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Collis, Inc. - Corrective Measures Activities
March 2017 (Q1 2017) – Final Quarterly Vapor Intrusion Monitoring

Report Date: 8 August 2017

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Site Name: Collis, Inc.
Clinton, Iowa
Corrective Measures Activities
U.S. EPA ID #IAD047303771

Prepared by: Jim Colmer, PE, BB&E, Inc.

On behalf of Collis, Inc. (Collis or SSW), BB&E, Inc. (BB&E) is pleased to provide the third of four scheduled Quarterly Corrective Measures Activities for Vapor Intrusion (VI) Monitoring, conducted March 1, 2017 (Q1 2017). This final report documents the recent monitoring activities performed at the Collis property (Site) located at 2005 South 19th Street in Clinton, Clinton County, Iowa (**Figure 1**). This final Corrective Measures Activities Report references comments from the United States Environmental Protection Agency (U.S. EPA) in a letter dated January 7, 2017.

As data is developed during the implementation of the Quarterly VI Monitoring, Collis intends to present and discuss findings with the U.S. EPA for the purposes of developing a path forward related to potential future response activities at the Site and finalizing the Corrective Measures Study (CMS). This report has been prepared to document recent work performed in accordance with the terms provided in the following U.S. EPA approved documents:

- *Final Vapor Intrusion Work Plan* (VIWP) prepared by BB&E, dated September 24, 2015 and
- *RCRA Corrective Measures Activities Quality Assurance Project Plan* (QAPP) prepared by BB&E, dated August 2014.

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This report documents the Quarterly VI Monitoring activities performed at the Site on March 1, 2017. The key activities and/or findings of this report include:

- Collection of five (5) indoor sub-slab soil gas (SSSG) samples, six (6) indoor air quality (IAQ) samples, one (1) crawl space air quality sample (CSAQ), and one (1) ambient outdoor background sample (OAQ).
- Low concentrations of Volatile Organic Compounds (VOCs) were detected in the samples collected, as shown in **Table 1.**

This report contains a summary of the field activities conducted, VI analytical results (**Tables 1, 2, and 3**), analytical data (**Attachment A**), field notes (**Attachment B**), and a building survey (**Attachment C**).

BACKGROUND

Collis, Inc. and the U.S. EPA Region VII entered into an Administrative Order of Consent on November 10, 1993, as amended on April 3, 1998. Issues identified on-site are summarized in the Revised Final Resource Conservation and Recovery Act (RCRA) Facility Investigation (RFI) Report of November 30, 2010. In general, low concentrations of VOCs, semi-volatile organic compounds (SVOCs), polychlorinated biphenyl (PCBs), and metals were identified in the soil at various locations across the Site. Naphthalene, total lead, amenable cyanide and certain VOCs were also identified in certain groundwater samples collected at the Site, some of which exceeded the U.S. EPA Medium Specific Screening Levels (MSSL).

Based on historical results of soil and groundwater samples, the U.S. EPA requested that a VI investigation be conducted at the Site and VI sampling was initially proposed in the CMS Work Plan dated August, 2011. The U.S. EPA requested that Collis conduct two (2) VI sampling events which were performed by BB&E in March and September 2012. The U.S. EPA notified Collis in its September 10, 2014 letter that an additional four (4) consecutive quarters of SSSG and IAQ sampling would be required to account for seasonal fluctuations and spatial/temporal changes at the Site.

MARCH 2017 FIELD ACTIVITIES SUMMARY

The following activities were conducted during the March 2017 Quarterly VI Monitoring event in accordance with the Final VIWP and QAPP:

- Leak testing, field screening, and sample collection of SSSG, IAQ, CSAQ and OAQ samples in accordance with the Final VIWP. In accordance with the QAPP, samples were analyzed via EPA Method TO-15. Analytical results are summarized in **Table 1** and sample locations are shown on **Figure 2**.
- A survey of the building floor, integrity, and facility activities was conducted prior to sample collection. Floor integrity at vapor intrusion point (VIP) locations is documented on field notes, included in **Attachment B**. A Building Survey is included as **Attachment C.**

MARCH 2017 LEAK TESTS AND FIELD SCREENING

On March 1, 2017, prior to sample collection, a shut-in test, leak test, and field screening were conducted at each sampling location, in accordance with the VIWP. Results from the shut-in tests indicated favorable connections (i.e., air tight) were obtained for all SSSG sample points prior to sample collection. In addition, the water dam for each SSSG sample point held water throughout the duration of sampling, indicating a good seal was obtained around the VIP and through the concrete floor. Helium leak testing indicated no helium was evident in any tedlar bag field screening sample. A minimum of three liters of SSSG was collected and field screened via tedlar bags and lung box assembly utilizing a GilAir-5 vapor sampling vacuum pump prior to SSSG sample collection at each location. Field screening was conducted with a photoionization detector (PID), helium tracer gas detector (Dielectric MGD-2002) and Multi-Gas Detector (GEM 5000). Results of field screenings were documented on field sampling forms, included in **Attachment B**.

ASSESSMENT OF BUILDING FLOORS, INTEGRITY, AND ACTIVITIES

Prior to the start of sampling activities, observations of the Collis Facility floor were documented on field notes, included in **Attachment B**. Some superficial cracks and defects were observed in the vicinity of VIP locations but no significant defects that could potentially influence SSSG or IAQ sampling results were noted.

A Building Survey, which identifies potential sources of VOCs, was also conducted prior to the start of sampling activities. The Building Survey has been included as **Attachment C.**

SUB-SLAB SOIL GAS (SSSG) SAMPLE COLLECTION PROCEDURES

Upon completion of the shut-in test, leak test, and field screening, SSSG samples were collected via six-liter summa canisters from each sample location (VIP-2, VIP-3, VIP-4, VIP-5, and VIP-6). Sample locations are shown on **Figure 2**. Separate, dedicated flow regulators for each six-liter summa canister were provided by the analytical laboratory. The flow regulators were pre-adjusted by the lab to enable a six-liter summa collection time of approximately eight (8) hours. Pre- and post-summa canister vacuum checks were performed and results were documented on the field sampling forms (**Attachment B**) and on the chain of custody (included with the laboratory analytical report, **Attachment A**). Upon completion of the SSSG sampling, the VIPs were left in-place for future use. A protective cap and flush mount cover were placed over each location.

INDOOR AIR QUALITY (IAQ) SAMPLE COLLECTION PROCEDURES

IAQ samples were collected at six (6) locations (IAQ-1, IAQ-2, IAQ-3, IAQ-4, IAQ-5, and IAQ-6) inside the Collis Facility. Sample locations are shown on **Figure 2**. Six-liter summa canisters were placed in the breathing zone at each location. Separate, dedicated flow regulators for each six-liter summa canister were provided by the analytical laboratory. The flow regulators were pre-adjusted by the lab to enable a six-liter summa collection time of approximately eight (8) hours. Pre- and post-summa canister vacuum checks were performed and results were documented on the field sampling forms (**Attachment B**) and on the chain of custody (included with the laboratory analytical report, **Attachment A**).

OUTDOOR BACKGROUND SAMPLING PROCEDURE

One (1) ambient outdoor background sample was collected at location OAQ-1, located outside and upwind of the Collis Facility. A six-liter summa canister was placed in the breathing zone, in the same manner as the IAQ sampling. A separate, dedicated flow regulator was provided for the six-liter summa canister by the analytical laboratory. The flow regulator was pre-adjusted by the lab to enable a six-liter summa collection time of approximately eight (8) hours. Pre- and post-summa canister vacuum checks were performed and results were documented on the field

sampling forms (**Attachment B**) and on the chain of custody (included with the laboratory analytical report, **Attachment A**).

DEVIATIONS TO THE VAPOR INTRUSION WORK PLAN (VIWP)

The following deviations from the VIWP or QAPP were noted:

- Only five (5) SSSG samples were collected rather than the proposed six (6) samples due to the presence of a crawl space below proposed location VIP-1 (Front Offices). After a discussion with the U.S. EPA on September 27, 2016 during the first quarterly sampling event, VIP-1 was not installed and a SSSG sample was not collected at this location. Instead, the U.S. EPA requested an ambient air sample be collected in the crawl space below the proposed location of VIP-1; therefore, ambient air sample COL-CSAQ-01 was collected. COL-CSAQ-01 was collected from the crawl space directly below IAQ-1 (Front Offices), where air quality samples COL-IAQ-07 and COL-IAQ-08 were collected.
- During field activities, each of the SSSG sampling locations were leak checked prior to sampling. Each sampling location passed the leak check by maintaining a vacuum at the same pressure for at least 60 seconds. In the VIWP, it is stated that the pressure should be held between 80 and 100 in of H_2O; however, the pressure readings in the field were between 50 and 70 in of H_2O. This deviation occurred due to the limited capabilities of the pump provided by the equipment rental company. The pump was unable to achieve the desired pressure stated in the VIWP. Once the pump was no longer increasing the pressure in the sample train, the pump was shut off and the leak check was conducted. All of the sampling locations held their relative pressures for at least 60 seconds.

VI SAMPLING LOCATION SUMMARY MARCH 2017

Description	Location	# IAQ Samples	# SSSG Samples	Sample ID
Front Offices	IAQ-1	3	0	COL-IAQ-07 COL-IAQ-08 (duplicate) COL-CSAQ-01
Powder Paint Room	VIP-2/IAQ-2	1	1	COL-SSSG-04 COL-IAQ-05
Near PC2 Finishing Operations	VIP-3/IAQ-3	1	1	COL-SSSG-05 COL-IAQ-06
Lunch Room	VIP-4/IAQ-4	2	1	COL-SSSG-03 COL-IAQ-03 COL-IAQ-04 (duplicate)
Near PC1 Finishing Operations	VIP-5/IAQ-5	1	1	COL-SSSG-02 COL-IAQ-02

Burn Room	VIP-6/IAQ-6	1	1	COL-SSSG-01 COL-IAQ-01
Ambient Outdoor Background	OAQ-1	1	0	COL-OAQ-01
	Total:	**10**	**5**	

MARCH 2017 VI MONITORING ANALYTICAL RESULTS

Per the QAPP, laboratory analytical results for air quality, including IAQ, CSAQ, and OAQ samples were compared to the U.S. EPA May 2016 (most current) Industrial Air Regional Screening Levels (RSLs) Screening and Action levels. The U.S. EPA May 2016 Industrial Air RSL Screening level values have a cancer risk of $1x10^{-6}$ and a hazard index of 0.1. The U.S. EPA May 2016 Industrial Air RSL Action level has a cancer risk of $1x10^{-5}$ and a hazard index of 1.0. These values were taken from their respective RSL Composite Worker Ambient Air Tables located on the U.S. EPA website, per the U.S. EPA. The sample collected from the crawl space below IAQ-1 (front offices), sample COL-CSAQ-01, is believed to be representative of the air quality conditions in the crawl space beneath the front office area and therefore the results have been included in the IAQ results table (**Table 3**).

Per comments provided by the U.S. EPA in their January 17, 2017 letter, SSSG samples were compared to Commercial Screening criteria based on a cancer risk of $1x10^{-6}$ and a hazard index of 0.1 as well as Commercial Action criteria based on a cancer risk of $1x10^{-5}$ and a hazard index of 1.0. The Commercial Screening and Commercial Action criteria values were taken from the Target Sub-Slab and Exterior Soil Gas Concentration column using the appropriate cancer risk and hazard index values on the Vapor Intrusion Screening Level Calculator Version 3.5.1 (May 2016 RSLs). Per the U.S. EPA comments in their January 17, 2017 letter, TCE Commercial Screening and Commercial Action criteria were taken from the "EPA Region 7 Action Levels for Trichloroethene in Air" established criteria. These values were then divided by an attenuation factor of 0.03 to determine the Commercial Screening and Commercial Action values for sub slab soil gas (SSSG).

All samples were analyzed by ALS Laboratory Group located in Simi Valley, California (a NELAP approved lab). A summary of the VI monitoring analytical results is provided in **Table 1**. A summary of the SSSG sample results compared to the Commercial Screening and Commercial Action criteria is shown in **Table 2.** A summary of the IAQ, CSAQ, and OAQ

analytical results is included in **Table 3.** A complete set of laboratory results is provided in **Attachment A.** Field notes and sample log forms are provided for reference in **Attachment B.**

VOC Analytical Results

All samples were submitted to the laboratory for VOC analysis via U.S. EPA Method TO-15. Per comments provided by the U.S. EPA, the IAQ, CSAQ, and OAQ samples were compared to the U.S. EPA May 2016 Industrial Air RSL Screening Level and the U.S. EPA May 2016 Industrial Air RSL Action Level. Analytical results showed multiple VOC detections in the IAQ samples above the U.S. EPA May 2016 Industrial Air RSL Screening level. Benzene was detected at locations IAQ-2 (COL-IAQ-05), IAQ-3 (COL-IAQ-06), IAQ-4 (COL-IAQ-04), IAQ-5 (COL-IAQ-02), and IAQ-6 (COL-IAQ-01) at a maximum concentration of 9.4 ug/m^3. 1,4-dioxane was detected at location IAQ-2 (COL-IAQ-05) at a concentration of 2.7 ug/m^3. Ethylbenzene was detected at locations IAQ-3 (COL-IAQ-06), IAQ-5 (COL-IAQ-02), and IAQ-6 (COL-IAQ-01) at a maximum concentration of 47 ug/m^3. M,p-xylenes was detected at location IAQ-3 (COL-IAQ-06) and IAQ-5 (COL-IAQ-02) at a maximum concentration of 170 ug/m^3. O-xylene was detected at location IAQ-5 (COL-IAQ-02) at a concentration of 62 ug/m^3. 1,2,4-trimethylbenzene was detected at locations IAQ-2 (COL-IAQ-05), IAQ-3 (COL-IAQ-06), IAQ-4 (COL-IAQ-03 and COL-IAQ-04[duplicate]), IAQ-5 (COL-IAQ-02), and IAQ-6 (COL-IAQ-01) at a maximum concentration of 32 ug/m^3. Results are shown on **Table 3.**

One IAQ sample detection exceeded the U.S. EPA May 2016 Industrial Air RSL Action level. 1,2,4–trimethylbenzene exceeded its the Industrial Air Action level (31 ug/m^3) at location IAQ-5 (COL-IAQ-02) with a concentration of 32 ug/m^3. Results are shown on **Table 3.**

All OAQ and CSAQ sample detections were below the U.S. EPA May 2016 Industrial Air RSL Screening and Action levels. These results are shown on **Table 3.**

All SSSG samples were compared to the Commercial Screening and Commercial Action levels as mentioned above. There was one exceedance of the Commercial Screening level. Ethylbenzene was detected at location VIP-4 (COL-SSSG-03) at a concentration of 180 ug/m^3. There were no SSSG sample detections exceeding the Commercial Action level. These results are shown on **Table 2.**

Quality Assurance (QA)/Quality Control (QC) Samples

Per the QAPP, all duplicate samples submitted to the laboratory for analysis were to be "blind" duplicates. Blind duplicates submitted for this sampling event were collected at sampling location IAQ-1 (sample COL-IAQ-08) and IAQ-4 (sample COL-IAQ-04). Duplicate results from sample COL-IAQ-08 were generally consistent with the parent sample (COL-IAQ -07) results with the exception of ethyl acetate, 2-propanol, and acetone. The acetone difference could be lab interference as acetone is commonly present in the ambient air inside a laboratory. The 2-propanol and ethyl acetate differences could be explained by a number of different conditions, including lab conditions, slightly varying field conditions, or minor disturbances to the canisters during sample collection. Because the levels of VOCs present in the samples, these variations do not affect the overall quality of the samples. Duplicate results from sample COL-IAQ-04 were generally consistent with the parent sample (COL-IAQ-03) with the exception of ethyl acetate. The ethyl acetate difference could also be explained by a number of different conditions, including lab conditions, slightly varying field conditions, or minor disturbances to the canisters during sample collection. Because the levels of VOCs present in the samples, these variations do not affect the overall quality of the samples. These results are shown on **Table 3.**

CONCLUSIONS

During the Q1 2017 Quarterly VI Monitoring, IAQ samples had VOC detections of benzene, 1,4-dioxane, ethylbenzene, m,p-xylenes, o-xylene and 1,2,4-trimethylbenzene above their respective EPA Industrial Air RSL Screening level. There was one detection of 1,2,4-trimethylbenzene exceeding the U.S. EPA May 2016 Industrial Air RSL Action level. These results are shown on **Table 3.**

The OAQ and CSAQ samples had no detections above the U.S. EPA Industrial Air RSL Screening level or Action level. These results are shown on **Table 3.**

SSSG analytical results indicated only one exceedance of commercial screening levels (ethylbenzene); however, there were no detections exceeding the Commercial Action level. These results are shown on **Table 2**.

As data is developed during the implementation of the Quarterly VI Monitoring, Collis intends to present and discuss findings with the U.S. EPA for the purposes of developing a path forward related to potential future response activities at the Site and finalizing the CMS.

UPCOMING ACTIVITIES

The final of the four scheduled Quarterly VI Monitoring events will be conducted during Q2 2017 (April-June 2017) in accordance with the VIWP and QAPP.

Event Number	Quarter	Event date	Draft Report	Final Report
1	Q3 2016	9/27/2016-9/29/2016	11/7/2016	2/21/2017
2	Q4 2016	12/13/2016-12/15/2016	3/17/2017	6/9/2017
3	Q1 2017	2/27/2017-3/2/2017	6/16/2017	8/8/2017
4	Q2 2017	5/2/2017-5/4/2017	7/10/2017	TBD

TBD=to be determined

If you have any questions or comments regarding this report, please do not hesitate to contact me at (248) 489-9636 ext. 309 or Ms. Cindy Lang at ext. 317.

Sincerely,

Jim Colmer, PE
Project Manager
BB&E, INC

cc: Mr. Brian Calhoun – Collis/SSW
Mr. Charlie Denton – Barnes & Thornburg, LLP

Enclosures:
Figure 1 – Site Location Map
Figure 2 – Site Features Map
Table 1 – IAQ and SSSG Results for Q3 2016, Q4 2016, and Q1 2017 Vapor Intrusion Monitoring Results
Table 2 – SSSG Results Q3 2016, Q4 2016, and Q1 2017 Vapor Intrusion Monitoring
Table 3 – IAQ Results for Q3 2016, Q4 2016, and Q1 2017 Vapor Intrusion Monitoring
Attachment A – Analytical Data
Attachment B – Field Notes
Attachment C – Building Survey Form

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FIGURES

Figure 1

Site Location Map

Collis, Inc. Manufacturing Facility
Clinton, Iowa

NORTH

0 1,500 3,000
Feet

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Figure 2

Site Features Map

Collis, Inc. Manufacturing Facility
Clinton, Iowa

Legend:

- Sample Location
- Property Boundary (Approximate)
- Building Expansion (Approximate)

Notes:
IAQ = Indoor Air Quality
CSAQ = Crawl Space Air Quality
OAQ = Outdoor Air Quality
VIP = Vapor Intrusion Point

Sample locations are approximate.

NORTH

0 100 200
Feet

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TABLES

Table 1
IAQ and SSSG Results for Q3 and Q4 2016 and Q1 2017 Vapor Intrusion Monitoring Results
SSW Collis, Clinton, Iowa

Parameters	CAS #	CSAQ-1/IAQ-1									VIP-2/IAQ-2					
		Front Offices									Powder Paint Room					
		COL-CSAQ-01	COL-IAQ-07	COL-IAQ-08 (duplicate)	COL-CSAQ-01	COL-IAQ-07	COL-IAQ-08 (duplicate)	COL-CSAQ-01	COL-IAQ-07	COL-IAQ-08 (Duplicate)	COL-SSSG-02	COL-IAQ-02	COL-SSSG-04	COL-IAQ-04	COL-SSSG-04	COL-IAQ-05
		Sampled 9/28/16			Sampled 12/14/16			Sampled 3/1/17			Sampled 9/28/16		Sampled 12/14/16		Sampled 3/1/17	
VOCs by Method TO-15		µg/m³	µg/m³	µg/m³	µg/m³	µg/m³	µg/m³	µg/m³	µg/m³	µg/m³	µg/m³	µg/m³	µg/m³	µg/m³	µg/m³	µg/m³
Propene	115-07-1	**1.8**	**6.9**	**6.4**	<0.66	<0.85	**1.3**	<0.8	**3.6**	**5.4**	**15**	**7.2**	**3.8**	**7.1**	<5.2	**4.9**
Dichlorodifluoromethane (CFC 12)	75-71-8	**6.1**	**2.9**	**2.9**	**2.3**	**1.8**	**2**	**2.6**	**2.7**	**2.7**	**2.1**	**2.3**	**1.5**	**1.8**	<5.2	**2.2**
1,3-Butadiene	106-99-0	<0.74	<0.68	<0.81	<0.66	<0.85	<0.81	<0.8	<0.9	<0.92	<0.78	<0.8	**1.1**	**2**	<5.2	<1.1
Acetone	67-64-1	**41**	**230**	**220**	<0.66	**22**	**25**	**17**	**140**	**180**	**410**	**24**	**810**	**1,100**	**2,300**	**280**
Trichlorofluoromethane	75-69-4	**29**	**38**	**38**	**3.5**	**5.6**	**5.1**	**1.3**	**10**	**10**	**1.1**	**1.2**	**1.3**	**1.9**	<5.2	**1.1**
2-Propanol (Isopropyl Alcohol)	67-63-0	<7.4	<6.8	<8.1	<6.6	<8.5	<8.1	<8.0	<9.0	**18**	**16**	**11**	<8.4	<8.4	<52	<11
Methylene Chloride	75-09-2	<0.74	<0.68	<0.81	<0.66	<0.85	<0.81	<0.8	<0.9	<0.92	<0.78	<0.8	<0.84	<0.84	<5.2	<1.1
Carbon Disulfide	75-15-0	<7.4	<6.8	<8.1	<6.6	<8.5	<8.1	<8.0	<9.0	<9.2	<7.8	<8.0	**46**	<8.4	<52	<11
Vinyl Acetate	108-05-4	<7.4	<6.8	<8.1	<6.6	<8.5	<8.1	<8.0	<9.0	<9.2	**17**	<8.0	<8.4	<8.4	<52	<11
2-Butanone (MEK)	78-93-3	**9.7**	**50**	**46**	<6.6	<8.5	<8.1	<8.0	**10**	**13**	**57**	<8.0	**23**	**14**	**550**	**23**
cis-1,2-Dichloroethene	156-59-2	<0.74	<0.68	<0.81	<0.66	<0.85	<0.81	<0.8	<0.9	<1.8	<0.78	<0.8	**2.6**	<0.84	<5.2	<1.1
Ethyl Acetate	141-78-6	<1.5	<1.4	<1.6	**4.4**	**2.8**	**2.6**	**1.9**	**1.9**	**34**	**2.5**	**13**	**23**	**3.4**	<10	**6.5**
n-Hexane	110-54-3	**1.0**	**33**	**33**	<0.66	<0.85	<0.81	<0.8	<0.9	<0.92	**2.2**	<0.8	**21**	<0.84	<5.2	<1.1
Chloroform	67-66-3	<0.74	<0.68	<0.81	<0.66	<0.85	<0.81	<0.8	<0.9	<0.92	<0.78	<0.8	<0.84	<0.84	<5.2	<1.1
Tetrahydrofuran (THF)	109-99-9	**1.8**	**1.2**	**1.1**	<0.66	<0.85	<0.81	<0.8	<0.9	<0.92	**8.6**	**2.6**	**6.8**	<0.84	<5.2	<1.1
Benzene	71-43-2	<0.74	**0.78**	<0.81	<0.66	<0.85	<0.81	<0.8	<0.9	<0.92	**30**	**2.0**	**18**	**6.2**	**8.7**	**7.2**
Cyclohexane	110-82-7	<1.5	<1.4	<1.6	<1.3	<1.7	<1.6	<1.6	<1.8	<1.8	**3.8**	<1.6	**4.6**	<1.7	<10	<2.2
Trichloroethene	79-01-6	<0.74	<0.68	<0.81	<0.66	<0.85	<0.81	<0.8	<0.9	<0.92	**0.86**	<0.8	**1.4**	<0.84	<5.2	<1.1
1,4-Dioxane	123-91-1	<0.74	<0.68	<0.81	<0.66	<0.85	<0.81	<0.8	<0.9	<0.92	<0.78	<0.8	<0.84	**3.4**	<5.2	**2.7**
n-Heptane	142-82-5	<0.74	<0.68	<0.81	<0.66	<0.85	<0.81	<0.8	<0.9	<0.92	**4.8**	<0.8	**3**	<0.84	<5.2	<1.1
4-Methyl-2-pentanone	108-10-1	<0.74	<0.68	<0.81	<0.66	<0.85	<0.81	<0.8	<0.9	<0.92	**2.3**	<0.8	**1.2**	<0.84	<5.2	<1.1
Toluene	108-88-3	**19**	**68**	**62**	**0.77**	**1.4**	**1.1**	**1.4**	**11**	**13**	**25**	**12**	**90**	**21**	**810**	**29**
2-Hexanone	591-78-6	<0.74	<0.68	<0.81	<0.66	<0.85	<0.81	<0.8	<0.9	<0.92	**1.6**	<0.8	<0.84	<0.84	<5.2	<1.1
Tetrachloroethene	127-18-4	<0.74	<0.68	<0.81	<0.66	<0.85	<0.81	<0.8	<0.9	<0.92	**1.7**	<0.8	<0.84	<0.84	<5.2	<1.1
Ethylbenzene	100-41-4	**2.7**	**12**	**10**	<0.66	<0.85	<0.81	<0.8	**2.1**	**2.3**	**9.2**	**1.2**	**11**	**3.6**	**130**	**4.8**
m,p-Xylenes	179601-23-1	**11**	**48**	**42**	<1.3	<1.7	<1.6	<1.6	**7.3**	**8.5**	**21**	**4.3**	**34**	**13**	**480**	**19**
Styrene	100-42-5	<0.74	<0.68	<0.81	<0.66	<0.85	<0.81	<0.8	<0.9	<0.92	**7.5**	<0.8	**4.9**	<0.84	<5.2	<1.1
o-Xylene	95-47-6	**3.6**	**14**	**13**	<0.66	<0.85	<0.81	**0.92**	**2.8**	**3.2**	**14**	**1.6**	**11**	**4.2**	**97**	**6.3**
Cumene (isopropylbenzene)	98-82-8	<0.74	<0.68	<0.81	<0.66	<0.85	<0.81	<0.8	<0.9	<0.92	**46**	<0.8	**11**	<0.84	<5.2	<1.1
4-Ethyltoluene	622-96-8	<0.74	**3.2**	**2.7**	<0.66	<0.85	<0.81	<0.8	<0.9	<0.92	**1.8**	<0.8	**1.5**	**1.1**	**13**	**1.7**
1,3,5-Trimethylbenzene	108-67-8	**0.93**	**3.5**	**3.0**	<0.66	<0.85	<0.81	<0.8	<0.9	**0.94**	**0.99**	<0.8	**1.3**	**1.4**	**8.9**	**1.8**
1,2,4-Trimethylbenzene	95-63-6	**1.9**	**6.3**	**5.4**	<0.66	**1.9**	**1.7**	<0.8	**2.1**	**2.5**	**3.4**	**1.4**	**3**	**2.9**	**17**	**3.7**
1,4 - Dichlorobenzene	541-73-1	<0.74	<0.68	<0.81	**2.3**	<0.85	<0.81	<0.8	<0.9	<0.92	<0.78	<0.8	<0.84	<0.84	<5.2	<1.1

Notes:
- -- = Not Applicable
- µg/m³ = micrograms per cubic meter
- CAS #=unique numerical identifier assigned by Chemical Abstracts Service
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- VIP = Vapor Intrusion Point
- VOC = Volatile Organic Compounds
- **Bolding** indicates a detection of that compound
- Only parameters that were detected in one or more samples are shown in the table. Not all sample results are shown.

[1] Samples collected from VIP-3/IAQ-3 were not analyzed by the laboratory due to complications with the function of the vacuum gauges.
[2] Final vacuum pressure at IAQ-4 and IAQ-5 was at -0" Hg, which is below the recommended value (-1" Hg) for a sample to be considered valid.

Table 1
IAQ and SSSG Results for Q3 and Q4 2016 and Q1 2017 Vapor Intrusion Monitoring Results
SSW Collis, Clinton, Iowa

Parameters	CAS #	VIP-3/IAQ-3							VIP-4/IAQ-4							
		Near PC2 Finishing Operations							Lunch Room							
		COL-SSSG-03[1]	COL-IAQ-03[1]	COL-IAQ-04 (duplicate)	COL-SSSG-05	COL-IAQ-05	COL-SSSG-05	COL-IAQ-06	COL-SSSG-01	COL-IAQ-01	COL-SSSG-03	COL-IAQ-03[2]	COL-IAQ-06 (Duplicate)	COL-SSSG-03	COL-IAQ-03	COL-IAQ-04 (Duplicate)
		Sampled 9/28/16			Sampled 12/14/16		Sampled 3/1/17		Sampled 9/28/16		Sampled 12/14/16			Sampled 3/1/17		
VOCs by Method TO-15		µg/m³	µg/m³	µg/m³	µg/m³	µg/m³	µg/m³	µg/m³	µg/m³	µg/m³	µg/m³	µg/m³	µg/m³	µg/m³	µg/m³	µg/m³
Propene	115-07-1	NA	NA	NA	**11**	**10**	<4.4	**9.4**	**18**	**8.6**	**5**	**2.7**	**2.6**	<6.3	**3.4**	**3.9**
Dichlorodifluoromethane (CFC 12)	75-71-8	NA	NA	NA	**1.6**	**1.8**	<4.4	**2.2**	**2.4**	**2.2**	**1.9**	**1.9**	**1.7**	<6.3	**2.3**	**2.3**
1,3-Butadiene	106-99-0	NA	NA	NA	<0.84	**1.3**	<4.4	<1.3	<0.64	<0.83	<0.89	**1.1**	**1.1**	<6.3	<0.86	<0.86
Acetone	67-64-1	NA	NA	NA	**710**	**680**	**2,500**	**980**	**240**	**70**	**730**	**83**	**74**	**3,200**	**230**	**240**
Trichlorofluoromethane	75-69-4	NA	NA	NA	**1.1**	**1.4**	<4.4	<1.3	**1.8**	**1.4**	**3.3**	**1.4**	**1.3**	<6.3	**1.2**	**1.2**
2-Propanol (Isopropyl Alcohol)	67-63-0	NA	NA	NA	<8.4	<10	<44	<13	**21**	**10**	**9.3**	<6.3	<9.4	<63	<8.6	<8.6
Methylene Chloride	75-09-2	NA	NA	NA	<0.84	<1.0	<4.4	<1.3	**0.75**	<0.83	**1.4**	<0.63	<0.94	<6.3	<0.86	<0.86
Carbon Disulfide	75-15-0	NA	NA	NA	**55**	<10	<44	<13	<6.4	<8.3	**74**	<6.3	<9.4	<63	<8.6	<8.6
Vinyl Acetate	108-05-4	NA	NA	NA	<8.4	<10	<44	<13	**12**	<8.3	<8.9	<6.3	<9.4	<63	<8.6	<8.6
2-Butanone (MEK)	78-93-3	NA	NA	NA	**21**	**11**	**630**	**80**	**49**	**26**	**23**	<6.3	<9.4	**890**	**18**	**21**
cis-1,2-Dichloroethene	156-59-2	NA	NA	NA	**2.5**	<1.0	<4.4	<1.3	<0.64	<0.83	**4.4**	<0.63	<0.94	<6.3	<0.86	<0.86
Ethyl Acetate	141-78-6	NA	NA	NA	**28**	**30**	**11**	**12**	**8.1**	<1.7	**48**	**9.3**	**5.5**	**13**	**6.3**	**23**
n-Hexane	110-54-3	NA	NA	NA	**21**	<1.0	<4.4	<1.3	**2.4**	<0.83	**39**	**0.88**	<0.94	<6.3	**0.96**	**0.96**
Chloroform	67-66-3	NA	NA	NA	**0.94**	<1.0	<4.4	<1.3	<0.64	<0.83	<0.89	<0.63	<0.94	<6.3	<0.86	<0.86
Tetrahydrofuran (THF)	109-99-9	NA	NA	NA	**6.6**	<1.0	**5.1**	<1.3	**6.2**	<0.83	**10**	<0.63	<0.94	**7.2**	<0.86	<0.86
Benzene	71-43-2	NA	NA	NA	**8.1**	**3.5**	**4.5**	**3.1**	**16**	<0.83	**14**	**5.1**	**4.9**	<6.3	**1.5**	**1.6**
Cyclohexane	110-82-7	NA	NA	NA	**5.3**	<2.1	<8.7	<2.6	<1.3	<1.7	**8.3**	<1.3	<1.9	<13	<1.7	<1.7
Trichloroethene	79-01-6	NA	NA	NA	**2**	<1.0	<4.4	<1.3	**0.78**	<0.83	**2.1**	<0.63	<0.94	<6.3	<0.86	<0.86
1,4-Dioxane	123-91-1	NA	NA	NA	<0.84	**2.3**	<4.4	<1.3	<0.64	<0.83	<0.89	<0.63	<0.94	<6.3	<0.86	<0.86
n-Heptane	142-82-5	NA	NA	NA	**3.2**	<1.0	<4.4	<1.3	**3.9**	<0.83	**5.2**	<0.63	<0.94	<6.3	<0.86	<0.86
4-Methyl-2-pentanone	108-10-1	NA	NA	NA	**1.2**	<1.0	<4.4	<1.3	**1.5**	<0.83	**1.4**	<0.63	<0.94	<6.3	<0.86	<0.86
Toluene	108-88-3	NA	NA	NA	**86**	**15**	**760**	**90**	**35**	**32**	**150**	**4.5**	**3.4**	**1,100**	**19**	**20**
2-Hexanone	591-78-6	NA	NA	NA	<0.84	<1.0	<4.4	<1.3	**1.0**	<0.83	**1.1**	<0.63	<0.94	<6.3	<0.86	<0.86
Tetrachloroethene	127-18-4	NA	NA	NA	<0.84	<1.0	<4.4	<1.3	**0.93**	<0.83	**0.94**	<0.63	<0.94	<6.3	<0.86	<0.86
Ethylbenzene	100-41-4	NA	NA	NA	**9.2**	**3.3**	**130**	**15**	**8.2**	**5.3**	**14**	**0.85**	<0.94	**180**	**4.3**	**4.4**
m,p-Xylenes	179601-23-1	NA	NA	NA	**30**	**13**	**460**	**61**	**25**	**21**	**43**	**2.9**	**2.3**	**650**	**17**	**18**
Styrene	100-42-5	NA	NA	NA	**3.8**	<1.0	<4.4	<1.3	**4.2**	<0.83	**7.6**	<0.63	<0.94	<6.3	<0.86	<0.86
o-Xylene	95-47-6	NA	NA	NA	**9.9**	**4.7**	**93**	**19**	**11**	**6.1**	**15**	**0.93**	<0.94	**130**	**6**	**6.1**
Cumene (isopropylbenzene)	98-82-8	NA	NA	NA	**9.6**	<1.0	<4.4	<1.3	**19**	<0.83	**14**	<0.63	<0.94	<6.3	<0.86	<0.86
4-Ethyltoluene	622-96-8	NA	NA	NA	**1.3**	**1.2**	**11**	**4.6**	**1.9**	**1.3**	**2**	<0.63	<0.94	**18**	**2.4**	**2.5**
1,3,5-Trimethylbenzene	108-67-8	NA	NA	NA	**1.2**	**1.4**	**7.5**	**4.7**	**1.6**	**1.4**	**1.7**	<0.63	<0.94	**12**	**2.6**	**2.6**
1,2,4-Trimethylbenzene	95-63-6	NA	NA	NA	**2.7**	**3.1**	**15**	**9.3**	**4.1**	**2.6**	**4.1**	<0.63	<0.94	**24**	**6.6**	**6.8**
1,4 - Dichlorobenzene	541-73-1	NA	NA	NA	<0.84	<1.0	<4.4	<1.3	<0.64	<0.83	<0.89	<0.63	<0.94	<6.3	<0.86	<0.86

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- VOC = Volatile Organic Compounds
- **Bolding** indicates a detection of that compound
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[1] Samples collected from VIP-3/IAQ-3 were not analyzed by the laboratory due to complications with the function of the vacuum gauges.
[2] Final vacuum pressure at IAQ-4 and IAQ-5 was at -0" Hg, which is below the recommended value (-1" Hg) for a sample to be considered valid.

