

ANALYTICAL REPORT

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Laboratory Job ID: 320-82916-1
Client Project/Site: King Salmon (AKN) DOFPF

For:
Shannon & Wilson, Inc
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Fairbanks, Alaska 99709-5244

Attn: Michael X Jaramillo



Authorized for release by:
12/28/2021 1:25:30 PM

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This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.



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Definitions/Glossary

Client: Shannon & Wilson, Inc
Project/Site: King Salmon (AKN) DOFPF

Job ID: 320-82916-1

Qualifiers

LCMS

Qualifier	Qualifier Description
H	Sample was prepped or analyzed beyond the specified holding time
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
α	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

Case Narrative

Client: Shannon & Wilson, Inc
Project/Site: King Salmon (AKN) DOFPF

Job ID: 320-82916-1

Job ID: 320-82916-1

Laboratory: Eurofins TestAmerica, Sacramento

Narrative

Job Narrative 320-82916-1

Receipt

The samples were received on 12/14/2021 5:50 PM. Unless otherwise noted below, the samples arrived in good condition, and where required, properly preserved and on ice. The temperature of the cooler at receipt was 0.6° C.

LCMS

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Organic Prep

Method 537.1 DW: Insufficient sample volume was available to perform a matrix spike/matrix spike duplicate (MS/MSD) associated with preparation batch 320-553351.

Method 537.1 DW: The following samples were observed to be light brown after adjustment to final volume: AKNPW-011 (320-82916-1), AKNPW-208 (320-82916-2), AKNPW-007 (320-82916-3), AKNPW-012 (320-82916-4), AKNPW-112 (320-82916-5) and AKNPW-008 (320-82916-6).

Method 537.1 DW: The following samples were re-prepared outside of preparation holding time due to Low LCS %R for several analytes: AKNPW-011 (320-82916-1), AKNPW-208 (320-82916-2), AKNPW-007 (320-82916-3), AKNPW-012 (320-82916-4), AKNPW-112 (320-82916-5) and AKNPW-008 (320-82916-6).

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

Detection Summary

Client: Shannon & Wilson, Inc
Project/Site: King Salmon (AKN) DOFPF

Job ID: 320-82916-1

Client Sample ID: AKNPW-011

Lab Sample ID: 320-82916-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Perfluorohexanoic acid (PFHxA)	5.5	H	1.7	0.43	ng/L	1		537.1 DW	Total/NA
Perfluoroheptanoic acid (PFHpA)	1.2	J H	1.7	0.43	ng/L	1		537.1 DW	Total/NA
Perfluorooctanoic acid (PFOA)	7.4	H	1.7	0.43	ng/L	1		537.1 DW	Total/NA
Perfluorohexanesulfonic acid (PFHxS)	3.1	H	1.7	0.43	ng/L	1		537.1 DW	Total/NA

Client Sample ID: AKNPW-208

Lab Sample ID: 320-82916-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Perfluorohexanoic acid (PFHxA)	14	H	1.7	0.42	ng/L	1		537.1 DW	Total/NA
Perfluoroheptanoic acid (PFHpA)	2.7	H	1.7	0.42	ng/L	1		537.1 DW	Total/NA
Perfluorooctanoic acid (PFOA)	21	H	1.7	0.42	ng/L	1		537.1 DW	Total/NA
Perfluorobutanesulfonic acid (PFBS)	6.7	H	1.7	0.42	ng/L	1		537.1 DW	Total/NA
Perfluorohexanesulfonic acid (PFHxS)	13	H	1.7	0.42	ng/L	1		537.1 DW	Total/NA

Client Sample ID: AKNPW-007

Lab Sample ID: 320-82916-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Perfluorohexanoic acid (PFHxA)	2.9	H	1.7	0.43	ng/L	1		537.1 DW	Total/NA
Perfluoroheptanoic acid (PFHpA)	4.1	H	1.7	0.43	ng/L	1		537.1 DW	Total/NA
Perfluorooctanoic acid (PFOA)	3.5	H	1.7	0.43	ng/L	1		537.1 DW	Total/NA
Perfluorohexanesulfonic acid (PFHxS)	3.6	H	1.7	0.43	ng/L	1		537.1 DW	Total/NA

Client Sample ID: AKNPW-012

Lab Sample ID: 320-82916-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Perfluorohexanoic acid (PFHxA)	14	H	1.7	0.42	ng/L	1		537.1 DW	Total/NA
Perfluoroheptanoic acid (PFHpA)	3.3	H	1.7	0.42	ng/L	1		537.1 DW	Total/NA
Perfluorooctanoic acid (PFOA)	20	H	1.7	0.42	ng/L	1		537.1 DW	Total/NA
Perfluorobutanesulfonic acid (PFBS)	3.6	H	1.7	0.42	ng/L	1		537.1 DW	Total/NA
Perfluorohexanesulfonic acid (PFHxS)	11	H	1.7	0.42	ng/L	1		537.1 DW	Total/NA

Client Sample ID: AKNPW-112

Lab Sample ID: 320-82916-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Perfluorohexanoic acid (PFHxA)	13	H	1.7	0.43	ng/L	1		537.1 DW	Total/NA
Perfluoroheptanoic acid (PFHpA)	3.2	H	1.7	0.43	ng/L	1		537.1 DW	Total/NA
Perfluorooctanoic acid (PFOA)	19	H	1.7	0.43	ng/L	1		537.1 DW	Total/NA
Perfluorobutanesulfonic acid (PFBS)	3.4	H	1.7	0.43	ng/L	1		537.1 DW	Total/NA
Perfluorohexanesulfonic acid (PFHxS)	11	H	1.7	0.43	ng/L	1		537.1 DW	Total/NA

Client Sample ID: AKNPW-008

Lab Sample ID: 320-82916-6

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Perfluorohexanoic acid (PFHxA)	3.1	H	1.8	0.44	ng/L	1		537.1 DW	Total/NA
Perfluoroheptanoic acid (PFHpA)	0.61	J H	1.8	0.44	ng/L	1		537.1 DW	Total/NA
Perfluorooctanoic acid (PFOA)	3.0	H	1.8	0.44	ng/L	1		537.1 DW	Total/NA
Perfluorohexanesulfonic acid (PFHxS)	1.4	J H	1.8	0.44	ng/L	1		537.1 DW	Total/NA

This Detection Summary does not include radiochemical test results.

