



SUBMITTED TO:
Department of
Transportation & Public
Facilities Southcoast Region
P.O. Box 110218
Juneau, Alaska 99811

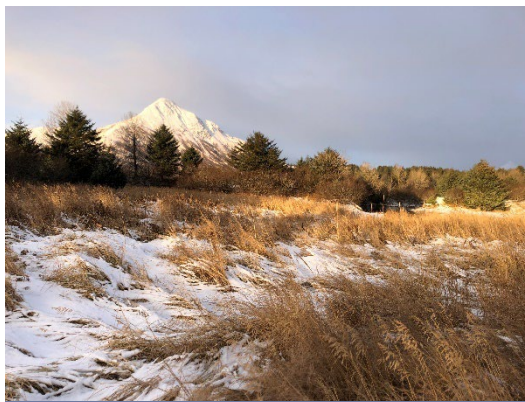


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FINAL REV. 1

SUMMARY REPORT
Kodiak Airport Pre-Construction
Fencing Upgrade
KODIAK, ALASKA





THE STATE
of **ALASKA**
GOVERNOR MIKE DUNLEAVY

Department of Environmental Conservation

Spill Prevention and Response
Contaminated Sites

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ADEC File Numbers:
2601.38.112, 2601.26.003, 2601.38.006, 2601.38.073, Kodiak Airport General

August 10, 2022

Alaska Department of Transportation and Public Facilities
Attention: Joseph Galgano
P.O. Box 112506
Juneau, Ak 99801-2506

Re: **ADEC Review and Approval of the Final 2022 ADOT&PF Kodiak Airport Perimeter Fencing Upgrades 2021 Pre-construction Summary Report**

Dear Mr. Galgano:

Thank you for providing the Alaska Department of Environmental Conservation's Contaminated Sites Program (ADEC) with a copy of the final 2022 ADOT&PF Kodiak Airport Perimeter Fencing Upgrades 2021 Pre-construction Summary Report which is dated July 2022 and was received by ADEC electronically from the ADOT&PF on July 27, 2022. ADEC has completed its review of the revised final report and determined all of its comments and revision requests have been adequately and appropriately applied to the document. This letter serves as ADEC's written approval of the final report.

Please contact me at curtis.dunkin@alaska.gov or at (907)269-3053 if you have any questions regarding ADEC's approval determination and/or this letter.

Sincerely,

Curtis Dunkin Digitally signed by Curtis Dunkin
Date: 2022.08.10 10:34:54 -08'00'

Curtis Dunkin
Environmental Program Specialist

Electronic Copy: 1) Kate Von Rekowski – USCG
 2) Jennifer Nutt – USCG
 3) Jan Palumbo – EPA

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Submitted To: Department of Transportation & Public Facilities Southcoast Region
P.O. Box 110218
Juneau, Alaska 99811
Attn: James Brown and Christy Gentemann

Subject: FINAL REV. 1 SUMMARY REPORT, KODIAK AIRPORT PRE-
CONSTRUCTION FENCING UPGRADE, KODIAK, ALASKA

Shannon & Wilson prepared this report and participated in this project as a consultant to Alaska Department of Transportation and Public Facilities (DOT&PF). Shannon & Wilson's services were authorized by Professional Services Agreement Number 25-19-1-013 Per- and Polyfluorinated Substances (PFAS) Related Environmental & Engineering Services, issued by DOT&PF on May 31, 2019, under Amendment 39 and notice to proceed (NTP) P13-1 dated August 24, 2021 and Amendment 41 and NTP P13-1a dated November 23, 2021. Our scope of services was specified in our proposals dated July 26, 2021, September 3, 2021, and September 17, 2021.

We appreciate the opportunity to be of service to you on this project. If you have questions concerning this report, or we may be of further service, please contact us.

Sincerely,

SHANNON & WILSON

Rachel Willis
Environmental Scientist
Role: Field Lead and Author

Kristen Freiburger
Associate
Role: Project Manager

RLW:TXG:KRF:CBD/rlw

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ACRONYMS

AAC	Alaska Administrative Code
ADONA	4,8-Dioxa-3H-perfluorononanoic acid
ADQ	Kodiak Benny Benson State Airport
°C	degrees Celsius
9Cl-PF3ONS	9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid
11Cl-PF3OUdS	11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid
COPC	contaminant of potential concern
CV	coefficient of variance
DEC	Alaska Department of Environmental Conservation
DOT&PF	Alaska Department of Transportation & Public Facilities
DRO	diesel range organics
DU	decision unit
GRO	gasoline range organics
GWP	Statewide PFAS General Work Plan Revision 1
IDA	isotope dilution analyte
ISM	Incremental Sampling Methodology
LCS	laboratory control sample
LCSD	laboratory control sample duplicate
LDRC	Laboratory Data Review Checklist
MB	method blank
mg/kg	milligrams per kilogram
MS	matrix spike
MSD	matrix spike duplicate
N-EtFOSAA	N-Ethyl perfluorooctane sulfonamidoacetic acid
N-MeFOSAA	N-Methyl perfluorooctane sulfonamidoacetic acid
PFAS	per- and polyfluoroalkyl substances
PFBS	perfluorobutanesulfonic acid
PFOA	perfluorooctanoic acid
PFOS	perfluorooctane sulfonate
QA	quality assurance
QC	quality control
RL	reporting limit
RSD	relative standard deviation
SD	standard deviation
μ	arithmetic mean
μg/kg	micrograms per kilogram
UCL	upper confidence limit
USCG	U.S. Coast Guard

ACRONYMS

VOC	volatile organic compound
WO	work order

1 INTRODUCTION

Shannon & Wilson, Inc. has prepared this report to summarize the November 2021 soil and asphalt sampling associated with upcoming construction activities at the Kodiak Benny Benson State Airport (ADQ) in Kodiak Alaska (Figure 1).

This report was prepared for the Alaska Department of Transportation and Public Facilities (DOT&PF) in accordance with the terms and conditions of our contract, relevant Alaska Department of Environmental Conservation (DEC) guidance documents, and 18 Alaska Administrative Code (AAC) 75.335.

1.1 Purpose and Objectives

The purpose of the project was to sample soil and asphalt in areas where construction activities will occur and where potentially contaminated material will be stockpiled. The objective of the sampling effort was to characterize existing material at the site to guide management of contaminated media during construction. The results presented in this report are intended to support project planning efforts; and should not be used for final waste characterization purposes.

1.2 Background

The ADQ is located on the northeast side of Kodiak Island, south of Buskin River, and adjacent to the Kodiak U.S. Coast Guard (USCG) base. The ADQ is used by the public and military and operated by the State of Alaska.

We understand that DOT&PF is preparing for a perimeter fencing upgrades project at the ADQ. The fencing upgrades requires removal of soil and asphalt from areas with potential to be contaminated by per- and polyfluoroalkyl substances (PFAS) and other contaminants. We understand the excavated material will be stockpiled in two locations (Figure 1).



Exhibit 1-1: ADQ runway and taxiway, facing south.

1.3 Site History

Site 35 is an active DEC Contaminated Site (DEC File Number 2601.38.073, Hazard ID 2898) due to the presence of contaminants related to fire training activities for the USCG (Figures

1 and 4). The Site 35 fire training area has been filled with approximately 10 feet of overburden since excavation and remediation activities occurred in 2001. PFAS, diesel range organics (DRO), gasoline range organics (GRO), and multiple volatile organic compounds (VOCs) have been detected in the soil and groundwater within the Site 35 vicinity.

DOT&PF has designated two areas where excavated soil and asphalt will be stockpiled during construction activities. The location of the future stockpile areas is used to practice gravel road re-surfacing, per conversations field staff had with DOT&PF personnel. It is unknown if there have been any releases in this area.

1.4 Contaminants of Potential Concern and Action Levels

The primary contaminants of potential concern (COPCs) are PFAS, specifically perfluorooctanesulfonic acid (PFOS) and perfluorooctanoic acid (PFOA). We requested 18 PFAS analytes be analyzed for the project samples; however, only PFOS and PFOA are currently regulated with established DEC cleanup levels. We have also included DRO, GRO, and VOCs as COPCs, as these compounds have been previously detected at Site 35.

We compared soil and asphalt results to the migration to groundwater cleanup levels listed in 18 AAC 75 *Table B1. Method Two- Soil Cleanup Levels and Table B2. Method Two- Petroleum Hydrocarbon Soil Cleanup Levels- Over 40-inch Zone.*

1.5 Scope of Services

The scope of services discussed in this report includes the implementation of work summarized in our September 3, 2021 proposal.

These activities included:

- collection of 15 primary and 2 field-duplicate samples from Site 35 for analysis of PFAS, GRO, DRO, and VOCs;
- collection of up to 11 primary and 6 replicate samples using Incremental Sampling Methodology (ISM) at future contaminated media stockpile locations for analysis of PFAS, GRO, DRO, and VOCs;
- collection of 13 primary and two field-duplicate asphalt-composite samples for analysis of PFAS;
- laboratory analysis for the above-listed samples; and
- evaluation and reporting of the analytical data.

This report was prepared for DOT&PF and its representatives. This work presents our professional judgement as to the conditions of the site. Information presented here is based

on the sampling and analyses we performed. This report should not be used for other purposes without our approval or if any of the following occurs:

- Project details change, or new information becomes available, such as revised regulatory levels or the discovery of additional source areas.
- Conditions change due to natural forces or human activity at, under, or adjacent to the project site.
- Assumptions stated in this report have changed.
- If the site ownership or land use has changed.
- Regulations, laws, or cleanup levels change.
- If the site's regulatory status has changed.

If any of these occur, we should be retained to review the applicability of our recommendations. This report should not be used for other purposes without Shannon & Wilson's review. If a service is not specifically indicated in this report, do not assume it was performed.

2 FIELD ACTIVITIES

This section summarizes the soil and asphalt sampling field activities performed in November 2021. The following Shannon & Wilson staff collected analytical samples and are State of Alaska Qualified Samplers, per 18 AAC 7.5333[b] and 18 AAC 78.088[b].

- Rachel Willis, Environmental Scientist
- Zachary Thon, Environmental Scientist

Field staff are aware of the potential for cross-contamination of PFAS from numerous everyday items. Appropriate precautions were taken to prevent cross-contamination, including discontinuing the use of personal protection equipment and field supplies known to contain PFAS, hand washing, and donning a fresh pair of disposal nitrile gloves before each sample is collected.

Field forms are included in Appendix A.

Sampling locations and ISM boundaries are included in Figures 2 through 5.



Exhibit 2-1: Field staff use a rotary drill to sample the asphalt profile outside the Alaska Air Cargo building at the ADQ.

2.1 Asphalt Sampling

Shannon & Wilson collected 13 primary and two field-duplicate asphalt samples on November 13 and November 14, 2021. Sampling locations are presented in Figures 2 and 3.

Field staff used a Bosch Rotary Impact drill with a 1-inch diameter auger bit to drill two adjacent holes through the asphalt and into the aggregate material below. Field staff used a disposable stainless-steel spoon to collect the asphalt sample from the two drilled holes into laboratory-provided sample jars. The asphalt sample is a composite of the asphalt profile and is representative of materials to be stockpiled during construction activities.

Asphalt samples were analyzed for PFAS.

2.2 Site 35 Soil Sampling

Shannon & Wilson collected 15 primary samples and two field-duplicate surface soil samples on November 13, 2021 using the methods described in our August 2020 *Revision 1 DOT&PF Statewide PFAS General Work Plan (GWP)*. Surface soil samples were collected just below vegetation, if present, and between 0.5 to 1.0 feet below ground surface. A trowel or rock hammer was used to clear vegetation and dig to the target depth. A new, disposable stainless-steel spoon was used to fill the laboratory-provided sample jars.

Surface soil samples were collected from the locations shown in Figure 4 and were analyzed for PFAS, GRO, DRO, and VOCs.

2.3 ISM Sampling

Field staff conducted ISM sampling in two areas where DOT&PF plans to stockpile excavated material related to the fencing upgrade project. Area ADQ-ISM1, located northeast of the runway, contained four decision units (DUs), and area ADQ-ISM2, located northwest of the airport runway, was designated into five DUs (Figure 5). The DUs are summarized in Exhibit 2-3.



Exhibit 2-2: Zach Thon collects a soil sample from the northern area of Site 35 adjacent to the Buskin River.

Exhibit 2-3: Decision Unit Summary

Area	DU Name	Surface Area (sq ft)	Notes	Analyses
ADQ-ISM1	ADQ-ISM1-01	6,750	Replicate samples collected.	GRO (AK101), DRO (AK102), VOCs (SW8260C, SW8260C-SIM, and 8011), and PFAS (531M)
	ADQ-ISM1-02	6,750	—	
	ADQ-ISM1-03	7,500	—	
	ADQ-ISM1-04	7,500	—	
ADQ-ISM2	ADQ-ISM2-01	9,600	—	GRO (AK101), DRO (AK102), VOCs (SW8260C, SW8260C-SIM, and 8011), and PFAS (531M)
	ADQ-ISM2-02	9,240	Replicate samples collected.	
	ADQ-ISM2-03	9,240	—	
	ADQ-ISM2-04	9,240	—	
	ADQ-ISM2-05	6,750	—	

Field staff divided each DU into 30 equally sized subunits and systematically collected a subsample from each increment. The substrate at the sample areas consisted of frozen, compacted gravel. Field staff used a Bosch Rotary Drill to loosen the compacted gravel prior to sample collection and collected sample increments using a 5-gram Terra Core® sampler and stainless-steel spoon.

Increment samples from each DU were composited in a resealable bag and laboratory-supplied jars. To assess the precision of the method and overall representativeness, we collected two replicate samples from the DUs in each area, ADQ-ISM1 and ADQ-ISM2.



Exhibit 2-4: Field staff mark decision unit boundaries at ADQ-ISM1 (left), and field staff use a Terra Core® sampler to collect a sample increment of soil for GRO and VOC analysis from ADQ-ISM1.

2.4 Sample Custody, Storage, and Shipping

Field staff collected, handled, and stored samples in a manner consistent with the GWP and DEC's *Field Sampling Guidance*. Immediately after collection, the samples were placed in a designated sample cooler maintained between 0 degrees Celsius (°C) and 6 °C with ice substitute. The PFAS and DRO ISM samples were double-bagged to prevent any leakage and cross-contamination; the PFAS soil jars were stored in individual resealable plastic bags.

Shannon & Wilson maintained custody of the analytical samples until samples were shipped from Kodiak, Alaska to Eurofins TestAmerica Laboratories (Eurofins TestAmerica) in West Sacramento, California using Alaska Air Cargo's Goldstreak service. Field staff placed samples in a hard-sided cooler with a chain of custody form. Samples were packed with frozen ice substitute to maintain the proper temperature range. The coolers were sealed with custody seals on the outside of the coolers. The laboratory receipt notes custody seals were intact upon arrival to the laboratory.

Due to the remote location of Kodiak and flight delays, the samples were received by the laboratory five days after samples were shipped. The laboratory informed Shannon & Wilson that they may not be able to meet the 14-day hold time due to shipping delays and the laboratory's holiday schedule for some project samples. No data were rejected due to hold time failures. See Section C.2 in Appendix C for a discussion of affected samples.

2.5 Investigation Derived Waste

Excess soil was not generated during sampling. Decontamination fluids were discharged at least 100 feet from drainage ditches and surface water bodies at the northwest end of airport runway 11. Other investigation derived wastes included non-reusable sampling equipment, such as nitrile gloves, and were disposed of in an onsite dumpster to be transferred to the Kodiak Island Borough Landfill.

2.6 Deviations from Approved Work

In general, we conducted our services in accordance with the GWP and DEC-approved proposals, except for the following deviations.

- Several asphalt sampling locations were moved outside the airport restricted access boundary to reduce escort needs on DOT&PF staff. Final sample locations are shown in Figures 2 and 3. Samples were moved less than 10 feet from the proposed location.
- The stockpile areas identified in the September 2021 *ISM Stockpile Sampling and Analysis Plan* were comprised of compacted, frozen gravel. Field staff used the Bosch Rotary Drill to separate the frozen gravel to allow for ISM sampling.

- Equipment blank samples were collected each day for the ISM samples since reusable equipment (i.e., rotary drill bit) was introduced during soil sampling. The drill bit was decontaminated after use in each DU using phosphate-free detergent, followed by rinsing with distilled water and PFAS-free water.
- The number of DUs identified in the September 2021 *ISM Stockpile Sampling and Analysis Plan* was reduced to sample only areas that will be used for stockpiling. This change was based on conversations with local DOT&PF personnel.

3 ANALYTICAL RESULTS

Analytical samples collected for this project were submitted to Eurofins TestAmerica Laboratories in West Sacramento, California for analysis of PFAS, GRO, DRO, and VOCs, where applicable. The laboratories maintain current certifications approved by DEC Contaminated Sites to conduct the requested analyses.

Analytical results are presented in Table 1 through Table 3. ISM replicate results and statistical analyses are included in Table 4. The analytical laboratory reports and corresponding DEC Laboratory Data Review Checklists (LDRCs) are included in Appendix B. A quality assurance/quality control (QA/QC) summary of the analytical results is provided in Appendix C.

Soil and asphalt results were compared to the migration to groundwater cleanup levels listed in 18 AAC 75 *Table B1. Method Two- Soil Cleanup Levels and Table B2. Method Two- Petroleum Hydrocarbon Soil Cleanup Levels- Over 40-inch Zone*.

3.1 Asphalt Analytical Results

PFOS was the primary PFAS compound detected in the asphalt and soil samples. PFOS was detected at concentrations exceeding the DEC Cleanup Level of 3.0 micrograms per kilogram ($\mu\text{g}/\text{kg}$) in samples *ADQ-AC11-01* and *ADQ-AC11-02* at 26 $\mu\text{g}/\text{kg}$ and 5.0 $\mu\text{g}/\text{kg}$, respectively.

PFOS was detected above the detection limit but below the DEC Cleanup Level in samples *ADQ-AC3-3-02*, *ADQ-AC3-04*, *ADQ-AC3-05*, *ADQ-AC3-06*, *ADQ-AC3-7* and field-duplicate sample *ADQ-AC3-107*, and *ADQ-AC6-01*.

PFAS were not detected in the following samples: *ADQ-AC3-01*, *ADQ-AC3-03*, *ADQ-AC6-02*, *ADQ-AC7-01* and field-duplicate sample *ADQ-AC7-101*, and *ADQ-AC7-02*.

3.2 Site 35 Analytical Results

GRO, DRO, and VOCs were detected below the associated DEC Cleanup Level in all samples with the following exceptions:

- 1,2,3-trichloropropane was detected above the DEC Cleanup Level in samples *ADQ-Site35-05* and *ADQ-Site35-07*; and
- 1,2-dibromomethane was detected above the DEC Cleanup Level in sample *ADQ-Site35-14*.

Multiple VOCs had elevated detection limits above the associated DEC Cleanup Levels, including 1,2,3-trichloropropane and 1,2-dibromomethane in other project samples.

PFOS and PFOA are the primary PFAS detected in the Site 35 soil samples. PFOS was detected in each surface-soil sample collected from Site 35.

PFOS was detected at concentrations exceeding the DEC Cleanup Level of 3.0 µg/kg in samples *ADQ-Site35-12*, *ADQ-Site35-13*, and field duplicate sample *ADQ-Site35-113*. PFOA was detected at a concentration exceeding the DEC Cleanup Level of 1.7 µg/kg in sample *ADQ-Site35-13*.

3.3 ISM Stockpile Base ISM Analytical Results

GRO, DRO, and VOCs were detected below the associated DEC Cleanup Levels in each ISM sample with the following exceptions:

- DRO was detected at concentrations exceeding the DEC Cleanup Level of 230 mg/kg in ISM samples *ADQ-ISM1-01*, *ADQ-ISM1-02*, and *ADQ-ISM1-04*.

PFOS and PFOA were the primary PFAS detected. No PFAS were detected above the associated DEC Cleanup Levels. PFAS were not detected above laboratory limits with exception of samples *ADQ-ISM1-03* and *ADQ-ISM1-04*, where multiple PFAS were detected at estimated concentrations.

4 ISM STATISTICAL ANALYSES

ISM replicate results and statistical analyses are presented in Table 4. The associated equations are described in our September 3, 2021 Proposal *Kodiak Airport Baseline PFAS Stockpile Sampling and Analysis Plan, Kodiak, Alaska*.

4.1 Arithmetic Mean and Standard Deviation

The arithmetic mean (μ) and standard deviation (SD) for the replicate ISM samples are presented in Table 4. These values can be calculated for analytes where at least one replicate sample result was detected above the reporting limit. The laboratory reporting limit was substituted for the non-detect result for the calculations, where detectable results are not reported. The arithmetic mean represents the average concentration of target analyte in the DU, and the SD is a measure of the ISM replicate variance.

4.2 Data Distribution

The coefficient of variance (CV) is a statistical measure of the spread of variance around the arithmetic mean. If the CV for a given analyte is between 0 and 1.5, then the analyte is assumed to be normally distributed. CV values, where calculable, were less than 1.5. We consider the detected analytical results to be normally distributed.

4.3 Relative Standard Deviation

The overall representativeness of ISM sample results is evaluated by calculating the amount of agreement between the reported concentrations of replicate samples. The agreement between the results is represented by the relative standard deviation (RSD). The RSD is given as a percentage and calculated from the arithmetic mean and standard deviation of the data set.

DEC requires the RSD be 30% or less before the data can be considered sufficiently precise. RSDs can only be calculated where one or more of the target analytes in the replicates were detected. The laboratory reporting limit was substituted for the non-detect result for the calculations.

The RSD was below 30% for the following analytes:

- GRO in sample *ADQ-ISM2-02*; and
- DRO in samples *ADQ-ISM1-01* and *ADQ-ISM2-02*.

We consider the GRO result in sample *ADQ-ISM2-02* and DRO result in samples *ADQ-ISM1-01* and *ADQ-ISM2-02* to be precise and a robust estimate of the actual mean concentration in associated DU.

The RSD was above 30% for the following analytes:

- GRO, 1,2,4-trimethylbenzene, 2-hexanone, acetone, and benzene in sample *ADQ-ISM1-01*; and

- p-xylene & m-xylene and toluene in samples *ADQ-ISM1-01* and *ADQ-ISM2-02*.

An RSD greater than 30% implies imprecision of the analytical method and/or sample non-homogeneity. We consider the analyte concentrations where the RSD was calculated above 30% to be estimated due to the imprecision at the laboratory or sample non-homogeneity.

4.4 95% Upper Confidence Limit

The DEC requires a 95-percent upper confidence limit (95% UCL) be calculated for each target analyte when replicate sample results are reported. This 95% UCL was derived from the three replicate results and represents a value for which there is a 95% probability that the true mean analyte concentration does not exceed within the sampled DU. We compared the 95% UCL for each analyte to the associated DEC Cleanup Level. These values are presented in Table 3.

4.5 ISM Statistical Summary

We consider the GRO result in sample *ADQ-ISM2-02* and DRO result in samples *ADQ-ISM1-01* and *ADQ-ISM2-02* to be representative and complete. The replicate analytical results are normally distributed and meet DEC requirements for analytical precision where analyte results were detected above the laboratory method detection limits.

An RSD greater than 30% implies imprecision of the analytical method and/or sample non-homogeneity. We consider the analyte concentrations where the RSD was calculated above 30% to be estimated due to the imprecision at the laboratory or sample non-homogeneity.

5 DISCUSSION AND RECOMMENDATIONS

The pre-construction sampling effort described in this report documents PFAS contamination and fuel-related contamination in onsite soil and asphalt at the ADQ. PFOS and PFOA were identified in several asphalt samples as well as surface-soil samples from Site 35. PFOS and/or PFOA exceeded the DEC Cleanup Level in two asphalt samples from area AC11, south of the runway by the DOT&PF Maintenance Station (Figure 3) and in two surface-soil samples from Site 35 (Figure 4). We did not observe PFAS contamination above DEC Cleanup Levels at the future stockpile locations (Figure 5).

We observed fuel-related contamination at the stockpile locations (*ADQ-ISM1*) located on the northeast side of the runway and at Site 35.

Based on the results of our pre-construction sampling, we recommend the DOT&PF:

- update the contaminated materials management plan (CMMP) to include the preliminary results. We note that these results should be used as guidance for initial segregation and stockpiling of contaminated media and should not be used for final waste-characterization purposes.
- inform DEC of the results of this sampling event.

These recommendations are based on:

- Site conditions observed at and near the ADQ in November 2021.
- The results of testing on soil and asphalt at the ADQ.
- Shannon & Wilson's understanding of the project and information provided by DOT&PF and other members of the project team.
- The limitations and approved scope and schedule described in our approved proposals.

6 REFERENCES

Alaska Department of Environmental Conservation (DEC), 2020c, 18 AAC 75.341, Soil Cleanup Levels: Juneau, Alaska, Alaska Administrative Code (AAC), Title 18, Chapter 75, Section 341, January, available: <http://dec.alaska.gov/commish/regulations/>.

Alaska Department of Environmental Conservation (DEC), 2022, *Field Sampling Guidance*: Juneau, Alaska, DEC Division of Spill Prevention and Response, Contaminated Sites Program, August, available: http://dec.alaska.gov/spar/csp/guidance_forms/csguidance.htm.

Interstate Technology Regulatory Council (ITRC), 2020, *Technical/Regulatory Guidance for Incremental Sampling Methodology Update*, October, available: <https://ism-2.itrcweb.org/>

Table 1 - Asphalt Analytical Results

Analytical Method	Analyte	DEC Cleanup Level	Units	ADQ-AC3-07								
				ADQ-AC3-01	ADQ-AC3-02	ADQ-AC3-03	ADQ-AC3-04	ADQ-AC3-05	ADQ-AC3-06	Primary	Duplicate	
				11/14/2021	11/13/2021	11/13/2021	11/13/2021	11/13/2021	11/13/2021	11/13/2021	11/13/2021	
PFAS EPA 537M	Perfluorohexanesulfonic acid (PFHxS)	—	µg/kg	<0.19 J*	0.12 J*	<0.21	<0.21	<0.21	<0.21	<0.21	<0.22	<0.20
	Perfluorohexanoic acid (PFHxA)	—	µg/kg	<0.19	0.061 J	<0.21	<0.21	<0.21	<0.21	<0.21	<0.22	<0.20
	Perfluoroheptanoic acid (PFHpA)	—	µg/kg	<0.19	<0.21	<0.21	<0.21	<0.21	<0.21	<0.21	<0.22	<0.20
	Perfluorononanoic acid (PFNA)	—	µg/kg	<0.19	0.046 J	<0.21	<0.21	<0.21	<0.21	<0.21	<0.22	<0.20
	Perfluorobutanesulfonic acid (PFBS)	—	µg/kg	<0.19	<0.21	<0.21	<0.21	<0.21	<0.21	<0.21	<0.22	<0.20
	Perfluorodecanoic acid (PFDA)	—	µg/kg	<0.19	0.055 J	<0.21	<0.21	<0.21	<0.21	<0.21	<0.22	<0.20
	Perfluoroundecanoic acid (PFUnA)	—	µg/kg	<0.19	<0.21	<0.21	<0.21	<0.21	<0.21	<0.21	<0.22	<0.20
	Perfluorododecanoic acid (PFDoA)	—	µg/kg	<0.19	0.053 J	<0.21	<0.21	<0.21	<0.21	<0.21	<0.22	<0.20
	Perfluorotridecanoic acid (PFTrDA)	—	µg/kg	<0.19	0.049 J	<0.21	<0.21	<0.21	<0.21	<0.21	<0.22	<0.20
	Perfluorotetradecanoic acid (PFTeA)	—	µg/kg	<0.19	0.051 J	<0.21	<0.21	<0.21	<0.21	<0.21	<0.22	<0.20
	N-Methyl perfluorooctane sulfonamidoacetic acid (N-MeFOSAA)	—	µg/kg	<0.19	0.051 J	<0.21	<0.21	<0.21	<0.21	<0.21	<0.22	<0.20
	N-Ethyl perfluorooctane sulfonamidoacetic acid (N-EtFOSAA)	—	µg/kg	<0.19	<0.21	<0.21	<0.21	<0.21	<0.21	<0.21	<0.22	<0.20
	9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid (9Cl-PF3ONS)	—	µg/kg	<0.19	0.037 J	<0.21	<0.21	<0.21	<0.21	<0.21	<0.22	<0.20
	11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	—	µg/kg	<0.19	0.042 J	<0.21	<0.21	<0.21	<0.21	<0.21	<0.22	<0.20
	4,8-Dioxa-3H-perfluorononanoic acid (DONA)	—	µg/kg	<0.19	0.050 J	<0.21	<0.21	<0.21	<0.21	<0.21	<0.22	<0.20
	Hexafluoropropylene oxide dimer acid (HFPO-DA)	—	µg/kg	<0.19	<0.21	<0.21	<0.21	<0.21	<0.21	<0.21	<0.22	<0.20
	Perfluorooctanesulfonic acid (PFOS)	3.0	µg/kg	<0.19 J*	0.36	<0.21	0.058 J*	0.11 J*	0.15 J	0.048 J	0.052 J	
Perfluorooctanoic acid (PFOA)	1.7	µg/kg	<0.19	<0.21	<0.21	<0.21	<0.21	<0.21	<0.21	<0.22	<0.20	

NOTES: Results reported from Eurofins Test America work order 82155-1.
Regulatory limits from 18 AAC 75.341 Table B1 Method Two - Soil Cleanup Levels (Migration to Groundwater).