Table 1
IAQ and SSSG Results for Q3 and Q4 2016 and Q1 2017 Vapor Intrusion Monitoring Results
SSW Collis, Clinton, Iowa

Parameters	CAS #	VIP-5/IAQ-5						VIP-6/IAQ-6						OAQ-1		
		Near PC1 Finishing Operations						Burn Room						Ambient Outdoor Background		
		COL-SSSG-05	COL-IAQ-06[2]	COL-SSSG-02	COL-IAQ-02	COL-SSSG-02	COL-IAQ-02	COL-SSSG-04	COL-IAQ-05	COL-SSSG-01	COL-IAQ-01	COL-SSSG-01	COL-IAQ-01	COL-OAQ-01	COL-OAQ-01	COL-OAQ-1
		Sampled 9/28/16		Sampled 12/14/16		Sampled 3/1/17		Sampled 9/28/16		Sampled 12/14/16		Sampled 3/1/17		Sampled 9/28/16	Sampled 12/14/16	Sampled 3/1/17
VOCs by Method TO-15		µg/m³	µg/m³	µg/m³	µg/m³	µg/m³	µg/m³	µg/m³	µg/m³	µg/m³	µg/m³	µg/m³	µg/m³	µg/m³	µg/m³	µg/m³
Propene	115-07-1	**29**	**3.3**	**4.3**	**4.5**	<3.5	**4.8**	**7.4**	**2.6**	**2.2**	**4.5**	<4.1	**5.7**	<0.74	<0.63	<0.57
Dichlorodifluoromethane (CFC 12)	75-71-8	**22**	**2.3**	**15**	**2**	**20**	**2.2**	**2.3**	**2.2**	**1.2**	**1.9**	<4.1	**2.3**	**2.2**	**1.9**	**2.3**
1,3-Butadiene	106-99-0	<0.82	<0.61	<0.83	**0.87**	<3.5	<0.82	<0.79	<0.8	<0.83	<0.63	<4.1	<0.79	<0.74	<0.63	<0.57
Acetone	67-64-1	**250**	**65**	**610**	**350**	**2,600**	**710**	**440**	**20**	**610**	**220**	**2,200**	**350**	**17**	ND	**16**
Trichlorofluoromethane	75-69-4	**36**	**1.2**	**28**	**1.3**	**28**	**1.1**	**3.7**	**1.2**	**1.4**	**1.2**	<4.1	**1.1**	**1.1**	**0.96**	**1.1**
2-Propanol (Isopropyl Alcohol)	67-63-0	**34**	<6.1	<8.3	<7.6	<35	<8.2	**21**	<8.0	<8.3	<6.3	<41	<7.9	<7.4	<6.3	<5.7
Methylene Chloride	75-09-2	**0.86**	<0.61	<0.83	<0.76	<3.5	<0.82	<0.79	<0.8	<0.83	<0.63	<4.1	<0.79	<0.74	<0.63	<0.57
Carbon Disulfide	75-15-0	<8.2	<6.1	**42**	<7.6	<35	<8.2	<7.9	<8.0	**40**	<6.3	<41	<7.9	**13**	<6.3	<5.7
Vinyl Acetate	108-05-4	**15**	<6.1	<8.3	<7.6	<35	<8.2	**13**	<8.0	<8.3	<6.3	<41	<7.9	<7.4	<6.3	<5.7
2-Butanone (MEK)	78-93-3	**52**	**19**	**17**	**27**	**670**	**190**	**55**	**19**	**20**	**34**	**530**	**46**	<7.4	<6.3	<5.7
cis-1,2-Dichloroethene	156-59-2	<0.82	<0.61	**2.8**	<0.76	<3.5	<0.82	<0.79	<0.8	**2**	<0.63	<4.1	<0.79	<0.74	<0.63	<0.57
Ethyl Acetate	141-78-6	**2.7**	**10**	**43**	**5**	**8.4**	**15**	**3.3**	<1.6	**12**	**3.8**	**8.4**	**2.8**	<1.5	<1.3	**4.2**
n-Hexane	110-54-3	**2.7**	**0.90**	**27**	<0.76	<3.5	<0.82	**2.8**	<0.8	**18**	**0.64**	<4.1	<0.79	<0.74	<0.63	<0.57
Chloroform	67-66-3	<0.82	<0.61	<0.83	<0.76	<3.5	<0.82	<0.79	<0.8	<0.83	<0.63	<4.1	<0.79	<0.74	<0.63	<0.57
Tetrahydrofuran (THF)	109-99-9	**9.2**	<0.61	**7**	<0.76	**4.5**	<0.82	**8.7**	<0.8	**5.8**	<0.63	<4.1	<0.79	<0.74	<0.63	<0.57
Benzene	71-43-2	**16**	**2.0**	**14**	**4.7**	**8.3**	**5.9**	**33**	**1.9**	**18**	**8.7**	**9.5**	**9.4**	<0.74	<0.63	<0.57
Cyclohexane	110-82-7	<1.6	<1.2	**5.3**	<1.5	<7.0	<1.6	<1.6	<1.6	**4.1**	<1.3	<8.2	<1.6	<1.5	<1.3	<1.1
Trichloroethene	79-01-6	**0.94**	<0.61	**1.7**	<0.76	<3.5	<0.82	<0.79	<0.8	**1.1**	<0.63	<4.1	<0.79	<0.74	<0.63	<0.57
1,4-Dioxane	123-91-1	<0.82	<0.61	<0.83	<0.76	<3.5	<0.82	<0.79	<0.8	<0.83	<0.63	<4.1	<0.79	<0.74	<0.63	<0.57
n-Heptane	142-82-5	**3.6**	**1.7**	**3.6**	<0.76	<3.5	<0.82	**4.4**	<0.8	**2.3**	<0.63	<4.1	<0.79	<0.74	<0.63	<0.57
4-Methyl-2-pentanone	108-10-1	**2.5**	<0.61	**0.89**	<0.76	<3.5	<0.82	**2.5**	<0.8	**0.99**	<0.63	<4.1	<0.79	<0.74	<0.63	<0.57
Toluene	108-88-3	**25**	**84**	**99**	**41**	**720**	**160**	**21**	**14**	**71**	**29**	**640**	**46**	**1.2**	<0.63	<0.57
2-Hexanone	591-78-6	**1.6**	<0.61	<0.83	<0.76	<3.5	<0.82	**1.5**	<0.8	**1.3**	<0.63	<4.1	<0.79	<0.74	<0.63	<0.57
Tetrachloroethene	127-18-4	**1.8**	<0.61	<0.83	<0.76	<3.5	<0.82	**1.4**	<0.8	<0.83	<0.63	<4.1	<0.79	<0.74	<0.63	<0.57
Ethylbenzene	100-41-4	**8.5**	**51**	**9.2**	**12**	**120**	**47**	**8.2**	**2.1**	**7.1**	**5.6**	**95**	**9.2**	<0.74	<0.63	<0.57
m,p-Xylenes	179601-23-1	**20**	**200**	**29**	**44**	**430**	**170**	**19**	**9.0**	**21**	**22**	**340**	**39**	<1.5	<1.3	<1.1
Styrene	100-42-5	**8.0**	<0.61	**4.5**	<0.76	<3.5	<0.82	**6.5**	<0.8	**3.2**	<0.63	<4.1	<0.79	<0.74	<0.63	<0.57
o-Xylene	95-47-6	**13**	**76**	**10**	**16**	**85**	**62**	**12**	**2.8**	**7**	**7.6**	**67**	**13**	<0.74	<0.63	<0.57
Cumene (isopropylbenzene)	98-82-8	**41**	**3.9**	**9.5**	<0.76	**3.9**	**3**	**42**	<0.8	**7.8**	<0.63	<4.1	<0.79	<0.74	<0.63	<0.57
4-Ethyltoluene	622-96-8	**1.8**	**21**	**1.4**	**2.8**	**11**	**16**	**1.6**	<0.8	**0.9**	**1.4**	**8.5**	**3.8**	<0.74	<0.63	<0.57
1,3,5-Trimethylbenzene	108-67-8	**1.1**	**26**	**1.3**	**3.6**	**7.5**	**17**	**0.86**	<0.8	**0.89**	**1.8**	**6.1**	**3.5**	<0.74	<0.63	<0.57
1,2,4-Trimethylbenzene	95-63-6	**3.4**	**47**	**2.8**	**6.1**	**15**	**32**	**3.0**	**1.4**	**1.9**	**3.5**	**12**	**7.3**	<0.74	<0.63	<0.57
1,4 - Dichlorobenzene	541-73-1	ND	<0.61	<0.83	<0.76	<3.5	<0.82	<0.79	<0.8	<0.83	<0.63	<4.1	<0.79	<0.74	<0.63	<0.57

Notes:
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[1] Samples collected from VIP-3/IAQ-3 were not analyzed by the laboratory due to complications with the function of the vacuum gauges.
[2] Final vacuum pressure at IAQ-4 and IAQ-5 was at -0" Hg, which is below the recommended value (-1" Hg) for a sample to be considered valid.

Table 2
SSSG Results for Q3 and Q4 2016 and Q1 2017 Vapor Intrusion Monitoring
SSW Collis, Clinton, Iowa

Parameter	CAS #	Commercial Screening Level	Commercial Action Level	VIP-2			VIP-3			VIP-4			VIP-5			VIP-6		
				Powder Paint Room			Near PC2 Finishing Operations			Lunch Room			Near PC1 Finishing Operations			Burn Room		
				COL-SSSG-02	COL-SSSG-04	COL-SSSG-04	COL-SSSG-03[1]	COL-SSSG-05	COL-SSSG-05	COL-SSSG-01	COL-SSSG-03	COL-SSSG-03	COL-SSSG-05	COL-SSSG-02	COL-SSSG-02	COL-SSSG-04	COL-SSSG-01	COL-SSSG-01
				Sampled 9/28/16	Sampled 12/14/16	Sampled 3/1/17	Sampled 9/28/16	Sampled 12/14/16	Sampled 3/1/17	Sampled 9/28/16	Sampled 12/14/16	Sampled 3/1/17	Sampled 9/28/16	Sampled 12/14/16	Sampled 3/1/17	Sampled 9/28/16	Sampled 12/14/16	Sampled 3/1/17
VOCs by Method TO-15		µg/m³	µg/m³	µg/m³	µg/m³	µg/m³	µg/m³	µg/m³	µg/m³	µg/m³	µg/m³	µg/m³	µg/m³	µg/m³	µg/m³	µg/m³	µg/m³	µg/m³
Propene	115-07-1	44,000	440,000	**15**	**3.8**	<5.2	NA	**11**	<4.4	**18**	**5**	<6.3	**29**	**4.3**	<3.5	**7.4**	**2.2**	<4.1
Dichlorodifluoromethane (CFC 12)	75-71-8	1,500	15,000	**2.1**	**1.5**	<5.2	NA	**1.6**	<4.4	**2.4**	**1.9**	<6.3	**22**	**15**	**20**	**2.3**	**1.2**	<4.1
1,3-Butadiene	106-99-0	14	140	<0.78	**1.1**	<5.2	NA	<0.84	<4.4	<0.68	<0.89	<6.3	<0.82	<0.83	<3.5	<0.79	<0.83	<4.1
Acetone	67-64-1	450,000	4,500,000	**410**	**810**	**2,300**	NA	**710**	**2,500**	**240**	**730**	**3,200**	**250**	**610**	**2,600**	**440**	**610**	**2,200**
Trichlorofluoromethane	75-69-4	--	--	**1.1**	**1.3**	<5.2	NA	**1.1**	<4.4	**1.8**	**3.3**	<6.3	**36**	**28**	**28**	**3.7**	**1.4**	<4.1
2-Propanol (Isopropyl Alcohol)	67-63-0	2,900	29,000	**16**	<8.4	<52	NA	<8.4	<44	**21**	**9.3**	<63	**34**	<8.3	<35	**21**	<8.3	<41
Methylene Chloride	75-09-2	8,800	88,000	<0.78	<0.84	<5.2	NA	<0.84	<4.4	**0.75**	**1.4**	<6.3	**0.86**	<0.83	<3.5	<0.79	<0.83	<4.1
Carbon Disulfide	75-15-0	10,000	100,000	<7.8	**46**	<52	NA	**55**	<44	<6.8	**74**	<63	<8.2	**42**	<35	<7.9	**40**	<41
Vinyl Acetate	108-05-4	2,900	29,000	**17**	<8.4	<52	NA	<8.4	<44	**12**	<8.9	<63	**15**	<8.3	<35	**13**	<8.3	<41
2-Butanone (MEK)	78-93-3	73,000	730,000	**57**	**23**	**550**	NA	**21**	**630**	**49**	**23**	**890**	**52**	**17**	**670**	**55**	**20**	**530**
cis-1,2-Dichloroethene	156-59-2	--	--	<0.78	**2.6**	<5.2	NA	**2.5**	<4.4	<0.68	**4.4**	<6.3	<0.82	**2.8**	<3.5	<0.79	**2**	<4.1
Ethyl Acetate	141-78-6	1,000	10,000	**2.5**	**23**	<10	NA	**28**	**11**	**8.1**	**48**	**13**	**2.7**	**43**	**8.4**	**3.3**	**12**	**8.4**
n-Hexane	110-54-3	10,000	100,000	**2.2**	**21**	<5.2	NA	**21**	<4.4	**2.4**	**39**	<6.3	**2.7**	**27**	<3.5	**2.8**	**18**	<4.1
Chloroform	67-66-3	18	180	<0.78	<0.84	<5.2	NA	**0.94**	<4.4	<0.68	<0.89	<6.3	<0.82	<0.83	<3.5	<0.79	<0.83	<4.1
Tetrahydrofuran (THF)	109-99-9	29,000	290,000	**8.6**	**6.8**	<5.2	NA	**6.6**	**5.1**	**6.2**	**10**	**7.2**	**9.2**	**7**	**4.5**	**8.7**	**5.8**	<4.1
Benzene	71-43-2	52	520	**30**	**18**	**8.7**	NA	**8.1**	**4.5**	**16**	**14**	<6.3	**16**	**14**	**8.3**	**33**	**18**	**9.5**
Cyclohexane	110-82-7	88,000	880,000	**3.8**	**4.6**	<10	NA	**5.3**	<8.7	**3.9**	**8.3**	<13	**4.6**	**5.3**	<7.0	**3.8**	**4.1**	<8.2
Trichloroethene	79-01-6	20[2]	200[2]	**0.86**	**1.4**	<5.2	NA	**2**	<4.4	**0.78**	**2.1**	<6.3	**0.94**	**1.7**	<3.5	<0.79	**1.1**	<4.1
n-Heptane	142-82-5	--	--	**4.8**	**3**	<5.2	NA	**3.2**	<4.4	**3.9**	**5.2**	<6.3	**3.6**	**3.6**	<3.5	**4.4**	**2.3**	<4.1
4-Methyl-2-pentanone	108-10-1	44,000	440,000	**2.3**	**1.2**	<5.2	NA	**1.2**	<4.4	**1.5**	**1.4**	<6.3	**2.5**	**0.89**	<3.5	**2.5**	**0.99**	<4.1
Toluene	108-88-3	73,000	730,000	**25**	**90**	**810**	NA	**86**	**760**	**35**	**150**	**1,100**	**25**	**99**	**720**	**21**	**71**	**640**
2-Hexanone	591-78-6	440	4,400	**1.6**	<0.84	<5.2	NA	<0.84	<4.4	**1.0**	**1.1**	<6.3	**1.6**	<0.83	<3.5	**1.5**	**1.3**	<4.1
Tetrachloroethene	127-18-4	580	5,800	**1.7**	<0.84	<5.2	NA	<0.84	<4.4	**0.93**	**0.94**	<6.3	**1.8**	<0.83	<3.5	**1.4**	<0.83	<4.1
Ethylbenzene	100-41-4	160	1,600	**9.2**	**11**	**130**	NA	**9.2**	**130**	**8.2**	**14**	**180**	**8.5**	**9.2**	**120**	**8.2**	**7.1**	**95**
m,p-Xylenes	179601-23-1	1,500	15,000	**21**	**34**	**480**	NA	**30**	**460**	**25**	**43**	**650**	**20**	**29**	**430**	**19**	**21**	**340**
Styrene	100-42-5	15,000	150,000	**7.5**	**4.9**	<5.2	NA	**3.8**	<4.4	**4.2**	**7.6**	<6.3	**8.0**	**4.5**	<3.5	**6.5**	**3.2**	<4.1
o-Xylene	95-47-6	1,500	15,000	**14**	**11**	**97**	NA	**9.9**	**93**	**11**	**15**	**130**	**13**	**10**	**85**	**12**	**7**	**67**
Cumene	98-82-8	5,800	58,000	**46**	**11**	<5.2	NA	**9.6**	<4.4	**19**	**14**	<6.3	**41**	**9.5**	**3.9**	**42**	**7.8**	<4.1
4-Ethyltoluene	622-96-8	--	--	**1.8**	**1.5**	**13**	NA	**1.3**	**11**	**1.9**	**2**	**18**	**1.8**	**1.4**	**11**	**1.6**	**0.9**	**8.5**
1,3,5-Trimethylbenzene	108-67-8	--	--	**0.99**	**1.3**	**8.9**	NA	**1.2**	**7.5**	**1.6**	**1.7**	**12**	**1.1**	**1.3**	**7.5**	**0.86**	**0.89**	**6.1**
1,2,4-Trimethylbenzene	95-63-6	100	1,000	**3.4**	**3**	**17**	NA	**2.7**	**15**	**4.1**	**4.1**	**24**	**3.4**	**2.8**	**15**	**3.0**	**1.9**	**12**

Notes:
- -- = Not Applicable
- CAS # = unique numerical identifier assigned by Chemical Abstracts Service
- NA = Non-Analyzed
- RSL = Regional Screening Level (USEPA)
- SSSG = Sub-Slab Soil Gas
- µg/m³ = micrograms per cubic meter
- VIP = Vapor Intrusion Point
- VOC = Volatile Organic Compounds
- **Bolding** indicates a detection of that compound
- Highlighting indicates a detection exceeding the Commercial Screening Level
- Highlighting indicates a detection exceeding the Commercial Action Level
- Commercial Screening level based on a cancer risk of 10E-6 and a hazard index of 0.1. These values were taken from the USEPA Vapor Intrusion Screening Level Calculator
- Commercial Action level based on a cancer risk of 10E-5 and a hazard index of 1. These values were taken from the USEPA Vapor Intrusion Screening Level Calculator
- The Commercial Screening and Commercial Action levels were calculated on the Vapor Intrusion Screening Level Calculator Version 3.5.1 (May 2016 RSLs) using the Target Sub-Slab and Exterior Soil Gas concentration column using the appropriate risk and hazard index values.

[1] Samples collected from VIP-3/IAQ-3 were not analyzed by the laboratory due to complications with the function of the vacuum gauges.

[2] Trichloroethene (TCE) Commercial Screening and Commercial Action criteria were taken from the EPA Region 7 Action Levels for Trichloroethene in Air. These values were then divided by an attenuation factor of 0.03 in order to calculate the Commercial Screening and Commercial Action criteria for sub slab soil gas.

Table 3
IAQ Results for Q3 and Q4 2016 and Q1 2017 Vapor Intrusion Monitoring
SSW, Collis, Clinton, Iowa

Parameters	CAS #	USEPA May 2016 Industrial Air RSL Screening Level	USEPA May 2016 Industrial Air RSL Action Level	IAQ-1/CSAQ-1								
				Front Offices								
				COL-CSAQ-01	COL-IAQ-07	COL-IAQ-08 (duplicate)	COL-CSAQ-01	COL-IAQ-07	COL-IAQ-08 (duplicate)	COL-CSAQ-01	COL-IAQ-07	COL-IAQ-08 (duplicate)
				9/28/2016			12/14/2016			3/1/2017		
VOCs by Method TO-15		µg/m³	µg/m³	µg/m³	µg/m³	µg/m³	µg/m³	µg/m³	µg/m³	µg/m³	µg/m³	µg/m³
Propene	115-07-1	1,300	13,000	**1.8**	**6.9**	**6.4**	<0.66	<0.85	**1.3**	<0.8	**3.6**	**5.4**
Dichlorodifluoromethane	75-71-8	44	440	**6.1**	**2.9**	**2.9**	**2.3**	**1.8**	**2**	**2.6**	**2.7**	**2.7**
1,3-Butadiene	106-99-0	0.41	4.1	<0.74	<0.68	<0.81	<0.66	<0.85	<0.81	<0.8	<0.9	<0.92
Acetone	67-64-1	14,000	140,000	**41**	**230**	**220**	<0.66	**22**	**25**	**17**	**140**	**180**
Trichlorofluoromethane	75-69-4	--	--	**29**	**38**	**38**	**3.5**	**5.6**	**5.1**	**1.3**	**10**	**10**
2-Propanol (Isopropyl Alcohol)	67-63-0	88	880	<7.4	<6.8	<8.1	<6.6	<8.5	<8.1	<8.0	<9.0	**18**
Carbon Disulfide	75-15-0	310	3100	<7.4	<6.8	<8.1	<6.6	<8.5	<8.1	<8.0	<9.0	<9.2
2-Butanone (MEK)	78-93-3	2,200	22,000	**9.7**	**50**	**46**	<6.6	<8.5	<8.1	<8.0	**10**	**13**
cis-1,2-Dichloroethene	156-59-2	--	--	<0.74	<0.68	<0.81	<0.66	<0.85	<0.81	<0.8	<0.9	<1.8
Ethyl Acetate	141-78-6	--	310	<1.5	<1.4	<1.6	**4.4**	**2.8**	**2.6**	**1.9**	**1.9**	**34**
n-Hexane	110-54-3	310	3,100	**1**	**33**	**33**	<0.66	<0.85	<0.81	<0.8	<0.9	<0.92
Tetrahydrofuran (THF)	109-99-9	880	8,800	**1.8**	**1.2**	**1.1**	<0.66	<0.85	<0.81	<0.8	<0.9	<0.92
Benzene	71-43-2	1.6	16	<0.74	**0.78**	<0.81	<0.66	<0.85	<0.81	<0.8	<0.9	<0.92
1,4-Dioxane	123-91-1	2.5	25	<0.74	<0.68	<0.81	<0.66	<0.85	<0.81	<0.8	<0.9	<0.92
n-Heptane	142-82-5	--	--	<0.74	<0.68	<0.81	<0.66	<0.85	<0.81	<0.8	<0.9	<0.92
Toluene	108-88-3	2,200	22,000	**19**	**68**	**62**	**0.77**	**1.4**	**1.1**	**1.4**	**11**	**13**
Ethylbenzene	100-41-4	4.9	49	**2.7**	**12**	**10**	<0.66	<0.85	<0.81	<0.8	**2.1**	**2.3**
m,p-Xylenes	179601-23-1	44	440	**11**	**48**	**42**	<1.3	<1.7	<1.6	<1.6	**7.3**	**8.5**
Styrene	100-42-5	440	4400.0	<0.74	<0.68	<0.81	<0.66	<0.85	<0.81	<0.8	<0.9	<0.92
o-Xylene	95-47-6	44	440	**3.6**	**14**	**13**	<0.66	<0.85	<0.81	**0.92**	**2.8**	**3.2**
Cumene	98-82-8	180	1,800	<0.74	<0.68	<0.81	<0.66	<0.85	<0.81	<0.8	<0.9	<0.92
4-Ethyltoluene	622-96-8	--	--	<0.74	**3.2**	**2.7**	<0.66	<0.85	<0.81	<0.8	<0.9	<0.92
1,3,5-Trimethylbenzene	108-67-8	--	--	**0.93**	**3.5**	**3**	<0.66	<0.85	<0.81	<0.8	<0.9	**0.94**
1,2,4-Trimethylbenzene	95-63-6	3.1	31	**1.9**	**6.3**	**5.4**	<0.66	**1.9**	**1.7**	<0.8	**2.1**	**2.5**
1,4 - Dichlorobenzene	541-73-1	1.1	11	<0.74	<0.68	<0.81	**2.3**	<0.85	<0.81	<0.8	<0.9	<0.92

Notes:
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- IAQ = Indoor Air Quality
- NA = Non-Analyzed
- RSL = Regional Screening Level (USEPA)
- µg/m³ = micrograms per cubic meter
- VIP = Vapor Intrusion Point
- VOC = Volatile Organic Compounds
- **Bolding** indicates a detection of that compound
- Highlighting indicates a detection exceeding the USEPA May 2016 Industrial Air RSL Screening level
- Highlighting indicates a detection exceeding the USEPA May 2016 Industrial Air RSL Action level
- Only parameters that were detected in one or more samples are displayed. Not all sample results are shown.
- CSAQ samples were included in this table because the sample is believed to be representative of the air quality conditions in the crawl space located beneath the front office area.
- The USEPA May 2016 Industrial Air RSL Screening Level Criteria has a TR of 1E-6 and a THI of 0.1. These values were taken from the RSL Composite Worker Ambient Air Table (TR=1E-6, HQ=0.1)
- The USEPA May 2016 Industrial Air RSL Action Level Criteria has a TR of 1E-5 and a THI of 1.0. These values were taken from the RSL Composite Worker Ambient Air Table (TR=1E-6, HQ=1.0). If the values were taken from Carcinogenic SL table, they were multiplied by a factor of 10 since the TR is 1E-6 rather than the necessary 1E-5. Values taken from the noncarcinogenic column were taken as is because the THI is at the correct value of 1.0.

[1] Samples collected from VIP-3/IAQ-3 were not analyzed by the laboratory due to complications with the function of the vacuum gauges.

[2] Final vacuum pressure at IAQ-4 and IAQ-5 was at -0" Hg, which is below the recommended value (-1" Hg) for a sample to be considered valid.

Table 3
IAQ Results for Q3 and Q4 2016 and Q1 2017 Vapor Intrusion Monitoring
SSW, Collis, Clinton, Iowa

Parameters	CAS #	USEPA May 2016 Industrial Air RSL Screening Level	USEPA May 2016 Industrial Air RSL Action Level	IAQ-2			IAQ-3				IAQ-4				
				Powder Paint Room			Near PC2 Finishing Operations				Lunch Room				
				COL-IAQ-02	COL-IAQ-04	COL-IAQ-05	COL-IAQ-03[1]	COL-IAQ-04[1] (duplicate)	COL-IAQ-05	COL-IAQ-06	COL-IAQ-01	COL-IAQ-03[2]	COL-IAQ-06 (Duplicate)	COL-IAQ-03	COL-IAQ-04 (Duplicate)
				9/28/2016	12/14/2016	3/1/2017	9/28/2016		12/14/2016	3/1/2017	9/28/2016	12/14/2016		3/1/2017	
VOCs by Method TO-15		µg/m³	µg/m³	µg/m³	µg/m³	µg/m³	µg/m³	µg/m³	µg/m³	µg/m³	µg/m³	µg/m³	µg/m³	µg/m³	µg/m³
Propene	115-07-1	1,300	13,000	**7.2**	**7.1**	**4.9**	NA	NA	**10**	**9.4**	**8.6**	**2.7**	**2.6**	**3.4**	**3.9**
Dichlorodifluoromethane	75-71-8	44	440	**2.3**	**1.8**	**2.2**	NA	NA	**1.8**	**2.2**	**2.2**	**1.9**	**1.7**	**2.3**	**2.3**
1,3-Butadiene	106-99-0	0.41	4.1	<0.8	**2**	<1.1	NA	NA	**1.3**	<1.3	<0.83	**1.1**	**1.1**	<0.86	<0.86
Acetone	67-64-1	14,000	140,000	**24**	**1,100**	**280**	NA	NA	**680**	**980**	**70**	**83**	**74**	**230**	**240**
Trichlorofluoromethane	75-69-4	--	--	**1.2**	**1.9**	**1.1**	NA	NA	**1.4**	<1.3	**1.4**	**1.4**	**1.3**	**1.2**	**1.2**
2-Propanol (Isopropyl Alcohol)	67-63-0	88	880	**11**	<8.4	<11	NA	NA	<10	<13	**10**	<6.3	<9.4	<8.6	<8.6
Carbon Disulfide	75-15-0	310	3100	<8.0	<8.4	<11	NA	NA	<10	<13	<8.3	<6.3	<9.4	<8.6	<8.6
2-Butanone (MEK)	78-93-3	2,200	22,000	<8.0	**14**	**23**	NA	NA	**11**	**80**	**26**	<6.3	<9.4	**18**	**21**
cis-1,2-Dichloroethene	156-59-2	--	--	<0.8	<0.84	<1.1	NA	NA	<1.0	<1.3	<0.83	<0.63	<0.94	<0.86	<0.86
Ethyl Acetate	141-78-6	--	310	**13**	**3.4**	**6.5**	NA	NA	**30**	**12**	<1.7	**9.3**	**5.5**	**6.3**	**23**
n-Hexane	110-54-3	310	3,100	<0.8	<0.84	<1.1	NA	NA	<1.0	<1.3	<0.83	**0.88**	<0.94	**0.96**	**0.96**
Tetrahydrofuran (THF)	109-99-9	880	8,800	**2.6**	<0.84	<1.1	NA	NA	<1.0	<1.3	<0.83	<0.63	<0.94	<0.86	<0.86
Benzene	71-43-2	1.6	16	**2**	**6.2**	**7.2**	NA	NA	**3.5**	**3.1**	<0.83	**5.1**	**4.9**	**1.5**	**1.6**
1,4-Dioxane	123-91-1	2.5	25	<0.8	**3.4**	**2.7**	NA	NA	**2.3**	<1.3	<0.83	<0.63	<0.94	<0.86	<0.86
n-Heptane	142-82-5	--	--	<0.8	<0.84	<1.1	NA	NA	<1.0	<1.3	<0.83	<0.63	<0.94	<0.86	<0.86
Toluene	108-88-3	2,200	22,000	**12**	**21**	**29**	NA	NA	**15**	**90**	**32**	**4.5**	**3.4**	**19**	**20**
Ethylbenzene	100-41-4	4.9	49	**1.2**	**3.6**	**4.8**	NA	NA	**3.3**	**15**	**5.3**	**0.85**	<0.94	**4.3**	**4.4**
m,p-Xylenes	179601-23-1	44	440	**4.3**	**13**	**19**	NA	NA	**13**	**61**	**21**	**2.9**	**2.3**	**17**	**18**
Styrene	100-42-5	440	4400.0	<0.8	<0.84	<1.1	NA	NA	<1.0	<1.3	<0.83	<0.63	<0.94	<0.86	<0.86
o-Xylene	95-47-6	44	440	**1.6**	**4.2**	**6.3**	NA	NA	**4.7**	**19**	**6.1**	**0.93**	<0.94	**6**	**6.1**
Cumene	98-82-8	180	1,800	<0.8	<0.84	<1.1	NA	NA	<1.0	<1.3	<0.83	<0.63	<0.94	<0.86	<0.86
4-Ethyltoluene	622-96-8	--	--	<0.8	**1.1**	**1.7**	NA	NA	**1.2**	**4.6**	**1.3**	<0.63	<0.94	**2.4**	**2.5**
1,3,5-Trimethylbenzene	108-67-8	--	--	<0.8	**1.4**	**1.8**	NA	NA	**1.4**	**4.7**	**1.4**	<0.63	<0.94	**2.6**	**2.6**
1,2,4-Trimethylbenzene	95-63-6	3.1	31	**1.4**	**2.9**	**3.7**	NA	NA	**3.1**	**9.3**	**2.6**	<0.63	<0.94	**6.6**	**6.8**
1,4 - Dichlorobenzene	541-73-1	1.1	11	<0.8	<0.84	<1.1	NA	NA	<1.0	<1.3	<0.83	<0.63	<0.94	<0.86	<0.86

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- Only parameters that were detected in one or more samples are displayed. Not all sample results are shown.
- CSAQ samples were included in this table because the sample is believed to be representative of the air quality conditions in the crawl space located beneath the front office area.
- The USEPA May 2016 Industrial Air RSL Screening Level Criteria has a TR of 1E-6 and a THI of 0.1. These values were taken from the RSL Composite Worker Ambient Air Table (TR=1E-6, HQ=0.1)
- The USEPA May 2016 Industrial Air RSL Action Level Criteria has a TR of 1E-5 and a THI of 1.0. These values were taken from the RSL Composite Worker Ambient Air Table (TR=1E-6, HQ=1.0). If the values were taken from Carcinogenic SL table, they were multiplied by a factor of 10 since the TR is 1E-6 rather than the necessary 1E-5. Values taken from the noncarcinogenic column were taken as is because the THI is at the correct value of 1.0.

[1] Samples collected from VIP-3/IAQ-3 were not analyzed by the laboratory due to complications with the function of the vacuum gauges.

[2] Final vacuum pressure at IAQ-4 and IAQ-5 was at -0" Hg, which is below the recommended value (-1" Hg) for a sample to be considered valid.

Table 3
IAQ Results for Q3 and Q4 2016 and Q1 2017 Vapor Intrusion Monitoring
SSW, Collis, Clinton, Iowa

Parameters	CAS #	USEPA May 2016 Industrial Air RSL Screening Level	USEPA May 2016 Industrial Air RSL Action Level	IAQ-5			IAQ-6			OAQ-1		
				Near PC1 Finishing Operations			Burn Room			Ambient Outdoor Background		
				COL-IAQ-06[2]	COL-IAQ-02	COL-IAQ-02	COL-IAQ-05	COL-IAQ-01	COL-IAQ-01	COL-OAQ-01	COL-OAQ-01	COL-OAQ-01
				9/28/2016	12/14/2016	3/1/2017	9/28/2016	12/14/2016	3/1/2017	9/28/2016	12/14/2016	3/1/2017
VOCs by Method TO-15		µg/m³	µg/m³	µg/m³	µg/m³	µg/m³	µg/m³	µg/m³	µg/m³	µg/m³	µg/m³	µg/m³
Propene	115-07-1	1,300	13,000	**3.3**	**4.5**	**4.8**	**2.6**	**4.5**	**5.7**	<0.74	<0.63	<0.57
Dichlorodifluoromethane	75-71-8	44	440	**2.3**	**2**	**2.2**	**2.2**	**1.9**	**2.3**	**2.2**	**1.9**	**2.3**
1,3-Butadiene	106-99-0	0.41	4.1	<0.61	**0.87**	<0.82	<0.8	<0.63	<0.79	<0.74	<0.63	<0.57
Acetone	67-64-1	14,000	140,000	**65**	**350**	**710**	**20**	**220**	**350**	**17**	<0.63	**16**
Trichlorofluoromethane	75-69-4	--	--	**1.2**	**1.3**	**1.1**	**1.2**	**1.2**	**1.1**	**1.1**	**0.96**	**1.1**
2-Propanol (Isopropyl Alcohol)	67-63-0	88	880	<6.1	<7.6	<8.2	<8.0	<6.3	<7.9	<7.4	<6.3	<5.7
Carbon Disulfide	75-15-0	310	3100	<6.1	<7.6	<8.2	<8.0	<6.3	<7.9	**13**	<6.3	<5.7
2-Butanone (MEK)	78-93-3	2,200	22,000	**19**	**27**	**190**	**19**	**34**	**46**	<7.4	<6.3	<5.7
cis-1,2-Dichloroethene	156-59-2	--	--	<0.61	<0.76	<0.82	<0.8	<0.63	<0.79	<0.74	<0.63	<0.57
Ethyl Acetate	141-78-6	--	310	**10**	**5**	**15**	<1.6	**3.8**	**2.8**	<1.5	<1.3	**4.2**
n-Hexane	110-54-3	310	3,100	**0.9**	<0.76	<0.82	<0.8	**0.64**	<0.79	<0.74	<0.63	<0.57
Tetrahydrofuran (THF)	109-99-9	880	8,800	<0.61	<0.76	<0.82	<0.8	<0.63	<0.79	<0.74	<0.63	<0.57
Benzene	71-43-2	1.6	16	**2**	**4.7**	**5.9**	**1.9**	**8.7**	**9.4**	<0.74	<0.63	<0.57
1,4-Dioxane	123-91-1	2.5	25	<0.61	<0.76	<0.82	<0.8	<0.63	<0.79	<0.74	<0.63	<0.57
n-Heptane	142-82-5	--	--	**1.7**	<0.76	<0.82	<0.8	<0.63	<0.79	<0.74	<0.63	<0.57
Toluene	108-88-3	2,200	22,000	**84**	**41**	**160**	**14**	**29**	**46**	**1.2**	<0.63	<0.57
Ethylbenzene	100-41-4	4.9	49	**51**	**12**	**47**	**2.1**	**5.6**	**9.2**	<0.74	<0.63	<0.57
m,p-Xylenes	179601-23-1	44	440	**200**	**44**	**170**	**9**	**22**	**39**	<1.5	<1.3	<1.1
Styrene	100-42-5	440	4400.0	<0.61	<0.76	<0.82	<0.8	<0.63	<0.79	<0.74	<0.63	<0.57
o-Xylene	95-47-6	44	440	**76**	**16**	**62**	**2.8**	**7.6**	**13**	<0.74	<0.63	<0.57
Cumene	98-82-8	180	1,800	**3.9**	<0.76	**3**	<0.8	<0.63	<0.79	<0.74	<0.63	<0.57
4-Ethyltoluene	622-96-8	--	--	**21**	**2.8**	**16**	<0.8	**1.4**	**3.8**	<0.74	<0.63	<0.57
1,3,5-Trimethylbenzene	108-67-8	--	--	**26**	**3.6**	**17**	<0.8	**1.8**	**3.5**	<0.74	<0.63	<0.57
1,2,4-Trimethylbenzene	95-63-6	3.1	31	**47**	**6.1**	**32**	**1.4**	**3.5**	**7.3**	<0.74	<0.63	<0.57
1,4 - Dichlorobenzene	541-73-1	1.1	11	<0.61	<0.76	<0.82	<0.8	<0.63	<0.79	<0.74	<0.63	<0.57

Notes:
- -- = Not Applicable
- CAS # = unique numerical identifier assigned by Chemical Abstracts Service
- CSAQ = Crawl Space Air Quality
- IAQ = Indoor Air Quality
- NA = Non-Analyzed
- RSL = Regional Screening Level (USEPA)
- µg/m³ = micrograms per cubic meter
- VIP = Vapor Intrusion Point
- VOC = Volatile Organic Compounds
- **Bolding** indicates a detection of that compound
- Highlighting indicates a detection exceeding the USEPA May 2016 Industrial Air RSL Screening level
- Highlighting indicates a detection exceeding the USEPA May 2016 Industrial Air RSL Action level
- Only parameters that were detected in one or more samples are displayed. Not all sample results are shown.
- CSAQ samples were included in this table because the sample is believed to be representative of the air quality conditions in the crawl space located beneath the front office area.
- The USEPA May 2016 Industrial Air RSL Screening Level Criteria has a TR of 1E-6 and a THI of 0.1. These values were taken from the RSL Composite Worker Ambient Air Table (TR=1E-6, HQ=0.1)
- The USEPA May 2016 Industrial Air RSL Action Level Criteria has a TR of 1E-5 and a THI of 1.0. These values were taken from the RSL Composite Worker Ambient Air Table (TR=1E-6, HQ=1.0). If the values were taken from Carcinogenic SL table, they were multiplied by a factor of 10 since the TR is 1E-6 rather than the necessary 1E-5. Values taken from the noncarcinogenic column were taken as is because the THI is at the correct value of 1.0.

