Halifax Landfill
2044 Branch Road
Halifax, Vermont

VTDEC Project# NS95-0165
Solid Waste Facility ID# WH280
KAS Job# 610110045

FALL 2018 SEMI-ANNUAL WATER QUALITY MONITORING REPORT

December 17, 2018

Prepared for:

Town of Halifax
P.O. Box 45
Halifax, VT 05358

kas
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802 383.0486 p
802 383.0490 f

Introduction

KAS, Inc. (KAS) conducted a semi-annual water quality monitoring event on October 23, 2018 at the Halifax Landfill (Site Location Map and Site Map in Appendix A). A groundwater sample was collected from monitoring well MW-3 and analyzed for perfluorinated compounds (PFCs) via EPA Method 537 (short list). The October 2018 sampling effort was conducted in accordance with the current landfill certification. The sample was field analyzed for temperature, pH, and specific conductance using a properly calibrated YSI® Pro Multi-Meter. The depth to water was gauged using a Geotech™ water level indicator.

Results

Field measurements

Depth to water in MW-3 was measured at 5.62 feet below top of casing (btoc). The water temperature was 9.7 degrees Celsius and a pH value of 6.53 standard units was recorded at the time of sampling. The depth to water, temperature and pH measurements recorded are within range of historical measurements. A specific conductance reading of 160.7 µS/cm was noted at the time of sampling and is within range of historical fluctuations. Field measurement data is tabulated in Appendix B.

Laboratory results

Analytical testing indicated the presence of several PFCs in the groundwater sample collected from MW-3. A combined concentration of perfluorooctanoic acid (PFOA), perfluorooctanesulfonic acid (PFOS), perfluorohexanesulfonic acid (PFHxS) and perfluoroheptanoic acid in MW-3 was reported at 140.6 nanograms per liter (ng/l) which exceeds the Vermont Groundwater Enforcement Standard (VGES) of 20 ng/l. No PFCs were detected above laboratory method detection limits in the trip blank sample. Current and historical analytical data is tabulated in Appendix B and a copy of the laboratory report is provided in Appendix C.

PFC concentrations at MW-3 decreased compared to the previous sampling in May 2018. The data set is still limited and fluctuations in PFC concentrations continue over time. While an overall increasing trend appears apparent based on the linear trend R-square value (See Graph in Appendix B), a statistically significant trend has not been established. The figure on page 2 (Figure 1) is the concentration of total PFCs in MW-3 over time using a concentration linear trend generated by the Groundwater Spatio-Temporal Data Analysis Tool (GWSDAT Version 2.12). The solid green line shows the trend estimate and the dashed green lines are the 95% confidence intervals. The statistical significance of this trend is assessed using the Mann-Kendall trend test. If the Mann-Kendall p-value is below 0.05, then the estimated trend is statistically significantly different from 0, meaning that there is a trend within the data (GWSDAT User Manual v2.12). The Mann-Kendall p-value for MW-3 is 0.452; which is above 0.05, indicating a statistically relevant trend could not be established.

