Northern Waterfront Parcel Penny Lane Burlington, Vermont 05401



KAS#512150387

Phase II Environmental Site Assessment Report

March 11, 2016

Prepared for:

Burlington Harbor Marina, LLC 25 Cherry Street Burlington, Vermont 05401



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1.0 REPORT PREPARATION / CERTIFICATION

This Phase II Environmental Site Assessment Report was prepared pursuant to ASTM 1903-11 by KAS, Inc. for Burlington Harbor Marina, LLC of Burlington, Vermont. The report was prepared by Jeremy Roberts, Environmental Program Manager and EP (Environmental Professional) and was reviewed by Erik Sandblom, EP. This report accurately represents the findings of the Phase II Environmental Site Assessment to the best of our knowledge.

Prepared by: Jeremy Roberts, Environmental Program Manager, EP

Reviewed By: Erik Sandblom, EP



2.0 INTRODUCTION

This report summarizes the results of a Phase II Environmental Site Assessment (ESA) completed at lands located within tax map parcel #043-4-004 along the northern waterfront in the City of Burlington, Vermont (property). A site location map is included in Appendix A. The Phase II ESA was performed by KAS, Inc. (KAS) in accordance with the American Society for Testing and Materials (ASTM) Practice ASTM E 1903-11. KAS performed this Phase II ESA for Burlington Harbor Marina, LLC of Burlington, Vermont, herein referred to as Client. Burlington Harbor Marina, LLC is the Phase II ESA document user.

3.0 SITE DESCRIPTION

The property is located along the northern waterfront of the City of Burlington, Vermont (see Appendix A Site Location Map) within a mixed commercial/industrial/residential area. The nearest road is Penny Lane. The property itself does not have an established address as there are no commercial or residential buildings present on the property. The property is located in the City of Burlington on Tax Map #043-4 and is identified as lot # 043-4-004¹. The property consists of areas of land within parcel #043-4-004 and the areas are positioned between buildings and portions of Penny Lane (See Site Map, Appendix A). The property coordinates are 44° 28′ 53.70″ north latitude and 73° 13′ 24.30″ west longitude².

The property is predominantly used for parking spaces with one structure and some open green spaces present. The one structure is used as a gathering spot / pavilion. Green spaces are generally present around the parking areas.

The general area of the property consists of mixed commercial, industrial and residential development. Nearby businesses include a community sailing center, marinas, US Coast Guard, Burlington Electric department and the City of Burlington water department. Residential properties are mainly present in the vicinity of the property to the east. Additional parking areas and marinas are present further to the south. The main area of the Burlington waterfront is present to the south along Lake Champlain.

4.0 BACKGROUND

A Phase I ESA was completed at the property in December 2015. The assessment revealed four recognized environmental conditions (RECs) in connection with the property or adjacent properties as outlined below:

- 1. The presence of a hazardous waste site on the adjacent properties to the north (Moran Plant) and southeast (Alden Waterfront) with associated documented soil and/or groundwater contamination on or in the immediate vicinity of the property;
- 2. The noted presence of a fill pipe along the south side of the Burlington Water Department Pump Station building which lies immediately adjacent to the property;
- 3. The documented presence of fill material with contaminants indicative of "urban fill" in the immediate vicinity to the property; and,
- 4. The historical presence of a "coal house" and use of coal on or immediately adjacent to the property.

¹ Burlington zoning department

² Envirosite Report page 1



The current and historical presence of a railway line in the immediate vicinity of the property is considered to be a deminimis condition. De minimis conditions are not recognized environmental conditions. The closed hazardous waste site identified as Burlington Electric SMS #90-0540 is considered to be a historical REC.

The area has a long history of industrial use which has led to documented subsurface contamination. Soil and groundwater data collected on or in the immediate vicinity of the property has indicated subsurface contamination is present at specific locations. A Corrective Action Plan (CAP) was prepared in August 2011 for the adjacent property to the north and this plan includes portions of the property.

5.0 SUMMARY OF PLANNED REDEVELOPMENT

As of March 2016, conceptual redevelopment plans are in place for the property. These plans consist of replacing two existing parking lot areas, removing trees and re-landscaping green space along the waterfront, installing subsurface utilities between the City of Burlington Water Department and US Coast Guard buildings, removing the existing pavilion located to the west of the City of Burlington Water Department and installing an electric transformer and underground vault in the vicinity of the removed pavilion. The preliminary conceptual plans have also considered the potential installation of a storm water treatment basin east of the Burlington Electric Department building (see Site Plan, Appendix A). The planned depths of excavation to conduct these redevelopment activities range from surface grade up to approximately 10 feet below grade (fbg).

6.0 OBJECTIVES

The objective of this Phase II ESA is to evaluate and document subsurface conditions in the areas planned for redevelopment on the property and to provide information relevant to evaluating and allocating business environmental risk associated with the potential leasing of the property.

The means by which this objective was completed included the advancement of soil borings at eight selected locations, field screening and visual assessment of soils, and laboratory analysis of soil within each boring at select intervals and groundwater at one location. These tasks are further described in Section 7.0.

7.0 SOIL BORINGS / SOIL AND GROUNDWATER SAMPLING

Eight soil borings were advanced at the property on February 22, 2016. The locations were selected based on the locations of the proposed redevelopment areas, and to achieve adequate samples to determine potential impact to the site for environmental analysis (See Site Map, Appendix A).

7.1 Pre-Drilling Activities

Prior to the initiation of subsurface activities, KAS pre-marked potential drilling locations on February 10, 2016 as required by DigSafe. DigSafe Number 2016-0602563 was obtained on February 11, 2016. The City of Burlington was notified to locate service utility lines that may exist up to and/or on the property that may not be marked out by DigSafe. Prior to the drilling activities, KAS prepared a health and safety plan for the work.



7.2 Field Screening of Subsurface Soils

On February 22, 2016, soil borings were advanced at the property by Enpro Services, Inc. of Burlington, Vermont under the supervision of a KAS scientist. Soil borings were advanced using a track-mounted geoprobe drill rig. Soil borings were advanced to depths ranging from 6-8 feet below surface grade (bsg) (see Site Map; Appendix A). Each soil boring was advanced in an attempt to extend beneath the observed water table depth. Refusal was encountered at SB-3 at 6 feet bsg. Groundwater was encountered in all eight borings at depths ranging from approximately 4-7.5 feet bsg. Soils in the borings generally consisted of sand and gravel with some intervals of silty sand.

Soil samples were collected continuously at each boring location. The soil samples were logged by the supervising scientist and screened for volatile organic compounds (VOCs) using a MiniRae Lite model PID equipped with a 10.6 eV bulb. Prior to screening, the PID was calibrated with isobutylene with reference made to benzene. Soils were screened using the KAS *Jar/Polyethylene Bag Headspace Screening Protocol.* Soil characteristics and PID measurements were recorded by the supervising scientist (see Soil Classification Data; Appendix C). PID readings ranged from 0.0 – 38.2 parts per million volume (ppmv). A non-distinct odor was noted at soil boring SB-7 at the 1 – 4 foot soil interval. No odors or staining were noted at any other soil boring location.

7.3 Soil Sampling and Laboratory Analysis Results

On February 22, 2016, one soil sample was collected from each soil boring for laboratory analysis except at soil boring SB-2 where two samples were collected. The soil samples were collected from each boring at intervals that are best representative of the planned excavation depths for that particular area. The sample depths were as follows: SB-1 (0 – 2 feet), SB-2 (0 – 2; PCBs only and 6 – 8 feet), SB-3, SB-4 and SB-5 (0 – 2 feet), SB-6 (4 – 6 feet), SB-7 and SB-8 (1 – 4 feet). The soil samples were submitted for analysis of: VOCs via EPA Method 8260B with methanol preservation via EPA Method 5035, polycyclic aromatic hydrocarbons (PAHs) via EPA Method 8270D, RCRA 8 metals via EPA Method 6020, polychlorinated biphenyls (PCBs) via EPA Method 8082, and total petroleum hydrocarbon (TPH) via EPA Method 8100.

The soil samples were submitted under proper chain of custody procedures to Eastern Analytical, Inc. of Concord, New Hampshire (EAI). The results have been tabulated and compared to the most recent soil screening values (SSVs) and Vermont Department of Health (VDH) values as outlined in the Investigation and Remediation of Contaminated Properties Procedure (IROCP) document dated April 2012. The analytical laboratory report is included in Appendix D. The following is a summary of the results:

VOCs via EPA Method 8260B: No VOCs were reported at concentrations above laboratory reporting limits in any of the soil samples.

<u>PAHs via EPA Method 8270D:</u> Per IROCP, a specific list of PAHs that are toxicologically-similar to Benzo(a)Pyrene (BaP) are multiplied by their Toxic Equivalency Factors (TEFs) specified by the EPA, and then reported as a total Toxic Equivalency Quotient (TEQ) to BaP. In other words, PAHs that are toxicologically-similar to BaP are normalized to BaP. The total BaP TEQ for all sample locations except SB-2 and SB-7 exceeded the VDH and industrial SSVs. The concentrations were reported to be highest at SB-3, SB-6 and SB-8 with lower concentrations noted at the other five soil boring locations. The PAH levels are generally in line with levels previously detected in the vicinity of the property.



RCRA 8 Metals via EPA Method 6020: Concentrations of metals were reported for all soil samples obtained. The concentration of arsenic was above the industrial SSV at all sample locations. The arsenic levels are generally in line with levels previously detected in the vicinity of the property and appear to be within the normal background range for the property and for Vermont soils (currently understood to be around 10 mg/kg).

TPH via EPA Method 8100: TPH was reported in soils obtained from five of the eight sample locations at levels below the industrial SSVs. The reported TPH concentration ranged from 30 – 250 mg/kg.

<u>PCBs via EPA Method 8082:</u> No PCBs were detected above the laboratory detection limits in any of the soil samples collected except at soil boring SB-4. At SB-4, a concentration of Aroclor 1254 and Aroclor 1260 were detected at a concentration of 0.10 and 0.026 mg/kg, respectively. The reported concentrations were below the industrial SSVs.

7.4 Groundwater Sampling and Laboratory Analysis Results

On February 22, 2016, a groundwater sample was collected from soil boring SB-6 for laboratory analysis of total VOCs via EPA Method 8260B with Hydrochloric Acid preservation. The sample was collected from this boring using a peristaltic pump. One trip blank was submitted for quality assurance and control purposes.

The groundwater samples were submitted under proper chain of custody procedures to EAI. The analytical laboratory report is included in Appendix D. No VOCs were reported at concentrations above laboratory reporting limits in the groundwater sample collected on February 22, 2016.

8.0 CONCLUSIONS

Based on the Phase II ESA completed in conformance with the scope and limitations of ASTM Practice ASTM E 1903-11 at lands located along the northern waterfront in the City of Burlington, Vermont the following conclusions are offered:

- 1. Soil borings were advanced on the property on February 22, 2016 to depths ranging from 6 8 feet bsg. Groundwater was encountered at each of the soil boring locations. The boring locations were selected based on the proposed redevelopment areas, and to achieve adequate samples to determine potential impacts to the site for environmental analysis;
- 2. PID readings in the soil borings ranged from 0.0 38.2 ppmv. A non-distinct odor was noted at soil boring SB-7 at the 1 4 foot soil interval. No odors or staining were noted at any other soil boring location;
- 3. Soil samples were obtained from all eight borings advanced on February 22, 2016 for analysis of VOCs, PCBs, PAHs, TPH and metals. The samples contained no VOCs above laboratory detection limits. Concentrations of PAHs and arsenic were reported above industrial soil screening values. TPH was reported at five locations below industrial SSVs. PCBs were detected at one boring location at concentrations below industrial SSVs;
- 4. Although an elevated PID reading and odor was noted in the soil sample collected from SB-7 the laboratory analysis of the sample indicated no VOCs, TPH, or PAHs were present. This indicates the contamination present at this location is likely highly weathered;



- 5. A groundwater sample was collected from soil boring SB-6 on February 22, 2016 for analysis of VOCs. No VOCs were reported above laboratory detection limits;
- 6. Overall, the soil data collected in February 2016 is generally consistent with the data obtained during past investigations at and in the vicinity of the property; and,
- 7. Increased costs for redevelopment would be incurred if the soils will need to be disposed of offsite; however, based on the findings it appears the planned redevelopment activities can occur in accordance with the existing CAP prepared for the area, which includes reuse of soils on-site with proper management.

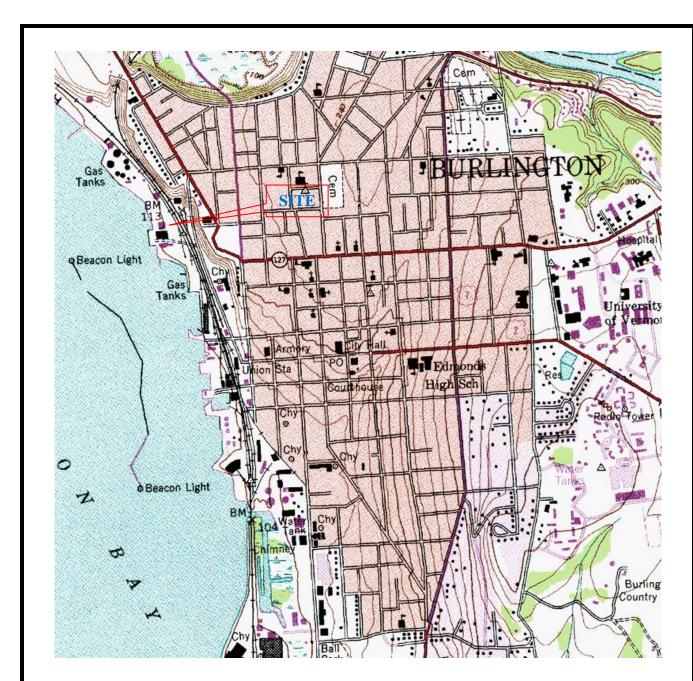
9.0 RECOMMENDATIONS

Based on the above listed conclusions, KAS recommends no further environmental work be conducted to assess subsurface conditions prior to redevelopment occurring. The soil and groundwater data collected as part of this Phase II ESA should be shared with the VTDEC along with the final redevelopment plans and the planned redevelopment should be incorporated into the existing CAP via an addendum.