[1] Samples collected from VIP-3/IAQ-3 were not analyzed by the laboratory due to complications with the function of the vacuum gauges.

[2] Final vacuum pressure at IAQ-4 and IAQ-5 was at -0" Hg, which is below the recommended value (-1" Hg) for a sample to be considered valid.

ATTACHMENT A
ANALYTICAL DATA

2655 Park Center Dr., Suite A
Simi Valley, CA 93065
T: +1 805 526 7161
F: +1 805 526 7270
www.alsglobal.com

LABORATORY REPORT

March 22, 2017

Cindy Lang
BB&E, Inc
235 East Main St, Suite 107
Northville, MI 48167

RE: Q1 2017 VI Assessment / 02028018 task 4

Dear Cindy:

Enclosed are the results of the samples submitted to our laboratory on March 8, 2017. For your reference, these analyses have been assigned our service request number P1701156.

All analyses were performed according to our laboratory's NELAP and DoD-ELAP-approved quality assurance program. The test results meet requirements of the current NELAP and DoD-ELAP standards, where applicable, and except as noted in the laboratory case narrative provided. For a specific list of NELAP and DoD-ELAP-accredited analytes, refer to the certifications section at www.alsglobal.com. Results are intended to be considered in their entirety and apply only to the samples analyzed and reported herein.

If you have any questions, please call me at (805) 526-7161.

Respectfully submitted,

ALS | Environmental

By Sue Anderson at 2:29 pm, Mar 22, 2017
For Kelly Horiuchi
Laboratory Director

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Simi Valley, CA 93065
T: +1 805 526 7161
F: +1 805 526 7270
www.alsglobal.com

Client: BB&E, Inc
Project: Q1 2017 VI Assessment / 02028018 task 4

Service Request No: P1701156

CASE NARRATIVE

The samples were received intact under chain of custody on March 8, 2017 and were stored in accordance with the analytical method requirements. Please refer to the sample acceptance check form for additional information. The results reported herein are applicable only to the condition of the samples at the time of sample receipt.

Volatile Organic Compound Analysis

The samples were analyzed for volatile organic compounds in accordance with EPA Method TO-15 from the Compendium of Methods for the Determination of Toxic Organic Compounds in Ambient Air, Second Edition (EPA/625/R-96/010b), January, 1999. This procedure is described in laboratory SOP VOA-TO15. The analytical system was comprised of a gas chromatograph / mass spectrometer (GC/MS) interfaced to a whole-air preconcentrator. This method is included on the laboratory's NELAP and DoD-ELAP scope of accreditation. Any analytes flagged with an X are not included on the NELAP or DoD-ELAP accreditation.

The containers were cleaned, prior to sampling, down to the method reporting limit (MRL) reported for this project. Please note, projects which require reporting below the MRL could have results between the MRL and method detection limit (MDL) that are biased high.

The results of analyses are given in the attached laboratory report. All results are intended to be considered in their entirety, and ALS Environmental (ALS) is not responsible for utilization of less than the complete report.

Use of ALS Environmental (ALS)'s Name. Client shall not use ALS's name or trademark in any marketing or reporting materials, press releases or in any other manner ("Materials") whatsoever and shall not attribute to ALS any test result, tolerance or specification derived from ALS's data ("Attribution") without ALS's prior written consent, which may be withheld by ALS for any reason in its sole discretion. To request ALS's consent, Client shall provide copies of the proposed Materials or Attribution and describe in writing Client's proposed use of such Materials or Attribution. If ALS has not provided written approval of the Materials or Attribution within ten (10) days of receipt from Client, Client's request to use ALS's name or trademark in any Materials or Attribution shall be deemed denied. ALS may, in its discretion, reasonably charge Client for its time in reviewing Materials or Attribution requests. Client acknowledges and agrees that the unauthorized use of ALS's name or trademark may cause ALS to incur irreparable harm for which the recovery of money damages will be inadequate. Accordingly, Client acknowledges and agrees that a violation shall justify preliminary injunctive relief. For questions contact the laboratory.

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Simi Valley, CA 93065
T: +1 805 526 7161
F: +1 805 526 7270
www.alsglobal.com

ALS Environmental – Simi Valley

CERTIFICATIONS, ACCREDITATIONS, AND REGISTRATIONS

Agency	Web Site	Number
Arizona DHS	http://www.azdhs.gov/preparedness/state-laboratory/lab-licensure-certification/index.php#laboratory-licensure-home	AZ0694
Florida DOH (NELAP)	http://www.doh.state.fl.us/lab/EnvLabCert/WaterCert.htm	E871020
Louisiana DEQ (NELAP)	http://www.deq.louisiana.gov/portal/DIVISIONS/PublicParticipationandPermitSupport/LouisianaLaboratoryAccreditationProgram.aspx	05071
Maine DHHS	http://www.maine.gov/dhhs/mecdc/environmental-health/water/dwp-services/labcert/labcert.htm	2016036
Minnesota DOH (NELAP)	http://www.health.state.mn.us/accreditation	1177034
New Jersey DEP (NELAP)	http://www.nj.gov/dep/oqa/	CA009
New York DOH (NELAP)	http://www.wadsworth.org/labcert/elap/elap.html	11221
Oregon PHD (NELAP)	http://public.health.oregon.gov/LaboratoryServices/EnvironmentalLaboratoryAccreditation/Pages/index.aspx	4068-004
Pennsylvania DEP	http://www.depweb.state.pa.us/labs	68-03307 (Registration)
PJLA (DoD ELAP)	http://www.pjlabs.com/search-accredited-labs	65818 (Testing)
Texas CEQ (NELAP)	http://www.tceq.texas.gov/field/qa/env_lab_accreditation.html	T104704413-16-7
Utah DOH (NELAP)	http://health.utah.gov/lab/environmental-lab-certification/	CA016272016-6
Washington DOE	http://www.ecy.wa.gov/programs/eap/labs/lab-accreditation.html	C946

Analyses were performed according to our laboratory's NELAP and DoD-ELAP approved quality assurance program. A complete listing of specific NELAP and DoD-ELAP certified analytes can be found in the certifications section at www.alsglobal.com, or at the accreditation body's website.

Each of the certifications listed above have an explicit Scope of Accreditation that applies to specific matrices/methods/analytes; therefore, please contact the laboratory for information corresponding to a particular certification.

ALS ENVIRONMENTAL

DETAIL SUMMARY REPORT

Client: BB&E, Inc

Service Request: P1701156

Project ID: Q1 2017 VI Assessment / 02028018 task 4

Date Received: 3/8/2017

Time Received: 09:25

Client Sample ID	Lab Code	Matrix	Date Collected	Time Collected	Container ID	Pi1 (psig)	Pf1 (psig)	TO-15 - VOC Cans
COL-SSSG-01	P1701156-001	Air	3/1/2017	18:53	SC02158	-3.58	3.53	X
COL-IAQ-01	P1701156-002	Air	3/1/2017	18:53	AC02088	-3.03	3.60	X
COL-SSSG-02	P1701156-003	Air	3/1/2017	18:55	SC02189	-3.88	3.59	X
COL-IAQ-02	P1701156-004	Air	3/1/2017	18:55	AC02209	-3.43	3.62	X
COL-SSSG-03	P1701156-005	Air	3/1/2017	19:00	SC00980	-4.33	3.66	X
COL-IAQ-03	P1701156-006	Air	3/1/2017	19:00	AC02156	-3.98	3.67	X
COL-IAQ-04	P1701156-007	Air	3/1/2017	19:00	AC02078	-4.12	3.54	X
COL-SSSG-04	P1701156-008	Air	3/1/2017	19:05	SSC00342	-3.57	3.71	X
COL-IAQ-05	P1701156-009	Air	3/1/2017	19:05	AC02210	-6.31	3.50	X
COL-SSSG-05	P1701156-010	Air	3/1/2017	19:07	SC00519	-4.16	3.65	X
COL-IAQ-06	P1701156-011	Air	3/1/2017	19:07	AS00675	-7.52	3.62	X
COL-IAQ-07	P1701156-012	Air	3/1/2017	19:11	AS00676	-4.51	3.57	X
COL-IAQ-08	P1701156-013	Air	3/1/2017	19:11	AC02217	-4.78	3.57	X
COL-CSAQ-01	P1701156-014	Air	3/1/2017	19:17	AS00972	-3.21	3.55	X
COL-OAQ-01	P1701156-015	Air	3/1/2017	19:20	AC01010	1.29	3.49	X

Air - Chain of Custody Record & Analytical Service Request

2655 Park Center Drive, Suite A
Simi Valley, California 93065
Phone (805) 526-7161
Fax (805) 526-7270

Requested Turnaround Time in Business Days (Surcharges) please circle
1 Day (100%) 2 Day (75%) 3 Day (50%) 4 Day (35%) 5 Day (25%) 10-Day-Standard 3/21/17

ALS Project No. P170 1156

Company Name & Address (Reporting Information): BBaE Inc. 235 E Main St. Suite 107 Northville, MI 48167

Project Name: Q1 2017 VI Assessment

Project Number:

ALS Contact: Joe Ribar

Analysis Method

Project Manager: Cindy Lang

Phone: 248-489-9636

Fax:

P.O. # / Billing Information: 02028018 task 4

Email Address for Result Reporting: kdepew@bbande.com; kvanbuskirk@bbande.com; clang@bbande.com

Sampler (Print & Sign): Beatrice Depew Bat Depew

Client Sample ID	Laboratory ID Number	Date Collected	Time Collected	Canister ID (Bar code # - AC, SC, etc.)	Flow Controller ID (Bar code # - FC #)	Canister Start Pressure "Hg	Canister End Pressure "Hg/psig	Sample Volume			Comments e.g. Actual Preservative or specific instructions
COL-SSSG-01	1	3/1/17	1853	002792	OA00819	-30	-9				
COL-IAQ-01	2		1853	AC02088	005374	-29	-8				
COL-SSSG-02	3		1855	004053	03927	-27	-10				
COL-IAQ-02	4		1855	11582	H220147	-29	-8				
COL-SSSG-03	5		1900	02127	OA02106	-29	-10				
COL-IAQ-03	6		1900	N0680	00837	-26	-5				
COL-IAQ-04	7		1900	AC02078	02379	-29	-8				
COL-SSSG-04	8		1905	13999	OA01103	-29	-10				
COL-IAQ-05	9		1905	13672	01880	-29	-14.5				
COL-SSSG-05	10		1907	00485	OA00542	-30	-11				
COL-IAQ-06	11		1907	AS00675	F220512	-30	-17.5				
COL-IAQ-07	12		1911	AS00676	FCA00497	-30	-10				
COL-IAQ-08	13		1911	AC02217	FCA00957	-28	-10				
~~COL-CSAQ-01~~				~~002774~~	~~FCA00247~~						

Report Tier Levels - please select

Tier I - Results (Default in not specified) _____
Tier II (Results + QC Summaries _____
Tier III (Results + QC & Calibration Summaries) _____
Tier IV (Date Validation Package) 10% Surcharge _____

EDD required YES / No
Type: _____ Units: _____

Chain of Custody Seal: (Circle) INTACT BROKEN ABSENT

Project Requirements (MRLs, QAPP)

Relinquished by: (Signature)	Date:	Time:	Received by: (Signature)	Date:	Time:
Bat Depew	3/1/17	2100	Scott Wa Feder		
Relinquished by: (Signature)	Date:	Time:	Received by: (Signature)	Date:	Time:
				3/8/17	0925

Cooler / Blank Temperature _____ °C

Air - Chain of Custody Record & Analytical Service Request

2655 Park Center Drive, Suite A
Simi Valley, California 93065
Phone (805) 526-7161
Fax (805) 526-7270

Requested Turnaround Time in Business Days (Surcharges) please circle
1 Day (100%) 2 Day (75%) 3 Day (50%) 4 Day (35%) 5 Day (25%) 10-Day-Standard

3/21/17

ALS Project No. P1701156

ALS Contact: Joe Ribar

Company Name & Address (Reporting Information): BB&E Inc. 235 E Main St Suite 107 Northville, MI 48167

Project Name: Q1 2017 VI Assessment

Project Number:

Project Manager: Cindy Lang

P.O. # / Billing Information: 02028018 task 4

Phone: 248 489 9636

Fax:

Email Address for Result Reporting: Kdepew@bbande.com; Kvanbuskirk@bbande.com; clang@bbande.com

Sampler (Print & Sign): Katrice Depew Kat Depew

Analysis Method

Client Sample ID	Laboratory ID Number	Date Collected	Time Collected	Canister ID (Bar code # - AC, SC, etc.)	Flow Controller ID (Bar code # - FC #)	Canister Start Pressure "Hg	Canister End Pressure "Hg/psig	Sample Volume			Comments e.g. Actual Preservative or specific instructions
COL-CSAQ-01	(4)	3/1/17	1917	20470	FCA00481	-28.5	-8				
COL-OAQ-01	(5)	↓	1920	002774	FCA00247	-25	-3				

Report Tier Levels - please select

Tier I - Results (Default in not specified) ____
Tier II (Results + QC Summaries ____
Tier III (Results + QC & Calibration Summaries) ____
Tier IV (Date Validation Package) 10% Surcharge ____

EDD required YES / No
Type: ____ Units: ____

Chain of Custody Seal: (Circle) INTACT BROKEN ABSENT

Project Requirements (MRLs, QAPP)

Relinquished by: (Signature)	Date:	Time:	Received by: (Signature)	Date:	Time:
Kat Depew	3/1/17	2100	Scott Wakeley		
Relinquished by: (Signature)	Date:	Time:	Received by: (Signature)	Date:	Time:
			[signature]	3/8/17	0925

Cooler / Blank Temperature ____ °C

ALS Environmental
Sample Acceptance Check Form

Client: BB&E, Inc Work order: P1701156
Project: Q1 2017 VI Assessment / 02028018 task 4
Sample(s) received on: 3/9/17 Date opened: 3/9/17 by: ADAVID

Note: This form is used for all samples received by ALS. The use of this form for custody seals is strictly meant to indicate presence/absence and not as an indication of compliance or nonconformity. Thermal preservation and pH will only be evaluated either at the request of the client and/or as required by the method/SOP.

		Yes	No	N/A
1	Were **sample containers** properly marked with client sample ID?	☒	☐	☐
2	Did **sample containers** arrive in good condition?	☒	☐	☐
3	Were **chain-of-custody** papers used and filled out?	☒	☐	☐
4	Did **sample container labels** and/or tags agree with custody papers?	☒	☐	☐
5	Was **sample volume** received adequate for analysis?	☒	☐	☐
6	Are samples within specified holding times?	☒	☐	☐
7	Was proper **temperature** (thermal preservation) of cooler at receipt adhered to?	☐	☐	☒
8	Were **custody seals** on outside of cooler/Box/Container?	☐	☒	☐
	Location of seal(s)? _____ Sealing Lid?	☐	☐	☒
	Were signature and date included?	☐	☐	☒
	Were seals intact?	☐	☐	☒
9	Do containers have appropriate **preservation**, according to method/SOP or Client specified information?	☐	☐	☒
	Is there a client indication that the submitted samples are **pH** preserved?	☐	☐	☒
	Were **VOA vials** checked for presence/absence of air bubbles?	☐	☐	☒
	Does the client/method/SOP require that the analyst check the sample pH and if necessary alter it?	☐	☐	☒
10	**Tubes:** Are the tubes capped and intact?	☐	☐	☒
11	**Badges:** Are the badges properly capped and intact?	☐	☐	☒
	Are dual bed badges separated and individually capped and intact?	☐	☐	☒

Lab Sample ID	Container Description	Required pH *	Received pH	Adjusted pH	VOA Headspace (Presence/Absence)	Receipt / Preservation Comments
P1701156-001.01	6.0 L Source Can					
P1701156-002.01	6.0 L Ambient Can					
P1701156-003.01	6.0 L Source Can					
P1701156-004.01	6.0 L Ambient Can					
P1701156-005.01	6.0 L Source Can					
P1701156-006.01	6.0 L Ambient Can					
P1701156-007.01	6.0 L Ambient Can					
P1701156-008.01	6.0 L Silonite Can					
P1701156-009.01	6.0 L Ambient Can					
P1701156-010.01	6.0 L Source Can					
P1701156-011.01	6.0 L Silonite Can					
P1701156-012.01	6.0 L Silonite Can					
P1701156-013.01	6.0 L Ambient Can					
P1701156-014.01	6.0 L Silonite Can					
P1701156-015.01	6.0 L Ambient Can					

Explain any discrepancies: (include lab sample ID numbers): _____

RSK - MEEPP, HCL (pH<2); RSK - CO2, (pH 5-8); Sulfur (pH>4)

ALS Environmental
Sample Acceptance Check Form

Client: BB&E, Inc Work order: P1701156
Project: Q1 2017 VI Assessment / 02028018 task 4
Sample(s) received on: 3/9/17 Date opened: 3/9/17 by: ADAVID

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Client: **BB&E, Inc**
Client Sample ID: **COL-SSSG-01**
Client Project ID: **Q1 2017 VI Assessment / 02028018 task 4**

ALS Project ID: P1701156
ALS Sample ID: P1701156-001

Test Code: EPA TO-15
Instrument ID: Tekmar AUTOCAN/Agilent 5975Cinert/6890N/MS16
Analyst: Lusine Hakobyan
Sample Type: 6.0 L Summa Canister
Test Notes:
Container ID: SC02158

Date Collected: 3/1/17
Date Received: 3/8/17
Date Analyzed: 3/15/17
Volume(s) Analyzed: 0.20 Liter(s)

Initial Pressure (psig): -3.58 Final Pressure (psig): 3.53

Canister Dilution Factor: 1.64

CAS #	Compound	Result µg/m³	MRL µg/m³	Result ppbV	MRL ppbV	Data Qualifier
115-07-1	Propene	ND	4.1	ND	2.4	
75-71-8	Dichlorodifluoromethane (CFC 12)	ND	4.1	ND	0.83	
74-87-3	Chloromethane	ND	4.1	ND	2.0	
76-14-2	1,2-Dichloro-1,1,2,2-tetrafluoroethane (CFC 114)	ND	4.1	ND	0.59	
75-01-4	Vinyl Chloride	ND	4.1	ND	1.6	
106-99-0	1,3-Butadiene	ND	4.1	ND	1.9	
74-83-9	Bromomethane	ND	4.1	ND	1.1	
75-00-3	Chloroethane	ND	4.1	ND	1.6	
67-64-1	Acetone	**2,200**	41	**920**	17	
75-69-4	Trichlorofluoromethane (CFC 11)	ND	4.1	ND	0.73	
67-63-0	2-Propanol (Isopropyl Alcohol)	ND	41	ND	17	
75-35-4	1,1-Dichloroethene	ND	4.1	ND	1.0	
75-09-2	Methylene Chloride	ND	4.1	ND	1.2	
76-13-1	Trichlorotrifluoroethane (CFC 113)	ND	4.1	ND	0.54	
75-15-0	Carbon Disulfide	ND	41	ND	13	
156-60-5	trans-1,2-Dichloroethene	ND	4.1	ND	1.0	
75-34-3	1,1-Dichloroethane	ND	4.1	ND	1.0	
1634-04-4	Methyl tert-Butyl Ether	ND	4.1	ND	1.1	
108-05-4	Vinyl Acetate	ND	41	ND	12	
78-93-3	2-Butanone (MEK)	**530**	41	**180**	14	
156-59-2	cis-1,2-Dichloroethene	ND	4.1	ND	1.0	

ND = Compound was analyzed for, but not detected above the laboratory reporting limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Client: **BB&E, Inc**
Client Sample ID: **COL-SSSG-01**
Client Project ID: **Q1 2017 VI Assessment / 02028018 task 4**

ALS Project ID: P1701156
ALS Sample ID: P1701156-001

Test Code: EPA TO-15
Instrument ID: Tekmar AUTOCAN/Agilent 5975Cinert/6890N/MS16
Analyst: Lusine Hakobyan
Sample Type: 6.0 L Summa Canister
Test Notes:
Container ID: SC02158

Date Collected: 3/1/17
Date Received: 3/8/17
Date Analyzed: 3/15/17
Volume(s) Analyzed: 0.20 Liter(s)

Initial Pressure (psig): -3.58 Final Pressure (psig): 3.53

Canister Dilution Factor: 1.64

CAS #	Compound	Result µg/m³	MRL µg/m³	Result ppbV	MRL ppbV	Data Qualifier
141-78-6	Ethyl Acetate	**8.4**	8.2	**2.3**	2.3	
110-54-3	n-Hexane	ND	4.1	ND	1.2	
67-66-3	Chloroform	ND	4.1	ND	0.84	
109-99-9	Tetrahydrofuran (THF)	ND	4.1	ND	1.4	
107-06-2	1,2-Dichloroethane	ND	4.1	ND	1.0	
71-55-6	1,1,1-Trichloroethane	ND	4.1	ND	0.75	
71-43-2	Benzene	**9.5**	4.1	**3.0**	1.3	
56-23-5	Carbon Tetrachloride	ND	4.1	ND	0.65	
110-82-7	Cyclohexane	ND	8.2	ND	2.4	
78-87-5	1,2-Dichloropropane	ND	4.1	ND	0.89	
75-27-4	Bromodichloromethane	ND	4.1	ND	0.61	
79-01-6	Trichloroethene	ND	4.1	ND	0.76	
123-91-1	1,4-Dioxane	ND	4.1	ND	1.1	
142-82-5	n-Heptane	ND	4.1	ND	1.0	
10061-01-5	cis-1,3-Dichloropropene	ND	4.1	ND	0.90	
108-10-1	4-Methyl-2-pentanone	ND	4.1	ND	1.0	
10061-02-6	trans-1,3-Dichloropropene	ND	4.1	ND	0.90	
79-00-5	1,1,2-Trichloroethane	ND	4.1	ND	0.75	
108-88-3	Toluene	**640**	4.1	**170**	1.1	
591-78-6	2-Hexanone	ND	4.1	ND	1.0	

ND = Compound was analyzed for, but not detected above the laboratory reporting limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Client: **BB&E, Inc**
Client Sample ID: **COL-SSSG-01**
Client Project ID: **Q1 2017 VI Assessment / 02028018 task 4**

ALS Project ID: P1701156
ALS Sample ID: P1701156-001

Test Code: EPA TO-15
Instrument ID: Tekmar AUTOCAN/Agilent 5975Cinert/6890N/MS16
Analyst: Lusine Hakobyan
Sample Type: 6.0 L Summa Canister
Test Notes:
Container ID: SC02158

Date Collected: 3/1/17
Date Received: 3/8/17
Date Analyzed: 3/15/17
Volume(s) Analyzed: 0.20 Liter(s)

Initial Pressure (psig): -3.58 Final Pressure (psig): 3.53

Canister Dilution Factor: 1.64

CAS #	Compound	Result µg/m³	MRL µg/m³	Result ppbV	MRL ppbV	Data Qualifier
124-48-1	Dibromochloromethane	ND	4.1	ND	0.48	
106-93-4	1,2-Dibromoethane	ND	4.1	ND	0.53	
127-18-4	Tetrachloroethene	ND	4.1	ND	0.60	
108-90-7	Chlorobenzene	ND	4.1	ND	0.89	
100-41-4	Ethylbenzene	**95**	4.1	**22**	0.94	
179601-23-1	m,p-Xylenes	**340**	8.2	**78**	1.9	
75-25-2	Bromoform	ND	4.1	ND	0.40	
100-42-5	Styrene	ND	4.1	ND	0.96	
95-47-6	o-Xylene	**67**	4.1	**15**	0.94	
79-34-5	1,1,2,2-Tetrachloroethane	ND	4.1	ND	0.60	
98-82-8	Cumene	ND	4.1	ND	0.83	
622-96-8	4-Ethyltoluene	**8.5**	4.1	**1.7**	0.83	
108-67-8	1,3,5-Trimethylbenzene	**6.1**	4.1	**1.2**	0.83	
95-63-6	1,2,4-Trimethylbenzene	**12**	4.1	**2.4**	0.83	
100-44-7	Benzyl Chloride	ND	4.1	ND	0.79	
541-73-1	1,3-Dichlorobenzene	ND	4.1	ND	0.68	
106-46-7	1,4-Dichlorobenzene	ND	4.1	ND	0.68	
95-50-1	1,2-Dichlorobenzene	ND	4.1	ND	0.68	
120-82-1	1,2,4-Trichlorobenzene	ND	4.1	ND	0.55	
87-68-3	Hexachlorobutadiene	ND	4.1	ND	0.38	

ND = Compound was analyzed for, but not detected above the laboratory reporting limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Client: **BB&E, Inc**
Client Sample ID: **COL-IAQ-01**
Client Project ID: **Q1 2017 VI Assessment / 02028018 task 4**

ALS Project ID: P1701156
ALS Sample ID: P1701156-002

Test Code: EPA TO-15
Instrument ID: Tekmar AUTOCAN/Agilent 5975Cinert/6890N/MS16
Analyst: Lusine Hakobyan
Sample Type: 6.0 L Summa Canister
Test Notes:
Container ID: AC02088

Date Collected: 3/1/17
Date Received: 3/8/17
Date Analyzed: 3/15/17
Volume(s) Analyzed: 1.00 Liter(s)

Initial Pressure (psig): -3.03 Final Pressure (psig): 3.60

Canister Dilution Factor: 1.57

CAS #	Compound	Result µg/m³	MRL µg/m³	Result ppbV	MRL ppbV	Data Qualifier
115-07-1	Propene	**5.7**	0.79	**3.3**	0.46	
75-71-8	Dichlorodifluoromethane (CFC 12)	**2.3**	0.79	**0.47**	0.16	
74-87-3	Chloromethane	ND	0.79	ND	0.38	
76-14-2	1,2-Dichloro-1,1,2,2-tetrafluoroethane (CFC 114)	ND	0.79	ND	0.11	
75-01-4	Vinyl Chloride	ND	0.79	ND	0.31	
106-99-0	1,3-Butadiene	ND	0.79	ND	0.35	
74-83-9	Bromomethane	ND	0.79	ND	0.20	
75-00-3	Chloroethane	ND	0.79	ND	0.30	
67-64-1	Acetone	**350**	7.9	**150**	3.3	
75-69-4	Trichlorofluoromethane (CFC 11)	**1.1**	0.79	**0.20**	0.14	
67-63-0	2-Propanol (Isopropyl Alcohol)	ND	7.9	ND	3.2	
75-35-4	1,1-Dichloroethene	ND	0.79	ND	0.20	
75-09-2	Methylene Chloride	ND	0.79	ND	0.23	
76-13-1	Trichlorotrifluoroethane (CFC 113)	ND	0.79	ND	0.10	
75-15-0	Carbon Disulfide	ND	7.9	ND	2.5	
156-60-5	trans-1,2-Dichloroethene	ND	0.79	ND	0.20	
75-34-3	1,1-Dichloroethane	ND	0.79	ND	0.19	
1634-04-4	Methyl tert-Butyl Ether	ND	0.79	ND	0.22	
108-05-4	Vinyl Acetate	ND	7.9	ND	2.2	
78-93-3	2-Butanone (MEK)	**46**	7.9	**16**	2.7	
156-59-2	cis-1,2-Dichloroethene	ND	0.79	ND	0.20	

ND = Compound was analyzed for, but not detected above the laboratory reporting limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Client: **BB&E, Inc**
Client Sample ID: **COL-IAQ-01**
Client Project ID: **Q1 2017 VI Assessment / 02028018 task 4**

ALS Project ID: P1701156
ALS Sample ID: P1701156-002

Test Code: EPA TO-15
Instrument ID: Tekmar AUTOCAN/Agilent 5975Cinert/6890N/MS16
Analyst: Lusine Hakobyan
Sample Type: 6.0 L Summa Canister
Test Notes:
Container ID: AC02088

Date Collected: 3/1/17
Date Received: 3/8/17
Date Analyzed: 3/15/17
Volume(s) Analyzed: 1.00 Liter(s)

Initial Pressure (psig): -3.03 Final Pressure (psig): 3.60

Canister Dilution Factor: 1.57

CAS #	Compound	Result µg/m³	MRL µg/m³	Result ppbV	MRL ppbV	Data Qualifier
141-78-6	Ethyl Acetate	**2.8**	1.6	**0.77**	0.44	
110-54-3	n-Hexane	ND	0.79	ND	0.22	
67-66-3	Chloroform	ND	0.79	ND	0.16	
109-99-9	Tetrahydrofuran (THF)	ND	0.79	ND	0.27	
107-06-2	1,2-Dichloroethane	ND	0.79	ND	0.19	
71-55-6	1,1,1-Trichloroethane	ND	0.79	ND	0.14	
71-43-2	Benzene	**9.4**	0.79	**3.0**	0.25	
56-23-5	Carbon Tetrachloride	ND	0.79	ND	0.12	
110-82-7	Cyclohexane	ND	1.6	ND	0.46	
78-87-5	1,2-Dichloropropane	ND	0.79	ND	0.17	
75-27-4	Bromodichloromethane	ND	0.79	ND	0.12	
79-01-6	Trichloroethene	ND	0.79	ND	0.15	
123-91-1	1,4-Dioxane	ND	0.79	ND	0.22	
142-82-5	n-Heptane	ND	0.79	ND	0.19	
10061-01-5	cis-1,3-Dichloropropene	ND	0.79	ND	0.17	
108-10-1	4-Methyl-2-pentanone	ND	0.79	ND	0.19	
10061-02-6	trans-1,3-Dichloropropene	ND	0.79	ND	0.17	
79-00-5	1,1,2-Trichloroethane	ND	0.79	ND	0.14	
108-88-3	Toluene	**46**	0.79	**12**	0.21	
591-78-6	2-Hexanone	ND	0.79	ND	0.19	

ND = Compound was analyzed for, but not detected above the laboratory reporting limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Client: **BB&E, Inc**
Client Sample ID: **COL-IAQ-01**
Client Project ID: **Q1 2017 VI Assessment / 02028018 task 4**

ALS Project ID: P1701156
ALS Sample ID: P1701156-002

Test Code: EPA TO-15
Instrument ID: Tekmar AUTOCAN/Agilent 5975Cinert/6890N/MS16
Analyst: Lusine Hakobyan
Sample Type: 6.0 L Summa Canister
Test Notes:
Container ID: AC02088

Date Collected: 3/1/17
Date Received: 3/8/17
Date Analyzed: 3/15/17
Volume(s) Analyzed: 1.00 Liter(s)

Initial Pressure (psig): -3.03 Final Pressure (psig): 3.60

Canister Dilution Factor: 1.57

CAS #	Compound	Result µg/m³	MRL µg/m³	Result ppbV	MRL ppbV	Data Qualifier
124-48-1	Dibromochloromethane	ND	0.79	ND	0.092	
106-93-4	1,2-Dibromoethane	ND	0.79	ND	0.10	
127-18-4	Tetrachloroethene	ND	0.79	ND	0.12	
108-90-7	Chlorobenzene	ND	0.79	ND	0.17	
100-41-4	Ethylbenzene	**9.2**	0.79	**2.1**	0.18	
179601-23-1	m,p-Xylenes	**39**	1.6	**8.9**	0.36	
75-25-2	Bromoform	ND	0.79	ND	0.076	
100-42-5	Styrene	ND	0.79	ND	0.18	
95-47-6	o-Xylene	**13**	0.79	**2.9**	0.18	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.79	ND	0.11	
98-82-8	Cumene	ND	0.79	ND	0.16	
622-96-8	4-Ethyltoluene	**3.8**	0.79	**0.78**	0.16	
108-67-8	1,3,5-Trimethylbenzene	**3.5**	0.79	**0.71**	0.16	
95-63-6	1,2,4-Trimethylbenzene	**7.3**	0.79	**1.5**	0.16	
100-44-7	Benzyl Chloride	ND	0.79	ND	0.15	
541-73-1	1,3-Dichlorobenzene	ND	0.79	ND	0.13	
106-46-7	1,4-Dichlorobenzene	ND	0.79	ND	0.13	
95-50-1	1,2-Dichlorobenzene	ND	0.79	ND	0.13	
120-82-1	1,2,4-Trichlorobenzene	ND	0.79	ND	0.11	
87-68-3	Hexachlorobutadiene	ND	0.79	ND	0.074	

ND = Compound was analyzed for, but not detected above the laboratory reporting limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Client: **BB&E, Inc**
Client Sample ID: **COL-SSSG-02**
Client Project ID: **Q1 2017 VI Assessment / 02028018 task 4**

ALS Project ID: P1701156
ALS Sample ID: P1701156-003

Test Code: EPA TO-15
Instrument ID: Tekmar AUTOCAN/Agilent 5975Cinert/6890N/MS16
Analyst: Lusine Hakobyan
Sample Type: 6.0 L Summa Canister
Test Notes:
Container ID: SC02189

Date Collected: 3/1/17
Date Received: 3/8/17
Date Analyzed: 3/15/17
Volume(s) Analyzed: 0.24 Liter(s)

Initial Pressure (psig): -3.88 Final Pressure (psig): 3.59

Canister Dilution Factor: 1.69

CAS #	Compound	Result µg/m³	MRL µg/m³	Result ppbV	MRL ppbV	Data Qualifier
115-07-1	Propene	ND	3.5	ND	2.0	
75-71-8	Dichlorodifluoromethane (CFC 12)	**20**	3.5	**4.0**	0.71	
74-87-3	Chloromethane	ND	3.5	ND	1.7	
76-14-2	1,2-Dichloro-1,1,2,2-tetrafluoroethane (CFC 114)	ND	3.5	ND	0.50	
75-01-4	Vinyl Chloride	ND	3.5	ND	1.4	
106-99-0	1,3-Butadiene	ND	3.5	ND	1.6	
74-83-9	Bromomethane	ND	3.5	ND	0.91	
75-00-3	Chloroethane	ND	3.5	ND	1.3	
67-64-1	Acetone	**2,600**	35	**1,100**	15	
75-69-4	Trichlorofluoromethane (CFC 11)	**28**	3.5	**4.9**	0.63	
67-63-0	2-Propanol (Isopropyl Alcohol)	ND	35	ND	14	
75-35-4	1,1-Dichloroethene	ND	3.5	ND	0.89	
75-09-2	Methylene Chloride	ND	3.5	ND	1.0	
76-13-1	Trichlorotrifluoroethane (CFC 113)	ND	3.5	ND	0.46	
75-15-0	Carbon Disulfide	ND	35	ND	11	
156-60-5	trans-1,2-Dichloroethene	ND	3.5	ND	0.89	
75-34-3	1,1-Dichloroethane	ND	3.5	ND	0.87	
1634-04-4	Methyl tert-Butyl Ether	ND	3.5	ND	0.98	
108-05-4	Vinyl Acetate	ND	35	ND	10	
78-93-3	2-Butanone (MEK)	**670**	35	**230**	12	
156-59-2	cis-1,2-Dichloroethene	ND	3.5	ND	0.89	

ND = Compound was analyzed for, but not detected above the laboratory reporting limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Client: **BB&E, Inc**
Client Sample ID: **COL-SSSG-02**
Client Project ID: **Q1 2017 VI Assessment / 02028018 task 4**