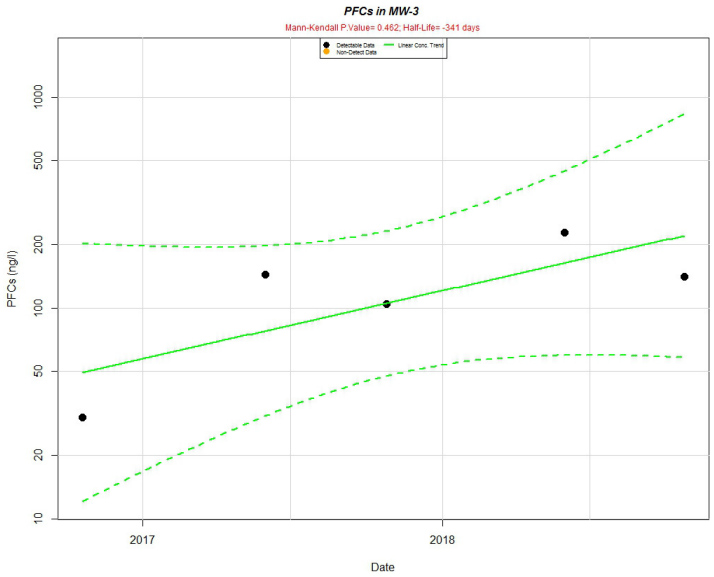
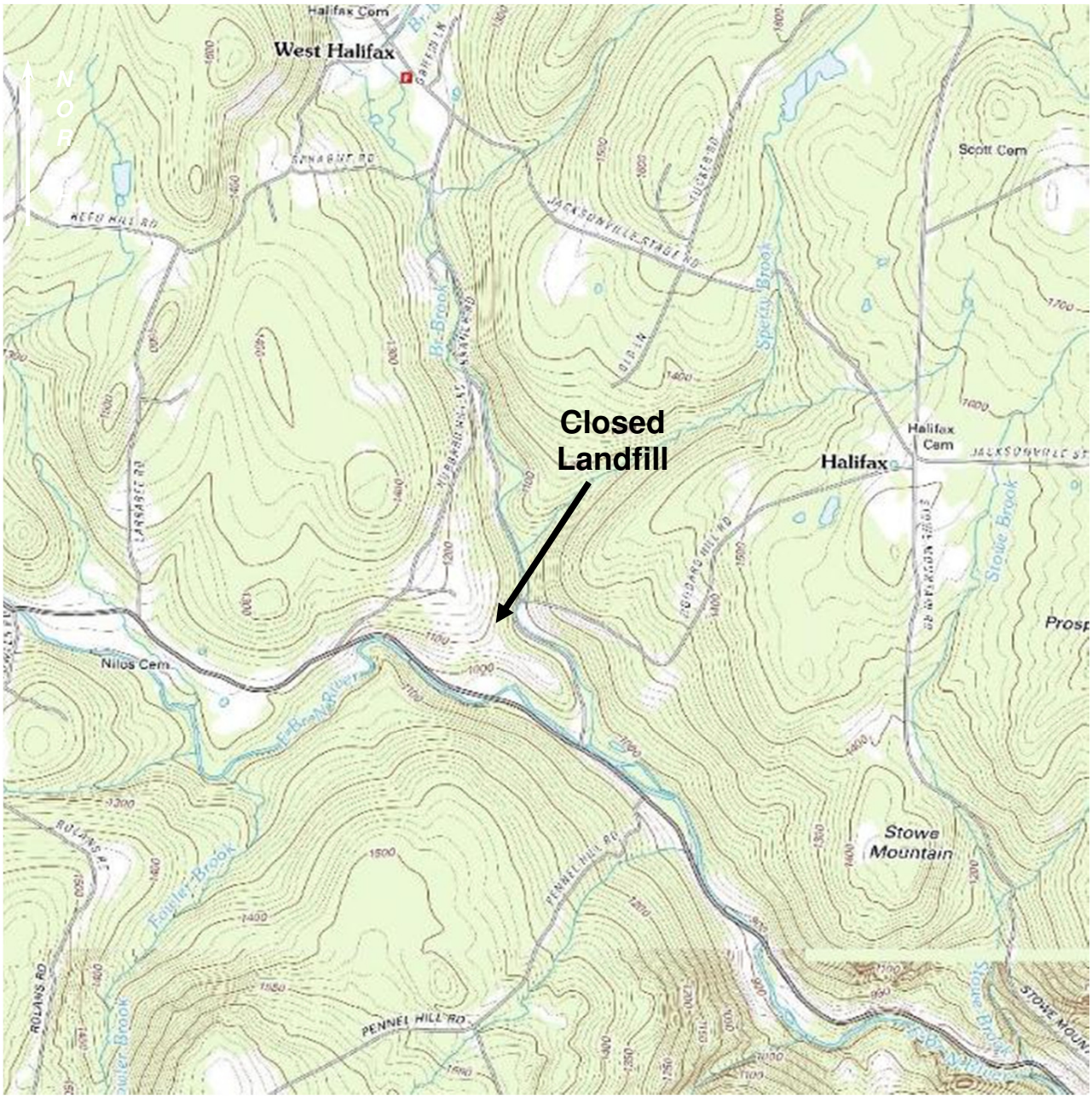


Figure 1. Total PFC concentration trend for monitoring wells MW-3

A seasonal correlation between PFC levels and depth to groundwater remains unclear; however, lower PFC concentrations are apparent during fall sampling events. The next groundwater monitoring event is scheduled to occur in May 2019.