Eurofins TestAmerica, Sacramento

Client Sample Results

Client: Shannon & Wilson, Inc
Project/Site: King Salmon (AKN) DOFPF

Job ID: 320-82916-1

Client Sample ID: AKNPW-011

Lab Sample ID: 320-82916-1

Date Collected: 12/06/21 14:13

Matrix: Water

Date Received: 12/14/21 17:50

Method: 537.1 DW - Perfluorinated Alkyl Acids (LC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorohexanoic acid (PFHxA)	5.5	H	1.7	0.43	ng/L		12/22/21 20:40	12/26/21 15:45	1
Perfluoroheptanoic acid (PFHpA)	1.2	J H	1.7	0.43	ng/L		12/22/21 20:40	12/26/21 15:45	1
Perfluorooctanoic acid (PFOA)	7.4	H	1.7	0.43	ng/L		12/22/21 20:40	12/26/21 15:45	1
Perfluorononanoic acid (PFNA)	ND	H	1.7	0.43	ng/L		12/22/21 20:40	12/26/21 15:45	1
Perfluorodecanoic acid (PFDA)	ND	H	1.7	0.43	ng/L		12/22/21 20:40	12/26/21 15:45	1
Perfluoroundecanoic acid (PFUnA)	ND	H	1.7	0.43	ng/L		12/22/21 20:40	12/26/21 15:45	1
Perfluorododecanoic acid (PFDoA)	ND	H	1.7	0.43	ng/L		12/22/21 20:40	12/26/21 15:45	1
Perfluorotridecanoic acid (PFTriA)	ND	H	1.7	0.43	ng/L		12/22/21 20:40	12/26/21 15:45	1
Perfluorotetradecanoic acid (PFTeA)	ND	H	1.7	0.43	ng/L		12/22/21 20:40	12/26/21 15:45	1
Perfluorobutanesulfonic acid (PFBS)	ND	H	1.7	0.43	ng/L		12/22/21 20:40	12/26/21 15:45	1
Perfluorohexanesulfonic acid (PFHxS)	3.1	H	1.7	0.43	ng/L		12/22/21 20:40	12/26/21 15:45	1
Perfluorooctanesulfonic acid (PFOS)	ND	H	1.7	0.43	ng/L		12/22/21 20:40	12/26/21 15:45	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	ND	H	1.7	0.43	ng/L		12/22/21 20:40	12/26/21 15:45	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	ND	H	1.7	0.43	ng/L		12/22/21 20:40	12/26/21 15:45	1
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid (9Cl-PF3O)	ND	H	1.7	0.43	ng/L		12/22/21 20:40	12/26/21 15:45	1
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF)	ND	H	1.7	0.43	ng/L		12/22/21 20:40	12/26/21 15:45	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	ND	H	1.7	0.43	ng/L		12/22/21 20:40	12/26/21 15:45	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	ND	H	1.7	0.43	ng/L		12/22/21 20:40	12/26/21 15:45	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C2 PFHxA	90		70 - 130	12/22/21 20:40	12/26/21 15:45	1
13C2 PFDA	96		70 - 130	12/22/21 20:40	12/26/21 15:45	1
d5-NEtFOSAA	85		70 - 130	12/22/21 20:40	12/26/21 15:45	1
13C3 HFPO-DA	91		70 - 130	12/22/21 20:40	12/26/21 15:45	1