APPENDIX A

1) SITE LOCATION MAP 2) SITE MAP



JOB # 511150384



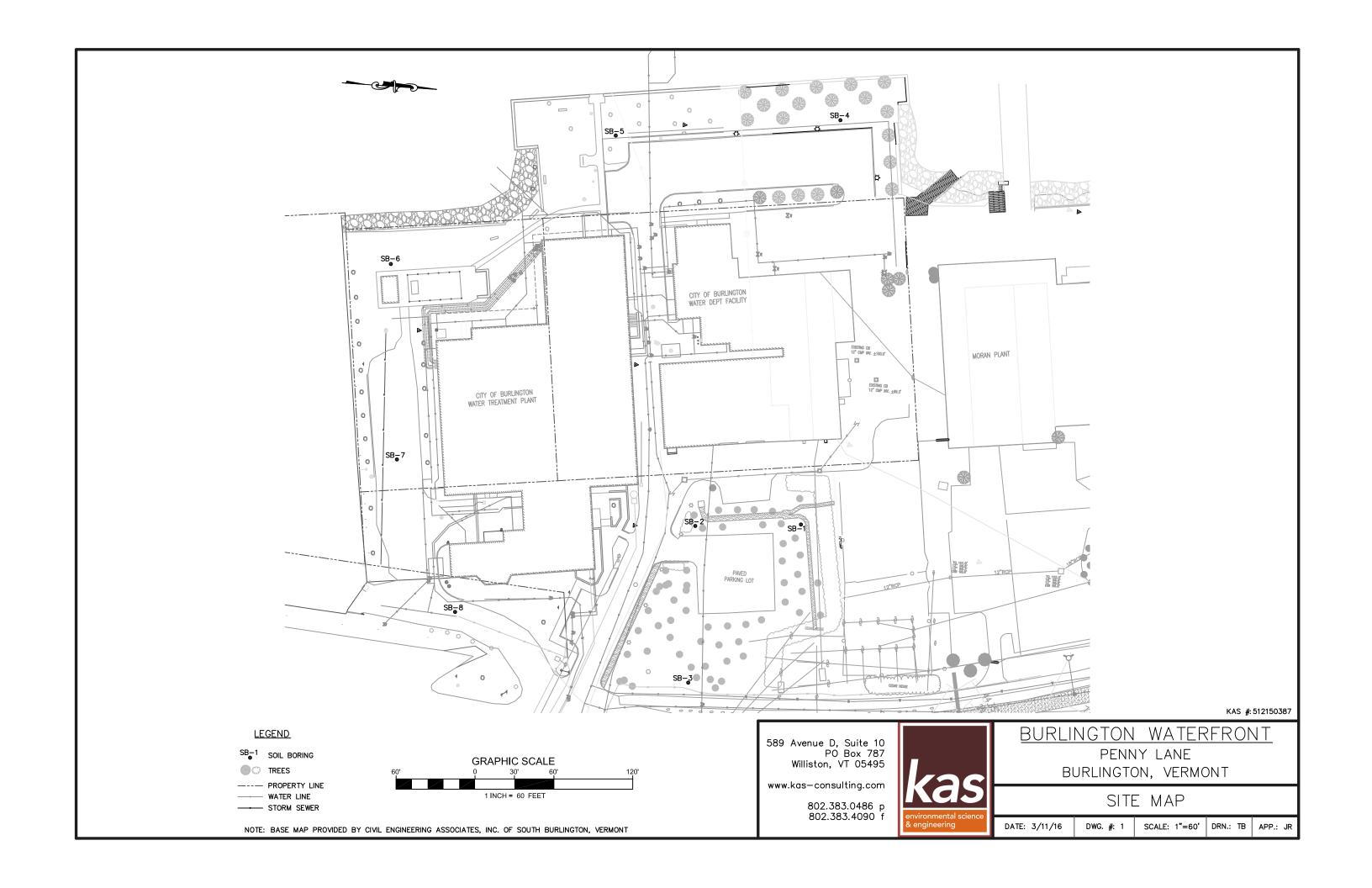
Northern Waterfront

Penny Lane Burlington, Vermont

Site Location Map

Source: topoquest.com

Date: 12/21/15 Drawing: #1 Scale: 1:24,000" By: JR





APPENDIX B

PHOTOGRAPHIC DOCUMENTATION



Photograph ID: 001

Date: February 22, 2016

Location: Property

Direction: Facing north

View of SB-1 location



Photograph ID: 002

Date: February 22, 2016

Location: Property

Direction: Facing west

Comments:

View of SB-2 location





Photograph ID: 003

Date: February 22, 2016

Location: Property

Direction: Facing west Comments:

View of SB-3 location



Photograph ID: 004

Date: February 22, 2016

Location: Property

Direction: Facing north

Comments:

View of SB-4 location





Photograph ID: 005

Date: February 22, 2016

Location: Property

Direction: Facing south Comments:

View of SB-5 location



Photograph ID: 006

Date: February 22, 2016

Location: Property

Direction:

Facing southwest

Comments:

View of SB-6 location





Photograph ID: 007

Date: February 22, 2016

Location: Property

Direction: Facing south Comments:

View of SB-7 location



Photograph ID: 008 Date: February 22, 2016

Location: Property

Direction:

Facing southwest

Comments:

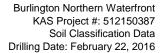
View of SB-8 location





APPENDIX C

SOIL CLASSIFICATION DATA SOIL DATA SUMMARY





Soil Classification Data:

Location	Soil Boring	Depth (feet)	Soil Symb	ol Group Name	Odor	PID (ppm)
north of eastern	SB-1	0-2*	SW-GW	Well Graded Sand with Gravel	No	0.4
		2-4	SW-GW	Well Graded Sand with Gravel	No	0.8
parking lot		4-8	SM-GM	Sandy Silt with Gravel	No	0.2
	SB-2	0-2*	SW-GW	Well Graded Sand with Gravel	No	0.1
west of eastern		2-4	SW-GW	Well Graded Sand with Gravel	No	0.2
parking lot		4-6	SM	Silty Sand with Gravel	No	0.3
, ,		6-8*	SM	Silty Sand with Gravel	No	0.1
east of eastern	SB-3	0-2*	SW-GW	Well Graded Sand with Gravel	No	0.2
		2-4	SW-GW	Well Graded Sand with Gravel	No	0.3
parking lot		4-6	SM	Silty Sand	No	0.3
porthwest and of	SB-4	0-2*	SW-GW	Well Graded Sand with Gravel	No	0.0
northwest end of western parking lot		2-4	SW-GW	Well Graded Sand with Gravel	No	0.0
western parking for		4-8	SW-GW	Well Graded Sand with Gravel	No	0.0
southwest end of	SB-5	0-2*	SW-GW	Well Graded Sand with Gravel	No	0.4
		2-4	SW-GW	Well Graded Sand with Gravel	No	0.1
western parking lot		4-8	SM	Silty Sand	No	0.5
	SB-6	0-4	SW-GW	Well Graded Sand with Gravel	No	0.4
west side of pavilion		4-6*	SM	Silty Sand	No	0.4
		6-8^	SM	Silty Sand	No	0.3
between water dept	SB-7	0-1	SW-GW	Well Graded Sand with Gravel	No	0.3
and coast guard		1-4*	SW-GW	Well Graded Sand with Gravel	Yes	38.2
building		4-8	SW-GW	Well Graded Sand with Gravel	No	0.4
cast of water dept	SB-8	0-1	SW-GW	Well Graded Sand with Gravel	No	0.3
east of water dept		1-4*	SW-GW	Well Graded Sand with Gravel	No	1.0
building		4-8	SW	Well Graded Sand	No	2.9

[^] Collected groundwater sample for laboratory analysis of VOCs via EPA Method 8260B * Collected soil sample for laboratory analysis of VOCs via EPA Method 8260B



Soil Sampling Data Summary - PAHs Burlington Waterfront Burlington, Vermont

Soil Sample	SB-1	SB-2	SB-3	SB-4	SB-5	SB-6	SB-7	SB-8	IROCP	VDH	
Sample Depth (ft.)	0-2	6-8	0-2	0-2	0-2	4-6	1-4	1-4	SSV	Values	
Sample Date	2/22/16	2/22/16	2/22/16	2/22/16	2/22/16	2/22/16	2/22/16	2/22/16	Industrial		
PAHs, EPA Method 8270, Benzo(a)Pyrene TEQ (mg/kg)											
Benzo(a)anthracene	0.0058	ND<0.008	0.02	0.002	0.0081	0.02	ND<0.008	0.018			
Benzo(b)fluoranthene	0.0083	ND<0.008	0.028	0.003	0.0096	0.035	ND<0.008	0.036			
Benzo(k)fluoranthene	0.00032	ND<0.008	0.001	0.00011	0.00036	0.0014	ND<0.008	0.0012			
Benzo(a)pyrene	0.063	ND<0.008	0.21	0.026	0.081	0.27	ND<0.008	0.26	NA	NA	
Chrysene	0.00064	ND<0.008	0.0022	0.00017	0.00078	0.0021	ND<0.008	0.0020			
Dibenz(a,h)anthracene	0.014	ND<0.008	0.030	ND<0.008	0.013	0.038	ND<0.008	0.041			
Indeno(1,2,3-cd)pyrene	0.006	ND<0.008	0.01	0.0019	0.0045	0.11	ND<0.008	0.017			
Total Benzo(a)Pyrene TEQ	0.10	ND	0.30	0.03	0.12	0.48	ND	0.38	0.21	0.01	

NOTES

All values reported in mg/kg, dry, unless otherwise indicated

IROCP = April 2012 Investigation and Remediation of Contaminated Properties document

SSV = Soil Screening Values from Appendix A of the IROCP with EPA Regional Screening Levels updated in November 2015

ND<xx = Not Detected< Detection Limit

Results reported above detection limits are indicated in bold

Detection limits and reported concentrations at or above the Residential SSV or VDH are shaded.

NA = No IROCP SSV available

TEQ=Toxic Equivalency Quotient based on toxicity equivalency factors (TEF) from EPA document: "Mid-Atlantic Risk Assessment User's Guide: November 2013"

VDH = Vermont Department of Health Soil Screening Values

Total Benzo(a)Pyrene TEQ at or above the VDH or SSVs are shaded.



Soil Sampling Data Summary - Metals Burlington Waterfront Burlington, Vermont

Soil Sample	SB-1	SB-2	SB-3	SB-4	SB-5	SB-6	SB-7	SB-8	IROCP	VDH
Sample Depth (ft.)	0-2	6-8	0-2	0-2	0-2	4-6	1-4	1-4	SSV	Values
Sample Date	2/22/16	2/22/16	2/22/16	2/22/16	2/22/16	2/22/16	2/22/16	2/22/16	Industrial	
TOTAL METALS (mg/kg, dry)										
Total Arsenic	5.3	3.1	5.3	4.6	5.1	4.9	4.1	3.8	3.0	NA
Total Barium	39	20	43	41	41	45	25	33	220,000	NA
Total Cadmium	ND<0.5	980	65.6							
Total Chromium	17	13	14	16	16	16	14	15	NA	NA
Total Lead	28	3.8	26	11	14	32	7.5	16	800	NA
Total Mercury	ND<0.1	46	NA							
Total Selenium	ND<0.5	5,800	NA							
Total Silver	ND<0.5	5,800	NA							

NOTES:

All values reported in mg/kg, dry, unless otherwise indicated.

IROCP = April 2012 Investigation and Remediation of Contaminated Properties document updated May 2014

SSV= Soil Screening Values from Appendix A of the IROCP

ND < xx = Not Detected < Detection Limit

Results reported above detection limits are indicated in bold

Detection limits and reported concentrations at or above the Industrial SSV or VDH are shaded

NDC Means the published threshold is not directly comparable to the data as reported

VDH = Vermont Department of Health Soil Screening Values

NA = No IROCP SSV available



Soil Sampling Data Summary - TPH Burlington Waterfront Burlington, Vermont

Soil Sample	SB-1	SB-2	SB-3	SB-4	SB-5	SB-6	SB-7	SB-8	IROCP	
Sample Depth (ft.)	0-2	6-8	0-2	0-2	0-2	4-6	1-4	1-4	SSV	
Sample Date	2/22/16	2/22/16	2/22/16	2/22/16	2/22/16	2/22/16	2/22/16	2/22/16	Industrial	
TPH, EPA Method 8100										
TPH (mg/kg, dry)	31	ND<20	150	ND<20	30	250	ND<20	48	33,000	

NOTES:

All values reported in mg/kg, dry, unless otherwise indicated.

IROCP = April 2012 Investigation and Remediation of Contaminated Properties document

SSV = Soil Screening Values from Appendix A of the IROCP with EPA Regional Screening Levels updated in November 2015

ND<xx = Not Detected< Detection Limit

Results reported above detection limits are indicated in bold

Detection limits and reported concentrations at or above the Residential SSV are shaded.



