received: 07/11/16
Field Prep: Not Specified

	ppbV			ug/m3				
Parameter	**Results**	**RL**	**MDL**	**Results**	**RL**	**MDL**	**Qualifier**	**Dilution Factor**
Volatile Organics in Air by SIM - Mansfield Lab								
Chlorobenzene	ND	0.100	--	ND	0.461	--		1
Ethylbenzene	0.033	0.020	--	0.143	0.087	--		1
p/m-Xylene	0.099	0.040	--	0.430	0.174	--		1
o-Xylene	0.042	0.020	--	0.182	0.087	--		1
1,4-Dichlorobenzene	0.079	0.020	--	0.475	0.120	--		1
Naphthalene	0.058	0.050	--	0.304	0.262	--		1
Xylenes, Total	0.141	0.020	--	0.612	0.087	--		1

Internal Standard	**% Recovery**	**Qualifier**	**Acceptance Criteria**
1,4-difluorobenzene	85		60-140
bromochloromethane	90		60-140
chlorobenzene-d5	87		60-140

Project Name: I-SCHNEID
Project Number: 0121021
Lab Number: L1621168
Report Date: 07/15/16

SAMPLE RESULTS

Lab ID: L1621168-03
Client ID: IA-02-20160705-01
Sample Location: ATLANTA, GA
Matrix: Air
Anaytical Method: 48,TO-15-SIM
Analytical Date: 07/14/16 21:41
Analyst: MB

Date Collected: 07/05/16 16:40
Date Received: 07/08/16
Field Prep: Not Specified

	ppbV			ug/m3				
Parameter	**Results**	**RL**	**MDL**	**Results**	**RL**	**MDL**	**Qualifier**	**Dilution Factor**
Volatile Organics in Air by SIM - Mansfield Lab								
Chlorobenzene	ND	0.100	--	ND	0.461	--		1
Ethylbenzene	0.029	0.020	--	0.126	0.087	--		1
p/m-Xylene	0.090	0.040	--	0.391	0.174	--		1
o-Xylene	0.037	0.020	--	0.161	0.087	--		1
1,4-Dichlorobenzene	0.093	0.020	--	0.559	0.120	--		1
Naphthalene	ND	0.050	--	ND	0.262	--		1
Xylenes, Total	0.127	0.020	--	0.552	0.087	--		1

Internal Standard	**% Recovery**	**Qualifier**	**Acceptance Criteria**
1,4-difluorobenzene	85		60-140
bromochloromethane	89		60-140
chlorobenzene-d5	88		60-140

Project Name: I-SCHNEID
Project Number: 0121021
Lab Number: L1621168
Report Date: 07/15/16

SAMPLE RESULTS

Lab ID: L1621168-04
Client ID: IA-03-20160705-01
Sample Location: ATLANTA, GA
Matrix: Air
Anaytical Method: 48,TO-15-SIM
Analytical Date: 07/14/16 22:12
Analyst: MB

Date Collected: 07/05/16 18:10
Date Received: 07/08/16
Field Prep: Not Specified

	ppbV			ug/m3				
Parameter	**Results**	**RL**	**MDL**	**Results**	**RL**	**MDL**	**Qualifier**	**Dilution Factor**
Volatile Organics in Air by SIM - Mansfield Lab								
Chlorobenzene	ND	0.100	--	ND	0.461	--		1
Ethylbenzene	0.033	0.020	--	0.143	0.087	--		1
p/m-Xylene	0.109	0.040	--	0.473	0.174	--		1
o-Xylene	0.042	0.020	--	0.182	0.087	--		1
1,4-Dichlorobenzene	0.057	0.020	--	0.343	0.120	--		1
Naphthalene	0.066	0.050	--	0.346	0.262	--		1
Xylenes, Total	0.151	0.020	--	0.656	0.087	--		1

Internal Standard	**% Recovery**	**Qualifier**	**Acceptance Criteria**
1,4-difluorobenzene	85		60-140
bromochloromethane	90		60-140
chlorobenzene-d5	87		60-140

Project Name: I-SCHNEID
Project Number: 0121021
Lab Number: L1621168
Report Date: 07/15/16

SAMPLE RESULTS

Lab ID: L1621168-05
Client ID: IA-04-20160705-01
Sample Location: ATLANTA, GA
Matrix: Air
Anaytical Method: 48,TO-15-SIM
Analytical Date: 07/14/16 22:44
Analyst: MB

Date Collected: 07/05/16 18:15
Date Received: 07/08/16
Field Prep: Not Specified

	ppbV			ug/m3				
Parameter	**Results**	**RL**	**MDL**	**Results**	**RL**	**MDL**	**Qualifier**	**Dilution Factor**
Volatile Organics in Air by SIM - Mansfield Lab								
Chlorobenzene	ND	0.100	--	ND	0.461	--		1
Ethylbenzene	0.061	0.020	--	0.265	0.087	--		1
p/m-Xylene	0.197	0.040	--	0.856	0.174	--		1
o-Xylene	0.067	0.020	--	0.291	0.087	--		1
1,4-Dichlorobenzene	0.375	0.020	--	2.25	0.120	--		1
Naphthalene	0.084	0.050	--	0.440	0.262	--		1
Xylenes, Total	0.264	0.020	--	1.15	0.087	--		1

Internal Standard	**% Recovery**	**Qualifier**	**Acceptance Criteria**
1,4-difluorobenzene	85		60-140
bromochloromethane	90		60-140
chlorobenzene-d5	87		60-140

Project Name: I-SCHNEID
Project Number: 0121021
Lab Number: L1621168
Report Date: 07/15/16

SAMPLE RESULTS

Lab ID: L1621168-06
Client ID: IA-05-20160705-01
Sample Location: ATLANTA, GA
Matrix: Air
Anaytical Method: 48,TO-15-SIM
Analytical Date: 07/14/16 23:15
Analyst: MB

Date Collected: 07/05/16 18:40
Date Received: 07/11/16
Field Prep: Not Specified

	ppbV			ug/m3				
Parameter	**Results**	**RL**	**MDL**	**Results**	**RL**	**MDL**	**Qualifier**	**Dilution Factor**
Volatile Organics in Air by SIM - Mansfield Lab								
Chlorobenzene	ND	0.100	--	ND	0.461	--		1
Ethylbenzene	0.047	0.020	--	0.204	0.087	--		1
p/m-Xylene	0.149	0.040	--	0.647	0.174	--		1
o-Xylene	0.054	0.020	--	0.235	0.087	--		1
1,4-Dichlorobenzene	0.118	0.020	--	0.709	0.120	--		1
Naphthalene	ND	0.050	--	ND	0.262	--		1
Xylenes, Total	0.203	0.020	--	0.882	0.087	--		1

Internal Standard	**% Recovery**	**Qualifier**	**Acceptance Criteria**
1,4-difluorobenzene	84		60-140
bromochloromethane	92		60-140
chlorobenzene-d5	86		60-140