DEC Alaska Department of Environmental Conservation
 PFAS per- and poly-fluoroalkyl substances
 µg/kg micrograms per kilogram
 — No applicable regulatory limit exists for the associated analyte.
 < Analyte was not detected; reported as <Reporting Limit (RL).
BOLD Detected concentration exceeds the DEC cleanup level.
 J Estimated concentration, detected below the RL. Flag applied by the laboratory.
 J* Estimated concentration due to quality control failures. Flag applied by Shannon & Wilson, Inc. (*)

Table 1 - Asphalt Analytical Results

Analytical Method	Analyte	DEC Cleanup Level	Units	ADQ-AC7-01							
				ADQ-AC6-01	ADQ-AC6-02	Primary		Duplicate	ADQ-AC7-02	ADQ-AC11-01	ADQ-AC11-02
				11/14/2021	11/14/2021	11/14/2021	11/14/2021	11/14/2021	11/14/2021	11/14/2021	11/14/2021
PFAS EPA 537M	Perfluorohexanesulfonic acid (PFHxS)	—	µg/kg	<0.19	<0.19	<0.21	<0.21	<0.21	<0.21	3.7	0.41
	Perfluorohexanoic acid (PFHxA)	—	µg/kg	<0.19	<0.19	<0.21	<0.21	<0.21	<0.21 J*	0.54	0.067 J
	Perfluoroheptanoic acid (PFHpA)	—	µg/kg	<0.19	<0.19	<0.21	<0.21	<0.21	<0.21	0.18 J	<0.22
	Perfluorononanoic acid (PFNA)	—	µg/kg	<0.19	<0.19	<0.21	<0.21	<0.21	<0.21	0.055 J	<0.22
	Perfluorobutanesulfonic acid (PFBS)	—	µg/kg	<0.19	<0.19	<0.21	<0.21	<0.21	<0.21	0.20	<0.22
	Perfluorodecanoic acid (PFDA)	—	µg/kg	<0.19	<0.19	<0.21	<0.21	<0.21	<0.21	<0.20	<0.22
	Perfluoroundecanoic acid (PFUnA)	—	µg/kg	<0.19	<0.19	<0.21	<0.21	<0.21	<0.21	<0.20	<0.22
	Perfluorododecanoic acid (PFDoA)	—	µg/kg	<0.19	<0.19	<0.21	<0.21	<0.21	<0.21	<0.20	<0.22
	Perfluorotridecanoic acid (PFTrDA)	—	µg/kg	<0.19	<0.19	<0.21	<0.21	<0.21	<0.21	<0.20	<0.22
	Perfluorotetradecanoic acid (PFTeA)	—	µg/kg	<0.19	<0.19	<0.21	<0.21	<0.21	<0.21	<0.20	<0.22
	N-Methyl perfluorooctane sulfonamidoacetic acid (N-MeFOSAA)	—	µg/kg	<0.19	<0.19	<0.21	<0.21	<0.21	<0.21 J*	0.058 J	<0.22
	N-Ethyl perfluorooctane sulfonamidoacetic acid (N-EtFOSAA)	—	µg/kg	<0.19	<0.19	<0.21	<0.21	<0.21	<0.21 J*	<0.20	<0.22
	9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid (9Cl-PF3ONS)	—	µg/kg	<0.19	<0.19	<0.21	<0.21	<0.21	<0.21	<0.20	<0.22
	11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	—	µg/kg	<0.19	<0.19	<0.21	<0.21	<0.21	<0.21	<0.20	<0.22
	4,8-Dioxa-3H-perfluorononanoic acid (DONA)	—	µg/kg	<0.19	<0.19	<0.21	<0.21	<0.21	<0.21	<0.20	<0.22
	Hexafluoropropylene oxide dimer acid (HFPO-DA)	—	µg/kg	<0.19	<0.19	<0.21	<0.21	<0.21	<0.21	<0.20	<0.22
	Perfluorooctanesulfonic acid (PFOS)	3.0	µg/kg	0.10 J	<0.19	<0.21 J*	<0.21	<0.21	<0.21 J*	26	5.0
Perfluorooctanoic acid (PFOA)	1.7	µg/kg	<0.19	<0.19	<0.21	<0.21	<0.21	<0.21	0.40	<0.22	

NOTES:

- Results reported from Eurofins Test America work order 82155-1.
- Regulatory limits from 18 AAC 75.341 Table B1 Method Two - Soil Cleanup Levels (Migration to Groundwater).
- DEC Alaska Department of Environmental Conservation
- PFAS per- and poly-fluoroalkyl substances
- µg/kg micrograms per kilogram
- No applicable regulatory limit exists for the associated analyte.
- < Analyte was not detected; reported as <Reporting Limit (RL).
- BOLD** Detected concentration exceeds the DEC cleanup level.
- J Estimated concentration, detected below the RL. Flag applied by the laboratory.
- J* Estimated concentration due to quality control failures. Flag applied by Shannon & Wilson, Inc. (*)

Table 2 - Site 35 Soil Analytical Results

Analytical Method	Analyte	DEC Cleanup Level	Units	ADQ-Site35-01	ADQ-Site35-02	ADQ-Site35-03	ADQ-Site35-04	ADQ-Site35-05	ADQ-Site35-06	ADQ-Site35-07	ADQ-Site35-08	ADQ-Site35-09
				11/13/2021	11/13/2021	11/13/2021	11/13/2021	11/13/2021	11/13/2021	11/13/2021	11/13/2021	11/13/2021
AK101	Gasoline Range Organics	260	mg/kg	<15.0 J*	<12.0	<7.50	0.950 J	<3.70	<4.70	<6.20	<3.80	<2.00
AK102	Diesel Range Organics	230	mg/kg	<5.00 B*	<3.50 B*	<3.00 B*	<2.20 B*	11.0	<2.50 B*	62.0 JH*	<3.10 B*	<2.10 B*
VOCs (8260C/ 8011/ 8260C-SIM)	1,1,1,2-Tetrachloroethane	0.022	mg/kg	<0.150 J*	<0.120 J*	<0.0750 J*	<0.0330 J*	<0.0370 J*	<0.0470 J*	<0.0620 J*	<0.0380 J*	<0.0200 J*
	1,1,1-Trichloroethane	32	mg/kg	<0.150 J*	<0.120 J*	<0.0750 J*	<0.0330 J*	<0.0370 J*	<0.0470 J*	<0.0620 J*	<0.0380 J*	<0.0200 J*
	1,1,2,2-Tetrachloroethane	0.003	mg/kg	<0.00740 J*	<0.00620 J*	<0.00380 J*	<0.00160 J*	<0.00190 J*	<0.00230 J*	<0.00310 J*	<0.00190 J*	<0.00100 J*
	1,1,2-Trichloroethane	0.0014	mg/kg	<0.00740 J*	<0.00620 J*	<0.00380 J*	<0.00160 J*	<0.00190 J*	<0.00230 J*	<0.00310 J*	<0.00190 J*	<0.00100 J*
	1,1-Dichloroethane	0.092	mg/kg	<0.150 J*	<0.120 J*	<0.0750 J*	<0.0330 J*	<0.0370 J*	<0.0470 J*	<0.0620 J*	<0.0380 J*	<0.0200 J*
	1,1-Dichloroethene	1.2	mg/kg	<0.150 J*	<0.120 J*	<0.0750 J*	<0.0330 J*	<0.0370 J*	<0.0470 J*	<0.0620 J*	<0.0380 J*	<0.0200 J*
	1,1-Dichloropropene	—	mg/kg	<0.150 J*	<0.120 J*	<0.0750 J*	<0.0330 J*	<0.0370 J*	<0.0470 J*	<0.0620 J*	<0.0380 J*	<0.0200 J*
	1,2,3-Trichlorobenzene	0.15	mg/kg	<0.150 J*	<0.120 J*	<0.0750 J*	<0.0330 J*	<0.0370 J*	<0.0470 J*	<0.0620 J*	<0.0380 J*	<0.0200 J*
	1,2,3-Trichloropropane	0.000031	mg/kg	<0.000630 J*	<0.000400 J*	<0.000350 J*	<0.000280 J*	0.000300 JL*	<0.000310 J*	0.000200 JL*	<0.000280 J*	<0.000270 J*
	1,2,4-Trichlorobenzene	0.082	mg/kg	<0.150 J*	<0.120 J*	<0.0750 J*	<0.0330 J*	<0.0370 J*	<0.0470 J*	<0.0620 J*	<0.0380 J*	<0.0200 J*
	1,2,4-Trimethylbenzene	0.61	mg/kg	<0.150 J*	<0.120 J*	<0.0750 J*	<0.0330 J*	<0.0370 J*	<0.0470 J*	<0.0620 J*	<0.0380 J*	<0.0200 J*
	1,2-Dibromo-3-chloropropane	—	mg/kg	<0.300 J*	<0.250 J*	<0.150 J*	<0.0660 J*	<0.0750 J*	<0.0940 J*	<0.120 J*	<0.0760 J*	<0.0400 J*
	1,2-Dibromoethane	0.00024	mg/kg	<0.000630 J*	<0.000400 J*	<0.000350 J*	<0.000280 J*	0.0000720 JL*	<0.000310 J*	<0.000290 J*	<0.000280 J*	<0.000270 J*
	1,2-Dichlorobenzene	2.4	mg/kg	<0.150 J*	<0.120 J*	<0.0750 J*	<0.0330 J*	<0.0370 J*	<0.0470 J*	<0.0620 J*	<0.0380 J*	<0.0200 J*
	1,2-Dichloroethane	0.0055	mg/kg	<0.00740 J*	<0.00620 J*	<0.00380 J*	<0.00160 J*	<0.00190 J*	<0.00230 J*	<0.00310 J*	<0.00190 J*	<0.00100 J*
	1,2-Dichloropropane	0.03	mg/kg	<0.150 J*	<0.120 J*	<0.0750 J*	<0.0330 J*	<0.0370 J*	<0.0470 J*	<0.0620 J*	<0.0380 J*	<0.0200 J*
	1,3,5-Trimethylbenzene	0.66	mg/kg	<0.150 J*	<0.120 J*	<0.0750 J*	<0.0330 J*	<0.0370 J*	<0.0470 J*	<0.0620 J*	<0.0380 J*	<0.0200 J*
	1,3-Dichlorobenzene	2.3	mg/kg	<0.150 J*	<0.120 J*	<0.0750 J*	<0.0330 J*	<0.0370 J*	<0.0470 J*	<0.0620 J*	<0.0380 J*	<0.0200 J*
	1,3-Dichloropropane	—	mg/kg	<0.150 J*	<0.120 J*	<0.0750 J*	<0.0330 J*	<0.0370 J*	<0.0470 J*	<0.0620 J*	<0.0380 J*	<0.0200 J*
	1,4-Dichlorobenzene	0.037	mg/kg	<0.150 J*	<0.120 J*	<0.0750 J*	<0.0330 J*	<0.0370 J*	<0.0470 J*	<0.0620 J*	<0.0380 J*	<0.0200 J*
	2,2-Dichloropropane	—	mg/kg	<0.150 J*	<0.120 J*	<0.0750 J*	<0.0330 J*	<0.0370 J*	<0.0470 J*	<0.0620 J*	<0.0380 J*	<0.0200 J*
	2-Butanone (MEK)	15	mg/kg	<0.300 J*	<0.250 J*	<0.150 J*	<0.0660 J*	<0.0750 J*	<0.0940 J*	<0.120 J*	<0.0760 J*	<0.0400 J*
	2-Chlorotoluene	—	mg/kg	<0.150 J*	<0.120 J*	<0.0750 J*	<0.0330 J*	<0.0370 J*	<0.0470 J*	<0.0620 J*	<0.0380 J*	<0.0200 J*
	2-Hexanone	0.11	mg/kg	<0.300 J*	<0.250 J*	<0.150 J*	<0.0660 J*	<0.0750 J*	<0.0940 J*	<0.120 J*	<0.0760 J*	<0.0400 J*
	4-Chlorotoluene	—	mg/kg	<0.150 J*	<0.120 J*	<0.0750 J*	<0.0330 J*	<0.0370 J*	<0.0470 J*	<0.0620 J*	<0.0380 J*	<0.0200 J*
	Acetone	38	mg/kg	0.210 JL*	<1.20 J*	<0.750 J*	<0.330 J*	0.0620 JL*	<0.470 J*	0.0750 JL*	<0.380 J*	<0.200 J*
	Benzene	0.022	mg/kg	<0.150 J*	<0.120 J*	<0.0750 J*	<0.0330 J*	<0.0370 J*	<0.0470 J*	<0.0620 J*	<0.0380 J*	<0.0200 J*
	Bromobenzene	0.36	mg/kg	<0.150 J*	<0.120 J*	<0.0750 J*	<0.0330 J*	<0.0370 J*	<0.0470 J*	<0.0620 J*	<0.0380 J*	<0.0200 J*
	Bromochloromethane	—	mg/kg	<0.150 J*	<0.120 J*	<0.0750 J*	<0.0330 J*	<0.0370 J*	<0.0470 J*	<0.0620 J*	<0.0380 J*	<0.0200 J*
	Bromodichloromethane	0.0043	mg/kg	<0.00740 J*	<0.00620 J*	<0.00380 J*	<0.00160 J*	<0.00190 J*	<0.00230 J*	<0.00310 J*	<0.00190 J*	<0.00100 J*
Bromoform	0.1	mg/kg	<0.150 J*	<0.120 J*	<0.0750 J*	<0.0330 J*	<0.0370 J*	<0.0470 J*	<0.0620 J*	<0.0380 J*	<0.0200 J*	
Bromomethane	0.024	mg/kg	<0.0150 J*	<0.0120 J*	<0.00750 J*	<0.00330 J*	<0.00370 J*	<0.00470 J*	<0.00620 J*	<0.00380 J*	<0.00200 J*	
Carbon disulfide	2.9	mg/kg	<0.300 J*	<0.250 J*	<0.150 J*	<0.0660 J*	<0.0750 J*	<0.0940 J*	<0.120 J*	<0.0760 J*	<0.0400 J*	

Table 2 - Site 35 Soil Analytical Results

Analytical Method	Analyte	DEC Cleanup Level	Units	ADQ-Site35-01	ADQ-Site35-02	ADQ-Site35-03	ADQ-Site35-04	ADQ-Site35-05	ADQ-Site35-06	ADQ-Site35-07	ADQ-Site35-08	ADQ-Site35-09
				11/13/2021	11/13/2021	11/13/2021	11/13/2021	11/13/2021	11/13/2021	11/13/2021	11/13/2021	11/13/2021
VOCs (8260C/ 8011/ 8260C-SIM)	Carbon tetrachloride	0.021	mg/kg	<0.150 J*	<0.120 J*	<0.0750 J*	<0.0330 J*	<0.0370 J*	<0.0470 J*	<0.0620 J*	<0.0380 J*	<0.0200 J*
	Chlorobenzene	0.46	mg/kg	<0.150 J*	<0.120 J*	<0.0750 J*	<0.0330 J*	<0.0370 J*	<0.0470 J*	<0.0620 J*	<0.0380 J*	<0.0200 J*
	Chloroethane	72	mg/kg	<0.150 J*	<0.120 J*	<0.0750 J*	<0.0330 J*	<0.0370 J*	<0.0470 J*	<0.0620 J*	<0.0380 J*	<0.0200 J*
	Chloroform	0.0071	mg/kg	<0.0150 J*	<0.0120 J*	<0.00750 J*	<0.00330 J*	<0.00370 J*	<0.00470 J*	<0.00620 J*	<0.00380 J*	<0.00200 J*
	Chloromethane	0.61	mg/kg	<0.150 J*	<0.120 J*	<0.0750 J*	<0.0330 J*	<0.0370 J*	<0.0470 J*	<0.0620 J*	<0.0380 J*	<0.0200 J*
	cis-1,2-Dichloroethene	0.12	mg/kg	<0.150 J*	<0.120 J*	<0.0750 J*	<0.0330 J*	<0.0370 J*	<0.0470 J*	<0.0620 J*	<0.0380 J*	<0.0200 J*
	cis-1,3-Dichloropropene	0.018	mg/kg	<0.150 J*	<0.120 J*	<0.0750 J*	<0.0330 J*	<0.0370 J*	<0.0470 J*	<0.0620 J*	<0.0380 J*	<0.0200 J*
	Dibromochloromethane	0.0027	mg/kg	<0.00740 J*	<0.00620 J*	<0.00380 J*	<0.00160 J*	<0.00190 J*	<0.00230 J*	<0.00310 J*	<0.00190 J*	<0.00100 J*
	Dibromomethane	0.025	mg/kg	<0.150 J*	<0.120 J*	<0.0750 J*	<0.0330 J*	<0.0370 J*	<0.0470 J*	<0.0620 J*	<0.0380 J*	<0.0200 J*
	Dichlorodifluoromethane	3.9	mg/kg	<0.150 J*	<0.120 J*	<0.0750 J*	<0.0330 J*	<0.0370 J*	<0.0470 J*	<0.0620 J*	<0.0380 J*	<0.0200 J*
	Ethylbenzene	0.13	mg/kg	<0.150 J*	<0.120 J*	<0.0750 J*	<0.0330 J*	<0.0370 J*	<0.0470 J*	<0.0620 J*	<0.0380 J*	<0.0200 J*
	Hexachlorobutadiene	0.02	mg/kg	<0.150 J*	<0.120 J*	<0.0750 J*	<0.0330 J*	<0.0370 J*	<0.0470 J*	<0.0620 J*	<0.0380 J*	<0.0200 J*
	Isopropylbenzene	5.6	mg/kg	<0.150 J*	<0.120 J*	<0.0750 J*	<0.0330 J*	<0.0370 J*	<0.0470 J*	<0.0620 J*	<0.0380 J*	<0.0200 J*
	Methyl isobutyl ketone	18	mg/kg	<0.300 J*	<0.250 J*	<0.150 J*	<0.0660 J*	<0.0750 J*	<0.0940 J*	<0.120 J*	<0.0760 J*	<0.0400 J*
	Methylene chloride	0.33	mg/kg	<0.150 J*	<0.120 J*	<0.0750 J*	<0.0330 J*	<0.0370 J*	<0.0470 J*	<0.0620 J*	<0.0380 J*	<0.0200 J*
	Methyl-t-butyl ether (MTBE)	0.4	mg/kg	<0.300 J*	<0.250 J*	<0.150 J*	<0.0660 J*	<0.0750 J*	<0.0940 J*	<0.120 J*	<0.0760 J*	<0.0400 J*
	Naphthalene	0.038	mg/kg	<0.150 J*	<0.120 J*	<0.0750 J*	<0.0330 J*	<0.0370 J*	<0.0470 J*	<0.0620 J*	<0.0380 J*	<0.0200 J*
	n-Butylbenzene	23	mg/kg	<0.150 J*	<0.120 J*	<0.0750 J*	<0.0330 J*	<0.0370 J*	<0.0470 J*	<0.0620 J*	<0.0380 J*	<0.0200 J*
	n-Propylbenzene	9.1	mg/kg	<0.150 J*	<0.120 J*	<0.0750 J*	<0.0330 J*	<0.0370 J*	<0.0470 J*	<0.0620 J*	<0.0380 J*	<0.0200 J*
	o-Xylene	1.5	mg/kg	<0.150 J*	<0.120 J*	<0.0750 J*	<0.0330 J*	<0.0370 J*	<0.0470 J*	<0.0620 J*	<0.0380 J*	<0.0200 J*
	P & M-Xylene	—	mg/kg	<0.150 J*	<0.120 J*	<0.0750 J*	<0.0330 J*	<0.0370 J*	<0.0470 J*	<0.0620 J*	<0.0380 J*	<0.0200 J*
	p-Isopropyltoluene	—	mg/kg	<0.150 J*	<0.120 J*	0.0170 JL*	0.00470 JL*	0.00970 JL*	<0.0470 J*	<0.0620 J*	0.00200 JL*	<0.0200 J*
	sec-Butylbenzene	42	mg/kg	<0.150 J*	<0.120 J*	<0.0750 J*	<0.0330 J*	<0.0370 J*	<0.0470 J*	<0.0620 J*	<0.0380 J*	<0.0200 J*
	Styrene	10	mg/kg	<0.150 J*	<0.120 J*	<0.0750 J*	<0.0330 J*	<0.0370 J*	<0.0470 J*	<0.0620 J*	<0.0380 J*	<0.0200 J*
	tert-Butylbenzene	11	mg/kg	<0.150 J*	<0.120 J*	<0.0750 J*	<0.0330 J*	<0.0370 J*	<0.0470 J*	<0.0620 J*	<0.0380 J*	<0.0200 J*
	Tetrachloroethene	0.19	mg/kg	<0.150 J*	<0.120 J*	<0.0750 J*	<0.0330 J*	<0.0370 J*	<0.0470 J*	<0.0620 J*	<0.0380 J*	<0.0200 J*
	Toluene	6.7	mg/kg	<0.150 J*	<0.120 J*	<0.0750 J*	<0.0330 J*	<0.0370 B*	<0.0470 J*	<0.0620 J*	<0.0380 J*	<0.0200 B*
	trans-1,2-Dichloroethene	1.3	mg/kg	<0.150 J*	<0.120 J*	<0.0750 J*	<0.0330 J*	<0.0370 J*	<0.0470 J*	<0.0620 J*	<0.0380 J*	<0.0200 J*
	trans-1,3-Dichloropropene	0.018	mg/kg	<0.150 J*	<0.120 J*	<0.0750 J*	<0.0330 J*	<0.0370 J*	<0.0470 J*	<0.0620 J*	<0.0380 J*	<0.0200 J*
	Trichloroethene	0.011	mg/kg	<0.00740 J*	<0.00620 J*	<0.00380 J*	<0.00160 J*	<0.00190 J*	<0.00230 J*	<0.00310 J*	<0.00190 J*	<0.00100 J*
Trichlorofluoromethane	41	mg/kg	<0.150 J*	<0.120 J*	<0.0750 J*	<0.0330 J*	<0.0370 J*	<0.0470 J*	<0.0620 J*	<0.0380 J*	<0.0200 J*	
Vinyl chloride	0.0008	mg/kg	<0.00740 J*	<0.00620 J*	<0.00380 J*	<0.00160 J*	<0.00190 J*	<0.00230 J*	<0.00310 J*	<0.00190 J*	<0.00100 J*	

Table 2 - Site 35 Soil Analytical Results

Analytical Method	Analyte	DEC Cleanup Level	Units	ADQ-Site35-01	ADQ-Site35-02	ADQ-Site35-03	ADQ-Site35-04	ADQ-Site35-05	ADQ-Site35-06	ADQ-Site35-07	ADQ-Site35-08	ADQ-Site35-09
				11/13/2021	11/13/2021	11/13/2021	11/13/2021	11/13/2021	11/13/2021	11/13/2021	11/13/2021	11/13/2021
PFAS EPA 537M	Perfluorohexanesulfonic acid (PFHxS)	—	µg/kg	0.081 J*	<0.29	<0.26	<0.21	<0.22	0.048 J	0.14 J	<0.21	<0.20
	Perfluorohexanoic acid (PFHxA)	—	µg/kg	0.14 J	<0.29	<0.26	<0.21	<0.22	0.19 J	0.080 J	<0.21	<0.20
	Perfluoroheptanoic acid (PFHpA)	—	µg/kg	0.14 J	<0.29	0.079 J	<0.21	<0.22	0.16 J	0.046 J	<0.21	<0.20
	Perfluorononanoic acid (PFNA)	—	µg/kg	0.14 J	0.10 J	0.095 J	<0.21	0.052 J	0.13 J	<0.22	<0.21	<0.20
	Perfluorobutanesulfonic acid (PFBS)	—	µg/kg	<0.47	<0.29	<0.26	<0.21	<0.22	<0.23	<0.22	<0.21	<0.20
	Perfluorodecanoic acid (PFDA)	—	µg/kg	<0.47	<0.29	<0.26	<0.21	<0.22	<0.23	<0.22	<0.21	<0.20
	Perfluoroundecanoic acid (PFUnA)	—	µg/kg	<0.47	<0.29	<0.26	<0.21	<0.22	<0.23	0.078 J	<0.21	<0.20
	Perfluorododecanoic acid (PFDoA)	—	µg/kg	<0.47	<0.29	<0.26	<0.21	<0.22	<0.23	<0.22	<0.21	<0.20
	Perfluorotridecanoic acid (PFTrDA)	—	µg/kg	<0.47	<0.29	<0.26	<0.21	<0.22	<0.23	<0.22	<0.21	<0.20
	Perfluorotetradecanoic acid (PFTeA)	—	µg/kg	<0.47	<0.29	<0.26	<0.21	<0.22	<0.23	<0.22	<0.21	<0.20
	N-Methyl perfluorooctane sulfonamidoacetic acid (N-MeFOSAA)	—	µg/kg	<0.47	<0.29	<0.26	<0.21	<0.22	<0.23	<0.22	<0.21	<0.20
	N-Ethyl perfluorooctane sulfonamidoacetic acid (N-EtFOSAA)	—	µg/kg	<0.47	<0.29	<0.26	<0.21	<0.22	<0.23	<0.22	<0.21	<0.20 J*
	9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid (9Cl-PF3ONS)	—	µg/kg	<0.47	<0.29	<0.26	<0.21	<0.22	<0.23	<0.22	<0.21	<0.20
	11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	—	µg/kg	<0.47	<0.29	<0.26	<0.21	<0.22	<0.23	<0.22	<0.21	<0.20
	4,8-Dioxa-3H-perfluorononanoic acid (DONA)	—	µg/kg	<0.47	<0.29	<0.26	<0.21	<0.22	<0.23	<0.22	<0.21	<0.20
	Hexafluoropropylene oxide dimer acid (HFPO-DA)	—	µg/kg	<0.47	<0.29	<0.26	<0.21	<0.22	<0.23	<0.22	<0.21	<0.20
	Perfluorooctanesulfonic acid (PFOS)	3.0	µg/kg	2.3	1.0	0.53	0.047 J*	0.21 J*	1.4	0.72	0.086 J*	0.043 J*
Perfluorooctanoic acid (PFOA)	1.7	µg/kg	0.39 J	0.094 J	0.30	<0.21	<0.22	0.81	0.39	<0.21	<0.20	

NOTES:

- Results reported from Eurofins Test America work order 82154-1.
- Regulatory limits from 18 AAC 75.341 Table B1 Method Two - Soil Cleanup Levels (Migration to Groundwater) and Table B2 Method Two - Over 40-inch zone.
- DEC Alaska Department of Environmental Conservation
- PFAS per- and poly-fluoroalkyl substances
- µg/kg micrograms per kilogram
- No applicable regulatory limit exists for the associated analyte.
- < Analyte was not detected; reported as <Reporting Limit (RL).
- <BOLD The laboratory's limit of detection (LOD) is greater than the regulatory limit.
- BOLD** Detected concentration exceeds the DEC cleanup level.
- B* Sample result is included in the same preparatory batch as a blank detection; see checklist for details. Flag applied by Shannon & Wilson, Inc. (*)
- J Estimated concentration, detected below the RL. Flag applied by the laboratory.
- J* Estimated concentration due to quality control failures. Flag applied by Shannon & Wilson, Inc. (*)
- JH* Estimated concentration, biased high due to quality control failures. Flag applied by Shannon & Wilson, Inc. (*)
- JL* Estimated concentration, biased low due to quality control failures. Flag applied by Shannon & Wilson, Inc. (*)

Table 2 - Site 35 Soil Analytical Results

Analytical Method	Analyte	DEC Cleanup Level	Units	ADQ-Site35-13						ADQ-Site35-15	
				ADQ-Site35-10	ADQ-Site35-11	ADQ-Site35-12	Primary	Duplicate	ADQ-Site35-14	Primary	Duplicate
				11/13/2021	11/13/2021	11/13/2021	11/13/2021	11/13/2021	11/13/2021	11/13/2021	11/13/2021
AK101	Gasoline Range Organics	260	mg/kg	<2.50	<11.0	<3.70	<4.40	1.20 J	1.20 J	<3.30	<4.50
AK102	Diesel Range Organics	230	mg/kg	<2.10 B*	6.90 J*	8.50 J	6.30 J*	6.10 JH*	<2.60 B*	<2.20 B*	<2.20 B*
VOCs (8260C/ 8011/ 8260C-SIM)	1,1,1,2-Tetrachloroethane	0.022	mg/kg	<0.0250 J*	<0.110 J*	<0.0370 J*	<0.0440 J*	<0.0430 J*	<0.0280 J*	<0.0330 J*	<0.0450 J*
	1,1,1-Trichloroethane	32	mg/kg	<0.0250 J*	<0.110 J*	<0.0370 J*	<0.0440 J*	<0.0430 J*	<0.0280 J*	<0.0330 J*	<0.0450 J*
	1,1,2,2-Tetrachloroethane	0.003	mg/kg	<0.00130 J*	<0.00560 J*	<0.00180 J*	<0.00220 J*	<0.00210 J*	<0.00140 J*	<0.00170 J*	<0.00230 J*
	1,1,2-Trichloroethane	0.0014	mg/kg	<0.00130 J*	<0.00560 J*	<0.00180 J*	<0.00220 J*	<0.00210 J*	<0.00140 J*	<0.00170 J*	<0.00230 J*
	1,1-Dichloroethane	0.092	mg/kg	<0.0250 J*	<0.110 J*	<0.0370 J*	<0.0440 J*	<0.0430 J*	<0.0280 J*	<0.0330 J*	<0.0450 J*
	1,1-Dichloroethene	1.2	mg/kg	<0.0250 J*	<0.110 J*	<0.0370 J*	<0.0440 J*	<0.0430 J*	<0.0280 J*	<0.0330 J*	<0.0450 J*
	1,1-Dichloropropene	—	mg/kg	<0.0250 J*	<0.110 J*	<0.0370 J*	<0.0440 J*	<0.0430 J*	<0.0280 J*	<0.0330 J*	<0.0450 J*
	1,2,3-Trichlorobenzene	0.15	mg/kg	<0.0250 J*	<0.110 J*	<0.0370 J*	<0.0440 J*	<0.0430 J*	<0.0280 J*	<0.0330 J*	<0.0450 J*
	1,2,3-Trichloropropane	0.000031	mg/kg	<0.000270 J*	<0.000390 J*	<0.000310 J*	<0.000290 J*	<0.000290 J*	<0.000280 J*	<0.000280 J*	<0.000280 J*
	1,2,4-Trichlorobenzene	0.082	mg/kg	<0.0250 J*	<0.110 J*	<0.0370 J*	<0.0440 J*	<0.0430 J*	<0.0280 J*	<0.0330 J*	<0.0450 J*
	1,2,4-Trimethylbenzene	0.61	mg/kg	0.00260 JL*	<0.110 J*	<0.0370 J*	0.00410 JL*	0.0160 JL*	<0.0280 J*	<0.0330 J*	<0.0450 J*
	1,2-Dibromo-3-chloropropane	—	mg/kg	<0.0500 J*	<0.230 J*	<0.0730 J*	<0.0870 J*	<0.0850 J*	<0.0570 J*	<0.0660 J*	<0.0900 J*
	1,2-Dibromoethane	0.00024	mg/kg	<0.000270 J*	<0.000390 J*	0.000180 JL*	0.000210 JL*	0.0000660 JL*	0.000360 JL*	<0.000280 J*	<0.000280 J*
	1,2-Dichlorobenzene	2.4	mg/kg	<0.0250 J*	<0.110 J*	<0.0370 J*	<0.0440 J*	<0.0430 J*	<0.0280 J*	<0.0330 J*	<0.0450 J*
	1,2-Dichloroethane	0.0055	mg/kg	<0.00130 J*	<0.00560 J*	<0.00180 J*	<0.00220 J*	<0.00210 J*	<0.00140 J*	<0.00170 J*	<0.00230 J*
	1,2-Dichloropropane	0.03	mg/kg	<0.0250 J*	<0.110 J*	<0.0370 J*	<0.0440 J*	<0.0430 J*	<0.0280 J*	<0.0330 J*	<0.0450 J*
	1,3,5-Trimethylbenzene	0.66	mg/kg	<0.0250 J*	<0.110 J*	<0.0370 J*	<0.0440 J*	<0.0430 J*	<0.0280 J*	<0.0330 J*	<0.0450 J*
	1,3-Dichlorobenzene	2.3	mg/kg	<0.0250 J*	<0.110 J*	<0.0370 J*	<0.0440 J*	<0.0430 J*	<0.0280 J*	<0.0330 J*	<0.0450 J*
	1,3-Dichloropropane	—	mg/kg	<0.0250 J*	<0.110 J*	<0.0370 J*	<0.0440 J*	<0.0430 J*	<0.0280 J*	<0.0330 J*	<0.0450 J*
	1,4-Dichlorobenzene	0.037	mg/kg	<0.0250 J*	<0.110 J*	<0.0370 J*	<0.0440 J*	<0.0430 J*	<0.0280 J*	<0.0330 J*	<0.0450 J*
	2,2-Dichloropropane	—	mg/kg	<0.0250 J*	<0.110 J*	<0.0370 J*	<0.0440 J*	<0.0430 J*	<0.0280 J*	<0.0330 J*	<0.0450 J*
	2-Butanone (MEK)	15	mg/kg	<0.0500 J*	<0.230 J*	<0.0730 J*	<0.0870 J*	<0.0850 J*	<0.0570 J*	<0.0660 J*	<0.0900 J*
	2-Chlorotoluene	—	mg/kg	<0.0250 J*	<0.110 J*	<0.0370 J*	<0.0440 J*	<0.0430 J*	<0.0280 J*	<0.0330 J*	<0.0450 J*
	2-Hexanone	0.11	mg/kg	<0.0500 J*	<0.230 J*	<0.0730 J*	<0.0870 J*	<0.0850 J*	<0.0570 J*	<0.0660 J*	<0.0900 J*
	4-Chlorotoluene	—	mg/kg	<0.0250 J*	<0.110 J*	<0.0370 J*	<0.0440 J*	<0.0430 J*	<0.0280 J*	<0.0330 J*	<0.0450 J*
	Acetone	38	mg/kg	<0.250 J*	<1.10 J*	<0.370 J*	<0.440 J*	<0.430 J*	0.0530 JL*	<0.330 J*	<0.450 J*
	Benzene	0.022	mg/kg	<0.0250 J*	<0.110 J*	<0.0370 J*	<0.0440 J*	<0.0430 J*	<0.0280 J*	<0.0330 J*	<0.0450 J*
	Bromobenzene	0.36	mg/kg	<0.0250 J*	<0.110 J*	<0.0370 J*	<0.0440 J*	<0.0430 J*	<0.0280 J*	<0.0330 J*	<0.0450 J*
	Bromochloromethane	—	mg/kg	<0.0250 J*	<0.110 J*	<0.0370 J*	<0.0440 J*	<0.0430 J*	<0.0280 J*	<0.0330 J*	<0.0450 J*
	Bromodichloromethane	0.0043	mg/kg	<0.00130 J*	<0.00560 J*	<0.00180 J*	<0.00220 J*	<0.00210 J*	<0.00140 J*	<0.00170 J*	<0.00230 J*
Bromoform	0.1	mg/kg	<0.0250 J*	<0.110 J*	<0.0370 J*	<0.0440 J*	<0.0430 J*	<0.0280 J*	<0.0330 J*	<0.0450 J*	
Bromomethane	0.024	mg/kg	<0.00250 J*	<0.0110 J*	<0.00370 J*	<0.00440 J*	<0.00430 J*	<0.00280 J*	<0.00330 J*	<0.00450 J*	
Carbon disulfide	2.9	mg/kg	<0.0500 J*	<0.230 J*	<0.0730 J*	<0.0870 J*	<0.0850 J*	<0.0570 J*	<0.0660 J*	<0.0900 J*	