Soil Sampling Data Summary - PCBs Burlington Waterfront Burlington, Vermont

Soil Sample	SB-1	SB-2	SB-3	SB-4	SB-5	SB-6	SB-7	SB-8	IROCP	VDH
Sample Depth (ft.)	0-2	0-2	0-2	0-2	0-2	4-6	1-4	1-4	SSV	Values
Sample Date	2/22/16	2/22/16	2/22/16	2/22/16	2/22/16	2/22/16	2/22/16	2/22/16	Industrial	
PCBs, EPA Method 8082 (mg/kg)										
Aroclor 1016	ND<0.02	27	NA							
Aroclor 1221	ND<0.02	0.83	NA							
Aroclor 1232	ND<0.02	0.72	NA							
Aroclor 1242	ND<0.02	0.95	NA							
Aroclor 1248	ND<0.02	0.95	NA							
Aroclor 1254	ND<0.02	ND<0.02	ND<0.02	0.10	ND<0.02	ND<0.02	ND<0.02	ND<0.02	0.97	NA
Aroclor 1260	ND<0.02	ND<0.02	ND<0.02	0.026	ND<0.02	ND<0.02	ND<0.02	ND<0.02	0.99	NA
Aroclor 1262	ND<0.02	NA	NA							
Aroclor 1268	ND<0.02	NA	NA							
Total Reported PCBs	ND	ND	ND	0.126	ND	ND	ND	ND	NA	0.120

NOTES

All values reported in mg/kg, dry, unless otherwise indicated.

IROCP = April 2012 Investigation and Remediation of Contaminated Properties document.

SSV= Soil Screening Values from Appendix A of the IROCP

ND < xx = Not Detected < Detection Limit

Results reported above detection limits are indicated in bold

Detection limits and reported concentrations at or above the Industrial SSV or VDH are shaded.

NA = No IROCP SSV available

VDH = Vermont Department of Health Soil Screening Values



APPENDIX D

ANALYTICAL LABORATORY REPORT



Jeremy Roberts KAS, Inc. PO Box 787 Williston, VT 05495



Subject: Laboratory Report

Eastern Analytical, Inc. ID: 153268

Client Identification: Burlington Waterfront | 512150387

Date Received: 2/23/2016

Dear Mr. Roberts:

Enclosed please find the laboratory report for the above identified project. All analyses were performed in accordance with our QA/QC Program. Unless otherwise stated, holding times, preservation techniques, container types, and sample conditions adhered to EPA Protocol. Samples which were collected by Eastern Analytical, Inc. (EAI) were collected in accordance with approved EPA procedures. Eastern Analytical, Inc. certifies that the enclosed test results meet all requirements of NELAP and other applicable state certifications. Please refer to our website at www.eailabs.com for a copy of our NELAP certificate and accredited parameters.

The following standard abbreviations and conventions apply to all EAI reports:

Solid samples are reported on a dry weight basis, unless otherwise noted

< : "less than" followed by the reporting limit

> : "greater than" followed by the reporting limit

%R: % Recovery

Eastern Analytical Inc. maintains certification in the following states: Connecticut (PH-0492), Maine (NH005), Massachusetts (M-NH005), New Hampshire/NELAP (1012), Rhode Island (269) and Vermont (VT1012).

The following information is contained within this report: Sample Conditions summary, Analytical Results/Data, Quality Control data (if requested) and copies of the Chain of Custody. This report may not be reproduced except in full, without the the written approval of the laboratory.

If you have any questions regarding the results contained within, please feel free to directly contact me or the chemist(s) who performed the testing in question. Unless otherwise requested, we will dispose of the sample(s) 30 days from the sample receipt date.

We appreciate this opportunity to be of service and look forward to your continued patronage.

Sincerely,

Lorraine Olashaw, Lab Director

3 · 3 · 16

Date

3 · 3 · 16

of pages (excluding cover letter)



Client: KAS, Inc.

Client Designation: Burlington Waterfront | 512150387

Temperature upon receipt (°C): 2.1

Received on ice or cold packs (Yes/No): Y

Acceptable temperature range (°C): 0-6

Lab ID	Sample ID	Date Received	Date Sampled	Sample Matrix	•	Exceptions/Comments (other than thermal preservation)
153268.01	GW	2/23/16	2/22/16	aqueous	Weight	Adheres to Sample Acceptance Policy
153268.02	SB-1 (0-2)	2/23/16	2/22/16	soil	85.3	Adheres to Sample Acceptance Policy
153268.03	SB-2 (0-2)	2/23/16	2/22/16	soil	88.9	Adheres to Sample Acceptance Policy
153268.04	SB-2 (6-8)	2/23/16	2/22/16	soil	83.4	Adheres to Sample Acceptance Policy
153268.05	SB-3 (0-2)	2/23/16	2/22/16	soil	89.2	Adheres to Sample Acceptance Policy
153268.06	SB-4 (0-2)	2/23/16	2/22/16	soil	90.0	Adheres to Sample Acceptance Policy
153268.07	SB-5 (0-2)	2/23/16	2/22/16	soil	87.6	Adheres to Sample Acceptance Policy
153268.08	SB-6 (4-6)	2/23/16	2/22/16	soil	90.7	Adheres to Sample Acceptance Policy
153268.09	SB-7 (1-4)	2/23/16	2/22/16	soil	85.8	Adheres to Sample Acceptance Policy
153268.1	SB-8 (1-4)	2/23/16	2/22/16	soil	88.9	Adheres to Sample Acceptance Policy
153268.11	Trip Blank	2/23/16	2/22/16	soil	100.0	Adheres to Sample Acceptance Policy
153268.12	Trip Blank	2/23/16	12/23/15	aqueous		Adheres to Sample Acceptance Policy

Samples were properly preserved and the pH measured when applicable unless otherwise noted. Analysis of solids for pH, Flashpoint, Ignitibility, Paint Filter, Corrosivity, Conductivity and Specific Gravity are reported on an "as received" basis.

Immediate analyses, pH, Total Residual Chlorine, Dissolved Oxygen and Sulfite, performed at the laboratory were run outside of the recommended 15 minute hold time.

All results contained in this report relate only to the above listed samples.

References include:

- 1) EPA 600/4-79-020, 1983
- 2) Standard Methods for Examination of Water and Wastewater, 20th Edition, 1998 and 22nd Edition, 2012
- 3) Test Methods for Evaluating Solid Waste SW 846 3rd Edition including updates IVA and IVB
- 4) Hach Water Analysis Handbook, 2nd edition, 1992

Client: KAS, Inc.

Sample ID:	GW	SB-1 (0-2)	SB-2 (6-8)	SB-3 (0-2)	SB-4 (0-2)	SB-5 (0-2)	SB-6 (4-6)
Lab Sample ID:	153268.01	153268.02	153268.04	153268.05	153268.06	153268.07	153268.08
Matrix:							
	aqueous	soil	soil	soil	soil	soil	soil
Date Sampled:	2/22/16	2/22/16	2/22/16	2/22/16	2/22/16	2/22/16	2/22/16
Date Received:	2/23/16	2/23/16	2/23/16	2/23/16	2/23/16	2/23/16	2/23/16
Units:	ug/l	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
Date of Analysis:	2/24/16	2/29/16	2/25/16	2/25/16	2/25/16	2/25/16	2/25/16
Analyst:	BAM	BML	BML	BML	BML	BML	BML
Method:	8260B	8260B	8260B	8260B	8260B	8260B	8260B
Dilution Factor:	1	1	1	1	1	1	1
2	·	·	•	•	•	•	•
Dichlorodifluoromethane	< 5	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Chloromethane	< 2	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Vinyl chloride	< 2	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Bromomethane Chloroethane	< 2 < 5	< 0.1 < 0.1	< 0.1 < 0.1	< 0.1 < 0.1	< 0.1 < 0.1	< 0.1 < 0.1	< 0.1 < 0.1
Trichlorofluoromethane	< 5	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Diethyl Ether	< 5	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Acetone	< 10	< 2	< 2	< 2	< 2	< 2	< 2
1,1-Dichloroethene	< 1	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Methylene chloride	< 5	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Carbon disulfide	< 5	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Methyl-t-butyl ether(MTBE) trans-1,2-Dichloroethene	< 5	< 0.1	< 0.1	< 0.1	⁷ < 0.1	< 0.1	< 0.1
1,1-Dichloroethane	< 2 < 2	< 0.05 < 0.05	< 0.05 < 0.05	< 0.05 < 0.05	< 0.05 < 0.05	< 0.05 < 0.05	< 0.05 < 0.05
2,2-Dichloropropane	< 2	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
cis-1,2-Dichloroethene	< 2	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
2-Butanone(MEK)	< 10	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
Bromochloromethane	< 2	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Tetrahydrofuran(THF)	< 10	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
Chloroform 1,1,1-Trichloroethane	< 2 < 2	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Carbon tetrachloride	< 2	< 0.05 < 0.05	< 0.05 < 0.05	< 0.05 < 0.05	< 0.05 < 0.05	< 0.05 < 0.05	< 0.05 < 0.05
1,1-Dichloropropene	< 2	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Benzene	< 1	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
1,2-Dichloroethane	< 2	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Trichloroethene	< 2	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
1,2-Dichloropropane	< 2	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Dibromomethane Bromodichloromethane	< 2 < 1	< 0.05 < 0.05	< 0.05 < 0.05	< 0.05 < 0.05	< 0.05 < 0.05	< 0.05 < 0.05	< 0.05 < 0.05
4-Methyl-2-pentanone(MIBK)	< 10	< 0.5	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
cis-1,3-Dichloropropene	< 1	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Toluene	< 1	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
trans-1,3-Dichloropropene	< 1	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
1,1,2-Trichloroethane	< 2	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
2-Hexanone Tetrachloroethene	< 10	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
1,3-Dichloropropane	< 2 < 2	< 0.05 < 0.05	< 0.05 < 0.05	< 0.05 < 0.05	< 0.05 < 0.05	< 0.05 < 0.05	< 0.05 < 0.05
Dibromochloromethane	< 2	< 0.05	< 0.05	< 0.05 < 0.05	< 0.05	< 0.05	< 0.05
1,2-Dibromoethane(EDB)	< 1	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Chlorobenzene	< 2	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
1,1,1,2-Tetrachloroethane	< 2	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Ethylbenzene	< 1	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
mp-Xylene o-Xylene	< 1	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Styrene	< 1 < 1	< 0.05 < 0.05	< 0.05 < 0.05	< 0.05 < 0.05	< 0.05 < 0.05	< 0.05 < 0.05	< 0.05 < 0.05
Bromoform	< 2	< 0.05	< 0.05 < 0.05	< 0.05	< 0.05	< 0.05	< 0.05
IsoPropylbenzene	< 1	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05 2
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LABORATORY REPORT

EAI ID#: 153268

Client: KAS, Inc.

Sample ID:	GW	SB-1 (0-2)	SB-2 (6-8)	SB-3 (0-2)	SB-4 (0-2)	SB-5 (0-2)	SB-6 (4-6)
Lab Sample ID:	153268.01	153268.02	153268.04	153268.05	153268.06	153268.07	153268.08
Matrix:	aqueous	soil	soil	soil	soil	soil	soil
Date Sampled:	2/22/16	2/22/16	2/22/16	2/22/16	2/22/16	2/22/16	2/22/16
Date Received:	2/23/16	2/23/16	2/23/16	2/23/16	2/23/16	2/23/16	2/23/16
Units:	ug/l	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
Date of Analysis:	2/24/16	2/29/16	2/25/16	2/25/16	2/25/16	2/25/16	2/25/16
Analyst:	BAM	BML	BML	BML	BML	BML	BML
Method:	8260B	8260B	8260B	8260B	8260B	8260B	8260B
Dilution Factor:	1	1	1	1	1	1	1
Bromobenzene	< 2	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
1,1,2,2-Tetrachloroethane	< 2	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
1,2,3-Trichloropropane	< 2	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
n-Propylbenzene	< 1	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
2-Chlorotoluene	< 2	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
4-Chlorotoluene	< 2	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
1,3,5-Trimethylbenzene	< 1	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
tert-Butylbenzene	< 1	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
1,2,4-Trimethylbenzene	< 1	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
sec-Butylbenzene	< 1	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
1,3-Dichlorobenzene	< 1	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
p-Isopropyltoluene	< 1	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
1,4-Dichlorobenzene	< 1	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
1,2-Dichlorobenzene	< 1	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
n-Butylbenzene	< 1	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
1,2-Dibromo-3-chloropropane	< 1	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
1,2,4-Trichlorobenzene	< 1	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Hexachlorobutadiene	< 1	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Naphthalene	< 5	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
1,2,3-Trichlorobenzene	< 1	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
4-Bromofluorobenzene (surr)	98 %R	97 %R	98 %R	98 %R	97 %R	98 %R	100 %R
1,2-Dichlorobenzene-d4 (surr)	106 %R	100 %R	101 %R	100 %R	100 %R	102 %R	100 %R
Toluene-d8 (surr)	96 %R	101 %R	99 %R	99 %R	99 %R	99 %R	101 %R

Client: KAS, Inc.

