PERIODIC REVIEW REPORT

JUNE 29, 2015 TO JUNE 30, 2018

REMINGTON RAND BUILDING

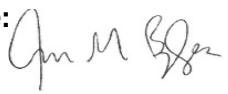
SITE # C932142
184 SWEENEY STREET
NORTH TONAWANDA, NEW YORK 14120

Prepared for:

Remington Lofts on the Canal, LLC
298 Main Street
Suite 222
Buffalo, New York 14202

Prepared by:

1270 Niagara St
Buffalo, New York, 14213

Prepared By: Peter J. Gorton	**Signature:** 	**Date:** July 25, 2018	**Title:** BE3 – Senior Env. Proffessional
Reviewed By: Jason M. Brydges, PE	**Signature:** 	**Date:** July 25, 2018	**Title:** BE3 - PE

EXECUTIVE SUMMARY

The Remington Rand site is in the City of North Tonawanda, County of Niagara, New York and is identified as Block 1 and Lot 21 on the Niagara County Tax Map (SBL # 185.09-1-21). The site is an approximately 1.8-acre area bounded by Tremont Street to the north, Sweeney Street to the south, New York Central Railroad property to the east, and Marion Street to the west. The boundaries of the site are more fully described on the ALTA Survey map provided herein. The 1.8-acre site includes a slab-on-grade four-story concrete block and brick building. Also, a one-story slab-on-grade brick building adjoins the four-story building on the south. The remainder of the property is occupied by asphalt/concrete and gravel parking areas with some green space. The building area occupies approximately 1.2 acres of the 1.8-acre property.

The following is a summary of the nature and extent of contamination from the remedial investigation and resulting remedial history:

Sub-Slab Vapor Investigation -The sub-slab vapor assessment program resulted in several VOC compounds detected in both the indoor/outdoor air samples and in the sub-slab vapor samples. To mitigate the sub slab vapors in an area of elevated VOCs a passive vapor mitigation system was installed under an IRM with provisions to make the system active (In-line fan installed). The vapor mitigation system was sampled per the SMP as part of this periodic inspection and the results are discussed in section 4.0.

Exterior Soils Investigation - Exterior surface and sub-surface soils exhibited elevated concentrations of PAHs and metals that exceeded Part 375 residential and restricted residential soil cleanup objectives. For the site to meet Part 375 restricted residential cleanup objectives the top two feet of existing soil across the site, exterior to the building, was removed as an IRM and replaced with clean fill material. The removed soil was disposed off-site at a NYSDEC approved landfill. Most of this open area was then covered with asphalt (driveways/parking), sidewalks and minimal additional landscaping.

Sub-Slab Soils Investigation - Sub-slab soils exhibited only a few PAH and metal compounds that slightly exceeded Part 375 residential and restricted residential soil cleanup objectives. Because of the very low level of contamination detected and the fact that the floor slab is to remain in place for the planned future development no further remediation was recommended for this area.

Floor Drains/Pits Sediment Investigation – The existing building first floor drain/trench system and elevator pits sediment samples exhibited in several samples significant elevated concentrations of several metal compounds that exceeded 375 residential and restricted residential soil cleanup objectives. The sediments were removed from the drains/trenches and pits under an IRM and disposed off-site at an approved disposal facility.

Transformer sampling conducted as part of the RI indicated that three of the ten existing transformers and both fluid reservoirs did not have PCB containing oil. Results from the remaining seven transformers indicated various concentrations of PCBs (COC) with the highest being 250 ppm. Some minor staining of soil around specific transformers indicated elevated levels of PCBs in the surface stained areas. Under an IRM all transformers, contents and impacted soil were removed according to regulations and properly disposed of at an approved disposal facility.

Upon completion of the IRMs remnant contamination remained in site soil material below the two-foot removal level. The final remedy for the site included the establishing of an environmental easement that restricts future development to restricted residential use and the establishing of engineering and institutional controls for the site as stipulated in the SMP.

Site Wide Inspection of the IC/EC's, was conducted on July 31, 2015. The inspection noted that all elements of the SMP were in compliance at the site i.e. IC/EC, the Monitoring Plan and the O & M Plan.

Sub-slab soil vapor depressurization system sampling was conducted on June 28, 2018. The results from the sampling are provided in the attached table and this table also provides results from previous sampling. Some results for some compounds are higher than in previous years.

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1.0 SITE OVERVIEW

The Remington Rand Building site is in the City of North Tonawanda, County of Niagara, New York and is identified as Block 1 and Lot 21 on the Niagara County Tax Map (SBL # 185.09-1-21). The site is an approximately 1.8-acre area bounded by Tremont Street to the north, Sweeney Street to the south, New York Central Railroad property to the east, and Marion Street to the west. The boundaries of the site are more fully described on the ALTA Survey map (see attachment). The 1.8-acre site includes a slab-on-grade four-story concrete block and brick building. Also, a one-story slab-on-grade brick building adjoins the four-story building on the south. The remainder of the property is occupied by asphalt/concrete and gravel parking areas with some green space. The building area occupies approximately 1.2 acres of the 1.8-acre property.

1.1 Nature and Extent of Contamination - RI Program

Building sub-slab vapor assessment program resulted in several VOC compounds detected in both the indoor/outdoor air samples and in the sub-slab vapor samples. Based on the NYSDOH Guidance for Evaluating Soil Vapor Intrusion in NY State, only one sample had concentrations indicating follow-up remediation.

Building exterior surface and sub-surface soils analytical results confirmed the results of prior assessments completed on the property which indicated elevated concentrations of PAHs and metals (COCs) that exceeded Part 375 restricted residential soil cleanup objectives.

Building sub-slab soils assessment indicated only a few PAH and metal compounds that slightly exceeded Part 375 restricted residential soil cleanup objectives. Because of the very low level of contamination detected and the fact that the floor slab is to remain in place for the planned future development no further remediation was recommended for this area.

Building first floor drain/trench and elevator pit sediment assessment indicated elevated concentrations of a number of metal compounds (COCs) that exceeded 375 restricted residential soil cleanup objectives.

Groundwater assessment indicated that only two metal compounds were detected in two of the unfiltered samples which exceeded the TOGs groundwater standards. No metal compounds exceeded groundwater standards in the filtered samples. Since the site is served by municipal water supply, and groundwater is not planned to be used for the new development, no further action related to groundwater was recommended.

Transformer sampling indicated that three of the ten existing transformers and both fluid reservoirs did not have PCB containing oil. Results from the remaining seven transformers indicated various concentrations of PCBs (COC) with the highest being 250 ppm. Some minor staining of soil around specific transformers indicated elevated levels of PCBs in the surface stained areas.

1.2 Remedial Program

The site was remediated in accordance with the remedy selected by the NYSDEC in its decision document dated November 2010. The components of the selected remedy included implementation of Interim Remedial Measures (IRMs) with an Environmental Easement and institutional and engineering controls (IC/EC).

IRMs

Based on the findings of the RI program (see above) the following IRMs were completed:

1. Installed a sub-slab vapor venting system beneath a portion of the ground floor slab of the structure (June and August 2010).

2. Removed the top two feet of impacted soil from outside the building foot print from across the site and replacement with two feet of clean fill and/or cement/asphalt paving sections (April and August 2010).

3. Removed sediments and cleaned building floor drains and elevator shafts (April and June 2010).

4. Removed and disposed of PCB transformer fluids, transformers/enclosures and any impacted soil/materials adjacent/below transformers (March 2010).

ICs/ECs

The final remedy for the site is defined as performing no additional cleanup activities at the Site beyond that which was already performed as IRMs with implementation of ICs and ECs as follows:

- Execution and recording of an Environmental Easement to restrict land use to restricted residential use per NYSDEC Part 375 regulations and prevent future exposure to any contamination remaining at the site along with restricted use of groundwater.

- Development and implementation of a Site Management Plan (SMP) for long term management of remaining contamination including operation, monitoring and maintenance of the sub-slab vapor venting system as required by the Environmental Easement, which includes plans for Institutional and Engineering Controls.

There have been no changes to the selected remedy since remedy selection.

2.0 EFFECTIVENESS/COMPLIANCE OF THE REMEDIAL PROGRAM

There have been no changes or modifications to the implemented remedy (IRMs) based on the Site Wide Inspection completed under this PRR. The current site use effectively meets, and is in compliance with, the ICs/ECs for the site as discussed in section 3.0.

3.0 IC/EC PLAN COMPLIANCE REPORT

3.1 INSTITUTIONAL CONTROLS (IC)

The site has a series of Institutional Controls in the form of site restrictions. Adherence to these Institutional Controls is required by the Environmental Easement. Site restrictions that apply to the Controlled Property are:

- The property may only be used for restricted residential use provided that the long-term Engineering and Institutional Controls included in this SMP are employed;
- The property may not be used for a higher level of use, such as unrestricted residential use

without additional remediation and amendment of the Environmental Easement, as approved by the NYSDEC;
- All future activities on the property that will disturb remaining contaminated material must be conducted in accordance with this SMP;
- The use of the groundwater underlying the property is prohibited without testing and approval of the NYSDEC and NYSDOH; and
- Vegetable gardens and farming on the property are prohibited.

The current site use meets all the IC requirements. There are no recommendations for changes to the ICs.

3.2 Engineering Controls (EC)

The following Engineering Control systems were inspected for compliance to SMP requirements:

3.2.1 Soil Cover

Exposure to remaining contamination in soil/fill at the site will be prevented by a soil cover system placed over the site. This cover system is comprised of a minimum of 24 inches of clean soil, asphalt/concrete pavement sections (12 inches minimum depth) and the existing concrete building slab. Before placement of cover material, a geotextile fabric layer was placed as a demarcation between the clean fill and the existing soil. The Excavation Work Plan that appears in Appendix A of the SMP outlines the procedures required to be implemented in the event the cover system is breached, penetrated or temporarily removed and any underlying remaining contamination is disturbed.

The soil cover was inspected and appears to be in place with no disturbances since its initial placement and is in compliance with the requirements of the SMP (refer to attached photos).

3.2.2 Sub-Slab Vapor Depressurization System

A passive sub-slab soil vapor depressurization system was installed below the first-floor slab in the rear northeast end of the center section of the structure, south of the courtyard area. The system was designed to allow for conversion to an active sub-slab depressurization system by activating an in-line fan installed during the IRM. To evaluate the effectiveness of the vent system the SMP called for a sample to be collected from the vent stack sample port along with an ambient air sample (refer to the October 2012 PRR). The SMP calls for samples to be analyzed for TCL VOCs by EPA Method TO-15. Prior to each sampling event the in-line fan will be turned on to exert the necessary vacuum to collect a representative sub-slab air sample. The TO-15 sample will be collected using a Summa canister through the provided sample port in the vent stack.

The monitoring and sampling of the depressurization system are discussed in sect 4.0- Monitoring Plan Compliance Report.

4.0 MONITORING PLAN COMPLIANCE REPORT

4.1 Soil Cover System Monitoring

The soil cover was inspected (see Appendix A Inspection Report) and appears to be in place with no disturbances since its initial placement and is in compliance with the requirements of the SMP.