Table 2 - Site 35 Soil Analytical Results

Analytical Method	Analyte	DEC Cleanup Level	Units	ADQ-Site35-13						ADQ-Site35-15	
				ADQ-Site35-10	ADQ-Site35-11	ADQ-Site35-12	Primary	Duplicate	ADQ-Site35-14	Primary	Duplicate
				11/13/2021	11/13/2021	11/13/2021	11/13/2021	11/13/2021	11/13/2021	11/13/2021	11/13/2021
VOCs (8260C/ 8011/ 8260C-SIM)	Carbon tetrachloride	0.021	mg/kg	<0.0250 J*	<0.110 J*	<0.0370 J*	<0.0440 J*	<0.0430 J*	<0.0280 J*	<0.0330 J*	<0.0450 J*
	Chlorobenzene	0.46	mg/kg	<0.0250 J*	<0.110 J*	<0.0370 J*	<0.0440 J*	<0.0430 J*	<0.0280 J*	<0.0330 J*	<0.0450 J*
	Chloroethane	72	mg/kg	<0.0250 J*	<0.110 J*	<0.0370 J*	<0.0440 J*	<0.0430 J*	<0.0280 J*	<0.0330 J*	<0.0450 J*
	Chloroform	0.0071	mg/kg	<0.00250 J*	<0.0110 J*	<0.00370 J*	<0.00440 J*	<0.00430 J*	<0.00280 J*	<0.00330 J*	<0.00450 J*
	Chloromethane	0.61	mg/kg	<0.0250 J*	<0.110 J*	<0.0370 J*	<0.0440 J*	<0.0430 J*	<0.0280 J*	<0.0330 J*	<0.0450 J*
	cis-1,2-Dichloroethene	0.12	mg/kg	<0.0250 J*	<0.110 J*	<0.0370 J*	<0.0440 J*	<0.0430 J*	<0.0280 J*	<0.0330 J*	<0.0450 J*
	cis-1,3-Dichloropropene	0.018	mg/kg	<0.0250 J*	<0.110 J*	<0.0370 J*	<0.0440 J*	<0.0430 J*	<0.0280 J*	<0.0330 J*	<0.0450 J*
	Dibromochloromethane	0.0027	mg/kg	<0.00130 J*	<0.00560 J*	<0.00180 J*	<0.00220 J*	<0.00210 J*	<0.00140 J*	<0.00170 J*	<0.00230 J*
	Dibromomethane	0.025	mg/kg	<0.0250 J*	<0.110 J*	<0.0370 J*	<0.0440 J*	<0.0430 J*	<0.0280 J*	<0.0330 J*	<0.0450 J*
	Dichlorodifluoromethane	3.9	mg/kg	<0.0250 J*	<0.110 J*	<0.0370 J*	<0.0440 J*	<0.0430 J*	<0.0280 J*	<0.0330 J*	<0.0450 J*
	Ethylbenzene	0.13	mg/kg	<0.0250 J*	<0.110 J*	<0.0370 J*	<0.0440 J*	<0.0430 J*	<0.0280 J*	<0.0330 J*	<0.0450 J*
	Hexachlorobutadiene	0.02	mg/kg	<0.0250 J*	<0.110 J*	<0.0370 J*	<0.0440 J*	<0.0430 J*	<0.0280 J*	<0.0330 J*	<0.0450 J*
	Isopropylbenzene	5.6	mg/kg	<0.0250 J*	<0.110 J*	<0.0370 J*	<0.0440 J*	<0.0430 J*	<0.0280 J*	<0.0330 J*	<0.0450 J*
	Methyl isobutyl ketone	18	mg/kg	<0.0500 J*	<0.230 J*	<0.0730 J*	<0.0870 J*	<0.0850 J*	<0.0570 J*	<0.0660 J*	<0.0900 J*
	Methylene chloride	0.33	mg/kg	<0.0250 J*	<0.110 J*	<0.0370 J*	<0.0440 J*	<0.0430 J*	<0.0280 J*	<0.0330 J*	<0.0450 J*
	Methyl-t-butyl ether (MTBE)	0.4	mg/kg	<0.0500 J*	<0.230 J*	<0.0730 J*	<0.0870 J*	<0.0850 J*	<0.0570 J*	<0.0660 J*	<0.0900 J*
	Naphthalene	0.038	mg/kg	<0.0250 J*	<0.110 J*	<0.0370 J*	0.00700 JL*	0.0220 JL*	<0.0280 J*	<0.0330 J*	<0.0450 J*
	n-Butylbenzene	23	mg/kg	<0.0250 J*	<0.110 J*	<0.0370 J*	<0.0440 J*	<0.0430 J*	<0.0280 J*	<0.0330 J*	<0.0450 J*
	n-Propylbenzene	9.1	mg/kg	<0.0250 J*	<0.110 J*	<0.0370 J*	<0.0440 J*	<0.0430 J*	<0.0280 J*	<0.0330 J*	<0.0450 J*
	o-Xylene	1.5	mg/kg	<0.0250 J*	<0.110 J*	<0.0370 J*	<0.0440 J*	0.00830 JL*	<0.0280 J*	<0.0330 J*	<0.0450 J*
	P & M-Xylene	—	mg/kg	0.00410 JL*	<0.110 J*	0.00420 JL*	0.00850 JL*	0.0300 JL*	0.00340 JL*	<0.0330 J*	<0.0450 J*
	p-Isopropyltoluene	—	mg/kg	<0.0250 J*	<0.110 J*	<0.0370 J*	<0.0440 J*	<0.0430 J*	0.00480 JL*	<0.0330 J*	<0.0450 J*
	sec-Butylbenzene	42	mg/kg	<0.0250 J*	<0.110 J*	<0.0370 J*	<0.0440 J*	<0.0430 J*	<0.0280 J*	<0.0330 J*	<0.0450 J*
	Styrene	10	mg/kg	<0.0250 J*	<0.110 J*	<0.0370 J*	<0.0440 J*	<0.0430 J*	<0.0280 J*	<0.0330 J*	<0.0450 J*
	tert-Butylbenzene	11	mg/kg	<0.0250 J*	<0.110 J*	<0.0370 J*	<0.0440 J*	<0.0430 J*	<0.0280 J*	<0.0330 J*	<0.0450 J*
	Tetrachloroethene	0.19	mg/kg	<0.0250 J*	<0.110 J*	<0.0370 J*	<0.0440 J*	<0.0430 J*	<0.0280 J*	<0.0330 J*	<0.0450 J*
	Toluene	6.7	mg/kg	<0.0250 B*	<0.110 B*	<0.0370 B*	<0.0440 B*	0.0590 JL*	<0.0280 B*	<0.0330 J*	<0.0450 B*
	trans-1,2-Dichloroethene	1.3	mg/kg	<0.0250 J*	<0.110 J*	<0.0370 J*	<0.0440 J*	<0.0430 J*	<0.0280 J*	<0.0330 J*	<0.0450 J*
	trans-1,3-Dichloropropene	0.018	mg/kg	<0.0250 J*	<0.110 J*	<0.0370 J*	<0.0440 J*	<0.0430 J*	<0.0280 J*	<0.0330 J*	<0.0450 J*
	Trichloroethene	0.011	mg/kg	<0.00130 J*	<0.00560 J*	<0.00180 J*	<0.00220 J*	<0.00210 J*	<0.00140 J*	<0.00170 J*	<0.00230 J*
Trichlorofluoromethane	41	mg/kg	<0.0250 J*	<0.110 J*	<0.0370 J*	<0.0440 J*	<0.0430 J*	<0.0280 J*	<0.0330 J*	<0.0450 J*	
Vinyl chloride	0.0008	mg/kg	<0.00130 J*	<0.00560 J*	<0.00180 J*	<0.00220 J*	<0.00210 J*	<0.00140 J*	<0.00170 J*	<0.00230 J*	

Table 2 - Site 35 Soil Analytical Results

Analytical Method	Analyte	DEC Cleanup Level	Units	ADQ-Site35-13					ADQ-Site35-15		
				ADQ-Site35-10	ADQ-Site35-11	ADQ-Site35-12	Primary	Duplicate	ADQ-Site35-14	Primary	Duplicate
				11/13/2021	11/13/2021	11/13/2021	11/13/2021	11/13/2021	11/13/2021	11/13/2021	11/13/2021
PFAS EPA 537M	Perfluorohexanesulfonic acid (PFHxS)	—	µg/kg	<0.20	0.093 J	0.39	1.3	1.2	0.10 J	<0.20	<0.20
	Perfluorohexanoic acid (PFHxA)	—	µg/kg	<0.20	<0.28	0.13 J	0.10 J	0.096 J	0.044 J	<0.20	<0.20
	Perfluoroheptanoic acid (PFHpA)	—	µg/kg	<0.20	<0.28	<0.23	0.073 J	<0.21	0.059 J	<0.20	<0.20
	Perfluorononanoic acid (PFNA)	—	µg/kg	<0.20	<0.28	0.049 J	0.028 J	0.036 J	0.039 J	<0.20	<0.20
	Perfluorobutanesulfonic acid (PFBS)	—	µg/kg	<0.20	<0.28	<0.23	<0.21	<0.21	<0.20	<0.20	<0.20
	Perfluorodecanoic acid (PFDA)	—	µg/kg	<0.20	<0.28	0.13 J	0.057 J	<0.21	<0.20	<0.20	<0.20
	Perfluoroundecanoic acid (PFUnA)	—	µg/kg	<0.20	<0.28	0.25	<0.21	<0.21	<0.20	<0.20	<0.20
	Perfluorododecanoic acid (PFDoA)	—	µg/kg	<0.20	0.052 J	0.10 J	<0.21	<0.21	0.030 J	<0.20	<0.20
	Perfluorotridecanoic acid (PFTrDA)	—	µg/kg	<0.20	<0.28	<0.23	<0.21	<0.21	<0.20	<0.20	<0.20
	Perfluorotetradecanoic acid (PFTeA)	—	µg/kg	<0.20	<0.28	<0.23	<0.21	<0.21	<0.20	<0.20	<0.20
	N-Methyl perfluorooctane sulfonamidoacetic acid (N-MeFOSAA)	—	µg/kg	<0.20	<0.28 J*	<0.23	<0.21	<0.21	<0.20	<0.20	<0.20
	N-Ethyl perfluorooctane sulfonamidoacetic acid (N-EtFOSAA)	—	µg/kg	<0.20	<0.28 J*	<0.23	<0.21	<0.21	<0.20	<0.20 J*	<0.20
	9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid (9Cl-PF3ONS)	—	µg/kg	<0.20	<0.28	<0.23	<0.21	<0.21	<0.20	<0.20	<0.20
	11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	—	µg/kg	<0.20	<0.28	<0.23	<0.21	<0.21	<0.20	<0.20	<0.20
	4,8-Dioxa-3H-perfluorononanoic acid (DONA)	—	µg/kg	<0.20	<0.28	<0.23	<0.21	<0.21	<0.20	<0.20	<0.20
	Hexafluoropropylene oxide dimer acid (HFPO-DA)	—	µg/kg	<0.20	<0.28	<0.23	<0.21	<0.21	<0.20	<0.20	<0.20
	Perfluorooctanesulfonic acid (PFOS)	3.0	µg/kg	0.070 J*	1.1	3.7	20	16	0.47	0.12 J*	0.13 J
Perfluorooctanoic acid (PFOA)	1.7	µg/kg	0.055 J	0.40	1.6	1.7	1.3	0.63	0.076 J	0.085 J	

NOTES:

Results reported from Eurofins Test America work order 82154-1.

Regulatory limits from 18 AAC 75.341 Table B1 Method Two - Soil Cleanup Levels (Migration to Groundwater) and Table B2 Method Two - Over 40-inch zone.

DEC Alaska Department of Environmental Conservation

PFAS per- and poly-fluoroalkyl substances

µg/kg micrograms per kilogram

— No applicable regulatory limit exists for the associated analyte.

< Analyte was not detected; reported as <Reporting Limit (RL).

<BOLD The laboratory's limit of detection (LOD) is greater than the regulatory limit.

BOLD Detected concentration exceeds the DEC cleanup level.

B* Sample result is included in the same preparatory batch as a blank detection; see checklist for details. Flag applied by Shannon & Wilson, Inc. (*)

J Estimated concentration, detected below the RL. Flag applied by the laboratory.

J* Estimated concentration due to quality control failures. Flag applied by Shannon & Wilson, Inc. (*)

JH* Estimated concentration, biased high due to quality control failures. Flag applied by Shannon & Wilson, Inc. (*)

JL* Estimated concentration, biased low due to quality control failures. Flag applied by Shannon & Wilson, Inc. (*)

Table 3 - ISM Stockpile Base Results

Analytical Method	Analyte	DEC Regulatory Cleanup Level	Units	ADQ-ISM1-01 [†]	ADQ-ISM1-02	ADQ-ISM1-03	ADQ-ISM1-04
				11/14/2021	11/14/2021	11/15/2021	11/15/2021
AK101	Gasoline Range Organics	260	mg/kg	8.30 J	<5.00	<8.50	<5.50
AK102	Diesel Range Organics	230	mg/kg	415 JH*	350 JH*	160 JL*	300 JL*
VOCs (8260C/ 8011/ 8260C-SIM)	1,1,1,2-Tetrachloroethane	0.022	mg/kg	<0.0760 J*	<0.0500 J*	<0.0850 J*	<0.0550 J*
	1,1,1-Trichloroethane	32	mg/kg	<0.0760 J*	<0.0500 J*	<0.0850 J*	<0.0550 J*
	1,1,2,2-Tetrachloroethane	0.003	mg/kg	<0.00380 J*	<0.00250 J*	<0.00420 J*	<0.00280 J*
	1,1,2-Trichloroethane	0.0014	mg/kg	<0.00380 J*	<0.00250 J*	<0.00420 J*	<0.00280 J*
	1,1-Dichloroethane	0.092	mg/kg	<0.0760 J*	<0.0500 J*	<0.0850 J*	<0.0550 J*
	1,1-Dichloroethene	1.2	mg/kg	<0.0760 J*	<0.0500 J*	<0.0850 J*	<0.0550 J*
	1,1-Dichloropropene	—	mg/kg	<0.0760 J*	<0.0500 J*	<0.0850 J*	<0.0550 J*
	1,2,3-Trichlorobenzene	0.15	mg/kg	<0.0760 J*	<0.0500 J*	<0.0850 J*	<0.0550 J*
	1,2,3-Trichloropropane	0.000031	mg/kg	<0.000250 J*	<0.000250 J*	<0.000250 J*	<0.000250 J*
	1,2,4-Trichlorobenzene	0.082	mg/kg	<0.0760 J*	<0.0500 J*	<0.0850 J*	<0.0550 J*
	1,2,4-Trimethylbenzene	0.61	mg/kg	0.00705 JL*	<0.0500 J*	<0.0850 J*	<0.0550 J*
	1,2-Dibromo-3-chloropropane	—	mg/kg	<0.150 J*	<0.100 J*	<0.170 J*	<0.110 J*
	1,2-Dibromoethane	0.00024	mg/kg	<0.000250 J*	<0.000250 J*	<0.000250 J*	<0.000250 J*
	1,2-Dichlorobenzene	2.4	mg/kg	<0.0760 J*	<0.0500 J*	<0.0850 J*	<0.0550 J*
	1,2-Dichloroethane	0.0055	mg/kg	<0.00380 J*	<0.00250 J*	<0.00420 J*	<0.00280 J*
	1,2-Dichloropropane	0.03	mg/kg	<0.0760 J*	<0.0500 J*	<0.0850 J*	<0.0550 J*
	1,3,5-Trimethylbenzene	0.66	mg/kg	<0.0760 J*	<0.0500 J*	<0.0850 J*	<0.0550 J*
	1,3-Dichlorobenzene	2.3	mg/kg	<0.0760 J*	<0.0500 J*	<0.0850 J*	<0.0550 J*
	1,3-Dichloropropane	—	mg/kg	<0.0760 J*	<0.0500 J*	<0.0850 J*	<0.0550 J*
	1,4-Dichlorobenzene	0.037	mg/kg	<0.0760 J*	<0.0500 J*	<0.0850 J*	<0.0550 J*
	2,2-Dichloropropane	—	mg/kg	<0.0760 J*	<0.0500 J*	<0.0850 J*	<0.0550 J*
	2-Butanone (MEK)	15	mg/kg	<0.150 J*	<0.100 J*	<0.170 J*	<0.110 J*
	2-Chlorotoluene	—	mg/kg	<0.0760 J*	<0.0500 J*	<0.0850 J*	<0.0550 J*
	2-Hexanone	0.11	mg/kg	0.0142 JL*	<0.100 J*	<0.170 J*	<0.110 J*
	4-Chlorotoluene	—	mg/kg	<0.0760 J*	<0.0500 J*	<0.0850 J*	<0.0550 J*
	Acetone	38	mg/kg	0.328 JL*	0.0720 JL*	<0.850 J*	0.0950 JL*
	Benzene	0.022	mg/kg	0.0106 JL*	<0.0500 J*	<0.0850 J*	<0.0550 J*
	Bromobenzene	0.36	mg/kg	<0.0760 J*	<0.0500 J*	<0.0850 J*	<0.0550 J*
	Bromochloromethane	—	mg/kg	<0.0760 J*	<0.0500 J*	<0.0850 J*	<0.0550 J*
	Bromodichloromethane	0.0043	mg/kg	<0.00380 J*	<0.00250 J*	<0.00420 J*	<0.00280 J*
Bromoform	0.1	mg/kg	<0.0760 J*	<0.0500 J*	<0.0850 J*	<0.0550 J*	
Bromomethane	0.024	mg/kg	<0.00760 J*	<0.00500 J*	<0.00850 J*	<0.00550 J*	
Carbon disulfide	2.9	mg/kg	<0.150 J*	<0.100 J*	<0.170 J*	<0.110 J*	

Table 3 - ISM Stockpile Base Results

Analytical Method	Analyte	DEC Regulatory Cleanup Level	Units	ADQ-ISM1-01 [†]	ADQ-ISM1-02	ADQ-ISM1-03	ADQ-ISM1-04
				11/14/2021	11/14/2021	11/15/2021	11/15/2021
VOCs (8260C/ 8011/ 8260C-SIM)	Carbon tetrachloride	0.021	mg/kg	<0.0760 J*	<0.0500 J*	<0.0850 J*	<0.0550 J*
	Chlorobenzene	0.46	mg/kg	<0.0760 J*	<0.0500 J*	<0.0850 J*	<0.0550 J*
	Chloroethane	72	mg/kg	<0.0760 J*	<0.0500 J*	<0.0850 J*	<0.0550 J*
	Chloroform	0.0071	mg/kg	<0.00760 J*	<0.00500 J*	<0.00850 J*	<0.00550 J*
	Chloromethane	0.61	mg/kg	<0.0760 J*	<0.0500 J*	<0.0850 J*	<0.0550 J*
	cis-1,2-Dichloroethene	0.12	mg/kg	<0.0760 J*	<0.0500 J*	<0.0850 J*	<0.0550 J*
	cis-1,3-Dichloropropene	0.018	mg/kg	<0.0760 J*	<0.0500 J*	<0.0850 J*	<0.0550 J*
	Dibromochloromethane	0.0027	mg/kg	<0.00380 J*	<0.00250 J*	<0.00420 J*	<0.00280 J*
	Dibromomethane	0.025	mg/kg	<0.0760 J*	<0.0500 J*	<0.0850 J*	<0.0550 J*
	Dichlorodifluoromethane	3.9	mg/kg	<0.0760 J*	<0.0500 J*	<0.0850 J*	<0.0550 J*
	Ethylbenzene	0.13	mg/kg	<0.0760 J*	<0.0500 J*	<0.0850 J*	<0.0550 J*
	Hexachlorobutadiene	0.02	mg/kg	<0.0760 J*	<0.0500 J*	<0.0850 J*	<0.0550 J*
	Isopropylbenzene	5.6	mg/kg	<0.0760 J*	<0.0500 J*	<0.0850 J*	<0.0550 J*
	Methyl isobutyl ketone	18	mg/kg	<0.150 J*	<0.100 J*	<0.170 J*	<0.110 J*
	Methylene chloride	0.33	mg/kg	<0.0760 J*	<0.0500 J*	<0.0850 J*	<0.0550 J*
	Methyl-t-butyl ether (MTBE)	0.4	mg/kg	<0.150 J*	<0.100 J*	<0.170 J*	<0.110 J*
	Naphthalene	0.038	mg/kg	<0.0760 J*	<0.0500 J*	<0.0850 J*	<0.0550 J*
	n-Butylbenzene	23	mg/kg	<0.0760 J*	<0.0500 J*	<0.0850 J*	<0.0550 J*
	n-Propylbenzene	9.1	mg/kg	<0.0760 J*	<0.0500 J*	<0.0850 J*	<0.0550 J*
	o-Xylene	1.5	mg/kg	<0.0760 J*	<0.0500 J*	<0.0850 J*	<0.0550 J*
	P & M-Xylene	1.5	mg/kg	0.0179 JL*	<0.0500 J*	0.0160 JL*	0.0120 JL*
	p-Isopropyltoluene	—	mg/kg	<0.0760 J*	<0.0500 J*	<0.0850 J*	<0.0550 J*
	sec-Butylbenzene	42	mg/kg	<0.0760 J*	<0.0500 J*	<0.0850 J*	<0.0550 J*
	Styrene	10	mg/kg	<0.0760 J*	<0.0500 J*	<0.0850 J*	<0.0550 J*
	tert-Butylbenzene	11	mg/kg	<0.0760 J*	<0.0500 J*	<0.0850 J*	<0.0550 J*
	Tetrachloroethene	0.19	mg/kg	<0.0760 J*	<0.0500 J*	<0.0850 J*	<0.0550 J*
	Toluene	6.7	mg/kg	0.0275 JL*	0.00540 JL*	0.0170 JL*	0.0140 JL*
	trans-1,2-Dichloroethene	1.3	mg/kg	<0.0760 J*	<0.0500 J*	<0.0850 J*	<0.0550 J*
	trans-1,3-Dichloropropene	0.018	mg/kg	<0.0760 J*	<0.0500 J*	<0.0850 J*	<0.0550 J*
	Trichloroethene	0.011	mg/kg	<0.00380 J*	<0.00250 J*	<0.00420 J*	<0.00280 J*
Trichlorofluoromethane	41	mg/kg	<0.0760 J*	<0.0500 J*	<0.0850 J*	<0.0550 J*	
Vinyl chloride	0.0008	mg/kg	<0.00380 J*	<0.00250 J*	<0.00420 J*	<0.00280 J*	

Table 3 - ISM Stockpile Base Results

Analytical Method	Analyte	DEC Regulatory Cleanup Level	Units	ADQ-ISM1-01 [†]	ADQ-ISM1-02	ADQ-ISM1-03	ADQ-ISM1-04
				11/14/2021	11/14/2021	11/15/2021	11/15/2021
PFAS (EPA 537M)	Perfluorohexanesulfonic acid (PFHxS)	—	µg/kg	<0.960 J*	<1.90 J*	0.0570 JL*	0.120 JL*
	Perfluorohexanoic acid (PFHxA)	—	µg/kg	<0.960 J*	<1.90 J*	0.0530 JL*	<0.200 J*
	Perfluoroheptanoic acid (PFHpA)	—	µg/kg	<0.960 J*	<1.90 J*	<0.190 J*	<0.200 J*
	Perfluorononanoic acid (PFNA)	—	µg/kg	<0.960 J*	<1.90 J*	0.0230 JL*	<0.200 J*
	Perfluorobutanesulfonic acid (PFBS)	—	µg/kg	<0.960 J*	<1.90 J*	<0.190 J*	<0.200 J*
	Perfluorodecanoic acid (PFDA)	—	µg/kg	<0.960 J*	<1.90 J*	<0.190 J*	<0.200 J*
	Perfluoroundecanoic acid (PFUnA)	—	µg/kg	<0.960 J*	<1.90 J*	<0.190 J*	<0.200 J*
	Perfluorododecanoic acid (PFDoA)	—	µg/kg	<0.960 J*	<1.90 J*	<0.190 J*	<0.200 J*
	Perfluorotridecanoic acid (PFTrDA)	—	µg/kg	<0.960 J*	<1.90 J*	<0.190 J*	<0.200 J*
	Perfluorotetradecanoic acid (PFTeA)	—	µg/kg	<0.960 J*	<1.90 J*	<0.190 J*	<0.200 J*
	N-Methyl perfluorooctane sulfonamidoacetic acid (N-MeFOSAA)	—	µg/kg	<0.960 J*	<1.90 J*	<0.190 J*	<0.200 J*
	N-Ethyl perfluorooctane sulfonamidoacetic acid (N-EtFOSAA)	—	µg/kg	<0.960 J*	<1.90 J*	<0.190 J*	<0.200 J*
	9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid (9Cl-PF3ONS)	—	µg/kg	<0.960 J*	<1.90 J*	<0.190 J*	<0.200 J*
	11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	—	µg/kg	<0.960 J*	<1.90 J*	<0.190 J*	<0.200 J*
	4,8-Dioxa-3H-perfluorononanoic acid (DONA)	—	µg/kg	<0.960 J*	<1.90 J*	<0.190 J*	<0.200 J*
	Hexafluoropropylene oxide dimer acid (HFPO-DA)	—	µg/kg	<0.960 J*	<1.90 J*	<0.190 J*	<0.200 J*
	Perfluorooctanesulfonic acid (PFOS)	3.0	µg/kg	<0.960 J*	<1.90 J*	0.200 JL*	0.480 JL*
	Perfluorooctanoic acid (PFOA)	1.7	µg/kg	<0.960 J*	<1.90 J*	0.0530 JL*	0.0550 JL*

NOTES:

- Results reported from Eurofins Test America work order 82154-1.
- Regulatory limits from 18 AAC 75.341 Table B1 Method Two - Soil Cleanup Levels (Migration to Groundwater) and Table B2 Method Two - Over 40-inch zone.
- DEC Alaska Department of Environmental Conservation
- PFAS per- and poly-fluoroalkyl substances
- µg/kg micrograms per kilogram
- † 95% upper confidence limit (UCL) reported. See Table 4 for full replicate results.
- No applicable regulatory limit exists for the associated analyte.
- < Analyte was not detected; reported as <Reporting Limit (RL).
- <Bold The laboratory's limit of detection (LOD) is greater than the regulatory limit.
- BOLD** Detected concentration exceeds the DEC cleanup level.
- B* Result is considered not detected due to quality control failures; see checklist for details. Flag applied by Shannon & Wilson, Inc.
- J* Estimated concentration due to quality control failures. Flag applied by Shannon & Wilson, Inc. (*)
- JH* Estimated concentration, biased high due to quality control failures. Flag applied by Shannon & Wilson, Inc. (*)
- JL* Estimated concentration, biased low due to quality control failures. Flag applied by Shannon & Wilson, Inc. (*)

Table 3 - ISM Stockpile Base Results

Analytical Method	Analyte	DEC Regulatory Cleanup Level	Units	ADQ-ISM2-01	ADQ-ISM2-02 [†]	ADQ-ISM2-03	ADQ-ISM2-04	ADQ-ISM2-05
				11/17/2021	11/16/2021	11/17/2021	11/17/2021	11/18/2021
AK101	Gasoline Range Organics	260	mg/kg	<9.30	3.03 J	<6.70	<7.60	<8.70
AK102	Diesel Range Organics	230	mg/kg	25.0	6.26 JH*	5.10 J*	6.50 JH*	5.80 JH*
VOCs (8260C/ 8011/ 8260C-SIM)	1,1,1,2-Tetrachloroethane	0.022	mg/kg	<0.0930 J*	<0.100 J*	<0.0670 J*	<0.0760 J*	<0.0870 J*
	1,1,1-Trichloroethane	32	mg/kg	<0.0930 J*	<0.100 J*	<0.0670 J*	<0.0760 J*	<0.0870 J*
	1,1,2,2-Tetrachloroethane	0.003	mg/kg	<0.00460	<0.00520 J*	<0.00340	<0.00380	<0.00430
	1,1,2-Trichloroethane	0.0014	mg/kg	<0.00460	<0.00520 J*	<0.00340	<0.00380	<0.00430
	1,1-Dichloroethane	0.092	mg/kg	<0.0930 J*	<0.100 J*	<0.0670 J*	<0.0760 J*	<0.0870 J*
	1,1-Dichloroethene	1.2	mg/kg	<0.0930 J*	<0.100 J*	<0.0670 J*	<0.0760 J*	<0.0870 J*
	1,1-Dichloropropene	—	mg/kg	<0.0930 J*	<0.100 J*	<0.0670 J*	<0.0760 J*	<0.0870 J*
	1,2,3-Trichlorobenzene	0.15	mg/kg	<0.0930 J*	<0.100 J*	<0.0670 J*	<0.0760 J*	<0.0870 J*
	1,2,3-Trichloropropane	0.000031	mg/kg	<0.000250 J*	<0.000250 J*	<0.000250 J*	<0.000250 J*	<0.000250 J*
	1,2,4-Trichlorobenzene	0.082	mg/kg	<0.0930 J*	<0.100 J*	<0.0670 J*	<0.0760 J*	<0.0870 J*
	1,2,4-Trimethylbenzene	0.61	mg/kg	0.00910 JL*	<0.100 J*	<0.0670 J*	<0.0760 J*	<0.0870 J*
	1,2-Dibromo-3-chloropropane	—	mg/kg	<0.190 J*	<0.210 J*	<0.130 J*	<0.150 J*	<0.170 J*
	1,2-Dibromoethane	0.00024	mg/kg	<0.000250 J*	<0.000250 J*	<0.000250 J*	<0.000250 J*	<0.000250 J*
	1,2-Dichlorobenzene	2.4	mg/kg	<0.0930 J*	<0.100 J*	<0.0670 J*	<0.0760 J*	<0.0870 J*
	1,2-Dichloroethane	0.0055	mg/kg	<0.00460	<0.00520 J*	<0.00340	<0.00380	<0.00430
	1,2-Dichloropropane	0.03	mg/kg	<0.0930 J*	<0.100 J*	<0.0670 J*	<0.0760 J*	<0.0870 J*
	1,3,5-Trimethylbenzene	0.66	mg/kg	<0.0930 J*	<0.100 J*	<0.0670 J*	<0.0760 J*	<0.0870 J*
	1,3-Dichlorobenzene	2.3	mg/kg	<0.0930 J*	<0.100 J*	<0.0670 J*	<0.0760 J*	<0.0870 J*
	1,3-Dichloropropane	—	mg/kg	<0.0930 J*	<0.100 J*	<0.0670 J*	<0.0760 J*	<0.0870 J*
	1,4-Dichlorobenzene	0.037	mg/kg	<0.0930 J*	<0.100 J*	<0.0670 J*	<0.0760 J*	<0.0870 J*
	2,2-Dichloropropane	—	mg/kg	<0.0930 J*	<0.100 J*	<0.0670 J*	<0.0760 J*	<0.0870 J*
	2-Butanone (MEK)	15	mg/kg	<0.190 J*	<0.210 J*	<0.130 J*	<0.150 J*	<0.170 J*
	2-Chlorotoluene	—	mg/kg	<0.0930 J*	<0.100 J*	<0.0670 J*	<0.0760 J*	<0.0870 J*
	2-Hexanone	0.11	mg/kg	<0.190 J*	<0.210 J*	<0.130 J*	<0.150 J*	<0.170 J*
	4-Chlorotoluene	—	mg/kg	<0.0930 J*	<0.100 J*	<0.0670 J*	<0.0760 J*	<0.0870 J*
	Acetone	38	mg/kg	<0.930 J*	<1.00 J*	<0.670 J*	<0.760 J*	<0.870 J*
	Benzene	0.022	mg/kg	<0.0930 J*	<0.100 J*	0.00470 JL*	<0.0760 J*	<0.0870 J*
	Bromobenzene	0.36	mg/kg	<0.0930 J*	<0.100 J*	<0.0670 J*	<0.0760 J*	<0.0870 J*
Bromochloromethane	—	mg/kg	<0.0930 J*	<0.100 J*	<0.0670 J*	<0.0760 J*	<0.0870 J*	
Bromodichloromethane	0.0043	mg/kg	<0.00460	<0.00520 J*	<0.00340	<0.00380	<0.00430	
Bromoform	0.1	mg/kg	<0.0930 J*	<0.100 J*	<0.0670 J*	<0.0760 J*	<0.0870 J*	
Bromomethane	0.024	mg/kg	<0.00930	<0.0100 J*	<0.00670	<0.00760	<0.00870	
Carbon disulfide	2.9	mg/kg	<0.190 J*	<0.210 J*	<0.130 J*	<0.150 J*	<0.170 J*	