Project Name: I-SCHNEID
Project Number: 0121021
Lab Number: L1621168
Report Date: 07/15/16

SAMPLE RESULTS

Lab ID: L1621168-07
Client ID: DUP-01-20160705-01
Sample Location: ATLANTA, GA
Matrix: Air
Anaytical Method: 48,TO-15-SIM
Analytical Date: 07/14/16 23:46
Analyst: MB

Date Collected: 07/05/16 00:00
Date Received: 07/11/16
Field Prep: Not Specified

	ppbV			ug/m3				
Parameter	**Results**	**RL**	**MDL**	**Results**	**RL**	**MDL**	**Qualifier**	**Dilution Factor**
Volatile Organics in Air by SIM - Mansfield Lab								
Chlorobenzene	ND	0.100	--	ND	0.461	--		1
Ethylbenzene	0.081	0.020	--	0.352	0.087	--		1
p/m-Xylene	0.231	0.040	--	1.00	0.174	--		1
o-Xylene	0.078	0.020	--	0.339	0.087	--		1
1,4-Dichlorobenzene	0.080	0.020	--	0.481	0.120	--		1
Naphthalene	0.052	0.050	--	0.273	0.262	--		1
Xylenes, Total	0.309	0.020	--	1.34	0.087	--		1

Internal Standard	**% Recovery**	**Qualifier**	**Acceptance Criteria**
1,4-difluorobenzene	84		60-140
bromochloromethane	98		60-140
chlorobenzene-d5	89		60-140

Project Name: I-SCHNEID
Project Number: 0121021

Lab Number: L1621168
Report Date: 07/15/16

Method Blank Analysis
Batch Quality Control

Analytical Method: 48,TO-15-SIM
Analytical Date: 07/14/16 14:50

Parameter	ppbV Results	ppbV RL	ppbV MDL	ug/m3 Results	ug/m3 RL	ug/m3 MDL	Qualifier	Dilution Factor
Volatile Organics in Air by SIM - Mansfield Lab for sample(s): 01-07 Batch: WG913585-4								
Xylenes, Total	ND	0.020	--	ND	0.087	--		1
Chlorobenzene	ND	0.100	--	ND	0.461	--		1
Ethylbenzene	ND	0.020	--	ND	0.087	--		1
p/m-Xylene	ND	0.040	--	ND	0.174	--		1
o-Xylene	ND	0.020	--	ND	0.087	--		1
1,4-Dichlorobenzene	ND	0.020	--	ND	0.120	--		1
Naphthalene	ND	0.050	--	ND	0.262	--		1

Lab Control Sample Analysis

Batch Quality Control

Project Name: I-SCHNEID

Project Number: 0121021

Lab Number: L1621168

Report Date: 07/15/16

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics in Air by SIM - Mansfield Lab Associated sample(s): 01-07 Batch: WG913585-3								
Propylene	111		-		70-130	-		25
Dichlorodifluoromethane	96		-		70-130	-		25
Chloromethane	95		-		70-130	-		25
1,2-Dichloro-1,1,2,2-tetrafluoroethane	89		-		70-130	-		25
Vinyl chloride	94		-		70-130	-		25
1,3-Butadiene	102		-		70-130	-		25
Bromomethane	85		-		70-130	-		25
Chloroethane	94		-		70-130	-		25
Ethyl Alcohol	87		-		70-130	-		25
Vinyl bromide	94		-		70-130	-		25
Acetone	95		-		70-130	-		25
Trichlorofluoromethane	90		-		70-130	-		25
iso-Propyl Alcohol	93		-		70-130	-		25
Acrylonitrile	99		-		70-130	-		25
1,1-Dichloroethene	104		-		70-130	-		25
Methylene chloride	97		-		70-130	-		25
3-Chloropropene	103		-		70-130	-		25
Carbon disulfide	93		-		70-130	-		25
1,1,2-Trichloro-1,2,2-Trifluoroethane	93		-		70-130	-		25
Halothane	86		-		70-130	-		25
trans-1,2-Dichloroethene	77		-		70-130	-		25

Lab Control Sample Analysis

Batch Quality Control

Project Name: I-SCHNEID

Project Number: 0121021

Lab Number: L1621168

Report Date: 07/15/16

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics in Air by SIM - Mansfield Lab Associated sample(s): 01-07 Batch: WG913585-3								
1,1-Dichloroethane	84		-		70-130	-		25
Methyl tert butyl ether	82		-		70-130	-		25
2-Butanone	87		-		70-130	-		25
cis-1,2-Dichloroethene	98		-		70-130	-		25
Ethyl Acetate	105		-		70-130	-		25
Chloroform	98		-		70-130	-		25
Tetrahydrofuran	119		-		70-130	-		25
1,2-Dichloroethane	95		-		70-130	-		25
n-Hexane	93		-		70-130	-		25
1,1,1-Trichloroethane	101		-		70-130	-		25
Benzene	98		-		70-130	-		25
Carbon tetrachloride	103		-		70-130	-		25
Cyclohexane	103		-		70-130	-		25
1,2-Dichloropropane	103		-		70-130	-		25
Bromodichloromethane	104		-		70-130	-		25
1,4-Dioxane	94		-		70-130	-		25
Trichloroethene	108		-		70-130	-		25
2,2,4-Trimethylpentane	116		-		70-130	-		25
cis-1,3-Dichloropropene	114		-		70-130	-		25
4-Methyl-2-pentanone	114		-		70-130	-		25
trans-1,3-Dichloropropene	99		-		70-130	-		25

Lab Control Sample Analysis

Batch Quality Control

Project Name: I-SCHNEID

Project Number: 0121021

Lab Number: L1621168

Report Date: 07/15/16

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics in Air by SIM - Mansfield Lab Associated sample(s): 01-07 Batch: WG913585-3								
1,1,2-Trichloroethane	91		-		70-130	-		25
Toluene	92		-		70-130	-		25
2-Hexanone	112		-		70-130	-		25
Dibromochloromethane	101		-		70-130	-		25
1,2-Dibromoethane	91		-		70-130	-		25
Tetrachloroethene	91		-		70-130	-		25
1,1,1,2-Tetrachloroethane	85		-		70-130	-		25
Chlorobenzene	94		-		70-130	-		25
Ethylbenzene	99		-		70-130	-		25
p/m-Xylene	101		-		70-130	-		25
Bromoform	107		-		70-130	-		25
Styrene	104		-		70-130	-		25
1,1,2,2-Tetrachloroethane	94		-		70-130	-		25
o-Xylene	105		-		70-130	-		25
Isopropylbenzene	97		-		70-130	-		25
4-Ethyltoluene	103		-		70-130	-		25
1,3,5-Trimethylbenzene	104		-		70-130	-		25
1,2,4-Trimethylbenzene	109		-		70-130	-		25
Benzyl chloride	110		-		70-130	-		25
1,3-Dichlorobenzene	100		-		70-130	-		25
1,4-Dichlorobenzene	99		-		70-130	-		25