4.2 Sub-Slab Depressurization System Monitoring

A passive soil vapor depressurization system was installed in the rear northeast end of the center section of the structure, south of the courtyard area. The system was designed to allow for conversion to an active sub-slab depressurization system by activating an in-line fan installed during the IRM. To evaluate the effectiveness of the vent system a sample was collected from the vent stack sample port. The sample was analyzed by Centek Labs for TCL VOCs by EPA Method TO-15. Prior to sampling the in-line fan was turned on to exert the necessary vacuum to collect a representative sub-slab air sample. The TO-15 sample was collected using a Summa canister through the provided sample port in the vent stack. Note, it was previously determined that an ambient air sample would not be collected as the area is an active garage and the sample would reflect car exhaust etc.

The following sub-slab sampling procedures were followed per the SMP:

Remove the one-inch plug from the sampling port and insert a ¼ inch Teflon or polyethylene tube through the port to the center of the 6-inch vent pipe. Seal the tubing at the port opening with a piece of modeling clay. Attach the sample tubing to the end of the flow controller/particulate filter assembly of a 6-liter Summa® canister using a ¼-inch Swagelok nut with appropriate ferrules. With the summa canister valve closed, close the knife valve in the vent line at the vent pipe by-pass and turn on the in-line fan and run for 15 minutes. Turn off the fan and turn on the valve built into the Summa canister. Sample collection will be terminated by shutting off the valve after the vacuum in the canister has reached approximately minus 3 inches of mercury.

The air vent sample was collected on June 28, 2018. The analytical results are presented in the attached Table 6. The current analytical results are compared in the table to the previous sampling results. The analytical results have validated and the Data Usability Summary Report (DUSR) is provided in Appendix D.

No indoor samples were collected for this PRR per NYSDEC agreement as a result of a previous PRR submission because it was determined since the indoor air sample would be collected an underground parking garage the results for comparison would be invalid. The assumption was that that lingering auto fumes and possible oil/gas stain odors could account for a number of VOCs present in the ambient air and not necessarily attributable to the sub slab conditions. The results of sampling this period showed higher results for some compounds from previous years.

The IC/EC certification forms are attached to this report.

5.0 OPERATION & MAINTENENCE (O & M) PLAN COMPLIANCE REPORT

In general, the site remedy does not rely on any mechanical systems; however, an in-line fan has been installed as part of the sub-slab venting system in the vent stack near the ceiling of the first floor of the building. The fan was used to draw a vacuum on the system during this sampling event for assessing the operating efficiency of the system. The in-line fan will also be used if the system is required to become an active system whereby the fan will operate continuously. A one-inch sample port was installed during the IRM in the six inch PVC vertical vent pipe on the first floor. A vapor sample was collected through the sample port for analysis. The sub-slab sample was collected by using a 6-liter Summa® canister equipped with a pre-calibrated/certified 2-hour flow controller, and particulate filter.

During the inspection the knife value was manually closed, and the fan turned on for a minimum of 15 minutes to assure it is operational. The caulking seals were also inspected and were deemed

satisfactory.

No O & M deficiencies were noted during the inspection.

6.0 CONCLUSIONS

PEI conducted sub-slab vent sampling and a periodic site inspection of the Former Remington-Rand facility on June 28, 2018 to assess compliance with the Site Management Plan (SMP). Based upon inspection of the site cover system, sub-slab vapor system sample analytical results and discussions with the facility ownership BE3 concludes that the site is in compliance with the SMP. The performance and effectiveness of the selected remedy appears to continue to achieve the remedial objectives for the site. However, some compounds detected in the air sample were elevated from previous years.

Also, attached in Appendix B is the executed NYSDEC Site Management Periodic Review Report Notice Institutional and Engineering Controls Certification Form.

TABLE 6 - Remington Rand Sub Slab Vapor & Ambient Air Analytical Results REV 7/19/18																		
Sample Number	**RR-AA-01**	**RR-AA-02**	**RR-AA-03**	**RR-AA-04**	**RR-AA-05**	**RR-AMP-01**	**RR-SA-01**	**RR-SA-02**	**RR-SA-03**	**RR-SA-04**	**RR-SA-05**	**RR-SA-06**	**RR-SA-07**	**RR-PVC-01**	**JC573-1**	**SS-01**	**NYSDOH (2)**	**NYSDOH (1)**
Sample Date	**5/12/2009**	**5/12/2009**	**5/12/2009**	**5/12/2009**	**5/12/2009**	**9/13/2012**	**5/12/2009**	**5/12/2009**	**5/12/2009**	**5/12/2009**	**5/12/2009**	**5/12/2009**	**5/12/2009**	**9/13/2012**	**7/31/2015**	**6/28/2018**	**Indoor Air Concentration**	**Sub-Slab Vapor**
Sample Location	**Outdoor**	**Indoor**	**Indoor**	**Indoor**	**Indoor**	**Indoor**	**SubSlab**	**SubSlab**	**SubSlab**	**SubSlab**	**SubSlab**	**SubSlab**	**SubSlab**	**Vent Port**	**Vent Port**	**Vent Port**	**Min Action Level**	**Min Matrix Level**
Compounds	**ug/m3**	**ug/m3**	**ug/m3**	**ug/m3**	**ug/m3**	**ug/m3**	**ug/m3**	**ug/m3**	**ug/m3**	**ug/m3**	**ug/m3**	**ug/m3**	**ug/m3**	**ug/m3**	**ug/m3**	**ug/m3**	**ug/m3**	**ug/m3**
VOCs EPA T0-15																		
Ethylbenzene	ND	ND	0.38	0.44	ND	4.2	1.50.	11.0	4.4	3.7	4.7	7.2	6.0	0.6	3.0	6.4		
Trichlorofluoromethane	1.4	I.4	2.2.	1.9.	2.1.	ND	83.0.	2.2.	2.0	2,0	8.9	5.8	2.7.	ND	1.7.	ND		
n-Hexane	ND	0.82	ND	1.1.	ND	ND	1.3.	14.0.	7.9	2.3	5.7	26.0	4.6.	ND	ND	ND		
tert-Butyl alcohol	ND	ND	ND	ND	ND	ND	L2	4.1.	3.8	5.0	5.6	62.0	9.7.	ND	0.7.	ND		
Methylene chloride	9.3.	1.2.	2.2.	12.0.	2.1.	1.2.	13.0.	3.4.	6.3	2.1	11.0	3.4	1.5.	0.2.	1.9.	1.8.	3	100
Benzene	0.6.	1.4.	1.2.	1.1.	0.7.	1.9.	33.0.	84 E	2.9	1.4	3.7	5.8	1.5.	0.5.	9.3.	8.9.		
Styrene	ND	ND	9.3.	ND	ND	2.0.	ND	1.7.	0.6	1.6	470 E	5.0	1.0.	0.3.	2.0.	1.1.		
Tetrachloroethene	ND	ND	ND	ND	ND	0.3.	8.0.	6.3.	9.0	5.7	5.7	13.0	ND	ND	7.5.	1.4.	3	100
Toluene	1.6.	2.6.	2.6.	2.5.	1.4.	42.0.	1.0.	55.0.	62.0	6.0	5.5	23.0	7.9.	3.0.	50.9.	96.0.		
l ,1,1-Trichloroethane	ND	ND	ND	0.5.	ND	ND	1.5.	8.2.	670 E	92.0	2.8	1.5	5.8	ND	11.0	ND	3	100
Trichloroethene	ND	0.3.	ND	0.7.	ND	0.5.	2.1.	ND	4.0	3.8	0.6	0,37	ND	0.1	3.3	65.0	0.2	6
1,2,4-Trimethylbenzene	ND	ND	0.6.	0.5.	ND	1.0.	1.4.	15.0.	3.	2.1	3.1	4.9	2.5	0.4	4.6	9.8		
1,3,5-Trimethylbenzene	ND	ND	ND	ND	ND	0.4.	0.6.	9.2.	0.97	1.0	1.4	3.0	0.9	0.2	1.5	3.3		
o-Xylene	ND	ND	0.6.	0.6.	ND	1.9.	1.9.	2.4.	9.	5.7	5.0	8.7	9.6	0.3	4.3	6.9		
1,1,2-Trichlorotritluoroethanc	ND	ND	0.7.	ND	ND	ND	0.7.	0,63	ND	0.6	0.8	0.6	0.7	ND	ND	ND		
2,2,4-Trimethylpentane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	2.8	5.9		
4-ethyltoluene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	2.8		
m-Xylenc & p-Xylene	0.9.	0.6.	1.5.	1.4.	0.7.	6.4.	8.2.	48.0.	18	17.0	18.0	35.0	27.0	1.4	11.0	13.0		
Bromodichloromethane	ND	ND	ND	ND	ND	ND	0.6.	ND	ND	ND	15.0	1.8	ND	ND	ND	ND		
2-Butanorte (MEK)	1.6.	1.0.	1.2.	2.0.	3.7.	80.0.	4.3.	16.0.	8.	8.7	7.4	12.0	13.0	4.6	3.2	ND		
Methyl Ethyl Ketone	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	46.0		
Methyl Isobutyl Ketone	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	1.9	1.5		
4-Methyl-2-pentanone (MIBK)	ND	ND	ND	ND	ND	4.7.	ND	2.2.	ND	ND	ND	2.9	L2	ND	ND	ND		
Carbon tetrachloride	0.66 J	0.67 J	0.85 J	0.82 J	0.84 J	0.2.	0.75 J	0.62 J	0.84 J	0.7 J	1.5 J	0.73 J	1.4 J	0.7	ND	ND	0.2	6
Dibromochloromethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	2.7	ND		
Chloroform	ND	ND	ND	ND	ND	0.2.	3.2.	0.5.	2.	2.8	120.0	9.5	0.4	ND	ND	3.0		
Chloromethane	0.8.	0.9.	1.3.	13.0.	1.5.	0.6.	ND	0.8.	4.	ND	ND	0.5	ND	0.2	0.5	0.8		
Cyclohe Mine	ND	ND	ND	ND	ND	ND	1.0.	ND	ND	ND	ND	ND	ND	ND	ND	ND		
Cyclohexane	ND	ND	ND	ND	ND	ND	ND	17.0.	19	12.0	5.0	15.0	34.0	ND	4.5	3.0		
Dichlorodifluoromethane	2.2.	23.0.	2.6.	2.6.	2.8.	ND	4.0.	2.9.	3.	1.3	3.1	2.8	2.3	ND	ND	ND		
1,1-Dichloroethane	ND	ND	ND	ND	ND	1.0.	ND	NO	2.	57.0	ND	ND	ND	0.2	ND	ND	0.2	6
1,2-Dichloroethane	ND	ND	ND	ND	ND	1.7.	ND	ND	ND	ND	ND	ND	ND	0.19	ND	ND		
4-ethyltoluene	ND	ND	ND	ND	ND	1.0.	ND	ND	ND	ND	ND	ND	ND	0.22	1.20	ND		
Acetone	ND	ND	ND	ND	ND	360.0.	ND	ND	ND	ND	ND	ND	ND	46	30	68		
Carbon disulfide	ND	ND	ND	ND	ND	11.0.	ND	ND	ND	ND	ND	ND	ND	1.1	0.9	ND		
Ethyl acetate	ND	ND	ND	ND	ND	4.6.	ND	ND	ND	ND	ND	ND	ND	0.72	ND	18.0		
Freon 11	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	1.7		
Freon 12	ND	ND	ND	ND	ND	0.6.	ND	ND	ND	ND	ND	ND	ND	0.14	ND	2.6		
Heptane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.70	1.70	5.40		
Isopropyl alcohol	ND	ND	ND	ND	ND	15.0.	ND	ND	ND	ND	ND	ND	ND	1.8	4.9	52.0		
Methyl tert-butyl ether	ND	ND	ND	ND	ND	1.4.	ND	ND	ND	ND	ND	ND	ND	0.25	ND	ND		
Tetrahydrofuran	ND	ND	ND	ND	ND	2.6.	ND	ND	ND	ND	ND	ND	ND	0.22	1.20	ND		
Ethanol	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	53.5	ND		
Hexane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	4.20	61.00		
Propylene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	5.50	ND		