APPENDIX A

Site Location Map and Site Map



KAS Job Number: 610110045

Source: http://anrmaps.vermont.gov/websites/anra5/

TOWN OF HALIFAX CLOSED LANDFILL

2044 Branch Road, Halifax, VT

Site Location Map

Date: 05/25/16	Drawing No. 0	Scale: NTS	By: CS

MONITORING WELL
SURFACE WATER SAMPLE
* montoring well and surface water locations are approximate

VTDEC Project: NS95-0165
KAS Job Number: 610110045
Source: Google Earth

HALIFAX CLOSED LANDFILL

2044 Branch Road, Halifax, VT

SITE MAP

Date: 07/31/17	Drawing No. 2	Scale: NTS	By: RT

APPENDIX B

Historical Sampling Data

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GROUNDWATER QUALITY SUMMARY

HALIFAX LANDFILL
HALIFAX, VT

MW-3

Parameter (PPM unless noted)	VGES	PAL	SAMPLING DATE: Aug-93	Dec-95	May-96	Nov-96	May-97	Oct-97	May-98	Oct-98	May-99	Oct-99	May-00	Dec-00	Oct-01	Jan-02	Jun-02	Dec-02	Jun-03
pH**	change of 1 ph unit		**6.4**	**6.27**	**6.1**	**6.1**	**6.4**	**6.3**	**6.2**	**5.8**	**6.2**	**6**	**6.6**	**6.5**	**6.5**	nt	**6.5**	**6.6**	**6.7**
Conductivity (µS/cm)**	change of 100 µs/cm		**328**	**440**	**600**	**610**	**530**	**380**	**480**	**280**	**340**	**390**	**520**	**500**	**320**	nt	nt	**360**	**430**
COD**	change of 25 ppm		**6.9**	ND<50	**22**	**16**	**16**	**18**	**10**	**20**	**20**	**10**	**20**	**10**	**10**	nt	**30**	**20**	**20**
Chloride*	250	125	**14**	**27**	**29**	**26**	**20**	**1**	**17**	**8**	**14**	ND<1	**18**	**17**	**8**	nt	**15**	**10**	**12**
Sodium* & ** (change of 10 ppm)	250	125	nt	**23**	**28**	**27**	**23**	**15**	**18**	**11**	**14**	nt	**21**	**16**	**13**	nt	**39**	**11**	**16**
Ca Hardness**	change of 100	NA	nt	nt	**230**	nt	**230**	**160**	**220**	**120**	**150**	**190**	**230**	**190**	**130**	nt	nt	**130**	**220**
Dissolved Chromium	0.1	0.05	nt	ND<0.05	ND<0.002	ND<0.002	**0.003**	ND<0.002	ND<0.002	**0.004**	ND<0.002	ND<0.002	ND<0.002	**0.005**	**0.004**	nt	ND<0.001	ND<0.001	ND<0.001
Dissolved Copper	1.3	0.65	nt	ND<0.05	ND<0.01	ND<0.01	**0.03**	ND<0.01	ND<0.01	**0.02**	ND<0.01	ND<0.01	**0.01**	**0.02**	**0.002**	nt	**0.003**	**0.001**	**0.002**
Dissolved Iron*	0.3	0.15	**0.06**	ND<0.05	nt	nt	nt	nt	nt	nt	nt	nt	nt	nt	nt	nt	**0.18**	nt	nt
Dissolved Manganese*	0.05	0.025	ND<0.02	ND<0.05	ND<0.005	**0.046**	**0.22**	**0.075**	**0.38**	**0.45**	**0.21**	**0.067**	**0.12**	**0.28**	**0.015**	nt	**0.005**	ND<0.005	ND<0.005
Dissolved Nickel	0.1	0.05	nt	ND<0.05	ND<0.01	ND<0.01	ND<0.01	ND<0.01	ND<0.01	ND<0.01	ND<0.01	nt	ND<0.01	ND<0.01	**0.002**	nt	**0.003**	ND<0.001	**0.001**
Dissolved Zinc*	5	2.5	nt	ND<0.05	**0.07**	**0.057**	**0.095**	**0.015**	**0.058**	**0.042**	**0.013**	**0.015**	**0.014**	**0.024**	**0.24**	nt	**0.23**	**0.084**	**0.2**
Dissolved Arsenic	0.05	0.005	nt	ND<0.010	ND<0.002	ND<0.01	ND<0.01	ND<0.01	ND<0.01	ND<0.01	ND<0.01	ND<0.01	ND<0.01	ND<0.01	**0.003**	nt	ND<0.001	ND<0.001	ND<0.001
Dissolved Cadmium	0.005	0.0025	nt	ND<0.005	ND<0.0005	ND<0.001	ND<0.001	ND<0.001	nt	ND<0.001	ND<0.001	ND<0.001	**0.002**	ND<0.001	ND<0.001	nt	ND<0.001	ND<0.001	ND<0.001
Dissolved Lead	0.015	0.005	nt	ND<0.005	ND<0.001	ND<0.01	ND<0.01	ND<0.01	ND<0.01	**0.01**	ND<0.01	ND<0.01	ND<0.01	ND<0.01	ND<0.001	nt	ND<0.001	ND<0.001	ND<0.001
Calcium	NA	NA	nt	nt	nt	nt	nt	nt	**2.3**	nt	nt	nt	nt	nt	nt	nt	nt	nt	nt
Methylene Chloride	0.005	0.0005	ND<10	ND<2	ND<2	ND<2	ND<2	nt	ND<2	nt	nt	ND<5	nt	nt	nt	ND<5	nt	**1600**[E]	**560**