ALS Project ID: P1701156
ALS Sample ID: P1701156-003

Test Code: EPA TO-15
Instrument ID: Tekmar AUTOCAN/Agilent 5975Cinert/6890N/MS16
Analyst: Lusine Hakobyan
Sample Type: 6.0 L Summa Canister
Test Notes:
Container ID: SC02189

Date Collected: 3/1/17
Date Received: 3/8/17
Date Analyzed: 3/15/17
Volume(s) Analyzed: 0.24 Liter(s)

Initial Pressure (psig): -3.88 Final Pressure (psig): 3.59

Canister Dilution Factor: 1.69

CAS #	Compound	Result µg/m³	MRL µg/m³	Result ppbV	MRL ppbV	Data Qualifier
141-78-6	Ethyl Acetate	**8.4**	7.0	**2.3**	2.0	
110-54-3	n-Hexane	ND	3.5	ND	1.0	
67-66-3	Chloroform	ND	3.5	ND	0.72	
109-99-9	Tetrahydrofuran (THF)	**4.5**	3.5	**1.5**	1.2	
107-06-2	1,2-Dichloroethane	ND	3.5	ND	0.87	
71-55-6	1,1,1-Trichloroethane	ND	3.5	ND	0.65	
71-43-2	Benzene	**8.3**	3.5	**2.6**	1.1	
56-23-5	Carbon Tetrachloride	ND	3.5	ND	0.56	
110-82-7	Cyclohexane	ND	7.0	ND	2.0	
78-87-5	1,2-Dichloropropane	ND	3.5	ND	0.76	
75-27-4	Bromodichloromethane	ND	3.5	ND	0.53	
79-01-6	Trichloroethene	ND	3.5	ND	0.66	
123-91-1	1,4-Dioxane	ND	3.5	ND	0.98	
142-82-5	n-Heptane	ND	3.5	ND	0.86	
10061-01-5	cis-1,3-Dichloropropene	ND	3.5	ND	0.78	
108-10-1	4-Methyl-2-pentanone	ND	3.5	ND	0.86	
10061-02-6	trans-1,3-Dichloropropene	ND	3.5	ND	0.78	
79-00-5	1,1,2-Trichloroethane	ND	3.5	ND	0.65	
108-88-3	Toluene	**720**	3.5	**190**	0.93	
591-78-6	2-Hexanone	ND	3.5	ND	0.86	

ND = Compound was analyzed for, but not detected above the laboratory reporting limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Client: **BB&E, Inc**
Client Sample ID: **COL-SSSG-02**
Client Project ID: **Q1 2017 VI Assessment / 02028018 task 4**

ALS Project ID: P1701156
ALS Sample ID: P1701156-003

Test Code: EPA TO-15
Instrument ID: Tekmar AUTOCAN/Agilent 5975Cinert/6890N/MS16
Analyst: Lusine Hakobyan
Sample Type: 6.0 L Summa Canister
Test Notes:
Container ID: SC02189

Date Collected: 3/1/17
Date Received: 3/8/17
Date Analyzed: 3/15/17
Volume(s) Analyzed: 0.24 Liter(s)

Initial Pressure (psig): -3.88 Final Pressure (psig): 3.59

Canister Dilution Factor: 1.69

CAS #	Compound	Result µg/m³	MRL µg/m³	Result ppbV	MRL ppbV	Data Qualifier
124-48-1	Dibromochloromethane	ND	3.5	ND	0.41	
106-93-4	1,2-Dibromoethane	ND	3.5	ND	0.46	
127-18-4	Tetrachloroethene	ND	3.5	ND	0.52	
108-90-7	Chlorobenzene	ND	3.5	ND	0.76	
100-41-4	Ethylbenzene	**120**	3.5	**28**	0.81	
179601-23-1	m,p-Xylenes	**430**	7.0	**99**	1.6	
75-25-2	Bromoform	ND	3.5	ND	0.34	
100-42-5	Styrene	ND	3.5	ND	0.83	
95-47-6	o-Xylene	**85**	3.5	**20**	0.81	
79-34-5	1,1,2,2-Tetrachloroethane	ND	3.5	ND	0.51	
98-82-8	Cumene	**3.9**	3.5	**0.80**	0.72	
622-96-8	4-Ethyltoluene	**11**	3.5	**2.3**	0.72	
108-67-8	1,3,5-Trimethylbenzene	**7.5**	3.5	**1.5**	0.72	
95-63-6	1,2,4-Trimethylbenzene	**15**	3.5	**3.0**	0.72	
100-44-7	Benzyl Chloride	ND	3.5	ND	0.68	
541-73-1	1,3-Dichlorobenzene	ND	3.5	ND	0.59	
106-46-7	1,4-Dichlorobenzene	ND	3.5	ND	0.59	
95-50-1	1,2-Dichlorobenzene	ND	3.5	ND	0.59	
120-82-1	1,2,4-Trichlorobenzene	ND	3.5	ND	0.47	
87-68-3	Hexachlorobutadiene	ND	3.5	ND	0.33	

ND = Compound was analyzed for, but not detected above the laboratory reporting limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Client: **BB&E, Inc**
Client Sample ID: **COL-IAQ-02**
Client Project ID: **Q1 2017 VI Assessment / 02028018 task 4**

ALS Project ID: P1701156
ALS Sample ID: P1701156-004

Test Code: EPA TO-15
Instrument ID: Tekmar AUTOCAN/Agilent 5975Cinert/6890N/MS16
Analyst: Lusine Hakobyan
Sample Type: 6.0 L Summa Canister
Test Notes:
Container ID: AC02209

Date Collected: 3/1/17
Date Received: 3/8/17
Date Analyzed: 3/15/17
Volume(s) Analyzed: 1.00 Liter(s)
0.10 Liter(s)

Initial Pressure (psig): -3.43 Final Pressure (psig): 3.62

Canister Dilution Factor: 1.63

CAS #	Compound	Result µg/m³	MRL µg/m³	Result ppbV	MRL ppbV	Data Qualifier
115-07-1	Propene	**4.8**	0.82	**2.8**	0.47	
75-71-8	Dichlorodifluoromethane (CFC 12)	**2.2**	0.82	**0.44**	0.16	
74-87-3	Chloromethane	ND	0.82	ND	0.39	
76-14-2	1,2-Dichloro-1,1,2,2-tetrafluoroethane (CFC 114)	ND	0.82	ND	0.12	
75-01-4	Vinyl Chloride	ND	0.82	ND	0.32	
106-99-0	1,3-Butadiene	ND	0.82	ND	0.37	
74-83-9	Bromomethane	ND	0.82	ND	0.21	
75-00-3	Chloroethane	ND	0.82	ND	0.31	
67-64-1	Acetone	**710**	8.2	**300**	3.4	
75-69-4	Trichlorofluoromethane (CFC 11)	**1.1**	0.82	**0.19**	0.15	
67-63-0	2-Propanol (Isopropyl Alcohol)	ND	8.2	ND	3.3	
75-35-4	1,1-Dichloroethene	ND	0.82	ND	0.21	
75-09-2	Methylene Chloride	ND	0.82	ND	0.23	
76-13-1	Trichlorotrifluoroethane (CFC 113)	ND	0.82	ND	0.11	
75-15-0	Carbon Disulfide	ND	8.2	ND	2.6	
156-60-5	trans-1,2-Dichloroethene	ND	0.82	ND	0.21	
75-34-3	1,1-Dichloroethane	ND	0.82	ND	0.20	
1634-04-4	Methyl tert-Butyl Ether	ND	0.82	ND	0.23	
108-05-4	Vinyl Acetate	ND	8.2	ND	2.3	
78-93-3	2-Butanone (MEK)	**190**	82	**63**	28	**D**
156-59-2	cis-1,2-Dichloroethene	ND	0.82	ND	0.21	

ND = Compound was analyzed for, but not detected above the laboratory reporting limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.
D = The reported result is from a dilution.

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Client: **BB&E, Inc**
Client Sample ID: **COL-IAQ-02**
Client Project ID: **Q1 2017 VI Assessment / 02028018 task 4**

ALS Project ID: P1701156
ALS Sample ID: P1701156-004

Test Code: EPA TO-15
Instrument ID: Tekmar AUTOCAN/Agilent 5975Cinert/6890N/MS16
Analyst: Lusine Hakobyan
Sample Type: 6.0 L Summa Canister
Test Notes:
Container ID: AC02209

Date Collected: 3/1/17
Date Received: 3/8/17
Date Analyzed: 3/15/17
Volume(s) Analyzed: 1.00 Liter(s)
0.10 Liter(s)

Initial Pressure (psig): -3.43 Final Pressure (psig): 3.62

Canister Dilution Factor: 1.63

CAS #	Compound	Result µg/m³	MRL µg/m³	Result ppbV	MRL ppbV	Data Qualifier
141-78-6	Ethyl Acetate	**15**	1.6	**4.1**	0.45	
110-54-3	n-Hexane	ND	0.82	ND	0.23	
67-66-3	Chloroform	ND	0.82	ND	0.17	
109-99-9	Tetrahydrofuran (THF)	ND	0.82	ND	0.28	
107-06-2	1,2-Dichloroethane	ND	0.82	ND	0.20	
71-55-6	1,1,1-Trichloroethane	ND	0.82	ND	0.15	
71-43-2	Benzene	**5.9**	0.82	**1.8**	0.26	
56-23-5	Carbon Tetrachloride	ND	0.82	ND	0.13	
110-82-7	Cyclohexane	ND	1.6	ND	0.47	
78-87-5	1,2-Dichloropropane	ND	0.82	ND	0.18	
75-27-4	Bromodichloromethane	ND	0.82	ND	0.12	
79-01-6	Trichloroethene	ND	0.82	ND	0.15	
123-91-1	1,4-Dioxane	ND	0.82	ND	0.23	
142-82-5	n-Heptane	ND	0.82	ND	0.20	
10061-01-5	cis-1,3-Dichloropropene	ND	0.82	ND	0.18	
108-10-1	4-Methyl-2-pentanone	ND	0.82	ND	0.20	
10061-02-6	trans-1,3-Dichloropropene	ND	0.82	ND	0.18	
79-00-5	1,1,2-Trichloroethane	ND	0.82	ND	0.15	
108-88-3	Toluene	**160**	0.82	**43**	0.22	
591-78-6	2-Hexanone	ND	0.82	ND	0.20	

ND = Compound was analyzed for, but not detected above the laboratory reporting limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Client: **BB&E, Inc**
Client Sample ID: **COL-IAQ-02**
Client Project ID: **Q1 2017 VI Assessment / 02028018 task 4**

ALS Project ID: P1701156
ALS Sample ID: P1701156-004

Test Code: EPA TO-15
Instrument ID: Tekmar AUTOCAN/Agilent 5975Cinert/6890N/MS16
Analyst: Lusine Hakobyan
Sample Type: 6.0 L Summa Canister
Test Notes:
Container ID: AC02209

Date Collected: 3/1/17
Date Received: 3/8/17
Date Analyzed: 3/15/17
Volume(s) Analyzed: 1.00 Liter(s)
0.10 Liter(s)

Initial Pressure (psig): -3.43 Final Pressure (psig): 3.62

Canister Dilution Factor: 1.63

CAS #	Compound	Result µg/m³	MRL µg/m³	Result ppbV	MRL ppbV	Data Qualifier
124-48-1	Dibromochloromethane	ND	0.82	ND	0.096	
106-93-4	1,2-Dibromoethane	ND	0.82	ND	0.11	
127-18-4	Tetrachloroethene	ND	0.82	ND	0.12	
108-90-7	Chlorobenzene	ND	0.82	ND	0.18	
100-41-4	Ethylbenzene	**47**	0.82	**11**	0.19	
179601-23-1	m,p-Xylenes	**170**	1.6	**39**	0.38	
75-25-2	Bromoform	ND	0.82	ND	0.079	
100-42-5	Styrene	ND	0.82	ND	0.19	
95-47-6	o-Xylene	**62**	0.82	**14**	0.19	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.82	ND	0.12	
98-82-8	Cumene	**3.0**	0.82	**0.61**	0.17	
622-96-8	4-Ethyltoluene	**16**	0.82	**3.3**	0.17	
108-67-8	1,3,5-Trimethylbenzene	**17**	0.82	**3.4**	0.17	
95-63-6	1,2,4-Trimethylbenzene	**32**	0.82	**6.5**	0.17	
100-44-7	Benzyl Chloride	ND	0.82	ND	0.16	
541-73-1	1,3-Dichlorobenzene	ND	0.82	ND	0.14	
106-46-7	1,4-Dichlorobenzene	ND	0.82	ND	0.14	
95-50-1	1,2-Dichlorobenzene	ND	0.82	ND	0.14	
120-82-1	1,2,4-Trichlorobenzene	ND	0.82	ND	0.11	
87-68-3	Hexachlorobutadiene	ND	0.82	ND	0.076	

ND = Compound was analyzed for, but not detected above the laboratory reporting limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Client: **BB&E, Inc**
Client Sample ID: **COL-SSSG-03**
Client Project ID: **Q1 2017 VI Assessment / 02028018 task 4**

ALS Project ID: P1701156
ALS Sample ID: P1701156-005

Test Code: EPA TO-15
Instrument ID: Tekmar AUTOCAN/Agilent 5975Cinert/6890N/MS16
Analyst: Lusine Hakobyan
Sample Type: 6.0 L Summa Canister
Test Notes:
Container ID: SC00980

Date Collected: 3/1/17
Date Received: 3/8/17
Date Analyzed: 3/15/17
Volume(s) Analyzed: 0.14 Liter(s)

Initial Pressure (psig): -4.33 Final Pressure (psig): 3.66

Canister Dilution Factor: 1.77

CAS #	Compound	Result µg/m³	MRL µg/m³	Result ppbV	MRL ppbV	Data Qualifier
115-07-1	Propene	ND	6.3	ND	3.7	
75-71-8	Dichlorodifluoromethane (CFC 12)	ND	6.3	ND	1.3	
74-87-3	Chloromethane	ND	6.3	ND	3.1	
76-14-2	1,2-Dichloro-1,1,2,2-tetrafluoroethane (CFC 114)	ND	6.3	ND	0.90	
75-01-4	Vinyl Chloride	ND	6.3	ND	2.5	
106-99-0	1,3-Butadiene	ND	6.3	ND	2.9	
74-83-9	Bromomethane	ND	6.3	ND	1.6	
75-00-3	Chloroethane	ND	6.3	ND	2.4	
67-64-1	Acetone	**3,200**	63	**1,400**	27	
75-69-4	Trichlorofluoromethane (CFC 11)	ND	6.3	ND	1.1	
67-63-0	2-Propanol (Isopropyl Alcohol)	ND	63	ND	26	
75-35-4	1,1-Dichloroethene	ND	6.3	ND	1.6	
75-09-2	Methylene Chloride	ND	6.3	ND	1.8	
76-13-1	Trichlorotrifluoroethane (CFC 113)	ND	6.3	ND	0.83	
75-15-0	Carbon Disulfide	ND	63	ND	20	
156-60-5	trans-1,2-Dichloroethene	ND	6.3	ND	1.6	
75-34-3	1,1-Dichloroethane	ND	6.3	ND	1.6	
1634-04-4	Methyl tert-Butyl Ether	ND	6.3	ND	1.8	
108-05-4	Vinyl Acetate	ND	63	ND	18	
78-93-3	2-Butanone (MEK)	**890**	63	**300**	21	
156-59-2	cis-1,2-Dichloroethene	ND	6.3	ND	1.6	

ND = Compound was analyzed for, but not detected above the laboratory reporting limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Client: **BB&E, Inc**
Client Sample ID: **COL-SSSG-03**
Client Project ID: **Q1 2017 VI Assessment / 02028018 task 4**

ALS Project ID: P1701156
ALS Sample ID: P1701156-005

Test Code: EPA TO-15
Instrument ID: Tekmar AUTOCAN/Agilent 5975Cinert/6890N/MS16
Analyst: Lusine Hakobyan
Sample Type: 6.0 L Summa Canister
Test Notes:
Container ID: SC00980

Date Collected: 3/1/17
Date Received: 3/8/17
Date Analyzed: 3/15/17
Volume(s) Analyzed: 0.14 Liter(s)

Initial Pressure (psig): -4.33 Final Pressure (psig): 3.66

Canister Dilution Factor: 1.77

CAS #	Compound	Result µg/m³	MRL µg/m³	Result ppbV	MRL ppbV	Data Qualifier
141-78-6	Ethyl Acetate	**13**	13	**3.7**	3.5	
110-54-3	n-Hexane	ND	6.3	ND	1.8	
67-66-3	Chloroform	ND	6.3	ND	1.3	
109-99-9	Tetrahydrofuran (THF)	**7.2**	6.3	**2.4**	2.1	
107-06-2	1,2-Dichloroethane	ND	6.3	ND	1.6	
71-55-6	1,1,1-Trichloroethane	ND	6.3	ND	1.2	
71-43-2	Benzene	ND	6.3	ND	2.0	
56-23-5	Carbon Tetrachloride	ND	6.3	ND	1.0	
110-82-7	Cyclohexane	ND	13	ND	3.7	
78-87-5	1,2-Dichloropropane	ND	6.3	ND	1.4	
75-27-4	Bromodichloromethane	ND	6.3	ND	0.94	
79-01-6	Trichloroethene	ND	6.3	ND	1.2	
123-91-1	1,4-Dioxane	ND	6.3	ND	1.8	
142-82-5	n-Heptane	ND	6.3	ND	1.5	
10061-01-5	cis-1,3-Dichloropropene	ND	6.3	ND	1.4	
108-10-1	4-Methyl-2-pentanone	ND	6.3	ND	1.5	
10061-02-6	trans-1,3-Dichloropropene	ND	6.3	ND	1.4	
79-00-5	1,1,2-Trichloroethane	ND	6.3	ND	1.2	
108-88-3	Toluene	**1,100**	6.3	**300**	1.7	
591-78-6	2-Hexanone	ND	6.3	ND	1.5	

ND = Compound was analyzed for, but not detected above the laboratory reporting limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Client: **BB&E, Inc**
Client Sample ID: **COL-SSSG-03**
Client Project ID: **Q1 2017 VI Assessment / 02028018 task 4**

ALS Project ID: P1701156
ALS Sample ID: P1701156-005

Test Code: EPA TO-15
Instrument ID: Tekmar AUTOCAN/Agilent 5975Cinert/6890N/MS16
Analyst: Lusine Hakobyan
Sample Type: 6.0 L Summa Canister
Test Notes:
Container ID: SC00980

Date Collected: 3/1/17
Date Received: 3/8/17
Date Analyzed: 3/15/17
Volume(s) Analyzed: 0.14 Liter(s)

Initial Pressure (psig): -4.33 Final Pressure (psig): 3.66

Canister Dilution Factor: 1.77

CAS #	Compound	Result µg/m³	MRL µg/m³	Result ppbV	MRL ppbV	Data Qualifier
124-48-1	Dibromochloromethane	ND	6.3	ND	0.74	
106-93-4	1,2-Dibromoethane	ND	6.3	ND	0.82	
127-18-4	Tetrachloroethene	ND	6.3	ND	0.93	
108-90-7	Chlorobenzene	ND	6.3	ND	1.4	
100-41-4	Ethylbenzene	**180**	6.3	**41**	1.5	
179601-23-1	m,p-Xylenes	**650**	13	**150**	2.9	
75-25-2	Bromoform	ND	6.3	ND	0.61	
100-42-5	Styrene	ND	6.3	ND	1.5	
95-47-6	o-Xylene	**130**	6.3	**30**	1.5	
79-34-5	1,1,2,2-Tetrachloroethane	ND	6.3	ND	0.92	
98-82-8	Cumene	ND	6.3	ND	1.3	
622-96-8	4-Ethyltoluene	**18**	6.3	**3.7**	1.3	
108-67-8	1,3,5-Trimethylbenzene	**12**	6.3	**2.5**	1.3	
95-63-6	1,2,4-Trimethylbenzene	**24**	6.3	**4.9**	1.3	
100-44-7	Benzyl Chloride	ND	6.3	ND	1.2	
541-73-1	1,3-Dichlorobenzene	ND	6.3	ND	1.1	
106-46-7	1,4-Dichlorobenzene	ND	6.3	ND	1.1	
95-50-1	1,2-Dichlorobenzene	ND	6.3	ND	1.1	
120-82-1	1,2,4-Trichlorobenzene	ND	6.3	ND	0.85	
87-68-3	Hexachlorobutadiene	ND	6.3	ND	0.59	

ND = Compound was analyzed for, but not detected above the laboratory reporting limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Client: **BB&E, Inc**
Client Sample ID: **COL-IAQ-03**
Client Project ID: **Q1 2017 VI Assessment / 02028018 task 4**

ALS Project ID: P1701156
ALS Sample ID: P1701156-006

Test Code: EPA TO-15
Instrument ID: Tekmar AUTOCAN/Agilent 5975Cinert/6890N/MS16
Analyst: Lusine Hakobyan
Sample Type: 6.0 L Summa Canister
Test Notes:
Container ID: AC02156

Date Collected: 3/1/17
Date Received: 3/8/17
Date Analyzed: 3/15/17
Volume(s) Analyzed: 1.00 Liter(s)

Initial Pressure (psig): -3.98 Final Pressure (psig): 3.67

Canister Dilution Factor: 1.71

CAS #	Compound	Result µg/m³	MRL µg/m³	Result ppbV	MRL ppbV	Data Qualifier
115-07-1	Propene	**3.4**	0.86	**2.0**	0.50	
75-71-8	Dichlorodifluoromethane (CFC 12)	**2.3**	0.86	**0.46**	0.17	
74-87-3	Chloromethane	ND	0.86	ND	0.41	
76-14-2	1,2-Dichloro-1,1,2,2-tetrafluoroethane (CFC 114)	ND	0.86	ND	0.12	
75-01-4	Vinyl Chloride	ND	0.86	ND	0.33	
106-99-0	1,3-Butadiene	ND	0.86	ND	0.39	
74-83-9	Bromomethane	ND	0.86	ND	0.22	
75-00-3	Chloroethane	ND	0.86	ND	0.32	
67-64-1	Acetone	**230**	8.6	**96**	3.6	
75-69-4	Trichlorofluoromethane (CFC 11)	**1.2**	0.86	**0.21**	0.15	
67-63-0	2-Propanol (Isopropyl Alcohol)	ND	8.6	ND	3.5	
75-35-4	1,1-Dichloroethene	ND	0.86	ND	0.22	
75-09-2	Methylene Chloride	ND	0.86	ND	0.25	
76-13-1	Trichlorotrifluoroethane (CFC 113)	ND	0.86	ND	0.11	
75-15-0	Carbon Disulfide	ND	8.6	ND	2.7	
156-60-5	trans-1,2-Dichloroethene	ND	0.86	ND	0.22	
75-34-3	1,1-Dichloroethane	ND	0.86	ND	0.21	
1634-04-4	Methyl tert-Butyl Ether	ND	0.86	ND	0.24	
108-05-4	Vinyl Acetate	ND	8.6	ND	2.4	
78-93-3	2-Butanone (MEK)	**18**	8.6	**6.2**	2.9	
156-59-2	cis-1,2-Dichloroethene	ND	0.86	ND	0.22	

ND = Compound was analyzed for, but not detected above the laboratory reporting limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Client: **BB&E, Inc**
Client Sample ID: **COL-IAQ-03**
Client Project ID: **Q1 2017 VI Assessment / 02028018 task 4**

ALS Project ID: P1701156
ALS Sample ID: P1701156-006

Test Code: EPA TO-15
Instrument ID: Tekmar AUTOCAN/Agilent 5975Cinert/6890N/MS16
Analyst: Lusine Hakobyan
Sample Type: 6.0 L Summa Canister
Test Notes:
Container ID: AC02156

Date Collected: 3/1/17
Date Received: 3/8/17
Date Analyzed: 3/15/17
Volume(s) Analyzed: 1.00 Liter(s)

Initial Pressure (psig): -3.98 Final Pressure (psig): 3.67

Canister Dilution Factor: 1.71

CAS #	Compound	Result µg/m³	MRL µg/m³	Result ppbV	MRL ppbV	Data Qualifier
141-78-6	Ethyl Acetate	**6.3**	1.7	**1.8**	0.47	
110-54-3	n-Hexane	**0.96**	0.86	**0.27**	0.24	
67-66-3	Chloroform	ND	0.86	ND	0.18	
109-99-9	Tetrahydrofuran (THF)	ND	0.86	ND	0.29	
107-06-2	1,2-Dichloroethane	ND	0.86	ND	0.21	
71-55-6	1,1,1-Trichloroethane	ND	0.86	ND	0.16	
71-43-2	Benzene	**1.5**	0.86	**0.48**	0.27	
56-23-5	Carbon Tetrachloride	ND	0.86	ND	0.14	
110-82-7	Cyclohexane	ND	1.7	ND	0.50	
78-87-5	1,2-Dichloropropane	ND	0.86	ND	0.19	
75-27-4	Bromodichloromethane	ND	0.86	ND	0.13	
79-01-6	Trichloroethene	ND	0.86	ND	0.16	
123-91-1	1,4-Dioxane	ND	0.86	ND	0.24	
142-82-5	n-Heptane	ND	0.86	ND	0.21	
10061-01-5	cis-1,3-Dichloropropene	ND	0.86	ND	0.19	
108-10-1	4-Methyl-2-pentanone	ND	0.86	ND	0.21	
10061-02-6	trans-1,3-Dichloropropene	ND	0.86	ND	0.19	
79-00-5	1,1,2-Trichloroethane	ND	0.86	ND	0.16	
108-88-3	Toluene	**19**	0.86	**5.1**	0.23	
591-78-6	2-Hexanone	ND	0.86	ND	0.21	

ND = Compound was analyzed for, but not detected above the laboratory reporting limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Client: **BB&E, Inc**
Client Sample ID: **COL-IAQ-03**
Client Project ID: **Q1 2017 VI Assessment / 02028018 task 4**

ALS Project ID: P1701156
ALS Sample ID: P1701156-006

Test Code: EPA TO-15
Instrument ID: Tekmar AUTOCAN/Agilent 5975Cinert/6890N/MS16
Analyst: Lusine Hakobyan
Sample Type: 6.0 L Summa Canister
Test Notes:
Container ID: AC02156

Date Collected: 3/1/17
Date Received: 3/8/17
Date Analyzed: 3/15/17
Volume(s) Analyzed: 1.00 Liter(s)

Initial Pressure (psig): -3.98 Final Pressure (psig): 3.67

Canister Dilution Factor: 1.71

CAS #	Compound	Result µg/m³	MRL µg/m³	Result ppbV	MRL ppbV	Data Qualifier
124-48-1	Dibromochloromethane	ND	0.86	ND	0.10	
106-93-4	1,2-Dibromoethane	ND	0.86	ND	0.11	
127-18-4	Tetrachloroethene	ND	0.86	ND	0.13	
108-90-7	Chlorobenzene	ND	0.86	ND	0.19	
100-41-4	Ethylbenzene	**4.3**	0.86	**0.99**	0.20	
179601-23-1	m,p-Xylenes	**17**	1.7	**4.0**	0.39	
75-25-2	Bromoform	ND	0.86	ND	0.083	
100-42-5	Styrene	ND	0.86	ND	0.20	
95-47-6	o-Xylene	**6.0**	0.86	**1.4**	0.20	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.86	ND	0.12	
98-82-8	Cumene	ND	0.86	ND	0.17	
622-96-8	4-Ethyltoluene	**2.4**	0.86	**0.50**	0.17	
108-67-8	1,3,5-Trimethylbenzene	**2.6**	0.86	**0.53**	0.17	
95-63-6	1,2,4-Trimethylbenzene	**6.6**	0.86	**1.4**	0.17	
100-44-7	Benzyl Chloride	ND	0.86	ND	0.17	
541-73-1	1,3-Dichlorobenzene	ND	0.86	ND	0.14	
106-46-7	1,4-Dichlorobenzene	ND	0.86	ND	0.14	
95-50-1	1,2-Dichlorobenzene	ND	0.86	ND	0.14	
120-82-1	1,2,4-Trichlorobenzene	ND	0.86	ND	0.12	
87-68-3	Hexachlorobutadiene	ND	0.86	ND	0.080	

ND = Compound was analyzed for, but not detected above the laboratory reporting limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Client: **BB&E, Inc**
Client Sample ID: **COL-IAQ-04**
Client Project ID: **Q1 2017 VI Assessment / 02028018 task 4**

ALS Project ID: P1701156
ALS Sample ID: P1701156-007

Test Code: EPA TO-15
Instrument ID: Tekmar AUTOCAN/Agilent 5975Cinert/6890N/MS16
Analyst: Lusine Hakobyan
Sample Type: 6.0 L Summa Canister
Test Notes:
Container ID: AC02078

Date Collected: 3/1/17
Date Received: 3/8/17
Date Analyzed: 3/15/17
Volume(s) Analyzed: 1.00 Liter(s)

Initial Pressure (psig): -4.12 Final Pressure (psig): 3.54

Canister Dilution Factor: 1.72

CAS #	Compound	Result µg/m³	MRL µg/m³	Result ppbV	MRL ppbV	Data Qualifier
115-07-1	Propene	**3.9**	0.86	**2.3**	0.50	
75-71-8	Dichlorodifluoromethane (CFC 12)	**2.3**	0.86	**0.46**	0.17	
74-87-3	Chloromethane	ND	0.86	ND	0.42	
76-14-2	1,2-Dichloro-1,1,2,2-tetrafluoroethane (CFC 114)	ND	0.86	ND	0.12	
75-01-4	Vinyl Chloride	ND	0.86	ND	0.34	
106-99-0	1,3-Butadiene	ND	0.86	ND	0.39	
74-83-9	Bromomethane	ND	0.86	ND	0.22	
75-00-3	Chloroethane	ND	0.86	ND	0.33	
67-64-1	Acetone	**240**	8.6	**100**	3.6	
75-69-4	Trichlorofluoromethane (CFC 11)	**1.2**	0.86	**0.21**	0.15	
67-63-0	2-Propanol (Isopropyl Alcohol)	ND	8.6	ND	3.5	
75-35-4	1,1-Dichloroethene	ND	0.86	ND	0.22	
75-09-2	Methylene Chloride	ND	0.86	ND	0.25	
76-13-1	Trichlorotrifluoroethane (CFC 113)	ND	0.86	ND	0.11	
75-15-0	Carbon Disulfide	ND	8.6	ND	2.8	
156-60-5	trans-1,2-Dichloroethene	ND	0.86	ND	0.22	
75-34-3	1,1-Dichloroethane	ND	0.86	ND	0.21	
1634-04-4	Methyl tert-Butyl Ether	ND	0.86	ND	0.24	
108-05-4	Vinyl Acetate	ND	8.6	ND	2.4	
78-93-3	2-Butanone (MEK)	**21**	8.6	**7.2**	2.9	
156-59-2	cis-1,2-Dichloroethene	ND	0.86	ND	0.22	

ND = Compound was analyzed for, but not detected above the laboratory reporting limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Client: **BB&E, Inc**
Client Sample ID: **COL-IAQ-04**
Client Project ID: **Q1 2017 VI Assessment / 02028018 task 4**

ALS Project ID: P1701156
ALS Sample ID: P1701156-007

Test Code: EPA TO-15
Instrument ID: Tekmar AUTOCAN/Agilent 5975Cinert/6890N/MS16
Analyst: Lusine Hakobyan
Sample Type: 6.0 L Summa Canister
Test Notes:
Container ID: AC02078

Date Collected: 3/1/17
Date Received: 3/8/17
Date Analyzed: 3/15/17
Volume(s) Analyzed: 1.00 Liter(s)

Initial Pressure (psig): -4.12 Final Pressure (psig): 3.54

Canister Dilution Factor: 1.72

CAS #	Compound	Result µg/m³	MRL µg/m³	Result ppbV	MRL ppbV	Data Qualifier
141-78-6	Ethyl Acetate	**23**	1.7	**6.3**	0.48	
110-54-3	n-Hexane	**0.96**	0.86	**0.27**	0.24	
67-66-3	Chloroform	ND	0.86	ND	0.18	
109-99-9	Tetrahydrofuran (THF)	ND	0.86	ND	0.29	
107-06-2	1,2-Dichloroethane	ND	0.86	ND	0.21	
71-55-6	1,1,1-Trichloroethane	ND	0.86	ND	0.16	
71-43-2	Benzene	**1.6**	0.86	**0.49**	0.27	
56-23-5	Carbon Tetrachloride	ND	0.86	ND	0.14	
110-82-7	Cyclohexane	ND	1.7	ND	0.50	
78-87-5	1,2-Dichloropropane	ND	0.86	ND	0.19	
75-27-4	Bromodichloromethane	ND	0.86	ND	0.13	
79-01-6	Trichloroethene	ND	0.86	ND	0.16	
123-91-1	1,4-Dioxane	ND	0.86	ND	0.24	
142-82-5	n-Heptane	ND	0.86	ND	0.21	
10061-01-5	cis-1,3-Dichloropropene	ND	0.86	ND	0.19	
108-10-1	4-Methyl-2-pentanone	ND	0.86	ND	0.21	
10061-02-6	trans-1,3-Dichloropropene	ND	0.86	ND	0.19	
79-00-5	1,1,2-Trichloroethane	ND	0.86	ND	0.16	
108-88-3	Toluene	**20**	0.86	**5.3**	0.23	
591-78-6	2-Hexanone	ND	0.86	ND	0.21	

ND = Compound was analyzed for, but not detected above the laboratory reporting limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Client: **BB&E, Inc**
Client Sample ID: **COL-IAQ-04**
Client Project ID: **Q1 2017 VI Assessment / 02028018 task 4**

ALS Project ID: P1701156
ALS Sample ID: P1701156-007

Test Code: EPA TO-15
Instrument ID: Tekmar AUTOCAN/Agilent 5975Cinert/6890N/MS16
Analyst: Lusine Hakobyan
Sample Type: 6.0 L Summa Canister
Test Notes:
Container ID: AC02078

Date Collected: 3/1/17
Date Received: 3/8/17
Date Analyzed: 3/15/17
Volume(s) Analyzed: 1.00 Liter(s)

Initial Pressure (psig): -4.12 Final Pressure (psig): 3.54

Canister Dilution Factor: 1.72

CAS #	Compound	Result µg/m³	MRL µg/m³	Result ppbV	MRL ppbV	Data Qualifier
124-48-1	Dibromochloromethane	ND	0.86	ND	0.10	
106-93-4	1,2-Dibromoethane	ND	0.86	ND	0.11	
127-18-4	Tetrachloroethene	ND	0.86	ND	0.13	
108-90-7	Chlorobenzene	ND	0.86	ND	0.19	
100-41-4	Ethylbenzene	**4.4**	0.86	**1.0**	0.20	
179601-23-1	m,p-Xylenes	**18**	1.7	**4.1**	0.40	
75-25-2	Bromoform	ND	0.86	ND	0.083	
100-42-5	Styrene	ND	0.86	ND	0.20	
95-47-6	o-Xylene	**6.1**	0.86	**1.4**	0.20	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.86	ND	0.13	
98-82-8	Cumene	ND	0.86	ND	0.18	
622-96-8	4-Ethyltoluene	**2.5**	0.86	**0.51**	0.18	
108-67-8	1,3,5-Trimethylbenzene	**2.6**	0.86	**0.53**	0.18	
95-63-6	1,2,4-Trimethylbenzene	**6.8**	0.86	**1.4**	0.18	
100-44-7	Benzyl Chloride	ND	0.86	ND	0.17	
541-73-1	1,3-Dichlorobenzene	ND	0.86	ND	0.14	
106-46-7	1,4-Dichlorobenzene	ND	0.86	ND	0.14	
95-50-1	1,2-Dichlorobenzene	ND	0.86	ND	0.14	
120-82-1	1,2,4-Trichlorobenzene	ND	0.86	ND	0.12	
87-68-3	Hexachlorobutadiene	ND	0.86	ND	0.081	

ND = Compound was analyzed for, but not detected above the laboratory reporting limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Client: **BB&E, Inc**
Client Sample ID: **COL-SSSG-04**
Client Project ID: **Q1 2017 VI Assessment / 02028018 task 4**

ALS Project ID: P1701156
ALS Sample ID: P1701156-008

Test Code: EPA TO-15
Instrument ID: Tekmar AUTOCAN/Agilent 5975Cinert/6890N/MS16
Analyst: Lusine Hakobyan
Sample Type: 6.0 L Silonite Canister
Test Notes:
Container ID: SSC00342

Date Collected: 3/1/17
Date Received: 3/8/17
Date Analyzed: 3/15/17
Volume(s) Analyzed: 0.16 Liter(s)