Lab Control Sample Analysis

Batch Quality Control

Project Name: I-SCHNEID

Project Number: 0121021

Lab Number: L1621168

Report Date: 07/15/16

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics in Air by SIM - Mansfield Lab Associated sample(s): 01-07 Batch: WG913585-3								
sec-Butylbenzene	100		-		70-130	-		25
p-Isopropyltoluene	94		-		70-130	-		25
1,2-Dichlorobenzene	97		-		70-130	-		25
n-Butylbenzene	92		-		70-130	-		25
1,2,4-Trichlorobenzene	99		-		70-130	-		25
Naphthalene	93		-		70-130	-		25
1,2,3-Trichlorobenzene	92		-		70-130	-		25
Hexachlorobutadiene	98		-		70-130	-		25

Lab Duplicate Analysis
Batch Quality Control

Project Name: I-SCHNEID
Project Number: 0121021

Lab Number: L1621168
Report Date: 07/15/16

Parameter	Native Sample	Duplicate Sample	Units	RPD	Qual	RPD Limits
Volatile Organics in Air by SIM - Mansfield Lab Associated sample(s): 01-07 QC Batch ID: WG913585-5 QC Sample: L1621095-02 Client ID: DUP Sample						
Propylene	ND	ND	ppbV	NC		25
Dichlorodifluoromethane	0.453	0.469	ppbV	3		25
Vinyl chloride	ND	ND	ppbV	NC		25
Acetone	3.99	3.82	ppbV	4		25
Trichlorofluoromethane	0.266	0.266	ppbV	0		25
iso-Propyl Alcohol	2.52	2.55	ppbV	1		25
1,1-Dichloroethene	1.14	1.13	ppbV	1		25
Carbon disulfide	ND	ND	ppbV	NC		25
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	ND	ppbV	NC		25
1,1-Dichloroethane	0.282	0.284	ppbV	1		25
2-Butanone	ND	ND	ppbV	NC		25
cis-1,2-Dichloroethene	0.651	0.669	ppbV	3		25
Chloroform	0.625	0.625	ppbV	0		25
1,1,1-Trichloroethane	2.33	2.34	ppbV	0		25
Carbon tetrachloride	0.064	0.064	ppbV	0		25
Trichloroethene	0.416	0.416	ppbV	0		25
4-Methyl-2-pentanone	ND	ND	ppbV	NC		25
Toluene	0.191	0.194	ppbV	2		25
Tetrachloroethene	ND	ND	ppbV	NC		25

Lab Duplicate Analysis
Batch Quality Control

Project Name: I-SCHNEID
Project Number: 0121021

Lab Number: L1621168
Report Date: 07/15/16

Parameter	Native Sample	Duplicate Sample	Units	RPD	RPD Limits
Volatile Organics in Air by SIM - Mansfield Lab Associated sample(s): 01-07 QC Batch ID: WG913585-5 QC Sample: L1621095-02 Client ID: DUP Sample					
Ethylbenzene	ND	ND	ppbV	NC	25
p/m-Xylene	ND	ND	ppbV	NC	25
o-Xylene	ND	ND	ppbV	NC	25
1,2,4-Trimethylbenzene	ND	ND	ppbV	NC	25

Project Name: I-SCHNEID

Project Number: 0121021

Lab Number: L1621168

Report Date: 07/15/16

Canister and Flow Controller Information

Samplenum	Client ID	Media ID	Media Type	Date Prepared	Bottle Order	Cleaning Batch ID	Can Leak Check	Initial Pressure (in. Hg)	Pressure on Receipt (in. Hg)	Flow Controler Leak Chk	Flow Out mL/min	Flow In mL/min	% RPD
L1621168-01	OA-01-20160705-01	0702	#16 AMB	06/30/16	224672		-	-	-	Pass	4.4	4.0	10
L1621168-01	OA-01-20160705-01	221	2.7L Can	06/30/16	224672	L1619299-01	Pass	-29.4	-11.3	-	-	-	-
L1621168-02	IA-01-20160705-01	0155	#16 AMB	06/30/16	224672		-	-	-	Pass	4.4	4.2	5
L1621168-02	IA-01-20160705-01	2197	2.7L Can	06/30/16	224672	L1619299-01	Pass	-29.7	-5.9	-	-	-	-
L1621168-03	IA-02-20160705-01	0387	#16 AMB	06/30/16	224672		-	-	-	Pass	4.5	4.0	12
L1621168-03	IA-02-20160705-01	196	2.7L Can	06/30/16	224672	L1619299-01	Pass	-29.7	-4.2	-	-	-	-
L1621168-04	IA-03-20160705-01	0264	#16 SV	06/30/16	224672		-	-	-	Pass	4.5	4.8	6
L1621168-04	IA-03-20160705-01	2015	2.7L Can	06/30/16	224672	L1619299-01	Pass	-29.7	-5.4	-	-	-	-
L1621168-05	IA-04-20160705-01	0952	#4 AMB	06/30/16	224672		-	-	-	Pass	4.5	4.5	0
L1621168-05	IA-04-20160705-01	506	2.7L Can	06/30/16	224672	L1619299-01	Pass	-29.3	-6.1	-	-	-	-
L1621168-06	IA-05-20160705-01	0236	#16 AMB	06/30/16	224672		-	-	-	Pass	4.4	5.2	17
L1621168-06	IA-05-20160705-01	508	2.7L Can	06/30/16	224672	L1619299-01	Pass	-29.7	-6.5	-	-	-	-
L1621168-07	DUP-01-20160705-01	0915	#4 amb	06/30/16	224672		-	-	-	Pass	4.5	4.9	9
L1621168-07	DUP-01-20160705-01	2203	2.7L Can	06/30/16	224672	L1619299-01	Pass	-29.7	-9.3	-	-	-	-
L1621168-08	UNUSED CAN#388	0017	#16 AMB	06/30/16	224672		-	-	-	Pass	4.5	4.2	7

Project Name: I-SCHNEID

Project Number: 0121021

Lab Number: L1621168

Report Date: 07/15/16

Canister and Flow Controller Information

Samplenum	Client ID	Media ID	Media Type	Date Prepared	Bottle Order	Cleaning Batch ID	Can Leak Check	Initial Pressure (in. Hg)	Pressure on Receipt (in. Hg)	Flow Controler Leak Chk	Flow Out mL/min	Flow In mL/min	% RPD
L1621168-08	UNUSED CAN#388	388	2.7L Can	06/30/16	224672	L1619299-01	Pass	-29.7	-29.9	-	-	-	-

Project Name: BATCH CANISTER CERTIFICATION
Project Number: CANISTER QC BAT
Lab Number: L1619299
Report Date: 07/15/16