Parameter (PPM unless noted)	VGES	PAL	SAMPLING DATE: 11/3/03	6/17/04	10/28/04	12/1/05	5/6/06	10/6/06	5/7/07	10/7/07	5/8/08	10/24/08	5/15/09	10/22/09	5/10/10	10/13/10	5/25/11	10/26/11	5/8/12
pH**	change of 1 ph unit		**6.1**	**6.1**	ns	ns	nt	**6.63**	**5.67**	**6.41**	**6.41**	**6.78**	**6.59**	NR	**6.15**	**6.49**	**6.03**	**6.63**	**6.70**
Conductivity (µS/cm) **	change of 100 µs/cm		**450**	**420**	ns	ns	nt	**391**	**329**	**128**	**128**	**413**	**92**	**108**	**83.4**	**223.3**	**83.8**	**387.6**	**599**
Temperature (degrees C)	change of 5.6 deg C		nt	nt	ns	ns	nt	nt	nt	nt	nt	nt	nt	nt	nt	nt	nt	**10.9**	**11.7**
Depth to Water (feet btoc)	NA	NA	nt	nt	ns	ns	nt	nt	nt	nt	nt	nt	nt	nt	nt	nt	nt	**4.60**	**4.41**
COD**	change of 25 ppm		**10**	**20**	ns	ns	**121**	**60**	ND<10	**50**	**10**	<10	**28**	**290**	**29**	**27**	**11**	**18**	nt
Chloride*	250	125	**12**	**12**	ns	ns	**1460**	**1**	**10**	**6**	**9**	**7**	**2.8**	**6.2**	ND<2.5	**5.7**	**4.3**	**12**	**6.2**
Sodium* & ** (change of 10 ppm)	250	125	**17**	**28**	ns	ns	**17.6**	ND<5	**15**	ND<5	**16**	**13**	**2.3**	**2.7**	**1.9**	**10**	**2**	**12**	**13**
Ca Hardness**	change of 100	NA	**170**	**180**	ns	ns	nt	nt	nt	nt	nt	nt	nt	nt	nt	nt	nt	nt	nt
Dissolved Chromium	0.1	0.05	ND<0.001	ND<0.001	ns	ns	ND<0.002	ND<0.001	**0.004**	ND<0.001	**0.002**	ND<0.001	ND<0.02	ND<0.02	ND<0.005	ND<0.005	ND<0.005	ND<0.005	nt
Dissolved Copper	1.3	0.65	**0.001**	**0.002**	ns	ns	ND<0.05	**0.002**	**0.01**	**0.002**	**0.002**	ND<0.001	ND<0.02	ND<0.02	ND<0.02	ND<0.02	ND<0.02	ND<0.020	nt
Dissolved Iron*	0.3	0.15	ND<0.05	ND<0.05	ns	ns	**0.35**	**0.1**	**3.6**	**0.08**	ND<0.05	ND<0.05	**0.17**	**0.88**	**0.1**	**0.11**	**0.2**	ND<0.020	ND<0.020
Dissolved Manganese*	0.05	0.025	ND<0.005	ND<0.005	ns	ns	**0.05**	**0.006**	**0.079**	**0.007**	ND<0.005	ND<0.005	ND<0.02	**0.15**	ND<0.02	ND<0.02	ND<0.02	ND<0.020	ND<0.020
Dissolved Nickel	0.1	0.05	ND<0.001	**0.002**	ns	ns	ND<0.05	**0.003**	**0.007**	**0.003**	**0.005**	**0.004**	ND<0.02	ND<0.02	ND<0.005	ND<0.005	ND<0.005	ND<0.005	nt
Dissolved Zinc*	5	2.5	**0.078**	**0.13**	ns	ns	ND<0.01	**0.047**	**0.045**	**0.033**	**0.013**	**0.007**	ND<0.02	ND<0.02	ND<0.005	ND<0.005	**0.007**	ND<0.020	nt
Dissolved Arsenic	0.05	0.005	ND<0.001	ND<0.001	ns	ns	ND<0.002	ND<0.002	ND<0.001	ND<0.001	ND<0.001	ND<0.001	ND<0.002	ND<0.002	ND<0.001	ND<0.001	ND<0.001	ND<0.020	nt
Dissolved Cadmium	0.005	0.0025	ND<0.001	ND<0.001	ns	ns	ND<0.0005	ND<0.0005	ND<0.001	ND<0.001	ND<0.001	ND<0.001	ND<0.002	ND<0.002	ND<0.002	ND<0.002	ND<0.002	ND<0.002	nt
Dissolved Lead	0.015	0.005	ND<0.001	ND<0.001	ns	ns	ND<0.002	ND<0.001	**0.003**	ND<0.001	ND<0.001	ND<0.001	ND<0.001	ND<0.001	ND<0.001	ND<0.001	ND<0.001	ND<0.001	nt
Calcium	NA	AN	nt	nt	ns	ns	nt	nt	nt	nt	nt	nt	nt	nt	nt	nt	nt	nt	nt
Methylene Chloride	0.005	0.0005	ND<5	ND<5	ns	ns	nt	nt	nt	nt	nt	nt	nt	nt	nt	nt	nt	nt	nt