N/A - Not Applicable ND - Non-detect
E - Estimated result due to exceeding calibration range

(1) - NYSDOH - Guidance for Evaluating Soil Vapor Intrusion in the State of New York, October 2006
(2) - No indoor air sampled since installation/sampling of vapor collection system in 2012 because of indoor air being influenced by auto fumes in parking garage.

Appendix A

Inspection and Monitoring Report Forms

BE3 Corp./Panamerican
1270 Niagara Street
Buffalo, New York

SITE WIDE INSPECTION FORM

Date: 6-28-18

Site Name: Remington Lofts – NYSDEC Site # C932142

Location:
184 Sweeney Street, North Tonawanda, New York

General Site Conditions:

Facility and Grounds are excellently maintained

Weather Conditions: Sunny-Partially Cloudy 80sF

Compliance/Evaluation ICs and ECs :

Property is in compliance with the ICs and ECs. The cover system is well maintained and in place. No excavations into the cover system have been made. The vapor system was sampled and is functioning (refer to attached sample results)

Site management Activities (sampling, H & S Inspection, etc.):

Vapor System was operational and sampled (refer to attached analytical results)

Compliance with Permits and O & M Plan:

Site appears to be in compliance with O&M Plan

Records Compliance:

No issues have occurred that would require the need to generate any additional compliance records

General Comments:

Property and compliance systems appear to be well maintained and functioning. No additional comments – refer to attached photographs

INSPECTOR'S NAME: Peter J. Gorton/Alex Brennen

Appendix B

NYSDEC Site Management Periodic Review Report Notice Institutional And Engineering Controls Certification Form

Enclosure 2

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

Site Details **Box 1**

Site No. C932142

Site Name Remington Rand Building

Site Address: 184 Sweeney Street Zip Code: 14120
City/Town: North Tonawanda
County: Niagara
Site Acreage: 1.8

Reporting Period: June 29, 2015 to June 29, 2018

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

Box 2

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

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

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

Signature of Owner, Remedial Party or ~~Designated Representative~~ — Date: 7-20-18

Box 2A

	YES	NO
8. Has any new information revealed that assumptions made in the Qualitative Exposure Assessment regarding offsite contamination are no longer valid?	☐	☒

If you answered YES to question 8, include documentation or evidence that documentation has been previously submitted with this certification form.

9. Are the assumptions in the Qualitative Exposure Assessment still valid? (The Qualitative Exposure Assessment must be certified every five years)	☒	☐

If you answered NO to question 9, the Periodic Review Report must include an updated Qualitative Exposure Assessment based on the new assumptions.

SITE NO. C932142

Box 3

Description of Institutional Controls

Parcel	Owner	Institutional Control
185.09-1-21	Remington Lofts on the Canal, LLC	Monitoring Plan O&M Plan Ground Water Use Restriction Landuse Restriction Site Management Plan IC/EC Plan

Environmental Easement;September 1,2010 - BCA Index No: B9-0780-08-06 as property control for Restricted Residential as described in 6 NYCRR Part 375-1.8(g)(2)(ii), Commercial as described in 6 NYCRR Part 375-1.8(g)(2)(iii) and Industrial as described in 6 NYCRR Part 375-1.8(g)(2)(iv).

Box 4

Description of Engineering Controls

Parcel	Engineering Control
185.09-1-21	Vapor Mitigation Cover System

Soil cover and/or pavement placed over residual soil contamination. Sub-Slab passive depressurization system placed in a portion of the building to control potential vapor intrusion. Easement requires compliance with the Site Management Plan. Future intrusive activities and soil handling at the facility must be in accordance with the Excavation Work Plan found in the SMP.

Box 5

Periodic Review Report (PRR) Certification Statements

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

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

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

YES	NO
X	☐

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

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

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

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

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

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

YES	NO
X	☐

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

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

Signature of Owner, Remedial Party or Designated Representative

7-20-18
Date

IC CERTIFICATIONS
SITE NO. C932142

Box 6

SITE OWNER OR DESIGNATED REPRESENTATIVE SIGNATURE

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

I JASON BRIDGES (print name) at BE3 CORP/PANAMERICAN (print business address) 1270 NIAGARA ST BUFFALO, NY, 14213.

am certifying as OWNER/DESIGNATED REPRESENTATIVE (Owner or Remedial Party)

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

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

7-20-18
Date

IC/EC CERTIFICATIONS

Box 7

Signature

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

I Jason Brydges (print name) at BE3 Corp/Ramboll (print business address) 1270 Niagara St Buffalo, NY 14213

am certifying as a for the _____ (Owner or Remedial Party)

STATE OF NEW YORK
JASON M. BRYDGES
No. 079402
LICENSED PROFESSIONAL ENGINEER

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

Stamp (Required for PE)

Date 7-2018

Appendix C

Site Photographs

BE3/PANAMERICAN Photolog

Date: 6/28/18

1. East-Central side of property area from north facing south towards Canal and Sweeney Street

2. View of courtyard – northeast side of property

3. View along northeast border with rail line from south facing north at Tremont Street

4. View of courtyard from building facing east

BE3/PANAMERICAN Photolog

Date: 6/28/18

5. View of courtyard from northeast facing southwest

6. View of northeast border/entrance-exit from south facing north at Tremont Street

7. View of northeast border/entrance-exit from across Tremont Street facing south

8. View along northern border with Tremont Street from northeast corner facing west

BE3/PANAMERICAN Photolog

Date: 6/28/18

9. View of northwest corner and northern border from corner of Tremont and Marion Streets facing east

10.View of western border from northwest corner at Tremont and Marion Streets facing south

11. View of western side of property from across Sweeny street at the corner of Sweeny and Marion Streets facing northeast

12. View of south side of complex from southwest corner facing northeast along Sweeny Street

BE3/PANAMERICAN Photolog

Date: 6/28/18

13. View of southwest border area with Erie Canal facing east

- 14. View of front entrance of building complex from across Sweeny street facing north

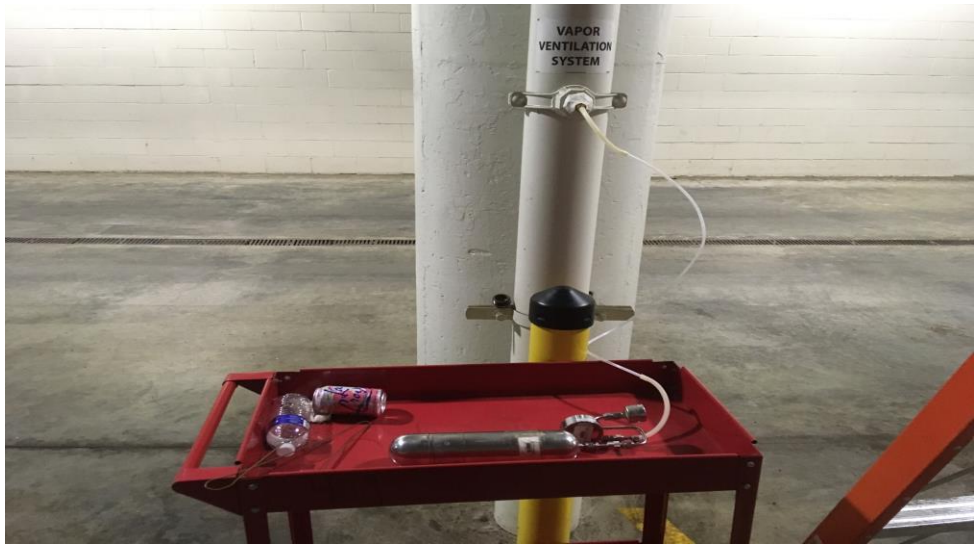
- 15. View of southeast portion of property along its border with the Erie Canal facing west

- 16. View of southeast corner of building from southeast facing northwest

BE3/PANAMERICAN Photolog

Date: 6/28/18

13. Southeast corner of property facing north



14. Air Sampling of Vapor System

Appendix D

Data Usability Summary Report

DATA USABILITY SUMMARY REPORT (DUSR)

Remington PRR
Buffalo, NY
NYSDEC BCP # C932142

SDG: C1806074

1 air sample

Prepared for:

BE3/Panamerican
1270 Niagara Street
Buffalo, NY 14213

July 2018

EDU Environmental Data Usability 10028 Deer Park Dr. Dansville, NY 14437 585.991.9156

Table of Contents

Tables

REVIEWER'S NARRATIVE
SDG C1806074

The data associated with this Sample Delivery Group (SDG) C1806074, analyzed by Centek Laboratories, LLC Syracuse, NY have been reviewed in accordance with assessment criteria provided by the New York State Department of Environmental Conservation following the review procedures provided in the USEPA Functional Guidelines for evaluating organic and inorganic data.

All analytical results reported by the laboratory are considered valid and acceptable except results that have been qualified as rejected, "R". Results qualified as estimated "J", or as non-detects, "U", are considered usable for the purpose of evaluating water and/or soil quality. However, these qualifiers indicate that the accuracy and/or precision of the analytical result is questionable. A summary of all data that have been qualified and the reasons for qualification are provided in the following data usability summary report (DUSR).

Two facts should be noted by all data users. First, the "R" qualifier means that the associated value is unusable. In other words, due to significant quality control (QC) problems, the analysis is invalid and provides no information as to whether the analyte is present or not. Values qualified with an "R" should not appear on the final data tables because they cannot be relied upon, even as the last resort. Second, no analyte concentration, even if it has passed all QC tests, is guaranteed to be accurate. Strict QC serves to increase confidence in data, but any value potentially contains error.

