# COMPLETE PFAS SAMPLING RESULTS

			Public Water System Source by Community													
Contaminant of Concern	ADEC Action Levels	Am	bler	Buckland	Deering	Kia	ana	Kivalina	Kobuk	Kotzebue		Noatak		Noorvik Selawik		Shungnak
(ng/L)	Action Levels	2002 Well	1982 Well	Buckland River	Inmachuk River	Upper Well		Wulik River	Main Well	Devils Lake		Well #5	Well #6	Kobuk River	Selawik River	Kobuk River
PFOA	Combination of the analytes	0.31	0.36	ND	ND	ND	ND	ND	0.32	ND	ND	ND	ND	0.23	0.41	ND
PFOS	should not exceed 70 ng/L	ND	ND	ND	ND	ND	ND	ND	0.29	ND	ND	ND	ND	ND	0.43	ND
PFHpA		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
PFNA	No	ND	ND	ND	0.21	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
PFHxS	Action Levels	0.34	0.39	ND	ND	ND	ND	ND	ND	5.43	ND	ND	ND	ND	ND	ND
PFBS		0.27	0.28	ND	0.38	ND	ND	ND	ND	ND	3.82	ND	ND	ND	ND	ND

# Detectable Concentration

### **ND** = **Not Detected**

Results are "Not Detected" when the concentration is lower than the Detection Limit.

## **Meansurement Equivalents**

1 ng/L = 1 ppt

One nanogram per liter equals one part per trillion

## **Contaminants Name and Acronym**

Perfluorooctanoic Acid (PFOA)

Perfluorooctane Sulfonate (PFOS)

Perfluoroheptanoic Acid (PFHpA)

Perfluorononanoic Acid (PFNA)

Perfluorohexane Sulfonate (PFHxS)

Perfluorobutane Sulfonate (PFBS)

Presented are the complete PFAS sampling results from each public water system source in the Northwest Arctic Borough (2019). The Department of Environmental Conservation (ADEC) recommends drinking water samples check for 6 different PFAS contaminants. On the left are all six of the PFAS contaminant acronyms that were analyzed. The second table column shows the ADEC Action Levels which mirror the EPA Health Advisory Limit of 70 ng/L for the sum of PFOA and PFOS concentrations (PFOA and PFOS results are outlined red in the table). 11 communities were investigated and 15 different water sources were sampled.

According to ADEC's current health guidelines, all public water system sources in the Northwest Arctic Borough have safe PFAS levels.





Generic Maniilaq Association

Work Order: 1195852

Kiana

Client: Maniilaq Association

Report Date: October 08, 2019

Enclosed are the analytical results associated with the above work order. The results apply to the samples as received. All results are intended to be used in their entirety and SGS is not responsible for use of less than the complete report. If you have any questions regarding this report, or if we can be of any other assistance, please contact your SGS Project Manager at 907-562-2343. This document is issued by the Company under its General Conditions of Service accessible at <a href="http://www.sgs.com/en/Terms-and-Conditions.aspx">http://www.sgs.com/en/Terms-and-Conditions.aspx</a>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

SGS maintains a formal Quality Assurance/Quality Control (QA/QC) program. A copy of our Quality Assurance Plan (QAP), which outlines this program, is available at your request. The laboratory certification numbers are AK00971 (DW Chemistry & Microbiology) & 17-021 (CS) for ADEC and 2944.01 for DOD ELAP/ISO 17025 (RCRA methods: 1020B, 1311, 3010A, 3050B, 3520C, 3550C, 5030B, 5035A, 6020A, 7470A, 7471B, 8015C, 8021B, 8082A, 8260C, 8270D, 8270D-SIM, 9040C, 9045D, 9056A, 9060A, AK101 and AK102/103). SGS is only certified for the analytes listed on our Drinking Water Certification, and only those analytes will be reported to the State of Alaska for compliance. Except as specifically noted, all statements and data in this report are in conformance to the provisions set forth by the SGS QAP and, when applicable, other regulatory authorities.

The following descriptors or qualifiers may be found in your report:

\* The analyte has exceeded allowable regulatory or control limits.

! Surrogate out of control limits.

B Indicates the analyte is found in a blank associated with the sample.

CCV/CVA/CVB Continuing Calibration Verification

CCCV/CVC/CVCA/CVCB Closing Continuing Calibration Verification

CL Control Limit

DF Analytical Dilution Factor

DL Detection Limit (i.e., maximum method detection limit)

E The analyte result is above the calibrated range.

GT Greater Than

ICV Initial Calibration Verification

J The quantitation is an estimation.

