

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
 Printed: 09/07/17 Page 1 of 1

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

NLS Project: 286322
 NLS Customer: 108400
 Phone: 802 383 0486
 PO # 610110045

Project: Halifax Landfill - DWM

Town Garage Well NLS ID: 1015250

COC: 228284:1 Matrix: DW
 Collected: 08/30/17 10:02 Received: 09/01/17

Parameter	Result	Units	Dilution	LOD	LOQ/MCL	Analyzed	Method	Lab
Perfluorinated Chemicals by EPA Method 537 Rev 1.1	see attached					09/06/17	EPA 537 Rev 1.1	721026460
Solid Phase Extraction by EPA Method 537	yes					09/05/17	EPA 537	721026460

Town Garage Well, FB NLS ID: 1015251

COC: 228284:1 Matrix: FB
 Collected: 08/30/17 10:02 Received: 09/01/17

Parameter	Result	Units	Dilution	LOD	LOQ	Analyzed	Method	Lab
Perfluorinated Chemicals by EPA Method 537 Rev 1.1	not analyzed					09/06/17	EPA 537 Rev 1.1	721026460
Solid Phase Extraction by EPA Method 537	not analyzed					09/06/17	EPA 537	721026460

Rafus Well NLS ID: 1015252

COC: 228284:2 Matrix: DW
 Collected: 08/30/17 10:44 Received: 09/01/17

Parameter	Result	Units	Dilution	LOD	LOQ/MCL	Analyzed	Method	Lab
Perfluorinated Chemicals by EPA Method 537 Rev 1.1	see attached					09/06/17	EPA 537 Rev 1.1	721026460
Solid Phase Extraction by EPA Method 537	yes					09/05/17	EPA 537	721026460

Rafus Well, FB NLS ID: 1015253

COC: 228284:2 Matrix: FB
 Collected: 08/30/17 10:44 Received: 09/01/17

Parameter	Result	Units	Dilution	LOD	LOQ	Analyzed	Method	Lab
Perfluorinated Chemicals by EPA Method 537 Rev 1.1	not analyzed					09/06/17	EPA 537 Rev 1.1	721026460
Solid Phase Extraction by EPA Method 537	not analyzed					09/06/17	EPA 537	721026460

Tamburrino Well NLS ID: 1015254

COC: 228284:3 Matrix: DW
 Collected: 08/30/17 09:21 Received: 09/01/17

Parameter	Result	Units	Dilution	LOD	LOQ/MCL	Analyzed	Method	Lab
Perfluorinated Chemicals by EPA Method 537 Rev 1.1	see attached					09/06/17	EPA 537 Rev 1.1	721026460
Solid Phase Extraction by EPA Method 537	yes					09/05/17	EPA 537	721026460

Tamburrino Well, FB NLS ID: 1015255

COC: 228284:3 Matrix: FB
 Collected: 08/30/17 09:21 Received: 09/01/17

Parameter	Result	Units	Dilution	LOD	LOQ	Analyzed	Method	Lab
Perfluorinated Chemicals by EPA Method 537 Rev 1.1	not analyzed					09/06/17	EPA 537 Rev 1.1	721026460
Solid Phase Extraction by EPA Method 537	not analyzed					09/06/17	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: 286322 PO # 610110045
Project Description: Halifax Landfill - DWM
Project Title: Template: 537PPT Printed: 09/07/2017 14:57
Sample: 1015250 Town Garage Well Collected: 08/30/17 Analyzed: 09/06/17 - Analytes: 6

ANALYTE NAME	RESULT	UNITS WWB	DIL	LOD	LOQ	MCL	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)	83.303%						S
C13-PFDA (SURR)	96.406%						S

NOTES APPLICABLE TO THIS ANALYSIS:

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

Sample: 1015252 Rafus Well Collected: 08/30/17 Analyzed: 09/06/17 - Analytes: 6

ANALYTE NAME	RESULT	UNITS WWB	DIL	LOD	LOQ	MCL	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)	85.157%						S
C13-PFDA (SURR)	97.073%						S

NOTES APPLICABLE TO THIS ANALYSIS:

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

Sample: 1015254 Tamburino Well Collected: 08/30/17 Analyzed: 09/06/17 - Analytes: 6

ANALYTE NAME	RESULT	UNITS WWB	DIL	LOD	LOQ	MCL	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)	81.956%						S
C13-PFDA (SURR)	96.486%						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 PO Box 787		
CITY WILLISTON	STATE VT	ZIP 05495
PROJECT DESCRIPTION / NO. HALIFAX LANDFILL - DWM		QUOTATION NO.
DNR FID #	DNR LICENSE #	
CONTACT REBELLA TREAT		PHONE 802.383.0486
PURCHASE ORDER NO. 610110045		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

USE BOXES BELOW: Indicate Y or N if GW Sample is field filtered.
Indicate G or C if WW Sample is Grab or Composite.

ANALYZE PER ORDER OF ANALYSIS
PFCs vial
EPA 507 (short list)

PARAMETER



NO. 228284

ITEM NO.	NLS LAB NO.	SAMPLE ID	COLLECTION		MATRIX (See above)	ANALYZE PER ORDER OF ANALYSIS	PARAMETER										COLLECTION REMARKS (i.e. DNR Well ID #)		
			DATE	TIME			1	2	3	4	5	6	7	8	9	10			
1.	101525051	TOWN GARAGE WELL	08/30/17	1002	DW	X													
2.	101525153	RAFUS WELL	↓	1044	↓	↓													
3.	101525155	TAMBURRING WELLS	↓	0921	↓	↓													
4.																			
5.																			
6.																			
7.																			
8.																			
9.																			
10.																			

ONE SAMPLE PER WELL

All samples checked OK for chlorine. AJO

COLLECTED BY (signature)	CUSTODY SEAL NO. (IF ANY)		DATE/TIME 08/30/17/1100
RELINQUISHED BY (signature)	RECEIVED BY (signature)		DATE/TIME
DISPATCHED BY (signature)	METHOD OF TRANSPORT UPS - AIR NEXT DAY		DATE/TIME 08/31/17/1100
RECEIVED AT NLS BY (signature)	DATE/TIME 9/1/17 @ 1030	CONDITION Good - on ice	TEMP 2.6 °C
COOLER #	REMARKS & OTHER INFORMATION ANALYZE FIELD BLANK ONLY IF ASSOCIATED SAMPLE HAS A POSITIVE RESULT FOR PFCs		
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	WDNR FACILITY NUMBER
E-MAIL ADDRESS			

REPORT TO KAS, INC.
INVOICE TO KAS, INC.

- 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.