Reviewer's Signature: Michael K. Perry Date: 7/20/18

Michael K. Perry
Chemist

1.0 SUMMARY

SITE:	Remington PRR Buffalo, NY
SAMPLING DATE:	June 28, 2018
SAMPLE TYPE:	1 - TO-15 air sample
LABORATORY:	Centek Laboratories, LLC. Syracuse, NY
SDG No.:	C1806074

2.0 INTRODUCTION

This data usability summary report (DUSR) was prepared in accordance with guidance provided by the New York State Department of Environmental Conservation (NYSDEC). The DUSR is based on a review and evaluation of the laboratory analytical data package. Specifically, the NYSDEC guidance recommends review and evaluation of the following elements of the data package:

- Completeness of the data package as defined under the requirements of the NYSDEC Analytical Services Protocols (ASP) Category B or the United States Environmental Protection Agency (USEPA) Contract Laboratory Program (CLP) deliverables,
- Compliance with established analyte holding times,
- Adherence to quality control (QC) limits and specifications for blanks, instrument tuning and calibration, surrogate recoveries, spike recoveries, laboratory duplicate analyses, and other QC criteria,
- Adherence to established analytical protocols,
- Conformance of data summary sheets with raw analytical data, and
- Use of correct data qualifiers.

Data deficiencies, analytical protocol deviations, and quality control problems identified using the review criteria above and their effect on the analytical results are discussed in this report.

3.0 SAMPLE AND ANALYSIS SUMMARY

The data package consists of analytical results for 1 air sample collected on June 28, 2018. This sample was analyzed for TO-15 volatile organic compounds.

All laboratory analyses were performed by Centek Laboratories, LLC, Syracuse, NY and analyzed as SDG C1806074. The analytical results were provided in NYSDEC ASP Category B format, which includes all raw analytical data and laboratory QC data.

4.0 GUIDANCE DOCUMENTS AND DATA REVIEW CRITERIA

The guidance documents used for reviewing laboratory quality control (QC) data and assigning data qualifiers (flags) to analytical results are listed in Table 4-1. The QC limits established in the documents applicable to this data review were used to assess the quality of the analytical results. In some cases, however, QC limits established internally by the laboratory were taken into account to determine data quality.

The QC criteria considered for assessing the usability of the reported analytical results provided for each analyte type (i.e. VOCs, SVOCs, metals, etc.) are listed in Table 4-2. These criteria may vary with the analytical method utilized by the laboratory. These criteria comply with the guidance recommended in Section 2.0 above.

5.0 DATA VALIDATION QUALIFIERS

The letter qualifiers (flags) used to define data usability are described briefly below. These letters are assigned by the data validator to analytical results having questionable accuracy and/or precision as determined by reviewing the laboratory QC data associated with the analytical results.

The laboratory may also use various letters and symbols to flag analytical results generated when QC limits were exceeded. The meanings of

TABLE 4-1

DATA VALIDATION GUIDANCE DOCUMENTS

Analyte Type	Validation Guidance
VOCs	USEPA, 2008, Validating Volatile Organic Compounds By Gas Chromatography/Mass Spectrometry; SW-846 Method 8260B; SOP # HW-24, Rev. 2. USEPA, 2008, Statement of Work for Organic Analysis of Low/Medium Concentration of Volatile Organic Compounds SOM01.2; SOP HW-33, Rev. 2.
SVOCs	USEPA, 2007, Statement of Work for Organic Analysis of Low/Medium Concentration of Semivolatile Organic Compounds SOM01.2; SOP HW-35, Rev. 1.
Pesticides/PCBs	USEPA, 2006, CLP Organics Data Review and Preliminary Review (CLP/SOW OLMO 4.3); SOP # HW-6, Rev. 14, Part C.
Metals	USEPA, 2006, Validation of Metals for the Contract Laboratory Program (CLP) based on SOW ILMO 5.3 (SOP Revision 13), SOP # HW-2, Rev. 13.
Gen Chemistry	NYSDEC, 2005, Analytical Services Protocols (ASP)
VOCs (Ambient air)	USEPA, 2006, Validating Air Samples, Volatile Organic Analysis of Ambient Air in Canister by Method TO-15; SOP # HW-31, Rev. 4.

TABLE 4-2

QUALITY CONTROL CRITERIA USED FOR VALIDATING
LABORATORY ANALYTICAL DATA

VOCs	SVOCs	Pesticides/PCBs	Metals	Gen Chemistry	Method TO-15
Completeness of Pkg Sample Condition Holding Time System Monitoring Compounds Lab Control Sample Matrix Spikes Blanks Instrument Tuning Internal Standards Initial Calibration Continuing Calibration Lab Qualifiers Field Duplicate	Completeness of Pkg Sample Condition Holding Time Surrogate Recoveries Lab Control Sample Matrix Spikes Blanks Instrument Tuning Internal Standards Initial Calibration Continuing Calibration Lab Qualifiers Field Duplicate	Completeness of Pkg Sample Condition Holding Time Surrogate Recoveries Matrix Spikes Blanks Instrument Calibration & Verification Analyte ID Lab Qualifiers Field Duplicate	Completeness of Pkg Sample Condition Holding Time Initial/Continuing Calibration CRDL Standards Blanks Interference Check Sample Spike Recoveries Lab Duplicate Lab Control Sample ICP Serial Dilutions Lab Qualifiers Field Duplicate	Completeness of Pkg Sample Condition Holding Times Calibration Lab Control Samples Blanks Spike Recoveries Lab Duplicates	Completeness of Pkg Sample Condition Holding Time Canister Certification Lab Control Sample Instrument Tuning Blanks Initial Calibration & System Performance Daily Calibration Field Duplicate

these flags may differ from those used by the independent data validator. Those used by the laboratory are provided with the analytical results.

NOTE: The assignment of data qualifiers by the data reviewer (validator) to laboratory analytical results should not necessarily be interpreted by the data user as a measure of laboratory ability or proficiency. Rather, the qualifiers are intended to provide a measure of data accuracy and precision to the data user, which, for example, may provide a level of confidence in determining whether or not standards or cleanup objectives have been met.

U The analyte was analyzed for but was not detected at or above the sample quantitation limit.

J The analyte was positively identified; the associated numerical value is the *approximate* concentration of the analyte in the sample. (The magnitude of any ± value associated with the result is not determined by data validation).

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

R The sample result is rejected (i.e., is unusable) due to serious deficiencies in the ability to analyze the sample and meet quality control criteria. The presence or absence of the analyte cannot be verified.

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

JN The analyte is considered to be "presumptively present." The associated numerical value represents its *approximate* concentration.

The validated analytical results are attached to this report. Validation qualifiers (flags) are indicated using red ink. Data sheets having qualified data are signed and dated by the data reviewer.

6.0 RESULTS OF THE DATA REVIEW

The results of the data review are summarized in Table 6-1. The tables list the samples where QC criteria were found to exceed acceptable limits and the actions taken to qualify the associated analytical results.

7.0 TOTAL USABLE DATA

For SDG C1806074, one sample was analyzed and results were reported for 64 analyses. Even though some results were flagged with a "J" as estimated, all results (100%) are considered usable. See the summary table for the flagged analytes and the associated QC reasons.

Table 6-1 TO-15

SAMPLES AFFECTED	ANALYTES	ACTION	QC VIOLATION	COMMENTS
SS-01	1,1,1-Trichloroethane Benzyl Chloride Carbon Tetrachloride Bromoform cis-1,3-Dichloropropene trans-1,3-Dichloropropene	J detects	LCSand/or LCSD >130 %	No data affected
SS-01	Benzyl Chloride	J detects UJ non-detects	C% D for CCV > 30 %	All results are estimated
SS-01	Isopropyl Alcohol	JN detects	Relative Intensity of characteristic ions not +/- 30 %	Compounds are tentatively identified and results are estimated

ACRONYMS

BSP	Blank Spike
CCAL	Continuing Calibration
CCB	Continuing Calibration Blank
CCV	Continuing Calibration Verification
CRDL	Contract Required Detection Limit
CRQL	Contract Required Quantitation Limit
%D	Percent Difference
ICAL	Initial Calibration
ICB	Initial Calibration Blank
IS	Internal Standard
LCS	Laboratory Control Sample
MS/MSD	Matrix Spike/Matrix Spike Duplicate
QA	Quality Assurance
QC	Quality Control
%R	Percent recovery
RPD	Relative Percent Difference
RRF	Relative Response Factor
%RSD	Percent Relative Standard Deviation
TAL	Target Analyte List (metals)
TCL	Target Compound List (organics)

Appendix A

Validated Analytical Results

CENTEK LABORATORIES, LLC
143 Midler Park Drive * Syracuse, NY 13206
Phone (315) 431-9730 * Emergency 24/7 (315) 416-2752
NYSDOH ELAP Certificate No. 11830

Analytical Report

Peter Gorton
BE3/Panamerican
1270 Niagara Street
Buffalo, NY 14213

TEL: 716-821-1650
FAX
RE: Remington PRR

Thursday, July 05, 2018
Order No.: C1806074

Dear Peter Gorton:

Centek Laboratories, LLC received 1 sample(s) on 6/29/2018 for the analyses presented in the following report.

I certify that this data package is in compliance with the terms and conditions of the Contract, both technically and for completeness. Release of the data contained in this hardcopy data package and/or in the computer readable data submitted has been authorized by the Laboratory Manager or his designee, as verified by the following signature.

All method blanks, laboratory spikes, and/or matrix spikes met quality assurance objective except as indicated in the case narrative. All samples were received and analyzed within the EPA recommended holding times. Test results are not Method Blank (MB) corrected for contamination.

Centek Laboratories is distinctively qualified to meet your needs for precise and timely volatile organic compound analysis. We perform all analyses according to EPA, NIOSH or OSHA-approved analytical methods. Centek Laboratories is dedicated to providing quality analyses and exceptional customer service. Samples were analyzed using the methods outlined in the following references:

Compendium of Methods for the Determination of Toxic Organic Compounds, Compendium Method TO-15, January 1999.

Centek Laboratories SOP TS-80

Analytical results relate to samples as received at laboratory. We do our best to make our reporting format clear and understandable and hope you are thoroughly satisfied with our services.

Please contact your client service representative at (315) 431-9730 or myself, if you would like any additional information regarding this report.