Initial Pressure (psig): -3.57 Final Pressure (psig): 3.71

Canister Dilution Factor: 1.65

CAS #	Compound	Result µg/m³	MRL µg/m³	Result ppbV	MRL ppbV	Data Qualifier
115-07-1	Propene	ND	5.2	ND	3.0	
75-71-8	Dichlorodifluoromethane (CFC 12)	ND	5.2	ND	1.0	
74-87-3	Chloromethane	ND	5.2	ND	2.5	
76-14-2	1,2-Dichloro-1,1,2,2-tetrafluoroethane (CFC 114)	ND	5.2	ND	0.74	
75-01-4	Vinyl Chloride	ND	5.2	ND	2.0	
106-99-0	1,3-Butadiene	ND	5.2	ND	2.3	
74-83-9	Bromomethane	ND	5.2	ND	1.3	
75-00-3	Chloroethane	ND	5.2	ND	2.0	
67-64-1	Acetone	**2,300**	52	**960**	22	
75-69-4	Trichlorofluoromethane (CFC 11)	ND	5.2	ND	0.92	
67-63-0	2-Propanol (Isopropyl Alcohol)	ND	52	ND	21	
75-35-4	1,1-Dichloroethene	ND	5.2	ND	1.3	
75-09-2	Methylene Chloride	ND	5.2	ND	1.5	
76-13-1	Trichlorotrifluoroethane (CFC 113)	ND	5.2	ND	0.67	
75-15-0	Carbon Disulfide	ND	52	ND	17	
156-60-5	trans-1,2-Dichloroethene	ND	5.2	ND	1.3	
75-34-3	1,1-Dichloroethane	ND	5.2	ND	1.3	
1634-04-4	Methyl tert-Butyl Ether	ND	5.2	ND	1.4	
108-05-4	Vinyl Acetate	ND	52	ND	15	
78-93-3	2-Butanone (MEK)	**550**	52	**190**	17	
156-59-2	cis-1,2-Dichloroethene	ND	5.2	ND	1.3	

ND = Compound was analyzed for, but not detected above the laboratory reporting limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Client: **BB&E, Inc**
Client Sample ID: **COL-SSSG-04**
Client Project ID: **Q1 2017 VI Assessment / 02028018 task 4**

ALS Project ID: P1701156
ALS Sample ID: P1701156-008

Test Code: EPA TO-15
Instrument ID: Tekmar AUTOCAN/Agilent 5975Cinert/6890N/MS16
Analyst: Lusine Hakobyan
Sample Type: 6.0 L Silonite Canister
Test Notes:
Container ID: SSC00342

Date Collected: 3/1/17
Date Received: 3/8/17
Date Analyzed: 3/15/17
Volume(s) Analyzed: 0.16 Liter(s)

Initial Pressure (psig): -3.57 Final Pressure (psig): 3.71

Canister Dilution Factor: 1.65

CAS #	Compound	Result µg/m³	MRL µg/m³	Result ppbV	MRL ppbV	Data Qualifier
141-78-6	Ethyl Acetate	ND	10	ND	2.9	
110-54-3	n-Hexane	ND	5.2	ND	1.5	
67-66-3	Chloroform	ND	5.2	ND	1.1	
109-99-9	Tetrahydrofuran (THF)	ND	5.2	ND	1.7	
107-06-2	1,2-Dichloroethane	ND	5.2	ND	1.3	
71-55-6	1,1,1-Trichloroethane	ND	5.2	ND	0.95	
71-43-2	Benzene	**8.7**	5.2	**2.7**	1.6	
56-23-5	Carbon Tetrachloride	ND	5.2	ND	0.82	
110-82-7	Cyclohexane	ND	10	ND	3.0	
78-87-5	1,2-Dichloropropane	ND	5.2	ND	1.1	
75-27-4	Bromodichloromethane	ND	5.2	ND	0.77	
79-01-6	Trichloroethene	ND	5.2	ND	0.96	
123-91-1	1,4-Dioxane	ND	5.2	ND	1.4	
142-82-5	n-Heptane	ND	5.2	ND	1.3	
10061-01-5	cis-1,3-Dichloropropene	ND	5.2	ND	1.1	
108-10-1	4-Methyl-2-pentanone	ND	5.2	ND	1.3	
10061-02-6	trans-1,3-Dichloropropene	ND	5.2	ND	1.1	
79-00-5	1,1,2-Trichloroethane	ND	5.2	ND	0.95	
108-88-3	Toluene	**810**	5.2	**210**	1.4	
591-78-6	2-Hexanone	ND	5.2	ND	1.3	

ND = Compound was analyzed for, but not detected above the laboratory reporting limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Client: **BB&E, Inc**
Client Sample ID: **COL-SSSG-04**
Client Project ID: **Q1 2017 VI Assessment / 02028018 task 4**

ALS Project ID: P1701156
ALS Sample ID: P1701156-008

Test Code: EPA TO-15
Instrument ID: Tekmar AUTOCAN/Agilent 5975Cinert/6890N/MS16
Analyst: Lusine Hakobyan
Sample Type: 6.0 L Silonite Canister
Test Notes:
Container ID: SSC00342

Date Collected: 3/1/17
Date Received: 3/8/17
Date Analyzed: 3/15/17
Volume(s) Analyzed: 0.16 Liter(s)

Initial Pressure (psig): -3.57 Final Pressure (psig): 3.71

Canister Dilution Factor: 1.65

CAS #	Compound	Result µg/m³	MRL µg/m³	Result ppbV	MRL ppbV	Data Qualifier
124-48-1	Dibromochloromethane	ND	5.2	ND	0.61	
106-93-4	1,2-Dibromoethane	ND	5.2	ND	0.67	
127-18-4	Tetrachloroethene	ND	5.2	ND	0.76	
108-90-7	Chlorobenzene	ND	5.2	ND	1.1	
100-41-4	Ethylbenzene	**130**	5.2	**30**	1.2	
179601-23-1	m,p-Xylenes	**480**	10	**110**	2.4	
75-25-2	Bromoform	ND	5.2	ND	0.50	
100-42-5	Styrene	ND	5.2	ND	1.2	
95-47-6	o-Xylene	**97**	5.2	**22**	1.2	
79-34-5	1,1,2,2-Tetrachloroethane	ND	5.2	ND	0.75	
98-82-8	Cumene	ND	5.2	ND	1.0	
622-96-8	4-Ethyltoluene	**13**	5.2	**2.6**	1.0	
108-67-8	1,3,5-Trimethylbenzene	**8.9**	5.2	**1.8**	1.0	
95-63-6	1,2,4-Trimethylbenzene	**17**	5.2	**3.6**	1.0	
100-44-7	Benzyl Chloride	ND	5.2	ND	1.0	
541-73-1	1,3-Dichlorobenzene	ND	5.2	ND	0.86	
106-46-7	1,4-Dichlorobenzene	ND	5.2	ND	0.86	
95-50-1	1,2-Dichlorobenzene	ND	5.2	ND	0.86	
120-82-1	1,2,4-Trichlorobenzene	ND	5.2	ND	0.69	
87-68-3	Hexachlorobutadiene	ND	5.2	ND	0.48	

ND = Compound was analyzed for, but not detected above the laboratory reporting limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Client: **BB&E, Inc**
Client Sample ID: **COL-IAQ-05**
Client Project ID: **Q1 2017 VI Assessment / 02028018 task 4**

ALS Project ID: P1701156
ALS Sample ID: P1701156-009

Test Code: EPA TO-15
Instrument ID: Tekmar AUTOCAN/Agilent 5975Cinert/6890N/MS16
Analyst: Lusine Hakobyan
Sample Type: 6.0 L Summa Canister
Test Notes:
Container ID: AC02210

Date Collected: 3/1/17
Date Received: 3/8/17
Date Analyzed: 3/15/17
Volume(s) Analyzed: 1.00 Liter(s)

Initial Pressure (psig): -6.31 Final Pressure (psig): 3.50

Canister Dilution Factor: 2.17

CAS #	Compound	Result µg/m³	MRL µg/m³	Result ppbV	MRL ppbV	Data Qualifier
115-07-1	Propene	**4.9**	1.1	**2.9**	0.63	
75-71-8	Dichlorodifluoromethane (CFC 12)	**2.2**	1.1	**0.45**	0.22	
74-87-3	Chloromethane	ND	1.1	ND	0.53	
76-14-2	1,2-Dichloro-1,1,2,2-tetrafluoroethane (CFC 114)	ND	1.1	ND	0.16	
75-01-4	Vinyl Chloride	ND	1.1	ND	0.42	
106-99-0	1,3-Butadiene	ND	1.1	ND	0.49	
74-83-9	Bromomethane	ND	1.1	ND	0.28	
75-00-3	Chloroethane	ND	1.1	ND	0.41	
67-64-1	Acetone	**280**	11	**120**	4.6	
75-69-4	Trichlorofluoromethane (CFC 11)	**1.1**	1.1	**0.20**	0.19	
67-63-0	2-Propanol (Isopropyl Alcohol)	ND	11	ND	4.4	
75-35-4	1,1-Dichloroethene	ND	1.1	ND	0.27	
75-09-2	Methylene Chloride	ND	1.1	ND	0.31	
76-13-1	Trichlorotrifluoroethane (CFC 113)	ND	1.1	ND	0.14	
75-15-0	Carbon Disulfide	ND	11	ND	3.5	
156-60-5	trans-1,2-Dichloroethene	ND	1.1	ND	0.27	
75-34-3	1,1-Dichloroethane	ND	1.1	ND	0.27	
1634-04-4	Methyl tert-Butyl Ether	ND	1.1	ND	0.30	
108-05-4	Vinyl Acetate	ND	11	ND	3.1	
78-93-3	2-Butanone (MEK)	**23**	11	**7.9**	3.7	
156-59-2	cis-1,2-Dichloroethene	ND	1.1	ND	0.27	

ND = Compound was analyzed for, but not detected above the laboratory reporting limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Client: **BB&E, Inc**
Client Sample ID: **COL-IAQ-05**
Client Project ID: **Q1 2017 VI Assessment / 02028018 task 4**

ALS Project ID: P1701156
ALS Sample ID: P1701156-009

Test Code: EPA TO-15
Instrument ID: Tekmar AUTOCAN/Agilent 5975Cinert/6890N/MS16
Analyst: Lusine Hakobyan
Sample Type: 6.0 L Summa Canister
Test Notes:
Container ID: AC02210

Date Collected: 3/1/17
Date Received: 3/8/17
Date Analyzed: 3/15/17
Volume(s) Analyzed: 1.00 Liter(s)

Initial Pressure (psig): -6.31 Final Pressure (psig): 3.50

Canister Dilution Factor: 2.17

CAS #	Compound	Result µg/m³	MRL µg/m³	Result ppbV	MRL ppbV	Data Qualifier
141-78-6	Ethyl Acetate	**6.5**	2.2	**1.8**	0.60	
110-54-3	n-Hexane	ND	1.1	ND	0.31	
67-66-3	Chloroform	ND	1.1	ND	0.22	
109-99-9	Tetrahydrofuran (THF)	ND	1.1	ND	0.37	
107-06-2	1,2-Dichloroethane	ND	1.1	ND	0.27	
71-55-6	1,1,1-Trichloroethane	ND	1.1	ND	0.20	
71-43-2	Benzene	**7.2**	1.1	**2.3**	0.34	
56-23-5	Carbon Tetrachloride	ND	1.1	ND	0.17	
110-82-7	Cyclohexane	ND	2.2	ND	0.63	
78-87-5	1,2-Dichloropropane	ND	1.1	ND	0.23	
75-27-4	Bromodichloromethane	ND	1.1	ND	0.16	
79-01-6	Trichloroethene	ND	1.1	ND	0.20	
123-91-1	1,4-Dioxane	**2.7**	1.1	**0.76**	0.30	
142-82-5	n-Heptane	ND	1.1	ND	0.26	
10061-01-5	cis-1,3-Dichloropropene	ND	1.1	ND	0.24	
108-10-1	4-Methyl-2-pentanone	ND	1.1	ND	0.26	
10061-02-6	trans-1,3-Dichloropropene	ND	1.1	ND	0.24	
79-00-5	1,1,2-Trichloroethane	ND	1.1	ND	0.20	
108-88-3	Toluene	**29**	1.1	**7.8**	0.29	
591-78-6	2-Hexanone	ND	1.1	ND	0.26	

ND = Compound was analyzed for, but not detected above the laboratory reporting limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Client: **BB&E, Inc**
Client Sample ID: **COL-IAQ-05**
Client Project ID: **Q1 2017 VI Assessment / 02028018 task 4**

ALS Project ID: P1701156
ALS Sample ID: P1701156-009

Test Code: EPA TO-15
Instrument ID: Tekmar AUTOCAN/Agilent 5975Cinert/6890N/MS16
Analyst: Lusine Hakobyan
Sample Type: 6.0 L Summa Canister
Test Notes:
Container ID: AC02210

Date Collected: 3/1/17
Date Received: 3/8/17
Date Analyzed: 3/15/17
Volume(s) Analyzed: 1.00 Liter(s)

Initial Pressure (psig): -6.31 Final Pressure (psig): 3.50

Canister Dilution Factor: 2.17

CAS #	Compound	Result µg/m³	MRL µg/m³	Result ppbV	MRL ppbV	Data Qualifier
124-48-1	Dibromochloromethane	ND	1.1	ND	0.13	
106-93-4	1,2-Dibromoethane	ND	1.1	ND	0.14	
127-18-4	Tetrachloroethene	ND	1.1	ND	0.16	
108-90-7	Chlorobenzene	ND	1.1	ND	0.24	
100-41-4	Ethylbenzene	**4.8**	1.1	**1.1**	0.25	
179601-23-1	m,p-Xylenes	**19**	2.2	**4.4**	0.50	
75-25-2	Bromoform	ND	1.1	ND	0.10	
100-42-5	Styrene	ND	1.1	ND	0.25	
95-47-6	o-Xylene	**6.3**	1.1	**1.4**	0.25	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.1	ND	0.16	
98-82-8	Cumene	ND	1.1	ND	0.22	
622-96-8	4-Ethyltoluene	**1.7**	1.1	**0.35**	0.22	
108-67-8	1,3,5-Trimethylbenzene	**1.8**	1.1	**0.37**	0.22	
95-63-6	1,2,4-Trimethylbenzene	**3.7**	1.1	**0.75**	0.22	
100-44-7	Benzyl Chloride	ND	1.1	ND	0.21	
541-73-1	1,3-Dichlorobenzene	ND	1.1	ND	0.18	
106-46-7	1,4-Dichlorobenzene	ND	1.1	ND	0.18	
95-50-1	1,2-Dichlorobenzene	ND	1.1	ND	0.18	
120-82-1	1,2,4-Trichlorobenzene	ND	1.1	ND	0.15	
87-68-3	Hexachlorobutadiene	ND	1.1	ND	0.10	

ND = Compound was analyzed for, but not detected above the laboratory reporting limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Client: **BB&E, Inc**
Client Sample ID: **COL-SSSG-05**
Client Project ID: **Q1 2017 VI Assessment / 02028018 task 4**

ALS Project ID: P1701156
ALS Sample ID: P1701156-010

Test Code: EPA TO-15
Instrument ID: Tekmar AUTOCAN/Agilent 5975Cinert/6890N/MS16
Analyst: Lusine Hakobyan
Sample Type: 6.0 L Summa Canister
Test Notes:
Container ID: SC00519

Date Collected: 3/1/17
Date Received: 3/8/17
Date Analyzed: 3/15/17
Volume(s) Analyzed: 0.20 Liter(s)

Initial Pressure (psig): -4.16 Final Pressure (psig): 3.65

Canister Dilution Factor: 1.74

CAS #	Compound	Result µg/m³	MRL µg/m³	Result ppbV	MRL ppbV	Data Qualifier
115-07-1	Propene	ND	4.4	ND	2.5	
75-71-8	Dichlorodifluoromethane (CFC 12)	ND	4.4	ND	0.88	
74-87-3	Chloromethane	ND	4.4	ND	2.1	
76-14-2	1,2-Dichloro-1,1,2,2-tetrafluoroethane (CFC 114)	ND	4.4	ND	0.62	
75-01-4	Vinyl Chloride	ND	4.4	ND	1.7	
106-99-0	1,3-Butadiene	ND	4.4	ND	2.0	
74-83-9	Bromomethane	ND	4.4	ND	1.1	
75-00-3	Chloroethane	ND	4.4	ND	1.6	
67-64-1	Acetone	**2,500**	44	**1,000**	18	
75-69-4	Trichlorofluoromethane (CFC 11)	ND	4.4	ND	0.77	
67-63-0	2-Propanol (Isopropyl Alcohol)	ND	44	ND	18	
75-35-4	1,1-Dichloroethene	ND	4.4	ND	1.1	
75-09-2	Methylene Chloride	ND	4.4	ND	1.3	
76-13-1	Trichlorotrifluoroethane (CFC 113)	ND	4.4	ND	0.57	
75-15-0	Carbon Disulfide	ND	44	ND	14	
156-60-5	trans-1,2-Dichloroethene	ND	4.4	ND	1.1	
75-34-3	1,1-Dichloroethane	ND	4.4	ND	1.1	
1634-04-4	Methyl tert-Butyl Ether	ND	4.4	ND	1.2	
108-05-4	Vinyl Acetate	ND	44	ND	12	
78-93-3	2-Butanone (MEK)	**630**	44	**210**	15	
156-59-2	cis-1,2-Dichloroethene	ND	4.4	ND	1.1	

ND = Compound was analyzed for, but not detected above the laboratory reporting limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Client: **BB&E, Inc**
Client Sample ID: **COL-SSSG-05**
Client Project ID: **Q1 2017 VI Assessment / 02028018 task 4**

ALS Project ID: P1701156
ALS Sample ID: P1701156-010

Test Code: EPA TO-15
Instrument ID: Tekmar AUTOCAN/Agilent 5975Cinert/6890N/MS16
Analyst: Lusine Hakobyan
Sample Type: 6.0 L Summa Canister
Test Notes:
Container ID: SC00519

Date Collected: 3/1/17
Date Received: 3/8/17
Date Analyzed: 3/15/17
Volume(s) Analyzed: 0.20 Liter(s)

Initial Pressure (psig): -4.16 Final Pressure (psig): 3.65

Canister Dilution Factor: 1.74

CAS #	Compound	Result µg/m³	MRL µg/m³	Result ppbV	MRL ppbV	Data Qualifier
141-78-6	Ethyl Acetate	**11**	8.7	**3.0**	2.4	
110-54-3	n-Hexane	ND	4.4	ND	1.2	
67-66-3	Chloroform	ND	4.4	ND	0.89	
109-99-9	Tetrahydrofuran (THF)	**5.1**	4.4	**1.7**	1.5	
107-06-2	1,2-Dichloroethane	ND	4.4	ND	1.1	
71-55-6	1,1,1-Trichloroethane	ND	4.4	ND	0.80	
71-43-2	Benzene	**4.5**	4.4	**1.4**	1.4	
56-23-5	Carbon Tetrachloride	ND	4.4	ND	0.69	
110-82-7	Cyclohexane	ND	8.7	ND	2.5	
78-87-5	1,2-Dichloropropane	ND	4.4	ND	0.94	
75-27-4	Bromodichloromethane	ND	4.4	ND	0.65	
79-01-6	Trichloroethene	ND	4.4	ND	0.81	
123-91-1	1,4-Dioxane	ND	4.4	ND	1.2	
142-82-5	n-Heptane	ND	4.4	ND	1.1	
10061-01-5	cis-1,3-Dichloropropene	ND	4.4	ND	0.96	
108-10-1	4-Methyl-2-pentanone	ND	4.4	ND	1.1	
10061-02-6	trans-1,3-Dichloropropene	ND	4.4	ND	0.96	
79-00-5	1,1,2-Trichloroethane	ND	4.4	ND	0.80	
108-88-3	Toluene	**760**	4.4	**200**	1.2	
591-78-6	2-Hexanone	ND	4.4	ND	1.1	

ND = Compound was analyzed for, but not detected above the laboratory reporting limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Client: **BB&E, Inc**
Client Sample ID: **COL-SSSG-05**
Client Project ID: **Q1 2017 VI Assessment / 02028018 task 4**

ALS Project ID: P1701156
ALS Sample ID: P1701156-010

Test Code: EPA TO-15
Instrument ID: Tekmar AUTOCAN/Agilent 5975Cinert/6890N/MS16
Analyst: Lusine Hakobyan
Sample Type: 6.0 L Summa Canister
Test Notes:
Container ID: SC00519

Date Collected: 3/1/17
Date Received: 3/8/17
Date Analyzed: 3/15/17
Volume(s) Analyzed: 0.20 Liter(s)

Initial Pressure (psig): -4.16 Final Pressure (psig): 3.65

Canister Dilution Factor: 1.74

CAS #	Compound	Result µg/m³	MRL µg/m³	Result ppbV	MRL ppbV	Data Qualifier
124-48-1	Dibromochloromethane	ND	4.4	ND	0.51	
106-93-4	1,2-Dibromoethane	ND	4.4	ND	0.57	
127-18-4	Tetrachloroethene	ND	4.4	ND	0.64	
108-90-7	Chlorobenzene	ND	4.4	ND	0.94	
100-41-4	Ethylbenzene	**130**	4.4	**30**	1.0	
179601-23-1	m,p-Xylenes	**460**	8.7	**110**	2.0	
75-25-2	Bromoform	ND	4.4	ND	0.42	
100-42-5	Styrene	ND	4.4	ND	1.0	
95-47-6	o-Xylene	**93**	4.4	**21**	1.0	
79-34-5	1,1,2,2-Tetrachloroethane	ND	4.4	ND	0.63	
98-82-8	Cumene	ND	4.4	ND	0.89	
622-96-8	4-Ethyltoluene	**11**	4.4	**2.3**	0.89	
108-67-8	1,3,5-Trimethylbenzene	**7.7**	4.4	**1.6**	0.89	
95-63-6	1,2,4-Trimethylbenzene	**15**	4.4	**3.0**	0.89	
100-44-7	Benzyl Chloride	ND	4.4	ND	0.84	
541-73-1	1,3-Dichlorobenzene	ND	4.4	ND	0.72	
106-46-7	1,4-Dichlorobenzene	ND	4.4	ND	0.72	
95-50-1	1,2-Dichlorobenzene	ND	4.4	ND	0.72	
120-82-1	1,2,4-Trichlorobenzene	ND	4.4	ND	0.59	
87-68-3	Hexachlorobutadiene	ND	4.4	ND	0.41	

ND = Compound was analyzed for, but not detected above the laboratory reporting limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Client: **BB&E, Inc**
Client Sample ID: **COL-IAQ-06**
Client Project ID: **Q1 2017 VI Assessment / 02028018 task 4**

ALS Project ID: P1701156
ALS Sample ID: P1701156-011

Test Code: EPA TO-15
Instrument ID: Tekmar AUTOCAN/Agilent 5975Cinert/6890N/MS16
Analyst: Lusine Hakobyan
Sample Type: 6.0 L Silonite Canister
Test Notes:
Container ID: AS00675

Date Collected: 3/1/17
Date Received: 3/8/17
Date Analyzed: 3/15/17
Volume(s) Analyzed: 1.00 Liter(s)

Initial Pressure (psig): -7.52 Final Pressure (psig): 3.62

Canister Dilution Factor: 2.55

CAS #	Compound	Result µg/m³	MRL µg/m³	Result ppbV	MRL ppbV	Data Qualifier
115-07-1	Propene	**9.4**	1.3	**5.5**	0.74	
75-71-8	Dichlorodifluoromethane (CFC 12)	**2.2**	1.3	**0.44**	0.26	
74-87-3	Chloromethane	ND	1.3	ND	0.62	
76-14-2	1,2-Dichloro-1,1,2,2-tetrafluoroethane (CFC 114)	ND	1.3	ND	0.18	
75-01-4	Vinyl Chloride	ND	1.3	ND	0.50	
106-99-0	1,3-Butadiene	ND	1.3	ND	0.58	
74-83-9	Bromomethane	ND	1.3	ND	0.33	
75-00-3	Chloroethane	ND	1.3	ND	0.48	
67-64-1	Acetone	**980**	13	**410**	5.4	
75-69-4	Trichlorofluoromethane (CFC 11)	ND	1.3	ND	0.23	
67-63-0	2-Propanol (Isopropyl Alcohol)	ND	13	ND	5.2	
75-35-4	1,1-Dichloroethene	ND	1.3	ND	0.32	
75-09-2	Methylene Chloride	ND	1.3	ND	0.37	
76-13-1	Trichlorotrifluoroethane (CFC 113)	ND	1.3	ND	0.17	
75-15-0	Carbon Disulfide	ND	13	ND	4.1	
156-60-5	trans-1,2-Dichloroethene	ND	1.3	ND	0.32	
75-34-3	1,1-Dichloroethane	ND	1.3	ND	0.32	
1634-04-4	Methyl tert-Butyl Ether	ND	1.3	ND	0.35	
108-05-4	Vinyl Acetate	ND	13	ND	3.6	
78-93-3	2-Butanone (MEK)	**80**	13	**27**	4.3	
156-59-2	cis-1,2-Dichloroethene	ND	1.3	ND	0.32	

ND = Compound was analyzed for, but not detected above the laboratory reporting limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Client: **BB&E, Inc**
Client Sample ID: **COL-IAQ-06**
Client Project ID: **Q1 2017 VI Assessment / 02028018 task 4**

ALS Project ID: P1701156
ALS Sample ID: P1701156-011

Test Code: EPA TO-15
Instrument ID: Tekmar AUTOCAN/Agilent 5975Cinert/6890N/MS16
Analyst: Lusine Hakobyan
Sample Type: 6.0 L Silonite Canister
Test Notes:
Container ID: AS00675

Date Collected: 3/1/17
Date Received: 3/8/17
Date Analyzed: 3/15/17
Volume(s) Analyzed: 1.00 Liter(s)

Initial Pressure (psig): -7.52 Final Pressure (psig): 3.62

Canister Dilution Factor: 2.55

CAS #	Compound	Result µg/m³	MRL µg/m³	Result ppbV	MRL ppbV	Data Qualifier
141-78-6	Ethyl Acetate	**12**	2.6	**3.2**	0.71	
110-54-3	n-Hexane	ND	1.3	ND	0.36	
67-66-3	Chloroform	ND	1.3	ND	0.26	
109-99-9	Tetrahydrofuran (THF)	ND	1.3	ND	0.43	
107-06-2	1,2-Dichloroethane	ND	1.3	ND	0.32	
71-55-6	1,1,1-Trichloroethane	ND	1.3	ND	0.23	
71-43-2	Benzene	**3.1**	1.3	**0.98**	0.40	
56-23-5	Carbon Tetrachloride	ND	1.3	ND	0.20	
110-82-7	Cyclohexane	ND	2.6	ND	0.74	
78-87-5	1,2-Dichloropropane	ND	1.3	ND	0.28	
75-27-4	Bromodichloromethane	ND	1.3	ND	0.19	
79-01-6	Trichloroethene	ND	1.3	ND	0.24	
123-91-1	1,4-Dioxane	ND	1.3	ND	0.35	
142-82-5	n-Heptane	ND	1.3	ND	0.31	
10061-01-5	cis-1,3-Dichloropropene	ND	1.3	ND	0.28	
108-10-1	4-Methyl-2-pentanone	ND	1.3	ND	0.31	
10061-02-6	trans-1,3-Dichloropropene	ND	1.3	ND	0.28	
79-00-5	1,1,2-Trichloroethane	ND	1.3	ND	0.23	
108-88-3	Toluene	**90**	1.3	**24**	0.34	
591-78-6	2-Hexanone	ND	1.3	ND	0.31	

ND = Compound was analyzed for, but not detected above the laboratory reporting limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Client: **BB&E, Inc**
Client Sample ID: **COL-IAQ-06**
Client Project ID: **Q1 2017 VI Assessment / 02028018 task 4**

ALS Project ID: P1701156
ALS Sample ID: P1701156-011

Test Code: EPA TO-15
Instrument ID: Tekmar AUTOCAN/Agilent 5975Cinert/6890N/MS16
Analyst: Lusine Hakobyan
Sample Type: 6.0 L Silonite Canister
Test Notes:
Container ID: AS00675

Date Collected: 3/1/17
Date Received: 3/8/17
Date Analyzed: 3/15/17
Volume(s) Analyzed: 1.00 Liter(s)

Initial Pressure (psig): -7.52 Final Pressure (psig): 3.62

Canister Dilution Factor: 2.55

CAS #	Compound	Result µg/m³	MRL µg/m³	Result ppbV	MRL ppbV	Data Qualifier
124-48-1	Dibromochloromethane	ND	1.3	ND	0.15	
106-93-4	1,2-Dibromoethane	ND	1.3	ND	0.17	
127-18-4	Tetrachloroethene	ND	1.3	ND	0.19	
108-90-7	Chlorobenzene	ND	1.3	ND	0.28	
100-41-4	Ethylbenzene	**15**	1.3	**3.5**	0.29	
179601-23-1	m,p-Xylenes	**61**	2.6	**14**	0.59	
75-25-2	Bromoform	ND	1.3	ND	0.12	
100-42-5	Styrene	ND	1.3	ND	0.30	
95-47-6	o-Xylene	**19**	1.3	**4.3**	0.29	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.3	ND	0.19	
98-82-8	Cumene	ND	1.3	ND	0.26	
622-96-8	4-Ethyltoluene	**4.6**	1.3	**0.93**	0.26	
108-67-8	1,3,5-Trimethylbenzene	**4.7**	1.3	**0.96**	0.26	
95-63-6	1,2,4-Trimethylbenzene	**9.3**	1.3	**1.9**	0.26	
100-44-7	Benzyl Chloride	ND	1.3	ND	0.25	
541-73-1	1,3-Dichlorobenzene	ND	1.3	ND	0.21	
106-46-7	1,4-Dichlorobenzene	ND	1.3	ND	0.21	
95-50-1	1,2-Dichlorobenzene	ND	1.3	ND	0.21	
120-82-1	1,2,4-Trichlorobenzene	ND	1.3	ND	0.17	
87-68-3	Hexachlorobutadiene	ND	1.3	ND	0.12	

ND = Compound was analyzed for, but not detected above the laboratory reporting limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Client: **BB&E, Inc**
Client Sample ID: **COL-IAQ-07**
Client Project ID: **Q1 2017 VI Assessment / 02028018 task 4**

ALS Project ID: P1701156
ALS Sample ID: P1701156-012

Test Code: EPA TO-15
Instrument ID: Tekmar AUTOCAN/Agilent 5975Cinert/6890N/MS16
Analyst: Lusine Hakobyan
Sample Type: 6.0 L Silonite Canister
Test Notes:
Container ID: AS00676

Date Collected: 3/1/17
Date Received: 3/8/17
Date Analyzed: 3/15/17
Volume(s) Analyzed: 1.00 Liter(s)

Initial Pressure (psig): -4.51 Final Pressure (psig): 3.57

Canister Dilution Factor: 1.79

CAS #	Compound	Result µg/m³	MRL µg/m³	Result ppbV	MRL ppbV	Data Qualifier
115-07-1	Propene	**3.6**	0.90	**2.1**	0.52	
75-71-8	Dichlorodifluoromethane (CFC 12)	**2.7**	0.90	**0.55**	0.18	
74-87-3	Chloromethane	ND	0.90	ND	0.43	
76-14-2	1,2-Dichloro-1,1,2,2-tetrafluoroethane (CFC 114)	ND	0.90	ND	0.13	
75-01-4	Vinyl Chloride	ND	0.90	ND	0.35	
106-99-0	1,3-Butadiene	ND	0.90	ND	0.40	
74-83-9	Bromomethane	ND	0.90	ND	0.23	
75-00-3	Chloroethane	ND	0.90	ND	0.34	
67-64-1	Acetone	**140**	9.0	**57**	3.8	
75-69-4	Trichlorofluoromethane (CFC 11)	**10**	0.90	**1.8**	0.16	
67-63-0	2-Propanol (Isopropyl Alcohol)	ND	9.0	ND	3.6	
75-35-4	1,1-Dichloroethene	ND	0.90	ND	0.23	
75-09-2	Methylene Chloride	ND	0.90	ND	0.26	
76-13-1	Trichlorotrifluoroethane (CFC 113)	ND	0.90	ND	0.12	
75-15-0	Carbon Disulfide	ND	9.0	ND	2.9	
156-60-5	trans-1,2-Dichloroethene	ND	0.90	ND	0.23	
75-34-3	1,1-Dichloroethane	ND	0.90	ND	0.22	
1634-04-4	Methyl tert-Butyl Ether	ND	0.90	ND	0.25	
108-05-4	Vinyl Acetate	ND	9.0	ND	2.5	
78-93-3	2-Butanone (MEK)	**10**	9.0	**3.4**	3.0	
156-59-2	cis-1,2-Dichloroethene	ND	0.90	ND	0.23	

ND = Compound was analyzed for, but not detected above the laboratory reporting limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Client: **BB&E, Inc**
Client Sample ID: **COL-IAQ-07**
Client Project ID: **Q1 2017 VI Assessment / 02028018 task 4**

ALS Project ID: P1701156
ALS Sample ID: P1701156-012

Test Code: EPA TO-15
Instrument ID: Tekmar AUTOCAN/Agilent 5975Cinert/6890N/MS16
Analyst: Lusine Hakobyan
Sample Type: 6.0 L Silonite Canister
Test Notes:
Container ID: AS00676

Date Collected: 3/1/17
Date Received: 3/8/17
Date Analyzed: 3/15/17
Volume(s) Analyzed: 1.00 Liter(s)

Initial Pressure (psig): -4.51 Final Pressure (psig): 3.57

Canister Dilution Factor: 1.79

CAS #	Compound	Result µg/m³	MRL µg/m³	Result ppbV	MRL ppbV	Data Qualifier
141-78-6	Ethyl Acetate	**1.9**	1.8	**0.54**	0.50	
110-54-3	n-Hexane	ND	0.90	ND	0.25	
67-66-3	Chloroform	ND	0.90	ND	0.18	
109-99-9	Tetrahydrofuran (THF)	ND	0.90	ND	0.30	
107-06-2	1,2-Dichloroethane	ND	0.90	ND	0.22	
71-55-6	1,1,1-Trichloroethane	ND	0.90	ND	0.16	
71-43-2	Benzene	ND	0.90	ND	0.28	
56-23-5	Carbon Tetrachloride	ND	0.90	ND	0.14	
110-82-7	Cyclohexane	ND	1.8	ND	0.52	
78-87-5	1,2-Dichloropropane	ND	0.90	ND	0.19	
75-27-4	Bromodichloromethane	ND	0.90	ND	0.13	
79-01-6	Trichloroethene	ND	0.90	ND	0.17	
123-91-1	1,4-Dioxane	ND	0.90	ND	0.25	
142-82-5	n-Heptane	ND	0.90	ND	0.22	
10061-01-5	cis-1,3-Dichloropropene	ND	0.90	ND	0.20	
108-10-1	4-Methyl-2-pentanone	ND	0.90	ND	0.22	
10061-02-6	trans-1,3-Dichloropropene	ND	0.90	ND	0.20	
79-00-5	1,1,2-Trichloroethane	ND	0.90	ND	0.16	
108-88-3	Toluene	**11**	0.90	**3.0**	0.24	
591-78-6	2-Hexanone	ND	0.90	ND	0.22	

ND = Compound was analyzed for, but not detected above the laboratory reporting limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Client: **BB&E, Inc**
Client Sample ID: **COL-IAQ-07**
Client Project ID: **Q1 2017 VI Assessment / 02028018 task 4**

ALS Project ID: P1701156
ALS Sample ID: P1701156-012

Test Code: EPA TO-15
Instrument ID: Tekmar AUTOCAN/Agilent 5975Cinert/6890N/MS16
Analyst: Lusine Hakobyan
Sample Type: 6.0 L Silonite Canister
Test Notes:
Container ID: AS00676

Date Collected: 3/1/17
Date Received: 3/8/17
Date Analyzed: 3/15/17
Volume(s) Analyzed: 1.00 Liter(s)

Initial Pressure (psig): -4.51 Final Pressure (psig): 3.57

Canister Dilution Factor: 1.79

CAS #	Compound	Result µg/m³	MRL µg/m³	Result ppbV	MRL ppbV	Data Qualifier
124-48-1	Dibromochloromethane	ND	0.90	ND	0.11	
106-93-4	1,2-Dibromoethane	ND	0.90	ND	0.12	
127-18-4	Tetrachloroethene	ND	0.90	ND	0.13	
108-90-7	Chlorobenzene	ND	0.90	ND	0.19	
100-41-4	Ethylbenzene	**2.1**	0.90	**0.48**	0.21	
179601-23-1	m,p-Xylenes	**7.3**	1.8	**1.7**	0.41	
75-25-2	Bromoform	ND	0.90	ND	0.087	
100-42-5	Styrene	ND	0.90	ND	0.21	
95-47-6	o-Xylene	**2.8**	0.90	**0.64**	0.21	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.90	ND	0.13	
98-82-8	Cumene	ND	0.90	ND	0.18	
622-96-8	4-Ethyltoluene	ND	0.90	ND	0.18	
108-67-8	1,3,5-Trimethylbenzene	ND	0.90	ND	0.18	
95-63-6	1,2,4-Trimethylbenzene	**2.1**	0.90	**0.42**	0.18	
100-44-7	Benzyl Chloride	ND	0.90	ND	0.17	
541-73-1	1,3-Dichlorobenzene	ND	0.90	ND	0.15	
106-46-7	1,4-Dichlorobenzene	ND	0.90	ND	0.15	
95-50-1	1,2-Dichlorobenzene	ND	0.90	ND	0.15	
120-82-1	1,2,4-Trichlorobenzene	ND	0.90	ND	0.12	
87-68-3	Hexachlorobutadiene	ND	0.90	ND	0.084	