Table 3 - ISM Stockpile Base Results

Analytical Method	Analyte	DEC Regulatory Cleanup Level	Units	ADQ-ISM2-01	ADQ-ISM2-02 [†]	ADQ-ISM2-03	ADQ-ISM2-04	ADQ-ISM2-05
				11/17/2021	11/16/2021	11/17/2021	11/17/2021	11/18/2021
VOCs (8260C/ 8011/ 8260C-SIM)	Carbon tetrachloride	0.021	mg/kg	<0.0930 J*	<0.100 J*	<0.0670 J*	<0.0760 J*	<0.0870 J*
	Chlorobenzene	0.46	mg/kg	<0.0930 J*	<0.100 J*	<0.0670 J*	<0.0760 J*	<0.0870 J*
	Chloroethane	72	mg/kg	<0.0930 J*	<0.100 J*	<0.0670 J*	<0.0760 J*	<0.0870 J*
	Chloroform	0.0071	mg/kg	<0.00930	<0.0100 J*	<0.00670	<0.00760	<0.00870
	Chloromethane	0.61	mg/kg	<0.0930 J*	<0.100 J*	<0.0670 J*	<0.0760 J*	<0.0870 J*
	cis-1,2-Dichloroethene	0.12	mg/kg	<0.0930 J*	<0.100 J*	<0.0670 J*	<0.0760 J*	<0.0870 J*
	cis-1,3-Dichloropropene	0.018	mg/kg	<0.0930 J*	<0.100 J*	<0.0670 J*	<0.0760 J*	<0.0870 J*
	Dibromochloromethane	0.0027	mg/kg	<0.00460	<0.00520 J*	<0.00340	<0.00380	<0.00430
	Dibromomethane	0.025	mg/kg	<0.0930 J*	<0.100 J*	<0.0670 J*	<0.0760 J*	<0.0870 J*
	Dichlorodifluoromethane	3.9	mg/kg	<0.0930 J*	<0.100 J*	<0.0670 J*	<0.0760 J*	<0.0870 J*
	Ethylbenzene	0.13	mg/kg	<0.0930 J*	<0.100 J*	<0.0670 J*	<0.0760 J*	<0.0870 J*
	Hexachlorobutadiene	0.02	mg/kg	<0.0930 J*	<0.100 J*	<0.0670 J*	<0.0760 J*	<0.0870 J*
	Isopropylbenzene	5.6	mg/kg	<0.0930 J*	<0.100 J*	<0.0670 J*	<0.0760 J*	<0.0870 J*
	Methyl isobutyl ketone	18	mg/kg	<0.190 J*	<0.210 J*	<0.130 J*	<0.150 J*	<0.170 J*
	Methylene chloride	0.33	mg/kg	<0.0930 J*	<0.100 J*	<0.0670 J*	<0.0760 J*	<0.0870 J*
	Methyl-t-butyl ether (MTBE)	0.4	mg/kg	<0.190 J*	<0.210 J*	<0.130 J*	<0.150 J*	<0.170 J*
	Naphthalene	0.038	mg/kg	<0.0930 J*	<0.100 J*	<0.0670 J*	<0.0760 J*	<0.0870 J*
	n-Butylbenzene	23	mg/kg	<0.0930 J*	<0.100 J*	<0.0670 J*	<0.0760 J*	<0.0870 J*
	n-Propylbenzene	9.1	mg/kg	<0.0930 J*	<0.100 J*	<0.0670 J*	<0.0760 J*	<0.0870 J*
	o-Xylene	1.5	mg/kg	<0.0930 J*	<0.100 J*	<0.0670 J*	<0.0760 J*	<0.0870 J*
	P & M-Xylene	1.5	mg/kg	0.0130 JL*	0.0196 JL*	<0.0670 J*	<0.0760 J*	<0.0870 J*
	p-Isopropyltoluene	—	mg/kg	<0.0930 J*	<0.100 J*	<0.0670 J*	<0.0760 J*	<0.0870 J*
	sec-Butylbenzene	42	mg/kg	<0.0930 J*	<0.100 J*	<0.0670 J*	<0.0760 J*	<0.0870 J*
	Styrene	10	mg/kg	<0.0930 J*	<0.100 J*	<0.0670 J*	<0.0760 J*	<0.0870 J*
	tert-Butylbenzene	11	mg/kg	<0.0930 J*	<0.100 J*	<0.0670 J*	<0.0760 J*	<0.0870 J*
	Tetrachloroethene	0.19	mg/kg	<0.0930 J*	<0.100 J*	<0.0670 J*	<0.0760 J*	<0.0870 J*
	Toluene	6.7	mg/kg	0.0150 JL*	0.0224 JL*	0.00740 JL*	0.00720 JL*	0.00790 JL*
	trans-1,2-Dichloroethene	1.3	mg/kg	<0.0930 J*	<0.100 J*	<0.0670 J*	<0.0760 J*	<0.0870 J*
	trans-1,3-Dichloropropene	0.018	mg/kg	<0.0930 J*	<0.100 J*	<0.0670 J*	<0.0760 J*	<0.0870 J*
	Trichloroethene	0.011	mg/kg	<0.00460	<0.00520 J*	<0.00340	<0.00380	<0.00430
Trichlorofluoromethane	41	mg/kg	<0.0930 J*	<0.100 J*	<0.0670 J*	<0.0760 J*	<0.0870 J*	
Vinyl chloride	0.0008	mg/kg	<0.00460	<0.00520 J*	<0.00340	<0.00380	<0.00430	

Table 3 - ISM Stockpile Base Results

Analytical Method	Analyte	DEC Regulatory Cleanup Level	Units	ADQ-ISM2-01	ADQ-ISM2-02 [†]	ADQ-ISM2-03	ADQ-ISM2-04	ADQ-ISM2-05
				11/17/2021	11/16/2021	11/17/2021	11/17/2021	11/18/2021
PFAS (EPA 537M)	Perfluorohexanesulfonic acid (PFHxS)	—	µg/kg	<0.200	<0.190	<0.200	<0.190	<0.200
	Perfluorohexanoic acid (PFHxA)	—	µg/kg	<0.200	<0.190	<0.200	<0.190	<0.200
	Perfluoroheptanoic acid (PFHpA)	—	µg/kg	<0.200	<0.190	<0.200	<0.190	<0.200
	Perfluorononanoic acid (PFNA)	—	µg/kg	<0.200	<0.190	<0.200	<0.190	<0.200
	Perfluorobutanesulfonic acid (PFBS)	—	µg/kg	<0.200	<0.190	<0.200	<0.190	<0.200
	Perfluorodecanoic acid (PFDA)	—	µg/kg	<0.200	<0.190	<0.200	<0.190	<0.200
	Perfluoroundecanoic acid (PFUnA)	—	µg/kg	<0.200	<0.190	<0.200	<0.190	<0.200
	Perfluorododecanoic acid (PFDoA)	—	µg/kg	<0.200	<0.190	<0.200	<0.190	<0.200
	Perfluorotridecanoic acid (PFTrDA)	—	µg/kg	<0.200	<0.190	<0.200	<0.190	<0.200
	Perfluorotetradecanoic acid (PFTeA)	—	µg/kg	<0.200	<0.190	<0.200	<0.190	<0.200
	N-Methyl perfluorooctane sulfonamidoacetic acid (N-MeFOSAA)	—	µg/kg	<0.200	<0.190	<0.200	<0.190	<0.200
	N-Ethyl perfluorooctane sulfonamidoacetic acid (N-EtFOSAA)	—	µg/kg	<0.200	<0.190	<0.200	<0.190	<0.200
	9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid (9Cl-PF3ONS)	—	µg/kg	<0.200	<0.190	<0.200	<0.190	<0.200
	11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	—	µg/kg	<0.200	<0.190	<0.200	<0.190	<0.200
	4,8-Dioxa-3H-perfluorononanoic acid (DONA)	—	µg/kg	<0.200	<0.190	<0.200	<0.190	<0.200
	Hexafluoropropylene oxide dimer acid (HFPO-DA)	—	µg/kg	<0.200	<0.190	<0.200	<0.190	<0.200
	Perfluorooctanesulfonic acid (PFOS)	3.0	µg/kg	<0.200	<0.190	<0.200	<0.190	<0.200
	Perfluorooctanoic acid (PFOA)	1.7	µg/kg	<0.200	<0.190	<0.200	<0.190	<0.200

NOTES:

- Results reported from Eurofins Test America work order 82154-1.
- Regulatory limits from 18 AAC 75.341 Table B1 Method Two - Soil Cleanup Levels (Migration to Groundwater) and Table B2 Method Two - Over 40-inch zo
- DEC Alaska Department of Environmental Conservation
- PFAS per- and poly-fluoroalkyl substances
- µg/kg micrograms per kilogram
- † 95% upper confidence limit (UCL) reported. See Table 4 for full replicate results.
- No applicable regulatory limit exists for the associated analyte.
- < Analyte was not detected; reported as <Reporting Limit (RL).
- <Bold The laboratory's limit of detection (LOD) is greater than the regulatory limit.
- BOLD** Detected concentration exceeds the DEC cleanup level.
- B* Result is considered not detected due to quality control failures; see checklist for details. Flag applied by Shannon & Wilson, Inc.
- J* Estimated concentration due to quality control failures. Flag applied by Shannon & Wilson, Inc. (*)
- JH* Estimated concentration, biased high due to quality control failures. Flag applied by Shannon & Wilson, Inc. (*)
- JL* Estimated concentration, biased low due to quality control failures. Flag applied by Shannon & Wilson, Inc. (*)

Table 4 - ISM Replicate Sample Results and Statistical Analysis

Analytical Method	Analyte	Cleanup Level	Units	ADQ-ISM1-01							
				Primary	Duplicate	Triplicate	μ	SD	CV	RSD	95% UCL
AK101	Gasoline Range Organics	260	mg/kg	1.20 J	0.930 J	6.60 J	2.91	3.20	1.10	110	8.30 J
AK102	Diesel Range Organics	230	mg/kg	350 JH*	350 JH*	400 JH*	367	28.9	0.0787	7.87	415 JH*
VOCs (8260C/ 8011/ 8260C-SIM)	1,1,1,2-Tetrachloroethane	0.022	mg/kg	<0.0620 J*	<0.0440 J*	<0.0760 J*	—	—	—	—	<0.0760 J*
	1,1,1-Trichloroethane	32	mg/kg	<0.0620 J*	<0.0440 J*	<0.0760 J*	—	—	—	—	<0.0760 J*
	1,1,2,2-Tetrachloroethane	0.003	mg/kg	<0.00310 J*	<0.00220 J*	<0.00380 J*	—	—	—	—	<0.00380 J*
	1,1,2-Trichloroethane	0.0014	mg/kg	<0.00310 J*	<0.00220 J*	<0.00380 J*	—	—	—	—	<0.00380 J*
	1,1-Dichloroethane	0.092	mg/kg	<0.0620 J*	<0.0440 J*	<0.0760 J*	—	—	—	—	<0.0760 J*
	1,1-Dichloroethene	1.2	mg/kg	<0.0620 J*	<0.0440 J*	<0.0760 J*	—	—	—	—	<0.0760 J*
	1,1-Dichloropropene	NA	mg/kg	<0.0620 J*	<0.0440 J*	<0.0760 J*	—	—	—	—	<0.0760 J*
	1,2,3-Trichlorobenzene	0.15	mg/kg	<0.0620 J*	<0.0440 J*	<0.0760 J*	—	—	—	—	<0.0760 J*
	1,2,3-Trichloropropane	0.000031	mg/kg	<0.000250 J*	<0.000250 J*	<0.000250 J*	—	—	—	—	<0.000250 J*
	1,2,4-Trichlorobenzene	0.082	mg/kg	<0.0620 J*	<0.0440 J*	<0.0760 J*	—	—	—	—	<0.0760 J*
	1,2,4-Trimethylbenzene	0.61	mg/kg	<0.0620 J*	<0.0440 J*	0.00610 JL*	0.00450	0.00151	0.336	33.6	0.00705 JL*
	1,2-Dibromo-3-chloropropane	NA	mg/kg	<0.120 J*	<0.0880 J*	<0.150 J*	—	—	—	—	<0.150 J*
	1,2-Dibromoethane	0.00024	mg/kg	<0.000250 J*	<0.000250 J*	<0.000250 J*	—	—	—	—	<0.000250 J*
	1,2-Dichlorobenzene	2.4	mg/kg	<0.0620 J*	<0.0440 J*	<0.0760 J*	—	—	—	—	<0.0760 J*
	1,2-Dichloroethane	0.0055	mg/kg	<0.00310 J*	<0.00220 J*	<0.00380 J*	—	—	—	—	<0.00380 J*
	1,2-Dichloropropane	0.03	mg/kg	<0.0620 J*	<0.0440 J*	<0.0760 J*	—	—	—	—	<0.0760 J*
	1,3,5-Trimethylbenzene	0.66	mg/kg	<0.0620 J*	<0.0440 J*	<0.0760 J*	—	—	—	—	<0.0760 J*
	1,3-Dichlorobenzene	2.3	mg/kg	<0.0620 J*	<0.0440 J*	<0.0760 J*	—	—	—	—	<0.0760 J*
	1,3-Dichloropropane	NA	mg/kg	<0.0620 J*	<0.0440 J*	<0.0760 J*	—	—	—	—	<0.0760 J*
	1,4-Dichlorobenzene	0.037	mg/kg	<0.0620 J*	<0.0440 J*	<0.0760 J*	—	—	—	—	<0.0760 J*
	2,2-Dichloropropane	NA	mg/kg	<0.0620 J*	<0.0440 J*	<0.0760 J*	—	—	—	—	<0.0760 J*
	2-Butanone (MEK)	15	mg/kg	<0.120 J*	<0.0880 J*	<0.150 J*	—	—	—	—	<0.150 J*
	2-Chlorotoluene	NA	mg/kg	<0.0620 J*	<0.0440 J*	<0.0760 J*	—	—	—	—	<0.0760 J*
	2-Hexanone	0.11	mg/kg	<0.120 J*	<0.0880 J*	0.0120 JL*	0.00770	0.00384	0.499	49.9	0.0142 JL*
	4-Chlorotoluene	NA	mg/kg	<0.0620 J*	<0.0440 J*	<0.0760 J*	—	—	—	—	<0.0760 J*
	Acetone	38	mg/kg	0.0710 JL*	0.110 JL*	0.270 JL*	0.150	0.105	0.701	70.1	0.328 JL*
	Benzene	0.022	mg/kg	0.00880 JL*	<0.0440 J*	<0.0760 J*	0.00557	0.00299	0.537	53.7	0.0106 JL*
	Bromobenzene	0.36	mg/kg	<0.0620 J*	<0.0440 J*	<0.0760 J*	—	—	—	—	<0.0760 J*
	Bromochloromethane	NA	mg/kg	<0.0620 J*	<0.0440 J*	<0.0760 J*	—	—	—	—	<0.0760 J*
	Bromodichloromethane	0.0043	mg/kg	<0.00310 J*	<0.00220 J*	<0.00380 J*	—	—	—	—	<0.00380 J*
Bromoform	0.1	mg/kg	<0.0620 J*	<0.0440 J*	<0.0760 J*	—	—	—	—	<0.0760 J*	
Bromomethane	0.024	mg/kg	<0.00620 J*	<0.00440 J*	<0.00760 J*	—	—	—	—	<0.00760 J*	
Carbon disulfide	2.9	mg/kg	<0.120 J*	<0.0880 J*	<0.150 J*	—	—	—	—	<0.150 J*	
Carbon tetrachloride	0.021	mg/kg	<0.0620 J*	<0.0440 J*	<0.0760 J*	—	—	—	—	<0.0760 J*	

Table 4 - ISM Replicate Sample Results and Statistical Analysis

Analytical Method	Analyte	Cleanup Level	Units	ADQ-ISM1-01							
				Primary	Duplicate	Triplicate	μ	SD	CV	RSD	95% UCL
VOCs (8260C/ 8011/ 8260C-SIM)	Chlorobenzene	0.46	mg/kg	<0.0620 J*	<0.0440 J*	<0.0760 J*	—	—	—	—	<0.0760 J*
	Chloroethane	72	mg/kg	<0.0620 J*	<0.0440 J*	<0.0760 J*	—	—	—	—	<0.0760 J*
	Chloroform	0.0071	mg/kg	<0.00620 J*	<0.00440 J*	<0.00760 J*	—	—	—	—	<0.00760 J*
	Chloromethane	0.61	mg/kg	<0.0620 J*	<0.0440 J*	<0.0760 J*	—	—	—	—	<0.0760 J*
	cis-1,2-Dichloroethene	0.12	mg/kg	<0.0620 J*	<0.0440 J*	<0.0760 J*	—	—	—	—	<0.0760 J*
	cis-1,3-Dichloropropene	0.018	mg/kg	<0.0620 J*	<0.0440 J*	<0.0760 J*	—	—	—	—	<0.0760 J*
	Dibromochloromethane	0.0027	mg/kg	<0.00310 J*	<0.00220 J*	<0.00380 J*	—	—	—	—	<0.00380 J*
	Dibromomethane	0.025	mg/kg	<0.0620 J*	<0.0440 J*	<0.0760 J*	—	—	—	—	<0.0760 J*
	Dichlorodifluoromethane	3.9	mg/kg	<0.0620 J*	<0.0440 J*	<0.0760 J*	—	—	—	—	<0.0760 J*
	Ethylbenzene	0.13	mg/kg	<0.0620 J*	<0.0440 J*	<0.0760 J*	—	—	—	—	<0.0760 J*
	Hexachlorobutadiene	0.02	mg/kg	<0.0620 J*	<0.0440 J*	<0.0760 J*	—	—	—	—	<0.0760 J*
	Isopropylbenzene	5.6	mg/kg	<0.0620 J*	<0.0440 J*	<0.0760 J*	—	—	—	—	<0.0760 J*
	Methyl isobutyl ketone	18	mg/kg	<0.120 J*	<0.0880 J*	<0.150 J*	—	—	—	—	<0.150 J*
	Methylene chloride	0.33	mg/kg	<0.0620 J*	<0.0440 J*	<0.0760 J*	—	—	—	—	<0.0760 J*
	Methyl-t-butyl ether (MTBE)	0.4	mg/kg	<0.120 J*	<0.0880 J*	<0.150 J*	—	—	—	—	<0.150 J*
	Naphthalene	0.038	mg/kg	<0.0620 J*	<0.0440 J*	<0.0760 J*	—	—	—	—	<0.0760 J*
	n-Butylbenzene	23	mg/kg	<0.0620 J*	<0.0440 J*	<0.0760 J*	—	—	—	—	<0.0760 J*
	n-Propylbenzene	9.1	mg/kg	<0.0620 J*	<0.0440 J*	<0.0760 J*	—	—	—	—	<0.0760 J*
	o-Xylene	1.5	mg/kg	<0.0620 J*	<0.0440 J*	<0.0760 J*	—	—	—	—	<0.0760 J*
	P&M-Xylene	1.5	mg/kg	<0.0620 J*	0.00510 JL*	0.0150 JL*	0.00877	0.00543	0.619	61.9	0.0179 JL*
	p-Isopropyltoluene	NA	mg/kg	<0.0620 J*	<0.0440 J*	<0.0760 J*	—	—	—	—	<0.0760 J*
	sec-Butylbenzene	42	mg/kg	<0.0620 J*	<0.0440 J*	<0.0760 J*	—	—	—	—	<0.0760 J*
	Styrene	10	mg/kg	<0.0620 J*	<0.0440 J*	<0.0760 J*	—	—	—	—	<0.0760 J*
	tert-Butylbenzene	11	mg/kg	<0.0620 J*	<0.0440 J*	<0.0760 J*	—	—	—	—	<0.0760 J*
	Tetrachloroethene	0.19	mg/kg	<0.0620 J*	<0.0440 J*	<0.0760 J*	—	—	—	—	<0.0760 J*
	Toluene	6.7	mg/kg	0.00790 JL*	0.00940 JL*	0.0230 JL*	0.0134	0.00832	0.619	61.9	0.0275 JL*
	trans-1,2-Dichloroethene	1.3	mg/kg	<0.0620 J*	<0.0440 J*	<0.0760 J*	—	—	—	—	<0.0760 J*
	trans-1,3-Dichloropropene	0.018	mg/kg	<0.0620 J*	<0.0440 J*	<0.0760 J*	—	—	—	—	<0.0760 J*
	Trichloroethene	0.011	mg/kg	<0.00310 J*	<0.00220 J*	<0.00380 J*	—	—	—	—	<0.00380 J*
	Trichlorofluoromethane	41	mg/kg	<0.0620 J*	<0.0440 J*	<0.0760 J*	—	—	—	—	<0.0760 J*
Vinyl chloride	0.0008	mg/kg	<0.00310 J*	<0.00220 J*	<0.00380 J*	—	—	—	—	<0.00380 J*	

Table 4 - ISM Replicate Sample Results and Statistical Analysis

Analytical Method	Analyte	Cleanup Level	Units	ADQ-ISM1-01							
				Primary	Duplicate	Triplicate	μ	SD	CV	RSD	95% UCL
PFAS (EPA 537M)	Perfluorohexanesulfonic acid (PFHxS)	NA	μg/kg	<0.980 J*	<0.980 J*	<0.960 J*	—	—	—	—	<0.960 J*
	Perfluorohexanoic acid (PFHxA)	NA	μg/kg	<0.980 J*	<0.980 J*	<0.960 J*	—	—	—	—	<0.960 J*
	Perfluoroheptanoic acid (PFHpA)	NA	μg/kg	<0.980 J*	<0.980 J*	<0.960 J*	—	—	—	—	<0.960 J*
	Perfluorononanoic acid (PFNA)	NA	μg/kg	<0.980 J*	<0.980 J*	<0.960 J*	—	—	—	—	<0.960 J*
	Perfluorobutanesulfonic acid (PFBS)	NA	μg/kg	<0.980 J*	<0.980 J*	<0.960 J*	—	—	—	—	<0.960 J*
	Perfluorodecanoic acid (PFDA)	NA	μg/kg	<0.980 J*	<0.980 J*	<0.960 J*	—	—	—	—	<0.960 J*
	Perfluoroundecanoic acid (PFUnA)	NA	μg/kg	<0.980 J*	<0.980 J*	<0.960 J*	—	—	—	—	<0.960 J*
	Perfluorododecanoic acid (PFDoA)	NA	μg/kg	<0.980 J*	<0.980 J*	<0.960 J*	—	—	—	—	<0.960 J*
	Perfluorotridecanoic acid (PFTrDA)	NA	μg/kg	<0.980 J*	<0.980 J*	<0.960 J*	—	—	—	—	<0.960 J*
	Perfluorotetradecanoic acid (PFTeA)	NA	μg/kg	<0.980 J*	<0.980 J*	<0.960 J*	—	—	—	—	<0.960 J*
	N-Methyl perfluorooctane sulfonamidoacetic acid (N-MeFOSAA)	NA	μg/kg	<0.980 J*	<0.980 J*	<0.960 J*	—	—	—	—	<0.960 J*
	N-Ethyl perfluorooctane sulfonamidoacetic acid (N-EtFOSAA)	NA	μg/kg	<0.980 J*	<0.980 J*	<0.960 J*	—	—	—	—	<0.960 J*
	9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid (9Cl-PF3ONS)	NA	μg/kg	<0.980 J*	<0.980 J*	<0.960 J*	—	—	—	—	<0.960 J*
	11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	NA	μg/kg	<0.980 J*	<0.980 J*	<0.960 J*	—	—	—	—	<0.960 J*
	4,8-Dioxa-3H-perfluorononanoic acid (DONA)	NA	μg/kg	<0.980 J*	<0.980 J*	<0.960 J*	—	—	—	—	<0.960 J*
	Hexafluoropropylene oxide dimer acid (HFPO-DA)	NA	μg/kg	<0.980 J*	<0.980 J*	<0.960 J*	—	—	—	—	<0.960 J*
	Perfluorooctanesulfonic acid (PFOS)	3.0	μg/kg	<0.980 J*	<0.980 J*	<0.960 J*	—	—	—	—	<0.960 J*
	Perfluorooctanoic acid (PFOA)	1.7	μg/kg	<0.980 J*	<0.980 J*	<0.960 J*	—	—	—	—	<0.960 J*

Table 4 - ISM Replicate Sample Results and Statistical Analysis

Analytical Method	Analyte	Cleanup Level	Units	ADQ-ISM1-01							
				Primary	Duplicate	Triplicate	μ	SD	CV	RSD	95% UCL
NOTES:	Results reported from Eurofins Test America work order 82156-1. Regulatory limits from 18 AAC 75.341 Table B1 Method Two - Soil Cleanup Levels (Migration to Groundwater) and Table B2 Method Two - Petroleum Hydrocarbon Soil Cleanup Levles - Over 40-Inch Zone. For analytes with one or two non-detect results, the laboratory detection limit is substituted for non-detect results for statistical analysis. For analytes with three non-detect results, the highest of the three reporting limits (RL) is used for the 95% UCL. All analytes with one or more detection had CVs less than 1.5 and are assumed to be normally distributed. Regulatory limits from 18 AAC 75.341 Table B1 Method Two - Soil Cleanup Levels Table (Migration to Groundwater).										
μ	arithmetic mean										
SD	standard deviation										
CV	coefficient of variance										
RSD	relative standard deviation (percent)										
95% UCL	Upper Confidence Limit at a 95-percent confidence										
DEC	Alaska Department of Environmental Conservation										
PFAS	per- and poly-fluoroalkyl substances										
VOCs	volatile organic compounds										
mg/kg	milligrams per kilogram										
μg/kg	micrograms per kilogram										
NA	No applicable regulatory limit exists for the associated analyte.										
—	Not applicable; statistical analysis cannot be performed for analytes with three non-detect results.										
<	Analyte was not detected; reported as <Reporting Limit (RL).										
<Bold	The laboratory's limit of detection (LOD) is greater than the regulatory limit.										
Bold	The detected concentration exceeds the associated DEC cleanup level.										
J	Estimated concentration, detected greater than the method detection limit and less than the RL. Flag applied by the laboratory.										
J*	Estimated concentration due to quality control failures. Flag applied by Shannon & Wilson, Inc. (*)										
JH*	Estimated concentration, biased high due to quality control failures. Flag applied by Shannon & Wilson, Inc. (*)										
JL*	Estimated concentration, biased low due to quality control failures. Flag applied by Shannon & Wilson, Inc. (*)										

Table 4 - ISM Replicate Sample Results and Statistical Analysis

Analytical Method	Analyte	Cleanup Level	Units	ADQ-ISM2-02							
				Primary	Duplicate	Triplicate	μ	SD	CV	RSD	95% UCL
AK101	Gasoline Range Organics	260	mg/kg	<9.50	2.70 J	<8.20	2.07	0.569	0.275	27.5	3.03 J
AK102	Diesel Range Organics	230	mg/kg	4.80 JH*	5.40 J*	3.40 JH*	4.53	1.03	0.226	22.6	6.26 JH*
VOCs (8260C/ 8011/ 8260C-SIM)	1,1,1,2-Tetrachloroethane	0.022	mg/kg	<0.0950 J*	<0.100 J*	<0.0820 J*	—	—	—	—	<0.100 J*
	1,1,1-Trichloroethane	32	mg/kg	<0.0950 J*	<0.100 J*	<0.0820 J*	—	—	—	—	<0.100 J*
	1,1,1,2-Tetrachloroethane	0.003	mg/kg	<0.00470 J*	<0.00520 J*	<0.00410 J*	—	—	—	—	<0.00520 J*
	1,1,2-Trichloroethane	0.0014	mg/kg	<0.00470 J*	<0.00520 J*	<0.00410 J*	—	—	—	—	<0.00520 J*
	1,1-Dichloroethane	0.092	mg/kg	<0.0950 J*	<0.100 J*	<0.0820 J*	—	—	—	—	<0.100 J*
	1,1-Dichloroethene	1.2	mg/kg	<0.0950 J*	<0.100 J*	<0.0820 J*	—	—	—	—	<0.100 J*
	1,1-Dichloropropene	NA	mg/kg	<0.0950 J*	<0.100 J*	<0.0820 J*	—	—	—	—	<0.100 J*
	1,2,3-Trichlorobenzene	0.15	mg/kg	<0.0950 J*	<0.100 J*	<0.0820 J*	—	—	—	—	<0.100 J*
	1,2,3-Trichloropropane	0.000031	mg/kg	<0.000250 J*	<0.000250 J*	<0.000250 J*	—	—	—	—	<0.000250 J*
	1,2,4-Trichlorobenzene	0.082	mg/kg	<0.0950 J*	<0.100 J*	<0.0820 J*	—	—	—	—	<0.100 J*
	1,2,4-Trimethylbenzene	0.61	mg/kg	<0.0950 J*	<0.100 J*	<0.0820 J*	—	—	—	—	<0.100 J*
	1,2-Dibromo-3-chloropropane	NA	mg/kg	<0.190 J*	<0.210 J*	<0.160 J*	—	—	—	—	<0.210 J*
	1,2-Dibromoethane	0.00024	mg/kg	<0.000250 J*	<0.000250 J*	<0.000250 J*	—	—	—	—	<0.000250 J*
	1,2-Dichlorobenzene	2.4	mg/kg	<0.0950 J*	<0.100 J*	<0.0820 J*	—	—	—	—	<0.100 J*
	1,2-Dichloroethane	0.0055	mg/kg	<0.00470 J*	<0.00520 J*	<0.00410 J*	—	—	—	—	<0.00520 J*
	1,2-Dichloropropane	0.03	mg/kg	<0.0950 J*	<0.100 J*	<0.0820 J*	—	—	—	—	<0.100 J*
	1,3,5-Trimethylbenzene	0.66	mg/kg	<0.0950 J*	<0.100 J*	<0.0820 J*	—	—	—	—	<0.100 J*
	1,3-Dichlorobenzene	2.3	mg/kg	<0.0950 J*	<0.100 J*	<0.0820 J*	—	—	—	—	<0.100 J*
	1,3-Dichloropropane	NA	mg/kg	<0.0950 J*	<0.100 J*	<0.0820 J*	—	—	—	—	<0.100 J*
	1,4-Dichlorobenzene	0.037	mg/kg	<0.0950 J*	<0.100 J*	<0.0820 J*	—	—	—	—	<0.100 J*
	2,2-Dichloropropane	NA	mg/kg	<0.0950 J*	<0.100 J*	<0.0820 J*	—	—	—	—	<0.100 J*
	2-Butanone (MEK)	15	mg/kg	<0.190 J*	<0.210 J*	<0.160 J*	—	—	—	—	<0.210 J*
	2-Chlorotoluene	NA	mg/kg	<0.0950 J*	<0.100 J*	<0.0820 J*	—	—	—	—	<0.100 J*
	2-Hexanone	0.11	mg/kg	<0.190 J*	<0.210 J*	<0.160 J*	—	—	—	—	<0.210 J*
	4-Chlorotoluene	NA	mg/kg	<0.0950 J*	<0.100 J*	<0.0820 J*	—	—	—	—	<0.100 J*
	Acetone	38	mg/kg	<0.950 J*	<1.00 J*	<0.820 J*	—	—	—	—	<1.00 J*
	Benzene	0.022	mg/kg	<0.0950 J*	<0.100 J*	<0.0820 J*	—	—	—	—	<0.100 J*
	Bromobenzene	0.36	mg/kg	<0.0950 J*	<0.100 J*	<0.0820 J*	—	—	—	—	<0.100 J*
	Bromochloromethane	NA	mg/kg	<0.0950 J*	<0.100 J*	<0.0820 J*	—	—	—	—	<0.100 J*
	Bromodichloromethane	0.0043	mg/kg	<0.00470 J*	<0.00520 J*	<0.00410 J*	—	—	—	—	<0.00520 J*
Bromoform	0.1	mg/kg	<0.0950 J*	<0.100 J*	<0.0820 J*	—	—	—	—	<0.100 J*	
Bromomethane	0.024	mg/kg	<0.00950 J*	<0.0100 J*	<0.00820 J*	—	—	—	—	<0.0100 J*	
Carbon disulfide	2.9	mg/kg	<0.190 J*	<0.210 J*	<0.160 J*	—	—	—	—	<0.210 J*	
Carbon tetrachloride	0.021	mg/kg	<0.0950 J*	<0.100 J*	<0.0820 J*	—	—	—	—	<0.100 J*	