LCS(D) Laboratory Control Spike (Duplicate)

LLQC/LLIQC Low Level Quantitation Check

LOD Limit of Detection (i.e., 1/2 of the LOQ)

LOQ Limit of Quantitation (i.e., reporting or practical quantitation limit)

LT Less Than MB Method Blank

MS(D) Matrix Spike (Duplicate)

ND Indicates the analyte is not detected.

RPD Relative Percent Difference

U Indicates the analyte was analyzed for but not detected.

Note: Sample summaries which include a result for "Total Solids" have already been adjusted for moisture content.

All DRO/RRO analyses are integrated per SOP.



SGS North America Inc. CHAIN OF CUSTODY RECORD

specific method and/or compound list: BTEX, REMARKS/LOC ID Data Deliverable Requirements: Chain of Custody Seal: (Circle) A SENT analyses require Please report PFOS, PFOA, PFNA, PFHxS, PFHpA, and PFBS. Metals, PFAS The following Delivery Method: Hand Delivery Commerical Delivery INTACT BROKEN NOTE: ROPICE: SCH493 NSW 10/1/19 WWW.US.SGS.COM Requested Turnaround Time and/or Special Instructions: Instructions: Sections 1 - 5 must be filled out. Omissions may delay the onset of analysis. DOD Project? Yes No Temp Blank °C: 290057 Preservative or Ambient [ ] Analysis\* Section 4 Cooler ID: 2A74 - 768 A9 Received For Laboratory By: Comp Grab MI (Multi-incre-mental) Section 3 d Spekerson Condenguy, co Received By: Becefved By: Received By: MATRIX MATRIX CODE ジグ 3 7 S111- CHH (206 E-MAIL: CharlottesheridanQ Profile #: Makii lag.org 18:30 HH:MM 11:52 TIME 11:31 6.0119 9:16 Time Time Time Time mm/dd/yy 11-1-0/ DATE 198/19 QUOTE #: PHONE #: Date Date Date PROJECT/ PWSID/ PERMIT#: Date P.O. #: KIANA - LOWER (NEW) SAMPLE IDENTIFICATION KIMMA - UPIER WELL CHARLOTTE SHERLDAN MANICAD YIAXA Relinquished By: (1) Relinquished By: (2) Relinquished By: (3) Relinquished By: (4) CHAZLOTTE REPORTS TO INVOICE TO: RESERVED for lab use CONTACT PROJECT CLIENT: NAME: Section 1 Section 5 Section 2

6 #

http://www.sgs.com/terms-and-conditions

F083-Blank\_COC\_20181228



e-Sample Receipt Form

SGS Workorder #:

1195852



Durlan O V. I						1 7	, 6 ,	
	Condition (Yes,	No, N/A				Noted be		
Chain of Custody / Temperature Requirer	ments		Yes	Exemption permi	tted if sa	ampler han	d carries/deli	vers.
Were Custody Seals intact? Note # & loca	ation N/A	Absent						
COC accompanied samp	oles? Yes							
DOD: Were samples received in COC corresponding cool								
, , ,		-11 01				-1-101		
N/A **Exemption permitted if chil			_		_			1
Temperature blank compliant* (i.e., 0-6 °C after C	CF)? Yes	Cooler ID	):	1	@		C Therm. ID	
		Cooler ID	):		@	Š	Therm. ID	
If samples received without a temperature blank, the "cooler temperature" will be		Cooler ID	):		@		C Therm. ID	
documented instead & "COOLER TEMP" will be noted to the right. "ambient" or "chilled be noted if neither is available.	d" will ———	Cooler ID	);		@	(	C Therm. ID	
be noted it flettier is available.		Cooler ID	_		@		C Therm. ID	
*If >6°C, were samples collected <8 hours ag	702 N/A	OCCION IE			•		9 11101111.12	1
ii >0 0, were samples collected <6 flours ag	N/A							
If <0°C, were sample containers ice fre	ee? N/A		_					
Note: Identify containers received at non-compliant temperatu	ure.							
Use form FS-0029 if more space is need								
Holding Time / Documentation / Sample Condition Requ	uiremente	Noto: Pofo	to fo	urm E 092 "Sample C	Quido" for	epocific hels	ling times	
Were samples received within holding tir		Note: Keiel	10 10	niii r-uos sampie G	oulue TOI	specific noic	mig umes.	
were samples received within holding tir	ne : Tes							
Do samples match COC** (i.e.,sample IDs,dates/times collected	ed)? Yes							
**Note: If times differ <1hr, record details & login per COC	). 							
***Note: If sample information on containers differs from COC, SGS will default to COC	information							
Were analytical requests clear? (i.e., method is specified for analy	/ses Yes							
with multiple option for analysis (Ex: BTEX, Met	tals)							
	,							
		[1	NI/A	***Evo====	mitto d f	or motals /	0 0 000 0/000	2041
W	10		N/A	***Exemption per	maeat	or metals (	<u>e.g,∠∪∪.8/602</u>	<u>2UA).</u>
Were proper containers (type/mass/volume/preservative***)us	ed? Yes							
Volatile / LL-Hg Requir								
Were Trip Blanks (i.e., VOAs, LL-Hg) in cooler with sample	les? N/A							
Were all water VOA vials free of headspace (i.e., bubbles ≤ 6m	m)? N/A							
Were all soil VOAs field extracted with MeOH+Bl	FB? N/A							
Note to Client: Any "No", answer above indicates non-co	ompliance v	with stand	ard r	procedures and m	av imna	ct data qua	ality.	
,	•				,pu	400	,	
Additional n	otes (if a	oplicable	e):					
			_				·	