ND = Compound was analyzed for, but not detected above the laboratory reporting limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Client: **BB&E, Inc**
Client Sample ID: **COL-IAQ-08**
Client Project ID: **Q1 2017 VI Assessment / 02028018 task 4**

ALS Project ID: P1701156
ALS Sample ID: P1701156-013

Test Code: EPA TO-15
Instrument ID: Tekmar AUTOCAN/Agilent 5975Cinert/6890N/MS16
Analyst: Lusine Hakobyan
Sample Type: 6.0 L Summa Canister
Test Notes:
Container ID: AC02217

Date Collected: 3/1/17
Date Received: 3/8/17
Date Analyzed: 3/15/17
Volume(s) Analyzed: 1.00 Liter(s)

Initial Pressure (psig): -4.78 Final Pressure (psig): 3.57

Canister Dilution Factor: 1.84

CAS #	Compound	Result µg/m³	MRL µg/m³	Result ppbV	MRL ppbV	Data Qualifier
115-07-1	Propene	**5.4**	0.92	**3.1**	0.53	
75-71-8	Dichlorodifluoromethane (CFC 12)	**2.7**	0.92	**0.56**	0.19	
74-87-3	Chloromethane	ND	0.92	ND	0.45	
76-14-2	1,2-Dichloro-1,1,2,2-tetrafluoroethane (CFC 114)	ND	0.92	ND	0.13	
75-01-4	Vinyl Chloride	ND	0.92	ND	0.36	
106-99-0	1,3-Butadiene	ND	0.92	ND	0.42	
74-83-9	Bromomethane	ND	0.92	ND	0.24	
75-00-3	Chloroethane	ND	0.92	ND	0.35	
67-64-1	Acetone	**180**	9.2	**77**	3.9	
75-69-4	Trichlorofluoromethane (CFC 11)	**10**	0.92	**1.8**	0.16	
67-63-0	2-Propanol (Isopropyl Alcohol)	**18**	9.2	**7.4**	3.7	
75-35-4	1,1-Dichloroethene	ND	0.92	ND	0.23	
75-09-2	Methylene Chloride	ND	0.92	ND	0.26	
76-13-1	Trichlorotrifluoroethane (CFC 113)	ND	0.92	ND	0.12	
75-15-0	Carbon Disulfide	ND	9.2	ND	3.0	
156-60-5	trans-1,2-Dichloroethene	ND	0.92	ND	0.23	
75-34-3	1,1-Dichloroethane	ND	0.92	ND	0.23	
1634-04-4	Methyl tert-Butyl Ether	ND	0.92	ND	0.26	
108-05-4	Vinyl Acetate	ND	9.2	ND	2.6	
78-93-3	2-Butanone (MEK)	**13**	9.2	**4.4**	3.1	
156-59-2	cis-1,2-Dichloroethene	ND	0.92	ND	0.23	

ND = Compound was analyzed for, but not detected above the laboratory reporting limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Client: **BB&E, Inc**
Client Sample ID: **COL-IAQ-08**
Client Project ID: **Q1 2017 VI Assessment / 02028018 task 4**

ALS Project ID: P1701156
ALS Sample ID: P1701156-013

Test Code: EPA TO-15
Instrument ID: Tekmar AUTOCAN/Agilent 5975Cinert/6890N/MS16
Analyst: Lusine Hakobyan
Sample Type: 6.0 L Summa Canister
Test Notes:
Container ID: AC02217

Date Collected: 3/1/17
Date Received: 3/8/17
Date Analyzed: 3/15/17
Volume(s) Analyzed: 1.00 Liter(s)

Initial Pressure (psig): -4.78 Final Pressure (psig): 3.57

Canister Dilution Factor: 1.84

CAS #	Compound	Result µg/m³	MRL µg/m³	Result ppbV	MRL ppbV	Data Qualifier
141-78-6	Ethyl Acetate	**34**	1.8	**9.5**	0.51	
110-54-3	n-Hexane	ND	0.92	ND	0.26	
67-66-3	Chloroform	ND	0.92	ND	0.19	
109-99-9	Tetrahydrofuran (THF)	ND	0.92	ND	0.31	
107-06-2	1,2-Dichloroethane	ND	0.92	ND	0.23	
71-55-6	1,1,1-Trichloroethane	ND	0.92	ND	0.17	
71-43-2	Benzene	ND	0.92	ND	0.29	
56-23-5	Carbon Tetrachloride	ND	0.92	ND	0.15	
110-82-7	Cyclohexane	ND	1.8	ND	0.53	
78-87-5	1,2-Dichloropropane	ND	0.92	ND	0.20	
75-27-4	Bromodichloromethane	ND	0.92	ND	0.14	
79-01-6	Trichloroethene	ND	0.92	ND	0.17	
123-91-1	1,4-Dioxane	ND	0.92	ND	0.26	
142-82-5	n-Heptane	ND	0.92	ND	0.22	
10061-01-5	cis-1,3-Dichloropropene	ND	0.92	ND	0.20	
108-10-1	4-Methyl-2-pentanone	ND	0.92	ND	0.22	
10061-02-6	trans-1,3-Dichloropropene	ND	0.92	ND	0.20	
79-00-5	1,1,2-Trichloroethane	ND	0.92	ND	0.17	
108-88-3	Toluene	**13**	0.92	**3.4**	0.24	
591-78-6	2-Hexanone	ND	0.92	ND	0.22	

ND = Compound was analyzed for, but not detected above the laboratory reporting limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Client: **BB&E, Inc**
Client Sample ID: **COL-IAQ-08**
Client Project ID: **Q1 2017 VI Assessment / 02028018 task 4**

ALS Project ID: P1701156
ALS Sample ID: P1701156-013

Test Code: EPA TO-15
Instrument ID: Tekmar AUTOCAN/Agilent 5975Cinert/6890N/MS16
Analyst: Lusine Hakobyan
Sample Type: 6.0 L Summa Canister
Test Notes:
Container ID: AC02217

Date Collected: 3/1/17
Date Received: 3/8/17
Date Analyzed: 3/15/17
Volume(s) Analyzed: 1.00 Liter(s)

Initial Pressure (psig): -4.78 Final Pressure (psig): 3.57

Canister Dilution Factor: 1.84

CAS #	Compound	Result µg/m³	MRL µg/m³	Result ppbV	MRL ppbV	Data Qualifier
124-48-1	Dibromochloromethane	ND	0.92	ND	0.11	
106-93-4	1,2-Dibromoethane	ND	0.92	ND	0.12	
127-18-4	Tetrachloroethene	ND	0.92	ND	0.14	
108-90-7	Chlorobenzene	ND	0.92	ND	0.20	
100-41-4	Ethylbenzene	**2.3**	0.92	**0.53**	0.21	
179601-23-1	m,p-Xylenes	**8.5**	1.8	**1.9**	0.42	
75-25-2	Bromoform	ND	0.92	ND	0.089	
100-42-5	Styrene	ND	0.92	ND	0.22	
95-47-6	o-Xylene	**3.2**	0.92	**0.73**	0.21	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.92	ND	0.13	
98-82-8	Cumene	ND	0.92	ND	0.19	
622-96-8	4-Ethyltoluene	ND	0.92	ND	0.19	
108-67-8	1,3,5-Trimethylbenzene	**0.94**	0.92	**0.19**	0.19	
95-63-6	1,2,4-Trimethylbenzene	**2.5**	0.92	**0.51**	0.19	
100-44-7	Benzyl Chloride	ND	0.92	ND	0.18	
541-73-1	1,3-Dichlorobenzene	ND	0.92	ND	0.15	
106-46-7	1,4-Dichlorobenzene	ND	0.92	ND	0.15	
95-50-1	1,2-Dichlorobenzene	ND	0.92	ND	0.15	
120-82-1	1,2,4-Trichlorobenzene	ND	0.92	ND	0.12	
87-68-3	Hexachlorobutadiene	ND	0.92	ND	0.086	

ND = Compound was analyzed for, but not detected above the laboratory reporting limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Client: **BB&E, Inc**
Client Sample ID: **COL-CSAQ-01**
Client Project ID: **Q1 2017 VI Assessment / 02028018 task 4**

ALS Project ID: P1701156
ALS Sample ID: P1701156-014

Test Code: EPA TO-15
Instrument ID: Tekmar AUTOCAN/Agilent 5975Cinert/6890N/MS16
Analyst: Lusine Hakobyan
Sample Type: 6.0 L Silonite Canister
Test Notes:
Container ID: AS00972

Date Collected: 3/1/17
Date Received: 3/8/17
Date Analyzed: 3/16/17
Volume(s) Analyzed: 1.00 Liter(s)

Initial Pressure (psig): -3.21 Final Pressure (psig): 3.55

Canister Dilution Factor: 1.59

CAS #	Compound	Result µg/m³	MRL µg/m³	Result ppbV	MRL ppbV	Data Qualifier
115-07-1	Propene	ND	0.80	ND	0.46	
75-71-8	Dichlorodifluoromethane (CFC 12)	**2.6**	0.80	**0.53**	0.16	
74-87-3	Chloromethane	ND	0.80	ND	0.39	
76-14-2	1,2-Dichloro-1,1,2,2-tetrafluoroethane (CFC 114)	ND	0.80	ND	0.11	
75-01-4	Vinyl Chloride	ND	0.80	ND	0.31	
106-99-0	1,3-Butadiene	ND	0.80	ND	0.36	
74-83-9	Bromomethane	ND	0.80	ND	0.20	
75-00-3	Chloroethane	ND	0.80	ND	0.30	
67-64-1	Acetone	**17**	8.0	**7.4**	3.3	
75-69-4	Trichlorofluoromethane (CFC 11)	**1.3**	0.80	**0.24**	0.14	
67-63-0	2-Propanol (Isopropyl Alcohol)	ND	8.0	ND	3.2	
75-35-4	1,1-Dichloroethene	ND	0.80	ND	0.20	
75-09-2	Methylene Chloride	ND	0.80	ND	0.23	
76-13-1	Trichlorotrifluoroethane (CFC 113)	ND	0.80	ND	0.10	
75-15-0	Carbon Disulfide	ND	8.0	ND	2.6	
156-60-5	trans-1,2-Dichloroethene	ND	0.80	ND	0.20	
75-34-3	1,1-Dichloroethane	ND	0.80	ND	0.20	
1634-04-4	Methyl tert-Butyl Ether	ND	0.80	ND	0.22	
108-05-4	Vinyl Acetate	ND	8.0	ND	2.3	
78-93-3	2-Butanone (MEK)	ND	8.0	ND	2.7	
156-59-2	cis-1,2-Dichloroethene	ND	0.80	ND	0.20	

ND = Compound was analyzed for, but not detected above the laboratory reporting limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Client: **BB&E, Inc**
Client Sample ID: **COL-CSAQ-01**
Client Project ID: **Q1 2017 VI Assessment / 02028018 task 4**

ALS Project ID: P1701156
ALS Sample ID: P1701156-014

Test Code: EPA TO-15
Instrument ID: Tekmar AUTOCAN/Agilent 5975Cinert/6890N/MS16
Analyst: Lusine Hakobyan
Sample Type: 6.0 L Silonite Canister
Test Notes:
Container ID: AS00972

Date Collected: 3/1/17
Date Received: 3/8/17
Date Analyzed: 3/16/17
Volume(s) Analyzed: 1.00 Liter(s)

Initial Pressure (psig): -3.21 Final Pressure (psig): 3.55

Canister Dilution Factor: 1.59

CAS #	Compound	Result µg/m³	MRL µg/m³	Result ppbV	MRL ppbV	Data Qualifier
141-78-6	Ethyl Acetate	**1.9**	1.6	**0.53**	0.44	
110-54-3	n-Hexane	ND	0.80	ND	0.23	
67-66-3	Chloroform	ND	0.80	ND	0.16	
109-99-9	Tetrahydrofuran (THF)	ND	0.80	ND	0.27	
107-06-2	1,2-Dichloroethane	ND	0.80	ND	0.20	
71-55-6	1,1,1-Trichloroethane	ND	0.80	ND	0.15	
71-43-2	Benzene	ND	0.80	ND	0.25	
56-23-5	Carbon Tetrachloride	ND	0.80	ND	0.13	
110-82-7	Cyclohexane	ND	1.6	ND	0.46	
78-87-5	1,2-Dichloropropane	ND	0.80	ND	0.17	
75-27-4	Bromodichloromethane	ND	0.80	ND	0.12	
79-01-6	Trichloroethene	ND	0.80	ND	0.15	
123-91-1	1,4-Dioxane	ND	0.80	ND	0.22	
142-82-5	n-Heptane	ND	0.80	ND	0.19	
10061-01-5	cis-1,3-Dichloropropene	ND	0.80	ND	0.18	
108-10-1	4-Methyl-2-pentanone	ND	0.80	ND	0.19	
10061-02-6	trans-1,3-Dichloropropene	ND	0.80	ND	0.18	
79-00-5	1,1,2-Trichloroethane	ND	0.80	ND	0.15	
108-88-3	Toluene	**1.4**	0.80	**0.36**	0.21	
591-78-6	2-Hexanone	ND	0.80	ND	0.19	

ND = Compound was analyzed for, but not detected above the laboratory reporting limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Client: **BB&E, Inc**
Client Sample ID: **COL-CSAQ-01**
Client Project ID: **Q1 2017 VI Assessment / 02028018 task 4**

ALS Project ID: P1701156
ALS Sample ID: P1701156-014

Test Code: EPA TO-15
Instrument ID: Tekmar AUTOCAN/Agilent 5975Cinert/6890N/MS16
Analyst: Lusine Hakobyan
Sample Type: 6.0 L Silonite Canister
Test Notes:
Container ID: AS00972

Date Collected: 3/1/17
Date Received: 3/8/17
Date Analyzed: 3/16/17
Volume(s) Analyzed: 1.00 Liter(s)

Initial Pressure (psig): -3.21 Final Pressure (psig): 3.55

Canister Dilution Factor: 1.59

CAS #	Compound	Result µg/m³	MRL µg/m³	Result ppbV	MRL ppbV	Data Qualifier
124-48-1	Dibromochloromethane	ND	0.80	ND	0.093	
106-93-4	1,2-Dibromoethane	ND	0.80	ND	0.10	
127-18-4	Tetrachloroethene	ND	0.80	ND	0.12	
108-90-7	Chlorobenzene	ND	0.80	ND	0.17	
100-41-4	Ethylbenzene	ND	0.80	ND	0.18	
179601-23-1	m,p-Xylenes	ND	1.6	ND	0.37	
75-25-2	Bromoform	ND	0.80	ND	0.077	
100-42-5	Styrene	ND	0.80	ND	0.19	
95-47-6	o-Xylene	**0.92**	0.80	**0.21**	0.18	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.80	ND	0.12	
98-82-8	Cumene	ND	0.80	ND	0.16	
622-96-8	4-Ethyltoluene	ND	0.80	ND	0.16	
108-67-8	1,3,5-Trimethylbenzene	ND	0.80	ND	0.16	
95-63-6	1,2,4-Trimethylbenzene	ND	0.80	ND	0.16	
100-44-7	Benzyl Chloride	ND	0.80	ND	0.15	
541-73-1	1,3-Dichlorobenzene	ND	0.80	ND	0.13	
106-46-7	1,4-Dichlorobenzene	ND	0.80	ND	0.13	
95-50-1	1,2-Dichlorobenzene	ND	0.80	ND	0.13	
120-82-1	1,2,4-Trichlorobenzene	ND	0.80	ND	0.11	
87-68-3	Hexachlorobutadiene	ND	0.80	ND	0.075	

ND = Compound was analyzed for, but not detected above the laboratory reporting limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Client: **BB&E, Inc**
Client Sample ID: **COL-OAQ-01**
Client Project ID: **Q1 2017 VI Assessment / 02028018 task 4**

ALS Project ID: P1701156
ALS Sample ID: P1701156-015

Test Code: EPA TO-15
Instrument ID: Tekmar AUTOCAN/Agilent 5975Cinert/6890N/MS16
Analyst: Lusine Hakobyan
Sample Type: 6.0 L Summa Canister
Test Notes:
Container ID: AC01010

Date Collected: 3/1/17
Date Received: 3/8/17
Date Analyzed: 3/16/17
Volume(s) Analyzed: 1.00 Liter(s)

Initial Pressure (psig): 1.29 Final Pressure (psig): 3.49

Canister Dilution Factor: 1.14

CAS #	Compound	Result µg/m³	MRL µg/m³	Result ppbV	MRL ppbV	Data Qualifier
115-07-1	Propene	ND	0.57	ND	0.33	
75-71-8	Dichlorodifluoromethane (CFC 12)	**2.3**	0.57	**0.47**	0.12	
74-87-3	Chloromethane	ND	0.57	ND	0.28	
76-14-2	1,2-Dichloro-1,1,2,2-tetrafluoroethane (CFC 114)	ND	0.57	ND	0.082	
75-01-4	Vinyl Chloride	ND	0.57	ND	0.22	
106-99-0	1,3-Butadiene	ND	0.57	ND	0.26	
74-83-9	Bromomethane	ND	0.57	ND	0.15	
75-00-3	Chloroethane	ND	0.57	ND	0.22	
67-64-1	Acetone	**16**	5.7	**6.8**	2.4	
75-69-4	Trichlorofluoromethane (CFC 11)	**1.1**	0.57	**0.20**	0.10	
67-63-0	2-Propanol (Isopropyl Alcohol)	ND	5.7	ND	2.3	
75-35-4	1,1-Dichloroethene	ND	0.57	ND	0.14	
75-09-2	Methylene Chloride	ND	0.57	ND	0.16	
76-13-1	Trichlorotrifluoroethane (CFC 113)	ND	0.57	ND	0.074	
75-15-0	Carbon Disulfide	ND	5.7	ND	1.8	
156-60-5	trans-1,2-Dichloroethene	ND	0.57	ND	0.14	
75-34-3	1,1-Dichloroethane	ND	0.57	ND	0.14	
1634-04-4	Methyl tert-Butyl Ether	ND	0.57	ND	0.16	
108-05-4	Vinyl Acetate	ND	5.7	ND	1.6	
78-93-3	2-Butanone (MEK)	ND	5.7	ND	1.9	
156-59-2	cis-1,2-Dichloroethene	ND	0.57	ND	0.14	

ND = Compound was analyzed for, but not detected above the laboratory reporting limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Client: **BB&E, Inc**
Client Sample ID: **COL-OAQ-01**
Client Project ID: **Q1 2017 VI Assessment / 02028018 task 4**

ALS Project ID: P1701156
ALS Sample ID: P1701156-015

Test Code: EPA TO-15
Instrument ID: Tekmar AUTOCAN/Agilent 5975Cinert/6890N/MS16
Analyst: Lusine Hakobyan
Sample Type: 6.0 L Summa Canister
Test Notes:
Container ID: AC01010

Date Collected: 3/1/17
Date Received: 3/8/17
Date Analyzed: 3/16/17
Volume(s) Analyzed: 1.00 Liter(s)

Initial Pressure (psig): 1.29 Final Pressure (psig): 3.49

Canister Dilution Factor: 1.14

CAS #	Compound	Result µg/m³	MRL µg/m³	Result ppbV	MRL ppbV	Data Qualifier
141-78-6	Ethyl Acetate	**4.2**	1.1	**1.2**	0.32	
110-54-3	n-Hexane	ND	0.57	ND	0.16	
67-66-3	Chloroform	ND	0.57	ND	0.12	
109-99-9	Tetrahydrofuran (THF)	ND	0.57	ND	0.19	
107-06-2	1,2-Dichloroethane	ND	0.57	ND	0.14	
71-55-6	1,1,1-Trichloroethane	ND	0.57	ND	0.10	
71-43-2	Benzene	ND	0.57	ND	0.18	
56-23-5	Carbon Tetrachloride	ND	0.57	ND	0.091	
110-82-7	Cyclohexane	ND	1.1	ND	0.33	
78-87-5	1,2-Dichloropropane	ND	0.57	ND	0.12	
75-27-4	Bromodichloromethane	ND	0.57	ND	0.085	
79-01-6	Trichloroethene	ND	0.57	ND	0.11	
123-91-1	1,4-Dioxane	ND	0.57	ND	0.16	
142-82-5	n-Heptane	ND	0.57	ND	0.14	
10061-01-5	cis-1,3-Dichloropropene	ND	0.57	ND	0.13	
108-10-1	4-Methyl-2-pentanone	ND	0.57	ND	0.14	
10061-02-6	trans-1,3-Dichloropropene	ND	0.57	ND	0.13	
79-00-5	1,1,2-Trichloroethane	ND	0.57	ND	0.10	
108-88-3	Toluene	ND	0.57	ND	0.15	
591-78-6	2-Hexanone	ND	0.57	ND	0.14	

ND = Compound was analyzed for, but not detected above the laboratory reporting limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Client: **BB&E, Inc**
Client Sample ID: **COL-OAQ-01**
Client Project ID: **Q1 2017 VI Assessment / 02028018 task 4**

ALS Project ID: P1701156
ALS Sample ID: P1701156-015

Test Code: EPA TO-15
Instrument ID: Tekmar AUTOCAN/Agilent 5975Cinert/6890N/MS16
Analyst: Lusine Hakobyan
Sample Type: 6.0 L Summa Canister
Test Notes:
Container ID: AC01010

Date Collected: 3/1/17
Date Received: 3/8/17
Date Analyzed: 3/16/17
Volume(s) Analyzed: 1.00 Liter(s)

Initial Pressure (psig): 1.29 Final Pressure (psig): 3.49

Canister Dilution Factor: 1.14

CAS #	Compound	Result µg/m³	MRL µg/m³	Result ppbV	MRL ppbV	Data Qualifier
124-48-1	Dibromochloromethane	ND	0.57	ND	0.067	
106-93-4	1,2-Dibromoethane	ND	0.57	ND	0.074	
127-18-4	Tetrachloroethene	ND	0.57	ND	0.084	
108-90-7	Chlorobenzene	ND	0.57	ND	0.12	
100-41-4	Ethylbenzene	ND	0.57	ND	0.13	
179601-23-1	m,p-Xylenes	ND	1.1	ND	0.26	
75-25-2	Bromoform	ND	0.57	ND	0.055	
100-42-5	Styrene	ND	0.57	ND	0.13	
95-47-6	o-Xylene	ND	0.57	ND	0.13	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.57	ND	0.083	
98-82-8	Cumene	ND	0.57	ND	0.12	
622-96-8	4-Ethyltoluene	ND	0.57	ND	0.12	
108-67-8	1,3,5-Trimethylbenzene	ND	0.57	ND	0.12	
95-63-6	1,2,4-Trimethylbenzene	ND	0.57	ND	0.12	
100-44-7	Benzyl Chloride	ND	0.57	ND	0.11	
541-73-1	1,3-Dichlorobenzene	ND	0.57	ND	0.095	
106-46-7	1,4-Dichlorobenzene	ND	0.57	ND	0.095	
95-50-1	1,2-Dichlorobenzene	ND	0.57	ND	0.095	
120-82-1	1,2,4-Trichlorobenzene	ND	0.57	ND	0.077	
87-68-3	Hexachlorobutadiene	ND	0.57	ND	0.053	

ND = Compound was analyzed for, but not detected above the laboratory reporting limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Client: **BB&E, Inc**
Client Sample ID: **Method Blank**
Client Project ID: **Q1 2017 VI Assessment / 02028018 task 4**

ALS Project ID: P1701156
ALS Sample ID: P170315-MB

Test Code: EPA TO-15
Instrument ID: Tekmar AUTOCAN/Agilent 5975Cinert/6890N/MS16
Analyst: Lusine Hakobyan
Sample Type: 6.0 L Summa Canister
Test Notes:

Date Collected: NA
Date Received: NA
Date Analyzed: 3/15/17
Volume(s) Analyzed: 1.00 Liter(s)

Canister Dilution Factor: 1.00

CAS #	Compound	Result µg/m³	MRL µg/m³	Result ppbV	MRL ppbV	Data Qualifier
115-07-1	Propene	ND	0.50	ND	0.29	
75-71-8	Dichlorodifluoromethane (CFC 12)	ND	0.50	ND	0.10	
74-87-3	Chloromethane	ND	0.50	ND	0.24	
76-14-2	1,2-Dichloro-1,1,2,2-tetrafluoroethane (CFC 114)	ND	0.50	ND	0.072	
75-01-4	Vinyl Chloride	ND	0.50	ND	0.20	
106-99-0	1,3-Butadiene	ND	0.50	ND	0.23	
74-83-9	Bromomethane	ND	0.50	ND	0.13	
75-00-3	Chloroethane	ND	0.50	ND	0.19	
67-64-1	Acetone	ND	5.0	ND	2.1	
75-69-4	Trichlorofluoromethane (CFC 11)	ND	0.50	ND	0.089	
67-63-0	2-Propanol (Isopropyl Alcohol)	ND	5.0	ND	2.0	
75-35-4	1,1-Dichloroethene	ND	0.50	ND	0.13	
75-09-2	Methylene Chloride	ND	0.50	ND	0.14	
76-13-1	Trichlorotrifluoroethane (CFC 113)	ND	0.50	ND	0.065	
75-15-0	Carbon Disulfide	ND	5.0	ND	1.6	
156-60-5	trans-1,2-Dichloroethene	ND	0.50	ND	0.13	
75-34-3	1,1-Dichloroethane	ND	0.50	ND	0.12	
1634-04-4	Methyl tert-Butyl Ether	ND	0.50	ND	0.14	
108-05-4	Vinyl Acetate	ND	5.0	ND	1.4	
78-93-3	2-Butanone (MEK)	ND	5.0	ND	1.7	
156-59-2	cis-1,2-Dichloroethene	ND	0.50	ND	0.13	

ND = Compound was analyzed for, but not detected above the laboratory reporting limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Client: **BB&E, Inc**
Client Sample ID: **Method Blank**
Client Project ID: **Q1 2017 VI Assessment / 02028018 task 4**

ALS Project ID: P1701156
ALS Sample ID: P170315-MB

Test Code: EPA TO-15
Instrument ID: Tekmar AUTOCAN/Agilent 5975Cinert/6890N/MS16
Analyst: Lusine Hakobyan
Sample Type: 6.0 L Summa Canister
Test Notes:

Date Collected: NA
Date Received: NA
Date Analyzed: 3/15/17
Volume(s) Analyzed: 1.00 Liter(s)

Canister Dilution Factor: 1.00

CAS #	Compound	Result µg/m³	MRL µg/m³	Result ppbV	MRL ppbV	Data Qualifier
141-78-6	Ethyl Acetate	ND	1.0	ND	0.28	
110-54-3	n-Hexane	ND	0.50	ND	0.14	
67-66-3	Chloroform	ND	0.50	ND	0.10	
109-99-9	Tetrahydrofuran (THF)	ND	0.50	ND	0.17	
107-06-2	1,2-Dichloroethane	ND	0.50	ND	0.12	
71-55-6	1,1,1-Trichloroethane	ND	0.50	ND	0.092	
71-43-2	Benzene	ND	0.50	ND	0.16	
56-23-5	Carbon Tetrachloride	ND	0.50	ND	0.080	
110-82-7	Cyclohexane	ND	1.0	ND	0.29	
78-87-5	1,2-Dichloropropane	ND	0.50	ND	0.11	
75-27-4	Bromodichloromethane	ND	0.50	ND	0.075	
79-01-6	Trichloroethene	ND	0.50	ND	0.093	
123-91-1	1,4-Dioxane	ND	0.50	ND	0.14	
142-82-5	n-Heptane	ND	0.50	ND	0.12	
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	ND	0.11	
108-10-1	4-Methyl-2-pentanone	ND	0.50	ND	0.12	
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	ND	0.11	
79-00-5	1,1,2-Trichloroethane	ND	0.50	ND	0.092	
108-88-3	Toluene	ND	0.50	ND	0.13	
591-78-6	2-Hexanone	ND	0.50	ND	0.12	

ND = Compound was analyzed for, but not detected above the laboratory reporting limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Client: **BB&E, Inc**
Client Sample ID: **Method Blank**
Client Project ID: **Q1 2017 VI Assessment / 02028018 task 4**

ALS Project ID: P1701156
ALS Sample ID: P170315-MB

Test Code: EPA TO-15
Instrument ID: Tekmar AUTOCAN/Agilent 5975Cinert/6890N/MS16
Analyst: Lusine Hakobyan
Sample Type: 6.0 L Summa Canister
Test Notes:

Date Collected: NA
Date Received: NA
Date Analyzed: 3/15/17
Volume(s) Analyzed: 1.00 Liter(s)

Canister Dilution Factor: 1.00

CAS #	Compound	Result µg/m³	MRL µg/m³	Result ppbV	MRL ppbV	Data Qualifier
124-48-1	Dibromochloromethane	ND	0.50	ND	0.059	
106-93-4	1,2-Dibromoethane	ND	0.50	ND	0.065	
127-18-4	Tetrachloroethene	ND	0.50	ND	0.074	
108-90-7	Chlorobenzene	ND	0.50	ND	0.11	
100-41-4	Ethylbenzene	ND	0.50	ND	0.12	
179601-23-1	m,p-Xylenes	ND	1.0	ND	0.23	
75-25-2	Bromoform	ND	0.50	ND	0.048	
100-42-5	Styrene	ND	0.50	ND	0.12	
95-47-6	o-Xylene	ND	0.50	ND	0.12	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.50	ND	0.073	
98-82-8	Cumene	ND	0.50	ND	0.10	
622-96-8	4-Ethyltoluene	ND	0.50	ND	0.10	
108-67-8	1,3,5-Trimethylbenzene	ND	0.50	ND	0.10	
95-63-6	1,2,4-Trimethylbenzene	ND	0.50	ND	0.10	
100-44-7	Benzyl Chloride	ND	0.50	ND	0.097	
541-73-1	1,3-Dichlorobenzene	ND	0.50	ND	0.083	
106-46-7	1,4-Dichlorobenzene	ND	0.50	ND	0.083	
95-50-1	1,2-Dichlorobenzene	ND	0.50	ND	0.083	
120-82-1	1,2,4-Trichlorobenzene	ND	0.50	ND	0.067	
87-68-3	Hexachlorobutadiene	ND	0.50	ND	0.047	

ND = Compound was analyzed for, but not detected above the laboratory reporting limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Client: **BB&E, Inc**
Client Sample ID: **Method Blank**
Client Project ID: **Q1 2017 VI Assessment / 02028018 task 4**

ALS Project ID: P1701156
ALS Sample ID: P170315-MB

Test Code: EPA TO-15
Instrument ID: Tekmar AUTOCAN/Agilent 5975Cinert/6890N/MS16
Analyst: Lusine Hakobyan
Sample Type: 6.0 L Summa Canister
Test Notes:

Date Collected: NA
Date Received: NA
Date Analyzed: 3/15/17
Volume(s) Analyzed: 1.00 Liter(s)

Canister Dilution Factor: 1.00

CAS #	Compound	Result µg/m³	MRL µg/m³	Result ppbV	MRL ppbV	Data Qualifier
115-07-1	Propene	ND	0.50	ND	0.29	
75-71-8	Dichlorodifluoromethane (CFC 12)	ND	0.50	ND	0.10	
74-87-3	Chloromethane	ND	0.50	ND	0.24	
76-14-2	1,2-Dichloro-1,1,2,2-tetrafluoroethane (CFC 114)	ND	0.50	ND	0.072	
75-01-4	Vinyl Chloride	ND	0.50	ND	0.20	
106-99-0	1,3-Butadiene	ND	0.50	ND	0.23	
74-83-9	Bromomethane	ND	0.50	ND	0.13	
75-00-3	Chloroethane	ND	0.50	ND	0.19	
67-64-1	Acetone	ND	5.0	ND	2.1	
75-69-4	Trichlorofluoromethane (CFC 11)	ND	0.50	ND	0.089	
67-63-0	2-Propanol (Isopropyl Alcohol)	ND	5.0	ND	2.0	
75-35-4	1,1-Dichloroethene	ND	0.50	ND	0.13	
75-09-2	Methylene Chloride	ND	0.50	ND	0.14	
76-13-1	Trichlorotrifluoroethane (CFC 113)	ND	0.50	ND	0.065	
75-15-0	Carbon Disulfide	ND	5.0	ND	1.6	
156-60-5	trans-1,2-Dichloroethene	ND	0.50	ND	0.13	
75-34-3	1,1-Dichloroethane	ND	0.50	ND	0.12	
1634-04-4	Methyl tert-Butyl Ether	ND	0.50	ND	0.14	
108-05-4	Vinyl Acetate	ND	5.0	ND	1.4	
78-93-3	2-Butanone (MEK)	ND	5.0	ND	1.7	
156-59-2	cis-1,2-Dichloroethene	ND	0.50	ND	0.13	

ND = Compound was analyzed for, but not detected above the laboratory reporting limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Client: **BB&E, Inc**
Client Sample ID: **Method Blank**
Client Project ID: **Q1 2017 VI Assessment / 02028018 task 4**

ALS Project ID: P1701156
ALS Sample ID: P170315-MB

Test Code: EPA TO-15
Instrument ID: Tekmar AUTOCAN/Agilent 5975Cinert/6890N/MS16
Analyst: Lusine Hakobyan
Sample Type: 6.0 L Summa Canister
Test Notes:

Date Collected: NA
Date Received: NA
Date Analyzed: 3/15/17
Volume(s) Analyzed: 1.00 Liter(s)

Canister Dilution Factor: 1.00

CAS #	Compound	Result µg/m³	MRL µg/m³	Result ppbV	MRL ppbV	Data Qualifier
141-78-6	Ethyl Acetate	ND	1.0	ND	0.28	
110-54-3	n-Hexane	ND	0.50	ND	0.14	
67-66-3	Chloroform	ND	0.50	ND	0.10	
109-99-9	Tetrahydrofuran (THF)	ND	0.50	ND	0.17	
107-06-2	1,2-Dichloroethane	ND	0.50	ND	0.12	
71-55-6	1,1,1-Trichloroethane	ND	0.50	ND	0.092	
71-43-2	Benzene	ND	0.50	ND	0.16	
56-23-5	Carbon Tetrachloride	ND	0.50	ND	0.080	
110-82-7	Cyclohexane	ND	1.0	ND	0.29	
78-87-5	1,2-Dichloropropane	ND	0.50	ND	0.11	
75-27-4	Bromodichloromethane	ND	0.50	ND	0.075	
79-01-6	Trichloroethene	ND	0.50	ND	0.093	
123-91-1	1,4-Dioxane	ND	0.50	ND	0.14	
142-82-5	n-Heptane	ND	0.50	ND	0.12	
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	ND	0.11	
108-10-1	4-Methyl-2-pentanone	ND	0.50	ND	0.12	
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	ND	0.11	
79-00-5	1,1,2-Trichloroethane	ND	0.50	ND	0.092	
108-88-3	Toluene	ND	0.50	ND	0.13	
591-78-6	2-Hexanone	ND	0.50	ND	0.12	

ND = Compound was analyzed for, but not detected above the laboratory reporting limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Client: **BB&E, Inc**
Client Sample ID: **Method Blank**
Client Project ID: **Q1 2017 VI Assessment / 02028018 task 4**

ALS Project ID: P1701156
ALS Sample ID: P170315-MB

Test Code: EPA TO-15
Instrument ID: Tekmar AUTOCAN/Agilent 5975Cinert/6890N/MS16
Analyst: Lusine Hakobyan
Sample Type: 6.0 L Summa Canister
Test Notes:

Date Collected: NA
Date Received: NA
Date Analyzed: 3/15/17
Volume(s) Analyzed: 1.00 Liter(s)

Canister Dilution Factor: 1.00

CAS #	Compound	Result µg/m³	MRL µg/m³	Result ppbV	MRL ppbV	Data Qualifier
124-48-1	Dibromochloromethane	ND	0.50	ND	0.059	
106-93-4	1,2-Dibromoethane	ND	0.50	ND	0.065	
127-18-4	Tetrachloroethene	ND	0.50	ND	0.074	
108-90-7	Chlorobenzene	ND	0.50	ND	0.11	
100-41-4	Ethylbenzene	ND	0.50	ND	0.12	
179601-23-1	m,p-Xylenes	ND	1.0	ND	0.23	
75-25-2	Bromoform	ND	0.50	ND	0.048	
100-42-5	Styrene	ND	0.50	ND	0.12	
95-47-6	o-Xylene	ND	0.50	ND	0.12	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.50	ND	0.073	
98-82-8	Cumene	ND	0.50	ND	0.10	
622-96-8	4-Ethyltoluene	ND	0.50	ND	0.10	
108-67-8	1,3,5-Trimethylbenzene	ND	0.50	ND	0.10	
95-63-6	1,2,4-Trimethylbenzene	ND	0.50	ND	0.10	
100-44-7	Benzyl Chloride	ND	0.50	ND	0.097	
541-73-1	1,3-Dichlorobenzene	ND	0.50	ND	0.083	
106-46-7	1,4-Dichlorobenzene	ND	0.50	ND	0.083	
95-50-1	1,2-Dichlorobenzene	ND	0.50	ND	0.083	
120-82-1	1,2,4-Trichlorobenzene	ND	0.50	ND	0.067	
87-68-3	Hexachlorobutadiene	ND	0.50	ND	0.047	

ND = Compound was analyzed for, but not detected above the laboratory reporting limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

ALS ENVIRONMENTAL

SURROGATE SPIKE RECOVERY RESULTS

Client: **BB&E, Inc**
Client Project ID: **Q1 2017 VI Assessment / 02028018 task 4**

ALS Project ID: P1701156

Test Code: EPA TO-15
Instrument ID: Tekmar AUTOCAN/Agilent 5975Cinert/6890N/MS16
Analyst: Lusine Hakobyan
Sample Type: 6.0 L Summa Canister(s)
Test Notes:

Date(s) Collected: 3/1/17
Date(s) Received: 3/8/17
Date(s) Analyzed: 3/15 - 3/16/17

Client Sample ID	ALS Sample ID	1,2-Dichloroethane-d4 Percent Recovered	Toluene-d8 Percent Recovered	Bromofluorobenzene Percent Recovered	Acceptance Limits	Data Qualifier
Method Blank	P170315-MB	**104**	**97**	**83**	70-130	
Method Blank	P170315-MB	**103**	**97**	**85**	70-130	
Lab Control Sample	P170315-LCS	**102**	**95**	**87**	70-130	
Lab Control Sample	P170315-LCS	**100**	**95**	**89**	70-130	
COL-SSSG-01	P1701156-001	**105**	**95**	**85**	70-130	
COL-IAQ-01	P1701156-002	**106**	**96**	**87**	70-130	
COL-SSSG-02	P1701156-003	**105**	**95**	**88**	70-130	
COL-IAQ-02	P1701156-004	**105**	**95**	**87**	70-130	
COL-SSSG-03	P1701156-005	**104**	**94**	**87**	70-130	
COL-IAQ-03	P1701156-006	**103**	**95**	**88**	70-130	
COL-IAQ-04	P1701156-007	**102**	**96**	**89**	70-130	
COL-SSSG-04	P1701156-008	**103**	**95**	**88**	70-130	
COL-IAQ-05	P1701156-009	**102**	**95**	**87**	70-130	
COL-SSSG-05	P1701156-010	**103**	**95**	**89**	70-130	
COL-IAQ-06	P1701156-011	**103**	**96**	**89**	70-130	
COL-IAQ-06	P1701156-011DUP	**103**	**96**	**88**	70-130	
COL-IAQ-07	P1701156-012	**104**	**98**	**96**	70-130	
COL-IAQ-08	P1701156-013	**103**	**96**	**98**	70-130	
COL-CSAQ-01	P1701156-014	**103**	**97**	**88**	70-130	
COL-OAQ-01	P1701156-015	**103**	**97**	**85**	70-130	

Surrogate percent recovery is verified and accepted based on the on-column result.
Reported results are shown in concentration units and as a result of the calculation, may vary slightly from the on-column percent recovery.