Table 4 - ISM Replicate Sample Results and Statistical Analysis

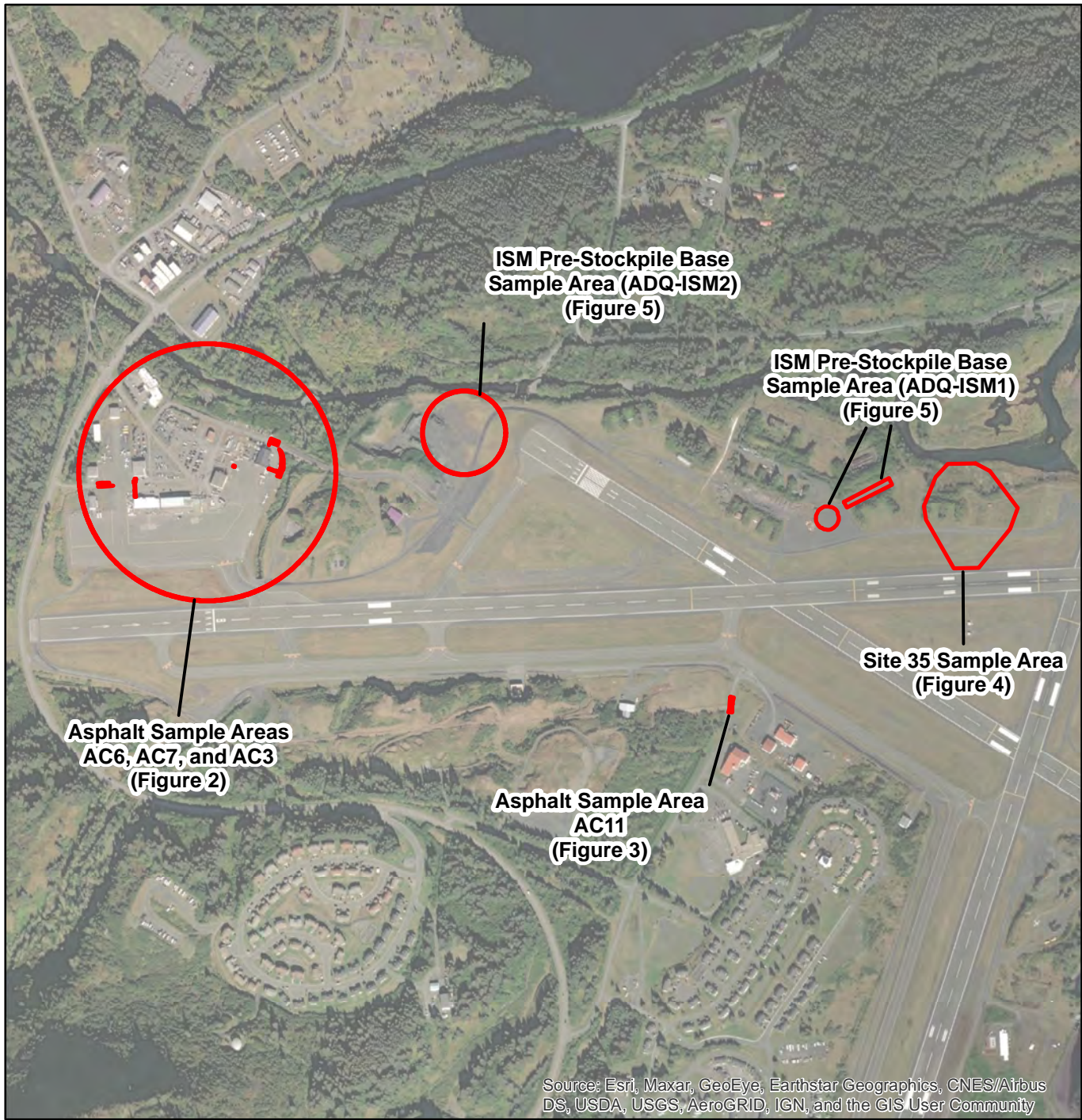
Analytical Method	Analyte	Cleanup Level	Units	ADQ-ISM2-02							
				Primary	Duplicate	Triplicate	μ	SD	CV	RSD	95% UCL
VOCs (8260C/ 8011/ 8260C-SIM)	Chlorobenzene	0.46	mg/kg	<0.0950 J*	<0.100 J*	<0.0820 J*	—	—	—	—	<0.100 J*
	Chloroethane	72	mg/kg	<0.0950 J*	<0.100 J*	<0.0820 J*	—	—	—	—	<0.100 J*
	Chloroform	0.0071	mg/kg	<0.00950 J*	<0.0100 J*	<0.00820 J*	—	—	—	—	<0.0100 J*
	Chloromethane	0.61	mg/kg	<0.0950 J*	<0.100 J*	<0.0820 J*	—	—	—	—	<0.100 J*
	cis-1,2-Dichloroethene	0.12	mg/kg	<0.0950 J*	<0.100 J*	<0.0820 J*	—	—	—	—	<0.100 J*
	cis-1,3-Dichloropropene	0.018	mg/kg	<0.0950 J*	<0.100 J*	<0.0820 J*	—	—	—	—	<0.100 J*
	Dibromochloromethane	0.0027	mg/kg	<0.00470 J*	<0.00520 J*	<0.00410 J*	—	—	—	—	<0.00520 J*
	Dibromomethane	0.025	mg/kg	<0.0950 J*	<0.100 J*	<0.0820 J*	—	—	—	—	<0.100 J*
	Dichlorodifluoromethane	3.9	mg/kg	<0.0950 J*	<0.100 J*	<0.0820 J*	—	—	—	—	<0.100 J*
	Ethylbenzene	0.13	mg/kg	<0.0950 J*	<0.100 J*	<0.0820 J*	—	—	—	—	<0.100 J*
	Hexachlorobutadiene	0.02	mg/kg	<0.0950 J*	<0.100 J*	<0.0820 J*	—	—	—	—	<0.100 J*
	Isopropylbenzene	5.6	mg/kg	<0.0950 J*	<0.100 J*	<0.0820 J*	—	—	—	—	<0.100 J*
	Methyl isobutyl ketone	18	mg/kg	<0.190 J*	<0.210 J*	<0.160 J*	—	—	—	—	<0.210 J*
	Methylene chloride	0.33	mg/kg	<0.0950 J*	<0.100 J*	<0.0820 J*	—	—	—	—	<0.100 J*
	Methyl-t-butyl ether (MTBE)	0.4	mg/kg	<0.190 J*	<0.210 J*	<0.160 J*	—	—	—	—	<0.210 J*
	Naphthalene	0.038	mg/kg	<0.0950 J*	<0.100 J*	<0.0820 J*	—	—	—	—	<0.100 J*
	n-Butylbenzene	23	mg/kg	<0.0950 J*	<0.100 J*	<0.0820 J*	—	—	—	—	<0.100 J*
	n-Propylbenzene	9.1	mg/kg	<0.0950 J*	<0.100 J*	<0.0820 J*	—	—	—	—	<0.100 J*
	o-Xylene	1.5	mg/kg	<0.0950 J*	<0.100 J*	<0.0820 J*	—	—	—	—	<0.100 J*
	P&M-Xylene	1.5	mg/kg	<0.0950 J*	0.0170 JL*	<0.0820 J*	0.0116	0.00475	0.411	41.1	0.0196 JL*
	p-Isopropyltoluene	NA	mg/kg	<0.0950 J*	<0.100 J*	<0.0820 J*	—	—	—	—	<0.100 J*
	sec-Butylbenzene	42	mg/kg	<0.0950 J*	<0.100 J*	<0.0820 J*	—	—	—	—	<0.100 J*
	Styrene	10	mg/kg	<0.0950 J*	<0.100 J*	<0.0820 J*	—	—	—	—	<0.100 J*
	tert-Butylbenzene	11	mg/kg	<0.0950 J*	<0.100 J*	<0.0820 J*	—	—	—	—	<0.100 J*
	Tetrachloroethene	0.19	mg/kg	<0.0950 J*	<0.100 J*	<0.0820 J*	—	—	—	—	<0.100 J*
	Toluene	6.7	mg/kg	<0.0950 J*	0.0190 JL*	<0.0820 J*	0.0116	0.00640	0.550	55.0	0.0224 JL*
	trans-1,2-Dichloroethene	1.3	mg/kg	<0.0950 J*	<0.100 J*	<0.0820 J*	—	—	—	—	<0.100 J*
	trans-1,3-Dichloropropene	0.018	mg/kg	<0.0950 J*	<0.100 J*	<0.0820 J*	—	—	—	—	<0.100 J*
	Trichloroethene	0.011	mg/kg	<0.00470 J*	<0.00520 J*	<0.00410 J*	—	—	—	—	<0.00520 J*
	Trichlorofluoromethane	41	mg/kg	<0.0950 J*	<0.100 J*	<0.0820 J*	—	—	—	—	<0.100 J*
Vinyl chloride	0.0008	mg/kg	<0.00470 J*	<0.00520 J*	<0.00410 J*	—	—	—	—	<0.00520 J*	

Table 4 - ISM Replicate Sample Results and Statistical Analysis

Analytical Method	Analyte	Cleanup Level	Units	ADQ-ISM2-02							
				Primary	Duplicate	Triplicate	μ	SD	CV	RSD	95% UCL
PFAS (EPA 537M)	Perfluorohexanesulfonic acid (PFHxS)	NA	μg/kg	<0.200	<0.190	<0.190	—	—	—	—	<0.190
	Perfluorohexanoic acid (PFHxA)	NA	μg/kg	<0.200	<0.190	<0.190	—	—	—	—	<0.190
	Perfluoroheptanoic acid (PFHpA)	NA	μg/kg	<0.200	<0.190	<0.190	—	—	—	—	<0.190
	Perfluorononanoic acid (PFNA)	NA	μg/kg	<0.200	<0.190	<0.190	—	—	—	—	<0.190
	Perfluorobutanesulfonic acid (PFBS)	NA	μg/kg	<0.200	<0.190	<0.190	—	—	—	—	<0.190
	Perfluorodecanoic acid (PFDA)	NA	μg/kg	<0.200	<0.190	<0.190	—	—	—	—	<0.190
	Perfluoroundecanoic acid (PFUnA)	NA	μg/kg	<0.200	<0.190	<0.190	—	—	—	—	<0.190
	Perfluorododecanoic acid (PFDoA)	NA	μg/kg	<0.200	<0.190	<0.190	—	—	—	—	<0.190
	Perfluorotridecanoic acid (PFTrDA)	NA	μg/kg	<0.200	<0.190	<0.190	—	—	—	—	<0.190
	Perfluorotetradecanoic acid (PFTeA)	NA	μg/kg	<0.200	<0.190	<0.190	—	—	—	—	<0.190
	N-Methyl perfluorooctane sulfonamidoacetic acid (N-MeFOSAA)	NA	μg/kg	<0.200	<0.190	<0.190	—	—	—	—	<0.190
	N-Ethyl perfluorooctane sulfonamidoacetic acid (N-EtFOSAA)	NA	μg/kg	<0.200	<0.190	<0.190	—	—	—	—	<0.190
	9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid (9Cl-PF3ONS)	NA	μg/kg	<0.200 J*	<0.190	<0.190	—	—	—	—	<0.190
	11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	NA	μg/kg	<0.200 J*	<0.190	<0.190	—	—	—	—	<0.190
	4,8-Dioxa-3H-perfluorononanoic acid (DONA)	NA	μg/kg	<0.200 J*	<0.190	<0.190	—	—	—	—	<0.190
	Hexafluoropropylene oxide dimer acid (HFPO-DA)	NA	μg/kg	<0.200	<0.190	<0.190	—	—	—	—	<0.190
	Perfluorooctanesulfonic acid (PFOS)	3.0	μg/kg	<0.200 J*	<0.190	<0.190	—	—	—	—	<0.190
	Perfluorooctanoic acid (PFOA)	1.7	μg/kg	<0.200	<0.190	<0.190	—	—	—	—	<0.190

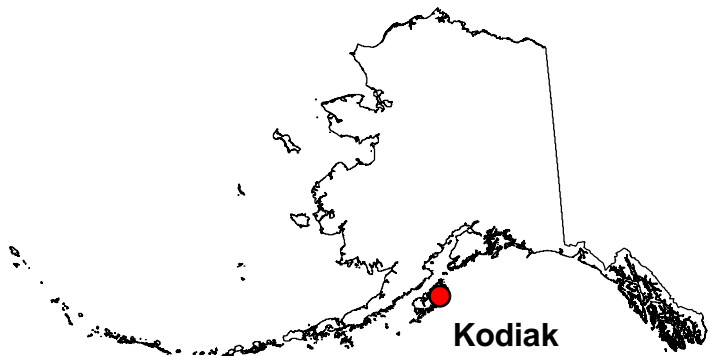
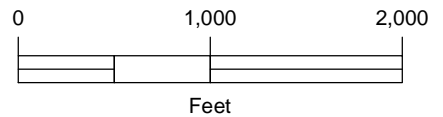
Table 4 - ISM Replicate Sample Results and Statistical Analysis

Analytical Method	Analyte	Cleanup Level	Units	ADQ-ISM2-02							
				Primary	Duplicate	Triplicate	μ	SD	CV	RSD	95% UCL
NOTES:	Results reported from Eurofins Test America work order 82156-1. Regulatory limits from 18 AAC 75.341 Table B1 Method Two - Soil Cleanup Levels (Migration to Groundwater) and Table B2 Method Two - Petroleum Hy For analytes with one or two non-detect results, the laboratory detection limit is substituted for non-detect results for statistical analysis. For analytes with three non-detect results, the highest of the three reporting limits (RL) is used for the 95% UCL. All analytes with one or more detection had CVs less than 1.5 and are assumed to be normally distributed. Regulatory limits from 18 AAC 75.341 Table B1 Method Two - Soil Cleanup Levels Table (Migration to Groundwater). μ arithmetic mean SD standard deviation CV coefficient of variance RSD relative standard deviation (percent) 95% UCL Upper Confidence Limit at a 95-percent confidence DEC Alaska Department of Environmental Conservation PFAS per- and poly-fluoroalkyl substances VOCs volatile organic compounds mg/kg milligrams per kilogram μg/kg micrograms per kilogram NA No applicable regulatory limit exists for the associated analyte. — Not applicable; statistical analysis cannot be performed for analytes with three non-detect results. < Analyte was not detected; reported as <Reporting Limit (RL). <Bold The laboratory's limit of detection (LOD) is greater than the regulatory limit. Bold The detected concentration exceeds the associated DEC cleanup level. J Estimated concentration, detected greater than the method detection limit and less than the RL. Flag applied by the laboratory. J* Estimated concentration due to quality control failures. Flag applied by Shannon & Wilson, Inc. (*) JH* Estimated concentration, biased high due to quality control failures. Flag applied by Shannon & Wilson, Inc. (*) JL* Estimated concentration, biased low due to quality control failures. Flag applied by Shannon & Wilson, Inc. (*)										



LEGEND

 Sampling Areas



Kodiak Airport Pre-Construction
Fencing Upgrade Summary Report
Kodiak, Alaska

AIRPORT SITE VICINITY

July 2022

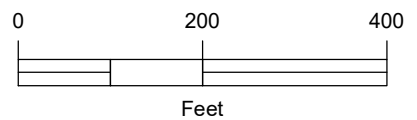
107471-001

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GEOTECHNICAL AND ENVIRONMENTAL CONSULTANTS

Figure 1



Source: Esri, Maxar, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community



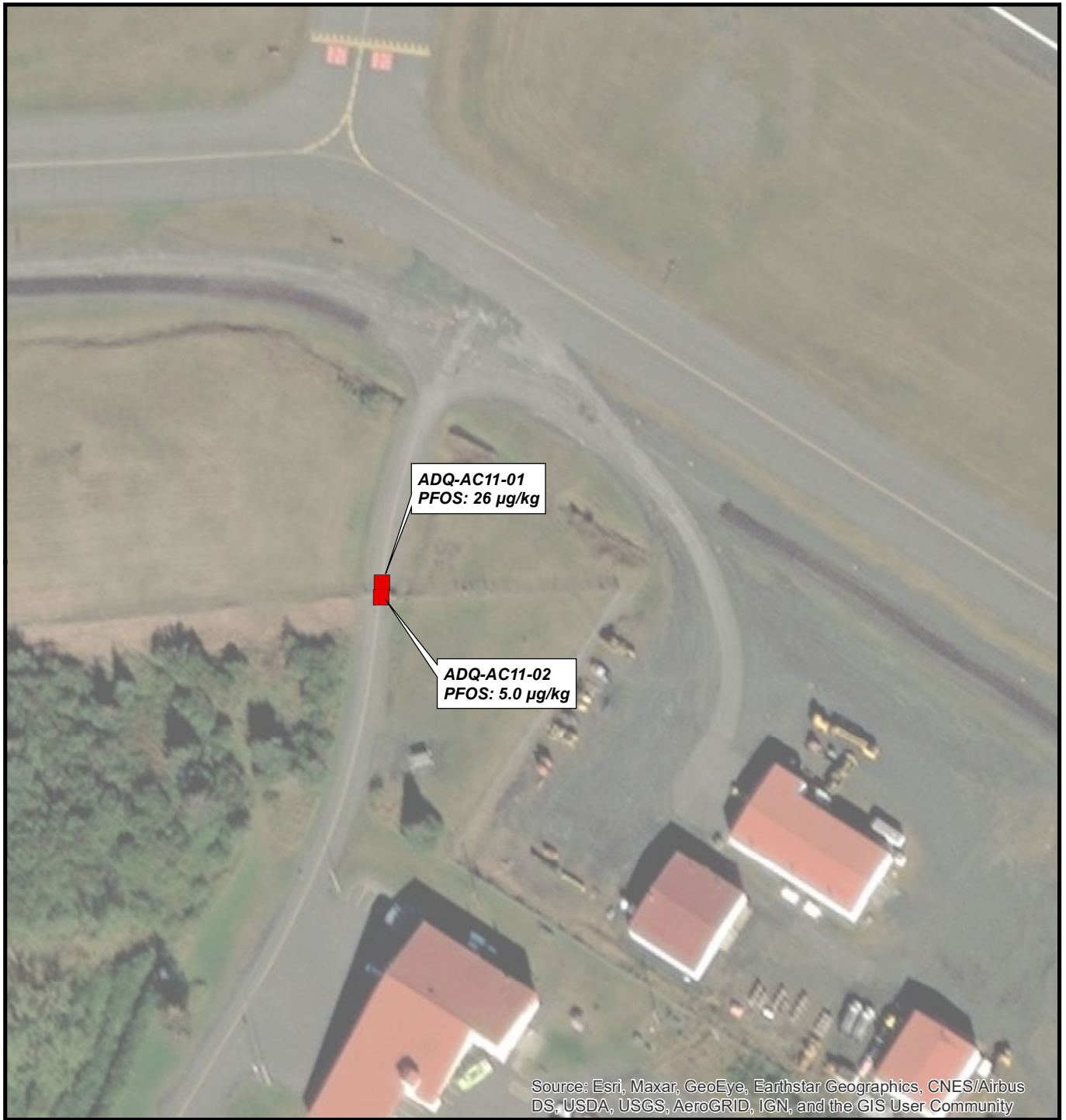
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Asphalt Sample Locations

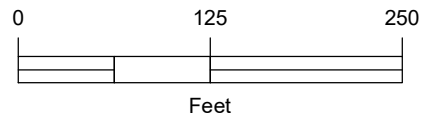
- PFOS not detected or detected less than 0.1 µg/kg.
- PFOS detected from 0.1 µg/kg to 1.4 µg/kg.
- PFOS detected from 1.5 µg/kg to 2.9 µg/kg.
- PFOS detected greater than 3.0 µg/kg.

Notes:
See Table 1 for full analytical results.
µg/kg: micrograms per kilogram

Kodiak Airport Pre-Construction Fencing Upgrade Summary Report Kodiak, Alaska
ASPHALT SAMPLE LOCATIONS AC3, AC6, AND AC7 WITH ANALYTICAL RESULTS
July 2022 107471-001
SHANNON & WILSON, INC. <small>GEOTECHNICAL AND ENVIRONMENTAL CONSULTANTS</small> Figure 2



Source: Esri, Maxar, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community



LEGEND

Asphalt Sample Locations

- PFOS not detected or detected less than 0.1 µg/kg.
- PFOS detected from 0.1 µg/kg to 1.4 µg/kg.
- PFOS detected from 1.5 µg/kg to 2.9 µg/kg.
- PFOS detected greater than 3.0 µg/kg.

Notes:
See Table 1 for full analytical results.
µg/kg: micrograms per kilogram

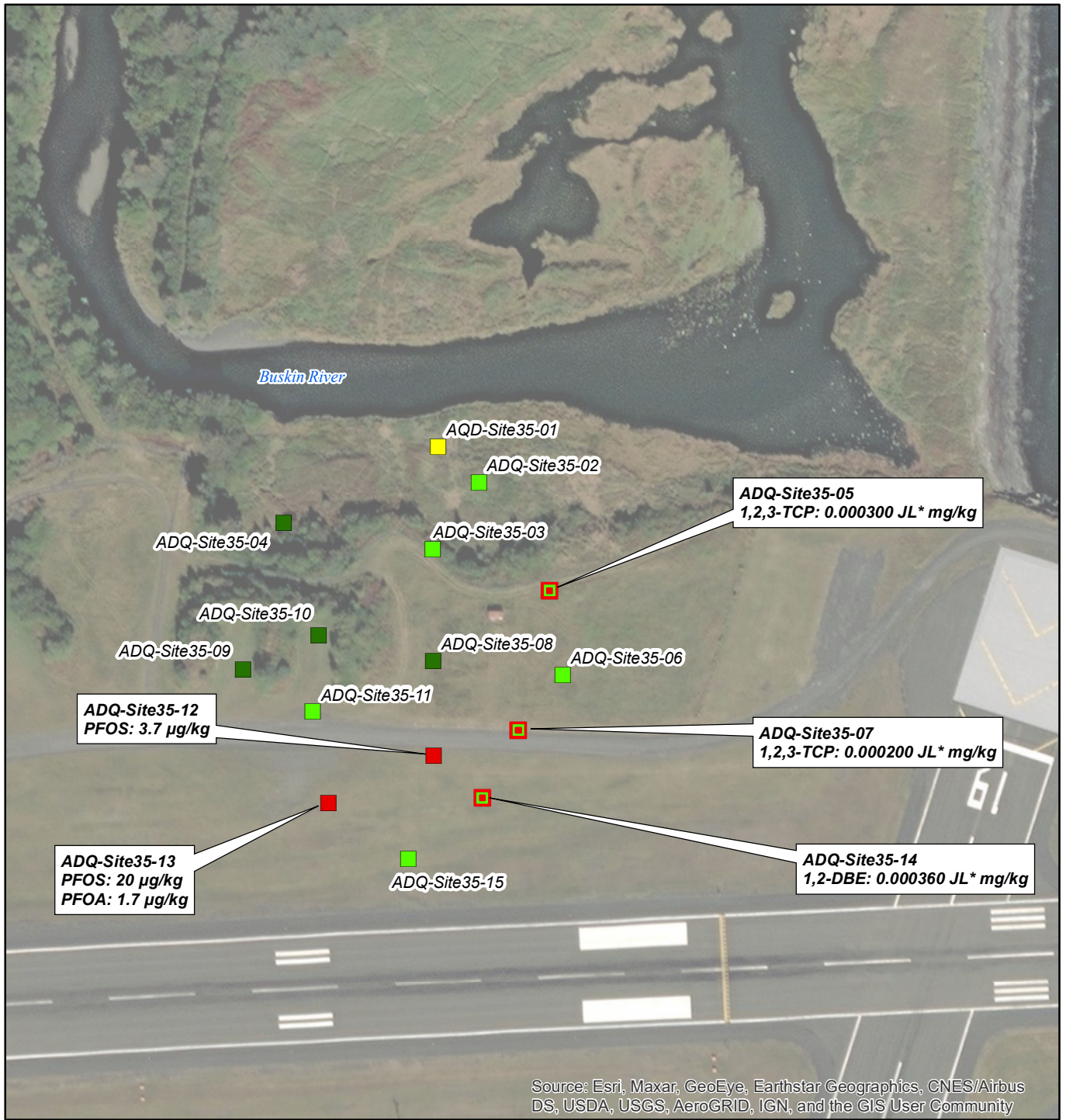
Kodiak Airport Pre-Construction
Fencing Upgrade Summary Report
Kodiak, Alaska

**ASPHALT SAMPLE LOCATIONS
AC11 WITH ANALYTICAL RESULTS**

July 2022 107471-001

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Figure 3

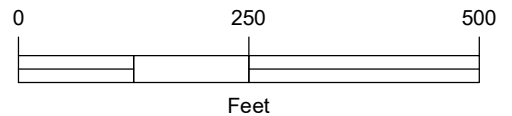


LEGEND

Surface Soil Sample Locations

- PFOS not detected or detected less than 0.1 µg/kg.
- PFOS detected from 0.1 µg/kg to 1.4 µg/kg.
- PFOS detected from 1.5 µg/kg to 2.9 µg/kg.
- PFOS detected greater than 3.0 µg/kg.
- VOC analyte exceeds the DEC Cleanup Level.

Notes:
 Highest field duplicate result is reported.
 See Table 2 for full analytical results and qualifiers.
 1,2,3-TCP: 1,2,3-trichloropropane
 1,2-DBE: 1,2-dibromoethane
 µg/kg: micrograms per kilogram



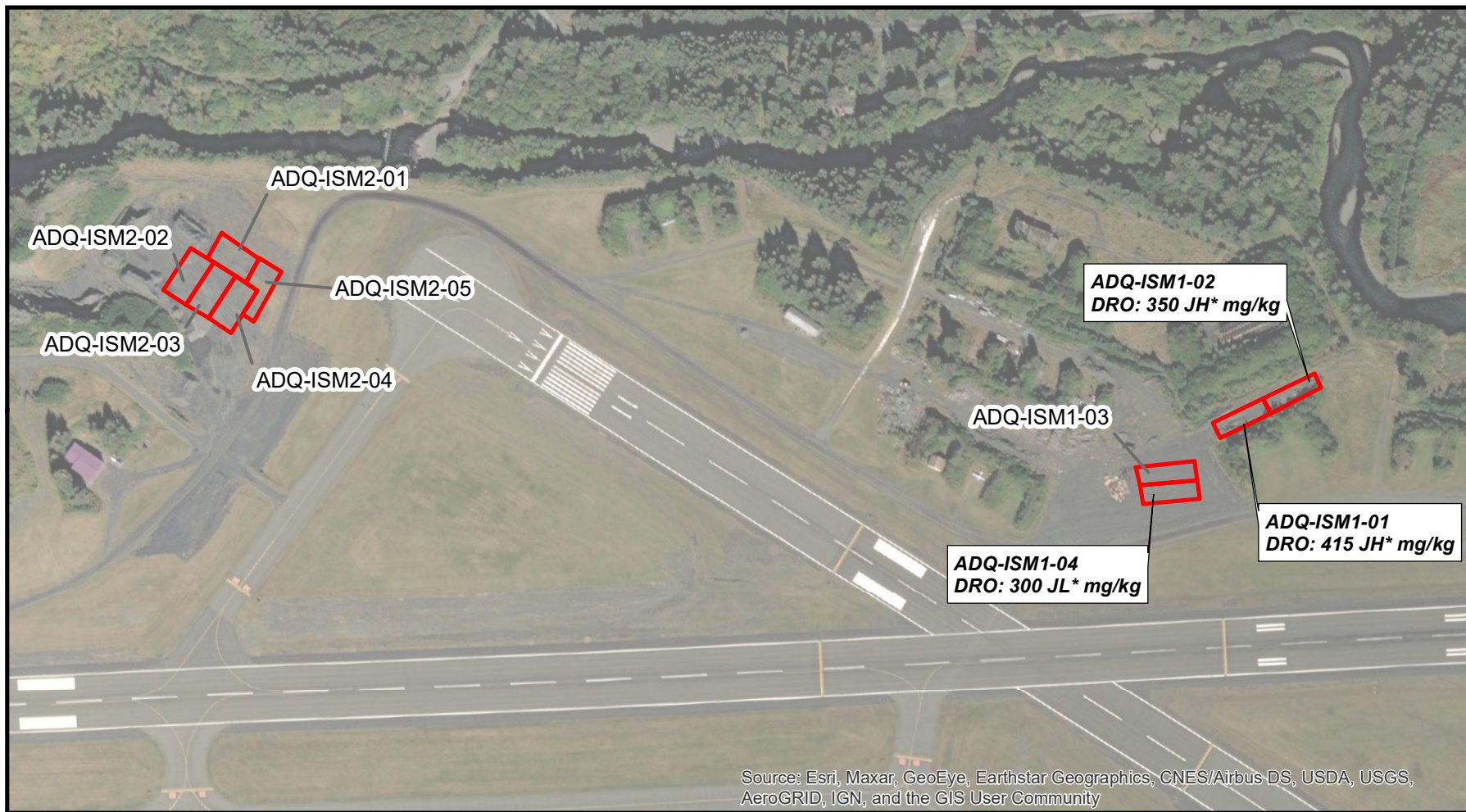
Kodiak Airport Pre-Construction
Fencing Upgrade Summary Report
Kodiak, Alaska

**SITE 35 SAMPLE LOCATIONS
WITH ANALYTICAL RESULTS**

July 2022 107471-001


SHANNON & WILSON, INC.
GEOTECHNICAL AND ENVIRONMENTAL CONSULTANTS

Figure 4

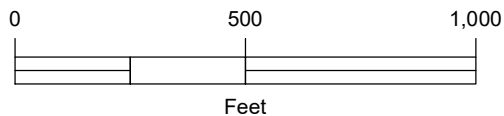



Source: Esri, Maxar, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community

LEGEND

 Decision unit (DU) boundary

Notes:
See Table 3 for full analytical results and qualifiers.
µg/kg: micrograms per kilogram



Kodiak Airport Pre-Construction Fencing Upgrade Summary Report Kodiak, Alaska	
ISM SAMPLING AREAS WITH ANALYTICAL RESULTS	
July 2022	107471-001
 SHANNON & WILSON, INC. <small>GEOTECHNICAL AND ENVIRONMENTAL CONSULTANTS</small>	
Figure 5	

Appendix A

Field Forms

CONTENTS

- Field Activities Daily Log
- Asphalt Sample Log
- Site 35 Soil Sample Log
- ISM Sampling Log with Field Sketches

FIELD DAILY ACTIVIEIS LOG

APPENDIX A: FIELD FORMS

FIELD ACTIVITIES DAILY LOG

Date 11/12/21

Sheet 1 of 1

Project No. 107431-001

Project Name: Kodiak DOT+PF PFAS

Field activity subject: Travel for soil sampling

Description of daily activities and events: _____

0900 RLW depart to FAI.
Meet ZJT in Anchorage Airport
1530 Arrive @ ADA. Collect Luggage + Pickup rental car
1620 Pick up cargo shipment from Alaska Air Cargo
1745 Arrive @ Bnblodging unpack vehicle
1730 Done for Day

Visitors on site: _____

Changes from plans/specifications and other special orders and important decisions: _____

Weather conditions: 30°F snow + wind

Important telephone calls: _____

Personnel on site: RLW, ZJT

Signature: [Signature] Date: 11/12/21

FIELD ACTIVITIES DAILY LOG

Date 11/13/21

Sheet 1 of 1

Project No. 107431-001

Project Name: Kodiak DOT+PF PFAS

Field activity subject: Site Preview, site 35 sampling, + Asphalt sampling

Description of daily activities and events: _____

0730 - RLW + ZJT prep field items + pack sample coolers.

0750 - Depart lodging. AA

0800 - Field staff arrive @ Gate A to meet DOT+PF Crew for escort. RLW calls Airport Duty Phone. Clark from DOT provides escort.

RLW + ZJT preview sampling locations.

Some locations for PFAS asphalt sampling are not on airport restricted access areas.

0915 - Begin sampling site 35: Airport security gate partitions sampling area. 4 locations "off-site", remaining locations "on-site". Samples ADQ-Site35-01 to ADQ-Site35-15 + two field duplicates for analysis of PFAS, GRO, DRO, + VOCs. Clark leaves site at 1230. Dan is new escort.

1430 RLW + ZJT finish site 35 sampling. Pick up generator from DOT, ~~and~~ decon water setup, and DI water.

1530 Field staff start sampling Asphalt at AC3-Part 2 + Part 3. Sample location in proposal shows location on gravel, RLW moved location to asphalt. AC3-Part 2 + 3 located "off-site" restricted access area. Sampled AE3-ADQ-AC3-02 to ADQ-AC3-07, 1 field duplicate, and 1 equipment blank sample for analysis of PFAS.

1800 Return to lodging. Unpack gear + QC samples.

Visitors on site: _____

Changes from plans/specifications and other special orders and important decisions:

Collected Asphalt samples ~~at~~ without airport escort since locations were not in restricted area, as previously discussed.

Weather conditions: 20°F - 30°F. Partly cloudy w/ wind + light snow.

Important telephone calls: Airport Duty OPS @ 0800.

Personnel on site: AT RLW, ZJT

Signature: _____ Date: 11/13/21

FIELD ACTIVITIES DAILY LOG

Date 11/14/21

Sheet 1 of 1

Project No. 107471-001

Project Name: Kodiak DOT+PF

Field activity subject: Asphalt Sampling + ISM Sampling

Description of daily activities and events:

0745 RLW + ZJT prep field equipment + depart lodging
0815 Field staff arrive outside AK Air Cargo to sample asphalt at AC7. RLW called Airport Ops cell to inform crew of escort needs for the day.

0930 Field staff move to location AC6 to sample asphalt. Both samples collected on non-restricted access side of gate.

Asphalt sample summary for 11/14/21: ADQ-AC7-01 + duplicate ADQ-AC7-101, ADQ-AC7-02, ADQ-AC3-01, ADQ-AC6-01, ADQ-AC6-02, ADQ-ACC-EB2, ADQ-AC11-01, + ADQ-AC11-02 collected for analysis of PFAS.

1040 RLW calls airport duty ops for airport escort. Field staff collect meet w/ Josiah from DOT for escort. Sample remaining asphalt sample @ AC3-Part1 and AC11.

1200 Field staff move to ISM area (Eastern-most location). Lay grid at ADQ-ISM1 for 2 decision units. New escort (Shift change)

1430 Begin sampling ADQ-ISM1-01 for analysis of PFAS, GRO, DRO, + VOCs

1600 Begin sampling ADQ-ISM1-02 for analysis of PFAS, GRO, DRO, + VOCs

↳ Prior to sampling ADQ-ISM1-01, field staff called KRF to inform her of site conditions. All ISM areas are heavily-compacted recycled asphalt or gravel. KRF advises field staff to use rotary drill to break apart substrate. Field staff + DOT return to shop to pick up generator to use drill.

1700 Finish sampling ISM-02. Pack up site. Field staff will collect duplicate + triplicate on 11/15/21.

1730 Return to the lodging + prep materials.

Visitors on site: _____

Changes from plans/specifications and other special orders and important decisions:

Used drill to break apart gravel material for ISM sampling.