Client Sample Results

Client: Shannon & Wilson, Inc
 Project/Site: King Salmon (AKN) DOFPF

Job ID: 320-82916-1

Client Sample ID: AKNPW-208

Lab Sample ID: 320-82916-2

Date Collected: 12/06/21 13:37

Matrix: Water

Date Received: 12/14/21 17:50

Method: 537.1 DW - Perfluorinated Alkyl Acids (LC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorohexanoic acid (PFHxA)	14	H	1.7	0.42	ng/L		12/22/21 19:44	12/26/21 15:53	1
Perfluoroheptanoic acid (PFHpA)	2.7	H	1.7	0.42	ng/L		12/22/21 19:44	12/26/21 15:53	1
Perfluorooctanoic acid (PFOA)	21	H	1.7	0.42	ng/L		12/22/21 19:44	12/26/21 15:53	1
Perfluorononanoic acid (PFNA)	ND	H	1.7	0.42	ng/L		12/22/21 19:44	12/26/21 15:53	1
Perfluorodecanoic acid (PFDA)	ND	H	1.7	0.42	ng/L		12/22/21 19:44	12/26/21 15:53	1
Perfluoroundecanoic acid (PFUnA)	ND	H	1.7	0.42	ng/L		12/22/21 19:44	12/26/21 15:53	1
Perfluorododecanoic acid (PFDoA)	ND	H	1.7	0.42	ng/L		12/22/21 19:44	12/26/21 15:53	1
Perfluorotridecanoic acid (PFTriA)	ND	H	1.7	0.42	ng/L		12/22/21 19:44	12/26/21 15:53	1
Perfluorotetradecanoic acid (PFTeA)	ND	H	1.7	0.42	ng/L		12/22/21 19:44	12/26/21 15:53	1
Perfluorobutanesulfonic acid (PFBS)	6.7	H	1.7	0.42	ng/L		12/22/21 19:44	12/26/21 15:53	1
Perfluorohexanesulfonic acid (PFHxS)	13	H	1.7	0.42	ng/L		12/22/21 19:44	12/26/21 15:53	1
Perfluorooctanesulfonic acid (PFOS)	ND	H	1.7	0.42	ng/L		12/22/21 19:44	12/26/21 15:53	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	ND	H	1.7	0.42	ng/L		12/22/21 19:44	12/26/21 15:53	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	ND	H	1.7	0.42	ng/L		12/22/21 19:44	12/26/21 15:53	1
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid (9Cl-PF3O)	ND	H	1.7	0.42	ng/L		12/22/21 19:44	12/26/21 15:53	1
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF)	ND	H	1.7	0.42	ng/L		12/22/21 19:44	12/26/21 15:53	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	ND	H	1.7	0.42	ng/L		12/22/21 19:44	12/26/21 15:53	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	ND	H	1.7	0.42	ng/L		12/22/21 19:44	12/26/21 15:53	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C2 PFHxA	86		70 - 130	12/22/21 19:44	12/26/21 15:53	1
13C2 PFDA	100		70 - 130	12/22/21 19:44	12/26/21 15:53	1
d5-NEtFOSAA	87		70 - 130	12/22/21 19:44	12/26/21 15:53	1
13C3 HFPO-DA	84		70 - 130	12/22/21 19:44	12/26/21 15:53	1

Client Sample Results

Client: Shannon & Wilson, Inc
 Project/Site: King Salmon (AKN) DOFPF

Job ID: 320-82916-1

Client Sample ID: AKNPW-007

Lab Sample ID: 320-82916-3

Date Collected: 12/06/21 14:41

Matrix: Water

Date Received: 12/14/21 17:50

Method: 537.1 DW - Perfluorinated Alkyl Acids (LC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorohexanoic acid (PFHxA)	2.9	H	1.7	0.43	ng/L		12/22/21 19:44	12/26/21 16:01	1
Perfluoroheptanoic acid (PFHpA)	4.1	H	1.7	0.43	ng/L		12/22/21 19:44	12/26/21 16:01	1
Perfluorooctanoic acid (PFOA)	3.5	H	1.7	0.43	ng/L		12/22/21 19:44	12/26/21 16:01	1
Perfluorononanoic acid (PFNA)	ND	H	1.7	0.43	ng/L		12/22/21 19:44	12/26/21 16:01	1
Perfluorodecanoic acid (PFDA)	ND	H	1.7	0.43	ng/L		12/22/21 19:44	12/26/21 16:01	1
Perfluoroundecanoic acid (PFUnA)	ND	H	1.7	0.43	ng/L		12/22/21 19:44	12/26/21 16:01	1
Perfluorododecanoic acid (PFDoA)	ND	H	1.7	0.43	ng/L		12/22/21 19:44	12/26/21 16:01	1
Perfluorotridecanoic acid (PFTriA)	ND	H	1.7	0.43	ng/L		12/22/21 19:44	12/26/21 16:01	1
Perfluorotetradecanoic acid (PFTeA)	ND	H	1.7	0.43	ng/L		12/22/21 19:44	12/26/21 16:01	1
Perfluorobutanesulfonic acid (PFBS)	ND	H	1.7	0.43	ng/L		12/22/21 19:44	12/26/21 16:01	1
Perfluorohexanesulfonic acid (PFHxS)	3.6	H	1.7	0.43	ng/L		12/22/21 19:44	12/26/21 16:01	1
Perfluorooctanesulfonic acid (PFOS)	ND	H	1.7	0.43	ng/L		12/22/21 19:44	12/26/21 16:01	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	ND	H	1.7	0.43	ng/L		12/22/21 19:44	12/26/21 16:01	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	ND	H	1.7	0.43	ng/L		12/22/21 19:44	12/26/21 16:01	1
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid (9Cl-PF3O)	ND	H	1.7	0.43	ng/L		12/22/21 19:44	12/26/21 16:01	1
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF)	ND	H	1.7	0.43	ng/L		12/22/21 19:44	12/26/21 16:01	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	ND	H	1.7	0.43	ng/L		12/22/21 19:44	12/26/21 16:01	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	ND	H	1.7	0.43	ng/L		12/22/21 19:44	12/26/21 16:01	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C2 PFHxA	78		70 - 130	12/22/21 19:44	12/26/21 16:01	1
13C2 PFDA	87		70 - 130	12/22/21 19:44	12/26/21 16:01	1
d5-NEtFOSAA	96		70 - 130	12/22/21 19:44	12/26/21 16:01	1
13C3 HFPO-DA	75		70 - 130	12/22/21 19:44	12/26/21 16:01	1