Air Canister Certification Results

Lab ID: L1619299-01
Client ID: CAN 191B SHELF 8
Sample Location:
Matrix: Air
Anaytical Method: 48,TO-15
Analytical Date: 06/23/16 20:15
Analyst: RY

Date Collected: 06/22/16 16:00
Date Received: 06/23/16
Field Prep: Not Specified

Parameter	ppbV Results	ppbV RL	ppbV MDL	ug/m3 Results	ug/m3 RL	ug/m3 MDL	Qualifier	Dilution Factor
Volatile Organics in Air - Mansfield Lab								
Chlorodifluoromethane	ND	0.200	--	ND	0.707	--		1
Propylene	ND	0.500	--	ND	0.861	--		1
Propane	ND	0.500	--	ND	0.902	--		1
Dichlorodifluoromethane	ND	0.200	--	ND	0.989	--		1
Chloromethane	ND	0.200	--	ND	0.413	--		1
Freon-114	ND	0.200	--	ND	1.40	--		1
Methanol	ND	5.00	--	ND	6.55	--		1
Vinyl chloride	ND	0.200	--	ND	0.511	--		1
1,3-Butadiene	ND	0.200	--	ND	0.442	--		1
Butane	ND	0.200	--	ND	0.475	--		1
Bromomethane	ND	0.200	--	ND	0.777	--		1
Chloroethane	ND	0.200	--	ND	0.528	--		1
Ethanol	ND	5.00	--	ND	9.42	--		1
Dichlorofluoromethane	ND	0.200	--	ND	0.842	--		1
Vinyl bromide	ND	0.200	--	ND	0.874	--		1
Acrolein	ND	0.500	--	ND	1.15	--		1
Acetone	ND	1.00	--	ND	2.38	--		1
Acetonitrile	ND	0.200	--	ND	0.336	--		1
Trichlorofluoromethane	ND	0.200	--	ND	1.12	--		1
Isopropanol	ND	0.500	--	ND	1.23	--		1
Acrylonitrile	ND	0.500	--	ND	1.09	--		1
Pentane	ND	0.200	--	ND	0.590	--		1
Ethyl ether	ND	0.200	--	ND	0.606	--		1
1,1-Dichloroethene	ND	0.200	--	ND	0.793	--		1
Tertiary butyl Alcohol	ND	0.500	--	ND	1.52	--		1

Project Name: BATCH CANISTER CERTIFICATION
Project Number: CANISTER QC BAT
Lab Number: L1619299
Report Date: 07/15/16

Air Canister Certification Results

Lab ID: L1619299-01
Client ID: CAN 191B SHELF 8
Sample Location:
Date Collected: 06/22/16 16:00
Date Received: 06/23/16
Field Prep: Not Specified

Parameter	ppbV Results	ppbV RL	ppbV MDL	ug/m3 Results	ug/m3 RL	ug/m3 MDL	Qualifier	Dilution Factor
Volatile Organics in Air - Mansfield Lab								
Methylene chloride	ND	0.500	--	ND	1.74	--		1
3-Chloropropene	ND	0.200	--	ND	0.626	--		1
Carbon disulfide	ND	0.200	--	ND	0.623	--		1
Freon-113	ND	0.200	--	ND	1.53	--		1
trans-1,2-Dichloroethene	ND	0.200	--	ND	0.793	--		1
1,1-Dichloroethane	ND	0.200	--	ND	0.809	--		1
Methyl tert butyl ether	ND	0.200	--	ND	0.721	--		1
Vinyl acetate	ND	1.00	--	ND	3.52	--		1
2-Butanone	ND	0.500	--	ND	1.47	--		1
cis-1,2-Dichloroethene	ND	0.200	--	ND	0.793	--		1
Ethyl Acetate	ND	0.500	--	ND	1.80	--		1
Chloroform	ND	0.200	--	ND	0.977	--		1
Tetrahydrofuran	ND	0.500	--	ND	1.47	--		1
2,2-Dichloropropane	ND	0.200	--	ND	0.924	--		1
1,2-Dichloroethane	ND	0.200	--	ND	0.809	--		1
n-Hexane	ND	0.200	--	ND	0.705	--		1
Diisopropyl ether	ND	0.200	--	ND	0.836	--		1
tert-Butyl Ethyl Ether	ND	0.200	--	ND	0.836	--		1
1,1,1-Trichloroethane	ND	0.200	--	ND	1.09	--		1
1,1-Dichloropropene	ND	0.200	--	ND	0.908	--		1
Benzene	ND	0.200	--	ND	0.639	--		1
Carbon tetrachloride	ND	0.200	--	ND	1.26	--		1
Cyclohexane	ND	0.200	--	ND	0.688	--		1
tert-Amyl Methyl Ether	ND	0.200	--	ND	0.836	--		1
Dibromomethane	ND	0.200	--	ND	1.42	--		1
1,2-Dichloropropane	ND	0.200	--	ND	0.924	--		1
Bromodichloromethane	ND	0.200	--	ND	1.34	--		1
1,4-Dioxane	ND	0.200	--	ND	0.721	--		1

Project Name: BATCH CANISTER CERTIFICATION
Project Number: CANISTER QC BAT

Lab Number: L1619299
Report Date: 07/15/16

Air Canister Certification Results

Lab ID: L1619299-01
Client ID: CAN 191B SHELF 8
Sample Location:

Date Collected: 06/22/16 16:00
Date Received: 06/23/16
Field Prep: Not Specified

Parameter	ppbV Results	ppbV RL	ppbV MDL	ug/m3 Results	ug/m3 RL	ug/m3 MDL	Qualifier	Dilution Factor
Volatile Organics in Air - Mansfield Lab								
Trichloroethene	ND	0.200	--	ND	1.07	--		1
2,2,4-Trimethylpentane	ND	0.200	--	ND	0.934	--		1
Methyl Methacrylate	ND	0.500	--	ND	2.05	--		1
Heptane	ND	0.200	--	ND	0.820	--		1
cis-1,3-Dichloropropene	ND	0.200	--	ND	0.908	--		1
4-Methyl-2-pentanone	ND	0.500	--	ND	2.05	--		1
trans-1,3-Dichloropropene	ND	0.200	--	ND	0.908	--		1
1,1,2-Trichloroethane	ND	0.200	--	ND	1.09	--		1
Toluene	ND	0.200	--	ND	0.754	--		1
1,3-Dichloropropane	ND	0.200	--	ND	0.924	--		1
2-Hexanone	ND	0.200	--	ND	0.820	--		1
Dibromochloromethane	ND	0.200	--	ND	1.70	--		1
1,2-Dibromoethane	ND	0.200	--	ND	1.54	--		1
Butyl acetate	ND	0.500	--	ND	2.38	--		1
Octane	ND	0.200	--	ND	0.934	--		1
Tetrachloroethene	ND	0.200	--	ND	1.36	--		1
1,1,1,2-Tetrachloroethane	ND	0.200	--	ND	1.37	--		1
Chlorobenzene	ND	0.200	--	ND	0.921	--		1
Ethylbenzene	ND	0.200	--	ND	0.869	--		1
p/m-Xylene	ND	0.400	--	ND	1.74	--		1
Bromoform	ND	0.200	--	ND	2.07	--		1
Styrene	ND	0.200	--	ND	0.852	--		1
1,1,2,2-Tetrachloroethane	ND	0.200	--	ND	1.37	--		1
o-Xylene	ND	0.200	--	ND	0.869	--		1
1,2,3-Trichloropropane	ND	0.200	--	ND	1.21	--		1
Nonane	ND	0.200	--	ND	1.05	--		1
Isopropylbenzene	ND	0.200	--	ND	0.983	--		1
Bromobenzene	ND	0.200	--	ND	0.793	--		1