Weather conditions: 30°F, Sunny

Important telephone calls: KRF call @ 1235

Personnel on site: RLW, ZJT

Signature: _____

Date: 11/14/21

FIELD ACTIVITIES DAILY LOG

Date 11/15/21

Sheet 1 of 1

Project No. 107471-001

Project Name: Kodiak DOT+PF

Field activity subject: ISM Sampling

Description of daily activities and events:

- 0800 Field staff (RLW+ZJT) Pack sampling materials + pick up supplies.
- 0850 Arrive onsite. Collect duplicate + triplicate sample at ISM1-01 for analysis of GRO, DRO, VOCs, + PFAS.
- 1200 Field staff finish sampling + collect ISM materials.
- 1230 Depart site to pick up additional equipment (spray paint) and refresh decon water. Decon water disposed of at end of runway.
- 1315 Return to site, begin setting up grid for ISM1-03+04
- 1700 Sampling of ISM1-03 + 04 complete. Samples will be submitted for analysis of GRO, DRO, VOCs, + PFAS.
- 1720 Return to lodging to unpack + complete paperwork.

Visitors on site: /

Changes from plans/specifications and other special orders and important decisions:

Weather conditions: 30°F sunny

Important telephone calls: /

Personnel on site: RLW, ZJT

Signature:

[Handwritten signature]

Date: 11/15/21

FIELD ACTIVITIES DAILY LOG

Date 11/16/21

Sheet 1 of 1

Project No. 107471-001

Project Name: Kodiak DOT+PF

Field activity subject: ISM Sampling

Description of daily activities and events:

- 0800 Depart lodging. Pick up wire brush to assist w/ decon and additional spray paint.
- 0850 Arrive onsite, pick up construction cones from DOT. Start setting up boundaries for ISM2. Based on DOT land use, 5 DUs required to cover locations likely to be used for stockpiles.
- 1030 RLW + ZJT depart site to refuel rental car and switch trucks per Kodiak car rental's request.
- 1145 Arrive back onsite, continue measuring DUs. Begin subdividing/Increment grid ISM2-01+02.
- 1430 Begin sampling ISM2-02 for analysis of GRO, PRO, VOLCS PFAS. Duplicate (ISM2-102) + triplicate (ISM2-202) also collected.
- 1700 Pack up equipment
- 1730 Depart site.

Visitors on site:

Changes from plans/specifications and other special orders and important decisions:

See notes of figure for description of land use @ gravel stockpiles

Weather conditions: 28°F Windy + overcast

Important telephone calls:

Personnel on site: RLW, ZJT

Signature:

[Handwritten signature]

Date: 11/16/21

FIELD ACTIVITIES DAILY LOG

Date 11/17/21

Sheet 1 of 1

Project No. 107471-001

Project Name: Kodiak DOT+PF PFAS

Field activity subject: ISM Sampling

Description of daily activities and events:

0830 Depart lodging

0900 Begin sampling ISM2-01. No

1200 Set up grid for ISM2-03 + ISM2-04.

Sample ADQ-ISM2-03 + -04.

1700 Begin cleaning up site. Left cones on Du boundaries in case of snow.

~~Pre-~~

Begin pre-measuring DUs ADQ-ISM2-05.

RLW talked to DOT Foremen about where stockpiles will be located. Confirmed sampling area is where stock piles will be placed.

1730 Depart site

Visitors on site:

Changes from plans/specifications and other special orders and important decisions:

Weather conditions: 19°F windy, partly cloudy

Important telephone calls:

Personnel on site: RLW, ZJT

Signature:

[Handwritten Signature]

Date: 11/17/21

FIELD ACTIVITIES DAILY LOG

Date 11/18/24

Sheet 1 of 1

Project No. 107271-001

Project Name: Kodiak DOT+PF PFAS

Field activity subject: ISM Sampling

Description of daily activities and events:

0830 Depart Lodging

0900 Arrive onsite. begin setting up sample grid for
ADQ-ISM2-05.
Sampled ADQ-ISM2-05

1200 Collected GPS coordinates for remaining DU boundaries
Cleaned up site. Returned cones to DOT + extra spray
paint.

1330- Depart site

1400- Arrive back at lodging and begin packing samples,
+ prep coolers for shipment

Visitors on site: _____

Changes from plans/specifications and other special orders and important decisions:

Weather conditions: 20°F, windy, overcast

Important telephone calls: _____

Personnel on site: _____

Signature: _____

RLW, ZJT
[Signature]

Date: 11/18/24

FIELD ACTIVITIES DAILY LOG

Date 11/19/21

Sheet 1 of 1

Project No. 107471

Project Name: Kodiak DOT+PF

Field activity subject: Travel Day

Description of daily activities and events:

0900 Prep Samples for shipment

1400 Leave for airport, ship coolers at Alaska Air Cargo

12100 Arrive back in Fairbanks

Visitors on site:

Changes from plans/specifications and other special orders and important decisions:

Weather conditions: 20°F

Important telephone calls:

Personnel on site: RLW, ZST

Signature:

Date: 11/19/21

ASPHALT SAMPLE LOG

APPENDIX A: FIELD FORMS

SAMPLE COLLECTION LOG

Project Number: 107471-001 Location: Kodiak Airport (ADD) Asphalt Sampling Page 1 of 1
 Date: 11/13/21 - 11/14/21
 Sampler: RLW, EJT

Sample Number	Description	Sample Day	Sample Time	Depth Interval (ft)		Matrix Type	Sample Type	PID Reading	Analyses
				top	bottom				
ADR-AC3-06	AC3 - Part 3	11/13/21	1601	0	0.7	Asphalt	PS	n/a	PFAS
ADR-AC3-07	↓ ↓	↓	1620	0	0.7	↓	PS	↓	↓
ADR-AC3-07	Dup for ADR-AC3-07	↓	1610	0	0.7	↓	FD	↓	↓
ADR-AC3-05	AC3 - Part 2	↓	1650	0	0.8	↓	PS	↓	↓
ADR-AC3-04	↓ ↓	↓	1700	0	0.7	↓	PS	↓	↓
ADR-AC3-03	↓ ↓	↓	1728	0	0.8	↓	PS	↓	↓
ADR-AC3-EB1	Equipment blank/rinse sample	↓	1720	-	-	Rinse	EB	↓	↓
ADR-AC3-02	AC3 - Part 2	↓	1745	0	0.8	Asphalt	PS	↓	↓
ADR-AC3-01	AC3 - Part 1	11/14/21	1045	0	0.8	Asphalt	PS	↓	PFAS
ADR-AC7-01	AC7, near gate 4 by Alaska Air + Island Air	11/14/21	0839	0	0.8	Asphalt	PS	n/a	PFAS
ADR-AC7-01	Dup of ADR-AC7-01	↓	0829	0	0.8	↓	FD	↓	↓
ADR-AC7-02	AC7	↓	0915	0	0.8	↓	PS	↓	↓
ADR-AC6-01	AC6 (int front of Gate A)	11/14/21	0939	0	0.7	Asphalt	PS	n/a	PFAS
ADR-AC6-02	↓ ↓	↓	0945	0	0.7	↓	PS	↓	↓
ADR-AC6-EB2	Equipment blank/rinse sample	↓	0952	-	-	Rinse	EB	↓	↓
ADR-AC11-01	AC11 (near DOT station/Gate D)	11/14/21	1105	0	0.8	Asphalt	PS	n/a	PFAS
ADR-AC11-02	↓ ↓	11/14/21	1120	0	0.8	↓	PS	↓	↓

Sample Type FS = Field screening measurement only ES = Environmental sample FD = Field duplicate

SITE 35 SOIL SAMPLE LOG

APPENDIX A: FIELD FORMS

SAMPLE COLLECTION LOG

Project Number: 107431-001 Location: ADQ Site 35 Soil Samples

Date: 11/13/21

Sampler: RLW #25T

Sample Number	Description	Sample Day	Sample Time	Depth Interval (ft)		Matrix Type	Sample Type	PID Reading	Analyses
				top	bottom				
ADQ-Site35-01	Site 35, near Buskirk river (organic)	11/13/21	1002	0.5	1.0	PS	Soil	na	PEAS, GRO, DRO, VOCs
ADQ-Site35-02	↓		1008	0.5	1.0	↓	↓	↓	↓
ADQ-Site35-03	↓		1019	0.5	1.0	↓	↓	↓	↓
ADQ-Site35-04	↓		1040	0.5	1.0	↓	↓	↓	↓
ADQ-Site35-05	Site 35, towards runway apron		1223	0.5	1.0	↓	↓	↓	↓
ADQ-Site35-06	↓		1204	0.5	1.0	↓	↓	↓	↓
ADQ-Site35-07	↓		1150	0.5	1.0	↓	↓	↓	↓
ADQ-Site35-08	↓		1201	0.5	1.0	↓	↓	↓	↓
ADQ-Site35-09	↓		1237	0.5	1.0	↓	↓	↓	↓
ADQ-Site35-10	↓		1253	0.5	1.0	↓	↓	↓	↓
ADQ-Site35-11	↓		1228	0.5	1.0	↓	↓	↓	↓
ADQ-Site35-12	↓		1150	0.5	1.0	↓	↓	↓	↓
ADQ-Site35-13	↓		1257	0.5	1.0	↓	↓	↓	↓
ADQ-Site35-113	Dup of -13		1307	0.5	1.0	FD	↓	↓	↓
ADQ-Site35-14	<100' from runway apron		1310	0.5	1.0	PS	↓	↓	↓
ADQ-Site35-15	<100' from runway apron		1252	0.5	1.0	PS	↓	↓	↓
ADQ-Site35-115	Dup of -15		1242	0.5	1.0	FD	✓	↓	↓

Sample Type FS = Field screening measurement only ES = Environmental sample FD = Field duplicate

AW 11/22

ISM SAMPLING LOG AND FIELD SKETCHES

APPENDIX A: FIELD FORMS

ISM Sampling Log

Owner/Client ADDT+PF Project No. 107471-001
 Location Rectangular area near brush pit Date 11/14/21 - 11/15/21
 Sampling Personnel BLW, ZJT DU name ADQ-ISM1-01
 Weather Conditions Sunny Air Temp. (°F) 28 Time started 1200
 Time completed 1700
 Sample No. ADQ-ISM1-01 Time 1430 (on 11/14/21)
 Duplicate ADQ-ISM1-101 Time 1005 (on 11/15/21)
 Triplicate ADQ-ISM1-201 Time 1110 (on 11/15/21)

Decision Unit (DU) Designation

- Boundaries/footprint should be less than 10,000 square feet.
- Stockpiles should be less than 250 cubic yards.
- DUs should encapsulate an area for intended use, expected contamination concentration, and soil properties.

DU Sampling Grid Creation

- 30 grid cells minimum, per guidance.

Field Measurements
 DU Length (ft) 150'
 DU Width (ft) 45
 DU area (A) (sq ft) 6750
 # grid cells (N) 30
 Dimensions of grid cells (X) 9' x 25'

Grid Cell Dimension Equation (optional)

$$x = \sqrt{\frac{A}{N}}$$
 X Length and width dimensions of the grid cell.
 A Total area of the DU
 N Total number of grid cells

- Collect GPS coordinates or swing tie measurements of DU corners
- Stake, flag, twine, and/or spray paint grid on surface
- Field sketch of DU

Systematic Random Sampling

- Use a random number generator to determine sampling location along grid axis.

	Primary	Duplicate	Triplicate
X axis	<u>8</u>	<u>0</u>	<u>7</u>
Y axis	<u>14</u>	<u>6</u>	<u>19</u>
Z axis	<u>n/a</u>	<u>-</u>	<u>-</u>

Sampling Path Description
 Primary start @ NW corner
 Duplicate start @ NE corner
 Tertiary start @ SW corner

Soil sampling tool 8 Terracore
 Increment size 5g / 100g

Analysis	Sample Containers	Preservatives	Duplicate	Triplicate
<input checked="" type="checkbox"/> VOCs, GRO	<u>6 x 4 oz septa jar</u>	<u>MeOH</u>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
<input checked="" type="checkbox"/> DRO, PFAS	<u>1 gal ziploc</u>	<u>-</u>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
<input type="checkbox"/>			<input type="checkbox"/>	<input type="checkbox"/>

Notes _____

BLW
11/22



DU ID: ADQ-ISM1-01

ISM Sampling Log

Owner/Client ADQ + PF
 Location Rectangular Area near brush pit
 Sampling Personnel RLW, ZJT
 Weather Conditions _____ Air Temp. (°F) _____

Project No. 107471-001
 Date 11/14/21
 DU name ADQ-ISM1-02
 Time started 1500
 Time completed 1700

Sample No. ADQ-ISM1-02 Time 1600
 Duplicate _____ Time _____
 Triplicate _____ Time _____

Decision Unit (DU) Designation

- Boundaries/footprint should be less than 10,000 square feet.
- Stockpiles should be less than 250 cubic yards.
- DUs should encapsulate an area for intended use, expected contamination concentration, and soil properties.

DU Sampling Grid Creation

- 30 grid cells minimum, per guidance.

Field Measurements

DU Length (ft)	<u>150</u>
DU Width (ft)	<u>45</u>
DU area (A) (sq ft)	<u>6750</u>
# grid cells (N)	<u>30</u>
Dimensions of grid cells (X)	<u>9' x 25'</u>

Grid Cell Dimension Equation (optional)

$$X = \sqrt{\frac{A}{N}}$$

X Length and width dimensions of the grid cell.
 A Total area of the DU
 N Total number of grid cells

- Collect GPS coordinates or swing tie measurements of DU corners
- Stake, flag, twine, and/or spray paint grid on surface
- Field sketch of DU

Systematic Random Sampling

- Use a random number generator to determine sampling location along grid axis.

	Primary	Duplicate	Triplicate
X axis	<u>2</u>	<u> </u>	<u> </u>
Y axis	<u>8</u>	<u> </u>	<u> </u>
Z axis	<u> </u>	<u> </u>	<u> </u>

Sampling Path Description

Primary Start @ NW corner
 Duplicate _____
 Tertiary _____

Soil sampling tool Terra-core
 Increment size 5g / 100g

Analysis	Sample Containers	Preservatives	Duplicate	Triplicate
<input checked="" type="checkbox"/> VOCs, GRO	<u>6x4oz septajar</u>	<u>Me DH</u>	<input type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/> DRO, PFAS	<u>1 gal ziploc</u>	<u> </u>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	_____	_____	<input type="checkbox"/>	<input type="checkbox"/>

Notes _____

DU ID: ADQ-
ISM 1-02

RLW
1/12

ISM Sampling Log

Owner/Client <u>ADOT+PF - KADIAK</u> Location <u>ADQ brush pile</u> Sampling Personnel <u>RLW, ZJT</u> Weather Conditions <u>SUNNY</u> Air Temp. (°F) <u>27</u>	Project No. <u>107471-00</u> Date <u>11/15/21</u> DU name <u>ISM1-03</u> Time started <u>1300</u> Time completed <u>1700</u>
Sample No. <u>ADQ-ISM1-03</u> Time <u>1510</u> Duplicate <u>-</u> Time <u>-</u> Triplicate <u>-</u> Time <u>-</u>	

Decision Unit (DU) Designation

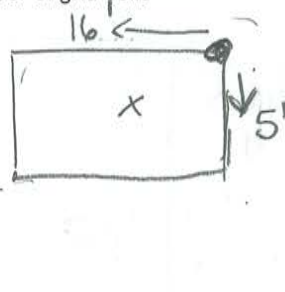
- Boundaries/footprint should be less than 10,000 square feet.
- Stockpiles should be less than 250 cubic yards.
- DUs should encapsulate an area for intended use, expected contamination concentration, and soil properties.

DU Sampling Grid Creation

- 30 grid cells minimum, per guidance.

Field Measurements	
DU Length (ft)	<u>150</u>
DU Width (ft)	<u>50</u>
DU area (A) (sq ft)	<u>7500</u>
# grid cells (N)	<u>30</u>
Dimensions of grid cells (X)	<u>25' x 10'</u>

Grid Cell Dimension Equation (optional)	
$X = \sqrt{\frac{A}{N}}$	X Length and width dimensions of the grid cell. A Total area of the DU N Total number of grid cells



- Collect GPS coordinates or swing tie measurements of DU corners
- Stake, flag, twine, and/or spray paint grid on surface
- Field sketch of DU

Systematic Random Sampling

- Use a random number generator to determine sampling location along grid axis.

	Primary	Duplicate	Triplicate
X axis	<u>16</u>	/	/
Y axis	<u>5</u>	/	/
Z axis	/	/	/

Sampling Path Description	
Primary	<u>start @ NE corner</u>
Duplicate	/
Tertiary	/

Soil sampling tool Terra core / Spoon
 Increment size 5g / 100g

	Analysis	Sample Containers	Preservatives	Duplicate	Triplicate
<input checked="" type="checkbox"/>	<u>VOCs, GRO</u>	<u>6 x 4oz septa jar</u>	<u>MeOH</u>	<input type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<u>DRO, PFAS</u>	<u>1 gal zilog</u>		<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>				<input type="checkbox"/>	<input type="checkbox"/>

Notes _____

DU ID: ADQ-
ISM1-03

RLW
11/22

ISM Sampling Log

Owner/Client ADOT+PF
 Location Brush pit gravel area
 Sampling Personnel RLW, ZJT
 Weather Conditions Sunny Air Temp. (°F) 30

Project No. 107471-001
 Date 11/15/21
 DU name ISM1-04
 Time started 1500
 Time completed 1700

Sample No. ADQ-ISM1-04 Time 1615
 Duplicate — Time —
 Triplicate — Time —

Equipment Blank: ADQ-ISM1-EB1 1700

Decision Unit (DU) Designation

- Boundaries/footprint should be less than 10,000 square feet.
- Stockpiles should be less than 250 cubic yards.
- DUs should encapsulate an area for intended use, expected contamination concentration, and soil properties.

DU Sampling Grid Creation

- 30 grid cells minimum, per guidance.

Field Measurements	
DU Length (ft)	<u>150</u>
DU Width (ft)	<u>50</u>
DU area (A) (sq ft)	<u>7500</u>
# grid cells (N)	<u>30</u>
Dimensions of grid cells (X)	<u>25' x 10'</u>

Grid Cell Dimension Equation (optional)	
$X = \sqrt{\frac{A}{N}}$	X Length and width dimensions of the grid cell.
	A Total area of the DU
	N Total number of grid cells

- Collect GPS coordinates or swing tie measurements of DU corners
- Stake, flag, twine, and/or spray paint grid on surface
- Field sketch of DU

Systematic Random Sampling

- Use a random number generator to determine sampling location along grid axis.

	Primary	Duplicate	Triplicate
X axis	<u>11</u>	<u>/</u>	<u>/</u>
Y axis	<u>10</u>	<u>/</u>	<u>/</u>
Z axis	<u>-</u>	<u>/</u>	<u>/</u>

Sampling Path Description
 Primary Start @ SW corner
 Duplicate /
 Tertiary /

Soil sampling tool terra-core / spoon
 Increment size 5g / 100g

Analysis	Sample Containers	Preservatives	Duplicate	Triplicate
<input checked="" type="checkbox"/> VOCs, GRO	<u>6 x 4oz septajars</u>		<input type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/> DRO, PFAS	<u>1 gal Ziploc</u>		<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>			<input type="checkbox"/>	<input type="checkbox"/>

Notes

PW 1/22

ISM Sampling Log

Owner/Client ADOT+PF
 Location ADQ Gravel storage
 Sampling Personnel RLW, ZJT
 Weather Conditions Partly cloudy Air Temp. (°F) 23
 Sample No. ADQ-ISM2-01 Time 1040
 Duplicate _____ Time _____
 Triplicate _____ Time _____

Project No. 107471-001
 Date 11/17/21
 DU name ISM2-01
 Time started 0900
 Time completed 1130

Decision Unit (DU) Designation

- Boundaries/footprint should be less than 10,000 square feet.
- Stockpiles should be less than 250 cubic yards.
- DUs should encapsulate an area for intended use, expected contamination concentration, and soil properties.

DU Sampling Grid Creation

- 30 grid cells minimum, per guidance.

Field Measurements
 DU Length (ft) 80
 DU Width (ft) 120
 DU area (A) (sq ft) 9600
 # grid cells (N) 30
 Dimensions of grid cells (X) 16 x 20

Grid Cell Dimension Equation (optional)

$$X = \sqrt{\frac{A}{N}}$$
 X Length and width dimensions of the grid cell.
 A Total area of the DU
 N Total number of grid cells

- Collect GPS coordinates or swing tie measurements of DU corners
- Stake, flag, twine, and/or spray paint grid on surface
- Field sketch of DU

Systematic Random Sampling

- Use a random number generator to determine sampling location along grid axis.

	Primary	Duplicate	Triplicate
X axis	<u>1'</u>	/	/
Y axis	<u>18'</u>	/	/
Z axis	<u>-</u>		

Sampling Path Description
 Primary Start @ SW corner
 Duplicate _____
 Tertiary _____

Soil sampling tool Terra Core / spoon
 Increment size 5g / 100g

Analysis	Sample Containers	Preservatives	Duplicate	Triplicate
<input checked="" type="checkbox"/> VOCs, GED	<u>6 x 4oz Septa jar</u>	<u>MeOH</u>	<input type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/> DRD, PFAS	<u>1 gal Bioloc</u>	<u>-</u>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>			<input type="checkbox"/>	<input type="checkbox"/>

Notes _____

DU ID: ADQ - ISM2-01

RLW 11/22

ISM Sampling Log

Owner/Client ADOT + PE Project No. 107471-001
 Location ADQ gravel storage Date 11/16/21
 Sampling Personnel RLW, ZJT DU name ISM2-02
 Weather Conditions Cloudy, gusting wind Air Temp. (°F) _____
 Time started 1400
 Time completed 1730
 Sample No. ADQ-ISM2-02 Time 1450
 Duplicate ADQ-ISM2-102 Time 1551
 Triplicate ADQ-ISM2-202 Time 1650
 Equipment Blank: ADQ-ISM2-EB1 1720 - PFAS only

Decision Unit (DU) Designation

- Boundaries/footprint should be less than 10,000 square feet.
- Stockpiles should be less than 250 cubic yards.
- DUs should encapsulate an area for intended use, expected contamination concentration, and soil properties.

DU Sampling Grid Creation

- 30 grid cells minimum, per guidance.

Field Measurements	
DU Length (ft)	<u>132</u>
DU Width (ft)	<u>70</u>
DU area (A) (sq ft)	<u>9,240</u>
# grid cells (N)	<u>30</u>
Dimensions of grid cells (X)	<u>22' x 14'</u>

Grid Cell Dimension Equation (optional)	
$X = \sqrt{\frac{A}{N}}$	X Length and width dimensions of the grid cell.
	A Total area of the DU
	N Total number of grid cells

- Collect GPS coordinates or swing tie measurements of DU corners
- Stake, flag, twine, and/or spray paint grid on surface
- Field sketch of DU

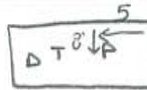
Systematic Random Sampling

- Use a random number generator to determine sampling location along grid axis.

	Primary	Duplicate	Triplicate
X axis	<u>5</u>	<u>20</u>	<u>14</u>
Y axis	<u>8</u>	<u>12</u>	<u>13</u>
Z axis	<u>-</u>	<u>-</u>	<u>-</u>

Sampling Path Description
 Primary Start @ NW, sample S + zig zag
 Duplicate start @ NW, sample E + zig zag
 Tertiary start @ SW, sample E + zig zag

Soil sampling tool terra core / spoon
 Increment size 5g / 100g



	Analysis	Sample Containers	Preservatives	Duplicate	Triplicate
<input checked="" type="checkbox"/>	<u>VOCs, GRD</u>	<u>6 x 4oz septa jar</u>	<u>MeOH</u>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
<input checked="" type="checkbox"/>	<u>DRD, PFAS</u>	<u>1 gal Ziploc</u>	<u>-</u>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
<input type="checkbox"/>				<input type="checkbox"/>	<input type="checkbox"/>

Notes _____

DU ID: ADQ-ISM2-02

PW 1122

ISM Sampling Log

Owner/Client DOT+PF
 Location ADQ Gravel Piles
 Sampling Personnel RLW, ZJT
 Weather Conditions Partly Cloudy Air Temp. (°F) 21

Project No. 107471-001
 Date 11/17/21
 DU name ISM 2-04
 Time started 1400
 Time completed 1645

Sample No. ADQ-ISM2-04 Time 1515
 Duplicate / Time /
 Triplicate / Time /

Equipment Blank ADQ-ISM2-EB2 1550

Decision Unit (DU) Designation

- Boundaries/footprint should be less than 10,000 square feet.
- Stockpiles should be less than 250 cubic yards.
- DUs should encapsulate an area for intended use, expected contamination concentration, and soil properties.

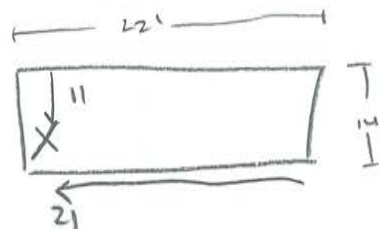
DU Sampling Grid Creation

- 30 grid cells minimum, per guidance.

Field Measurements
 DU Length (ft) 132
 DU Width (ft) 70
 DU area (A) (sq ft) 9240
 # grid cells (N) 30
 Dimensions of grid cells (X) 22' x 14'

Grid Cell Dimension Equation (optional)

$$X = \sqrt{\frac{A}{N}}$$
 X Length and width dimensions of the grid cell.
 A Total area of the DU
 N Total number of grid cells



- Collect GPS coordinates or swing tie measurements of DU corners
- Stake, flag, twine, and/or spray paint grid on surface
- Field sketch of DU

Systematic Random Sampling

- Use a random number generator to determine sampling location along grid axis.

	Primary	Duplicate	Triplicate
X axis	<u>21</u>	<u>/</u>	<u>/</u>
Y axis	<u>11</u>	<u>/</u>	<u>/</u>
Z axis	<u>/</u>	<u>/</u>	<u>/</u>

Sampling Path Description
 Primary start @ SW corner, move E
 Duplicate /
 Tertiary /

Soil sampling tool terra core / spoon
 Increment size 5g / 100g

Analysis	Sample Containers	Preservatives	Duplicate	Triplicate
<input checked="" type="checkbox"/> VOCs GRO	<u>6 x 4oz septa</u>	<u>MeOH</u>	<input type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/> DRO PFAS	<u>1 gal ziploc</u>	<u>/</u>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>			<input type="checkbox"/>	<input type="checkbox"/>

Notes _____

RLW
1/22

ISM Sampling Log

Owner/Client DOT + PF
 Location Gravel area, Kodiak Airport
 Sampling Personnel RLW, ZJT
 Weather Conditions Tight snow, partly cloudy Air Temp. (°F) 25
 Sample No. ADQ - ISM2-05 Time 1145
 Duplicate _____ Time _____
 Triplicate _____ Time _____

Project No. 107471-00
 Date 11/18/21
 DU name ISM2-05
 Time started 0900
 Time completed 1300

Equipment Blank ADQ - ISM2 - EB3 1215

Decision Unit (DU) Designation

- Boundaries/footprint should be less than 10,000 square feet.
- Stockpiles should be less than 250 cubic yards.
- DUs should encapsulate an area for intended use, expected contamination concentration, and soil properties.

DU Sampling Grid Creation

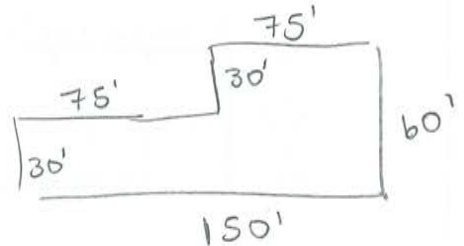
- 30 grid cells minimum, per guidance.

Field Measurements
 DU Length (ft) see diagram
 DU Width (ft) diagram
 DU area (A) (sq ft) 6750
 # grid cells (N) 30
 Dimensions of grid cells (X) 15' x 15'

Grid Cell Dimension Equation (optional)

$$X = \sqrt{\frac{A}{N}}$$
 X Length and width dimensions of the grid cell.
 A Total area of the DU
 N Total number of grid cells

$4500 + 2250$



- Collect GPS coordinates or swing tie measurements of DU corners
- Stake, flag, twine, and/or spray paint grid on surface
- Field sketch of DU

Systematic Random Sampling

- Use a random number generator to determine sampling location along grid axis.

	Primary	Duplicate	Triplicate
X axis	<u>13</u>		
Y axis	<u>6</u>		
Z axis			

Sampling Path Description
 Primary start @ SW corner
 Duplicate _____
 Tertiary _____

Soil sampling tool terra core / spoon
 Increment size 5g / 100g

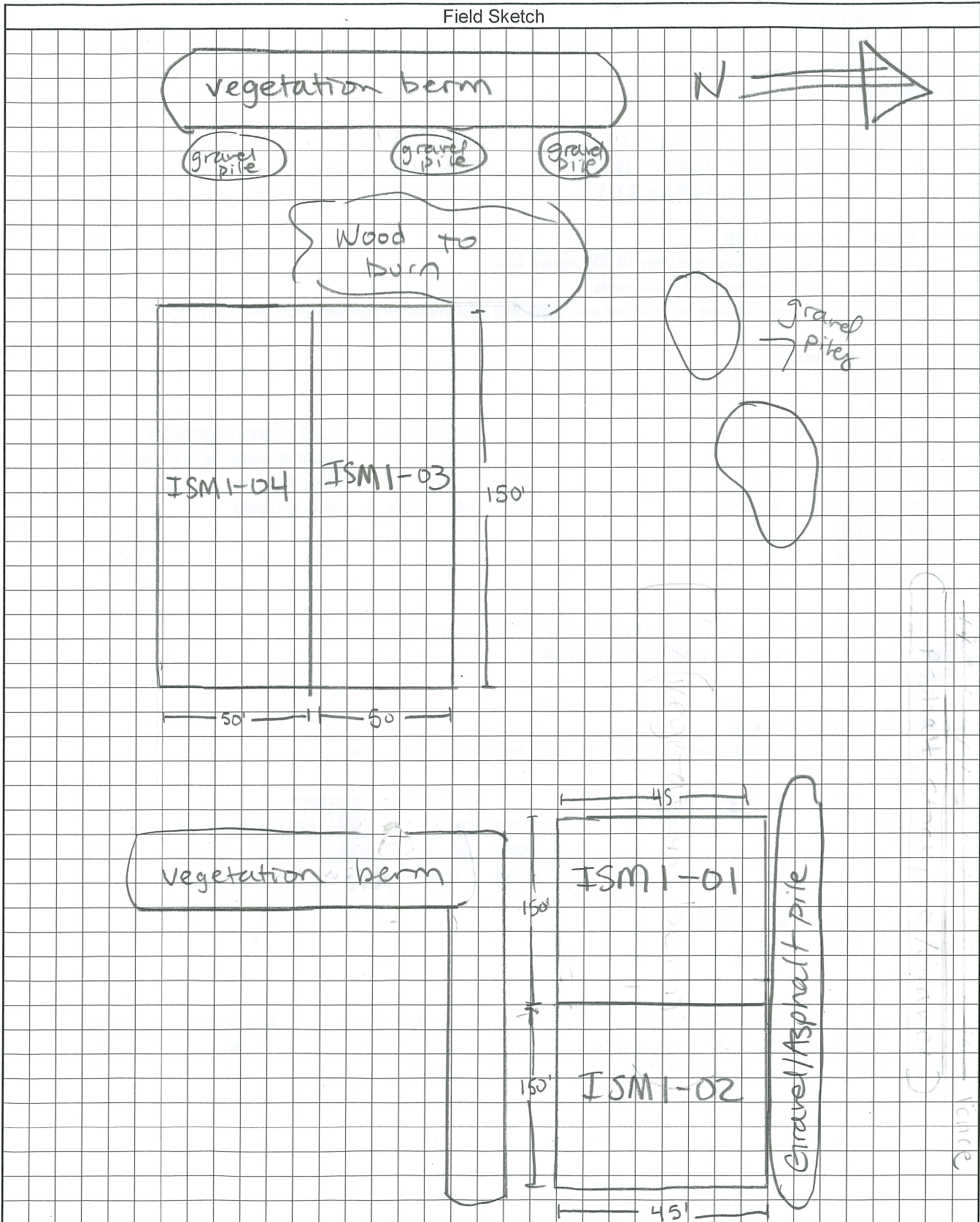
Analysis	Sample Containers	Preservatives	Duplicate	Triplicate
<input checked="" type="checkbox"/> VOCs, GRO	<u>6 x 4oz septa</u>	<u>MeOH</u>	<input type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/> PFAS, DRO	<u>1 gal Ziploc</u>	<u>-</u>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>			<input type="checkbox"/>	<input type="checkbox"/>

Notes _____

RLW
1/12

ISM Sampling Log

Field Sketch





SHANNON & WILSON, INC.
Geotechnical and Environmental Consultants

JOB NAME Kodiak Airport

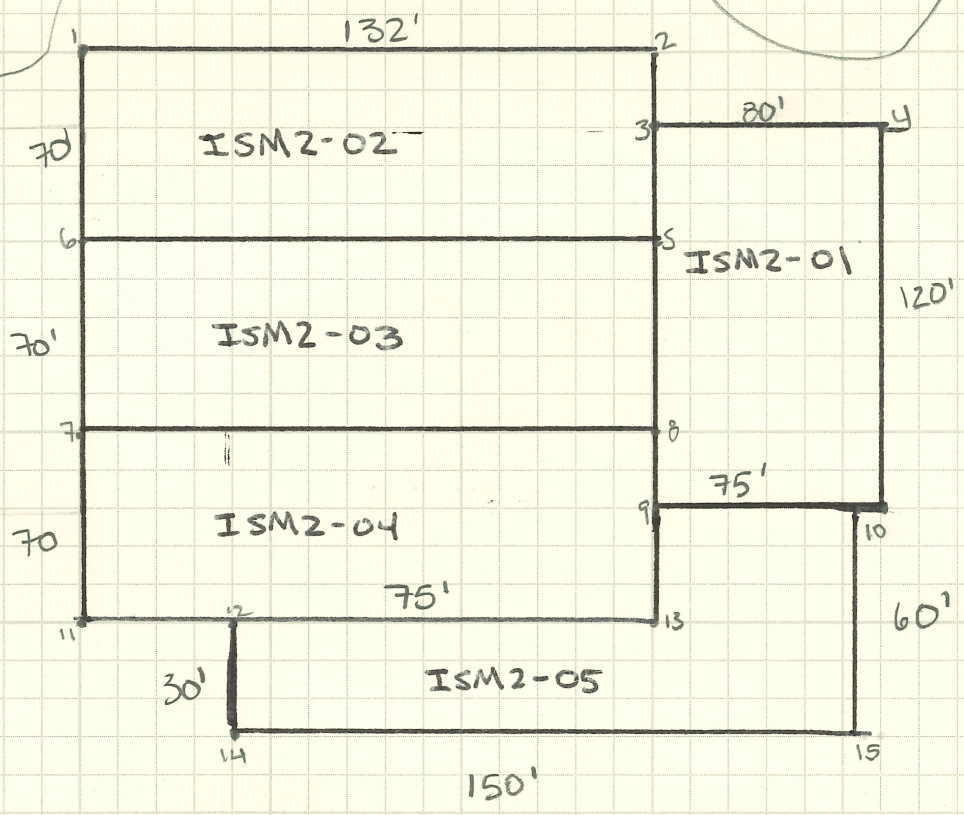
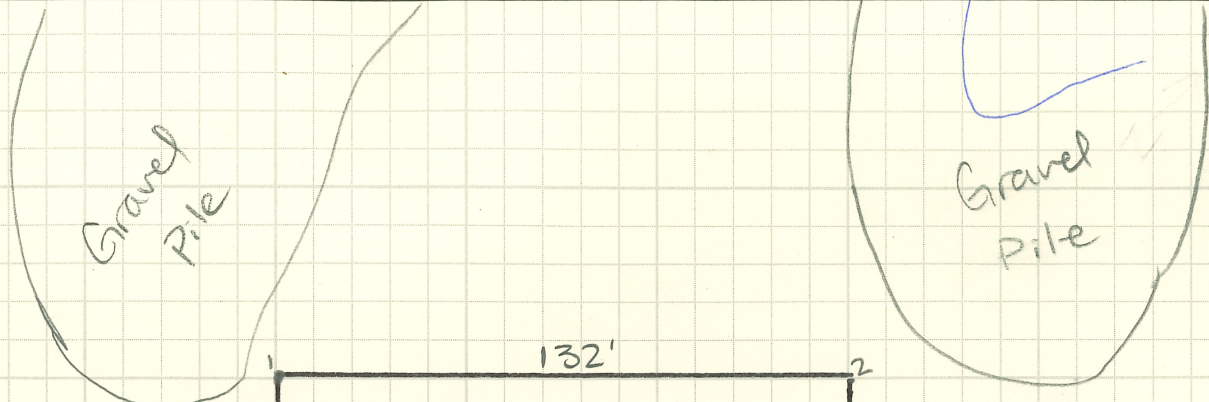
JOB NO. 107471-001

SUBJECT ADD-ISM2

DATE November 2021

BY RW CHK'D.