Client Sample Results

Client: Shannon & Wilson, Inc
 Project/Site: King Salmon (AKN) DOFPF

Job ID: 320-82916-1

Client Sample ID: AKNPW-012

Lab Sample ID: 320-82916-4

Date Collected: 12/06/21 15:48

Matrix: Water

Date Received: 12/14/21 17:50

Method: 537.1 DW - Perfluorinated Alkyl Acids (LC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorohexanoic acid (PFHxA)	14	H	1.7	0.42	ng/L		12/22/21 19:44	12/26/21 16:08	1
Perfluoroheptanoic acid (PFHpA)	3.3	H	1.7	0.42	ng/L		12/22/21 19:44	12/26/21 16:08	1
Perfluorooctanoic acid (PFOA)	20	H	1.7	0.42	ng/L		12/22/21 19:44	12/26/21 16:08	1
Perfluorononanoic acid (PFNA)	ND	H	1.7	0.42	ng/L		12/22/21 19:44	12/26/21 16:08	1
Perfluorodecanoic acid (PFDA)	ND	H	1.7	0.42	ng/L		12/22/21 19:44	12/26/21 16:08	1
Perfluoroundecanoic acid (PFUnA)	ND	H	1.7	0.42	ng/L		12/22/21 19:44	12/26/21 16:08	1
Perfluorododecanoic acid (PFDoA)	ND	H	1.7	0.42	ng/L		12/22/21 19:44	12/26/21 16:08	1
Perfluorotridecanoic acid (PFTriA)	ND	H	1.7	0.42	ng/L		12/22/21 19:44	12/26/21 16:08	1
Perfluorotetradecanoic acid (PFTeA)	ND	H	1.7	0.42	ng/L		12/22/21 19:44	12/26/21 16:08	1
Perfluorobutanesulfonic acid (PFBS)	3.6	H	1.7	0.42	ng/L		12/22/21 19:44	12/26/21 16:08	1
Perfluorohexanesulfonic acid (PFHxS)	11	H	1.7	0.42	ng/L		12/22/21 19:44	12/26/21 16:08	1
Perfluorooctanesulfonic acid (PFOS)	ND	H	1.7	0.42	ng/L		12/22/21 19:44	12/26/21 16:08	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	ND	H	1.7	0.42	ng/L		12/22/21 19:44	12/26/21 16:08	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	ND	H	1.7	0.42	ng/L		12/22/21 19:44	12/26/21 16:08	1
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid (9Cl-PF3O)	ND	H	1.7	0.42	ng/L		12/22/21 19:44	12/26/21 16:08	1
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF)	ND	H	1.7	0.42	ng/L		12/22/21 19:44	12/26/21 16:08	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	ND	H	1.7	0.42	ng/L		12/22/21 19:44	12/26/21 16:08	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	ND	H	1.7	0.42	ng/L		12/22/21 19:44	12/26/21 16:08	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C2 PFHxA	87		70 - 130	12/22/21 19:44	12/26/21 16:08	1
13C2 PFDA	89		70 - 130	12/22/21 19:44	12/26/21 16:08	1
d5-NEtFOSAA	88		70 - 130	12/22/21 19:44	12/26/21 16:08	1
13C3 HFPO-DA	84		70 - 130	12/22/21 19:44	12/26/21 16:08	1

Client Sample Results

Client: Shannon & Wilson, Inc
 Project/Site: King Salmon (AKN) DOFPF

Job ID: 320-82916-1

Client Sample ID: AKNPW-112

Lab Sample ID: 320-82916-5

Date Collected: 12/06/21 15:38

Matrix: Water

Date Received: 12/14/21 17:50

Method: 537.1 DW - Perfluorinated Alkyl Acids (LC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorohexanoic acid (PFHxA)	13	H	1.7	0.43	ng/L		12/22/21 19:44	12/26/21 16:16	1
Perfluoroheptanoic acid (PFHpA)	3.2	H	1.7	0.43	ng/L		12/22/21 19:44	12/26/21 16:16	1
Perfluorooctanoic acid (PFOA)	19	H	1.7	0.43	ng/L		12/22/21 19:44	12/26/21 16:16	1
Perfluorononanoic acid (PFNA)	ND	H	1.7	0.43	ng/L		12/22/21 19:44	12/26/21 16:16	1
Perfluorodecanoic acid (PFDA)	ND	H	1.7	0.43	ng/L		12/22/21 19:44	12/26/21 16:16	1
Perfluoroundecanoic acid (PFUnA)	ND	H	1.7	0.43	ng/L		12/22/21 19:44	12/26/21 16:16	1
Perfluorododecanoic acid (PFDoA)	ND	H	1.7	0.43	ng/L		12/22/21 19:44	12/26/21 16:16	1
Perfluorotridecanoic acid (PFTriA)	ND	H	1.7	0.43	ng/L		12/22/21 19:44	12/26/21 16:16	1
Perfluorotetradecanoic acid (PFTeA)	ND	H	1.7	0.43	ng/L		12/22/21 19:44	12/26/21 16:16	1
Perfluorobutanesulfonic acid (PFBS)	3.4	H	1.7	0.43	ng/L		12/22/21 19:44	12/26/21 16:16	1
Perfluorohexanesulfonic acid (PFHxS)	11	H	1.7	0.43	ng/L		12/22/21 19:44	12/26/21 16:16	1
Perfluorooctanesulfonic acid (PFOS)	ND	H	1.7	0.43	ng/L		12/22/21 19:44	12/26/21 16:16	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	ND	H	1.7	0.43	ng/L		12/22/21 19:44	12/26/21 16:16	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	ND	H	1.7	0.43	ng/L		12/22/21 19:44	12/26/21 16:16	1
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid (9Cl-PF3O)	ND	H	1.7	0.43	ng/L		12/22/21 19:44	12/26/21 16:16	1
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF)	ND	H	1.7	0.43	ng/L		12/22/21 19:44	12/26/21 16:16	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	ND	H	1.7	0.43	ng/L		12/22/21 19:44	12/26/21 16:16	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	ND	H	1.7	0.43	ng/L		12/22/21 19:44	12/26/21 16:16	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C2 PFHxA	80		70 - 130	12/22/21 19:44	12/26/21 16:16	1
13C2 PFDA	86		70 - 130	12/22/21 19:44	12/26/21 16:16	1
d5-NEtFOSAA	91		70 - 130	12/22/21 19:44	12/26/21 16:16	1
13C3 HFPO-DA	82		70 - 130	12/22/21 19:44	12/26/21 16:16	1