continued on next page

Notes:
Only detected or previously detected volatile organic compounds are listed.
btoc = below top of casing
ND<xx = Not Detected< Detection Limit
VGES = Vermont Groundwater Enforcement Standard (December 2016)
PAL = Preventative Action Level (December 2016)
NA = No VGES/PAL available
Results reported above detection limits are indicated in bold.

ns = not sampled
nt = not tested during sampling round
* = secondary groundwater quality standards (mg/L or ppm)
** = maximum acceptable change (units as noted)
*** = All perfluorinated compound values reported in ng/L. Analysis via EPA Method 537 (short list)
VGES and PALs pertain to total metals and are provided for reference only
E - The reported value exceeds largest calibration standard. Extrapolation of the calibration curve was employed to obtain the reported value.

= exceeds PAL
= exceeds VGES
= exceeds max acceptable change

kas

GROUNDWATER QUALITY SUMMARY

HALIFAX LANDFILL
HALIFAX, VT

MW-3 (continued)

Parameter (PPM unless noted)	VGES	PAL	SAMPLING DATE: 10/9/12	5/30/13	10/16/13	5/15/14	10/21/14	5/28/15	10/29/15	May-16	10/19/16	5/30/2017	10/25/2017	5/30/2018	10/23/2018
pH**	change of 1 ph unit		**6.06**	**6.71**	**6.09**	**6.05**	**5.73**	**6.56**	**6.71**	ns	nt	**7.04**	**6.51**	**6.55**	**6.53**
Conductivity (µS/cm)**	change of 100 µs/cm		**293**	**215.6**	**625**	**358.1**	**187**	**376**	**340.6**	ns	nt	**470.7**	**500**	**388**	**160.7**
Temperature (degrees C)	change of 5.6 deg C		**11.5**	**15.7**	**11.3**	**12.5**	**13.2**	**10.7**	**13.0**	ns	nt	**9.9**	**13.2**	**10.9**	**9.7**
Depth to Water (feet btoc)	NA	NA	**5.63**	**4.38**	**5.49**	**5.23**	**5.34**	**5.55**	**4.51**	ns	**6.87**	**5.07**	**4.85**	**6.50**	**5.62**
COD**	change of 25 ppm		nt	**22**	nt	nt	nt	nt	nt	ns	nt	nt	nt	nt	nt
Chloride*	250	125	**19**	**12**	**6.5**	**5.7**	**6.7**	**4.5**	**52**	ns	nt	nt	nt	nt	nt
Sodium* & ** (change of 10 ppm)	250	125	**12**	**13**	nt	nt	nt	nt	nt	ns	nt	nt	nt	nt	nt
Dissolved Chromium	0.1	0.05	nt	ND<0.005	nt	nt	nt	nt	nt	ns	nt	nt	nt	nt	nt
Dissolved Copper	1.3	0.65	nt	ND<0.020	nt	nt	nt	nt	nt	ns	nt	nt	nt	nt	nt
Dissolved Iron*	0.3	0.15	ND<0.020	ND<0.020	**0.030**	**0.086**	**0.020**	ND<0.020	ND<0.020	ns	nt	nt	nt	nt	nt
Dissolved Manganese*	0.05	0.025	ND<0.020	ND<0.020	ND<0.020	ND<0.020	ND<0.020	ND<0.020	ND<0.020	ns	nt	nt	nt	nt	nt
Dissolved Nickel	0.1	0.05	nt	ND<0.005	nt	nt	nt	nt	nt	ns	nt	nt	nt	nt	nt
Dissolved Zinc*	5	2.5	nt	ND<0.020	nt	nt	nt	nt	nt	ns	nt	nt	nt	nt	nt
Dissolved Arsenic	0.05	0.005	nt	ND<0.001	nt	nt	nt	nt	nt	ns	nt	nt	nt	nt	nt
Dissolved Cadmium	0.005	0.0025	nt	ND<0.002	nt	nt	nt	nt	nt	ns	nt	nt	nt	nt	nt
Dissolved Lead	0.015	0.0015	nt	ND<0.001	nt	nt	nt	nt	nt	ns	nt	nt	nt	nt	nt
Perfluorobutanesulfonic acid (PFBS)***	NA	NA	nt	nt	nt	nt	nt	nt	nt	ns	ND<11	ND<6.6	ND<6.6	**3.75**	ND<6.6
Perfluorohexanesulfonic acid (PFHxS)***			nt	nt	nt	nt	nt	nt	nt	ns	ND<3.8	**11.7**	**9.2**	**13.1**	**12.3**
Perfluoroheptanoic acid (PFHpA)***			nt	nt	nt	nt	nt	nt	nt	ns	**2.06**	**22**	**13.2**	**41.2**	**15.1**
Perfluorooctanoic acid (PFOA)***	20	10	nt	nt	nt	nt	nt	nt	nt	ns	**11.5**	**78.2**	**44.9**	**134**	**76.8**
Perfluorooctanesulfonic acid (PFOS)***			nt	nt	nt	nt	nt	nt	nt	ns	**16.7**	**32.1**	**37**	**33.3**	**36.4**
Perfluorononanoic acid (PFNA)***			nt	nt	nt	nt	nt	nt	nt	ns	ND<2.3	ND<1.5	ND<1.5	**1.9**	ND<1.5