Project Name: BATCH CANISTER CERTIFICATION
Project Number: CANISTER QC BAT

Lab Number: L1619299
Report Date: 07/15/16

Air Canister Certification Results

Lab ID: L1619299-01
Client ID: CAN 191B SHELF 8
Sample Location:

Date Collected: 06/22/16 16:00
Date Received: 06/23/16
Field Prep: Not Specified

Parameter	ppbV Results	ppbV RL	ppbV MDL	ug/m3 Results	ug/m3 RL	ug/m3 MDL	Qualifier	Dilution Factor
Volatile Organics in Air - Mansfield Lab								
2-Chlorotoluene	ND	0.200	--	ND	1.04	--		1
n-Propylbenzene	ND	0.200	--	ND	0.983	--		1
4-Chlorotoluene	ND	0.200	--	ND	1.04	--		1
4-Ethyltoluene	ND	0.200	--	ND	0.983	--		1
1,3,5-Trimethylbenzene	ND	0.200	--	ND	0.983	--		1
tert-Butylbenzene	ND	0.200	--	ND	1.10	--		1
1,2,4-Trimethylbenzene	ND	0.200	--	ND	0.983	--		1
Decane	ND	0.200	--	ND	1.16	--		1
Benzyl chloride	ND	0.200	--	ND	1.04	--		1
1,3-Dichlorobenzene	ND	0.200	--	ND	1.20	--		1
1,4-Dichlorobenzene	ND	0.200	--	ND	1.20	--		1
sec-Butylbenzene	ND	0.200	--	ND	1.10	--		1
p-Isopropyltoluene	ND	0.200	--	ND	1.10	--		1
1,2-Dichlorobenzene	ND	0.200	--	ND	1.20	--		1
n-Butylbenzene	ND	0.200	--	ND	1.10	--		1
1,2-Dibromo-3-chloropropane	ND	0.200	--	ND	1.93	--		1
Undecane	ND	0.200	--	ND	1.28	--		1
Dodecane	ND	0.200	--	ND	1.39	--		1
1,2,4-Trichlorobenzene	ND	0.200	--	ND	1.48	--		1
Naphthalene	ND	0.200	--	ND	1.05	--		1
1,2,3-Trichlorobenzene	ND	0.200	--	ND	1.48	--		1
Hexachlorobutadiene	ND	0.200	--	ND	2.13	--		1

	Results	Qualifier	Units	RDL	Dilution Factor
Tentatively Identified Compounds					
No Tentatively Identified Compounds					

Project Name: BATCH CANISTER CERTIFICATION
Project Number: CANISTER QC BAT

Lab Number: L1619299
Report Date: 07/15/16

Air Canister Certification Results

Lab ID: L1619299-01
Client ID: CAN 191B SHELF 8
Sample Location:

Date Collected: 06/22/16 16:00
Date Received: 06/23/16
Field Prep: Not Specified

Parameter	ppbV Results	ppbV RL	ppbV MDL	ug/m3 Results	ug/m3 RL	ug/m3 MDL	Qualifier	Dilution Factor
Volatile Organics in Air - Mansfield Lab								

Internal Standard	% Recovery	Qualifier	Acceptance Criteria
1,4-Difluorobenzene	89		60-140
Bromochloromethane	92		60-140
chlorobenzene-d5	85		60-140

Project Name: BATCH CANISTER CERTIFICATION **Lab Number:** L1619299

Project Number: CANISTER QC BAT **Report Date:** 07/15/16

Air Canister Certification Results

Lab ID: L1619299-01
Client ID: CAN 191B SHELF 8
Sample Location:
Matrix: Air
Anaytical Method: 48,TO-15-SIM
Analytical Date: 06/23/16 20:15
Analyst: RY

Date Collected: 06/22/16 16:00
Date Received: 06/23/16
Field Prep: Not Specified

Parameter	ppbV Results	ppbV RL	ppbV MDL	ug/m3 Results	ug/m3 RL	ug/m3 MDL	Qualifier	Dilution Factor
Volatile Organics in Air by SIM - Mansfield Lab								
Dichlorodifluoromethane	ND	0.200	--	ND	0.989	--		1
Chloromethane	ND	0.200	--	ND	0.413	--		1
Freon-114	ND	0.050	--	ND	0.349	--		1
Vinyl chloride	ND	0.020	--	ND	0.051	--		1
1,3-Butadiene	ND	0.020	--	ND	0.044	--		1
Bromomethane	ND	0.020	--	ND	0.078	--		1
Chloroethane	ND	0.020	--	ND	0.053	--		1
Acetone	ND	1.00	--	ND	2.38	--		1
Trichlorofluoromethane	ND	0.050	--	ND	0.281	--		1
Acrylonitrile	ND	0.500	--	ND	1.09	--		1
1,1-Dichloroethene	ND	0.020	--	ND	0.079	--		1
Methylene chloride	ND	0.500	--	ND	1.74	--		1
Freon-113	ND	0.050	--	ND	0.383	--		1
Halothane	ND	0.050	--	ND	0.404	--		1
trans-1,2-Dichloroethene	ND	0.020	--	ND	0.079	--		1
1,1-Dichloroethane	ND	0.020	--	ND	0.081	--		1
Methyl tert butyl ether	ND	0.200	--	ND	0.721	--		1
2-Butanone	ND	0.500	--	ND	1.47	--		1
cis-1,2-Dichloroethene	ND	0.020	--	ND	0.079	--		1
Chloroform	ND	0.020	--	ND	0.098	--		1
1,2-Dichloroethane	ND	0.020	--	ND	0.081	--		1
1,1,1-Trichloroethane	ND	0.020	--	ND	0.109	--		1
Benzene	ND	0.100	--	ND	0.319	--		1
Carbon tetrachloride	ND	0.020	--	ND	0.126	--		1
1,2-Dichloropropane	ND	0.020	--	ND	0.092	--		1

Project Name: BATCH CANISTER CERTIFICATION
Project Number: CANISTER QC BAT
Lab Number: L1619299
Report Date: 07/15/16