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Sample ID:	SB-7 (1-4)	SB-8 (1-4)	Trip Blank	Trip Blank	
Lab Sample ID:	153268.09	153268.1	153268.11	153268.12	
Matrix:	soil	soil	soil	aqueous	
Date Sampled:	2/22/16	2/22/16	2/22/16	12/23/15	
Date Received:	2/23/16	2/23/16	2/23/16	2/23/16	
Units:	mg/kg	mg/kg	mg/kg	ug/l	
				•	
Date of Analysis:	2/25/16	2/29/16	2/29/16	2/24/16	
Analyst:	BML	BML	BML	BAM	
Method:	8260B	8260B	8260B	8260B	
Dilution Factor:	1	1	1	1	
Dichlorodifluoromethane	< 0.1	< 0.1	< 0.1	< 5	
Chloromethane	< 0.1	< 0.1	< 0.1	< 2	
Vinyl chloride	< 0.1	< 0.1	< 0.1	< 2	
Bromomethane	< 0.1	< 0.1	< 0.1 < 0.1	< 2 < 5	
Chloroethane Trichlorofluoromethane	< 0.1 < 0.1	< 0.1 < 0.1	< 0.1 < 0.1	< 5 < 5	
Diethyl Ether	< 0.05	< 0.05	< 0.05	< 5	
Acetone	< 2	< 2	< 2	< 10	
1,1-Dichloroethene	< 0.05	< 0.05	< 0.05	< 1	
Methylene chloride	< 0.1	< 0.1	< 0.1	< 5	
Carbon disulfide	< 0.1	< 0.1	< 0.1	< 5	
Methyl-t-butyl ether(MTBE)	< 0.1	< 0.1	< 0.1	< 5	
rans-1,2-Dichloroethene 1,1-Dichloroethane	< 0.05 < 0.05	< 0.05 < 0.05	< 0.05 < 0.05	< 2 < 2	
2,2-Dichloropropane	< 0.05	< 0.05	< 0.05	< 2	
cis-1,2-Dichloroethene	< 0.05	< 0.05	< 0.05	< 2	
2-Butanone(MEK)	< 0.5	< 0.5	< 0.5	< 10	
Bromochloromethane	< 0.05	< 0.05	< 0.05	< 2	
Tetrahydrofuran(THF)	< 0.5	< 0.5	< 0.5	< 10	
Chloroform	< 0.05	< 0.05	< 0.05	< 2	
1,1,1-Trichloroethane	< 0.05 < 0.05	< 0.05 < 0.05	< 0.05 < 0.05	< 2 < 2	
Carbon tetrachloride 1,1-Dichloropropene	< 0.05 < 0.05	< 0.05	< 0.05	< 2	
Benzene	< 0.05	< 0.05	< 0.05	< 1	
1,2-Dichloroethane	< 0.05	< 0.05	< 0.05	< 2	
Trichloroethene	< 0.05	< 0.05	< 0.05	< 2	
1,2-Dichloropropane	< 0.05	< 0.05	< 0.05	< 2	
Dibromomethane	< 0.05	< 0.05	< 0.05	< 2	
Bromodichloromethane	< 0.05 < 0.5	< 0.05 < 0.5	< 0.05 < 0.5	< 1 < 10	
4-Methyl-2-pentanone(MIBK) cis-1,3-Dichloropropene	< 0.5 < 0.05	< 0.05	< 0.5 < 0.05	< 10	
Toluene	< 0.05	< 0.05	< 0.05	< 1	
trans-1,3-Dichloropropene	< 0.05	< 0.05	< 0.05	< 1	
1,1,2-Trichloroethane	< 0.05	< 0.05	< 0.05	< 2	
2-Hexanone	< 0.1	< 0.1	< 0.1	< 10	
Tetrachloroethene	< 0.05	< 0.05	< 0.05	< 2	
1,3-Dichloropropane	< 0.05	< 0.05	< 0.05	< 2 < 2	
Dibromochloromethane 1,2-Dibromoethane(EDB)	< 0.05 < 0.05	< 0.05 < 0.05	< 0.05 < 0.05	< 2 < 1	
Chlorobenzene	< 0.05	< 0.05	< 0.05	< 2	
1,1,1,2-Tetrachloroethane	< 0.05	< 0.05	< 0.05	< 2	
Ethylbenzene	< 0.05	< 0.05	< 0.05	< 1	
mp-Xylene	< 0.05	< 0.05	< 0.05	< 1	
o-Xylene	< 0.05	< 0.05	< 0.05	< 1	
Styrene	< 0.05	< 0.05	< 0.05	< 1	
Bromoform	< 0.05	< 0.05	< 0.05	< 2	
IsoPropylbenzene	< 0.05	< 0.05	< 0.05	< 1	



Client: KAS, Inc.

Sample ID:	SB-7 (1-4)	SB-8 (1-4)	Trip Blank	Trip Blank	
Lab Sample ID:	153268.09	153268.1	153268.11	153268.12	
Matrix:	soil	soil	soil	aqueous	
Date Sampled:	2/22/16	2/22/16	2/22/16	12/23/15	
Date Received:	2/23/16	2/23/16	2/23/16	2/23/16	
Units:	mg/kg	mg/kg	mg/kg	ug/l	
				_	
Date of Analysis:	2/25/16	2/29/16	2/29/16	2/24/16	
Analyst:	BML	BML	BML	BAM	
Method:	8260B	8260B	8260B	8260B	
Dilution Factor:	1	1	1	1	
Bromobenzene	< 0.05	< 0.05	< 0.05	< 2	
1,1,2,2-Tetrachloroethane	< 0.05	< 0.05	< 0.05	< 2	
1,2,3-Trichloropropane	< 0.05	< 0.05	< 0.05	< 2	
n-Propylbenzene	< 0.05	< 0.05	< 0.05	< 1	
2-Chlorotoluene	< 0.05	< 0.05	< 0.05	< 2	
4-Chlorotoluene	< 0.05	< 0.05	< 0.05	< 2	
1,3,5-Trimethylbenzene	< 0.05	< 0.05	< 0.05	< 1	
tert-Butylbenzene	< 0.05	< 0.05	< 0.05	< 1	
1,2,4-Trimethylbenzene	< 0.05	< 0.05	< 0.05	< 1	
sec-Butylbenzene	< 0.05	< 0.05	< 0.05	< 1	
1,3-Dichlorobenzene	< 0.05	< 0.05	< 0.05	< 1	
p-Isopropyltoluene	< 0.05	< 0.05	< 0.05	< 1	
1,4-Dichlorobenzene	< 0.05	< 0.05	< 0.05	< 1	
1,2-Dichlorobenzene	< 0.05	< 0.05	< 0.05	< 1	
n-Butylbenzene	< 0.05	< 0.05	< 0.05	< 1	
1,2-Dibromo-3-chloropropane	< 0.05	< 0.05	< 0.05	< 1	
1,2,4-Trichlorobenzene	< 0.05	< 0.05	< 0.05	< 1 < 1	
Hexachlorobutadiene	< 0.05	< 0.05 < 0.1	< 0.05 < 0.1	< 1 < 5	
Naphthalene	< 0.1 < 0.05	< 0.1	< 0.1	< 1	
1,2,3-Trichlorobenzene	98 %R	97 %R	97 %R	96 %R	
4-Bromofluorobenzene (surr) 1,2-Dichlorobenzene-d4 (surr)	101 %R	97 %R 99 %R	101 %R	104 %R	
	98 %R	99 %R	101 %R 102 %R	96 %R	
Toluene-d8 (surr)	98 %R	99 %R	102 %K	30 70K	

Client: KAS, Inc.

Parameter Name	Blank	LCS	LCSD	Analysis Date	Units	Limits	RPD	Method
Diebless dig.		00 (00 0/ 5)	,					
Dichlorodifluoromethane Chloromethane	< 5	20 (98 %R)	20 (100 %R) (2 RPD)		_	40 - 160		8260B
Chloromethane	< 2	19 (97 %R)	19 (95 %R) (2 RPD)		•	40 - 160		8260B
Vinyl chloride	< 2	18 (88 %R)	17 (87 %R) (1 RPD)		_	70 - 130		8260B
Bromomethane	< 2	22 (109 %R)	24 (119 %R) (9 RPD)		_	40 - 160		8260B
Chloroethane	< 5	21 (106 %R)	21 (107 %R) (1 RPD)		-	70 - 130		8260B
Trichlorofluoromethane	< 5 -	20 (98 %R)	19 (94 %R) (4 RPD)		-	70 - 130		8260B
Diethyl Ether	< 5	21 (106 %R)	22 (108 %R) (2 RPD)		_	70 - 130		8260B
Acetone	< 10	20 (107 %R)	20 (109 %R) (2 RPD)		_	40 - 160		8260B
1,1-Dichloroethene	< 1	18 (92 %R)	19 (94 %R) (2 RPD)		_	70 - 130		8260B
Methylene chloride	< 5	19 (93 %R)	19 (94 %R) (1 RPD)		_	70 - 130		8260B
Carbon disulfide	< 5	18 (92 %R)	18 (92 %R) (0 RPD)		_	70 - 130	20	8260B
Methyl-t-butyl ether(MTBE)	< 5	22 (108 %R)	21 (107 %R) (1 RPD)		_	70 - 130	20	8260B
trans-1,2-Dichloroethene	< 2	20 (98 %R)	20 (100 %R) (2 RPD)		•	70 - 130	20	8260B
1,1-Dichloroethane	< 2	20 (99 %R)	20 (99 %R) (0 RPD)	2/24/2016	ug/i	70 - 130	20	8260B
2,2-Dichloropropane	< 2	22 (109 %R)	22 (108 %R) (1 RPD)	2/24/2016	ug/l	70 - 130	20	8260B
cis-1,2-Dichloroethene	< 2	19 (96 %R)	19 (97 %R) (1 RPD)	2/24/2016	ug/l	70 - 130	20	8260B
2-Butanone(MEK)	< 10	20 (97 %R)	20 (98 %R) (1 RPD)	2/24/2016	ug/l	40 - 160	20	8260B
Bromochloromethane	< 2	20 (100 %R)	20 (101 %R) (1 RPD)	2/24/2016	ug/l	70 - 130	20	8260B
Tetrahydrofuran(THF)	< 10	20 (115 %R)	20 (118 %R) (3 RPD)	2/24/2016	ug/l	70 - 130	20	8260B
Chloroform	< 2	20 (100 %R)	20 (99 %R) (1 RPD)	2/24/2016	ug/l	70 - 130	20	8260B
1,1,1-Trichloroethane	< 2	21 (103 %R)	21 (103 %R) (0 RPD)	2/24/2016	ug/l	70 - 130	20	8260B
Carbon tetrachloride	< 2	21 (104 %R)	21 (105 %R) (1 RPD)	2/24/2016	ug/l	70 - 130	20	8260B
1,1-Dichloropropene	< 2	21 (104 %R)	21 (106 %R) (2 RPD)	2/24/2016	ug/l	70 - 130	20	8260B
Benzene	< 1	20 (102 %R)	21 (103 %R) (1 RPD)	2/24/2016	ug/l	70 - 130	20	8260B
1,2-Dichloroethane	< 2	20 (102 %R)	20 (101 %R) (1 RPD)	2/24/2016	ug/l	70 - 130	20	8260B
Trichloroethene	< 2	20 (99 %R)	20 (100 %R) (1 RPD)	2/24/2016	ug/l	70 - 130	20	8260B
1,2-Dichloropropane	< 2	20 (102 %R)	21 (104 %R) (2 RPD)	2/24/2016	ug/l	70 - 130	20	8260B
Dibromomethane	< 2	20 (102 %R)	20 (102 %R) (0 RPD)		_	70 - 130	20	8260B
Bromodichloromethane	< 1	23 (116 %R)	23 (117 %R) (1 RPD)	2/24/2016	ug/l	70 - 130	20	8260B
4-Methyl-2-pentanone(MIBK)	< 10	20 (117 %R)	20 (115 %R) (2 RPD)		ug/l	40 - 160	20	8260B
cis-1,3-Dichloropropene	< 1	24 (118 %R)	23 (117 %R) (1 RPD)	2/24/2016	-	70 - 130	20	8260B
Toluene	< 1	21 (105 %R)	21 (107 %R) (2 RPD)	2/24/2016	_	70 - 130	20	8260B
trans-1,3-Dichloropropene	< 1	22 (108 %R)	22 (109 %R) (1 RPD)	2/24/2016		70 - 130	20	8260B
1,1,2-Trichloroethane	< 2	21 (104 %R)	21 (105 %R) (1 RPD)			70 - 130	20	8260B
2-Hexanone	< 10	20 (117 %R)	20 (118 %R) (1 RPD)		-	40 - 160	20	8260B
Tetrachloroethene	< 2	19 (97 %R)	19 (97 %R) (0 RPD)		_	70 - 130	20	8260B
1,3-Dichloropropane	< 2	21 (107 %R)	21 (107 %R) (0 RPD)		-	70 - 130	20	8260B
Dibromochloromethane	< 2	23 (114 %R)	23 (114 %R) (0 RPD)		_	70 - 130	20	8260B
1,2-Dibromoethane(EDB)	- < 1	21 (106 %R)	22 (109 %R) (3 RPD)		_	70 - 130	20	8260B
Chlorobenzene	< 2	21 (104 %R)	21 (106 %R) (2 RPD)		_	70 - 130	20	8260B
1,1,1,2-Tetrachloroethane	< 2	21 (106 %R)	22 (108 %R) (2 RPD)	2/24/2016	-	70 - 130	20	8260B
Ethylbenzene	< 1	22 (108 %R)	22 (110 %R) (2 RPD)	2/24/2016		70 - 130	20	8260B
mp-Xylene	< 1	40 (99 %R)	40 (101 %R) (2 RPD)			70 - 130	20	8260B
o-Xylene	< 1	21 (107 %R)	22 (109 %R) (2 RPD)		_	70 - 130	20	8260B
Styrene	< 1	22 (110 %R)	22 (109 %R) (2 RPD) 22 (112 %R) (2 RPD)			70 - 130	20	8260B
Bromoform		22 (110 %R) 21 (106 %R)	22 (112 %R) (2 RPD) 22 (108 %R) (2 RPD)	2/24/2016	_	70 - 130	20	
Fastern Analytic		•	s com 1800 287 0525 1		-			82 6 0B



Client: KAS, Inc.