Notes:
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PAL = Preventative Action Level (July 2018)
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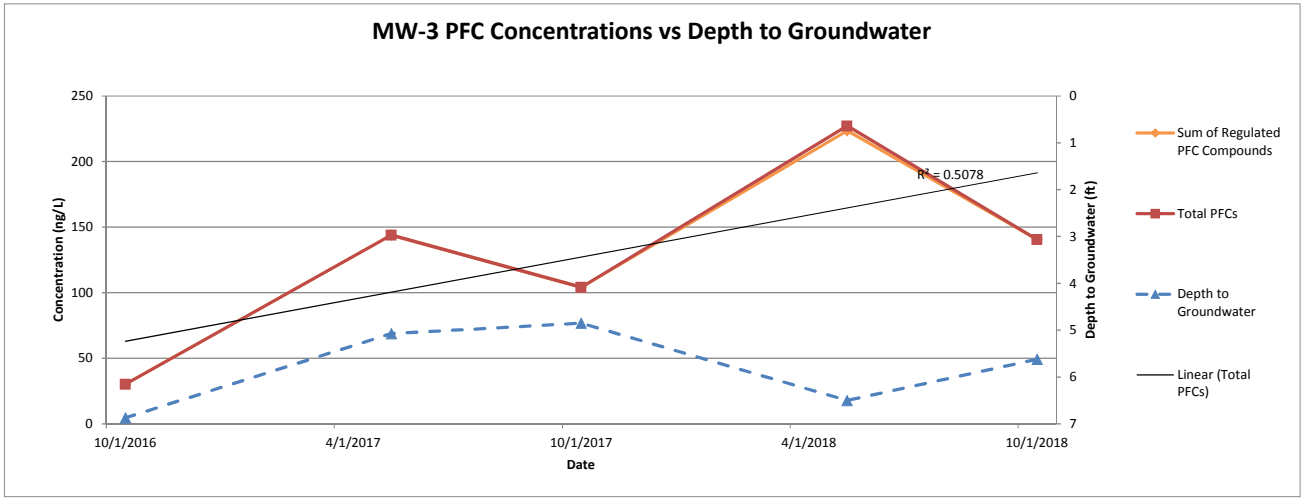
nt = not tested during sampling round
* = secondary groundwater quality standards (mg/L or ppm)
** = maximum acceptable change (units as noted)
*** = All perfluorinated compound values reported in ng/L. Analysis via EPA Method 537 (short list). For PFHxS, PFHpA, PFOA, PFOS and PFNA, the VGES and PAL standards apply to the sum of these compounds.
VGES and PALs pertain to total metals and are provided for reference only
E - The reported value exceeds largest calibration standard. Extrapolation of the calibration curve was employed to obtain the reported value.