Air Canister Certification Results

Lab ID: L1619299-01
Client ID: CAN 191B SHELF 8
Sample Location:
Date Collected: 06/22/16 16:00
Date Received: 06/23/16
Field Prep: Not Specified

Parameter	ppbV Results	ppbV RL	ppbV MDL	ug/m3 Results	ug/m3 RL	ug/m3 MDL	Qualifier	Dilution Factor
Volatile Organics in Air by SIM - Mansfield Lab								
Bromodichloromethane	ND	0.020	--	ND	0.134	--		1
1,4-Dioxane	ND	0.100	--	ND	0.360	--		1
Trichloroethene	ND	0.020	--	ND	0.107	--		1
cis-1,3-Dichloropropene	ND	0.020	--	ND	0.091	--		1
4-Methyl-2-pentanone	ND	0.500	--	ND	2.05	--		1
trans-1,3-Dichloropropene	ND	0.020	--	ND	0.091	--		1
1,1,2-Trichloroethane	ND	0.020	--	ND	0.109	--		1
Toluene	ND	0.050	--	ND	0.188	--		1
Dibromochloromethane	ND	0.020	--	ND	0.170	--		1
1,2-Dibromoethane	ND	0.020	--	ND	0.154	--		1
Tetrachloroethene	ND	0.020	--	ND	0.136	--		1
1,1,1,2-Tetrachloroethane	ND	0.020	--	ND	0.137	--		1
Chlorobenzene	ND	0.100	--	ND	0.461	--		1
Ethylbenzene	ND	0.020	--	ND	0.087	--		1
p/m-Xylene	ND	0.040	--	ND	0.174	--		1
Bromoform	ND	0.020	--	ND	0.207	--		1
Styrene	ND	0.020	--	ND	0.085	--		1
1,1,2,2-Tetrachloroethane	ND	0.020	--	ND	0.137	--		1
o-Xylene	ND	0.020	--	ND	0.087	--		1
Isopropylbenzene	ND	0.200	--	ND	0.983	--		1
4-Ethyltoluene	ND	0.020	--	ND	0.098	--		1
1,3,5-Trimethybenzene	ND	0.020	--	ND	0.098	--		1
1,2,4-Trimethylbenzene	ND	0.020	--	ND	0.098	--		1
1,3-Dichlorobenzene	ND	0.020	--	ND	0.120	--		1
1,4-Dichlorobenzene	ND	0.020	--	ND	0.120	--		1
sec-Butylbenzene	ND	0.200	--	ND	1.10	--		1
p-Isopropyltoluene	ND	0.200	--	ND	1.10	--		1
1,2-Dichlorobenzene	ND	0.020	--	ND	0.120	--		1

Project Name: BATCH CANISTER CERTIFICATION
Project Number: CANISTER QC BAT
Lab Number: L1619299
Report Date: 07/15/16

Air Canister Certification Results

Lab ID: L1619299-01
Client ID: CAN 191B SHELF 8
Sample Location:
Date Collected: 06/22/16 16:00
Date Received: 06/23/16
Field Prep: Not Specified

	ppbV			ug/m3				
Parameter	**Results**	**RL**	**MDL**	**Results**	**RL**	**MDL**	**Qualifier**	**Dilution Factor**
Volatile Organics in Air by SIM - Mansfield Lab								
n-Butylbenzene	ND	0.200	--	ND	1.10	--		1
1,2,4-Trichlorobenzene	ND	0.050	--	ND	0.371	--		1
Naphthalene	ND	0.050	--	ND	0.262	--		1
1,2,3-Trichlorobenzene	ND	0.050	--	ND	0.371	--		1
Hexachlorobutadiene	ND	0.050	--	ND	0.533	--		1

Internal Standard	**% Recovery**	**Qualifier**	**Acceptance Criteria**
1,4-difluorobenzene	91		60-140
bromochloromethane	93		60-140
chlorobenzene-d5	89		60-140

Project Name: I-SCHNEID
Project Number: 0121021

Lab Number: L1621168
Report Date: 07/15/16

Sample Receipt and Container Information

Were project specific reporting limits specified? YES

Cooler Information **Custody Seal**
Cooler
N/A Present/Intact

Container Information

Container ID	Container Type	Cooler	pH	Temp deg C	Pres	Seal	Analysis(*)
L1621168-01A	Canister - 2.7 Liter	N/A	N/A		Y	Absent	TO15-SIM(30)
L1621168-02A	Canister - 2.7 Liter	N/A	N/A		Y	Absent	TO15-SIM(30)
L1621168-03A	Canister - 2.7 Liter	N/A	N/A		Y	Absent	TO15-SIM(30)
L1621168-04A	Canister - 2.7 Liter	N/A	N/A		Y	Absent	TO15-SIM(30)
L1621168-05A	Canister - 2.7 Liter	N/A	N/A		Y	Absent	TO15-SIM(30)
L1621168-06A	Canister - 2.7 Liter	N/A	N/A		Y	Absent	TO15-SIM(30)
L1621168-07A	Canister - 2.7 Liter	N/A	N/A		Y	Absent	TO15-SIM(30)
L1621168-08A	Canister - 2.7 Liter	N/A	N/A		Y	Absent	CLEAN-FEE()

*Values in parentheses indicate holding time in days

Project Name:	I-SCHNEID	**Lab Number:**	L1621168
Project Number:	0121021	**Report Date:**	07/15/16

GLOSSARY

Acronyms

EDL	- Estimated Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The EDL includes any adjustments from dilutions, concentrations or moisture content, where applicable. The use of EDLs is specific to the analysis of PAHs using Solid-Phase Microextraction (SPME).
EPA	- Environmental Protection Agency.
LCS	- Laboratory Control Sample: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.
LCSD	- Laboratory Control Sample Duplicate: Refer to LCS.
LFB	- Laboratory Fortified Blank: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.
MDL	- Method Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The MDL includes any adjustments from dilutions, concentrations or moisture content, where applicable.
MS	- Matrix Spike Sample: A sample prepared by adding a known mass of target analyte to a specified amount of matrix sample for which an independent estimate of target analyte concentration is available.
MSD	- Matrix Spike Sample Duplicate: Refer to MS.
NA	- Not Applicable.
NC	- Not Calculated: Term is utilized when one or more of the results utilized in the calculation are non-detect at the parameter's reporting unit.
NDPA/DPA	- N-Nitrosodiphenylamine/Diphenylamine.
NI	- Not Ignitable.
NP	- Non-Plastic: Term is utilized for the analysis of Atterberg Limits in soil.
RL	- Reporting Limit: The value at which an instrument can accurately measure an analyte at a specific concentration. The RL includes any adjustments from dilutions, concentrations or moisture content, where applicable.
RPD	- Relative Percent Difference: The results from matrix and/or matrix spike duplicates are primarily designed to assess the precision of analytical results in a given matrix and are expressed as relative percent difference (RPD). Values which are less than five times the reporting limit for any individual parameter are evaluated by utilizing the absolute difference between the values; although the RPD value will be provided in the report.
SRM	- Standard Reference Material: A reference sample of a known or certified value that is of the same or similar matrix as the associated field samples.
STLP	- Semi-dynamic Tank Leaching Procedure per EPA Method 1315.
TIC	- Tentatively Identified Compound: A compound that has been identified to be present and is not part of the target compound list (TCL) for the method and/or program. All TICs are qualitatively identified and reported as estimated concentrations.