Client Designation: Burlington Waterfront | 512150387

Parameter Name	Blank	LCS	LCSD	Analysis Date	Units	Limits	RPD	Method
IsoPropylbenzene	< 1	21 (106 %R)	21 (107 %R) (1 RPD)	2/24/2016	ug/l	70 - 130	20	8260B
Bromobenzene	< 2	20 (101 %R)	20 (102 %R) (1 RPD)	2/24/2016	ug/l	70 - 130	20	8260B
1,1,2,2-Tetrachloroethane	< 2	21 (103 %R)	21 (105 %R) (2 RPD)	2/24/2016	ug/l	70 - 130	20	8260B
1,2,3-Trichloropropane	< 2	20 (100 %R)	20 (100 %R) (0 RPD)	2/24/2016	ug/l	70 - 130	20	8260B
n-Propylbenzene	< 1	21 (103 %R)	21 (104 %R) (1 RPD)	2/24/2016	ug/l	70 - 130	20	8260B
2-Chlorotoluene	< 2	20 (99 %R)	20 (101 %R) (2 RPD)	2/24/2016	ug/l	70 - 130	20	8260B
4-Chlorotoluene	< 2	20 (102 %R)	20 (102 %R) (0 RPD)	2/24/2016	ug/l	70 - 130	20	8260B
1,3,5-Trimethylbenzene	< 1	21 (106 %R)	21 (106 %R) (0 RPD)	2/24/2016	ug/l	70 - 130	20	8260B
tert-Butylbenzene	< 1	22 (108 %R)	22 (111 %R) (3 RPD)	2/24/2016	ug/l	70 - 130	20	8260B
1,2,4-Trimethylbenzene	< 1	21 (106 %R)	21 (107 %R) (1 RPD)	2/24/2016	ug/l	70 - 130	20	8260B
sec-Butylbenzene	< 1	21 (107 %R)	22 (109 %R) (2 RPD)	2/24/2016	ug/l	70 - 130	20	8260B
1,3-Dichlorobenzene	< 1	20 (101 %R)	20 (102 %R) (1 RPD)	2/24/2016	ug/l	70 - 130	20	8260B
p-Isopropyltoluene	< 1	22 (108 %R)	22 (111 %R) (3 RPD)	2/24/2016	ug/l	70 - 130	20	8260B
1,4-Dichlorobenzene	< 1	20 (99 %R)	20 (101 %R) (2 RPD)	2/24/2016	ug/l	70 - 130	20	8260B
1,2-Dichlorobenzene	< 1	20 (101 %R)	20 (102 %R) (1 RPD)	2/24/2016	ug/l	70 - 130	20	8260B
n-Butylbenzene	< 1	22 (111 %R)	22 (111 %R) (0 RPD)	2/24/2016	ug/l	70 - 130	20	8260B
1,2-Dibromo-3-chloropropane	< 1	22 (108 %R)	22 (109 %R) (1 RPD)	2/24/2016	ug/l	70 - 130	20	8260B
1,2,4-Trichlorobenzene	< 1	21 (107 %R)	22 (110 %R) (3 RPD)	2/24/2016	ug/l	70 - 130	20	8260B
Hexachlorobutadiene	< 1	20 (100 %R)	20 (100 %R) (0 RPD)	2/24/2016	ug/l	70 - 130	20	8260B
Naphthalene	< 5	23 (117 %R)	25 (123 %R) (5 RPD)	2/24/2016	ug/l	70 - 130	20	8260B
1,2,3-Trichlorobenzene	< 1	21 (104 %R)	22 (109 %R) (5 RPD)	2/24/2016	ug/l	70 - 130	20	8260B
4-Bromofluorobenzene (surr)	99 %R	102 %R	105 %F	2/24/2016	% Rec	70 - 130	50	8260B
1,2-Dichlorobenzene-d4 (surr)	101 %R	99 %R	101 %F	2/24/2016	% Rec	70 - 130	50	8260B
Toluene-d8 (surr)	101 %R	99 %R	99 %R	2/24/2016	% Rec	70 - 130	50	8260B

Samples were extracted and analyzed within holding time limits.

Instrumentation was calibrated in accordance with the method requirements.

The method blanks were free of contamination at the reporting limits.

Sample surrogate recoveries met the above stated criteria.

The associated matrix spikes and/or Laboratory Control Samples met acceptance criteria.

There were no exceptions in the analyses, unless noted.

*/! Flagged analyte recoveries deviated from the QA/QC limits. Unless noted below, flagged analytes that exceed acceptance limits in the Quality Control sample were not detected in the field samples.

Analytes that exceed limits high but are not detected in the field samples do not impact the data. For analytes that show low recovery and are not detected in the field samples, a low point calibration standard has been analyzed to support the reporting limit.

Client: KAS, Inc.

Parameter Name	Blank	LCS	LCSD	Analysis Date	Units	Limits	RPD	Method
Dichlorodifluoromethane	< 0.1			2/25/2016	mg/kg			8260B
Chloromethane	< 0.1			2/25/2016	mg/kg			8260B
Vinyl chloride	< 0.1			2/25/2016	mg/kg			8260B
Bromomethane	< 0.1			2/25/2016	mg/kg			8260B
Chloroethane	< 0.1			2/25/2016	mg/kg			8260B
Trichlorofluoromethane	< 0.1			2/25/2016	mg/kg			8260B
Diethyl Ether	< 0.05			2/25/2016	mg/kg			8260B
Acetone	< 2			2/25/2016	mg/kg			8260B
1,1-Dichloroethene	< 0.05	0.89 (89 %R)	0.89 (89 %R) (0 RPD)	2/25/2016		59 - 172	20	8260B
Methylene chloride	< 0.1	,	, ,, ,	2/25/2016	mg/kg			8260B
Carbon disulfide	< 0.1			2/25/2016	mg/kg			8260B
Methyl-t-butyl ether(MTBE)	< 0.1			2/25/2016	mg/kg			8260B
trans-1,2-Dichloroethene	< 0.05			2/25/2016	mg/kg			8260B
1,1-Dichloroethane	< 0.05			2/25/2016	mg/kg			8260B
2,2-Dichloropropane	< 0.05			2/25/2016	mg/kg			8260B
cis-1,2-Dichloroethene	< 0.05			2/25/2016	mg/kg			8260B
2-Butanone(MEK)	< 0.5			2/25/2016	mg/kg			8260B
Bromochloromethane	< 0.05			2/25/2016	mg/kg			8260B
Tetrahydrofuran(THF)	< 0.5			2/25/2016	mg/kg			8260B
Chloroform	< 0.05			2/25/2016	mg/kg			8260B
1,1,1-Trichloroethane	< 0.05			2/25/2016	mg/kg			8260B
Carbon tetrachloride	< 0.05			2/25/2016	mg/kg			8260B
1,1-Dichloropropene	< 0.05			2/25/2016	mg/kg			8260B
Benzene	< 0.05	1.1 (107 %R)	1.1 (107 %R) (0 RPD)	2/25/2016	mg/kg	66 - 142	20	8260B
1,2-Dichloroethane	< 0.05	,	, , , ,	2/25/2016	mg/kg			8260B
Trichloroethene	< 0.05	1.1 (107 %R)	1.1 (108 %R) (1 RPD)	2/25/2016		62 - 137	20	8260B
1,2-Dichloropropane	< 0.05		, , , , ,	2/25/2016	mg/kg			8260B
Dibromomethane	< 0.05			2/25/2016	mg/kg			8260B
Bromodichloromethane	< 0.05			2/25/2016	mg/kg			8260B
4-Methyl-2-pentanone(MIBK)	< 0.5			2/25/2016	mg/kg			8260B
cis-1,3-Dichloropropene	< 0.05			2/25/2016	mg/kg			8260B
Toluene	< 0.05	1.1 (108 %R)	1.1 (108 %R) (0 RPD)	2/25/2016	mg/kg	59 - 139	20	8260B
trans-1,3-Dichloropropene	< 0.05			2/25/2016	mg/kg			8260B
1,1,2-Trichloroethane	< 0.05			2/25/2016	mg/kg			8260B
2-Hexanone	< 0.1			2/25/2016	mg/kg			8260B
Tetrachloroethene	< 0.05			2/25/2016	mg/kg			8260B
1,3-Dichloropropane	< 0.05			2/25/2016	mg/kg			8260B
Dibromochloromethane	< 0.05			2/25/2016	mg/kg			8260B
1,2-Dibromoethane(EDB)	< 0.05			2/25/2016	mg/kg			8260B
Chlorobenzene	< 0.05	1.1 (108 %R)	1.1 (109 %R) (1 RPD)	2/25/2016	mg/kg	60 - 133	20	8260B
1,1,1,2-Tetrachloroethane	< 0.05			2/25/2016	mg/kg			8260B
Ethylbenzene	< 0.05			2/25/2016	mg/kg			8260B
mp-Xylene	< 0.05			2/25/2016	mg/kg			8260B
o-Xylene	< 0.05			2/25/2016	mg/kg			8260B
Styrene	< 0.05			2/25/2016	mg/kg			8260B
Bromoform	< 0.05			2/25/2016	mg/kg			8260B
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Client: KAS, Inc.

Client Designation: Burlington Waterfront | 512150387

Parameter Name	Blank	LCS	LCSD	Analysis Date	Units	Limits	RPD	Method
IsoPropylbenzene	< 0.05	•		2/25/2016	mg/kg			8260B
Bromobenzene	< 0.05			2/25/2016	mg/kg			8260B
1,1,2,2-Tetrachloroethane	< 0.05			2/25/2016	mg/kg			8260B
1,2,3-Trichloropropane	< 0.05			2/25/2016	mg/kg			8260B
n-Propylbenzene	< 0.05			2/25/2016	mg/kg			8260B
2-Chlorotoluene	< 0.05			2/25/2016	mg/kg			8260B
4-Chlorotoluene	< 0.05			2/25/2016	mg/kg			8260B
1,3,5-Trimethylbenzene	< 0.05			2/25/2016	mg/kg			8260B
tert-Butylbenzene	< 0.05			2/25/2016	mg/kg			8260B
1,2,4-Trimethylbenzene	< 0.05			2/25/2016	mg/kg			8260B
sec-Butylbenzene	< 0.05			2/25/2016	mg/kg			8260B
1,3-Dichlorobenzene	< 0.05			2/25/2016	mg/kg			8260B
p-Isopropyltoluene	< 0.05			2/25/2016	mg/kg			8260B
1,4-Dichlorobenzene	< 0.05			2/25/2016	mg/kg			8260B
1,2-Dichlorobenzene	< 0.05			2/25/2016	mg/kg			8260B
n-Butylbenzene	< 0.05			2/25/2016	mg/kg			8260B
1,2-Dibromo-3-chloropropane	< 0.05			2/25/2016	mg/kg			8260B
1,2,4-Trichlorobenzene	< 0.05			2/25/2016	mg/kg			8260B
Hexachlorobutadiene	< 0.05			2/25/2016	mg/kg			8260B
Naphthalene	< 0.1			2/25/2016	mg/kg			8260B
1,2,3-Trichlorobenzene	< 0.05			2/25/2016	mg/kg			8260B
4-Bromofluorobenzene (surr)	97 %R	99 %R	96 %F	R 2/25/2016	% Rec	70 - 130	20	8260B
1,2-Dichlorobenzene-d4 (surr)	102 %R	100 %R	101 %Թ	R 2/25/2016	% Rec	70 - 130	20	8260B
Toluene-d8 (surr)	98 %R	99 %R	99 %I	R 2/25/2016	% Rec	70 - 130	20	8260B

Samples were extracted and analyzed within holding time limits.

Instrumentation was calibrated in accordance with the method requirements.

The method blanks were free of contamination at the reporting limits.

Sample surrogate recoveries met the above stated criteria.

The associated matrix spikes and/or Laboratory Control Samples met acceptance criteria.

There were no exceptions in the analyses, unless noted.

*/! Flagged analyte recoveries deviated from the QA/QC limits. Unless noted below, flagged analytes that exceed acceptance limits in the Quality Control sample were not detected in the field samples.

Analytes that exceed limits high but are not detected in the field samples do not impact the data. For analytes that show low recovery and are not detected in the field samples, a low point calibration standard has been analyzed to support the reporting limit.



Client: KAS, Inc.