Centek Labs - Chain of Custody

Centek Laboratories
143 Midler Park Drive
Syracuse, NY 13206
315-431-9730
www.CentekLabs.com
Vapor Intrusion & IAQ

Site Name: Remington Road
Project: Remington PRR
PO#:
Quote # Q-SP
Canister Order #: 7291

Detection Limit	Report Level
☐ 5ppbv	☐ Level I
☒ 1ug/M3	☐ Level II
☒ 1ug/M3 + 0.2 NYS	☒ Cat "B" Like

TAT Turnaround Time:	Check One	Rush TAT Surcharge %	Due Date:
5 Business Days	☒	0%	
4 Business Days	☐	25%	
3 Business Days	☐	50%	
2 Business Days	☐	75%	
*Next Day by 5pm	☐	100%	
*Next Day by Noon	☐	150%	
*Same Day	☐	200%	

*For Same and Next Day TAT Please Notify Lab

Company: BE3 / Panamerican
Report to:
Address: 1220 Niagara St
City, State, Zip Buffalo, NY 14213
Email: jgorton@be3corp.com
Phone: 716-946-9135

Company:
Check Here If Same: ☒
Invoice to:
Address:
City, State, Zip
Email:
Phone:

Sample ID	Date Sampled	Canister Number	Regulator Number	Analysis Request	Field Vacuum Start / Stop	Labs Vacuum** Rec'd/Analysis	Comments
SS-02	06/28/19	162	400	TO-15	29 / 5	-5 / -5	
					/	/	
					/	/	
					/	/	
					/	/	
					/	/	
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Chain of Custody	Print Name	Signature	Date/Time
Sampled by:	Alex Brennan		06/28 1200
Relinquished by:	Alex Brennan		06/28 1300
Received at Lab by:	R PELLEGRINO		6/25/19

Courier: CIRCLE ONE
FedEx UPS Pickup/Dropoff
**For LAB USE ONLY
Work Order # CT00607

*** By signing Centek Labs Chain of Custody, you are accepting Centek Labs Terms and Conditions listed on the reverse side.

Centek Laboratories, LLC

Corrective Action Report

Date Initiated: 29-Jun-18 **Corrective Action Report ID:** 3773

Initiated By: Russell Pellegrino **Department:** MSVOA

Corrective Action Description

CAR Summary: CC did not meet criteria.

Description of Nonconformance Root/Cause(s): Continuing calibration did not meet criteria on 6/29/18 for benzylchloride. The compound was more sensitive. The compounds in question was not detected in the associated samples

Description of Corrective Action w/Proposed C.A.: Since the compound of interest was not detected the results should be considered valid. If compounds remain outside criteria perform system calibration. All sets of data submitted.

Performed By: Russell Pellegrino **Completion Date:** 29-Jun-18

Client Notification

Client Notification Required: No **Notified By:**

Comment:

Quality Assurance Review

Nonconformance Type: Deficiency

Further Action required by QA: Recalibrate the system ASAP if compound remains outside criteria. Monitoring of all quality control remains post initial calibration. All sets of data submitted.

Approval and Closure

Technical Director / Deputy Tech. Dir.: William Dobbin **Close Date:** 02-Jul-18

QA Officer Approval: Nick Scala **QA Date:** 02-Jul-18

Last Updated BY russ **Updated:** 17-Jul-2018 10:56 AM **Reported:** 17-Jul-2018 10:56 AM

Centek Laboratories, LLC

Corrective Action Report

Date Initiated: 29-Jun-18 **Corrective Action Report ID:** 3774

Initiated By: Russell Pellegrino **Department:** MSVOA

Corrective Action Description

CAR Summary: LCS did not meet criteria.

Description of Nonconformance Root/Cause(s): ALCS1UGD-062918 did not meet criteria for % recoveries for several compounds. All other QC required met criteria. The compounds that did not meet criteria were needed in associated samples. The LCS 6 Liter canister was independent of the 6 Liter continuing calibration canister.

Description of Corrective Action w/Proposed C.A.: Since the LCS 6 Liter canister was independent of the 6 Liter continuing calibration canister and all other QC required met criteria, then continue with analysis. If results continue outside established limits then recalibrate system. All sets of data submitted.

Performed By: Russell Pellegrino **Completion Date:** 29-Jun-18

Client Notification

Client Notification Required: No **Notified By:**

Comment:

Quality Assurance Review

Nonconformance Type: Deficiency

Further Action required by QA: If results continue then recalibrate the system. Perform new stock LCS. Monitor all quality control to meet established criteria. All sets of data submitted. If possible reanalyze samples.

Approval and Closure

Technical Director / Deputy Tech. Dir.: William Robbin **Close Date:** 02-Jul-18

QA Officer Approval: Nick Scala **QA Date:** 02-Jul-18

Last Updated BY russ Updated: 17-Jul-2018 10:58 AM Reported: 17-Jul-2018 10:58 AM

CENTEK LABORATORIES, LLC

Date: *17-Jul-18*

CLIENT:	BE3/Panamerican
Project:	Remington PRR
Lab Order:	C1806074

Work Order Sample Summary

Lab Sample ID	Client Sample ID	Tag Number	Collection Date	Date Received
C1806074-001A	SS-01	162 400	6/28/2018	6/29/2018

Centek Laboratories, LLC

Date: 11-Jul-18

CLIENT:	BE3/Panamerican	Client Sample ID:	SS-01
Lab Order:	C1806074	Tag Number:	162 400
Project:	Remington PRR	Collection Date:	6/28/2018
Lab ID:	C1806074-001A	Matrix:	AIR

Analyses	Result	**Limit	Qual	Units	DF	Date Analyzed
FIELD PARAMETERS		FLD				Analyst:
Lab Vacuum In	-5			"Hg		6/29/2018
Lab Vacuum Out	-30			"Hg		6/29/2018
1UG/M3 BY METHOD TO15		TO-15				Analyst: RJP
1,1,1-Trichloroethane	< 0.15	0.15		ppbV	1	6/30/2018 5:03:00 AM
1,1,2,2-Tetrachloroethane	< 0.15	0.15		ppbV	1	6/30/2018 5:03:00 AM
1,1,2-Trichloroethane	< 0.15	0.15		ppbV	1	6/30/2018 5:03:00 AM
1,1-Dichloroethane	< 0.15	0.15		ppbV	1	6/30/2018 5:03:00 AM
1,1-Dichloroethene	< 0.15	0.15		ppbV	1	6/30/2018 5:03:00 AM
1,2,4-Trichlorobenzene	< 0.15	0.15		ppbV	1	6/30/2018 5:03:00 AM
1,2,4-Trimethylbenzene	2.0	0.15		ppbV	1	6/30/2018 5:03:00 AM
1,2-Dibromoethane	< 0.15	0.15		ppbV	1	6/30/2018 5:03:00 AM
1,2-Dichlorobenzene	< 0.15	0.15		ppbV	1	6/30/2018 5:03:00 AM
1,2-Dichloroethane	< 0.15	0.15		ppbV	1	6/30/2018 5:03:00 AM
1,2-Dichloropropane	< 0.15	0.15		ppbV	1	6/30/2018 5:03:00 AM
1,3,5-Trimethylbenzene	0.68	0.15		ppbV	1	6/30/2018 5:03:00 AM
1,3-butadiene	< 0.15	0.15		ppbV	1	6/30/2018 5:03:00 AM
1,3-Dichlorobenzene	< 0.15	0.15		ppbV	1	6/30/2018 5:03:00 AM
1,4-Dichlorobenzene	< 0.15	0.15		ppbV	1	6/30/2018 5:03:00 AM
1,4-Dioxane	< 0.30	0.30		ppbV	1	6/30/2018 5:03:00 AM
2,2,4-trimethylpentane	1.3	0.15		ppbV	1	6/30/2018 5:03:00 AM
4-ethyltoluene	0.57	0.15		ppbV	1	6/30/2018 5:03:00 AM
Acetone	29	12		ppbV	40	6/30/2018 11:16:00 AM
Allyl chloride	< 0.15	0.15		ppbV	1	6/30/2018 5:03:00 AM
Benzene	2.8	1.5		ppbV	10	6/30/2018 10:39:00 AM
Benzyl chloride	< 0.15	0.15	U J	ppbV	1	6/30/2018 5:03:00 AM
Bromodichloromethane	< 0.15	0.15		ppbV	1	6/30/2018 5:03:00 AM
Bromoform	< 0.15	0.15		ppbV	1	6/30/2018 5:03:00 AM
Bromomethane	< 0.15	0.15		ppbV	1	6/30/2018 5:03:00 AM
Carbon disulfide	< 0.15	0.15		ppbV	1	6/30/2018 5:03:00 AM
Carbon tetrachloride	< 0.15	0.15		ppbV	1	6/30/2018 5:03:00 AM
Chlorobenzene	< 0.15	0.15		ppbV	1	6/30/2018 5:03:00 AM
Chloroethane	< 0.15	0.15		ppbV	1	6/30/2018 5:03:00 AM
Chloroform	0.62	0.15		ppbV	1	6/30/2018 5:03:00 AM
Chloromethane	0.40	0.15		ppbV	1	6/30/2018 5:03:00 AM
cis-1,2-Dichloroethene	< 0.15	0.15		ppbV	1	6/30/2018 5:03:00 AM
cis-1,3-Dichloropropene	< 0.15	0.15		ppbV	1	6/30/2018 5:03:00 AM
Cyclohexane	0.87	0.15		ppbV	1	6/30/2018 5:03:00 AM
Dibromochloromethane	< 0.15	0.15		ppbV	1	6/30/2018 5:03:00 AM
Ethyl acetate	5.1	1.5		ppbV	10	6/30/2018 10:39:00 AM

Qualifiers:

**	Quantitation Limit	.	Results reported are not blank corrected
B	Analyte detected in the associated Method Blank	E	Estimated Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limit
JN	Non-routine analyte. Quantitation estimated.	ND	Not Detected at the Limit of Detection
S	Spike Recovery outside accepted recovery limits		

MCP 7/19/18

Centek Laboratories, LLC

Date: *11-Jul-18*

CLIENT:	BE3/Panamerican	**Client Sample ID:**	SS-01
Lab Order:	C1806074	**Tag Number:**	162 400
Project:	Remington PRR	**Collection Date:**	6/28/2018
Lab ID:	C1806074-001A	**Matrix:**	AIR