Footnotes

1	- The reference for this analyte should be considered modified since this analyte is absent from the target analyte list of the original method.

Terms

Total: With respect to Organic analyses, a 'Total' result is defined as the summation of results for individual isomers or Aroclors. If a 'Total' result is requested, the results of its individual components will also be reported. This is applicable to 'Total' results for methods 8260, 8081 and 8082.

Analytical Method: Both the document from which the method originates and the analytical reference method. (Example: EPA 8260B is shown as 1,8260B.) The codes for the reference method documents are provided in the References section of the Addendum.

Data Qualifiers

A	- Spectra identified as "Aldol Condensation Product".
B	- The analyte was detected above the reporting limit in the associated method blank. Flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For MCP-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For DOD-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank AND the analyte was detected above one-half the reporting limit (or above the reporting limit for common lab contaminants) in the associated method blank. For NJ-Air-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte above the reporting limit. For NJ-related projects (excluding Air), flag only applies to associated field samples that have detectable concentrations of the analyte, which was detected above the reporting limit in the associated method blank or above five times the

Report Format: Data Usability Report

Project Name:	I-SCHNEID	**Lab Number:**	L1621168
Project Number:	0121021	**Report Date:**	07/15/16

Data Qualifiers

reporting limit for common lab contaminants (Phthalates, Acetone, Methylene Chloride, 2-Butanone).

C - Co-elution: The target analyte co-elutes with a known lab standard (i.e. surrogate, internal standards, etc.) for co-extracted analyses.

D - Concentration of analyte was quantified from diluted analysis. Flag only applies to field samples that have detectable concentrations of the analyte.

E - Concentration of analyte exceeds the range of the calibration curve and/or linear range of the instrument.

G - The concentration may be biased high due to matrix interferences (i.e, co-elution) with non-target compound(s). The result should be considered estimated.

H - The analysis of pH was performed beyond the regulatory-required holding time of 15 minutes from the time of sample collection.

I - The lower value for the two columns has been reported due to obvious interference.

M - Reporting Limit (RL) exceeds the MCP CAM Reporting Limit for this analyte.

NJ - Presumptive evidence of compound. This represents an estimated concentration for Tentatively Identified Compounds (TICs), where the identification is based on a mass spectral library search.

P - The RPD between the results for the two columns exceeds the method-specified criteria.

Q - The quality control sample exceeds the associated acceptance criteria. For DOD-related projects, LCS and/or Continuing Calibration Standard exceedences are also qualified on all associated sample results. Note: This flag is not applicable for matrix spike recoveries when the sample concentration is greater than 4x the spike added or for batch duplicate RPD when the sample concentrations are less than 5x the RL. (Metals only.)

R - Analytical results are from sample re-analysis.

RE - Analytical results are from sample re-extraction.

S - Analytical results are from modified screening analysis.

J - Estimated value. This represents an estimated concentration for Tentatively Identified Compounds (TICs).

ND - Not detected at the reporting limit (RL) for the sample.

Report Format: Data Usability Report

REFERENCES

48 Compendium of Methods for the Determination of Toxic Organic Compounds in Ambient Air. Second Edition. EPA/625/R-96/010b, January 1999.

LIMITATION OF LIABILITIES

Alpha Analytical performs services with reasonable care and diligence normal to the analytical testing laboratory industry. In the event of an error, the sole and exclusive responsibility of Alpha Analytical shall be to re-perform the work at it's own expense. In no event shall Alpha Analytical be held liable for any incidental, consequential or special damages, including but not limited to, damages in any way connected with the use of, interpretation of, information or analysis provided by Alpha Analytical.

We strongly urge our clients to comply with EPA protocol regarding sample volume, preservation, cooling, containers, sampling procedures, holding time and splitting of samples in the field.

Certification Information

The following analytes are not included in our Primary NELAP Scope of Accreditation:

Westborough Facility
EPA 524.2: 1,2-Dibromo-3-chloropropane, 1,2-Dibromoethane, m/p-xylene, o-xylene
EPA 624: 2-Butanone (MEK), 1,4-Dioxane, tert-Amylmethyl Ether, tert-Butyl Alcohol, m/p-xylene, o-xylene
EPA 625: Aniline, Benzoic Acid, Benzyl Alcohol, 4-Chloroaniline, 3-Methylphenol, 4-Methylphenol.
EPA 1010A: NPW: Ignitability
EPA 6010C: NPW: Strontium; SCM: Strontium
EPA 8151A: NPW: 2,4-DB, Dicamba, Dichloroprop, MCPA, MCPP; SCM: 2,4-DB, Dichloroprop, MCPA, MCPP
EPA 8260C: NPW: 1,2,4,5-Tetramethylbenzene; 4-Ethyltoluene, Azobenzene, Isopropanol; SCM: Iodomethane (methyl iodide), Methyl methacrylate (soil); 1,2,4,5-Tetramethylbenzene; 4-Ethyltoluene.
EPA 8270D: NPW: Pentachloronitrobenzene, 1-Methylnaphthalene, Dimethylnaphthalene,1,4-Diphenylhydrazine; SCM: Pentachloronitrobenzene, 1-Methylnaphthalene, Dimethylnaphthalene,1,4-Diphenylhydrazine.
EPA 9010: NPW: Amenable Cyanide Distillation, Total Cyanide Distillation
EPA 9038: NPW: Sulfate
EPA 9050A: NPW: Specific Conductance
EPA 9056: NPW: Chloride, Nitrate, Sulfate
EPA 9065: NPW: Phenols
EPA 9251: NPW: Chloride
SM3500: NPW: Ferrous Iron
SM4500: NPW: Amenable Cyanide, Dissolved Oxygen; SCM: Total Phosphorus, TKN, NO2, NO3.
SM5310C: DW: Dissolved Organic Carbon