= exceeds PAL, at time of sampling
= exceeds VGES, at time of sampling
= exceeds max acceptable change, at time of sampling



APPENDIX C

Laboratory Report

NORTHERN LAKE SERVICE, INC.
Analytical Laboratory and Environmental Services
400 North Lake Avenue - Crandon, WI 54520
Ph: (715)-478-2777 Fax: (715)-478-3060

ANALYTICAL REPORT

WDNR Laboratory ID No. 721026460
WDATCP Laboratory Certification No. 105-330
EPA Laboratory ID No. WI00034

NLS Project: 311391
NLS Customer: 108400

Client: KAS
Attn: Rebecca Treat
589 Avenue D, Suite 10
PO Box 787
Williston, VT 05495

Phone: 802 383 0486
PO # 610110045

Project: Halifax Landfill

MW-3 NLS ID: 1089621

COC: 222515:1 Matrix: DW
Collected: 10/23/18 10:10 Received: 10/26/18

Parameter	Result	Units	Dilution	LOD	LOQ/MCL	Analyzed	Method	Lab
Perfluorinated Chemicals by EPA Method 537 Rev 1.1	see attached					11/03/18	EPA 537 Rev 1.1	721026460
Solid Phase Extraction by EPA Method 537	yes					11/01/18	EPA 537	721026460

Trip blank NLS ID: 1089622

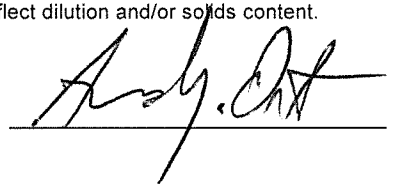
COC: 222515:1 Matrix: FB
Collected: 10/23/18 10:04 Received: 10/26/18

Parameter	Result	Units	Dilution	LOD	LOQ	Analyzed	Method	Lab
Perfluorinated Chemicals by EPA Method 537 Rev 1.1	see attached					11/02/18	EPA 537 Rev 1.1	721026460
Solid Phase Extraction by EPA Method 537	yes					11/01/18	EPA 537	721026460

Values in brackets represent results greater than or equal to the LOD but less than the LOQ and are within a region of "Less-Certain Quantitation". Results greater than or equal to the LOQ are considered to be in the region of "Certain Quantitation". LOD and/or LOQ tagged with an asterisk(*) are considered Reporting Limits. All LOD/LOQs adjusted to reflect dilution and/or solids content.

ND = Not Detected (< LOD) LOD = Limit of Detection LOQ = Limit of Quantitation NA = Not Applicable
DWB = Dry Weight Basis %DWB = (mg/kg DWB) / 10000 1000 ug/L = 1 mg/L
MCL = Maximum Contaminant Levels for Drinking Water Samples. Shaded results indicate >MCL.

Reviewed by:



Authorized by:
R. T. Krueger
President

ANALYTICAL RESULTS: Perfluorinated Chemicals by EPA 537 Rev 1.1 Safe Drinking Water Analysis

Customer: KAS NLS Project: 311391 PO # 610110045

Project Description: Halifax Landfill

Project Title: Template: 537PPT Printed: 12/17/2018 11:39

Sample: 1089621 MW-3 Collected: 10/23/18 Analyzed: 11/03/18 - Analytes: 6

ANALYTE NAME	RESULT	UNITS WWB	DIL	LOD	LOQ	MCL	Note
perfluorobutanesulfonic acid (PFBS)	ND	ppt	1	6.6	21		
perfluoroheptanoic acid (PFHpA)	15.1	ppt	1	0.80	2.6		
perfluorohexanesulfonic acid (PFHxS)	12.3	ppt	1	2.8	8.8		
perfluorooctanoic acid (PFOA)	76.8	ppt	1	1.2	3.9		
perfluorononanoic acid (PFNA)	ND	ppt	1	1.5	4.9		
perfluorooctanesulfonic acid (PFOS)	36.4	ppt	1	1.7	5.3		
C13-PFHxA (SURR)	70.465%		1				S
C13-PFDA (SURR)	72.006%		1				S

NOTES APPLICABLE TO THIS ANALYSIS:

S = This compound is a surrogate used to evaluate the quality control of a method.