Analyses	Result	**Limit	Qual	Units	DF	Date Analyzed
1UG/M3 BY METHOD TO15		TO-15				Analyst: RJP
Ethylbenzene	1.5	0.15		ppbV	1	6/30/2018 5:03:00 AM
Freon 11	0.31	0.15		ppbV	1	6/30/2018 5:03:00 AM
Freon 113	< 0.15	0.15		ppbV	1	6/30/2018 5:03:00 AM
Freon 114	< 0.15	0.15		ppbV	1	6/30/2018 5:03:00 AM
Freon 12	0.53	0.15		ppbV	1	6/30/2018 5:03:00 AM
Heptane	1.3	0.15		ppbV	1	6/30/2018 5:03:00 AM
Hexachloro-1,3-butadiene	< 0.15	0.15		ppbV	1	6/30/2018 5:03:00 AM
Hexane	17	1.5		ppbV	10	6/30/2018 10:39:00 AM
Isopropyl alcohol	21 JN	6.0		ppbV	40	6/30/2018 11:16:00 AM
m&p-Xylene	2.9	3.0	J	ppbV	10	6/30/2018 10:39:00 AM
Methyl Butyl Ketone	< 0.30	0.30		ppbV	1	6/30/2018 5:03:00 AM
Methyl Ethyl Ketone	16	12		ppbV	40	6/30/2018 11:16:00 AM
Methyl Isobutyl Ketone	0.37	0.30		ppbV	1	6/30/2018 5:03:00 AM
Methyl tert-butyl ether	< 0.15	0.15		ppbV	1	6/30/2018 5:03:00 AM
Methylene chloride	0.52	0.15		ppbV	1	6/30/2018 5:03:00 AM
o-Xylene	1.6	0.15		ppbV	1	6/30/2018 5:03:00 AM
Propylene	< 0.15	0.15		ppbV	1	6/30/2018 5:03:00 AM
Styrene	0.27	0.15		ppbV	1	6/30/2018 5:03:00 AM
Tetrachloroethylene	0.21	0.15		ppbV	1	6/30/2018 5:03:00 AM
Tetrahydrofuran	< 0.15	0.15		ppbV	1	6/30/2018 5:03:00 AM
Toluene	26	6.0		ppbV	40	6/30/2018 11:16:00 AM
trans-1,2-Dichloroethene	< 0.15	0.15		ppbV	1	6/30/2018 5:03:00 AM
trans-1,3-Dichloropropene	< 0.15	0.15		ppbV	1	6/30/2018 5:03:00 AM
Trichloroethene	12	1.5		ppbV	10	6/30/2018 10:39:00 AM
Vinyl acetate	< 0.15	0.15		ppbV	1	6/30/2018 5:03:00 AM
Vinyl Bromide	< 0.15	0.15		ppbV	1	6/30/2018 5:03:00 AM
Vinyl chloride	< 0.15	0.15		ppbV	1	6/30/2018 5:03:00 AM
Surr: Bromofluorobenzene	99.0	70-130		%REC	1	6/30/2018 5:03:00 AM

Qualifiers:	**	Quantitation Limit	.	Results reported are not blank corrected	
	B	Analyte detected in the associated Method Blank	E	Estimated Value above quantitation range	
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limit	
	JN	Non-routine analyte. Quantitation estimated.	ND	Not Detected at the Limit of Detection	
	S	Spike Recovery outside accepted recovery limits			

MAP 7/19/18

Appendix B

Laboratory QC Documentation

CENTEK LABORATORIES, LLC

Date: 11-Jul-18

ANALYTICAL QC SUMMARY REPORT

CLIENT: BE3/Panamerican
Work Order: C1806074
Project: Remington PRR

TestCode: 1ugM3_TO15

Sample ID: ALCS1UG-062918 SampType: LCS TestCode: 1ugM3_TO15 Units: ppbV Prep Date: RunNo: 13825
Client ID: ZZZZZ Batch ID: R13825 TestNo: TO-15 Analysis Date: 6/29/2018 SeqNo: 159720

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1,1-Trichloroethane	1.320	0.15	1	0	132	70	130				S
1,1,2,2-Tetrachloroethane	1.150	0.15	1	0	115	70	130				
1,1,2-Trichloroethane	1.110	0.15	1	0	111	70	130				
1,1-Dichloroethane	1.070	0.15	1	0	107	70	130				
1,1-Dichloroethene	1.010	0.15	1	0	101	70	130				
1,2,4-Trichlorobenzene	1.120	0.15	1	0	112	70	130				
1,2,4-Trimethylbenzene	1.110	0.15	1	0	111	70	130				
1,2-Dibromoethane	1.240	0.15	1	0	124	70	130				
1,2-Dichlorobenzene	1.140	0.15	1	0	114	70	130				
1,2-Dichloroethane	1.050	0.15	1	0	105	70	130				
1,2-Dichloropropane	1.090	0.15	1	0	109	70	130				
1,3,5-Trimethylbenzene	1.140	0.15	1	0	114	70	130				
1,3-butadiene	1.060	0.15	1	0	106	70	130				
1,3-Dichlorobenzene	1.120	0.15	1	0	112	70	130				
1,4-Dichlorobenzene	1.140	0.15	1	0	114	70	130				
1,4-Dioxane	1.130	0.30	1	0	113	70	130				
2,2,4-trimethylpentane	1.080	0.15	1	0	108	70	130				
4-ethyltoluene	1.140	0.15	1	0	114	70	130				
Acetone	1.080	0.30	1	0	108	70	130				
Allyl chloride	1.060	0.15	1	0	106	70	130				
Benzene	1.070	0.15	1	0	107	70	130				
Benzyl chloride	1.410	0.15	1	0	141	70	130				S
Bromodichloromethane	1.180	0.15	1	0	118	70	130				
Bromoform	1.230	0.15	1	0	123	70	130				
Bromomethane	1.110	0.15	1	0	111	70	130				

Qualifiers:

,	Results reported are not blank corrected	E	Estimated Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limit	ND	Not Detected at the Limit of Detection	R	RPD outside accepted recovery limits
S	Spike Recovery outside accepted recovery limits				

CLIENT: BE3/Panamerican
Work Order: C1806074
Project: Remington PRR

TestCode: 1ugM3_TO15

Sample ID: ALCS1UG-062918	SampType: LCS	TestCode: 1ugM3_TO15	Units: ppbV	Prep Date:	RunNo: 13825
Client ID: ZZZZZ	Batch ID: R13825	TestNo: TO-15		Analysis Date: 6/29/2018	SeqNo: 159720

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Carbon disulfide	1.000	0.15	1	0	100	70	130				
Carbon tetrachloride	1.330	0.15	1	0	133	70	130				S
Chlorobenzene	1.070	0.15	1	0	107	70	130				
Chloroethane	1.100	0.15	1	0	110	70	130				
Chloroform	1.040	0.15	1	0	104	70	130				
Chloromethane	1.060	0.15	1	0	106	70	130				
cis-1,2-Dichloroethene	1.030	0.15	1	0	103	70	130				
cis-1,3-Dichloropropene	1.150	0.15	1	0	115	70	130				
Cyclohexane	1.070	0.15	1	0	107	70	130				
Dibromochloromethane	1.250	0.15	1	0	125	70	130				
Ethyl acetate	1.090	0.15	1	0	109	70	130				
Ethylbenzene	1.080	0.15	1	0	108	70	130				
Freon 11	1.090	0.15	1	0	109	70	130				
Freon 113	1.040	0.15	1	0	104	70	130				
Freon 114	1.080	0.15	1	0	108	70	130				
Freon 12	1.080	0.15	1	0	108	70	130				
Heptane	1.070	0.15	1	0	107	70	130				
Hexachloro-1,3-butadiene	1.110	0.15	1	0	111	70	130				
Hexane	1.050	0.15	1	0	105	70	130				
Isopropyl alcohol	1.070	0.15	1	0	107	70	130				
m&p-Xylene	2.280	0.30	2	0	114	70	130				
Methyl Butyl Ketone	1.160	0.30	1	0	116	70	130				
Methyl Ethyl Ketone	1.090	0.30	1	0	109	70	130				
Methyl Isobutyl Ketone	1.150	0.30	1	0	115	70	130				
Methyl tert-butyl ether	1.200	0.15	1	0	120	70	130				
Methylene chloride	1.020	0.15	1	0	102	70	130				
o-Xylene	1.150	0.15	1	0	115	70	130				
Propylene	1.050	0.15	1	0	105	70	130				
Styrene	1.160	0.15	1	0	116	70	130				
Tetrachloroethylene	1.080	0.15	1	0	108	70	130				
Tetrahydrofuran	1.030	0.15	1	0	103	70	130				

Qualifiers:

- `.` Results reported are not blank corrected
- J Analyte detected below quantitation limit
- S Spike Recovery outside accepted recovery limits
- E Estimated Value above quantitation range
- ND Not Detected at the Limit of Detection
- H Holding times for preparation or analysis exceeded
- R RPD outside accepted recovery limits

CLIENT: BE3/Panamerican
Work Order: C1806074
Project: Remington PRR

TestCode: 1ugM3_TO15

Sample ID: ALCS1UG-062918	SampType: LCS	TestCode: 1ugM3_TO15	Units: ppbV	Prep Date:	RunNo: 13825
Client ID: ZZZZZ	Batch ID: R13825	TestNo: TO-15		Analysis Date: 6/29/2018	SeqNo: 159720

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Toluene	1.080	0.15	1	0	108	70	130				
trans-1,2-Dichloroethene	1.050	0.15	1	0	105	70	130				
trans-1,3-Dichloropropene	1.190	0.15	1	0	119	70	130				
Trichloroethene	1.040	0.15	1	0	104	70	130				
Vinyl acetate	1.120	0.15	1	0	112	70	130				
Vinyl Bromide	1.100	0.15	1	0	110	70	130				
Vinyl chloride	1.060	0.15	1	0	106	70	130				

Sample ID: ALCS1UGD-062918	SampType: LCSD	TestCode: 1ugM3_TO15	Units: ppbV	Prep Date:	RunNo: 13825
Client ID: ZZZZZ	Batch ID: R13825	TestNo: TO-15		Analysis Date: 6/29/2018	SeqNo: 159721

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1,1-Trichloroethane	1.460	0.15	1	0	146	70	130	1.32	10.1	30	S
1,1,2,2-Tetrachloroethane	1.190	0.15	1	0	119	70	130	1.15	3.42	30	
1,1,2-Trichloroethane	1.160	0.15	1	0	116	70	130	1.11	4.41	30	
1,1-Dichloroethane	1.120	0.15	1	0	112	70	130	1.07	4.57	30	
1,1-Dichloroethene	1.070	0.15	1	0	107	70	130	1.01	5.77	30	
1,2,4-Trichlorobenzene	1.030	0.15	1	0	103	70	130	1.12	8.37	30	
1,2,4-Trimethylbenzene	1.080	0.15	1	0	108	70	130	1.11	2.74	30	
1,2-Dibromoethane	1.280	0.15	1	0	128	70	130	1.24	3.17	30	
1,2-Dichlorobenzene	1.140	0.15	1	0	114	70	130	1.14	0	30	
1,2-Dichloroethane	1.100	0.15	1	0	110	70	130	1.05	4.65	30	
1,2-Dichloropropane	1.180	0.15	1	0	118	70	130	1.09	7.93	30	
1,3,5-Trimethylbenzene	1.160	0.15	1	0	116	70	130	1.14	1.74	30	
1,3-butadiene	1.130	0.15	1	0	113	70	130	1.06	6.39	30	
1,3-Dichlorobenzene	1.160	0.15	1	0	116	70	130	1.12	3.51	30	
1,4-Dichlorobenzene	1.170	0.15	1	0	117	70	130	1.14	2.60	30	
1,4-Dioxane	1.000	0.30	1	0	100	70	130	1.13	12.2	30	
2,2,4-trimethylpentane	1.110	0.15	1	0	111	70	130	1.06	4.61	30	
4-ethyltoluene	1.150	0.15	1	0	115	70	130	1.14	0.873	30	

Qualifiers:
- . Results reported are not blank corrected
- J Analyte detected below quantitation limit
- S Spike Recovery outside accepted recovery limits
- E Estimated Value above quantitation range
- ND Not Detected at the Limit of Detection
- H Holding times for preparation or analysis exceeded
- R RPD outside accepted recovery limits