ALS ENVIRONMENTAL

LABORATORY CONTROL SAMPLE SUMMARY

Client: **BB&E, Inc**
Client Sample ID: **Lab Control Sample**
Client Project ID: **Q1 2017 VI Assessment / 02028018 task 4**

ALS Project ID: P1701156
ALS Sample ID: P170315-LCS

Test Code: EPA TO-15
Instrument ID: Tekmar AUTOCAN/Agilent 5975Cinert/6890N/MS16
Analyst: Lusine Hakobyan
Sample Type: 6.0 L Summa Canister
Test Notes:

Date Collected: NA
Date Received: NA
Date Analyzed: 3/15/17
Volume(s) Analyzed: 0.125 Liter(s)

CAS #	Compound	Spike Amount µg/m³	Result µg/m³	% Recovery	Project Acceptance Limits	Data Qualifier
115-07-1	Propene	210	**215**	**102**	60-140	
75-71-8	Dichlorodifluoromethane (CFC 12)	210	**191**	**91**	60-140	
74-87-3	Chloromethane	210	**194**	**92**	60-140	
76-14-2	1,2-Dichloro-1,1,2,2-tetrafluoroethane (CFC 114)	211	**169**	**80**	60-140	
75-01-4	Vinyl Chloride	210	**225**	**107**	60-140	
106-99-0	1,3-Butadiene	210	**254**	**121**	60-140	
74-83-9	Bromomethane	210	**208**	**99**	60-140	
75-00-3	Chloroethane	210	**225**	**107**	60-140	
67-64-1	Acetone	1,060	**1100**	**104**	60-140	
75-69-4	Trichlorofluoromethane (CFC 11)	210	**187**	**89**	60-140	
67-63-0	2-Propanol (Isopropyl Alcohol)	424	**460**	**108**	60-140	
75-35-4	1,1-Dichloroethene	213	**212**	**100**	60-140	
75-09-2	Methylene Chloride	212	**211**	**100**	60-140	
76-13-1	Trichlorotrifluoroethane (CFC 113)	212	**177**	**83**	60-140	
75-15-0	Carbon Disulfide	213	**224**	**105**	60-140	
156-60-5	trans-1,2-Dichloroethene	213	**217**	**102**	60-140	
75-34-3	1,1-Dichloroethane	212	**210**	**99**	60-140	
1634-04-4	Methyl tert-Butyl Ether	213	**196**	**92**	60-140	
108-05-4	Vinyl Acetate	1,060	**1160**	**109**	60-140	
78-93-3	2-Butanone (MEK)	212	**222**	**105**	60-140	
156-59-2	cis-1,2-Dichloroethene	212	**215**	**101**	60-140	

Laboratory Control Sample percent recovery is verified and accepted based on the on-column result.
Reported results are shown in concentration units and as a result of the calculation, may vary slightly.

ALS ENVIRONMENTAL

LABORATORY CONTROL SAMPLE SUMMARY

Client: **BB&E, Inc**
Client Sample ID: **Lab Control Sample**
Client Project ID: **Q1 2017 VI Assessment / 02028018 task 4**

ALS Project ID: P1701156
ALS Sample ID: P170315-LCS

Test Code: EPA TO-15
Instrument ID: Tekmar AUTOCAN/Agilent 5975Cinert/6890N/MS16
Analyst: Lusine Hakobyan
Sample Type: 6.0 L Summa Canister
Test Notes:

Date Collected: NA
Date Received: NA
Date Analyzed: 3/15/17
Volume(s) Analyzed: 0.125 Liter(s)

CAS #	Compound	Spike Amount µg/m³	Result µg/m³	% Recovery	Project Acceptance Limits	Data Qualifier
141-78-6	Ethyl Acetate	426	**482**	**113**	60-140	
110-54-3	n-Hexane	213	**229**	**108**	60-140	
67-66-3	Chloroform	212	**197**	**93**	60-140	
109-99-9	Tetrahydrofuran (THF)	213	**212**	**100**	60-140	
107-06-2	1,2-Dichloroethane	212	**197**	**93**	60-140	
71-55-6	1,1,1-Trichloroethane	212	**185**	**87**	60-140	
71-43-2	Benzene	212	**197**	**93**	60-140	
56-23-5	Carbon Tetrachloride	213	**186**	**87**	60-140	
110-82-7	Cyclohexane	425	**408**	**96**	60-140	
78-87-5	1,2-Dichloropropane	212	**210**	**99**	60-140	
75-27-4	Bromodichloromethane	214	**204**	**95**	60-140	
79-01-6	Trichloroethene	212	**183**	**86**	60-140	
123-91-1	1,4-Dioxane	213	**218**	**102**	60-140	
142-82-5	n-Heptane	213	**210**	**99**	60-140	
10061-01-5	cis-1,3-Dichloropropene	210	**213**	**101**	60-140	
108-10-1	4-Methyl-2-pentanone	213	**235**	**110**	60-140	
10061-02-6	trans-1,3-Dichloropropene	213	**216**	**101**	60-140	
79-00-5	1,1,2-Trichloroethane	212	**202**	**95**	60-140	
108-88-3	Toluene	212	**180**	**85**	60-140	
591-78-6	2-Hexanone	213	**221**	**104**	60-140	

Laboratory Control Sample percent recovery is verified and accepted based on the on-column result.
Reported results are shown in concentration units and as a result of the calculation, may vary slightly.

ALS ENVIRONMENTAL

LABORATORY CONTROL SAMPLE SUMMARY

Client: **BB&E, Inc**
Client Sample ID: **Lab Control Sample**
Client Project ID: **Q1 2017 VI Assessment / 02028018 task 4**

ALS Project ID: P1701156
ALS Sample ID: P170315-LCS

Test Code: EPA TO-15
Instrument ID: Tekmar AUTOCAN/Agilent 5975Cinert/6890N/MS16
Analyst: Lusine Hakobyan
Sample Type: 6.0 L Summa Canister
Test Notes:

Date Collected: NA
Date Received: NA
Date Analyzed: 3/15/17
Volume(s) Analyzed: 0.125 Liter(s)

CAS #	Compound	Spike Amount µg/m³	Result µg/m³	% Recovery	Project Acceptance Limits	Data Qualifier
124-48-1	Dibromochloromethane	213	**185**	**87**	60-140	
106-93-4	1,2-Dibromoethane	212	**188**	**89**	60-140	
127-18-4	Tetrachloroethene	213	**163**	**77**	60-140	
108-90-7	Chlorobenzene	212	**180**	**85**	60-140	
100-41-4	Ethylbenzene	212	**188**	**89**	60-140	
179601-23-1	m,p-Xylenes	424	**382**	**90**	60-140	
75-25-2	Bromoform	212	**180**	**85**	60-140	
100-42-5	Styrene	212	**188**	**89**	60-140	
95-47-6	o-Xylene	212	**189**	**89**	60-140	
79-34-5	1,1,2,2-Tetrachloroethane	212	**213**	**100**	60-140	
98-82-8	Cumene	212	**181**	**85**	60-140	
622-96-8	4-Ethyltoluene	212	**195**	**92**	60-140	
108-67-8	1,3,5-Trimethylbenzene	212	**180**	**85**	60-140	
95-63-6	1,2,4-Trimethylbenzene	212	**195**	**92**	60-140	
100-44-7	Benzyl Chloride	212	**219**	**103**	60-140	
541-73-1	1,3-Dichlorobenzene	212	**205**	**97**	60-140	
106-46-7	1,4-Dichlorobenzene	213	**171**	**80**	60-140	
95-50-1	1,2-Dichlorobenzene	212	**178**	**84**	60-140	
120-82-1	1,2,4-Trichlorobenzene	212	**206**	**97**	60-140	
87-68-3	Hexachlorobutadiene	213	**165**	**77**	60-140	

Laboratory Control Sample percent recovery is verified and accepted based on the on-column result.
Reported results are shown in concentration units and as a result of the calculation, may vary slightly.

ALS ENVIRONMENTAL

LABORATORY CONTROL SAMPLE SUMMARY

Client: **BB&E, Inc**
Client Sample ID: **Lab Control Sample**
Client Project ID: **Q1 2017 VI Assessment / 02028018 task 4**

ALS Project ID: P1701156
ALS Sample ID: P170315-LCS

Test Code: EPA TO-15
Instrument ID: Tekmar AUTOCAN/Agilent 5975Cinert/6890N/MS16
Analyst: Lusine Hakobyan
Sample Type: 6.0 L Summa Canister
Test Notes:

Date Collected: NA
Date Received: NA
Date Analyzed: 3/15/17
Volume(s) Analyzed: 0.125 Liter(s)

CAS #	Compound	Spike Amount µg/m³	Result µg/m³	% Recovery	Project Acceptance Limits	Data Qualifier
115-07-1	Propene	210	**222**	**106**	60-140	
75-71-8	Dichlorodifluoromethane (CFC 12)	210	**193**	**92**	60-140	
74-87-3	Chloromethane	210	**184**	**88**	60-140	
76-14-2	1,2-Dichloro-1,1,2,2-tetrafluoroethane (CFC 114)	211	**170**	**81**	60-140	
75-01-4	Vinyl Chloride	210	**225**	**107**	60-140	
106-99-0	1,3-Butadiene	210	**238**	**113**	60-140	
74-83-9	Bromomethane	210	**208**	**99**	60-140	
75-00-3	Chloroethane	210	**224**	**107**	60-140	
67-64-1	Acetone	1,060	**1090**	**103**	60-140	
75-69-4	Trichlorofluoromethane (CFC 11)	210	**185**	**88**	60-140	
67-63-0	2-Propanol (Isopropyl Alcohol)	424	**449**	**106**	60-140	
75-35-4	1,1-Dichloroethene	213	**210**	**99**	60-140	
75-09-2	Methylene Chloride	212	**210**	**99**	60-140	
76-13-1	Trichlorotrifluoroethane (CFC 113)	212	**175**	**83**	60-140	
75-15-0	Carbon Disulfide	213	**220**	**103**	60-140	
156-60-5	trans-1,2-Dichloroethene	213	**215**	**101**	60-140	
75-34-3	1,1-Dichloroethane	212	**209**	**99**	60-140	
1634-04-4	Methyl tert-Butyl Ether	213	**195**	**92**	60-140	
108-05-4	Vinyl Acetate	1,060	**1150**	**108**	60-140	
78-93-3	2-Butanone (MEK)	212	**221**	**104**	60-140	
156-59-2	cis-1,2-Dichloroethene	212	**213**	**100**	60-140	

Laboratory Control Sample percent recovery is verified and accepted based on the on-column result.
Reported results are shown in concentration units and as a result of the calculation, may vary slightly.

ALS ENVIRONMENTAL

LABORATORY CONTROL SAMPLE SUMMARY

Client: **BB&E, Inc**
Client Sample ID: **Lab Control Sample**
Client Project ID: **Q1 2017 VI Assessment / 02028018 task 4**

ALS Project ID: P1701156
ALS Sample ID: P170315-LCS

Test Code: EPA TO-15
Instrument ID: Tekmar AUTOCAN/Agilent 5975Cinert/6890N/MS16
Analyst: Lusine Hakobyan
Sample Type: 6.0 L Summa Canister
Test Notes:

Date Collected: NA
Date Received: NA
Date Analyzed: 3/15/17
Volume(s) Analyzed: 0.125 Liter(s)

CAS #	Compound	Spike Amount µg/m³	Result µg/m³	% Recovery	Project Acceptance Limits	Data Qualifier
141-78-6	Ethyl Acetate	426	**475**	**112**	60-140	
110-54-3	n-Hexane	213	**225**	**106**	60-140	
67-66-3	Chloroform	212	**195**	**92**	60-140	
109-99-9	Tetrahydrofuran (THF)	213	**211**	**99**	60-140	
107-06-2	1,2-Dichloroethane	212	**194**	**92**	60-140	
71-55-6	1,1,1-Trichloroethane	212	**186**	**88**	60-140	
71-43-2	Benzene	212	**198**	**93**	60-140	
56-23-5	Carbon Tetrachloride	213	**190**	**89**	60-140	
110-82-7	Cyclohexane	425	**408**	**96**	60-140	
78-87-5	1,2-Dichloropropane	212	**211**	**100**	60-140	
75-27-4	Bromodichloromethane	214	**204**	**95**	60-140	
79-01-6	Trichloroethene	212	**185**	**87**	60-140	
123-91-1	1,4-Dioxane	213	**218**	**102**	60-140	
142-82-5	n-Heptane	213	**213**	**100**	60-140	
10061-01-5	cis-1,3-Dichloropropene	210	**214**	**102**	60-140	
108-10-1	4-Methyl-2-pentanone	213	**236**	**111**	60-140	
10061-02-6	trans-1,3-Dichloropropene	213	**217**	**102**	60-140	
79-00-5	1,1,2-Trichloroethane	212	**202**	**95**	60-140	
108-88-3	Toluene	212	**180**	**85**	60-140	
591-78-6	2-Hexanone	213	**220**	**103**	60-140	

Laboratory Control Sample percent recovery is verified and accepted based on the on-column result.
Reported results are shown in concentration units and as a result of the calculation, may vary slightly.

ALS ENVIRONMENTAL

LABORATORY CONTROL SAMPLE SUMMARY

Client: **BB&E, Inc**
Client Sample ID: **Lab Control Sample**
Client Project ID: **Q1 2017 VI Assessment / 02028018 task 4**

ALS Project ID: P1701156
ALS Sample ID: P170315-LCS

Test Code: EPA TO-15
Instrument ID: Tekmar AUTOCAN/Agilent 5975Cinert/6890N/MS16
Analyst: Lusine Hakobyan
Sample Type: 6.0 L Summa Canister
Test Notes:

Date Collected: NA
Date Received: NA
Date Analyzed: 3/15/17
Volume(s) Analyzed: 0.125 Liter(s)

CAS #	Compound	Spike Amount µg/m³	Result µg/m³	% Recovery	Project Acceptance Limits	Data Qualifier
124-48-1	Dibromochloromethane	213	**186**	**87**	60-140	
106-93-4	1,2-Dibromoethane	212	**188**	**89**	60-140	
127-18-4	Tetrachloroethene	213	**163**	**77**	60-140	
108-90-7	Chlorobenzene	212	**180**	**85**	60-140	
100-41-4	Ethylbenzene	212	**189**	**89**	60-140	
179601-23-1	m,p-Xylenes	424	**381**	**90**	60-140	
75-25-2	Bromoform	212	**181**	**85**	60-140	
100-42-5	Styrene	212	**189**	**89**	60-140	
95-47-6	o-Xylene	212	**188**	**89**	60-140	
79-34-5	1,1,2,2-Tetrachloroethane	212	**212**	**100**	60-140	
98-82-8	Cumene	212	**181**	**85**	60-140	
622-96-8	4-Ethyltoluene	212	**192**	**91**	60-140	
108-67-8	1,3,5-Trimethylbenzene	212	**180**	**85**	60-140	
95-63-6	1,2,4-Trimethylbenzene	212	**193**	**91**	60-140	
100-44-7	Benzyl Chloride	212	**220**	**104**	60-140	
541-73-1	1,3-Dichlorobenzene	212	**206**	**97**	60-140	
106-46-7	1,4-Dichlorobenzene	213	**172**	**81**	60-140	
95-50-1	1,2-Dichlorobenzene	212	**178**	**84**	60-140	
120-82-1	1,2,4-Trichlorobenzene	212	**208**	**98**	60-140	
87-68-3	Hexachlorobutadiene	213	**168**	**79**	60-140	

Laboratory Control Sample percent recovery is verified and accepted based on the on-column result.
Reported results are shown in concentration units and as a result of the calculation, may vary slightly.

ALS ENVIRONMENTAL

LABORATORY DUPLICATE SUMMARY RESULTS

Client: **BB&E, Inc**
Client Sample ID: **COL-IAQ-06**
Client Project ID: **Q1 2017 VI Assessment / 02028018 task 4**

ALS Project ID: P1701156
ALS Sample ID: P1701156-011DUP

Test Code: EPA TO-15
Instrument ID: Tekmar AUTOCAN/Agilent 5975Cinert/6890N/MS16
Analyst: Lusine Hakobyan
Sample Type: 6.0 L Silonite Canister
Test Notes:
Container ID: AS00675

Date Collected: 3/1/17
Date Received: 3/8/17
Date Analyzed: 3/15/17
Volume(s) Analyzed: 1.00 Liter(s)

Initial Pressure (psig): -7.52 Final Pressure (psig): 3.62

Canister Dilution Factor: 2.55

Compound	Sample Result µg/m³	Sample Result ppbV	Duplicate Sample Result µg/m³	Duplicate Sample Result ppbV	Average µg/m³	% RPD	RPD Limit	Data Qualifier
Propene	9.41	5.47	9.51	5.53	9.46	**1**	25	
Dichlorodifluoromethane (CFC 12)	2.19	0.442	2.18	0.441	2.185	**0.5**	25	
Chloromethane	ND	ND	ND	ND	-	-	25	
1,2-Dichloro-1,1,2,2-tetrafluoroethane (CFC 114)	ND	ND	ND	ND	-	-	25	
Vinyl Chloride	ND	ND	ND	ND	-	-	25	
1,3-Butadiene	ND	ND	ND	ND	-	-	25	
Bromomethane	ND	ND	ND	ND	-	-	25	
Chloroethane	ND	ND	ND	ND	-	-	25	
Acetone	982	413	992	418	987	**1**	25	
Trichlorofluoromethane	ND	ND	ND	ND	-	-	25	
2-Propanol (Isopropyl Alcohol)	ND	ND	ND	ND	-	-	25	
1,1-Dichloroethene	ND	ND	ND	ND	-	-	25	
Methylene Chloride	ND	ND	ND	ND	-	-	25	
Trichlorotrifluoroethane	ND	ND	ND	ND	-	-	25	
Carbon Disulfide	ND	ND	ND	ND	-	-	25	
trans-1,2-Dichloroethene	ND	ND	ND	ND	-	-	25	
1,1-Dichloroethane	ND	ND	ND	ND	-	-	25	
Methyl tert-Butyl Ether	ND	ND	ND	ND	-	-	25	
Vinyl Acetate	ND	ND	ND	ND	-	-	25	
2-Butanone (MEK)	80.1	27.2	80.3	27.2	80.2	**0.2**	25	
cis-1,2-Dichloroethene	ND	ND	ND	ND	-	-	25	

ND = Compound was analyzed for, but not detected above the laboratory reporting limit.

ALS ENVIRONMENTAL

LABORATORY DUPLICATE SUMMARY RESULTS

Client: **BB&E, Inc**
Client Sample ID: **COL-IAQ-06**
Client Project ID: **Q1 2017 VI Assessment / 02028018 task 4**

ALS Project ID: P1701156
ALS Sample ID: P1701156-011DUP

Test Code: EPA TO-15
Instrument ID: Tekmar AUTOCAN/Agilent 5975Cinert/6890N/MS16
Analyst: Lusine Hakobyan
Sample Type: 6.0 L Silonite Canister
Test Notes:
Container ID: AS00675

Date Collected: 3/1/17
Date Received: 3/8/17
Date Analyzed: 3/15/17
Volume(s) Analyzed: 1.00 Liter(s)

Initial Pressure (psig): -7.52 Final Pressure (psig): 3.62

Canister Dilution Factor: 2.55

Compound	Sample Result µg/m³	Sample Result ppbV	Duplicate Sample Result µg/m³	Duplicate Sample Result ppbV	Average µg/m³	% RPD	RPD Limit	Data Qualifier
Ethyl Acetate	11.6	3.23	11.8	3.28	11.7	**2**	25	
n-Hexane	ND	ND	ND	ND	-	-	25	
Chloroform	ND	ND	ND	ND	-	-	25	
Tetrahydrofuran (THF)	ND	ND	ND	ND	-	-	25	
1,2-Dichloroethane	ND	ND	ND	ND	-	-	25	
1,1,1-Trichloroethane	ND	ND	ND	ND	-	-	25	
Benzene	3.14	0.982	3.17	0.993	3.155	**1**	25	
Carbon Tetrachloride	ND	ND	ND	ND	-	-	25	
Cyclohexane	ND	ND	ND	ND	-	-	25	
1,2-Dichloropropane	ND	ND	ND	ND	-	-	25	
Bromodichloromethane	ND	ND	ND	ND	-	-	25	
Trichloroethene	ND	ND	ND	ND	-	-	25	
1,4-Dioxane	ND	ND	ND	ND	-	-	25	
n-Heptane	ND	ND	ND	ND	-	-	25	
cis-1,3-Dichloropropene	ND	ND	ND	ND	-	-	25	
4-Methyl-2-pentanone	ND	ND	ND	ND	-	-	25	
trans-1,3-Dichloropropene	ND	ND	ND	ND	-	-	25	
1,1,2-Trichloroethane	ND	ND	ND	ND	-	-	25	
Toluene	90.1	23.9	91.1	24.2	90.6	**1**	25	
2-Hexanone	ND	ND	ND	ND	-	-	25	

ND = Compound was analyzed for, but not detected above the laboratory reporting limit.

ALS ENVIRONMENTAL

LABORATORY DUPLICATE SUMMARY RESULTS

Client: **BB&E, Inc**
Client Sample ID: **COL-IAQ-06**
Client Project ID: **Q1 2017 VI Assessment / 02028018 task 4**

ALS Project ID: P1701156
ALS Sample ID: P1701156-011DUP

Test Code: EPA TO-15
Instrument ID: Tekmar AUTOCAN/Agilent 5975Cinert/6890N/MS16
Analyst: Lusine Hakobyan
Sample Type: 6.0 L Silonite Canister
Test Notes:
Container ID: AS00675

Date Collected: 3/1/17
Date Received: 3/8/17
Date Analyzed: 3/15/17
Volume(s) Analyzed: 1.00 Liter(s)

Initial Pressure (psig): -7.52 Final Pressure (psig): 3.62

Canister Dilution Factor: 2.55

Compound	Sample Result µg/m³	Sample Result ppbV	Duplicate Sample Result µg/m³	Duplicate Sample Result ppbV	Average µg/m³	% RPD	RPD Limit	Data Qualifier
Dibromochloromethane	ND	ND	ND	ND	-	-	25	
1,2-Dibromoethane	ND	ND	ND	ND	-	-	25	
Tetrachloroethene	ND	ND	ND	ND	-	-	25	
Chlorobenzene	ND	ND	ND	ND	-	-	25	
Ethylbenzene	15.1	3.48	15.3	3.53	15.2	**1**	25	
m,p-Xylenes	61.4	14.2	62.7	14.4	62.05	**2**	25	
Bromoform	ND	ND	ND	ND	-	-	25	
Styrene	ND	ND	ND	ND	-	-	25	
o-Xylene	18.5	4.26	21.0	4.85	19.75	**13**	25	
1,1,2,2-Tetrachloroethane	ND	ND	ND	ND	-	-	25	
Cumene	ND	ND	ND	ND	-	-	25	
4-Ethyltoluene	4.57	0.930	4.70	0.956	4.635	**3**	25	
1,3,5-Trimethylbenzene	4.73	0.963	4.83	0.982	4.78	**2**	25	
1,2,4-Trimethylbenzene	9.25	1.88	9.43	1.92	9.34	**2**	25	
Benzyl Chloride	ND	ND	ND	ND	-	-	25	
1,3-Dichlorobenzene	ND	ND	ND	ND	-	-	25	
1,4-Dichlorobenzene	ND	ND	ND	ND	-	-	25	
1,2-Dichlorobenzene	ND	ND	ND	ND	-	-	25	
1,2,4-Trichlorobenzene	ND	ND	ND	ND	-	-	25	
Hexachlorobutadiene	ND	ND	ND	ND	-	-	25	

ND = Compound was analyzed for, but not detected above the laboratory reporting limit.

ATTACHMENT B
FIELD NOTES

3/1/17

Q1 2017 VI Sampling

41°F rain

0630 WMD + WB arrive @ site.

0700 Commence setup + calibrate equipment

0800 Setup @ VIP-6 + perform leak check & shut-in test.

0815 Commence purging. Record CH_4, CO_2, O_2, H_2, VOC using PID, multi-gas meter, helium detector. Purge rates, leak check info., etc. being kept on Vapor Intrusion Assessment - Field Measurements Forms.

0833 Finish purge & left summa. Will return later to turn on.

0845 Setup @ VIP-5 + perform leak check & shut-in test.

0857 Commence purging. Record parameters on field form.

0912 Finish purge & left summa. Will return later to turn on.

0920 Set up @ VIP-4 + perform leak check & shut-in test.

0933 Commence purging. Record parameters

3/1/17

Q1 2017 VI Sampling Cont...
on field form.

0947 Finish purge & left summas. will return later to turn on.

1010 Setup @ VIP-2 & perform leak check & shut in test

1020 Commence purged record parameters on field form.

1035 Finish purge & left summas. will return later to turn on.

1040 ~~Com~~ ND Setup @ VIP-3 & perform leak check & shut in test.

1055 Commence purged record parameters on field forms

1109 Finish purged left summas. will return later to turn on.

Set up summa canisters @ IAQ-1

Set up summa canisters @ GSAQ-1

Set up summa canisters @ AAQ-1

Went around and opened all summa canisters

1210 Cal check equipment.

1850 Collected all summas. Closed, packaged to send

3/1/17

Q1 2017 VI sampling co: -
to Fedex

[signature] 3/1/17

Rite in the Rain

VAPOR INTRUSION ASSESSMENT – FIELD MEASUREMENTS

BP&E
235 E. Main St, Ste 107
Northville, MI 48167
(248) 489-9636

① Project Name: SSW Collis VI Sampling Q1 2017
Date: 3/1/17 Project Number: 02028018 task 4
SiteLocation: Clinton, Iowa
Weather: 41°F rain
Field Personnel: KMD & KVB
Recorded By: KMD & KVB

Probe No.: VP-6 ☒ Sub-slab probe ☐ Soil gas probe
Mini Rae 3000 Serial No.: R222996 Lamp: 10.6 / 11.7 eV
Landtech GEM 2000 Landfill Gas Meter Serial No. M: R4452
MDG 2002 Helium detector Serial No.: 22874
Tracer Gas: ☒ Helium ☐ Other

② Surface Type: ☐ Asphalt ☒ Concrete ☐ Grass ☐ Other
Surface Thickness 4.5" inches/centimeters ☐ Unknown
(i.e., asphalt or concrete)

③ 1 Casing Volume
☐ Sub-slab <0.1 L
Soil gas probe _____ (L)

④ Initial Vacuum (prior to pumping) 0 in. H_2O

⑤ Shut in test prior to pneumatic test completed, 70 in. H_2O held for 60 seconds.

⑥ Start of Pneumatic Test:

Elapsed Time (min.)	Pump Flow Rate (LPM)	Well Head Vacuum in. H_2O
	0.1	
	0.2	
	0.5	

⑦ Field tubing blank reading (ppm_v) completed? ☒ Yes ☐ No PID Reading 0 ppm_v

⑧ Shut in test prior to purging completed? Yes ☒ No ☐

⑨ Purging

Date	Start Time	End Time	Elapsed Time (min.)	Bag Volume (L)	Purge Rate (LPM)	Cumulative Volume (L)	CH_4 (%)	CO_2 (%)	O_2 (%)	Tracer Gas Shroud (%) Min	Tracer Gas Shroud (%) Max	Tracer Gas Sample (ppm_v, %) (circle one)	VOCs by PID (ppm_v)
3/1/17	0815	0818	3	1	0.33	1	0.002	0.8	19.1	13.0	15.9	0	1.35
↓	0823	0826	3	1	0.33	1	0.001	0.6	19.2	16.4	24.2	0	0.50
↓	0830	0833	3	1	0.33	1	0	0.6	19.1	25.7	34.7	0	0.60

⑩ Helium concentration in field screened samples is less than 5% of minimum concentration in the shroud? ☒ Yes ☐ No **Note:** 1% helium = 10,000 ppm_v

⑪ Shut in test prior to sample collection completed? Yes ☒ No ☐

⑫ Sample Collection Start 3/1/17 @ 1132

Date	Time	Sample ID	Summa Canister ID	Flow Controller #	Vacuum Gauge #	Initial Vacuum (in. Hg)	Final Vacuum (in. Hg)
3/1/17	1853 ~~1132~~	CoC-SSSG-01	002792	0A0819	0A0819	-30	-9
3/1/17	1853 ~~1132~~	CoC-IAQ-01	AC02088	005374	005374	-29	-8

Comments: IAQ sample set @ location VIP-6 in breathing zone.

At time of sample, truck dock door closed in Burn off Room. No noticeable cracks/breaks in concrete flooring surrounding VIP location. Seam in floor approx 10' from VIP.

Burn process running. Some forklift traffic. ~~Sulfuric~~ KD Phosphoric acid open drum near VIP.

VIP-6

VAPOR INTRUSION ASSESSMENT – FIELD MEASUREMENTS

BR&E CONSULTANTS & PROFESSIONAL ENGINEERS
235 E. Main St, Ste 107
Northville, MI 48167
(248) 489-9636

① Project Name: SSW Collis VI Sampling Q1 2017
Date: 3/1/17 Project Number: 02028018 task 4
SiteLocation: Clinton, Iowa
Weather: 41° rain
Field Personnel: KMD & KVB
Recorded By: KMD & KVB

Probe No.: VIP-5 ☒ Sub-slab probe ☐ Soil gas probe
Mini Rae 2000 Serial No.: R222996 Lamp (10.6) / 11.7 eV
Landtech GEM 2000 Landfill Gas Meter Serial No. M: R6452
MDG 2002 Helium detector Serial No.: 22874
Tracer Gas: ☒ Helium ☐ Other

② Surface Type: ☐ Asphalt ☒ Concrete ☐ Grass ☐ Other
Surface Thickness 4.5" inches/centimeters ☐ Unknown
(i.e., asphalt or concrete)

③ 1 Casing Volume
☐ Sub-slab <0.1 L
Soil gas probe ____ (L)

⑤ Shut in test prior to pneumatic test completed, 50 in. H_2O held for 60 seconds.

⑥ Start of Pneumatic Test:

Elapsed Time (min.)	Pump Flow Rate (LPM)	Well Head Vacuum in. H_2O
	0.1	
	0.2	
	0.5	

④ Initial Vacuum (prior to pumping) 0 in. H_2O

⑦ Field tubing blank reading (ppm_v) completed? ☒ Yes ☐ No PID Reading 0 ppm_v

⑧ Shut in test prior to purging completed? Yes ☒ No ☐

⑨ Purging

Date	Start Time	End Time	Elapsed Time (min.)	Bag Volume (L)	Purge Rate (LPM)	Cumulative Volume (L)	CH_4 (%)	CO_2 (%)	O_2 (%)	Tracer Gas Shroud (%) Min	Tracer Gas Shroud (%) Max	Tracer Gas Sample (ppm_v, %) (circle one)	VOCs by PID (ppm_v)
3/1/17	0857	0900	3	1	0.33	1	0	00.3	19.3	11.9	17.4	0	0.85
↓	0903	0906	3	1	0.33	1	0	00.1	19.4	16.2	20.1	0	1.80
↓	0909	0912	3	1	0.33	1	0	00.3	19.3	17.3	25.2	0	1.35

⑩ Helium concentration in field screened samples is less than 5% of minimum concentration in the shroud? ☒ Yes ☐ No **Note:** 1% helium = 10,000 ppm_v

⑪ Shut in test prior to sample collection completed? Yes ☐ No ☐

⑫ Sample Collection Start 3/1/17 @ 1135

Date	Time	Sample ID	Summa Canister ID	Flow Controller #	Vacuum Gauge #	Initial Vacuum (in. Hg)	Final Vacuum (in. Hg)
3/1/17	~~1855~~ 1135	COL-SSSG-02	004053	03927	03927	-27	-10
3/1/17	~~1855~~ 1135	COL-IAQ-02	11582	H220147	H220147	-29	-8

Comments: IAQ sample set @ location VIP-5 in breathing zone.

At the time of sample collection, no nearby doorways present. High foot traffic area w/ fork lift traffic. No noticeable cracks, breakage in concrete flooring surrounding VIP.

PC-1 finishing running

VFP - 5

VAPOR INTRUSION ASSESSMENT – FIELD MEASUREMENTS

BR&E
235 E. Main St, Ste 107
Northville, MI 48167
(248) 489-9636

① Project Name: SSW Collis VI Sampling Q1 2017
Date: 3/1/17 Project Number: 02028018 task 4
SiteLocation: Clinton, Iowa
Weather: 41° rain
Field Personnel: KMD & KVB
Recorded By: KMD & KVB

Probe No.: VIP-4 ☐ Sub-slab probe ☐ Soil gas probe
Mini Rae 2000 Serial No.: R222996 Lamp (10.6) / 11.7 eV
Landtech GEM 2000 Landfill Gas Meter Serial No. M: R6452
MDG 2002 Helium detector Serial No.: 22874
Tracer Gas: ☒ Helium ☐ Other

② Surface Type: ☐ Asphalt ☒ Concrete ☐ Grass ☐ Other
Surface Thickness 3" inches/centimeters ☐ Unknown
(i.e., asphalt or concrete)

③ 1 Casing Volume
☐ Sub-slab <0.1 L
Soil gas probe _____ (L)

⑤ Shut in test prior to pneumatic test completed, 58 in. H_2O held for 60 seconds.