Mansfield Facility
EPA 8270D: NPW: Biphenyl; SCM: Biphenyl, Caprolactam
EPA 8270D-SIM Isotope Dilution: SCM: 1,4-Dioxane
SM 2540D: TSS
SM2540G: SCM: Percent Solids
EPA 1631E: SCM: Mercury
EPA 7474: SCM: Mercury
EPA 8081B: NPW and SCM: Mirex, Hexachlorobenzene.
EPA 8082A: NPW: PCB: 1, 5, 31, 87,101, 110, 141, 151, 153, 180, 183, 187.
EPA 8270-SIM: NPW and SCM: Alkylated PAHs.
EPA TO-15: Halothane, 2,4,4-Trimethyl-2-pentene, 2,4,4-Trimethyl-1-pentene, Thiophene, 2-Methylthiophene, 3-Methylthiophene, 2-Ethylthiophene, 1,2,3-Trimethylbenzene, Indan, Indene, 1,2,4,5-Tetramethylbenzene, Benzothiophene, 1-Methylnaphthalene, n-Butylbenzene, n-Propylbenzene, sec-Butylbenzene, tert-Butylbenzene.
Biological Tissue Matrix: ***8270D-SIM; 3050B; 3051A; 7471B; 8081B; 8082A; 6020A:*** Lead***; 8270D:*** bis(2-ethylhexyl)phthalate, Butylbenzylphthalate, Diethyl phthalate, Dimethyl phthalate, Di-n-butyl phthalate, Di-n-octyl phthalate, Fluoranthene, Pentachlorophenol.

The following analytes are included in our Massachusetts DEP Scope of Accreditation, Westborough Facility:

Drinking Water
EPA 200.8: Sb,As,Ba,Be,Cd,Cr,Cu,Pb,Ni,Se,Tl; **EPA 200.7**: Ba,Be,Ca,Cd,Cr,Cu,Na; **EPA 245.1:** Mercury;
EPA 300.0: Nitrate-N, Fluoride, Sulfate; **EPA 353.2**: Nitrate-N, Nitrite-N; **SM4500NO3-F**: Nitrate-N, Nitrite-N; **SM4500F-C, SM4500CN-CE, EPA 180.1, SM2130B, SM4500Cl-D, SM2320B, SM2540C, SM4500H-B**
EPA 332: Perchlorate.
Microbiology: **SM9215B; SM9223-P/A, SM9223B-Colilert-QT, Enterolert-QT.**

Non-Potable Water
EPA 200.8: Al,Sb,As,Be,Cd,Cr,Cu,Pb,Mn,Ni,Se,Ag,Tl,Zn;
EPA 200.7: Al,Sb,As,Be,Cd,Ca,Cr,Co,Cu,Fe,Pb,Mg,Mn,Mo,Ni,K,Se,Ag,Na,Sr,Ti,Tl,V,Zn;
EPA 245.1, SM4500H,B, EPA 120.1, SM2510B, SM2540C, SM2340B, SM2320B, SM4500CL-E, SM4500F-BC, SM426C, SM4500NH3-BH, **EPA 350.1**: Ammonia-N, **LACHAT 10-107-06-1-B**: Ammonia-N, **SM4500NO3-F,**
EPA 353.2: Nitrate-N**, SM4500NH3-BC-NES, EPA 351.1, SM4500P-E, SM4500P-B, E, SM5220D, EPA 410.4, SM5210B, SM5310C, SM4500CL-D, EPA 1664, SM14 510AC, EPA 420.1, SM4500-CN-CE, SM2540D.**
EPA 624: Volatile Halocarbons & Aromatics,
EPA 608: Chlordane, Toxaphene, Aldrin, alpha-BHC, beta-BHC, gamma-BHC, delta-BHC, Dieldrin, DDD, DDE, DDT, Endosulfan I, Endosulfan II, Endosulfan sulfate, Endrin, Endrin Aldehyde, Heptachlor, Heptachlor Epoxide, PCBs
EPA 625: SVOC (Acid/Base/Neutral Extractables), **EPA 600/4-81-045**: PCB-Oil.
Microbiology: **SM9223B-Colilert-QT; Enterolert-QT, SM9222D-MF**.

For a complete listing of analytes and methods, please contact your Alpha Project Manager.

AIR ANALYSIS

PAGE 1 OF 1

CHAIN OF CUSTODY

320 Forbes Blvd, Mansfield, MA 02048
TEL: 508-822-9300 FAX: 508-822-3288

Date Rec'd in Lab: 7/11/16

ALPHA Job #: L1621168

Client Information

Client: ERM
Address: 3200 Windy Hill Rd
Suite 1500W ATL GA 30339
Phone: 678-486-2700
Fax:
Email: Nic.Vrey@erm.com
☐ These samples have been previously analyzed by Alpha

Project Information

Project Name: I. Schneid
Project Location: ATL
Project #: 0121021
Project Manager: Nic Vrey
ALPHA Quote #:

Turn-Around Time

☒ Standard ☐ RUSH (only confirmed if pre-approved!)
Date Due: Time:

Report Information - Data Deliverables

☐ FAX
☐ ADEx
Criteria Checker:
(Default based on Regulatory Criteria Indicated)
Other Formats:
☐ EMAIL (standard pdf report)
☐ Additional Deliverables:
Report to: (if different than Project Manager)

Billing Information

☒ Same as Client info PO #:

Regulatory Requirements/Report Limits

State/Fed	Program	Res / Comm

Other Project Specific Requirements/Comments:

Project-Specific Target Compound List: ☐

All Columns Below Must Be Filled Out

ALPHA Lab ID (Lab Use Only)	Sample ID	COLLECTION End Date	Start Time	End Time	Initial Vacuum	Final Vacuum	Sample Matrix*	Sampler's Initials	Can Size	I D Can	I D - Flow Controller	ANALYSIS TO-15	TO-15 SIM	APH Subtract Non-petroleum HCs ☐	Fixed Gases	Sulfides & Mercaptans by TO-15	Sample Comments (i.e. PID)
2116 08 .01	OA-01-20160705-01	7/5/16	0955	1845	-29.19	-10.18	AA	KS	2.7L	221	0702						
.02	IA-01-20160705-01		1000	1830	-29.53	-4.76		KS		2197	0155						
.03	IA-02-20160705-01		1005	1640	~~-29.23~~ -29.87	-3.86		KS		196	0387						
.04	IA-03-20160705-01		1010	1810	-29.28	-4.18		KS		2015	0264						
.05	IA-04-20160705-01		1015	1815	-28.81	-4.64		KS		506	0952						
.06	IA-05-20160705-01		1020	1840	-29.73	-5.36		KS		508	0236						
.07	Dup-01-20160705-01				-28.95	-7.84		KS		2203	0915						

*SAMPLE MATRIX CODES

AA = Ambient Air (Indoor/Outdoor)
SV = Soil Vapor/Landfill Gas/SVE
Other = Please Specify

Container Type

Please print clearly, legibly and completely. Samples can not be logged in and turnaround time clock will not start until any ambiguities are resolved. All samples submitted are subject to Alpha's Terms and Conditions. See reverse side.

Relinquished By:	Date/Time	Received By:	Date/Time:
FedEx	7/6/16 1100	FedEx	
		Kim C Bailey AAL	7/11/16 11:25

Form No: 301-02 Rev (25-Sep-15)