CLIENT: BE3/Panamerican
Work Order: C1806074
Project: Remington PRR

TestCode: 1ugM3_TO15

Sample ID: ALCS1UGD-062918 SampType: LCSD TestCode: 1ugM3_TO15 Units: ppbV Prep Date: RunNo: 13825
Client ID: ZZZZZ Batch ID: R13825 TestNo: TO-15 Analysis Date: 6/29/2018 SeqNo: 159721

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Acetone	1.160	0.30	1	0	116	70	130	1.08	7.14	30	
Allyl chloride	1.140	0.15	1	0	114	70	130	1.06	7.27	30	
Benzene	1.120	0.15	1	0	112	70	130	1.07	4.57	30	
Benzyl chloride	1.530	0.15	1	0	153	70	130	1.41	8.16	30	S
Bromodichloromethane	1.240	0.15	1	0	124	70	130	1.18	4.96	30	
Bromoform	1.380	0.15	1	0	138	70	130	1.23	11.5	30	S
Bromomethane	1.120	0.15	1	0	112	70	130	1.11	0.897	30	
Carbon disulfide	1.080	0.15	1	0	108	70	130	1	7.69	30	
Carbon tetrachloride	1.460	0.15	1	0	146	70	130	1.33	8.63	30	S
Chlorobenzene	1.090	0.15	1	0	109	70	130	1.07	1.86	30	
Chloroethane	1.130	0.15	1	0	113	70	130	1.1	2.69	30	
Chloroform	1.120	0.15	1	0	112	70	130	1.04	7.41	30	
Chloromethane	1.130	0.15	1	0	113	70	130	1.06	6.39	30	
cis-1,2-Dichloroethene	1.080	0.15	1	0	108	70	130	1.03	4.74	30	
cis-1,3-Dichloropropene	1.430	0.15	1	0	143	70	130	1.15	21.7	30	S
Cyclohexane	1.100	0.15	1	0	110	70	130	1.07	2.76	30	
Dibromochloromethane	1.270	0.15	1	0	127	70	130	1.25	1.59	30	
Ethyl acetate	1.100	0.15	1	0	110	70	130	1.09	0.913	30	
Ethylbenzene	1.060	0.15	1	0	106	70	130	1.03	2.79	30	
Freon 11	1.180	0.15	1	0	118	70	130	1.09	7.93	30	
Freon 113	1.110	0.15	1	0	111	70	130	1.04	6.51	30	
Freon 114	1.170	0.15	1	0	117	70	130	1.08	8.00	30	
Freon 12	1.140	0.15	1	0	114	70	130	1.08	5.41	30	
Heptane	1.100	0.15	1	0	110	70	130	1.07	2.76	30	
Hexachloro-1,3-butadiene	1.090	0.15	1	0	109	70	130	1.11	1.82	30	
Hexane	1.030	0.15	1	0	103	70	130	1.05	1.92	30	
Isopropyl alcohol	1.100	0.15	1	0	110	70	130	1.07	2.76	30	
m&p-Xylene	2.310	0.30	2	0	116	70	130	2.28	1.31	30	
Methyl Butyl Ketone	1.060	0.30	1	0	106	70	130	1.16	9.01	30	
Methyl Ethyl Ketone	1.010	0.30	1	0	101	70	130	1.09	7.62	30	
Methyl Isobutyl Ketone	1.040	0.30	1	0	104	70	130	1.15	10.0	30	

Qualifiers:

. Results reported are not blank corrected
J Analyte detected below quantitation limit
S Spike Recovery outside accepted recovery limits
E Estimated Value above quantitation range
ND Not Detected at the Limit of Detection
H Holding times for preparation or analysis exceeded
R RPD outside accepted recovery limits

CLIENT: BE3/Panamerican
Work Order: C1806074
Project: Remington PRR

TestCode: 1ugM3_TO15

Sample ID: ALCS1UGD-062918	SampType: LCSD	TestCode: 1ugM3_TO15	Units: ppbV	Prep Date:	RunNo: 13825
Client ID: ZZZZZ	Batch ID: R13825	TestNo: TO-15		Analysis Date: 6/29/2018	SeqNo: 159721

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Methyl tert-butyl ether	1.250	0.15	1	0	125	70	130	1.2	4.08	30	
Methylene chloride	1.090	0.15	1	0	109	70	130	1.02	6.64	30	
o-Xylene	1.190	0.15	1	0	119	70	130	1.15	3.42	30	
Propylene	1.100	0.15	1	0	110	70	130	1.05	4.66	30	
Styrene	1.190	0.15	1	0	119	70	130	1.16	2.55	30	
Tetrachloroethylene	1.130	0.15	1	0	113	70	130	1.08	4.52	30	
Tetrahydrofuran	1.020	0.15	1	0	102	70	130	1.03	0.976	30	
Toluene	1.090	0.15	1	0	109	70	130	1.08	0.922	30	
trans-1,2-Dichloroethene	1.040	0.15	1	0	104	70	130	1.05	0.957	30	
trans-1,3-Dichloropropene	1.460	0.15	1	0	146	70	130	1.19	21.7	30	S
Trichloroethene	1.090	0.15	1	0	109	70	130	1.04	4.69	30	
Vinyl acetate	1.130	0.15	1	0	113	70	130	1.12	0.889	30	
Vinyl Bromide	1.180	0.15	1	0	118	70	130	1.1	7.02	30	
Vinyl chloride	1.150	0.15	1	0	115	70	130	1.06	8.14	30	

Qualifiers:
. Results reported are not blank corrected
J Analyte detected below quantitation limit
S Spike Recovery outside accepted recovery limits
E Estimated Value above quantitation range
ND Not Detected at the Limit of Detection
H Holding times for preparation or analysis exceeded
R RPD outside accepted recovery limits

Evaluate Continuing Calibration Report

Data File : C:\HPCHEM\1\DATA\AP062903.D Vial: 3
Acq On : 29 Jun 2018 1:16 pm Operator: RJP
Sample : A1UG_1.0 Inst : MSD #1
Misc : A627_1UG Multiplr: 1.00
MS Integration Params: RTEINT.P

Method : C:\HPCHEM\1\METHODS\A627_1UG.M (RTE Integrator)
Title : TO-15 VOA Standards for 5 point calibration
Last Update : Wed Jul 11 09:10:22 2018
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.33min
Max. RRF Dev : 30% Max. Rel. Area : 150%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
51	T	Toluene	0.616	0.667	-8.3	82	0.00
52	T	Methyl Isobutyl Ketone	0.596	0.714	-19.8	91	0.00
53	T	Dibromochloromethane	0.759	0.948	-24.9	96	0.00
54	T	Methyl Butyl Ketone	0.488	0.486	0.4	72	0.00
55	T	1,2-dibromoethane	0.596	0.762	-27.9	96	0.00
56	T	Tetrachloroethylene	0.500	0.547	-9.4	84	0.00
57	T	Chlorobenzene	0.959	1.003	-4.6	80	0.00
58	T	Ethylbenzene	1.368	1.475	-7.8	80	0.00
59	T	m&p-xylene	1.116	1.267	-13.5	83	0.00
60	T	Nonane	0.714	0.808	-13.2	83	0.00
61	T	Styrene	0.844	0.974	-15.4	84	0.00
62	T	Bromoform	0.679	0.868	-27.8	98	0.00
63	T	o-xylene	1.239	1.432	-15.6	86	0.00
64	T	Cumene	1.505	1.622	-7.8	80	0.00
65	S	Bromofluorobenzene	0.659	0.728	-10.5	81	0.00
66	T	1,1,2,2-tetrachloroethane	0.974	1.129	-15.9	90	0.00
67	T	Propylbenzene	0.405	0.442	-9.1	80	0.00
68	T	2-Chlorotoluene	0.431	0.481	-11.6	82	0.00
69	T	4-ethyltoluene	1.544	1.741	-12.8	82	0.00
70	T	1,3,5-trimethylbenzene	1.346	1.534	-14.0	85	0.00
71	T	1,2,4-trimethylbenzene	1.173	1.289	-9.9	82	0.00
72	T	1,3-dichlorobenzene	0.893	1.011	-13.2	84	0.00
73	T	benzyl chloride	0.358	0.537	-50.0#	113	0.00
74	T	1,4-dichlorobenzene	0.951	0.971	-2.1	84	0.00
75	T	1,2,3-trimethylbenzene	1.182	1.360	-15.1	85	0.00
76	T	1,2-dichlorobenzene	0.862	0.966	-12.1	84	0.00
77	T	1,2,4-trichlorobenzene	0.311	0.326	-4.8	81	0.00
78	T	Naphthalene	0.603	0.609	-1.0	72	0.00
79	T	Hexachloro-1,3-butadiene	0.728	0.800	-9.9	86	0.00

(#) = Out of Range SPCC's out = 0 CCC's out = 0
AP062903.D A627_1UG.M Wed Jul 11 09:10:36 2018 MSD1 Page 2

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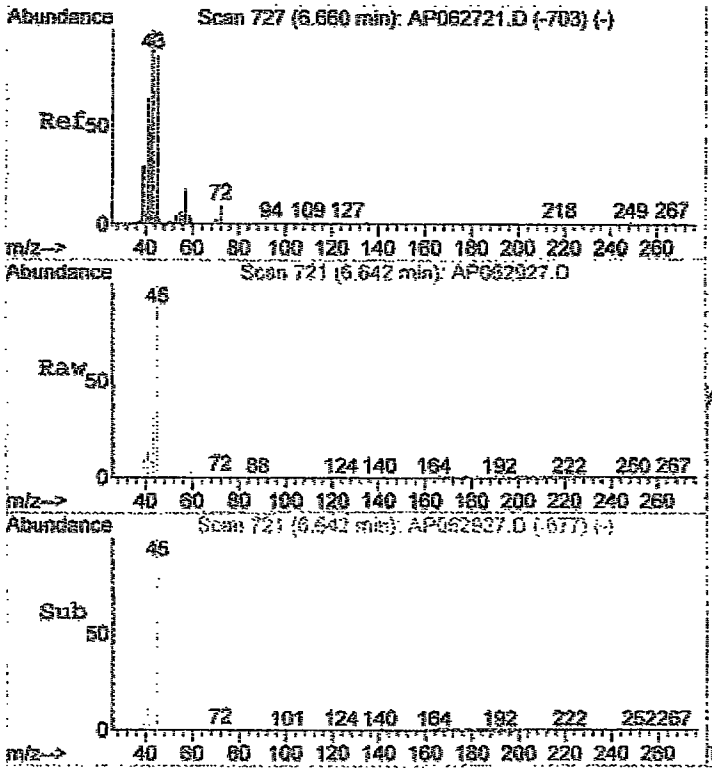
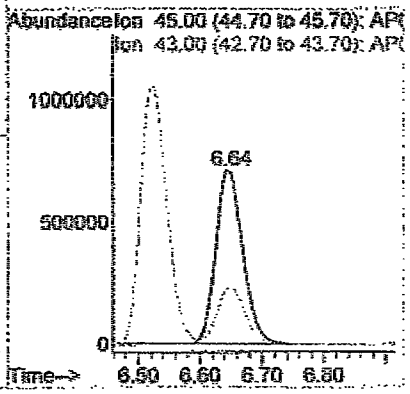
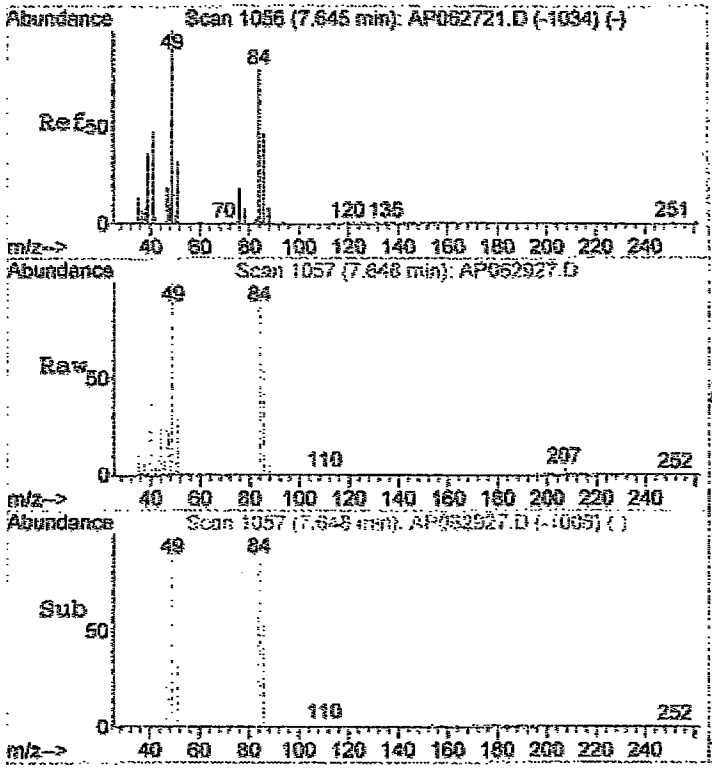