SHEET 1 of 1



Appendix B

Laboratory Reports and Laboratory Data Review Checklists

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- Work Order (WO) 320-82154-1
- LDRC for WO 320-82154-1
- WO 320-82155-1
- LDRC for WO 320-82155-1
- WO 320-82156-1
- LDRC for WO 320-82156-1

WORK ORDER 320-82154-1 AND LDRC

APPENDIX B: LAB REPORTS AND LDRCS

ANALYTICAL REPORT

Eurofins TestAmerica, Sacramento
880 Riverside Parkway
West Sacramento, CA 95605
Tel: (916)373-5600

Laboratory Job ID: 320-82154-1
Client Project/Site: Kodiak DOT&PF PFAS (107471)

For:
Shannon & Wilson, Inc
2355 Hill Rd.
Fairbanks, Alaska 99709-5244

Attn: Kristen Freiburger



Authorized for release by:
12/13/2021 3:53:25 PM

David Alltucker, Project Manager I
(916)374-4383
David.Alltucker@Eurofinset.com

LINKS

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results through
TotalAccess

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www.eurofinsus.com/Env

The test results in this report meet all 2003 NELAC, 2009 TNI, and 2016 TNI requirements for accredited parameters, exceptions are noted in this report. This report may not be reproduced except in full, and with written approval from the laboratory. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

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: Kodiak DOT&PF PFAS (107471)

Job ID: 320-82154-1

Qualifiers

GC/MS VOA

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.
S1-	Surrogate recovery exceeds control limits, low biased.

GC Semi VOA

Qualifier	Qualifier Description
B	Compound was found in the blank and sample.
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.
S1-	Surrogate recovery exceeds control limits, low biased.
S1+	Surrogate recovery exceeds control limits, high biased.

LCMS

Qualifier	Qualifier Description
*5+	Isotope dilution analyte is outside acceptance limits, high biased.
I	Value is EMPC (estimated maximum possible concentration).
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.
♠	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: Kodiak DOT&PF PFAS (107471)

Job ID: 320-82154-1

Job ID: 320-82154-1

Laboratory: Eurofins TestAmerica, Sacramento

Narrative

Job Narrative 320-82154-1

Receipt

The samples were received on 11/23/2021 4:45 PM. Unless otherwise noted below, the samples arrived in good condition, and where required, properly preserved and on ice. The temperatures of the 2 coolers at receipt time were 4.4° C and 5.0° C.

GC/MS VOA

Method 8260C SIM: The following samples were delayed in shipping and the lab received with insufficient time to run within holding time. ADQ-Site35-01 (320-82154-1), ADQ-Site35-02 (320-82154-2), ADQ-Site35-03 (320-82154-3), ADQ-Site35-04 (320-82154-4), ADQ-Site35-05 (320-82154-5), ADQ-Site35-06 (320-82154-6), ADQ-Site35-07 (320-82154-7), ADQ-Site35-08 (320-82154-8), ADQ-Site35-09 (320-82154-9), ADQ-Site35-10 (320-82154-10), ADQ-Site35-11 (320-82154-11), ADQ-Site35-12 (320-82154-12), ADQ-Site35-13 (320-82154-13), ADQ-Site35-113 (320-82154-14), ADQ-Site35-14 (320-82154-15), ADQ-Site35-15 (320-82154-16), ADQ-Site35-115 (320-82154-17) and Trip Blank 1 (320-82154-18).

Method 8260C: Internal standard (ISTD) response for TBA-d9 for the following samples in analytical batch 320-547871 was outside acceptance criteria: ADQ-Site35-02 (320-82154-2), ADQ-Site35-03 (320-82154-3), ADQ-Site35-04 (320-82154-4), ADQ-Site35-05 (320-82154-5), ADQ-Site35-08 (320-82154-8), ADQ-Site35-09 (320-82154-9), ADQ-Site35-10 (320-82154-10), ADQ-Site35-11 (320-82154-11), ADQ-Site35-12 (320-82154-12), ADQ-Site35-13 (320-82154-13), ADQ-Site35-113 (320-82154-14), ADQ-Site35-14 (320-82154-15), ADQ-Site35-15 (320-82154-16), ADQ-Site35-115 (320-82154-17), Trip Blank 1 (320-82154-18), (LCS 320-545528/2-A), (LCSD 320-545528/3-A) and (MB 320-545528/1-A). This ISTD does not correspond to any of the requested target compounds reported from this analytical batch; therefore, the data have been reported.

Method 8260C: The following samples were delayed in shipping and the lab received with insufficient time to run within holding time. ADQ-Site35-01 (320-82154-1), ADQ-Site35-02 (320-82154-2), ADQ-Site35-03 (320-82154-3), ADQ-Site35-04 (320-82154-4), ADQ-Site35-05 (320-82154-5), ADQ-Site35-06 (320-82154-6), ADQ-Site35-07 (320-82154-7), ADQ-Site35-08 (320-82154-8), ADQ-Site35-09 (320-82154-9), ADQ-Site35-10 (320-82154-10), ADQ-Site35-11 (320-82154-11), ADQ-Site35-12 (320-82154-12), ADQ-Site35-13 (320-82154-13), ADQ-Site35-113 (320-82154-14), ADQ-Site35-14 (320-82154-15), ADQ-Site35-15 (320-82154-16), ADQ-Site35-115 (320-82154-17) and Trip Blank 1 (320-82154-18).

Method AK101: Surrogate recovery for the following sample was outside control limits: ADQ-Site35-01 (320-82154-1). Re-extraction and/or re-analysis was performed and surrogate recovery was outside control limits.

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

GC Semi VOA

Method AK102 & 103: The following samples were diluted due to the abundance of non-target analytes: ADQ-Site35-11 (320-82154-11) and ADQ-Site35-12 (320-82154-12). Elevated reporting limits (RLs) are provided.

Method AK102 & 103: The following sample was diluted due to the abundance of non-target analytes: ADQ-Site35-07 (320-82154-7). As such, surrogate recoveries are below the calibration range or are not reported, and elevated reporting limits (RLs) are provided.

Method AK102 & 103: Surrogate recovery for the following samples were outside control limits: ADQ-Site35-01 (320-82154-1), ADQ-Site35-02 (320-82154-2), ADQ-Site35-11 (320-82154-11) and ADQ-Site35-13 (320-82154-13). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

Method AK102 & 103: The method blank for preparation batch 320-545524 and analytical batch 320-550005 contained DRO (nC10-<nC25) above the method detection limit. This target analyte concentration was less than half the reporting limit (1/2RL); therefore, re-analysis of samples was not performed.

Method AK102 & 103: The Diesel Range Organics (DRO), C10-C25, concentration reported for the following samples is partially due to the presence of discrete peaks: ADQ-Site35-04 (320-82154-4), ADQ-Site35-08 (320-82154-8), ADQ-Site35-14 (320-82154-15), ADQ-Site35-15 (320-82154-16) and ADQ-Site35-115 (320-82154-17).

Case Narrative

Client: Shannon & Wilson, Inc
Project/Site: Kodiak DOT&PF PFAS (107471)

Job ID: 320-82154-1

Job ID: 320-82154-1 (Continued)

Laboratory: Eurofins TestAmerica, Sacramento (Continued)

Method AK102 & 103: The following samples contained a hydrocarbon pattern in the diesel range; however, the elution pattern was later than the typical diesel fuel pattern used by the laboratory for quantitative purposes: ADQ-Site35-02 (320-82154-2), ADQ-Site35-03 (320-82154-3), ADQ-Site35-04 (320-82154-4), ADQ-Site35-05 (320-82154-5), ADQ-Site35-06 (320-82154-6), ADQ-Site35-07 (320-82154-7), ADQ-Site35-09 (320-82154-9), ADQ-Site35-10 (320-82154-10), ADQ-Site35-11 (320-82154-11), ADQ-Site35-12 (320-82154-12) and ADQ-Site35-113 (320-82154-14).

Method 8011: The %RPD between the primary and confirmation column / detector exceeded 40% for Ethylene Dibromide for the following sample: ADQ-Site35-13 (320-82154-13). The lower value has been reported and qualified in accordance with the laboratory's SOP.

Method 8011: The %RPD between the primary and confirmation column / detector exceeded 40% for 1,2,3-Trichloropropane for the following sample: ADQ-Site35-07 (320-82154-7). The lower value has been reported and qualified in accordance with the laboratory's SOP.

Method 8011: The following samples were analyzed outside of analytical holding time due to received out of hold: ADQ-Site35-01 (320-82154-1), ADQ-Site35-02 (320-82154-2), ADQ-Site35-03 (320-82154-3), ADQ-Site35-04 (320-82154-4), ADQ-Site35-05 (320-82154-5), ADQ-Site35-06 (320-82154-6), ADQ-Site35-07 (320-82154-7), ADQ-Site35-08 (320-82154-8), ADQ-Site35-09 (320-82154-9), ADQ-Site35-10 (320-82154-10), ADQ-Site35-11 (320-82154-11), ADQ-Site35-12 (320-82154-12), ADQ-Site35-13 (320-82154-13), ADQ-Site35-113 (320-82154-14), ADQ-Site35-14 (320-82154-15), ADQ-Site35-15 (320-82154-16), ADQ-Site35-115 (320-82154-17) and Trip Blank 1 (320-82154-18).

Method 8011: Insufficient sample volume was available to perform a matrix spike/matrix spike duplicate (MS/MSD) associated with preparation batch 280-559547. LCSD was run to ensure lab precision.

Method 8011: The samples provided were 5 mL of methanol. This method normally uses 10g of soil as the sample volume. As TSO instructed the 5 mL of sample were spiked with the normal spikes of surrogate and then 2 mL of hexane were added to the sample vial followed by 15 mL of reagent water. This volume was then placed on the auto shaker for 2 minutes. Most of the samples had bad emulsions and were then put into the centrifuge for 5 minutes. This allowed the hexane to raise to the top of the sample. The hexane was then extracted as normal. The resulting data will be qualified. ADQ-Site35-01 (320-82154-1), ADQ-Site35-02 (320-82154-2), ADQ-Site35-03 (320-82154-3), ADQ-Site35-04 (320-82154-4), ADQ-Site35-05 (320-82154-5), ADQ-Site35-06 (320-82154-6), ADQ-Site35-07 (320-82154-7), ADQ-Site35-08 (320-82154-8), ADQ-Site35-09 (320-82154-9), ADQ-Site35-10 (320-82154-10), ADQ-Site35-11 (320-82154-11), ADQ-Site35-12 (320-82154-12), ADQ-Site35-13 (320-82154-13), ADQ-Site35-113 (320-82154-14), ADQ-Site35-14 (320-82154-15), ADQ-Site35-15 (320-82154-16), ADQ-Site35-115 (320-82154-17) and Trip Blank 1 (320-82154-18)

Method 8011: MB, LCS, LCSD were prepared as SOP states due to the provided blank not having enough volume for all three QC. ADQ-Site35-01 (320-82154-1), ADQ-Site35-02 (320-82154-2), ADQ-Site35-03 (320-82154-3), ADQ-Site35-04 (320-82154-4), ADQ-Site35-05 (320-82154-5), ADQ-Site35-06 (320-82154-6), ADQ-Site35-07 (320-82154-7), ADQ-Site35-08 (320-82154-8), ADQ-Site35-09 (320-82154-9), ADQ-Site35-10 (320-82154-10), ADQ-Site35-11 (320-82154-11), ADQ-Site35-12 (320-82154-12), ADQ-Site35-13 (320-82154-13), ADQ-Site35-113 (320-82154-14), ADQ-Site35-14 (320-82154-15), ADQ-Site35-15 (320-82154-16), ADQ-Site35-115 (320-82154-17) and Trip Blank 1 (320-82154-18)

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

LCMS

Method EPA 537(Mod): Isotope Dilution Analyte (IDA) recovery is above the method recommended limit for the following samples: ADQ-Site35-09 (320-82154-9), ADQ-Site35-11 (320-82154-11), ADQ-Site35-115 (320-82154-17) and (320-82154-A-17-C MSD). Quantitation by isotope dilution generally precludes any adverse effect on data quality due to elevated IDA recoveries.

Method EPA 537(Mod): The "I" qualifier means the transition mass ratio for the indicated analyte was below the established ratio limits. The qualitative identification of the analyte has some degree of uncertainty. However, analyst judgment was used to positively identify the analyte.

Method EPA 537(Mod): Results for sample ADQ-Site35-13 (320-82154-13) were reported from the analysis of a diluted extract due to high concentration of the target analyte in the analysis of the undiluted extract. The dilution factor was applied to the labeled internal standard area counts and these area counts were within acceptance limits

Case Narrative

Client: Shannon & Wilson, Inc
Project/Site: Kodiak DOT&PF PFAS (107471)

Job ID: 320-82154-1

Job ID: 320-82154-1 (Continued)

Laboratory: Eurofins TestAmerica, Sacramento (Continued)

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

General Chemistry

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

Organic Prep

Method SHAKE: The following samples were yellow after extraction/final volume: ADQ-Site35-07 (320-82154-7) and ADQ-Site35-11 (320-82154-11).

preparation batch 320-545891

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

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- 14
- 15
- 16

Detection Summary

Client: Shannon & Wilson, Inc
Project/Site: Kodiak DOT&PF PFAS (107471)

Job ID: 320-82154-1

Client Sample ID: ADQ-Site35-01

Lab Sample ID: 320-82154-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Acetone	210	J H	1500	150	ug/Kg	1	✳	8260C	Total/NA
DRO (nC10-<nC25)	2.0	J B	5.0	1.2	mg/Kg	1	✳	AK102	Total/NA
Perfluorohexanoic acid (PFHxA)	0.14	J	0.47	0.073	ug/Kg	1	✳	EPA 537(Mod)	Total/NA
Perfluoroheptanoic acid (PFHpA)	0.14	J	0.47	0.090	ug/Kg	1	✳	EPA 537(Mod)	Total/NA
Perfluorooctanoic acid (PFOA)	0.39	J	0.47	0.13	ug/Kg	1	✳	EPA 537(Mod)	Total/NA
Perfluorononanoic acid (PFNA)	0.14	J	0.47	0.052	ug/Kg	1	✳	EPA 537(Mod)	Total/NA
Perfluorohexanesulfonic acid (PFHxS)	0.081	J I	0.47	0.068	ug/Kg	1	✳	EPA 537(Mod)	Total/NA
Perfluorooctanesulfonic acid (PFOS)	2.3		0.47	0.10	ug/Kg	1	✳	EPA 537(Mod)	Total/NA

Client Sample ID: ADQ-Site35-02

Lab Sample ID: 320-82154-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
DRO (nC10-<nC25)	3.5	B	3.1	0.77	mg/Kg	1	✳	AK102	Total/NA
Perfluorooctanoic acid (PFOA)	0.094	J	0.29	0.078	ug/Kg	1	✳	EPA 537(Mod)	Total/NA
Perfluorononanoic acid (PFNA)	0.10	J	0.29	0.032	ug/Kg	1	✳	EPA 537(Mod)	Total/NA
Perfluorooctanesulfonic acid (PFOS)	1.0		0.29	0.063	ug/Kg	1	✳	EPA 537(Mod)	Total/NA

Client Sample ID: ADQ-Site35-03

Lab Sample ID: 320-82154-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
p-Isopropyltoluene	17	J H	75	2.4	ug/Kg	1	✳	8260C	Total/NA
DRO (nC10-<nC25)	3.0	B	2.7	0.68	mg/Kg	1	✳	AK102	Total/NA
Perfluoroheptanoic acid (PFHpA)	0.079	J	0.26	0.049	ug/Kg	1	✳	EPA 537(Mod)	Total/NA
Perfluorooctanoic acid (PFOA)	0.30		0.26	0.069	ug/Kg	1	✳	EPA 537(Mod)	Total/NA
Perfluorononanoic acid (PFNA)	0.095	J	0.26	0.028	ug/Kg	1	✳	EPA 537(Mod)	Total/NA
Perfluorooctanesulfonic acid (PFOS)	0.53		0.26	0.056	ug/Kg	1	✳	EPA 537(Mod)	Total/NA

Client Sample ID: ADQ-Site35-04

Lab Sample ID: 320-82154-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
p-Isopropyltoluene	4.7	J H	33	1.0	ug/Kg	1	✳	8260C	Total/NA
C6-C10 AK	0.95	J	3.3	0.66	mg/Kg	1	✳	AK101	Total/NA
DRO (nC10-<nC25)	1.9	J B	2.2	0.54	mg/Kg	1	✳	AK102	Total/NA
Perfluorooctanesulfonic acid (PFOS)	0.047	J I	0.21	0.045	ug/Kg	1	✳	EPA 537(Mod)	Total/NA

Client Sample ID: ADQ-Site35-05

Lab Sample ID: 320-82154-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
p-Isopropyltoluene	9.7	J H	37	1.2	ug/Kg	1	✳	8260C	Total/NA
Acetone	62	J H	370	37	ug/Kg	1	✳	8260C	Total/NA
Toluene	5.9	J H	37	3.4	ug/Kg	1	✳	8260C	Total/NA
Ethylene Dibromide	0.072	J H	0.29	0.044	ug/Kg	1	✳	8011	Total/NA
1,2,3-Trichloropropane	0.30	H	0.29	0.16	ug/Kg	1	✳	8011	Total/NA
DRO (nC10-<nC25)	11	B	2.3	0.57	mg/Kg	1	✳	AK102	Total/NA
Perfluorononanoic acid (PFNA)	0.052	J	0.22	0.024	ug/Kg	1	✳	EPA 537(Mod)	Total/NA
Perfluorooctanesulfonic acid (PFOS)	0.21	J I	0.22	0.048	ug/Kg	1	✳	EPA 537(Mod)	Total/NA

Client Sample ID: ADQ-Site35-06

Lab Sample ID: 320-82154-6

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
DRO (nC10-<nC25)	2.5	B	2.4	0.60	mg/Kg	1	✳	AK102	Total/NA
Perfluorohexanoic acid (PFHxA)	0.19	J	0.23	0.036	ug/Kg	1	✳	EPA 537(Mod)	Total/NA
Perfluoroheptanoic acid (PFHpA)	0.16	J	0.23	0.044	ug/Kg	1	✳	EPA 537(Mod)	Total/NA

This Detection Summary does not include radiochemical test results.

Eurofins TestAmerica, Sacramento

Detection Summary

Client: Shannon & Wilson, Inc
Project/Site: Kodiak DOT&PF PFAS (107471)

Job ID: 320-82154-1

Client Sample ID: ADQ-Site35-06 (Continued)

Lab Sample ID: 320-82154-6

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Perfluorooctanoic acid (PFOA)	0.81		0.23	0.062	ug/Kg	1	☼	EPA 537(Mod)	Total/NA
Perfluorononanoic acid (PFNA)	0.13	J	0.23	0.026	ug/Kg	1	☼	EPA 537(Mod)	Total/NA
Perfluorohexanesulfonic acid (PFHxS)	0.048	J	0.23	0.034	ug/Kg	1	☼	EPA 537(Mod)	Total/NA
Perfluorooctanesulfonic acid (PFOS)	1.4		0.23	0.050	ug/Kg	1	☼	EPA 537(Mod)	Total/NA

Client Sample ID: ADQ-Site35-07

Lab Sample ID: 320-82154-7

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Acetone	75	J H	620	62	ug/Kg	1	☼	8260C	Total/NA
1,2,3-Trichloropropane	0.20	J H	0.29	0.16	ug/Kg	1	☼	8011	Total/NA
DRO (nC10-<nC25)	62	J B	110	29	mg/Kg	50	☼	AK102	Total/NA
Perfluorohexanoic acid (PFHxA)	0.080	J	0.22	0.034	ug/Kg	1	☼	EPA 537(Mod)	Total/NA
Perfluoroheptanoic acid (PFHpA)	0.046	J	0.22	0.041	ug/Kg	1	☼	EPA 537(Mod)	Total/NA
Perfluorooctanoic acid (PFOA)	0.39		0.22	0.058	ug/Kg	1	☼	EPA 537(Mod)	Total/NA
Perfluoroundecanoic acid (PFUnA)	0.078	J	0.22	0.046	ug/Kg	1	☼	EPA 537(Mod)	Total/NA
Perfluorohexanesulfonic acid (PFHxS)	0.14	J	0.22	0.032	ug/Kg	1	☼	EPA 537(Mod)	Total/NA
Perfluorooctanesulfonic acid (PFOS)	0.72		0.22	0.047	ug/Kg	1	☼	EPA 537(Mod)	Total/NA

Client Sample ID: ADQ-Site35-08

Lab Sample ID: 320-82154-8

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
p-Isopropyltoluene	2.0	J H	38	1.2	ug/Kg	1	☼	8260C	Total/NA
DRO (nC10-<nC25)	3.1	B	2.2	0.54	mg/Kg	1	☼	AK102	Total/NA
Perfluorooctanesulfonic acid (PFOS)	0.086	J I	0.21	0.045	ug/Kg	1	☼	EPA 537(Mod)	Total/NA

Client Sample ID: ADQ-Site35-09

Lab Sample ID: 320-82154-9

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Toluene	2.0	J H	20	1.8	ug/Kg	1	☼	8260C	Total/NA
DRO (nC10-<nC25)	1.9	J B	2.1	0.53	mg/Kg	1	☼	AK102	Total/NA
Perfluorooctanesulfonic acid (PFOS)	0.043	J I	0.20	0.043	ug/Kg	1	☼	EPA 537(Mod)	Total/NA

Client Sample ID: ADQ-Site35-10

Lab Sample ID: 320-82154-10

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
1,2,4-Trimethylbenzene	2.6	J H	25	1.8	ug/Kg	1	☼	8260C	Total/NA
m-Xylene & p-Xylene	4.1	J H	25	2.5	ug/Kg	1	☼	8260C	Total/NA
Toluene	6.0	J H	25	2.3	ug/Kg	1	☼	8260C	Total/NA
DRO (nC10-<nC25)	1.5	J B	2.1	0.53	mg/Kg	1	☼	AK102	Total/NA
Perfluorooctanoic acid (PFOA)	0.055	J	0.20	0.053	ug/Kg	1	☼	EPA 537(Mod)	Total/NA
Perfluorooctanesulfonic acid (PFOS)	0.070	J I	0.20	0.043	ug/Kg	1	☼	EPA 537(Mod)	Total/NA

Client Sample ID: ADQ-Site35-11

Lab Sample ID: 320-82154-11

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Toluene	13	J H	110	10	ug/Kg	1	☼	8260C	Total/NA
DRO (nC10-<nC25)	6.9	J B	15	3.8	mg/Kg	5	☼	AK102	Total/NA
Perfluorooctanoic acid (PFOA)	0.40		0.28	0.075	ug/Kg	1	☼	EPA 537(Mod)	Total/NA
Perfluorododecanoic acid (PFDoA)	0.052	J	0.28	0.042	ug/Kg	1	☼	EPA 537(Mod)	Total/NA
Perfluorohexanesulfonic acid (PFHxS)	0.093	J	0.28	0.041	ug/Kg	1	☼	EPA 537(Mod)	Total/NA
Perfluorooctanesulfonic acid (PFOS)	1.1		0.28	0.061	ug/Kg	1	☼	EPA 537(Mod)	Total/NA

This Detection Summary does not include radiochemical test results.

Eurofins TestAmerica, Sacramento

Detection Summary

Client: Shannon & Wilson, Inc
Project/Site: Kodiak DOT&PF PFAS (107471)

Job ID: 320-82154-1

Client Sample ID: ADQ-Site35-12

Lab Sample ID: 320-82154-12

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
m-Xylene & p-Xylene	4.2	J H	37	3.7	ug/Kg	1	✳	8260C	Total/NA
Toluene	6.4	J H	37	3.3	ug/Kg	1	✳	8260C	Total/NA
Ethylene Dibromide	0.18	J H	0.31	0.046	ug/Kg	1	✳	8011	Total/NA
DRO (nC10-<nC25)	8.5	J B	12	3.0	mg/Kg	5	✳	AK102	Total/NA
Perfluorohexanoic acid (PFHxA)	0.13	J	0.23	0.036	ug/Kg	1	✳	EPA 537(Mod)	Total/NA
Perfluorooctanoic acid (PFOA)	1.6		0.23	0.061	ug/Kg	1	✳	EPA 537(Mod)	Total/NA
Perfluorononanoic acid (PFNA)	0.049	J	0.23	0.025	ug/Kg	1	✳	EPA 537(Mod)	Total/NA
Perfluorodecanoic acid (PFDA)	0.13	J	0.23	0.055	ug/Kg	1	✳	EPA 537(Mod)	Total/NA
Perfluoroundecanoic acid (PFUnA)	0.25		0.23	0.048	ug/Kg	1	✳	EPA 537(Mod)	Total/NA
Perfluorododecanoic acid (PFDoA)	0.10	J	0.23	0.034	ug/Kg	1	✳	EPA 537(Mod)	Total/NA
Perfluorohexanesulfonic acid (PFHxS)	0.39		0.23	0.033	ug/Kg	1	✳	EPA 537(Mod)	Total/NA
Perfluorooctanesulfonic acid (PFOS)	3.7		0.23	0.049	ug/Kg	1	✳	EPA 537(Mod)	Total/NA

Client Sample ID: ADQ-Site35-13

Lab Sample ID: 320-82154-13

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
1,2,4-Trimethylbenzene	16	J H	43	3.0	ug/Kg	1	✳	8260C	Total/NA
m-Xylene & p-Xylene	30	J H	43	4.3	ug/Kg	1	✳	8260C	Total/NA
Naphthalene	22	J H	43	1.5	ug/Kg	1	✳	8260C	Total/NA
o-Xylene	8.3	J H	43	4.4	ug/Kg	1	✳	8260C	Total/NA
Toluene	59	H	43	3.8	ug/Kg	1	✳	8260C	Total/NA
C6-C10 AK	1.2	J	4.3	0.85	mg/Kg	1	✳	AK101	Total/NA
Ethylene Dibromide	0.066	J H	0.29	0.044	ug/Kg	1	✳	8011	Total/NA
DRO (nC10-<nC25)	6.1	B	2.3	0.57	mg/Kg	1	✳	AK102	Total/NA
Perfluorohexanoic acid (PFHxA)	0.10	J	0.21	0.033	ug/Kg	1	✳	EPA 537(Mod)	Total/NA
Perfluoroheptanoic acid (PFHpA)	0.073	J	0.21	0.041	ug/Kg	1	✳	EPA 537(Mod)	Total/NA
Perfluorooctanoic acid (PFOA)	1.7		0.21	0.057	ug/Kg	1	✳	EPA 537(Mod)	Total/NA
Perfluorononanoic acid (PFNA)	0.028	J	0.21	0.023	ug/Kg	1	✳	EPA 537(Mod)	Total/NA
Perfluorodecanoic acid (PFDA)	0.057	J	0.21	0.051	ug/Kg	1	✳	EPA 537(Mod)	Total/NA
Perfluorohexanesulfonic acid (PFHxS)	1.3		0.21	0.031	ug/Kg	1	✳	EPA 537(Mod)	Total/NA
Perfluorooctanesulfonic acid (PFOS) - DL	20		1.1	0.23	ug/Kg	5	✳	EPA 537(Mod)	Total/NA

Client Sample ID: ADQ-Site35-113

Lab Sample ID: 320-82154-14

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
1,2,4-Trimethylbenzene	4.1	J H	44	3.1	ug/Kg	1	✳	8260C	Total/NA
m-Xylene & p-Xylene	8.5	J H	44	4.4	ug/Kg	1	✳	8260C	Total/NA
Naphthalene	7.0	J H	44	1.6	ug/Kg	1	✳	8260C	Total/NA
Toluene	21	J H	44	3.9	ug/Kg	1	✳	8260C	Total/NA
Ethylene Dibromide	0.21	J H	0.29	0.043	ug/Kg	1	✳	8011	Total/NA
DRO (nC10-<nC25)	6.3	B	2.2	0.56	mg/Kg	1	✳	AK102	Total/NA
Perfluorohexanoic acid (PFHxA)	0.096	J	0.21	0.033	ug/Kg	1	✳	EPA 537(Mod)	Total/NA
Perfluorooctanoic acid (PFOA)	1.3		0.21	0.056	ug/Kg	1	✳	EPA 537(Mod)	Total/NA
Perfluorononanoic acid (PFNA)	0.036	J	0.21	0.023	ug/Kg	1	✳	EPA 537(Mod)	Total/NA
Perfluorohexanesulfonic acid (PFHxS)	1.2		0.21	0.031	ug/Kg	1	✳	EPA 537(Mod)	Total/NA
Perfluorooctanesulfonic acid (PFOS)	16		0.21	0.045	ug/Kg	1	✳	EPA 537(Mod)	Total/NA

Client Sample ID: ADQ-Site35-14

Lab Sample ID: 320-82154-15

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
p-Isopropyltoluene	4.8	J H	28	0.91	ug/Kg	1	✳	8260C	Total/NA
Acetone	53	J H	280	28	ug/Kg	1	✳	8260C	Total/NA

This Detection Summary does not include radiochemical test results.