Client Sample Results

Client: Shannon & Wilson, Inc
 Project/Site: King Salmon (AKN) DOFPF

Job ID: 320-82916-1

Client Sample ID: AKNPW-008

Lab Sample ID: 320-82916-6

Date Collected: 12/06/21 15:05

Matrix: Water

Date Received: 12/14/21 17:50

Method: 537.1 DW - Perfluorinated Alkyl Acids (LC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorohexanoic acid (PFHxA)	3.1	H	1.8	0.44	ng/L		12/22/21 19:44	12/26/21 16:23	1
Perfluoroheptanoic acid (PFHpA)	0.61	J H	1.8	0.44	ng/L		12/22/21 19:44	12/26/21 16:23	1
Perfluorooctanoic acid (PFOA)	3.0	H	1.8	0.44	ng/L		12/22/21 19:44	12/26/21 16:23	1
Perfluorononanoic acid (PFNA)	ND	H	1.8	0.44	ng/L		12/22/21 19:44	12/26/21 16:23	1
Perfluorodecanoic acid (PFDA)	ND	H	1.8	0.44	ng/L		12/22/21 19:44	12/26/21 16:23	1
Perfluoroundecanoic acid (PFUnA)	ND	H	1.8	0.44	ng/L		12/22/21 19:44	12/26/21 16:23	1
Perfluorododecanoic acid (PFDoA)	ND	H	1.8	0.44	ng/L		12/22/21 19:44	12/26/21 16:23	1
Perfluorotridecanoic acid (PFTriA)	ND	H	1.8	0.44	ng/L		12/22/21 19:44	12/26/21 16:23	1
Perfluorotetradecanoic acid (PFTeA)	ND	H	1.8	0.44	ng/L		12/22/21 19:44	12/26/21 16:23	1
Perfluorobutanesulfonic acid (PFBS)	ND	H	1.8	0.44	ng/L		12/22/21 19:44	12/26/21 16:23	1
Perfluorohexanesulfonic acid (PFHxS)	1.4	J H	1.8	0.44	ng/L		12/22/21 19:44	12/26/21 16:23	1
Perfluorooctanesulfonic acid (PFOS)	ND	H	1.8	0.44	ng/L		12/22/21 19:44	12/26/21 16:23	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	ND	H	1.8	0.44	ng/L		12/22/21 19:44	12/26/21 16:23	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	ND	H	1.8	0.44	ng/L		12/22/21 19:44	12/26/21 16:23	1
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid (9Cl-PF3O)	ND	H	1.8	0.44	ng/L		12/22/21 19:44	12/26/21 16:23	1
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF)	ND	H	1.8	0.44	ng/L		12/22/21 19:44	12/26/21 16:23	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	ND	H	1.8	0.44	ng/L		12/22/21 19:44	12/26/21 16:23	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	ND	H	1.8	0.44	ng/L		12/22/21 19:44	12/26/21 16:23	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C2 PFHxA	87		70 - 130	12/22/21 19:44	12/26/21 16:23	1
13C2 PFDA	85		70 - 130	12/22/21 19:44	12/26/21 16:23	1
d5-NEtFOSAA	93		70 - 130	12/22/21 19:44	12/26/21 16:23	1
13C3 HFPO-DA	83		70 - 130	12/22/21 19:44	12/26/21 16:23	1

Surrogate Summary

Client: Shannon & Wilson, Inc
 Project/Site: King Salmon (AKN) DOFPF

Job ID: 320-82916-1

Method: 537.1 DW - Perfluorinated Alkyl Acids (LC/MS)

Matrix: Water

Prep Type: Total/NA

Percent Surrogate Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	PFHxA	PFDA	d5NEFOS	HFPODA
		(70-130)	(70-130)	(70-130)	(70-130)
320-82916-1	AKNPW-011	90	96	85	91
320-82916-2	AKNPW-208	86	100	87	84
320-82916-3	AKNPW-007	78	87	96	75
320-82916-4	AKNPW-012	87	89	88	84
320-82916-5	AKNPW-112	80	86	91	82
320-82916-6	AKNPW-008	87	85	93	83
LCS 320-553351/2-A	Lab Control Sample	84	80	85	85
LCSD 320-553351/3-A	Lab Control Sample Dup	96	100	90	95
MB 320-553351/1-A	Method Blank	92	98	91	91

Surrogate Legend

PFHxA = 13C2 PFHxA

PFDA = 13C2 PFDA

d5NEFOS = d5-NEtFOSAA

HFPODA = 13C3 HFPO-DA

QC Sample Results

Client: Shannon & Wilson, Inc
 Project/Site: King Salmon (AKN) DOFPF

Job ID: 320-82916-1

Method: 537.1 DW - Perfluorinated Alkyl Acids (LC/MS)