⑥ Start of Pneumatic Test:

Elapsed Time (min.)	Pump Flow Rate (LPM)	Well Head Vacuum in. H_2O
	0.1	
	0.2	
	0.5	

④ Initial Vacuum (prior to pumping) 0 in. H_2O

⑦ Field tubing blank reading (ppm_v) completed? ☒ Yes ☐ No PID Reading 0 ppm_v

⑧ Shut in test prior to purging completed? Yes ☒ No ☐

⑨ Purging

Date	Start Time	End Time	Elapsed Time (min.)	Bag Volume (L)	Purge Rate (LPM)	Cumulative Volume (L)	CH_4 (%)	CO_2 (%)	O_2 (%)	Tracer Gas Shroud (%) Min	Tracer Gas Shroud (%) Max	Tracer Gas Sample (ppm_v, %) (circle one)	VOCs by PID (ppm_v)
3/1/17	0933	0936	3	1	0.33	1	0	00.1	19.3	17.1	25.2	0	1.15
↓	0939	0942	3	1	0.33	1	0	00.6	19.0	20.0	29.9	0	1.60
↓	0944	0947	3	1	0.33	1	0	00.5	18.7	18.0	26.5	0	2.0

⑩ Helium concentration in field screened samples is less than 5% of minimum concentration in the shroud? ☒ Yes ☐ No **Note:** 1% helium = 10,000 ppm_v

⑪ Shut in test prior to sample collection completed? Yes ☒ No ☐

⑫ Sample Collection Start 3/1/17 @ 1139

Date	Time	Sample ID	Summa Canister ID	Flow Controller #	Vacuum Gauge #	Initial Vacuum (in. Hg)	Final Vacuum (in. Hg)
3/1/17	1900	COL-SSSG-03	Ø2127	OAØ2106	OAØ2106	-29	-10
3/1/17	1900	COL-IAQ-03	NØ68Ø	ØØ837	ØØ837	-26	-5

Comments: IAQ Samples set at location VIP-4 in breathing zone.

3/1/17 1900 COL-IAQ-04 (duplicate) ACØ2Ø78 Ø2379 Ø2379 -29 -8

At time of sample collection, lunch room doors closed to outside plant. Occasional foot traffic entering through doors throughout sample collection. Some noticable cracks in tile aprox 3' from VIP. No large cracks in cement.

VIP-4

VAPOR INTRUSION ASSESSMENT – FIELD MEASUREMENTS

BR&E CONSULTANTS & PROFESSIONAL ENGINEERS
235 E. Main St, Ste 107
Northville, MI 48167
(248) 489-9636

① Project Name: SSW Collis VI Sampling Q1 2017
Date: 3/1/17 Project Number: 02028018 task 4
SiteLocation: Clinton, Iowa
Weather: 41° rain
Field Personnel: KMD & KVB
Recorded By: KMD & KVB

Probe No.: VIP 2 ☒ Sub-slab probe ☐ Soil gas probe
Mini Rae 2000 Serial No.: R222996 Lamp: 10.6 / 11.7 eV
Landtech GEM 2000 Landfill Gas Meter Serial No. M: R6452
MDG 2002 Helium detector Serial No.: 22874
Tracer Gas: ☒ Helium ☐ Other

② Surface Type: ☐ Asphalt ☒ Concrete ☐ Grass ☐ Other
Surface Thickness ____ inches/centimeters ☐ Unknown
(i.e., asphalt or concrete)

③ 1 Casing Volume
☐ Sub-slab <0.1 L
Soil gas probe ____ (L)

④ Initial Vacuum (prior to pumping) 0 in. H_2O

⑤ Shut in test prior to pneumatic test completed, 52 in. H_2O held for 60 seconds.

⑥ Start of Pneumatic Test:

Elapsed Time (min.)	Pump Flow Rate (LPM)	Well Head Vacuum in. H_2O
	0.1	
	0.2	
	0.5	

⑦ Field tubing blank reading (ppm_v) completed? ☒ Yes ☐ No PID Reading 0 ppm_v

⑧ Shut in test prior to purging completed? Yes ☒ No ☐

⑨ Purging

Date	Start Time	End Time	Elapsed Time (min.)	Bag Volume (L)	Purge Rate (LPM)	Cumulative Volume (L)	CH_4 (%)	CO_2 (%)	O_2 (%)	Tracer Gas Shroud (%) Min	Tracer Gas Shroud (%) Max	Tracer Gas Sample (ppm_v, %) (circle one)	VOCs by PID (ppm_v)
3/1/17	1020	~~1020~~ 1023	3	1	0.33	1	0	00.1	19.5	15.4	23.8	0	1.05
↓	1026	1029	3	1	0.33	1	0	00.1	19.4	15.8	26.9	0	0.80
↓	1032	1035	3	1	0.33	1	0	00.1	19.3	17.3	24.8	0	0.60

⑩ Helium concentration in field screened samples is less than 5% of minimum concentration in the shroud? ☒ Yes ☐ No **Note:** 1% helium = 10,000 ppm_v

⑪ Shut in test prior to sample collection completed? Yes ☒ No ☐

⑫ Sample Collection Start 3/1/17 @ 1142

Date	Time	Sample ID	Summa Canister ID	Flow Controller #	Vacuum Gauge #	Initial Vacuum (in. Hg)	Final Vacuum (in. Hg)
3/1/17	1905	COL - SSSG-04	13999	0A0103	0A0103	-29	-10
3/1/17	1905	COL - IAQ -05	13672	04880	04880	-29	-14.5

Comments: IAQ Sample set @ location VIP-2 in breathing zone.

At time of sample collection, doors + overhead doors closed inside building.
Some cracks + breakage observed in cement flooring, aprox 2' from VIP.

PC-2 finishing line running.

VIP-2

VAPOR INTRUSION ASSESSMENT – FIELD MEASUREMENTS

BP&E
235 E. Main St, Ste 107
Northville, MI 48167
(248) 489-9636

① Project Name: SSW Collis VI Sampling Q1 2017
Date: 3/1/17 Project Number: 02028018 task 4
SiteLocation: Clinton, Iowa
Weather: 41° rain
Field Personnel: KMD & KVB
Recorded By: KMD & KVB

Probe No.: VIP-3 ☑ Sub-slab probe ☐ Soil gas probe
Mini Rae 2000 Serial No.: R22296 Lamp: 10.6 / 11.7 eV
Landtech GEM 2000 Landfill Gas Meter Serial No. M: R6452
MDG 2002 Helium detector Serial No.: 22874
Tracer Gas: ☑ Helium ☐ Other

② Surface Type: ☐ Asphalt ☑ Concrete ☐ Grass ☐ Other
Surface Thickness 4.5" inches/centimeters ☐ Unknown
(i.e., asphalt or concrete)

③ 1 Casing Volume
☐ Sub-slab <0.1 L
Soil gas probe _____ (L)

④ Initial Vacuum (prior to pumping) 0 in. H_2O

⑤ Shut in test prior to pneumatic test completed, 60 in. H_2O held for 60 seconds.

⑥ Start of Pneumatic Test:

Elapsed Time (min.)	Pump Flow Rate (LPM)	Well Head Vacuum in. H_2O
	0.1	
	0.2	
	0.5	

⑦ Field tubing blank reading (ppm_v) completed? ☑ Yes ☐ No PID Reading 0 ppm_v

⑧ Shut in test prior to purging completed? Yes ☑ No ☐

⑨ Purging

Date	Start Time	End Time	Elapsed Time (min.)	Bag Volume (L)	Purge Rate (LPM)	Cumulative Volume (L)	CH_4 (%)	CO_2 (%)	O_2 (%)	Tracer Gas Shroud (%) Min	Tracer Gas Shroud (%) Max	Tracer Gas Sample (ppm_v, %) (circle one)	VOCs by PID (ppm_v)
3/1/17	1055	1058	3	1	0.33	1	0	00.1	19.6	11.1	20.1	0	0.40
↓	1101	1104	3	1	0.33	1	0	00.1	19.6	17.5	34.7	0	0.40
↓	1106	1109	3	1	0.33	1	0	00.1	19.5	15.3	31.2	0	0.30

⑩ Helium concentration in field screened samples is less than 5% of minimum concentration in the shroud? ☑ Yes ☐ No **Note:** 1% helium = 10,000 ppm_v

⑪ Shut in test prior to sample collection completed? Yes ☑ No ☐

⑫ Sample Collection Start 3/1/17 @ 1147

Date	Time	Sample ID	Summa Canister ID	Flow Controller #	Vacuum Gauge #	Initial Vacuum (in. Hg)	Final Vacuum (in. Hg)
3/1/17	1907	COL-SSSG-05	00485	OA00542	OA00542	-30	-11
3/1/17	1907	COL-IAQ-06	AS00675	F220512	F220512	-30	-17.5

Comments: IAQ Sample set @ location VIP-3 in breathing zone.

At time of sample collection, all doors closed. Noticable cracks + breaks w/in 2' of VIP. Floor drain aprox 4' from VIP.

PC2 finishing line running.

VAPOR INTRUSION ASSESSMENT – FIELD MEASUREMENTS

BR&E CONSULTANTS & PROFESSIONAL ENGINEERS
235 E. Main St, Ste 107
Northville, MI 48167
(248) 489-9636

① Project Name: SSW Collis VI Sampling Q1 2017
Date: 3/1/17 Project Number: 02028018 task 4
SiteLocation: Clinton, Iowa
Weather: 41° rain
Field Personnel: KMD & KVB
Recorded By: KMD & KVB

Probe No.: Front office IAQ-1 Area ☐ Sub-slab probe ☐ Soil gas probe
Mini Rae 2000 Serial No.: NA Lamp: 10.6 / 11.7 eV
Landtech GEM 2000 Landfill Gas Meter Serial No. M: NA
MDG 2002 Helium detector Serial No.: NA
Tracer Gas: ☐ Helium ☐ Other NA

② Surface Type: ☐ Asphalt ☐ Concrete ☐ Grass ☒ Other tile/wood
Surface Thickness _____ inches/centimeters ☐ Unknown
(i.e., asphalt or concrete)

③ 1 Casing Volume
☐ Sub-slab <0.1 L
Soil gas probe _____ (L)

④ Initial Vacuum (prior to pumping) _____ in. H_2O

⑤ Shut in test prior to pneumatic test completed, ____ in. H_2O held for ___ seconds.

⑥ Start of Pneumatic Test: _____

Elapsed Time (min.)	Pump Flow Rate (LPM)	Well Head Vacuum in. H_2O
	0.1	
	0.2	
	0.5	

⑦ Field tubing blank reading (ppm_v) completed? ☐ Yes ☐ No PID Reading _____ ppm_v

⑧ Shut in test prior to purging completed? Yes ☐ No ☐

⑨ Purging

Date	Start Time	End Time	Elapsed Time (min.)	Bag Volume (L)	Purge Rate (LPM)	Cumulative Volume (L)	CH_4 (%)	CO_2 (%)	O_2 (%)	Tracer Gas Shroud (%) Min	Tracer Gas Shroud (%) Max	Tracer Gas Sample (ppm_v, %) (circle one)	VOCs by PID (ppm_v)

⑩ Helium concentration in field screened samples is less than 5% of minimum concentration in the shroud? ☐ Yes ☐ No **Note:** 1% helium = 10,000 ppm_v

⑪ Shut in test prior to sample collection completed? Yes ☐ No ☐

⑫ Sample Collection Start 3/1/17 @ 1150

Date	Time	Sample ID	Summa Canister ID	Flow Controller #	Vacuum Gauge #	Initial Vacuum (in. Hg)	Final Vacuum (in. Hg)
3/1/17	1911	COL-IAQ-07	AS00676	FCA00497	FCA00497	-30	-10
3/1/17	1911	COL-IAQ-08 (duplicate)	AC02217	FCA00957	FCA00957	-28	-10

Comments: At time of sampling office doors & windows closed. Some foot traffic opening office doors into plant. Front office sits on top of crawl space.

VAPOR INTRUSION ASSESSMENT – FIELD MEASUREMENTS

BB&E CONSULTANTS & PROFESSIONAL ENGINEERS
235 E. Main St, Ste 107
Northville, MI 48167
(248) 489-9636

① Project Name: SSW Collis VI Sampling Q1 2017
Date: 3/1/17 Project Number: 02028018 task 4
Site Location: Clinton, Iowa
Weather: 41° rain
Field Personnel: KMD & KVB
Recorded By: KMD & KVB

Probe No.: Crawl space below IAQ-1 location ☐ Sub-slab probe ☐ Soil gas probe
Mini Rae 2000 Serial No.: NA Lamp: 10.6 / 11.7 eV
Landtech GEM 2000 Landfill Gas Meter Serial No. M: NA
MDG 2002 Helium detector Serial No.: NA
Tracer Gas: ☐ Helium ☐ Other NA

② Surface Type: ☐ Asphalt ☐ Concrete ☐ Grass ☐ Other_____
Surface Thickness _____ inches/centimeters ☐ Unknown
(i.e., asphalt or concrete)

③ 1 Casing Volume
☐ Sub-slab <0.1 L
Soil gas probe _____ (L)

④ Initial Vacuum (prior to pumping) _____ in. H_2O

⑤ Shut in test prior to pneumatic test completed,____in. H_2O held for ___ seconds.

⑥ Start of Pneumatic Test: _____

Elapsed Time (min.)	Pump Flow Rate (LPM)	Well Head Vacuum in. H_2O
	0.1	
	0.2	
	0.5	

⑦ Field tubing blank reading (ppm_v) completed? ☐Yes ☐No PID Reading _____ ppm_v

⑧ Shut in test prior to purging completed? Yes ☐ No ☐

⑨ Purging

Date	Start Time	End Time	Elapsed Time (min.)	Bag Volume (L)	Purge Rate (LPM)	Cumulative Volume (L)	CH_4 (%)	CO_2 (%)	O_2 (%)	Tracer Gas: Shroud (%) Min	Tracer Gas: Shroud (%) Max	Tracer Gas: Sample (ppm_v, %) (circle one)	VOCs by PID (ppm_v)

⑩ Helium concentration in field screened samples is less than 5% of minimum concentration in the shroud? ☐Yes ☐ No **Note:** 1% helium = 10,000 ppm_v

⑪ Shut in test prior to sample collection completed? Yes ☐ No ☐

⑫ Sample Collection Start 3/1/17 @ 1205

Date	Time	Sample ID	Summa Canister ID	Flow Controller #	Vacuum Gauge #	Initial Vacuum (in. Hg)	Final Vacuum (in. Hg)
3/1/17	1917	COL-CSAQ-01	20470	FCA 00481	FCA 00481	-28.5	-8

Comments: Sample placed in crawl space below location IAQ-1.

VAPOR INTRUSION ASSESSMENT – FIELD MEASUREMENTS

BB&E
235 E. Main St, Ste 107
Northville, MI 48167
(248) 489-9636

① Project Name: SSW Collis VI Sampling Q1 2017
Date: 3/1/17 Project Number: 02028018 task 4
Site Location: Clinton, Iowa
Weather: 41° rain
Field Personnel: KMD & KVB
Recorded By: KMD & KVB

Probe No.: Outdoor Ambient ☐ Sub-slab probe ☐ Soil gas probe
Mini Rae 2000 Serial No.: NA Lamp: 10.6 / 11.7 eV
Landtech GEM 2000 Landfill Gas Meter Serial No. M: NA
MDG 2002 Helium detector Serial No.: NA
Tracer Gas: ☐ Helium ☐ Other NA

② Surface Type: ☐ Asphalt ☐ Concrete ☐ Grass ☐ Other_____
Surface Thickness _____ inches/centimeters ☐ Unknown
(i.e., asphalt or concrete)

③ 1 Casing Volume
☐ Sub-slab <0.1 L
Soil gas probe _____ (L)

④ Initial Vacuum (prior to pumping) _____ in. H_2O

⑤ Shut in test prior to pneumatic test completed,____in. H_2O held for ___ seconds.

⑥ Start of Pneumatic Test: _____

Elapsed Time (min.)	Pump Flow Rate (LPM)	Well Head Vacuum in. H_2O
	0.1	
	0.2	
	0.5	

⑦ Field tubing blank reading (ppm_v) completed? ☐Yes ☐No PID Reading _____ ppm_v

⑧ Shut in test prior to purging completed? Yes ☐ No ☐

⑨ Purging

Date	Start Time	End Time	Elapsed Time (min.)	Bag Volume (L)	Purge Rate (LPM)	Cumulative Volume (L)	CH_4 (%)	CO_2 (%)	O_2 (%)	Tracer Gas Shroud (%) Min	Tracer Gas Shroud (%) Max	Tracer Gas Sample (ppm_v, %) (circle one)	VOCs by PID (ppm_v)

⑩ Helium concentration in field screened samples is less than 5% of minimum concentration in the shroud? ☐Yes ☐ No **Note:** 1% helium = 10,000 ppm_v

⑪ Shut in test prior to sample collection completed? Yes ☐ No ☐

⑫ Sample Collection Start 3/1/17 1210

Date	Time	Sample ID	Summa Canister ID	Flow Controller #	Vacuum Gauge #	Initial Vacuum (in. Hg)	Final Vacuum (in. Hg)
3/1/17	1920	COL-OAQ-01	02774	FCA0247	FCA0247	-25	-3

Comments: Set upwind of facility in breathing zone.

Soil Gas Field Calibration Sheet

LOCATION	Site:	SSW Collis VI sampling Q1 2017	Date: 3/1/17 0700
	Project and PO#:	Quarterly VI Sampling 02028018	Field Personnel: KVB/KMD

Photoionization (PID) Meter				
Name and Model: UltraRAE 3000				
Manufacturer Name: MiniRae				
Serial #/ Rental Equip #: R22 2996		Lamp: 10.6 / 11.7 eV		
	Calibration Gas Standard (PPM)	Calibration Gas Reading (PPM)	Ambient (PPM) (inside building)	Ambient (PPM) (outside/fresh air)
Name:	5	5	6.35	0

Multi-Gas Meter				
Name and Model: GEM 2000				
Manufacturer Name: Landtec				
Serial #/ Rental Equip #: R0452				
	Calibration Gas Standard (PPM)	Calibration Gas Reading (PPM)	Ambient (PPM) (inside building)	Ambient (PPM) (outside/fresh air)
CH4	50%	50%	0.02%	0.00%
CO2	35%	35%	0.04%	0.02%
O2	—	—	19.2%	19.7%
Balance	Nitrogen 15%	15%	80.14%	80.1%
H2	—	—	—	—
CO	1000	999	0011	0010
H2S	50	51	0002	0001

Helium Detector	
Name and Model: Dielectric MGD-2002	
Manufacturer Name: Radiodetection	
Serial #/ Rental Equip #: 22874	
Ambient (PPM) (inside building):	0 ppm
Ambient (PPM) (outside/fresh air):	0 ppm

Notes:

Soil Gas Field Calibration Sheet

LOCATION	Site:	SSW Collis VI sampling Q1 2017	Date:	~~[illegible]~~ 3/1/17 1210
	Project and PO#:	Quarterly VI Sampling 02028018	Field Personnel:	KVB/KMD

Photoionization (PID) Meter				
Name and Model: ultraRAE 3000 Manufacturer Name: MiniRAE				
Serial #/ Rental Equip #: R22 2996		Lamp: 10.6 / 11.7 eV		
	Calibration Gas Standard (PPM)	Calibration Gas Reading (PPM)	Ambient (PPM) (inside building)	Ambient (PPM) (outside/fresh air)
Name:	5	5.60	7.25	0

Multi-Gas Meter				
Name and Model: GEM2000 Manufacturer Name: Landtec				
Serial #/ Rental Equip #: R6452				
	Calibration Gas Standard (PPM)	Calibration Gas Reading (PPM)	Ambient (PPM) (inside building)	Ambient (PPM) (outside/fresh air)
CH4	50%	49.8	0.00%	0.00%
CO2	35%	34.6	0.1%	0.1%
O2	—	—	19.9%	19.4%
Balance	Nitrogen 15%	15%	79.8%	80.4%
H2	—	—	—	—
CO	1000	1010	~~0001~~ 0010	0011
H2S	50	50	0001	0002

Helium Detector	
Name and Model: Dielectric MGD-2002 Manufacturer Name: Radiodetection	
Serial #/ Rental Equip #: 22874	
Ambient (PPM) (inside building):	0
Ambient (PPM) (outside/fresh air):	0

Notes:

INSTRUMENT QC/ PACKING LIST

Description	Landtec GEM-2000 +
Instrument ID	R6452
Date Calibrated	2-22-17

PINE
www.pine-environmental.com

Standard Items	**Prepared**	**QC check**	**Received by customer**	**Returned to Pine**
GEM-2000 + w/ hard case	✓	✓		
Fabric carry case	✓	✓		
Manual	✓	✓		
Quick reference card	✓	✓		
Charger, AC cord (if applicable)	✓	✓		
(2) 4' lengths of sample tubing w/ filter, housing, and 4 male quick connects	✓	✓		
(2) Extra hydrophobic filters		✓		
(2) extra male quick connects	✓	✓		
Comm. Cable and data logging software	✓	✓		
Case insert warning	✓	✓		
ProCal calibration sheet	✓	✓		

Supporting Items

CH_4 and CO_2 calibration gas mix	✓	✓		
CH_4 and CO_2 calibration gas SDS ✓ *Must match cylinder with setup*	✓	✓		
CO and H_2S calibration gas mix	✓	✓		
CO and H_2S calibration gas SDS ✓ *Must match cylinder with setup*	✓	✓		
4% Oxygen, balance N_2 gas mix	✓	✓		
4% Oxygen, balance N_2 gas SDS ✓ *Must match cylinder with setup*	✓	✓		
Gas regulator, female (.25 or .5 lpm)	✓	✓		
Gas regulator, male (.25 or .5 lpm)	✓	✓		
Calibration tubing (6" tubing w/ male quick connect)	✓	✓		
Temperature probe	✓	✓		

Prepared by: DM
QC checked by: OAC
Date: 022217

This packing list is to ensure that every item needed to operate the unit was sent and received. Upon receiving a shipment, please fill out the "Received by customer" column. Call Pine within 24 hours of receiving the equipment if any pieces are missing, damaged, or malfunctioning. Thank you for choosing Pine Environmental Services LLC

INSTRUMENT QC PACKING LIST

Description	RAE Systems UltraRAE 3000
Instrument ID	R222996
Date Calibrated	2-22-17

PINE

www.pine-environmental.com

Standard Items	**Prepared**	**QC check**	**Received by customer**	**Returned to Pine**
UltraRAE w/ 9.8 eV lamp and case	✓	✓		
Protective Rubber Boot	✓	✓		
Manual	✓	✓		
Quick Reference Card	✓	✓		
Charger/ adapter, or charger and cradle	✓	✓		
Probe tip	✓	✓		
(2) Hydrophobic filters	✓	✓		
Effluent filter • Exhaust fitting • Tubing • Carbon filter	✓	✓		
Alkaline battery adapter	✓	✓		
(4) AA Alkaline batteries	✓	✓		
NIST traceable calibration sheet	✓	✓		
Optional Items				
5 ppm Benzene Calibration gas	X	—		
100 ppm isobutylene calibration gas	X	—		
Gas regulator(s) 1	✓	✓		
Tedlar bag(s) 1	✓	✓		
Datalogging Software & Comm. Cable	X	—		
Serial to USB Adapter + Driver Software	X	—		

Prepared by: [illegible]

QC checked by: OAC

Date: 022217

This packing list is to ensure that every item needed to operate the unit was sent and received. Upon receiving a shipment, please fill out the "Received by customer" column. Call Pine within 24 hours of receiving the equipment if any pieces are missing, damaged, or malfunctioning. Thank you for choosing Pine Environmental Services LLC

INSTRUMENT QC/ PACKING LIST

Description	SKC Sampling pumps (1 – 5)
Instrument ID	3008
Date Tested	2-22-17

PINE
www.pine-environmental.com

Standard Items	**Prepared**	**QC check**	**Received by customer**	**Returned to Pine**
1 SKC pump(s) and case	✓	✓		
(1) Manual	✓	✓		
1 Keypad cover(s)	✓	✓		
1 Adjustable low-flow tube adapter	✓	✓		
1 Low-flow tube adapter tube cover	✓	✓		
Brass low flow regulator cap	✓	✓		
Brass exhaust port cap	✓	✓		
1 Exhaust port barb(s)	✓	✓		
1 3' tubing length(s)	✓	✓		
1 37mm Cassette holder w/ luer adapters	✓	✓		
(1) Tool kit small and medium flat screwdrivers	✓	✓		
___ Single smart chargers (old style)	X	—		
1 Single port PowerFlex charger(s)	✓	✓		
1 single PowerFlex 15V* AC adapter(s) *Must be 15V / 1.0A for proper operation*	✓	✓		
___ Five port PowerFlex charger	X	—		
___ 5-port PowerFlex 15V* AC adapter(s) *Must be 15V / 3.3A – 4.8A for proper operation*	X	—		
___ xr charger cables (s) one per pump	X	—		
(1) PowerFlex charger warning/ instructions	X	—		
Optional Items				
___ feet of extra tubing	X	—		
___ Cyclones	X	—		
___ Cyclone calibration adapter	X	—		
___ Tripod(s)	X	—		

Prepared by: QU

QC checked by: JAC

Date: 02222.17

This packing list is to ensure that every item needed to operate the unit was sent and received. Upon receiving a shipment, please fill out the "Received by customer" column. Call Pine within 24 hours of receiving the equipment if any pieces are missing, damaged, or malfunctioning. Thank you for choosing Pine Environmental Services LLC

INSTRUMENT QC/ PACKING LIST

Description	Dielectric MGD-2002
Instrument ID	22874
Date Prepared	2-22-17

PINE

www.pine-environmental.com

Standard Items	**Prepared**	**QC check**	**Received by customer**	**Returned to Pine**
MGD-2002 and carry case	✓	✓		
Manual	✓	✓		
Quick reference card	✓	✓		
Charger	✓	✓		
12VDC auto plug adapter	✓	✓		
Needle probe	✓	✓		
Ground probe	✓	✓		
Handle assembly with moisture filter cartridge	✓	✓		
Extra moisture filter cartridge	✓	✓		
Drying adapter for cartridges	✓	✓		
Carry strap	✓	✓		

Prepared by: [signature]

QC checked by: DAC

Date: 022217

This packing list is to ensure that every item needed to operate the unit was sent and received. Upon receiving a shipment, please fill out the "Received by customer" column. Call Pine within 24 hours of receiving the equipment if any pieces are missing, damaged, or malfunctioning. Thank you for choosing Pine Environmental Services LLC

INSTRUMENT QC PACKING LIST

Description	SKC Vac-U-Chamber/ Vacuum Chamber
Instrument ID	A01168
Date Tested	2-21-17

PINE

www.pine-environmental.com

Standard Items	**Prepared**	**QC check**	**Received by customer**	**Returned to Pine**
Vacuum Chamber/Vac-U-Chamber Size: 1 L	✓	✓		
Manual/Quick Reference Guide	✓	✓		
Vacuum Outlet Port	✓	✓		
Purge Port	✓	✓		
Sample Inlet Port	✓	✓		
Case Release knob	✓	✓		
Quick Connectors	✓	✓		
Port Cap	✓	✓		
Sample Tubing	✓	✓		
ProCal Inspection Report		-		

Prepared by: DK

QC checked by: DAC

Date: 022217

This packing list is to ensure that every item needed to operate the unit was sent and received. Upon receiving a shipment, please fill out the "Received by customer" column. Call Pine within 24 hours of receiving the equipment if any pieces are missing, damaged, or malfunctioning. Thank you for choosing Pine Environmental Services LLC

INSTRUMENT CALIBRATION REPORT

Pine Environmental Services, LLC.
5170 Hudson Drive, Suite E
Hudson, OH 44236
Toll-free: (877) 326-PINE (7463)

Pine Environmental Services, Inc.

Instrument ID A01168
Description Vac-U-Chamber
Calibrated 2/21/2017 12:10:58PM

Manufacturer SKC
Model Number N/A
Serial Number/ Lot Number N/A
Location Ohio
Department

State Certified
Status
Temp °C
Humidity %

Calibration Specifications

Group #
Group Name
Stated Accy

Range Acc %
Reading Acc %
Plus/Minus

Nom In Val / In Val	In Type	Out Val	Out Type	Fnd As	Lft As	Dev%	Pass/Fail

Test Instruments Used During the Calibration

(As Of Cal Entry Date)

Test Standard ID	Description	Manufacturer	Model Number	Serial Number / Lot Number	Last Cal Date/ Opened Date	Next Cal Date / Expiration Date

Notes about this calibration

Calibration Result Calibration Successful
Who Calibrated Darnell Knight

All instruments are calibrated by Pine Environmental Services, LLC. according to the manufacturer's specifications, but it is the customer's responsibility to calibrate and maintain this unit in accordance with the manufacturer's specifications and/or the customer's own specific needs.

Notify Pine Environmental Services, LLC. of any defect within 24 hours of receipt of equipment
Please call 866-960-7463 for Technical Assistance

INSTRUMENT CALIBRATION REPORT

Pine Environmental Services LLC

5170 Hudson Drive, Suite E
Hudson, OH 44236
Toll-free: (877) 326-PINE (7463)

Pine Environmental Services, Inc.

Instrument ID R222996
Description UltraRAE 3000
Calibrated 2/22/2017 11:23:05AM

All instruments are calibrated by Pine Environmental Services LLC according to the manufacturer's specifications, but it is the customer's responsibility to calibrate and maintain this unit in accordance with the manufacturer's specifications and/or the customer's own specific needs.

Notify Pine Environmental Services LLC of any defect within 24 hours of receipt of equipment
Please call 800-301-9663 for Technical Assistance

INSTRUMENT CALIBRATION REPORT

Pine Environmental Services LLC

5170 Hudson Drive, Suite E
Hudson, OH 44236
Toll-free: (877) 326-PINE (7463)

Pine Environmental Services, Inc.

Instrument ID R222996
Description UltraRAE 3000
Calibrated 2/22/2017 11:23:05AM

Manufacturer Rae Systems
Model Number PGM 7360
Serial Number/ Lot Number 596-906014
Location Ohio
Department

State Certified
Status Pass
Temp °C
Humidity %

Calibration Specifications

Group # 1
Group Name Benzene
Stated Accy Pct of Reading

Range Acc % 0.0000
Reading Acc % 3.0000
Plus/Minus 0.00

Nom In Val / In Val	In Type	Out Val	Out Type	Fnd As	Lft As	Dev%	Pass/Fail
5.00 / 5.00	PPM	5.00	PPM	5.10	5.00	0.00%	Pass

Group # 2
Group Name Isobutylene
Stated Accy

Range Acc % 0.0000
Reading Acc % 0.0000
Plus/Minus 0.00

Nom In Val / In Val	In Type	Out Val	Out Type	Fnd As	Lft As	Dev%	Pass/Fail
100.00 / 100.00	PPM	100.00	PPM	105.00	100.10	0.10%	Pass

Test Instruments Used During the Calibration

(As Of Cal Entry Date)

Test Standard ID	Description	Manufacturer	Model Number	Serial Number / Lot Number	Last Cal Date/ Opened Date	Next Cal Date / Expiration Date
OH 100PPM ISO	OH ISO 100	Intermountain Specialty Gases	GP11010	10-4034		
OH 5.0PPM BENEZENE	OH 5PPM Benzene	Pine Environmental Services, Inc.	GP10951	2553A-02?T5		4/2/2017

Notes about this calibration

Calibration Result Calibration Successful
Who Calibrated Brandon Sekerak

INSTRUMENT CALIBRATION REPORT

Pine Environmental Services LLC
5170 Hudson Drive, Suite E
Hudson, OH 44236
Toll-free: (877) 326-PINE (7463)

Pine Environmental Services, Inc.

Instrument ID R6452
Description Gem 2000+
Calibrated 2/22/2017 10:35:21AM

Test Instruments Used During the Calibration (As Of Cal Entry Date)

Test Standard ID	Description	Manufacturer	Model Number	Serial Number / Lot Number	Last Cal Date/ Opened Date	Next Cal Date / Expiration Date
OH 4% OXYGEN	OH O2 4% BALANCE NITROGEN 34 LITERS	American Gas Group	GP12552	1843A-0175	1/1/2017	
OH CH4-50%/CO2-35%	OH 50 CH4/35 CO2	American Gas Group	GP12116	02118FB11	3/1/2015	

Notes about this calibration

Calibration Result Calibration Successful
Who Calibrated Darnell Knight

All instruments are calibrated by Pine Environmental Services LLC according to the manufacturer's specifications, but it is the customer's responsibility to calibrate and maintain this unit in accordance with the manufacturer's specifications and/or the customer's own specific needs.

Notify Pine Environmental Services LLC of any defect within 24 hours of receipt of equipment
Please call 800-301-9663 for Technical Assistance

INSTRUMENT CALIBRATION REPORT

Pine Environmental Services LLC
5170 Hudson Drive, Suite E
Hudson, OH 44236
Toll-free: (877) 326-PINE (7463)

Pine Environmental Services, Inc.

Instrument ID R6452
Description Gem 2000+
Calibrated 2/22/2017 10:35:21AM

Manufacturer CES Landtec
Model Number GEM2000+
Serial Number/ Lot Number GM08752/06
Location Ohio
Department

State Certified
Status Pass
Temp °C
Humidity %

Calibration Specifications

Group # 1
Group Name Methane
Stated Accy Pct of Reading
Range Acc % 0.0000
Reading Acc % 3.0000
Plus/Minus 0.00

Nom In Val / In Val	In Type	Out Val	Out Type	Fnd As	Lft As	Dev%	Pass/Fail
50.00 / 50.00	%Volume	50.00	%Volume	47.00	50.00	0.00%	Pass

Group # 2
Group Name Carbon Dioxide
Stated Accy Pct of Reading
Range Acc % 0.0000
Reading Acc % 3.0000
Plus/Minus 0.00

Nom In Val / In Val	In Type	Out Val	Out Type	Fnd As	Lft As	Dev%	Pass/Fail
35.00 / 35.00	%Volume	35.00	%Volume	33.00	35.00	0.00%	Pass

Group # 3
Group Name Oxygen
Stated Accy Pct of Reading
Range Acc % 0.0000
Reading Acc % 3.0000
Plus/Minus 0.00

Nom In Val / In Val	In Type	Out Val	Out Type	Fnd As	Lft As	Dev%	Pass/Fail
20.90 / 20.90	%Volume	20.90	%Volume	19.50	20.90	0.00%	Pass

Group # 4
Group Name Carbon Monoxide
Stated Accy Pct of Reading
Range Acc % 0.0000
Reading Acc % 3.0000
Plus/Minus 0.00

Nom In Val / In Val	In Type	Out Val	Out Type	Fnd As	Lft As	Dev%	Pass/Fail
50.00 / 50.00	PPM	50.00	PPM	47.00	50.00	0.00%	Pass

Group # 5
Group Name Hydrogen Sulfide
Stated Accy Pct of Reading
Range Acc % 0.0000
Reading Acc % 3.0000
Plus/Minus 0.00

Nom In Val / In Val	In Type	Out Val	Out Type	Fnd As	Lft As	Dev%	Pass/Fail
25.00 / 25.00	PPM	25.00	PPM	23.00	25.00	0.00%	Pass

ATTACHMENT C
BUILDING SURVEY FORM

Building Survey Form

Date: Q1 2017 VI Sampling Event 3/1/17

Location: Collis Inc., Clinton, Iowa

Client: SSW

Field Personnel Conducting Survey: KMD & KVB

1. Building occupancy:

   Number of personnel: 330

   Potentially sensitive populations: None

   Occupant activities within building: metal fabrication, powder coat and touch up painting, general assembly work, office activities, maintenance/machine shop, plating and process water treatment.

   Hours of occupancy: 24 hours/day, 3 shifts, 6 days/week

2. Susceptibility to soil gas entry under current conditions:

   Pressure difference between indoors and subsurface: Not measured, however general observations suggest a slight negative pressure differential inside the building during colder months. Due to age of building it is expected that any makeup air enters through openings in the building structure rather than the floor.

   Existing mitigation systems: None

   Physical conduits (e.g., foundation cracks, floor drains, sumps): some cracks noted in cement flooring, some existing floor drains

3. Building HVAC (including process-related exhaust fans and vents):

   Operating characteristics: AC in all 4 powder coat rooms without outside exhaust, natural gas fired unit space heaters throughout facility – vented, plating line and wash line exhaust, general ventilation fans used primarily during warmer months.

   Mechanical influence: Not aware of any

   Stagnation zones: PC 2 hang on area is low bay with minimal air movement.

4. Indoor and outdoor sources of vapor-forming chemicals (Location, type, formulations, quantities):

   Consumer products and chemicals (e.g., paint, stripper, fuel, cleaning products, mothballs): Touch up paint (pressure pots and aerosol cans) related to powder coat part touch up (acetone, MEK, Toluene) maintenance parts washer (Safety Kleen 150 Solvent), acid and caustics related wash line and plating operations, propane fuel for lift trucks with emissions.

   New carpet or furniture: None.

   Dry cleaned items: None.

   Cigarette smoke: None.

   Outdoor sources brought in through the HVAC system: ADM operations, Purina operations.

5. Groundwater seeps to basements None

6. Indoor air treatment systems (e.g., carbon filters): None

Kacie Van Buskirk — 3/1/2017

Signature of Field Personnel completing Building Survey — Date:

BB&E

235 E. Main St, Suite 107

Northville, MI 48167

248.489.9636