Sample: 1089622 Trip blank Collected: 10/23/18 Analyzed: 11/02/18 - Analytes: 6

ANALYTE NAME	RESULT	UNITS WWB	DIL	LOD	LOQ	Note
perfluorobutanesulfonic acid (PFBS)	ND	ppt	1	6.6	21	
perfluoroheptanoic acid (PFHpA)	ND	ppt	1	0.80	2.6	
perfluorohexanesulfonic acid (PFHxS)	ND	ppt	1	2.8	8.8	
perfluorooctanoic acid (PFOA)	ND	ppt	1	1.2	3.9	
perfluorononanoic acid (PFNA)	ND	ppt	1	1.5	4.9	
perfluorooctanesulfonic acid (PFOS)	ND	ppt	1	1.7	5.3	
C13-PFHxA (SURR)	99.759%		1			S
C13-PFDA (SURR)	109.45%		1			S

NOTES APPLICABLE TO THIS ANALYSIS:

S = This compound is a surrogate used to evaluate the quality control of a method.

The PFOA branch isotope peak is included in the PFOA calculation per EPA directive.

SAMPLE COLLECTION AND CHAIN OF CUSTODY RECORD

NORTHERN LAKE SERVICE, INC.

Analytical Laboratory and Environmental Services

400 North Lake Avenue • Crandon, WI 54520-1298

Tel: (715) 478-2777 • Fax: (715) 478-3060

CLIENT	KAS, Inc.
ADDRESS	P.O Box 787
CITY / STATE / ZIP	Williston / VT / 05495
PROJECT DESCRIPTION / NO.	Halifax Landfill
QUOTATION NO.	
DNR FID #	
DNR LICENSE #	
CONTACT	Rebecca Treat
PHONE	802-383-0486
PURCHASE ORDER NO.	0110110045
FAX	802-383-0490

Wisconsin DNR cert ID
721026460 (Cran) / 268533760 (Wauk)
Wisconsin DATCP ID
105-000330 (Cran) / 105-000479 (Wauk)

MATRIX:
SW = surface water
WW = waste water
GW = groundwater
DW = drinking water
TIS = tissue
AIR = air
SOIL = soil
SED = sediment
PROD = product
SL = sludge
OTHER

NO. 222515

ITEM NO.	NLS LAB NO.	SAMPLE ID	COLLECTION DATE	COLLECTION TIME	MATRIX (See above)	ANALYZE PER ORDER OF ANALYSIS: PFCs via EPA 537 Short List	USE BOXES BELOW: Indicate Y or N if GW Sample is field filtered. Indicate G or C if WW Sample is Grab or Composite. G	COLLECTION REMARKS (i.e. DNR Well ID #)
1.	91621	MW-3	10/23/18	1010	GW	X		MSDS bottles collected here
2.	91622	Trip blank	↓	1004	Blank H2O	↓		
3.								
4.								
5.								
6.								
7.								
8.								
9.								
10.								

NLS SAMPLE RECEIVING

COLLECTED BY (signature)	Monica Cadagin	CUSTODY SEAL NO. (IF ANY)
RELINQUISHED BY (signature)		RECEIVED BY (signature)
DISPATCHED BY (signature)		METHOD OF TRANSPORT: UPS - Overnight
DATE/TIME	10/23/18 1720	DATE/TIME: 10/25/18 0930
DATE/TIME		DATE/TIME: 10/25/18 09??

RECEIVED AT NLS BY (signature)	Julie Braun	DATE/TIME: 10/26/18 10	CONDITION: Cool
COOLER #		REMARKS & OTHER INFORMATION	TEMP.
WDNR FACILITY NUMBER		E-MAIL ADDRESS	

REPORT TO
~~Rebeccatreat~~
rebeccat@kas-consulting.com

INVOICE TO
rebeccat@kas-consulting.com

PRESERVATIVE:
NP = no preservative
S = sulfuric acid
N = nitric acid
Z = zinc acetate
M = methanol
OH = sodium hydroxide
HA = hydrochloric & ascorbic acid
H = hydrochloric acid

IMPORTANT

1. TO MEET REGULATORY REQUIREMENTS, THIS FORM **MUST** BE COMPLETED IN DETAIL AND INCLUDED IN THE COOLER CONTAINING THE SAMPLES DESCRIBED.
2. PLEASE USE ONE LINE PER SAMPLE, **NOT** PER BOTTLE.
3. RETURN THIS FORM WITH SAMPLES - CLIENT MAY KEEP YELLOW COPY.
4. PARTIES COLLECTING SAMPLE, LISTED AS **REPORT TO** AND LISTED AS **INVOICE TO** AGREE TO STANDARD TERMS & CONDITIONS ON REVERSE.

Rev. 7/20/15