### **Sample Containers and Preservatives**

Container Id	<u>Preservative</u>	<u>Container</u> <u>Condition</u>	Container Id	<u>Preservative</u>	<u>Container</u> <u>Condition</u>
1195852001-A	Trizma	ОК			
1195852001-B	Trizma	OK			
1195852002-A	Trizma	OK			
1195852002-B	Trizma	OK			

#### **Container Condition Glossary**

Containers for bacteriological, low level mercury and VOA vials are not opened prior to analysis and will be assigned condition code OK unless evidence indicates than an inappropriate container was submitted.

- OK The container was received at an acceptable pH for the analysis requested.
- BU The container was received with headspace greater than 6mm.
- DM The container was received damaged.
- FR The container was received frozen and not usable for Bacteria or BOD analyses.
- IC The container provided for microbiology analysis was not a laboratory-supplied, pre-sterilized container and therefore was not suitable for analysis.
- NC- The container provided was not preserved or was under-preserved. The method does not allow for additional preservative added after collection.
- PA The container was received outside of the acceptable pH for the analysis requested. Preservative was added upon receipt and the container is now at the correct pH. See the Sample Receipt Form for details on the amount and lot # of the preservative added.
- PH The container was received outside of the acceptable pH for the analysis requested. Preservative was added upon receipt, but was insufficient to bring the container to the correct pH for the analysis requested. See the Sample Receipt Form for details on the amount and lot # of the preservative added. QN Insufficient sample quantity provided.



Orlando, FL 10/08/19

The results set forth herein are provided by SGS North America Inc.

e-Hardcopy 2.0
Automated Report

### **Technical Report for**

SGS North America, Inc

1195852

SGS Job Number: FA68657

**Sampling Date: 09/30/19** 

### Report to:

SGS North America, Inc 200 W Potter Dr Anchorage, AK 99518 julie.shumway@sgs.com

**ATTN: Julie Shumway** 

Total number of pages in report: 10

TNI FORATORA

Test results contained within this data package meet the requirements of the National Environmental Laboratory Accreditation Program and/or state specific certification programs as applicable.

Caitlin Brice, M.S. General Manager

Client Service contact: Andrea Colby 407-425-6700

Certifications: FL(E83510), LA(03051), KS(E-10327), IL(200063), NC(573), NJ(FL002), NY(12022), SC(96038001) DoD ELAP(ANAB L2229), AZ(AZ0806), CA(2937), TX(T104704404), PA(68-03573), VA(460177), AK, AR, IA, KY, MA, MS, ND, NH, NV, OK, OR, UT, WA, WV

This report shall not be reproduced, except in its entirety, without the written approval of SGS.

Test results relate only to samples analyzed.

SGS North America Inc. • 4405 Vineland Road • Suite C-15 • Orlando, FL 32811 • tel: 407-425-6700 • fax: 407-425-0707 authorizing edits or modifications to this document.

# **Sections:**

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# **Sample Summary**

SGS North America, Inc

**Job No:** FA68657 1195852

Sample Number	•		Mat Received Code	<del></del>	Client Sample ID
This report of Organics ND			s ND = Not detect above the RL	ected. The following app	blies:
FA68657-1	09/30/19 1	1:31	10/03/19 DW	Drinking Water	KIANA-LOWER WELL
FA68657-2	09/30/19 1	1:52	10/03/19 DW	Drinking Water	KIANA-UPPER WELL

**Summary of Hits Job Number:** FA68657

Account: SGS North America, Inc

**Project:** 1195852 **Collected:** 09/30/19

Lab Sample ID Client Samp	ple ID Result/					
Analyte	Qual	$\mathbf{RL}$	MDL	Units	Method	

FA68657-1 KIANA-LOWER WELL

No hits reported in this sample.