Client Designation: Burlington Waterfront | 512150387

Client Sample ID:	SB-1 (0-2)				,
Lab Sample ID:	153268.02				
Matrix:	soil				
Date Sampled:	2/22/16				
Date Received:	2/23/16				
Date Prepared:	2/24/16				
Units	mg/kg				
Method	8270D				
Analyst	JMR				
		Dilution			
	Results	Factor	Date Analyzed	TEF	TEQ
laphthalene	0.030	1	2/24/16		
-Methylnaphthalene	0.033	1	2/24/16		
cenaphthylene	0.0096	1	2/24/16		
cenaphthene	< 0.008	1	2/24/16		
luorene	< 0.008	1	2/24/16		
henanthrene	0.085	1	2/24/16		
nthracene	0.020	1	2/24/16		
uoranthene	0.13	1	2/24/16		
yrene	0.10	1	2/24/16		
enzo[a]anthracene	0.058	1	2/24/16	0.1	.0058
hrysene	0.064	1	2/24/16	0.001	.000064
enzo[b]fluoranthene	0.083	1	2/24/16	0.1	.0083
enzo[k]fluoranthene	0.032	1	2/24/16	0.01	.00032
enzo[a]pyrene	0.063	1	2/24/16	1	.063
deno[1,2,3-cd]pyrene	0.057	1	2/24/16	0.1	.0057
ibenz[a,h]anthracene	0.014	1	2/24/16	1	.014
enzo[g,h,i]perylene	0.056	1	2/24/16		
-Terphenyl-D14 (surr)	58 %R		2/24/16		

TEF: Toxicity Equivalent Factor

TEQ: Toxicity Equivalence to Benzo[a]pyrene

The TEF factors set forth in this report are taken from the following EPA document: "Mid- Atlantic Risk Assessment User's Guide: November 2013". This guidance document sets forth a recommended, but not mandatory approach based upon currently available information with respect to risk assessment for response actions at CERCLA sites. This document does not establish binding rules. This document contains the most current TEF values per VT IROCP.



Client: KAS, Inc.

Client Designation: Burlington Waterfront | 512150387

Client Sample ID:	SB-2 (6-8)				
Lab Sample ID:	153268.04				
Matrix:	soil				
Date Sampled:	2/22/16				
Date Received:	2/23/16				
Date Prepared:	2/24/16				
Units	mg/kg				
Method	8270D				
Analyst	JMR				
	Results	Dilution Factor	Date Analyzed	TEF	TEQ
aphthalene	< 0.008	1	2/24/16		
Methylnaphthalene	< 0.008	1	2/24/16		
cenaphthylene	< 0.008	1	2/24/16		
cenaphthene	< 0.008	1	2/24/16		
uorene	< 0.008	1	2/24/16		
nenanthrene	< 0.008	1	2/24/16		
nthracene	< 0.008	1	2/24/16		
uoranthene	< 0.008	1	2/24/16		
yrene	< 0.008	1	2/24/16		
enzo[a]anthracene	< 0.008	1	2/24/16	0.1	< .0008
hrysene	< 0.008	1	2/24/16	0.001	< .00000
enzo[b]fluoranthene	< 0.008	1	2/24/16	0.1	< .0008
nzo[k]fluoranthene	< 0.008	1	2/24/16	0.01	< .00008
nzo[a]pyrene	< 0.008	1	2/24/16	1	< .008
deno[1,2,3-cd]pyrene	< 0.008	1	2/24/16	0.1	< .0008
benz[a,h]anthracene	< 0.008	1	2/24/16	1	< .008
enzo[g,h,i]perylene	< 0.008	1	2/24/16		
-Terphenyl-D14 (surr)	49 %R		2/24/16		

TEF: Toxicity Equivalent Factor

TEQ: Toxicity Equivalence to Benzo[a]pyrene

The TEF factors set forth in this report are taken from the following EPA document: "Mid- Atlantic Risk Assessment User's Guide: November 2013". This guidance document sets forth a recommended, but not mandatory approach based upon currently available information with respect to risk assessment for response actions at CERCLA sites. This document does not establish binding rules. This document contains the most current TEF values per VT IROCP.



Client: KAS, Inc.

Client Designation: Burlington Waterfront | 512150387

Sample ID: SB-3 (0-2) Sample ID: 153268.05
six: soil 2/22/16 2/22/16 2/23/16 2/23/16 2/24
Sampled: 2/22/16 Received: 2/23/16 Prepared: 2/24/16 Sampled: 2/24/16 Prepared: 2/24/16 Prepar
2/23/16 2 Prepared: 2/24/16 2 Is mg/kg hod 8270D lyst JMR Dilution Results Factor Date Analyzed TEF TEQ 1thalene 0.038 1 2/24/16 1thylnaphthalene 0.048 1 2/24/16 1aphthylene 0.024 1 2/24/16
Received: 2/23/16
mg/kg hod 8270D lyst JMR Dilution Results Factor Date Analyzed TEF TEQ withalene 0.038 1 2/24/16 thylnaphthalene 0.048 1 2/24/16 aphthylene 0.024 1 2/24/16
hod 8270D JMR Dilution Results Factor Date Analyzed TEF TEQ athalene 0.038 1 2/24/16 2/24/16 thylnaphthalene 0.048 1 2/24/16 2/24/16 aphthylene 0.024 1 2/24/16
hod 8270D JMR Dilution Results Factor Date Analyzed TEF TEQ athalene 0.038 1 2/24/16 2/24/16 thylnaphthalene 0.048 1 2/24/16 2/24/16 aphthylene 0.024 1 2/24/16
JMR Dilution TEQ Male Analyzed TEF TEQ Inthalene 0.038 1 2/24/16 </td
Results Factor Date Analyzed TEF TEQ athalene 0.038 1 2/24/16 2/24/16 thylnaphthalene 0.048 1 2/24/16 2/24/16 aphthylene 0.024 1 2/24/16
thalene 0.038 1 2/24/16 thylnaphthalene 0.048 1 2/24/16 aphthylene 0.024 1 2/24/16
thylnaphthalene 0.048 1 2/24/16 aphthylene 0.024 1 2/24/16
aphthylene 0.024 1 2/24/16
aphthene 0.022 1 2/24/16
rene 0.023 1 2/24/16
anthrene 0.28 1 2/24/16
racene 0.086 1 2/24/16
anthene 0.46 1 2/24/16
ne 0.32 1 2/24/16
o[a]anthracene 0.20 1 2/24/16 0.1 .02
sene 0.22 1 2/24/16 0.001 .00022
o[b]fluoranthene 0.28 1 2/24/16 0.1 .028
o[k]fluoranthene 0.10 1 2/24/16 0.01 .001
o[a]pyrene 0.21 1 2/24/16 1 .21
no[1,2,3-cd]pyrene 0.10 1 2/24/16 0.1 .01
nz[a,ḫ]anthracene 0.030 1 2/24/16 1 .03
o[g,h,i]perylene 0.087 1 2/24/16
rphenyl-D14 (surr) 37 %R 2/24/16

TEF: Toxicity Equivalent Factor

TEQ: Toxicity Equivalence to Benzo[a]pyrene

The TEF factors set forth in this report are taken from the following EPA document: "Mid- Atlantic Risk Assessment User's Guide: November 2013". This guidance document sets forth a recommended, but not mandatory approach based upon currently available information with respect to risk assessment for response actions at CERCLA sites. This document does not establish binding rules. This document contains the most current TEF values per VT IROCP.



Client: KAS, Inc.

Client Designation: Burlington Waterfront | 512150387

Client Sample ID:	SB-4 (0-2)				
_ab Sample ID:	153268.06				
latrix:	soil				
Date Sampled:	2/22/16				
Pate Received:	2/23/16				
ate Prepared:	2/24/16				
nits	mg/kg				
ethod	8270D				
nalyst	JMR				
	Sivii	Dilution			
	Results	Factor	Date Analyzed	TEF	TEQ
phthalene	< 0.008	1	2/24/16		
lethylnaphthalene	< 0.008	1	2/24/16		
enaphthylene	0.014	1	2/24/16		
enaphthene	< 0.008	1	2/24/16		
orene	< 0.008	1	2/24/16		
enanthrene	0.013	1	2/24/16		
nracene	0.0083	1	2/24/16		
oranthene	0.025	1	2/24/16		
ene	0.022	1	2/24/16		
nzo[a]anthracene	0.020	1	2/24/16	0.1	.002
rysene	0.017	1	2/24/16	0.001	.000017
nzo[b]fluoranthene	0.030	1	2/24/16	0.1	.003
zo[k]fluoranthene	0.011	1	2/24/16	0.01	.00011
zo[a]pyrene	0.026	1	2/24/16	1	.026
eno[1,2,3-cd]pyrene	0.019	1	2/24/16	0.1	.0019
enz[a,h]anthracene	< 0.008	1	2/24/16	1	< .008
nzo[g,h,i]perylene	0.016	1	2/24/16		
erphenyl-D14 (surr)	51 %R		2/24/16		

TEF: Toxicity Equivalent Factor

TEQ: Toxicity Equivalence to Benzo[a]pyrene



Client: KAS, Inc.

Client Designation: Burlington Waterfront | 512150387

Client Sample ID:	SB-5 (0-2)				
Lab Sample ID:	153268.07				
Matrix:	soil				
Date Sampled:	2/22/16				
Date Received:	2/23/16				
Date Prepared:	2/24/16				
Units	mg/kg				
Method	8270D				
Analyst	JMR				
		Dilution			
	Results	Factor	Date Analyzed	TEF	TEQ
laphthalene	< 0.008	1	2/24/16		
Methylnaphthalene	< 0.008	1	2/24/16		
cenaphthylene	0.010	1	2/24/16		
cenaphthene	0.0085	1	2/24/16		
uorene	0.011	1	2/24/16		
henanthrene	0.13	1	2/24/16		
nthracene	0.040	1	2/24/16		
uoranthene	0.18	1	2/24/16		
yrene	0.13	1	2/24/16		
enzo[a]anthracene	0.081	1	2/24/16	0.1	.0081
hrysene	0.078	1	2/24/16	0.001	.000078
enzo[b]fluoranthene	0.096	1	2/24/16	0.1	.0096
enzo[k]fluoranthene	0.036	1	2/24/16	0.01	.00036
enzo[a]pyrene	0.081	1	2/24/16	1	.081
deno[1,2,3-cd]pyrene	0.045	1	2/24/16	0.1	.0045
benz[a,h]anthracene	0.013	1	2/24/16	1	.013
enzo[g,h,i]perylene	0.038	1	2/24/16		

TEF: Toxicity Equivalent Factor

TEQ: Toxicity Equivalence to Benzo[a]pyrene



Client: KAS, Inc.

Client Designation: Burlington Waterfront | 512150387

Client Sample ID:	SB-6 (4-6)				
Lab Sample ID:	153268.08				
Matrix:	soil				
Date Sampled:	2/22/16				
Date Received:	2/23/16				
Date Prepared:	2/24/16				
Units	mg/kg				
Method	8270D				
Analyst	JMR				
		Dilution	Data Analysis	TEF	TEQ
	Results	Factor	Date Analyzed	IEF	IEQ
Naphthalene	0.0098	1	2/24/16		
-Methylnaphthalene	< 0.008	1	2/24/16		
Acenaphthylene	0.087	1	2/24/16		
cenaphthene	< 0.008	1	2/24/16		
-luorene	0.0083	1	2/24/16		
henanthrene	0.056	1	2/24/16		
nthracene	0.054	1	2/24/16		
luoranthene	0.31	1	2/24/16		
yrene	0.26	1	2/24/16		
enzo[a]anthracene	0.20	1	2/24/16	0.1	.02
Chrysene	0.21	1	2/24/16	0.001	.00021
senzo[b]fluoranthene	0.35	1	2/24/16	0.1	.035
enzo[k]fluoranthene	0.14	1	2/24/16	0.01	.0014
enzo[a]pyrene	0.27	1	2/24/16	1	.27
ndeno[1,2,3-cd]pyrene	0.11	1	2/24/16	0.1	.011
Dibenz[a,h]anthracene	0.038	1	2/24/16	1	.038
Benzo[g,h,i]perylene	0.11	1	2/24/16		
o-Terphenyl-D14 (surr)	38 %R		2/24/16		
, ,					

TEF: Toxicity Equivalent Factor

TEQ: Toxicity Equivalence to Benzo[a]pyrene



Client: KAS, Inc.

Client Designation: Burlington Waterfront | 512150387

Client Sample ID:	SB-7 (1-4)				
Lab Sample ID:	153268.09				
Matrix:	soil				
Date Sampled:	2/22/16				
Date Received:	2/23/16				
Date Prepared:	2/24/16				
Units	mg/kg				
Method	8270D				
Analyst					
	JMR	Dilution			
	Results	Factor	Date Analyzed	TEF	TEQ
Naphthalene	< 0.008	1	2/24/16		
2-Methylnaphthalene	< 0.008	1	2/24/16		
Acenaphthylene	< 0.008	1	2/24/16		
Acenaphthene	< 0.008	1	2/24/16		
Fluorene	< 0.008	1	2/24/16		
Phenanthrene	< 0.008	1	2/24/16		
Anthracene	< 0.008	1	2/24/16		
Fluoranthene	< 0.008	1	2/24/16		
Pyrene	< 0.008	1	2/24/16		
Benzo[a]anthracene	< 0.008	1	2/24/16	0.1	< .0008
Chrysene	< 0.008	1	2/24/16	0.001	< .00000
Benzo[b]fluoranthene	< 0.008	1	2/24/16	0.1	< .0008
Benzo[k]fluoranthene	< 0.008	1	2/24/16	0.01	< .00008
Benzo[a]pyrene	< 0.008	1	2/24/16	1	< .008
Indeno[1,2,3-cd]pyrene	< 0.008	1	2/24/16	0.1	< .0008
Dibenz[a,h]anthracene	< 0.008	1	2/24/16	1	< .008
Benzo[g,h,i]perylene	< 0.008	1	2/24/16		
p-Terphenyl-D14 (surr)	43 %R		2/24/16		

TEF: Toxicity Equivalent Factor

TEQ: Toxicity Equivalence to Benzo[a]pyrene



Client: KAS, Inc.