#17
Isopropyl alcohol
Concen: 56.94 ppb
RT: 6.64 min Scan# 721
Delta R.T. -0.02 min
Lab File: AP062927.D
Acq: 30 Jun 2018 5:03 am

Tgt Ion: 45 Resp: 2184064

Ion	Ratio	Lower	Upper
45	100		
43	34.1	102.2	142.2#

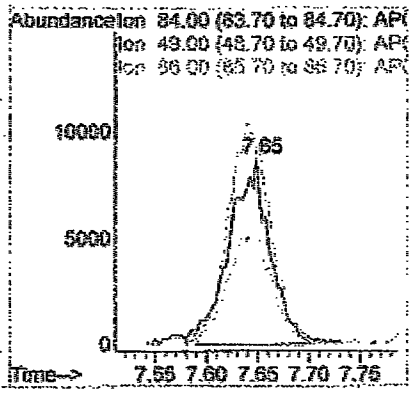




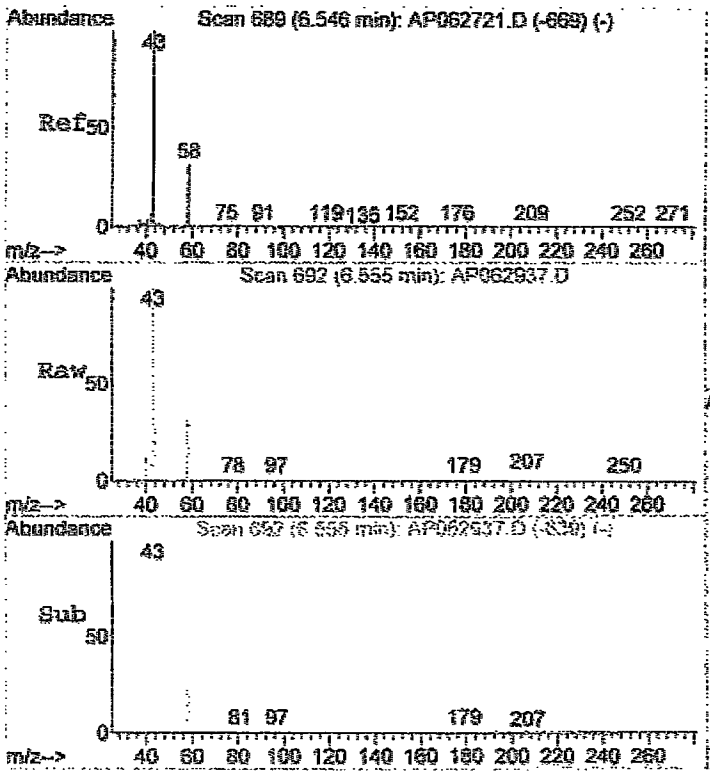
#21
Methylene chloride
Concen: 0.52 ppb
RT: 7.65 min Scan# 1057
Delta R.T. 0.00 min
Lab File: AP062927.D
Acq: 30 Jun 2018 5:03 am

Tgt Ion: 84 Resp: 24353

Ion	Ratio	Lower	Upper
84	100		
49	124.0	120.2	160.2
86	66.0	45.5	85.5



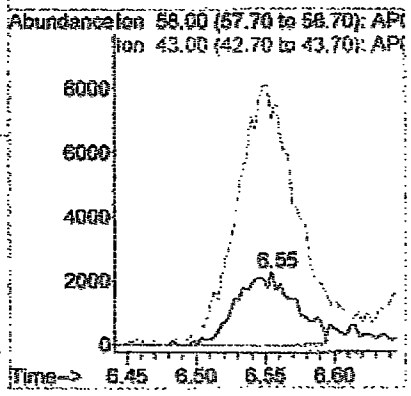
1/40

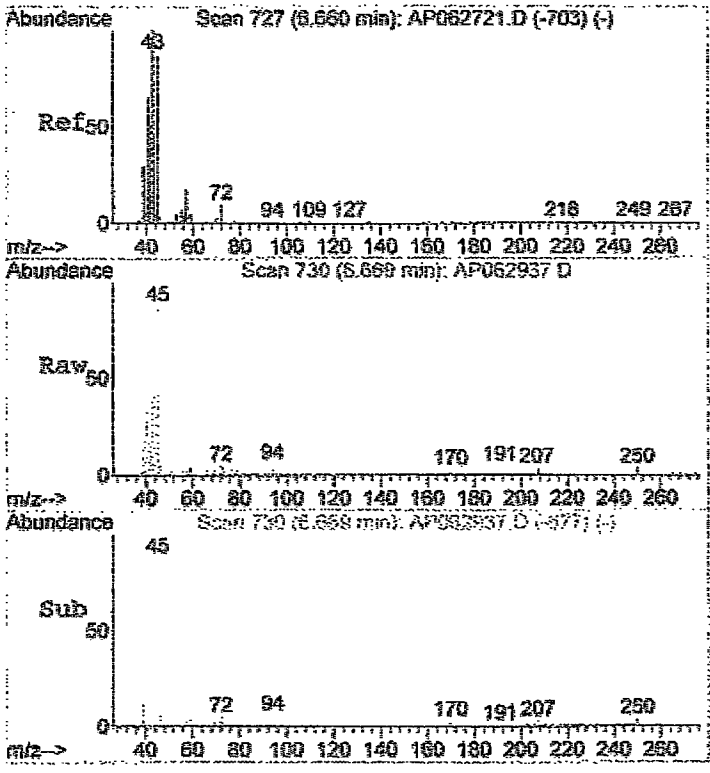


#15
Acetone
Concen: 0.72 ppb
RT: 6.55 min Scan# 692
Delta R.T. 0.01 min
Lab File: AP062937.D
Acq: 30 Jun 2018 11:16 am

Tgt Ion: 58 Resp: 6591

Ion	Ratio	Lower	Upper
58	100		
43	394.2	305.4	365.4#

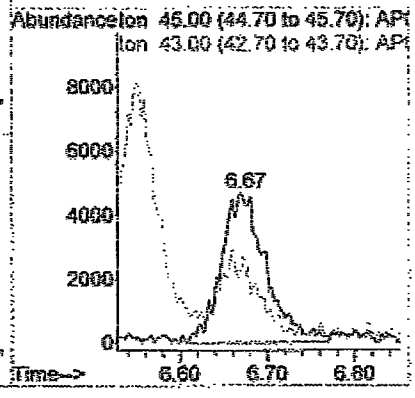




#17
Isopropyl alcohol
Concen: 0.53 ppb
RT: 6.67 min Scan# 730
Delta R.T. 0.01 min
Lab File: AP062937.D
Acq: 30 Jun 2018 11:16 am

Tgt Ion: 45 Resp: 16661

Ion	Ratio	Lower	Upper
45	100		
43	42.3	102.2	142.2#



Appendix C

Validator Qualifications

KENNETH R. APPLIN
Geochemist/Data Validator

Ph.D., Geochemistry and Mineralogy, The Pennsylvania State University

M.S., Geochemistry and Mineralogy, The Pennsylvania State University

B.A., Geological Sciences, SUNY at Geneseo, NY

Dr. Applin has over 35 years of experience working with the geochemistry of natural waters. His prior experience includes working as an Assistant Professor of Geology at the University of Missouri-Columbia and as Chief Hydrogeologist and Geochemist with a leading engineering firm in Rochester, NY. In 1993, he established KR Applin and Associates, a small consulting business that focuses on the geochemistry of natural waters, especially as applied to problems involving the contamination of groundwater and surface water.

Dr. Applin is also an experienced analytical data validator and has provided data validation services since 1994 to a variety of clients performing brownfield cleanup projects, hazardous waste remediation, groundwater monitoring at solid waste facilities, and other projects requiring third-party data validation. Dr. Applin has several years of hands-on experience with the laboratory analysis of natural waters and has successfully completed the USEPA Region II certification courses for performing inorganic and organic analytical data validation.

MICHAEL K. PERRY
Chemist/Data Validator

B.S. Chemistry, Georgia State University, Atlanta, GA

A.A.S., Chemical Technology, Alfred State College, Alfred, NY

Mr. Perry has over 30 years of experience in the analytical laboratory business. During his early career, he spent several years as a laboratory analyst performing the analysis of soil, water, and air samples for inorganic and organic chemical parameters. During his last 20 years in the environmental laboratory business, he managed and directed two major analytical laboratories in Rochester, NY. His management responsibilities included oversight of the daily operations of the lab, staff training and supervision, the selection, purchase, and maintenance of analytical instruments, the introduction of new laboratory methods, analytical quality assurance and quality control, data acquisition and management, and other business-related activities.

Mr. Perry has an extensive working knowledge of the methods and procedures used for sampling and analyzing both inorganic and organic analytes in soil, water, and air. He is an accomplished laboratory chemist and is familiar with the analytical methods and procedures established under the USEPA Contract Laboratory Protocols (CLP), the NYSDEC Analytical Services Protocols (ASP), and the NYSDOH Environmental Laboratory Approval Program (ELAP).