FA68657-2 KIANA-UPPER WELL

No hits reported in this sample.



Orlando, FL

Section 3  $\omega$ 

Sample Results	
Donort of Analysis	
Report of Analysis	

### Page 1 of 1

# **Report of Analysis**

Client Sample ID: KIANA-LOWER WELL

 Lab Sample ID:
 FA68657-1
 Date Sampled:
 09/30/19

 Matrix:
 DW - Drinking Water
 Date Received:
 10/03/19

 Method:
 EPA 537.1 REV 1.0 EPA 537
 Percent Solids:
 n/a

**Project:** 1195852

 File ID
 DF
 Analyzed
 By
 Prep Date
 Prep Batch
 Analytical Batch

 Run #1
 Q64600.D
 1
 10/08/19 00:09
 NG
 10/04/19 12:45
 OP77147
 SQ1455

 Run #2

Run #1 250 ml 1.0 ml

Run #2

### Perfluorinated Carboxylic Acids and Sulfonates

CAS No.	Compound	Result	MCL	RL	Units	Q
PERFLUO	ROALKYLCARBOXYLIC AC	CIDS				
375-85-9	Perfluoroheptanoic acid	ND		0.0040	ug/l	
335-67-1	Perfluorooctanoic acid	ND		0.0040	ug/l	
375-95-1	Perfluorononanoic acid	ND		0.0040	ug/l	
PERFLUO	ROALKYLSULFONATES					
375-73-5	Perfluorobutanesulfonic acid	ND		0.0040	ug/l	
355-46-4	Perfluorohexanesulfonic acid	ND		0.0040	ug/l	
1763-23-1	Perfluorooctanesulfonic acid	ND		0.0040	ug/l	
CAS No.	Surrogate Recoveries	Run# 1	Run#	2 Li	mits	
	13C2-PFHxA	91%		70	-130%	
	13C2-PFDA	98%		70	-130%	

ND = Not detected

MCL = Maximum Contamination Level (40 CFR 141)

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank N = Indicates presumptive evidence of a compound



### Page 1 of 1

# **Report of Analysis**

Client Sample ID: KIANA-UPPER WELL

 Lab Sample ID:
 FA68657-2
 Date Sampled:
 09/30/19

 Matrix:
 DW - Drinking Water
 Date Received:
 10/03/19

 Method:
 EPA 537.1 REV 1.0 EPA 537
 Percent Solids:
 n/a

**Project:** 1195852

 File ID
 DF
 Analyzed
 By
 Prep Date
 Prep Batch
 Analytical Batch

 Run #1
 Q64601.D
 1
 10/08/19 00:25
 NG
 10/04/19 12:45
 OP77147
 SQ1455

Run #2

Run #1 250 ml 1.0 ml
Run #2

### Perfluorinated Carboxylic Acids and Sulfonates

CAS No.	Compound	Result	MCL	RL	Units	Q
PERFLUO	ROALKYLCARBOXYLIC AC	CIDS				
375-85-9	Perfluoroheptanoic acid	ND		0.0040	ug/l	
335-67-1	Perfluorooctanoic acid	ND		0.0040	ug/l	
375-95-1	Perfluorononanoic acid	ND		0.0040	ug/l	
PERFLUO	ROALKYLSULFONATES					
375-73-5	Perfluorobutanesulfonic acid	ND		0.0040	ug/l	
355-46-4	Perfluorohexanesulfonic acid	ND		0.0040	ug/l	
1763-23-1	Perfluorooctanesulfonic acid	ND		0.0040	ug/l	
CAS No.	Surrogate Recoveries	Run# 1	Run#	2 Liı	nits	
		0.0-1				
	13C2-PFHxA	80%			-130%	
	13C2-PFDA	89%		70-	-130%	

ND = Not detected

MCL = Maximum Contamination Level (40 CFR 141)

E = Indicates value exceeds calibration range

J = Indicates an estimated value

 $B = \ Indicates \ analyte \ found \ in \ associated \ method \ blank$ 

N = Indicates presumptive evidence of a compound





Misc. Forms

Orlando, FL

Custody Documents and Other Forms

Includes the following where applicable:

• Chain of Custody

#### SGS North America Inc. CHAIN OF CUSTODY RECORD

1195852

Locations Nationwide Alaska Florida New Jersey Colorado North Carolina Louisiana

CLIENT:	SGS North Ame	rica Inc Alas	ka Division		SGS	Refere	nce:	•			•	SGS	FL		Page 1 of 1
CONTACT:	Julie Shumway	PHONE NO:	(907) 56	2-2343	Addi	tional (	Comn	ents	: All	soils	repo	rt ou	in dry weigh	ıt unless	Ĭ
PROJECT NAME:	1195852	PWSID#: NPDL#:			# C	Preserv- ative Used:	Tilina								
REPORTS TO:	Julie Shumway		Julie.Shumwa RefLabTeam@		0 N T	TYPE C = COMP								E	
INVOICE TO:	SGS - Alaska	QUOTE #: P.O. #:	1195		A - N	G = GRAB MI = Multi	PFAS*							:	
RESERVED for lab use	SAMPLE IDENTIFICATION	DATE mm/dd/yy	TIME HHMM	MATRIX/ MATRIX CODE	E R S	Incre- mental Soils	EPA 537				MS	MSD	SGS lab #		Location ID
	Kiana - Lower Well	9/30/2019	11:31:00	DW	2	GRA	Х			ļ <u> </u>			1195852001		-11
	Kiana - Upper Well	9/30/2019	11:52:00	DW	2	GRA	Х			ļ		-	1195852002		
					$\vdash$										
							-								
Relinquished	By: (1)	Date	Time	Received	Ву:				DOD Project? No					Data Deliverable Requirements:	
									Report to DL (J Flags)? If J- Report as DL/LOD/LOQ.						Level i
Relinquished By: (2) Date Time Receive		Received	ed By:				Cooler iD:  Requested Turnaround Time a  Please report PFOS, PFOA, P					nd-or Special Instructions:			
Relinquished	By: (3)	Date	Time	Received	Ву:				Temp	p Blani	k °C:		PFBS	i –	Custody Seal: (Circle)
Relinquished	linquished By: (4)  Date Time Received Ear L  18/2/F9 / 100			Eor La	borator	у Ву:		or Ambient [ ] INTACT BROK				BROKEN ABSENT			

X 20g W Potter Drive Anchorage, AK 99518 Tel: (907) 562-2343 Fax: (907) 561 (901) 5500 Business Drive Wilmington, NC 28405 Tel: (910) 350-1903 Fax: (910) 350-1557

F088\_COC\_REF\_LAB\_20190411

FA68657: Chain of Custody Page 1 of 2



# 4

# **SGS Sample Receipt Summary**

Job Number: FA68657 Client			SGS NORTH AME	RICA INC ALASKA DI	Project: 1195852				
Date / Time Received: 10/3/20	19 10:00:00 /	AM	Delivery Method:	UPS	Airbill #'s:				
Therm ID: IR 1;			Therm CF: 1;		# of Coolers: 1				
Cooler Temps (Raw Measure	ed) °C: Cool	er 1: (1.5	);						
Cooler Temps (Correct	ed) °C: Cool	er 1: (2.5	);						
Cooler Information	Y or	N_		Sample Information		Y or N	N/A		
1. Custody Seals Present	✓			1. Sample labels present	on bottles	<b>✓</b> □			
2. Custody Seals Intact	✓			2. Samples preserved pro	operly				
3. Temp criteria achieved	✓			3. Sufficient volume/conta	ainers recvd for analysis:	<b>✓</b>			
4. Cooler temp verification	IR Gun			4. Condition of sample		Intact			
5. Cooler media	Ice (Bag)			5. Sample recvd within H	Т				
				6. Dates/Times/IDs on Co	OC match Sample Label				
Trip Blank Information	Y or	<u>N</u> _	N/A_	7. VOCs have headspace	e		<b>~</b>		
1. Trip Blank present / cooler		✓		8. Bottles received for un	specified tests				
2. Trip Blank listed on COC		<b>✓</b>		9. Compositing instruction	ns clear		$\checkmark$		
	W or	s	N/A	10. Voa Soil Kits/Jars rec	eived past 48hrs?		$\checkmark$		
				11. % Solids Jar received	1?		$\checkmark$		
3. Type Of TB Received			<b>☑</b>	12. Residual Chlorine Pre	esent?		<b>✓</b>		
Misc. Information									
Number of Encores: 25-Gran	m	5-Gram	Nun	nber of 5035 Field Kits:	Number of La	ab Filtered Metals:			
Test Strip Lot #s:	pH 0-3	230315	 5 pl	H 10-12 219813A	Other: (Spec	cify)			
Residual Chlorine Test Strip Lo									
_									
Comments									
SM001 Rev. Date 05/24/17 Technicia	n: TRINITYM	l	Date: 10/3/2019	10:00:00 A	Reviewer:	Date:			

FA68657: Chain of Custody

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