Lab Sample ID: MB 320-553351/1-A
Matrix: Water
Analysis Batch: 554094

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 553351

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorohexanoic acid (PFHxA)	ND		2.0	0.50	ng/L		12/22/21 19:44	12/26/21 15:38	1
Perfluoroheptanoic acid (PFHpA)	ND		2.0	0.50	ng/L		12/22/21 19:44	12/26/21 15:38	1
Perfluorooctanoic acid (PFOA)	ND		2.0	0.50	ng/L		12/22/21 19:44	12/26/21 15:38	1
Perfluorononanoic acid (PFNA)	ND		2.0	0.50	ng/L		12/22/21 19:44	12/26/21 15:38	1
Perfluorodecanoic acid (PFDA)	ND		2.0	0.50	ng/L		12/22/21 19:44	12/26/21 15:38	1
Perfluoroundecanoic acid (PFUnA)	ND		2.0	0.50	ng/L		12/22/21 19:44	12/26/21 15:38	1
Perfluorododecanoic acid (PFDoA)	ND		2.0	0.50	ng/L		12/22/21 19:44	12/26/21 15:38	1
Perfluorotridecanoic acid (PFTriA)	ND		2.0	0.50	ng/L		12/22/21 19:44	12/26/21 15:38	1
Perfluorotetradecanoic acid (PFTeA)	ND		2.0	0.50	ng/L		12/22/21 19:44	12/26/21 15:38	1
Perfluorobutanesulfonic acid (PFBS)	ND		2.0	0.50	ng/L		12/22/21 19:44	12/26/21 15:38	1
Perfluorohexanesulfonic acid (PFHxS)	ND		2.0	0.50	ng/L		12/22/21 19:44	12/26/21 15:38	1
Perfluorooctanesulfonic acid (PFOS)	ND		2.0	0.50	ng/L		12/22/21 19:44	12/26/21 15:38	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	ND		2.0	0.50	ng/L		12/22/21 19:44	12/26/21 15:38	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	ND		2.0	0.50	ng/L		12/22/21 19:44	12/26/21 15:38	1
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid (9Cl-PF3O)	ND		2.0	0.50	ng/L		12/22/21 19:44	12/26/21 15:38	1
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF)	ND		2.0	0.50	ng/L		12/22/21 19:44	12/26/21 15:38	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	ND		2.0	0.50	ng/L		12/22/21 19:44	12/26/21 15:38	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	ND		2.0	0.50	ng/L		12/22/21 19:44	12/26/21 15:38	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C2 PFHxA	92		70 - 130	12/22/21 19:44	12/26/21 15:38	1
13C2 PFDA	98		70 - 130	12/22/21 19:44	12/26/21 15:38	1
d5-NEtFOSAA	91		70 - 130	12/22/21 19:44	12/26/21 15:38	1
13C3 HFPO-DA	91		70 - 130	12/22/21 19:44	12/26/21 15:38	1

Lab Sample ID: LCS 320-553351/2-A
Matrix: Water
Analysis Batch: 554094

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 553351

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Perfluorohexanoic acid (PFHxA)	80.0	66.4		ng/L		83	70 - 130
Perfluoroheptanoic acid (PFHpA)	80.0	68.0		ng/L		85	70 - 130
Perfluorooctanoic acid (PFOA)	80.0	77.3		ng/L		97	70 - 130
Perfluorononanoic acid (PFNA)	80.0	80.7		ng/L		101	70 - 130
Perfluorodecanoic acid (PFDA)	80.0	80.3		ng/L		100	70 - 130
Perfluoroundecanoic acid (PFUnA)	80.0	77.3		ng/L		97	70 - 130
Perfluorododecanoic acid (PFDoA)	80.0	78.4		ng/L		98	70 - 130
Perfluorotridecanoic acid (PFTriA)	80.0	71.9		ng/L		90	70 - 130
Perfluorotetradecanoic acid (PFTeA)	80.0	63.5		ng/L		79	70 - 130
Perfluorobutanesulfonic acid (PFBS)	70.7	66.6		ng/L		94	70 - 130

Eurofins TestAmerica, Sacramento

QC Sample Results

Client: Shannon & Wilson, Inc
 Project/Site: King Salmon (AKN) DOFPF

Job ID: 320-82916-1

Method: 537.1 DW - Perfluorinated Alkyl Acids (LC/MS) (Continued)

Lab Sample ID: LCS 320-553351/2-A
Matrix: Water
Analysis Batch: 554094

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 553351

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Perfluorohexanesulfonic acid (PFHxS)	72.8	66.1		ng/L		91	70 - 130
Perfluorooctanesulfonic acid (PFOS)	74.2	62.5		ng/L		84	70 - 130
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	80.0	68.3		ng/L		85	70 - 130
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	80.0	63.3		ng/L		79	70 - 130
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid (9Cl-PF3O)	74.6	66.0		ng/L		89	70 - 130
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PFHexafluoropropylene Oxide Dimer Acid (HFPO-DA)	75.4	63.6		ng/L		84	70 - 130
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	80.0	75.0		ng/L		94	70 - 130
	75.4	69.4		ng/L		92	70 - 130

Surrogate	LCS %Recovery	LCS Qualifier	Limits
13C2 PFHxA	84		70 - 130
13C2 PFDA	80		70 - 130
d5-NEtFOSAA	85		70 - 130
13C3 HFPO-DA	85		70 - 130

Lab Sample ID: LCSD 320-553351/3-A
Matrix: Water
Analysis Batch: 554094

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 553351

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Perfluorohexanoic acid (PFHxA)	80.0	74.1		ng/L		93	70 - 130	11	30
Perfluoroheptanoic acid (PFHpA)	80.0	78.3		ng/L		98	70 - 130	14	30
Perfluorooctanoic acid (PFOA)	80.0	82.0		ng/L		103	70 - 130	6	30
Perfluorononanoic acid (PFNA)	80.0	85.5		ng/L		107	70 - 130	6	30
Perfluorodecanoic acid (PFDA)	80.0	89.9		ng/L		112	70 - 130	11	30
Perfluoroundecanoic acid (PFUnA)	80.0	73.5		ng/L		92	70 - 130	5	30
Perfluorododecanoic acid (PFDoA)	80.0	82.7		ng/L		103	70 - 130	5	30
Perfluorotridecanoic acid (PFTriA)	80.0	74.7		ng/L		93	70 - 130	4	30
Perfluorotetradecanoic acid (PFTeA)	80.0	71.9		ng/L		90	70 - 130	12	30
Perfluorobutanesulfonic acid (PFBS)	70.7	69.0		ng/L		98	70 - 130	4	30
Perfluorohexanesulfonic acid (PFHxS)	72.8	67.6		ng/L		93	70 - 130	2	30
Perfluorooctanesulfonic acid (PFOS)	74.2	66.8		ng/L		90	70 - 130	7	30
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	80.0	69.8		ng/L		87	70 - 130	2	30
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	80.0	64.8		ng/L		81	70 - 130	2	30
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid (9Cl-PF3O)	74.6	68.8		ng/L		92	70 - 130	4	30