Client Designation: Burlington Waterfront | 512150387

Client Sample ID:	SB-8 (1-4)				
Lab Sample ID:	153268.1				
Matrix:	soil				
Date Sampled:	2/22/16				
Date Received:	2/23/16				
Date Prepared:	2/24/16				
Units	mg/kg				
Method	8270D				
Analyst					
•	JMR	Dilution			
	Results	Factor	Date Analyzed	TEF	TEQ
Naphthalene	0.022	1	2/24/16		
2-Methylnaphthalene	0.028	1	2/24/16		
Acenaphthylene	0.038	1	2/24/16		
Acenaphthene	0.0082	1	2/24/16		
Fluorene	0.012	1	2/24/16		
Phenanthrene	0.079	1	2/24/16		
inthracene	0.051	1	2/24/16		
luoranthene	0.31	1	2/24/16		
^o yrene	0.28	1	2/24/16		
Benzo[a]anthracene	0.18	1	2/24/16	0.1	.018
Chrysene	0.20	1	2/24/16	0.001	.0002
Benzo[b]fluoranthene	0.36	1	2/24/16	0.1	.036
Benzo[k]fluoranthene	0.12	1	2/24/16	0.01	.0012
Senzo[a]pyrene	0.26	1	2/24/16	1	.26
ndeno[1,2,3-cd]pyrene	0.17	1	2/24/16	0.1	.017
Dibenz[a,h]anthracene	0.041	1	2/24/16	1	.041
Benzo[g,h,i]perylene	0.14	1	2/24/16		
o-Terphenyl-D14 (surr)	48 %R		2/24/16		

TEF: Toxicity Equivalent Factor

TEQ: Toxicity Equivalence to Benzo[a]pyrene



Batch ID: 635919-22149/S022416PAH1

Client: **KAS, Inc.**Client Designation:

Burlington Waterfront | 512150387

Parameter Name	Blank	LCS	LCSD	Analysis Date	Units	Limits	RPD	Method
Naphthalene	< 0.007	1.1 (68 %R)	1.0 (61 %R) (11 RPD) 2/24/2016	mg/kg	40 - 140	30	8270D
2-Methylnaphthalene	< 0.007	1.2 (75 %R)	1.1 (67 %R) (11 RPD) 2/24/2016	mg/kg	40 - 140	30	8270D
Acenaphthylene	< 0.007	1.1 (68 %R)	1.0 (62 %R) (9 RPD) 2/24/2016	mg/kg	40 - 140	30	8270D
Acenaphthene	< 0.007	1.0 (62 %R)	0.94 (56 %R) (10 RPD) 2/24/2016	mg/kg	40 - 140	30	8270D
Fluorene	< 0.007	1.2 (74 %R)	1.1 (68 %R) (8 RPD) 2/24/2016	mg/kg	40 - 140	30	8270D
Phenanthrene	< 0.007	1.3 (76 %R)	1.2 (70 %R) (8 RPD) 2/24/2016	mg/kg	40 - 140	30	8270D
Anthracene	< 0.007	1.3 (78 %R)	1.2 (73 %R) (7 RPD) 2/24/2016	mg/kg	40 - 140	30	8270D
Fluoranthene	< 0.007	1.5 (91 %R)	1.4 (86 %R) (6 RPD) 2/24/2016	mg/kg	40 - 140	30	8270D
Pyrene	< 0.007	1.5 (89 %R)	1.4 (85 %R) (5 RPD) 2/24/2016	mg/kg	40 - 140	30	8270D
Benzo[a]anthracene	< 0.007	1.5 (90 %R)	1.5 (88 %R) (2 RPD) 2/24/2016	mg/kg	40 - 140	30	8270D
Chrysene	< 0.007	1.4 (87 %R)	1.4 (84 %R) (4 RPD) 2/24/2016	mg/kg	40 - 140	30	8270D
Benzo[b]fluoranthene	< 0.007	1.6 (96 %R)	1.5 (92 %R) (4 RPD) 2/24/2016	mg/kg	40 - 140	30	8270D
Benzo[k]fluoranthene	< 0.007	1.5 (91 %R)	1.5 (88 %R) (3 RPD) 2/24/2016	mg/kg	40 - 140	30	8270D
Benzo[a]pyrene	< 0.007	1.6 (95 %R)	1.5 (91 %R) (4 RPD) 2/24/2016	mg/kg	40 - 140	30	8270D
indeno[1,2,3-cd]pyrene	< 0.007	1.6 (96 %R)	1.5 (92 %R) (4 RPD) 2/24/2016	mg/kg	40 - 140	30	8270D
Dibenz[a,h]anthracene	< 0.007	1.6 (93 %R)	1.5 (90 %R) (3 RPD) 2/24/2016	mg/kg	40 - 140	30	8270D
Benzo[g,h,i]perylene	< 0.007	1.5 (89 %R)	1.4 (86 %R) (3 RPD) 2/24/2016		40 - 140		8270D
p-Terphenyl-D14 (surr)	68 %R	72 %R	69 %F	R 2/24/2016		30 - 130		8270D

Samples were extracted and analyzed within holding time limits.

Instrumentation was calibrated in accordance with the method requirements.

The method blanks were free of contamination at the reporting limits.

Sample surrogate recoveries met the above stated criteria.

The associated matrix spikes and/or Laboratory Control Samples met acceptance criteria.

There were no exceptions in the analyses, unless noted.

*/! Flagged analyte recoveries deviated from the QA/QC limits. Unless noted below, flagged analytes that exceed acceptance limits in the Quality Control sample were not detected in the field samples.



Client: KAS, Inc.

Client Designation: Burlington Waterfront | 512150387

Sample ID:	SB-1 (0-2)	SB-2 (6-8)	SB-3 (0-2)	SB-4 (0-2)	SB-5 (0-2)	SB-6 (4-6)	SB-7 (1-4)
Lab Sample ID:	153268.02	153268.04	153268.05	153268.06	153268.07	153268.08	153268.09
Matrix:	soil						
Date Sampled:	2/22/16	2/22/16	2/22/16	2/22/16	2/22/16	2/22/16	2/22/16
Date Received:	2/23/16	2/23/16	2/23/16	2/23/16	2/23/16	2/23/16	2/23/16
Units:	mg/kg						
Date of Extraction/Prep:	2/24/16	2/24/16	2/24/16	2/24/16	2/24/16	2/24/16	2/24/16
Date of Analysis:	2/24/16	2/24/16	2/24/16	2/24/16	2/25/16	2/24/16	2/24/16
Analyst:	SS						
Method:	8100mod						
Dilution Factor:	1	1	1	1	1	1	1
TPH (C9-C40)	31	< 20	150	< 20	30	250	< 20
p-Terphenyl-D14 (surr)	62 %R	49 %R	61 %R	56 %R	51 %R	63 %R	49 %R



Client: KAS, Inc.

Client Designation: Burlington Waterfront | 512150387

Sample ID:

SB-8 (1-4)

Lab Sample ID:	153268.1
Matrix:	soil
Date Sampled:	2/22/16
Date Received:	2/23/16
Units:	mg/kg
Date of Extraction/Prep:	2/24/16
Date of Analysis:	2/24/16
Analyst:	SS
Method:	8100mod
Dilution Factor:	1

TPH (C9-C40) 48 p-Terphenyl-D14 (surr) 50 %R



Batch ID: 635919-07316/S022416TPHL11

Client: **KAS, Inc.**Client Designation:

Burlington Waterfront | 512150387

Parameter Name	Blank	LCS	LCSD	Analysis Date	Units	Limits	RPD Method	t
TPH (C9-C40) p-Terphenyl-D14 (surr)	< 20 78 %R	54 (67 %R) 82 %R	50 (63 %R) (6 RPD 80 %F	,	0 0	30 - 160 30 - 130	30 8100mo 8100mo	

Samples were extracted and analyzed within holding time limits.

Instrumentation was calibrated in accordance with the method requirements.

The method blanks were free of contamination at the reporting limits.

Sample surrogate recoveries met the above stated criteria.

The associated matrix spikes and/or Laboratory Control Samples met acceptance criteria.

There were no exceptions in the analyses, unless noted.

*/! Flagged analyte recoveries deviated from the QA/QC limits. Unless noted below, flagged analytes that exceed acceptance limits in the Quality Control sample were not detected in the field samples.



Client: KAS, Inc.

Client Designation: Burlington Waterfront | 512150387

Sample ID:	SB-1 (0-2)	SB-2 (0-2)	SB-3 (0-2)	SB-4 (0-2)	SB-5 (0-2)	SB-6 (4-6)	SB-7 (1-4)
Lab Sample ID:	153268.02	153268.03	153268.05	153268.06	153268.07	153268.08	153268.09
Matrix:	soil						
Date Sampled:	2/22/16	2/22/16	2/22/16	2/22/16	2/22/16	2/22/16	2/22/16
Date Received:	2/23/16	2/23/16	2/23/16	2/23/16	2/23/16	2/23/16	2/23/16
% Solid:	85.3	88.9	89.2	90	87.6	90.7	85.8
Units:	mg/kg						
Date of Extraction/Prep:	2/29/16	2/29/16	2/29/16	2/29/16	2/29/16	2/29/16	2/29/16
Date of Analysis:	3/2/16	3/2/16	3/2/16	3/2/16	3/2/16	3/2/16	3/2/16
Analyst:	SS						
Extraction Method:	3540C						
Analysis Method:	8082	8082	8082	8082	8082	8082	8082
Dilution Factor:	1	1	1	1	1	1	1
PCB-1016	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02
PCB-1221	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02
PCB-1232	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02
PCB-1242	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02
PCB-1248	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02
PCB-1254	< 0.02	< 0.02	< 0.02	0.10	< 0.02	< 0.02	< 0.02
PCB-1260	< 0.02	< 0.02	< 0.02	0.026	< 0.02	< 0.02	< 0.02
PCB-1262	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02
PCB-1268	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02
TMX (surr)	90 %R	76 %R	73 %R	92 %R	92 %R	87 %R	90 %R
DCB (surr)	86 %R	68 %R	49 %R	55 %R	70 %R	42 %R	52 %R

Acid clean-up was performed on the samples and associated batch QC.



Client: KAS, Inc.

Client Designation: Burlington Waterfront | 512150387

Sample ID:	SB-8 (1-4)
Lab Sample ID:	153268.1
Matrix:	soil
Date Sampled:	2/22/16
Date Received:	2/23/16
% Solid:	88.9
Units:	mg/kg
Date of Extraction/Prep:	2/29/16
Date of Analysis:	3/2/16
Analyst:	SS
Extraction Method:	3540C
Analysis Method:	8082
Dilution Factor:	1
PCB-1016	< 0.02
PCB-1221	< 0.02
PCB-1232	< 0.02
PCB-1242	< 0.02
PCB-1248	< 0.02
PCB-1254	< 0.02
PCB-1260	< 0.02
PCB-1262	< 0.02
PCB-1268	< 0.02
TMX (surr)	71 %R
DCB (surr)	53 %R

Acid clean-up was performed on the samples and associated batch QC.



Batch ID: 635923-56413/S022916PCB1

Client: KAS, Inc.

Client Designation: Burlington Waterfront | 512150387

Parameter Name	Blank	LCS	LCSD	Analysis Date	Units	Limits	RPD	Method
PCB-1016	< 0.02	0.14 (103 %R)	0.13 (99 %R) (4 RPD) 3/1/2016	ma/ka	40 - 140	30	8082
PCB-1221	< 0.02	< 0.02 (%R N/A)	< 0.02 (%R N/A) (RPD		mg/kg			8082
PCB-1232	< 0.02	< 0.02 (%R N/A)	< 0.02 (%R N/A) (RPD	3/1/2016	mg/kg			8082
PCB-1242	< 0.02	< 0.02 (%R N/A)	< 0.02 (%R N/A) (RPD	3/1/2016	mg/kg			8082
PCB-1248	< 0.02	< 0.02 (%R N/A)	< 0.02 (%R N/A) (RPD	3/1/2016	mg/kg			8082
PCB-1254	< 0.02	< 0.02 (%R N/A)	< 0.02 (%R N/A) (RPD	3/1/2016	mg/kg			8082
PCB-1260	< 0.02	0.11 (85 %R)	0.11 (80 %R) (6 RPD)) 3/1/2016	mg/kg	40 - 140	30	8082
PCB-1262	< 0.02	< 0.02 (%R N/A)	< 0.02 (%R N/A) (RPD	3/1/2016	mg/kg			8082
PCB-1268	< 0.02	< 0.02 (%R N/A)	< 0.02 (%R N/A) (RPD	3/1/2016	mg/kg			8082
TMX (surr)	91 %R	96 %R	93 %F	R 3/1/2016	% Rec	30 - 150	30	8082
DCB (surr)	95 %R	102 %R	95 %F	3/1/2016	% Rec	30 - 150	30	8082

Samples were extracted and analyzed within holding time limits.

Instrumentation was calibrated in accordance with the method requirements.

The method blanks were free of contamination at the reporting limits.

Sample surrogate recoveries met the above stated criteria.

The associated matrix spikes and/or Laboratory Control Samples met acceptance criteria.

There were no exceptions in the analyses, unless noted.

*/! Flagged analyte recoveries deviated from the QA/QC limits. Unless noted below, flagged analytes that exceed acceptance limits in the Quality Control sample were not detected in the field samples.



Client: KAS, Inc.