Eurofins TestAmerica, Sacramento

QC Sample Results

Client: Shannon & Wilson, Inc
 Project/Site: King Salmon (AKN) DOFPF

Job ID: 320-82916-1

Method: 537.1 DW - Perfluorinated Alkyl Acids (LC/MS) (Continued)

Lab Sample ID: LCSD 320-553351/3-A
Matrix: Water
Analysis Batch: 554094

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 553351

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF)	75.4	71.4		ng/L		95	70 - 130	12	30
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	80.0	82.0		ng/L		103	70 - 130	9	30
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	75.4	74.2		ng/L		98	70 - 130	7	30

Surrogate	LCSD %Recovery	LCSD Qualifier	LCSD Limits
13C2 PFHxA	96		70 - 130
13C2 PFDA	100		70 - 130
d5-NEtFOSAA	90		70 - 130
13C3 HFPO-DA	95		70 - 130

QC Association Summary

Client: Shannon & Wilson, Inc
Project/Site: King Salmon (AKN) DOFPF

Job ID: 320-82916-1

LCMS

Prep Batch: 553351

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-82916-1	AKNPW-011	Total/NA	Water	537.1 DW	
320-82916-2	AKNPW-208	Total/NA	Water	537.1 DW	
320-82916-3	AKNPW-007	Total/NA	Water	537.1 DW	
320-82916-4	AKNPW-012	Total/NA	Water	537.1 DW	
320-82916-5	AKNPW-112	Total/NA	Water	537.1 DW	
320-82916-6	AKNPW-008	Total/NA	Water	537.1 DW	
MB 320-553351/1-A	Method Blank	Total/NA	Water	537.1 DW	
LCS 320-553351/2-A	Lab Control Sample	Total/NA	Water	537.1 DW	
LCSD 320-553351/3-A	Lab Control Sample Dup	Total/NA	Water	537.1 DW	

Analysis Batch: 554094

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-82916-1	AKNPW-011	Total/NA	Water	537.1 DW	553351
320-82916-2	AKNPW-208	Total/NA	Water	537.1 DW	553351
320-82916-3	AKNPW-007	Total/NA	Water	537.1 DW	553351
320-82916-4	AKNPW-012	Total/NA	Water	537.1 DW	553351
320-82916-5	AKNPW-112	Total/NA	Water	537.1 DW	553351
320-82916-6	AKNPW-008	Total/NA	Water	537.1 DW	553351
MB 320-553351/1-A	Method Blank	Total/NA	Water	537.1 DW	553351
LCS 320-553351/2-A	Lab Control Sample	Total/NA	Water	537.1 DW	553351
LCSD 320-553351/3-A	Lab Control Sample Dup	Total/NA	Water	537.1 DW	553351

Lab Chronicle

Client: Shannon & Wilson, Inc
Project/Site: King Salmon (AKN) DOFPF

Job ID: 320-82916-1

Client Sample ID: AKNPW-011

Date Collected: 12/06/21 14:13

Date Received: 12/14/21 17:50

Lab Sample ID: 320-82916-1

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	537.1 DW			291.3 mL	1.0 mL	553351	12/22/21 20:40	AP	TAL SAC
Total/NA	Analysis	537.1 DW		1			554094	12/26/21 15:45	D1R	TAL SAC

Client Sample ID: AKNPW-208

Date Collected: 12/06/21 13:37

Date Received: 12/14/21 17:50

Lab Sample ID: 320-82916-2

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	537.1 DW			298.2 mL	1.0 mL	553351	12/22/21 19:44	AP	TAL SAC
Total/NA	Analysis	537.1 DW		1			554094	12/26/21 15:53	D1R	TAL SAC

Client Sample ID: AKNPW-007

Date Collected: 12/06/21 14:41

Date Received: 12/14/21 17:50

Lab Sample ID: 320-82916-3

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	537.1 DW			290.7 mL	1.0 mL	553351	12/22/21 19:44	AP	TAL SAC
Total/NA	Analysis	537.1 DW		1			554094	12/26/21 16:01	D1R	TAL SAC

Client Sample ID: AKNPW-012

Date Collected: 12/06/21 15:48

Date Received: 12/14/21 17:50

Lab Sample ID: 320-82916-4

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	537.1 DW			299.2 mL	1.0 mL	553351	12/22/21 19:44	AP	TAL SAC
Total/NA	Analysis	537.1 DW		1			554094	12/26/21 16:08	D1R	TAL SAC

Client Sample ID: AKNPW-112

Date Collected: 12/06/21 15:38

Date Received: 12/14/21 17:50

Lab Sample ID: 320-82916-5

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	537.1 DW			288.7 mL	1.0 mL	553351	12/22/21 19:44	AP	TAL SAC
Total/NA	Analysis	537.1 DW		1			554094	12/26/21 16:16	D1R	TAL SAC

Client Sample ID: AKNPW-008

Date Collected: 12/06/21 15:05

Date Received: 12/14/21 17:50

Lab Sample ID: 320-82916-6

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	537.1 DW			283.9 mL	1.0 mL	553351	12/22/21 19:44	AP	TAL SAC
Total/NA	Analysis	537.1 DW		1			554094	12/26/21 16:23	D1R	TAL SAC

Laboratory References:

TAL SAC = Eurofins TestAmerica, Sacramento, 880 Riverside Parkway, West Sacramento, CA 95605, TEL (916)373-5600

Eurofins TestAmerica, Sacramento

Accreditation/Certification Summary

Client: Shannon & Wilson, Inc
 Project/Site: King Salmon (AKN) DOFPF

Job ID: 320-82916-1

Laboratory: Eurofins TestAmerica, Sacramento

Unless otherwise noted, all analytes for this laboratory were covered under each accreditation/certification below.

Authority	Program	Identification Number	Expiration Date
Alaska (UST)	State	17-020	02-20-24

The following analytes are included in this report, but the laboratory is not certified by the governing authority. This list may include analytes for which the agency does not offer certification.

Analysis Method	Prep Method	Matrix	Analyte
537.1 DW	537.1 DW	Water	11-Chloroeicosafuoro-3-oxaundecane-1-sulfonic acid (11Cl-PF)
537.1 DW	537.1 DW	Water	4,8-Dioxa-3H-perfluorononanoic acid (ADONA)
537.1 DW	537.1 DW	Water	9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid (9Cl-PF3O)
537.1 DW	537.1 DW	Water	Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)
537.1 DW	537.1 DW	Water	N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)
537.1 DW	537.1 DW	Water	N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)
537.1 DW	537.1 DW	Water	Perfluorobutanesulfonic acid (PFBS)
537.1 DW	537.1 DW	Water	Perfluorodecanoic acid (PFDA)
537.1 DW	537.1 DW	Water	Perfluorododecanoic acid (PFDoA)
537.1 DW	537.1 DW	Water	Perfluoroheptanoic acid (PFHpA)
537.1 DW	537.1 DW	Water	Perfluorohexanesulfonic acid (PFHxS)
537.1 DW	537.1 DW	Water	Perfluorohexanoic acid (PFHxA)
537.1 DW	537.1 DW	Water	Perfluorononanoic acid (PFNA)
537.1 DW	537.1 DW	Water	Perfluorooctanesulfonic acid (PFOS)
537.1 DW	537.1 DW	Water	Perfluorooctanoic acid (PFOA)
537.1 DW	537.1 DW	Water	Perfluorotetradecanoic acid (PFTeA)
537.1 DW	537.1 DW	Water	Perfluorotridecanoic acid (PFTriA)
537.1 DW	537.1 DW	Water	Perfluoroundecanoic acid (PFUnA)

Method Summary

Client: Shannon & Wilson, Inc
Project/Site: King Salmon (AKN) DOFPF

Job ID: 320-82916-1

Method	Method Description	Protocol	Laboratory
537.1 DW	Perfluorinated Alkyl Acids (LC/MS)	EPA	TAL SAC
537.1 DW	Extraction of Perfluorinated Alkyl Acids	EPA	TAL SAC

Protocol References:

EPA = US Environmental Protection Agency

Laboratory References:

TAL SAC = Eurofins TestAmerica, Sacramento, 880 Riverside Parkway, West Sacramento, CA 95605, TEL (916)373-5600



Sample Summary

Client: Shannon & Wilson, Inc
Project/Site: King Salmon (AKN) DOFPF

Job ID: 320-82916-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
320-82916-1	AKNPW-011	Water	12/06/21 14:13	12/14/21 17:50
320-82916-2	AKNPW-208	Water	12/06/21 13:37	12/14/21 17:50
320-82916-3	AKNPW-007	Water	12/06/21 14:41	12/14/21 17:50
320-82916-4	AKNPW-012	Water	12/06/21 15:48	12/14/21 17:50
320-82916-5	AKNPW-112	Water	12/06/21 15:38	12/14/21 17:50
320-82916-6	AKNPW-008	Water	12/06/21 15:05	12/14/21 17:50

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CHAIN-OF-CUSTODY RECORD

Analytical Methods (include preservative if used)

Quote No: _____

Turn Around Time:
 Normal Rush
 Please Specify _____

J-Flags: Yes No

Sample Identity	Lab No.	Time	Date Sampled	Total Number of Containers	Remarks/Matrix Composition/Grab? Sample Containers
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AKN PW - 011		1413	12/16/21	2	Drinking Water
AKN PW - 208		1337			
AKN PW - 007		1441			
AKN PW - 012		1548			
AKN PW - 112		1538			
AKN PW - 008		1505			



Project Information

Number: 102582-012
 Name: King Salmon (AKN) DOP
 Contact: Michael Jaramillo
 Ongoing Project? Yes No
 Sampler: RLW

Sample Receipt

Total No. of Containers: 12
 All QC Seals/Intact? Y/N/NA
 Received Good Cond./Cold Temp:
 Delivery Method:

Relinquished By: 1.	Relinquished By: 2.	Relinquished By: 3.
Signature: <u>[Signature]</u> Printed Name: <u>Rachel Willis</u> Company: <u>Shannon & Wilson, Inc</u>	Signature: _____ Printed Name: _____ Company: _____	Signature: _____ Printed Name: _____ Company: _____
Time: <u>1200</u> Date: <u>12/16/21</u>	Time: _____ Date: _____	Time: _____ Date: _____
Received By: 1.	Received By: 2.	Received By: 3.
Signature: <u>[Signature]</u> Printed Name: <u>Jared James</u> Company: <u>ES&S</u>	Signature: _____ Printed Name: _____ Company: _____	Signature: _____ Printed Name: _____ Company: _____
Time: <u>1547</u> Date: <u>12/16/21</u>	Time: _____ Date: _____	Time: _____ Date: _____

Notes:

Distribution: White - w/shipment - returned to Shannon & Wilson w/ laboratory report
 Yellow - w/shipment - for consignee files
 Pink - Shannon & Wilson - job file

Temp: 0,6°C



Login Sample Receipt Checklist

Client: Shannon & Wilson, Inc

Job Number: 320-82916-1

Login Number: 82916

List Source: Eurofins TestAmerica, Sacramento

List Number: 1

Creator: Her, David A

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	1698506/1698507
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	