Client Designation: Burlington Waterfront | 512150387

			_					
SB-1 (0-2)	SB-2 (6-8)	SB-3 (0-2)	SB-4 (0-2)					
153268.02	153268.04	153268.05	153268.06					
soil	soil	soil	soil					
2/22/16	2/22/16	2/22/16	2/22/16	Analytical		Date of		
2/23/16	2/23/16	2/23/16	2/23/16	Matrix	Units	Analysis	Method	Analys
5.3	3.1	5.3	4.6	SolTotDry	mg/kg	2/25/16	6020	DS
39	20	43	41	SolTotDry	mg/kg	2/25/16	6020	DS
< 0.5	< 0.5	< 0.5	< 0.5	SolTotDry	mg/kg	2/25/16	6020	DS
17	13	14	16	SolTotDry		2/25/16	6020	DS
28	3.8	26	11	SolTotDry		2/25/16	6020	DS
< 0.1	< 0.1	< 0.1	< 0.1	SolTotDry		2/25/16	6020	DS
< 0.5	< 0.5	< 0.5	< 0.5	SolTotDry	mg/kg	2/25/16	6020	DS
< 0.5	< 0.5	< 0.5	< 0.5	SolTotDry	mg/kg	2/25/16	6020	DS
	153268.02 soil 2/22/16 2/23/16 5.3 39 < 0.5 17 28 < 0.1 < 0.5	153268.02 153268.04 soil soil 2/22/16 2/22/16 2/23/16 2/23/16 5.3 3.1 39 20 <0.5 <0.5 17 13 28 3.8 <0.1 <0.5 <0.5 <0.5 <0.5	153268.02 153268.04 153268.05 soil soil soil 2/22/16 2/22/16 2/22/16 2/23/16 2/23/16 2/23/16 5.3 3.1 5.3 39 20 43 <0.5 <0.5 <0.5 17 13 14 28 3.8 26 <0.1 <0.1 <0.1 <0.5 <0.5 <0.5 <0.5	153268.02 153268.04 153268.05 153268.06 soil soil soil soil 2/22/16 2/22/16 2/22/16 2/23/16 2/23/16 2/23/16 2/23/16 2/23/16 2/23/16 5.3 3.1 5.3 4.6 39 20 43 41 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 17 13 14 16 28 3.8 26 11 < 0.1 < 0.1 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 <	153268.02 153268.04 153268.05 153268.06 soil soil soil soil soil 2/22/16 2/22/16 2/22/16 2/22/16 2/23/16 Matrix 5.3 3.1 5.3 4.6 SolTotDry 39 20 43 41 SolTotDry < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 SolTotDry 17 13 14 16 SolTotDry 28 3.8 26 11 SolTotDry < 0.1 < 0.1 < 0.1 < 0.1 SolTotDry < 0.5 < 0.5 < 0.5 SolTotDry < 0.5 < 0.5 SolTotDry < 0.7 SolTotDry < 0.8 SolTotDry < 0.9 SolTotDry < 0.9 SolTotDry < 0.1 SolTotDry < 0.1 SolTotDry < 0.2 SolTotDry < 0.3 SolTotDry < 0.4 SolTotDry < 0.5 SolTotDry < 0.5 SolTotDry < 0.5 SolTotDry < 0.5 SolTotDry	153268.02 153268.04 153268.05 153268.06 soil soil soil soil soil 2/22/16 2/22/16 2/22/16 2/23/16 Matrix Units 5.3 3.1 5.3 4.6 SolTotDry mg/kg 39 20 43 41 SolTotDry mg/kg < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 SolTotDry mg/kg 17 13 14 16 SolTotDry mg/kg 28 3.8 26 11 SolTotDry mg/kg < 0.1 < 0.1 < 0.1 < 0.1 SolTotDry mg/kg < 0.5 < 0.5 < 0.5 SolTotDry mg/kg < 0.1 < 0.1 < 0.1 SolTotDry mg/kg < 0.5 < 0.5 SolTotDry mg/kg < 0.5 < 0.5 SolTotDry mg/kg < 0.7 SolTotDry mg/kg < 0.8 SolTotDry mg/kg < 0.9 SolTotDry mg/kg	153268.02 153268.04 153268.05 153268.06 soil soil soil soil soil 2/22/16 2/22/16 2/22/16 2/22/16 Analytical 2/23/16 2/23/16 2/23/16 2/23/16 Matrix Units Analysis 5.3 3.1 5.3 4.6 SolTotDry mg/kg 2/25/16 39 20 43 41 SolTotDry mg/kg 2/25/16 <0.5 <0.5 <0.5 <0.5 <0.5 SolTotDry mg/kg 2/25/16 17 13 14 16 SolTotDry mg/kg 2/25/16 28 3.8 26 11 SolTotDry mg/kg 2/25/16 <0.1 <0.1 <0.1 <0.1 SolTotDry mg/kg 2/25/16 <0.5 <0.5 <0.5 SolTotDry mg/kg 2/25/16 SolTotDry mg/kg 2/25/16	153268.02 153268.04 153268.05 153268.06 soil soil soil soil soil 2/22/16 2/22/16 2/22/16 2/22/16 Analytical 2/23/16 2/23/16 2/23/16 2/23/16 Matrix Units Analysis Method 5.3 3.1 5.3 4.6 SolTotDry mg/kg 2/25/16 6020 39 20 43 41 SolTotDry mg/kg 2/25/16 6020 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 SolTotDry mg/kg 2/25/16 6020 17 13 14 16 SolTotDry mg/kg 2/25/16 6020 28 3.8 26 11 SolTotDry mg/kg 2/25/16 6020 < 0.1 < 0.1 < 0.1 < 0.1 SolTotDry mg/kg 2/25/16 6020 < 0.5 < 0.5 < 0.5 SolTotDry mg/kg 2/25/16 6020 < 0.1 < 0.1 < 0.1 SolTotDry mg/kg 2/25/16 6020 < 0.5 < 0.5 < 0.5 SolTotDry mg/kg 2/25/16 6020 < 0.1 < 0.1 < 0.1 SolTotDry mg/kg 2/25/16 6020 < 0.5 < 0.5 < 0.5 SolTotDry mg/kg 2/25/16 6020

Sample ID:	SB-5 (0-2)	SB-6 (4-6)	SB-7 (1-4)	SB-8 (1-4)					
Lab Sample ID:	153268.07	153268.08	153268.09	153268.1					
Matrix:	soil	soil	soil	soil					
Date Sampled:	2/22/16	2/22/16	2/22/16	2/22/16	Analytical		Date of		
Date Received:	2/23/16	2/23/16	2/23/16	2/23/16	Matrix	Units	Analysis	Method	Analyst
Arsenic	5.1	4.9	4.1	3.8	SolTotDry	mg/kg	2/25/16	6020	DS
Barium	41	45	25	33	SolTotDry	mg/kg	2/25/16	6020	DS
Cadmium	< 0.5	< 0.5	< 0.5	< 0.5	SolTotDry	mg/kg	2/25/16	6020	DS
Chromium	16	16	14	15	SolTotDry	mg/kg	2/25/16	6020	DS
Lead	14	32	7.5	16	SolTotDry	mg/kg	2/25/16	6020	DS
Mercury	< 0.1	< 0.1	< 0.1	< 0.1	SolTotDry	mg/kg	2/25/16	6020	DS
Selenium	< 0.5	< 0.5	< 0.5	< 0.5	SolTotDry	mg/kg	2/25/16	6020	DS
Silver	< 0.5	< 0.5	< 0.5	< 0.5	SolTotDry	mg/kg	2/25/16	6020	DS



Client: KAS, Inc.

Client Designation: Burlington Waterfront | 512150387

				Date of		
Parameter Name	Blank	LCS	LCSD	Units Analysis	Limits RP	D Method
Arsenic	< 0.5	39 (97 %R)		mg/kg 2/25/16	80 - 120 2	0 6020
Barium	< 0.5	39 (98 %R)		mg/kg 2/25/16	80 - 120 2	0 6020
Cadmium	< 0.5	38 (95 %R)		mg/kg 2/25/16	80 - 120 2	0 6020
Chromium	< 0.5	39 (98 %R)		mg/kg 2/25/16	80 - 120 2	0 6020
Lead	< 0.5	39 (97 %R)		mg/kg 2/25/16	80 - 120 2	0 6020
Mercury	< 0.1	0.4 (95 %R)		mg/kg 2/25/16	80 - 120 2	0 6020
Selenium	< 0.5	38 (94 %R)		mg/kg 2/25/16	80 - 120 2	0 6020
Silver	< 0.5	40 (99 %R)		mg/kg 2/25/16	80 - 120 2	0 6020

Samples were analyzed within holding times unless noted on the sample results page.

Instrumentation was calibrated in accordance with the method requirements.

The method blanks were free of contamination at the reporting limits.

The associated matrix spikes and/or Laboratory Control Samples met the above stated criteria.

Exceptions to the above statements are flagged or noted above or on the QC Narrative page.

^{*/!} Flagged analyte recoveries deviated from the QA/QC limits.

BOLD FIELDS REQUIRED. PLEASE CIRCLE REQUESTED ANALYSIS.

153268

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Sample I.D.	Sampling Date / Time *If Composite, Indicate Both Start & Finish Date / Time	MATRIX (SEE BELOW) GRAB/*COMPOSITE		8021B BTEX HALOS 8015B GRO MAVPH	ABN A BN PAH B DBCP ABN ABN PAH B DBCP ABN PAH B BN PAH B BN PAH B BN PAH BN	¥	10000	01L & Grease 1664 TPH 1664 TCLP 1311 ABN METALS	VOC PEST HERB DISSOLVED METALS (LIST BELOW)	TOTAL METALS (LIST BELOW)	T SST	Br CI F 504 NO ₂ NO ₃ NO ₃ NO ₂	CB0D		T. Res. CHLORINE	COD PHENOLS TOC DOC	REACTIVE CYANIDE—: REACTIVE SULFIDE	FLASHPOINT IGNITABILITY TOTAL COLIFORM E. COLI	FECAL COLIFORM ENTEROCOCCI HETEROTROPHIC PLATE COLINT	וונדיומוווו וויי בעור פפעו		:	#	Notes MeOH Vial #
GW	alaa 16 ; 1133	GN G								L.												C		
SB-1 (0-2)	alaah6: 1223	SG			VV					/													3	40409
SB-2(0-2)	12/22/16/1200	S 6			-																			
58-2(6-8)	12122116: 12'2	SG			V					V														40408
SB-3 (0-2)	12/22/16: /2 20	54			VV		/			\														40407
SB-4 (0-2)	2/22/16; 1/50	59			1		/			√														40406
SB-5 (0-2)	12/22/16:955	54			1/0					V														40411
SB-6 (4-6)	20	SG			V V					V												2		40392
SB-7 (1-4)	2/22/16/13/0	SG	V		1/1		\ <u>\</u>	,		1														+0421
SB-8 (1-4)	12/22/16: 1201	156			V V					\	<u> </u>												3 1	10410
MATRIX: A-AIR; S-SOIL; GW-GROUND WATE WW-WASTE WATER	er; SW-Surface Water; DW-Drin	KING WATER	;																					
Preservative: H-HCL; N-HNO ₃ ; S-H ₂ SO ₄ ;	Na-NaOH; M-MEOH					<u> </u>					<u> </u>													
Project Manager: <u>Jerem</u>	y Roberts			DATE	NEED	ED: _	Nor	ma		TAT	T		Tr	MP.	7 [°C	7 1	IETAL	.s: (8	RCRA	> 13	PP	FE,	Mn PB, CU
COMPANY: KAS, Inc.	\			QA/Q0				RE	PORTI	NG O	PTIO	//S	1	rir. <u>—</u> E? <u> </u>			0	THER M	ETALS: _					
ADDRESS: 589 Avenue Dis	Suite 10 (Box	. ***18 - ^5	405		ting Le		_	Prei	.ims: (Yi		No						┦ 。	A M D I	ec En	in Ei	ITEDI	.n. [٦v	es PNo
CITY: Williston PHONE: 802-383-04	STATE:	ZIP: QQ	<u> </u>	A	В		С	1	ES: FAX	_														INFO, IF DIFFERENT)
FAX: 802-383-0490)	LAI			OR ·			i	ECTRO			_	Equis				- 1	•						mont
E-MAIL: Jeremuro Kos	s-Consulting Co	m		Presui	MPTIVE C	CERTA	INTY	INO	Fax C	E-MAIL) (,				Soil to
SITE NAME: Burling ton	Waterfront			SAMPLER	(S): \[\]	<u>'00'</u>	R	420	2	1/-	20		0;1	11	•		1							
PROJECT #: 5\2\58377 STATE: NH MA ME	OTHER:			Im	DUISHED	大	2/3	DATE:	O	拼		4		Z P	ny	M	1 "	J \	1 %	40 C	٠ كر	7. E	PA	9 RSLS.
STATE: NH MA ME (REGULATORY PROGRAM: NPDES			T-A-A-S-S-S-S-S-S-S-S-S-S-S-S-S-S-S-S-S-	RELING	oushed 2.1	BY)				Time: 15 .	110		EWED	BY:)	7/2		_		Ţ	, sed	1 pa	بهجر	Ço	al heat, Electrical
	IFIELD OR OTHER: VTDEC	EPA		RELING	JUISHED	- 101 By:	4 2	3/16 DATE:		TIME:	7 "		FIVED	BY:										
QUOTE #:	PO #:					IS) = c							_	D.,										AHs
A A Tatern Ana	lytical, Inc.	F. C	. D	!	QUISHED			DATE:		TIME:	7050		EIVED		1E01	l E N								D ppm W.EAILABS.COM

(WHITE: ORIGINAL GREEN: PROJECT MANAGER)