Eurofins TestAmerica, Sacramento

Detection Summary

Client: Shannon & Wilson, Inc
 Project/Site: Kodiak DOT&PF PFAS (107471)

Job ID: 320-82154-1

Client Sample ID: ADQ-Site35-14 (Continued)

Lab Sample ID: 320-82154-15

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
m-Xylene & p-Xylene	3.4	J H	28	2.8	ug/Kg	1	✳	8260C	Total/NA
Toluene	3.6	J H	28	2.6	ug/Kg	1	✳	8260C	Total/NA
C6-C10 AK	1.2	J	2.8	0.57	mg/Kg	1	✳	AK101	Total/NA
Ethylene Dibromide	0.36	H	0.28	0.042	ug/Kg	1	✳	8011	Total/NA
DRO (nC10-<nC25)	2.6	B	2.2	0.55	mg/Kg	1	✳	AK102	Total/NA
Perfluorohexanoic acid (PFHxA)	0.044	J	0.20	0.031	ug/Kg	1	✳	EPA 537(Mod)	Total/NA
Perfluoroheptanoic acid (PFHpA)	0.059	J	0.20	0.038	ug/Kg	1	✳	EPA 537(Mod)	Total/NA
Perfluorooctanoic acid (PFOA)	0.63		0.20	0.053	ug/Kg	1	✳	EPA 537(Mod)	Total/NA
Perfluorononanoic acid (PFNA)	0.039	J	0.20	0.022	ug/Kg	1	✳	EPA 537(Mod)	Total/NA
Perfluorododecanoic acid (PFDoA)	0.030	J	0.20	0.030	ug/Kg	1	✳	EPA 537(Mod)	Total/NA
Perfluorohexanesulfonic acid (PFHxS)	0.10	J	0.20	0.029	ug/Kg	1	✳	EPA 537(Mod)	Total/NA
Perfluorooctanesulfonic acid (PFOS)	0.47		0.20	0.043	ug/Kg	1	✳	EPA 537(Mod)	Total/NA

Client Sample ID: ADQ-Site35-15

Lab Sample ID: 320-82154-16

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Toluene	6.5	J H	45	4.1	ug/Kg	1	✳	8260C	Total/NA
DRO (nC10-<nC25)	1.3	J B	2.2	0.54	mg/Kg	1	✳	AK102	Total/NA
Perfluorooctanoic acid (PFOA)	0.085	J	0.20	0.052	ug/Kg	1	✳	EPA 537(Mod)	Total/NA
Perfluorooctanesulfonic acid (PFOS)	0.13	J	0.20	0.042	ug/Kg	1	✳	EPA 537(Mod)	Total/NA

Client Sample ID: ADQ-Site35-115

Lab Sample ID: 320-82154-17

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
DRO (nC10-<nC25)	1.2	J B	2.2	0.54	mg/Kg	1	✳	AK102	Total/NA
Perfluorooctanoic acid (PFOA)	0.076	J	0.20	0.054	ug/Kg	1	✳	EPA 537(Mod)	Total/NA
Perfluorooctanesulfonic acid (PFOS)	0.12	J I	0.20	0.043	ug/Kg	1	✳	EPA 537(Mod)	Total/NA

Client Sample ID: Trip Blank 1

Lab Sample ID: 320-82154-18

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Toluene	4.9	J H	50	4.5	ug/Kg	1		8260C	Total/NA

This Detection Summary does not include radiochemical test results.

Eurofins TestAmerica, Sacramento

Client Sample Results

Client: Shannon & Wilson, Inc
 Project/Site: Kodiak DOT&PF PFAS (107471)

Job ID: 320-82154-1

Client Sample ID: ADQ-Site35-01

Lab Sample ID: 320-82154-1

Date Collected: 11/13/21 10:02

Matrix: Solid

Date Received: 11/23/21 16:45

Percent Solids: 39.9

Method: 8260C SIM - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,2,2-Tetrachloroethane	ND	H	7.4	1.7	ug/Kg	☼	11/24/21 10:53	11/30/21 11:52	1
1,1,2-Trichloroethane	ND	H	7.4	2.5	ug/Kg	☼	11/24/21 10:53	11/30/21 11:52	1
1,2-Dichloroethane	ND	H	7.4	1.2	ug/Kg	☼	11/24/21 10:53	11/30/21 11:52	1
Bromomethane	ND	H	15	4.8	ug/Kg	☼	11/24/21 10:53	11/30/21 11:52	1
Chlorodibromomethane	ND	H	7.4	1.2	ug/Kg	☼	11/24/21 10:53	11/30/21 11:52	1
Chloroform	ND	H	15	6.0	ug/Kg	☼	11/24/21 10:53	11/30/21 11:52	1
Dichlorobromomethane	ND	H	7.4	0.97	ug/Kg	☼	11/24/21 10:53	11/30/21 11:52	1
Ethylene Dibromide	ND	H	7.4	1.2	ug/Kg	☼	11/24/21 10:53	11/30/21 11:52	1
Trichloroethene	ND	H	7.4	1.5	ug/Kg	☼	11/24/21 10:53	11/30/21 11:52	1
Vinyl chloride	ND	H	7.4	1.9	ug/Kg	☼	11/24/21 10:53	11/30/21 11:52	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	83		69 - 129	11/24/21 10:53	11/30/21 11:52	1
Dibromofluoromethane (Surr)	116		72 - 132	11/24/21 10:53	11/30/21 11:52	1
1,2-Dichloroethane-d4 (Surr)	114		72 - 132	11/24/21 10:53	11/30/21 11:52	1
Toluene-d8 (Surr)	107		78 - 138	11/24/21 10:53	11/30/21 11:52	1

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND	H	150	18	ug/Kg	☼	11/24/21 10:53	12/03/21 14:13	1
1,1,1-Trichloroethane	ND	H	150	11	ug/Kg	☼	11/24/21 10:53	12/03/21 14:13	1
1,1-Dichloroethane	ND	H	150	8.0	ug/Kg	☼	11/24/21 10:53	12/03/21 14:13	1
1,1-Dichloroethene	ND	H	150	14	ug/Kg	☼	11/24/21 10:53	12/03/21 14:13	1
1,1-Dichloropropene	ND	H	150	13	ug/Kg	☼	11/24/21 10:53	12/03/21 14:13	1
1,2,3-Trichlorobenzene	ND	H	150	18	ug/Kg	☼	11/24/21 10:53	12/03/21 14:13	1
1,2,3-Trichloropropane	ND	H	150	14	ug/Kg	☼	11/24/21 10:53	12/03/21 14:13	1
1,2,4-Trichlorobenzene	ND	H	150	10	ug/Kg	☼	11/24/21 10:53	12/03/21 14:13	1
1,2,4-Trimethylbenzene	ND	H	150	10	ug/Kg	☼	11/24/21 10:53	12/03/21 14:13	1
1,2-Dibromo-3-Chloropropane	ND	H	300	19	ug/Kg	☼	11/24/21 10:53	12/03/21 14:13	1
1,2-Dichlorobenzene	ND	H	150	6.5	ug/Kg	☼	11/24/21 10:53	12/03/21 14:13	1
1,2-Dichloropropane	ND	H	150	14	ug/Kg	☼	11/24/21 10:53	12/03/21 14:13	1
1,3,5-Trimethylbenzene	ND	H	150	10	ug/Kg	☼	11/24/21 10:53	12/03/21 14:13	1
1,3-Dichlorobenzene	ND	H	150	9.8	ug/Kg	☼	11/24/21 10:53	12/03/21 14:13	1
1,3-Dichloropropane	ND	H	150	6.8	ug/Kg	☼	11/24/21 10:53	12/03/21 14:13	1
1,4-Dichlorobenzene	ND	H	150	6.5	ug/Kg	☼	11/24/21 10:53	12/03/21 14:13	1
2,2-Dichloropropane	ND	H	150	13	ug/Kg	☼	11/24/21 10:53	12/03/21 14:13	1
2-Butanone (MEK)	ND	H	300	77	ug/Kg	☼	11/24/21 10:53	12/03/21 14:13	1
2-Chlorotoluene	ND	H	150	11	ug/Kg	☼	11/24/21 10:53	12/03/21 14:13	1
2-Hexanone	ND	H	300	15	ug/Kg	☼	11/24/21 10:53	12/03/21 14:13	1
4-Chlorotoluene	ND	H	150	8.3	ug/Kg	☼	11/24/21 10:53	12/03/21 14:13	1
4-Methyl-2-pentanone (MIBK)	ND	H	300	9.2	ug/Kg	☼	11/24/21 10:53	12/03/21 14:13	1
p-Isopropyltoluene	ND	H	150	4.8	ug/Kg	☼	11/24/21 10:53	12/03/21 14:13	1
Acetone	210	J H	1500	150	ug/Kg	☼	11/24/21 10:53	12/03/21 14:13	1
Benzene	ND	H	150	9.8	ug/Kg	☼	11/24/21 10:53	12/03/21 14:13	1
Bromoform	ND	H	150	33	ug/Kg	☼	11/24/21 10:53	12/03/21 14:13	1
Bromobenzene	ND	H	150	17	ug/Kg	☼	11/24/21 10:53	12/03/21 14:13	1
Carbon disulfide	ND	H	300	10	ug/Kg	☼	11/24/21 10:53	12/03/21 14:13	1
Carbon tetrachloride	ND	H	150	10	ug/Kg	☼	11/24/21 10:53	12/03/21 14:13	1
Chlorobenzene	ND	H	150	13	ug/Kg	☼	11/24/21 10:53	12/03/21 14:13	1
Chlorobromomethane	ND	H	150	22	ug/Kg	☼	11/24/21 10:53	12/03/21 14:13	1

Eurofins TestAmerica, Sacramento

Client Sample Results

Client: Shannon & Wilson, Inc
 Project/Site: Kodiak DOT&PF PFAS (107471)

Job ID: 320-82154-1

Client Sample ID: ADQ-Site35-01

Lab Sample ID: 320-82154-1

Date Collected: 11/13/21 10:02

Matrix: Solid

Date Received: 11/23/21 16:45

Percent Solids: 39.9

Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloroethane	ND	H	150	20	ug/Kg	☼	11/24/21 10:53	12/03/21 14:13	1
Chloromethane	ND	H	150	7.4	ug/Kg	☼	11/24/21 10:53	12/03/21 14:13	1
cis-1,2-Dichloroethene	ND	H	150	24	ug/Kg	☼	11/24/21 10:53	12/03/21 14:13	1
cis-1,3-Dichloropropene	ND	H	150	12	ug/Kg	☼	11/24/21 10:53	12/03/21 14:13	1
Dibromomethane	ND	H	150	19	ug/Kg	☼	11/24/21 10:53	12/03/21 14:13	1
Dichlorodifluoromethane	ND	H	150	28	ug/Kg	☼	11/24/21 10:53	12/03/21 14:13	1
Ethylbenzene	ND	H	150	20	ug/Kg	☼	11/24/21 10:53	12/03/21 14:13	1
Hexachlorobutadiene	ND	H	150	15	ug/Kg	☼	11/24/21 10:53	12/03/21 14:13	1
Isopropylbenzene	ND	H	150	10	ug/Kg	☼	11/24/21 10:53	12/03/21 14:13	1
Methyl tert-butyl ether	ND	H	300	11	ug/Kg	☼	11/24/21 10:53	12/03/21 14:13	1
Methylene Chloride	ND	H	150	16	ug/Kg	☼	11/24/21 10:53	12/03/21 14:13	1
m-Xylene & p-Xylene	ND	H	150	15	ug/Kg	☼	11/24/21 10:53	12/03/21 14:13	1
Naphthalene	ND	H	150	5.4	ug/Kg	☼	11/24/21 10:53	12/03/21 14:13	1
n-Butylbenzene	ND	H	150	9.2	ug/Kg	☼	11/24/21 10:53	12/03/21 14:13	1
N-Propylbenzene	ND	H	150	14	ug/Kg	☼	11/24/21 10:53	12/03/21 14:13	1
o-Xylene	ND	H	150	15	ug/Kg	☼	11/24/21 10:53	12/03/21 14:13	1
sec-Butylbenzene	ND	H	150	7.1	ug/Kg	☼	11/24/21 10:53	12/03/21 14:13	1
Styrene	ND	H	150	3.3	ug/Kg	☼	11/24/21 10:53	12/03/21 14:13	1
tert-Butylbenzene	ND	H	150	12	ug/Kg	☼	11/24/21 10:53	12/03/21 14:13	1
Tetrachloroethene	ND	H	150	12	ug/Kg	☼	11/24/21 10:53	12/03/21 14:13	1
Toluene	ND	H	150	13	ug/Kg	☼	11/24/21 10:53	12/03/21 14:13	1
trans-1,2-Dichloroethene	ND	H	150	18	ug/Kg	☼	11/24/21 10:53	12/03/21 14:13	1
trans-1,3-Dichloropropene	ND	H	150	8.3	ug/Kg	☼	11/24/21 10:53	12/03/21 14:13	1
Trichlorofluoromethane	ND	H	150	36	ug/Kg	☼	11/24/21 10:53	12/03/21 14:13	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	117		52 - 126	11/24/21 10:53	12/03/21 14:13	1
4-Bromofluorobenzene (Surr)	110		67 - 135	11/24/21 10:53	12/03/21 14:13	1
Dibromofluoromethane (Surr)	109		61 - 123	11/24/21 10:53	12/03/21 14:13	1
Toluene-d8 (Surr)	115		65 - 131	11/24/21 10:53	12/03/21 14:13	1

Method: AK101 - Alaska - Gasoline Range Organics (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
C6-C10 AK	ND		15	3.0	mg/Kg	☼	11/24/21 10:53	12/07/21 15:18	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	103		60 - 120	11/24/21 10:53	12/07/21 15:18	1
Trifluorotoluene (Surr)	29	S1-	60 - 120	11/24/21 10:53	12/07/21 15:18	1

Method: 8011 - EDB, DBCP, and 1,2,3-TCP (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ethylene Dibromide	ND	H	0.63	0.095	ug/Kg	☼	12/03/21 13:26	12/04/21 00:19	1
1,2,3-Trichloropropane	ND	H	0.63	0.34	ug/Kg	☼	12/03/21 13:26	12/04/21 00:19	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dibromopropane	123		55 - 130	12/03/21 13:26	12/04/21 00:19	1

Method: AK102 - DRO

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
DRO (nC10-<nC25)	2.0	J B	5.0	1.2	mg/Kg	☼	11/24/21 09:17	12/11/21 16:08	1

Eurofins TestAmerica, Sacramento

Client Sample Results

Client: Shannon & Wilson, Inc
 Project/Site: Kodiak DOT&PF PFAS (107471)

Job ID: 320-82154-1

Client Sample ID: ADQ-Site35-01

Lab Sample ID: 320-82154-1

Date Collected: 11/13/21 10:02

Matrix: Solid

Date Received: 11/23/21 16:45

Percent Solids: 39.9

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
<i>o</i> -Terphenyl (Surr)	38	S1-	60 - 120	11/24/21 09:17	12/11/21 16:08	1
<i>n</i> -Triacontane-d62	77		60 - 120	11/24/21 09:17	12/11/21 16:08	1

Method: EPA 537(Mod) - PFAS for QSM 5.3, Table B-15

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorohexanoic acid (PFHxA)	0.14	J	0.47	0.073	ug/Kg	☆	11/24/21 18:30	11/29/21 05:02	1
Perfluoroheptanoic acid (PFHpA)	0.14	J	0.47	0.090	ug/Kg	☆	11/24/21 18:30	11/29/21 05:02	1
Perfluorooctanoic acid (PFOA)	0.39	J	0.47	0.13	ug/Kg	☆	11/24/21 18:30	11/29/21 05:02	1
Perfluorononanoic acid (PFNA)	0.14	J	0.47	0.052	ug/Kg	☆	11/24/21 18:30	11/29/21 05:02	1
Perfluorodecanoic acid (PFDA)	ND		0.47	0.11	ug/Kg	☆	11/24/21 18:30	11/29/21 05:02	1
Perfluoroundecanoic acid (PFUnA)	ND		0.47	0.099	ug/Kg	☆	11/24/21 18:30	11/29/21 05:02	1
Perfluorododecanoic acid (PFDoA)	ND		0.47	0.071	ug/Kg	☆	11/24/21 18:30	11/29/21 05:02	1
Perfluorotridecanoic acid (PFTTrDA)	ND		0.47	0.050	ug/Kg	☆	11/24/21 18:30	11/29/21 05:02	1
Perfluorotetradecanoic acid (PFTeA)	ND		0.47	0.087	ug/Kg	☆	11/24/21 18:30	11/29/21 05:02	1
Perfluorobutanesulfonic acid (PFBS)	ND		0.47	0.090	ug/Kg	☆	11/24/21 18:30	11/29/21 05:02	1
Perfluorohexanesulfonic acid (PFHxS)	0.081	J I	0.47	0.068	ug/Kg	☆	11/24/21 18:30	11/29/21 05:02	1
Perfluorooctanesulfonic acid (PFOS)	2.3		0.47	0.10	ug/Kg	☆	11/24/21 18:30	11/29/21 05:02	1
NEtFOSAA	ND		0.47	0.11	ug/Kg	☆	11/24/21 18:30	11/29/21 05:02	1
NMeFOSAA	ND		0.47	0.054	ug/Kg	☆	11/24/21 18:30	11/29/21 05:02	1
HFPO-DA (GenX)	ND		0.47	0.097	ug/Kg	☆	11/24/21 18:30	11/29/21 05:02	1
9Cl-PF3ONS	ND		0.47	0.083	ug/Kg	☆	11/24/21 18:30	11/29/21 05:02	1
11Cl-PF3OUdS	ND		0.47	0.073	ug/Kg	☆	11/24/21 18:30	11/29/21 05:02	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	ND		0.47	0.092	ug/Kg	☆	11/24/21 18:30	11/29/21 05:02	1

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C2 PFHxA	86		50 - 150	11/24/21 18:30	11/29/21 05:02	1
13C4 PFHpA	90		50 - 150	11/24/21 18:30	11/29/21 05:02	1
13C4 PFOA	92		50 - 150	11/24/21 18:30	11/29/21 05:02	1
13C5 PFNA	97		50 - 150	11/24/21 18:30	11/29/21 05:02	1
13C2 PFDA	99		50 - 150	11/24/21 18:30	11/29/21 05:02	1
13C2 PFUnA	101		50 - 150	11/24/21 18:30	11/29/21 05:02	1
13C2 PFDoA	90		50 - 150	11/24/21 18:30	11/29/21 05:02	1
13C2 PFTeDA	99		50 - 150	11/24/21 18:30	11/29/21 05:02	1
13C3 PFBS	99		50 - 150	11/24/21 18:30	11/29/21 05:02	1
18O2 PFHxS	85		50 - 150	11/24/21 18:30	11/29/21 05:02	1
13C4 PFOS	97		50 - 150	11/24/21 18:30	11/29/21 05:02	1
d3-NMeFOSAA	112		50 - 150	11/24/21 18:30	11/29/21 05:02	1
d5-NEtFOSAA	122		50 - 150	11/24/21 18:30	11/29/21 05:02	1
13C3 HFPO-DA	87		50 - 150	11/24/21 18:30	11/29/21 05:02	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	60.1		0.1	0.1	%			11/24/21 16:05	1
Percent Solids	39.9		0.1	0.1	%			11/24/21 16:05	1

Client Sample Results

Client: Shannon & Wilson, Inc
 Project/Site: Kodiak DOT&PF PFAS (107471)

Job ID: 320-82154-1

Client Sample ID: ADQ-Site35-02

Lab Sample ID: 320-82154-2

Date Collected: 11/13/21 10:08

Matrix: Solid

Date Received: 11/23/21 16:45

Percent Solids: 63.8

Method: 8260C SIM - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND	H	6.2	1.4	ug/Kg	☼	11/24/21 10:53	11/30/21 12:16	1
1,1,2-Trichloroethane	ND	H	6.2	2.1	ug/Kg	☼	11/24/21 10:53	11/30/21 12:16	1
1,2-Dichloroethane	ND	H	6.2	1.0	ug/Kg	☼	11/24/21 10:53	11/30/21 12:16	1
Bromomethane	ND	H	12	4.1	ug/Kg	☼	11/24/21 10:53	11/30/21 12:16	1
Chlorodibromomethane	ND	H	6.2	0.99	ug/Kg	☼	11/24/21 10:53	11/30/21 12:16	1
Chloroform	ND	H	12	5.0	ug/Kg	☼	11/24/21 10:53	11/30/21 12:16	1
Dichlorobromomethane	ND	H	6.2	0.81	ug/Kg	☼	11/24/21 10:53	11/30/21 12:16	1
Ethylene Dibromide	ND	H	6.2	1.0	ug/Kg	☼	11/24/21 10:53	11/30/21 12:16	1
Trichloroethene	ND	H	6.2	1.2	ug/Kg	☼	11/24/21 10:53	11/30/21 12:16	1
Vinyl chloride	ND	H	6.2	1.6	ug/Kg	☼	11/24/21 10:53	11/30/21 12:16	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	83		69 - 129	11/24/21 10:53	11/30/21 12:16	1
Dibromofluoromethane (Surr)	121		72 - 132	11/24/21 10:53	11/30/21 12:16	1
1,2-Dichloroethane-d4 (Surr)	116		72 - 132	11/24/21 10:53	11/30/21 12:16	1
Toluene-d8 (Surr)	108		78 - 138	11/24/21 10:53	11/30/21 12:16	1

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND	H	120	15	ug/Kg	☼	11/24/21 10:53	12/03/21 14:36	1
1,1,1-Trichloroethane	ND	H	120	9.2	ug/Kg	☼	11/24/21 10:53	12/03/21 14:36	1
1,1-Dichloroethane	ND	H	120	6.7	ug/Kg	☼	11/24/21 10:53	12/03/21 14:36	1
1,1-Dichloroethene	ND	H	120	12	ug/Kg	☼	11/24/21 10:53	12/03/21 14:36	1
1,1-Dichloropropene	ND	H	120	11	ug/Kg	☼	11/24/21 10:53	12/03/21 14:36	1
1,2,3-Trichlorobenzene	ND	H	120	15	ug/Kg	☼	11/24/21 10:53	12/03/21 14:36	1
1,2,3-Trichloropropane	ND	H	120	12	ug/Kg	☼	11/24/21 10:53	12/03/21 14:36	1
1,2,4-Trichlorobenzene	ND	H	120	8.5	ug/Kg	☼	11/24/21 10:53	12/03/21 14:36	1
1,2,4-Trimethylbenzene	ND	H	120	8.7	ug/Kg	☼	11/24/21 10:53	12/03/21 14:36	1
1,2-Dibromo-3-Chloropropane	ND	H	250	16	ug/Kg	☼	11/24/21 10:53	12/03/21 14:36	1
1,2-Dichlorobenzene	ND	H	120	5.5	ug/Kg	☼	11/24/21 10:53	12/03/21 14:36	1
1,2-Dichloropropane	ND	H	120	12	ug/Kg	☼	11/24/21 10:53	12/03/21 14:36	1
1,3,5-Trimethylbenzene	ND	H	120	8.7	ug/Kg	☼	11/24/21 10:53	12/03/21 14:36	1
1,3-Dichlorobenzene	ND	H	120	8.2	ug/Kg	☼	11/24/21 10:53	12/03/21 14:36	1
1,3-Dichloropropane	ND	H	120	5.7	ug/Kg	☼	11/24/21 10:53	12/03/21 14:36	1
1,4-Dichlorobenzene	ND	H	120	5.5	ug/Kg	☼	11/24/21 10:53	12/03/21 14:36	1
2,2-Dichloropropane	ND	H	120	11	ug/Kg	☼	11/24/21 10:53	12/03/21 14:36	1
2-Butanone (MEK)	ND	H	250	65	ug/Kg	☼	11/24/21 10:53	12/03/21 14:36	1
2-Chlorotoluene	ND	H	120	9.0	ug/Kg	☼	11/24/21 10:53	12/03/21 14:36	1
2-Hexanone	ND	H	250	13	ug/Kg	☼	11/24/21 10:53	12/03/21 14:36	1
4-Chlorotoluene	ND	H	120	7.0	ug/Kg	☼	11/24/21 10:53	12/03/21 14:36	1
4-Methyl-2-pentanone (MIBK)	ND	H	250	7.7	ug/Kg	☼	11/24/21 10:53	12/03/21 14:36	1
p-Isopropyltoluene	ND	H	120	4.0	ug/Kg	☼	11/24/21 10:53	12/03/21 14:36	1
Acetone	ND	H	1200	120	ug/Kg	☼	11/24/21 10:53	12/03/21 14:36	1
Benzene	ND	H	120	8.2	ug/Kg	☼	11/24/21 10:53	12/03/21 14:36	1
Bromoform	ND	H	120	27	ug/Kg	☼	11/24/21 10:53	12/03/21 14:36	1
Bromobenzene	ND	H	120	14	ug/Kg	☼	11/24/21 10:53	12/03/21 14:36	1
Carbon disulfide	ND	H	250	8.7	ug/Kg	☼	11/24/21 10:53	12/03/21 14:36	1
Carbon tetrachloride	ND	H	120	8.7	ug/Kg	☼	11/24/21 10:53	12/03/21 14:36	1
Chlorobenzene	ND	H	120	11	ug/Kg	☼	11/24/21 10:53	12/03/21 14:36	1
Chlorobromomethane	ND	H	120	18	ug/Kg	☼	11/24/21 10:53	12/03/21 14:36	1

Eurofins TestAmerica, Sacramento

Client Sample Results

Client: Shannon & Wilson, Inc
 Project/Site: Kodiak DOT&PF PFAS (107471)

Job ID: 320-82154-1

Client Sample ID: ADQ-Site35-02

Lab Sample ID: 320-82154-2

Date Collected: 11/13/21 10:08

Matrix: Solid

Date Received: 11/23/21 16:45

Percent Solids: 63.8

Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloroethane	ND	H	120	16	ug/Kg	☼	11/24/21 10:53	12/03/21 14:36	1
Chloromethane	ND	H	120	6.2	ug/Kg	☼	11/24/21 10:53	12/03/21 14:36	1
cis-1,2-Dichloroethene	ND	H	120	20	ug/Kg	☼	11/24/21 10:53	12/03/21 14:36	1
cis-1,3-Dichloropropene	ND	H	120	10	ug/Kg	☼	11/24/21 10:53	12/03/21 14:36	1
Dibromomethane	ND	H	120	16	ug/Kg	☼	11/24/21 10:53	12/03/21 14:36	1
Dichlorodifluoromethane	ND	H	120	23	ug/Kg	☼	11/24/21 10:53	12/03/21 14:36	1
Ethylbenzene	ND	H	120	16	ug/Kg	☼	11/24/21 10:53	12/03/21 14:36	1
Hexachlorobutadiene	ND	H	120	13	ug/Kg	☼	11/24/21 10:53	12/03/21 14:36	1
Isopropylbenzene	ND	H	120	8.7	ug/Kg	☼	11/24/21 10:53	12/03/21 14:36	1
Methyl tert-butyl ether	ND	H	250	9.0	ug/Kg	☼	11/24/21 10:53	12/03/21 14:36	1
Methylene Chloride	ND	H	120	13	ug/Kg	☼	11/24/21 10:53	12/03/21 14:36	1
m-Xylene & p-Xylene	ND	H	120	12	ug/Kg	☼	11/24/21 10:53	12/03/21 14:36	1
Naphthalene	ND	H	120	4.5	ug/Kg	☼	11/24/21 10:53	12/03/21 14:36	1
n-Butylbenzene	ND	H	120	7.7	ug/Kg	☼	11/24/21 10:53	12/03/21 14:36	1
N-Propylbenzene	ND	H	120	12	ug/Kg	☼	11/24/21 10:53	12/03/21 14:36	1
o-Xylene	ND	H	120	13	ug/Kg	☼	11/24/21 10:53	12/03/21 14:36	1
sec-Butylbenzene	ND	H	120	6.0	ug/Kg	☼	11/24/21 10:53	12/03/21 14:36	1
Styrene	ND	H	120	2.7	ug/Kg	☼	11/24/21 10:53	12/03/21 14:36	1
tert-Butylbenzene	ND	H	120	10	ug/Kg	☼	11/24/21 10:53	12/03/21 14:36	1
Tetrachloroethene	ND	H	120	10	ug/Kg	☼	11/24/21 10:53	12/03/21 14:36	1
Toluene	ND	H	120	11	ug/Kg	☼	11/24/21 10:53	12/03/21 14:36	1
trans-1,2-Dichloroethene	ND	H	120	15	ug/Kg	☼	11/24/21 10:53	12/03/21 14:36	1
trans-1,3-Dichloropropene	ND	H	120	7.0	ug/Kg	☼	11/24/21 10:53	12/03/21 14:36	1
Trichlorofluoromethane	ND	H	120	30	ug/Kg	☼	11/24/21 10:53	12/03/21 14:36	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	112		52 - 126	11/24/21 10:53	12/03/21 14:36	1
4-Bromofluorobenzene (Surr)	106		67 - 135	11/24/21 10:53	12/03/21 14:36	1
Dibromofluoromethane (Surr)	107		61 - 123	11/24/21 10:53	12/03/21 14:36	1
Toluene-d8 (Surr)	114		65 - 131	11/24/21 10:53	12/03/21 14:36	1

Method: AK101 - Alaska - Gasoline Range Organics (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
C6-C10 AK	ND		12	2.5	mg/Kg	☼	11/24/21 10:53	12/03/21 14:36	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	106		60 - 120	11/24/21 10:53	12/03/21 14:36	1
Trifluorotoluene (Surr)	65		60 - 120	11/24/21 10:53	12/03/21 14:36	1

Method: 8011 - EDB, DBCP, and 1,2,3-TCP (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ethylene Dibromide	ND	H	0.40	0.059	ug/Kg	☼	12/03/21 13:26	12/04/21 00:43	1
1,2,3-Trichloropropane	ND	H	0.40	0.21	ug/Kg	☼	12/03/21 13:26	12/04/21 00:43	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dibromopropane	125		55 - 130	12/03/21 13:26	12/04/21 00:43	1

Method: AK102 - DRO

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
DRO (nC10-<nC25)	3.5	B	3.1	0.77	mg/Kg	☼	11/24/21 09:17	12/11/21 16:32	1

Eurofins TestAmerica, Sacramento

Client Sample Results

Client: Shannon & Wilson, Inc
 Project/Site: Kodiak DOT&PF PFAS (107471)

Job ID: 320-82154-1

Client Sample ID: ADQ-Site35-02

Lab Sample ID: 320-82154-2

Date Collected: 11/13/21 10:08

Matrix: Solid

Date Received: 11/23/21 16:45

Percent Solids: 63.8

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
<i>o</i> -Terphenyl (Surr)	56	S1-	60 - 120	11/24/21 09:17	12/11/21 16:32	1
<i>n</i> -Triacontane-d62	76		60 - 120	11/24/21 09:17	12/11/21 16:32	1

Method: EPA 537(Mod) - PFAS for QSM 5.3, Table B-15

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorohexanoic acid (PFHxA)	ND		0.29	0.046	ug/Kg	☆	11/24/21 18:30	11/29/21 05:12	1
Perfluoroheptanoic acid (PFHpA)	ND		0.29	0.056	ug/Kg	☆	11/24/21 18:30	11/29/21 05:12	1
Perfluorooctanoic acid (PFOA)	0.094	J	0.29	0.078	ug/Kg	☆	11/24/21 18:30	11/29/21 05:12	1
Perfluorononanoic acid (PFNA)	0.10	J	0.29	0.032	ug/Kg	☆	11/24/21 18:30	11/29/21 05:12	1
Perfluorodecanoic acid (PFDA)	ND		0.29	0.071	ug/Kg	☆	11/24/21 18:30	11/29/21 05:12	1
Perfluoroundecanoic acid (PFUnA)	ND		0.29	0.062	ug/Kg	☆	11/24/21 18:30	11/29/21 05:12	1
Perfluorododecanoic acid (PFDoA)	ND		0.29	0.044	ug/Kg	☆	11/24/21 18:30	11/29/21 05:12	1
Perfluorotridecanoic acid (PFTrDA)	ND		0.29	0.031	ug/Kg	☆	11/24/21 18:30	11/29/21 05:12	1
Perfluorotetradecanoic acid (PFTeA)	ND		0.29	0.054	ug/Kg	☆	11/24/21 18:30	11/29/21 05:12	1
Perfluorobutanesulfonic acid (PFBS)	ND		0.29	0.056	ug/Kg	☆	11/24/21 18:30	11/29/21 05:12	1
Perfluorohexanesulfonic acid (PFHxS)	ND		0.29	0.043	ug/Kg	☆	11/24/21 18:30	11/29/21 05:12	1
Perfluorooctanesulfonic acid (PFOS)	1.0		0.29	0.063	ug/Kg	☆	11/24/21 18:30	11/29/21 05:12	1
NEtFOSAA	ND		0.29	0.071	ug/Kg	☆	11/24/21 18:30	11/29/21 05:12	1
NMeFOSAA	ND		0.29	0.034	ug/Kg	☆	11/24/21 18:30	11/29/21 05:12	1
HFPO-DA (GenX)	ND		0.29	0.060	ug/Kg	☆	11/24/21 18:30	11/29/21 05:12	1
9CI-PF3ONS	ND		0.29	0.051	ug/Kg	☆	11/24/21 18:30	11/29/21 05:12	1
11CI-PF3OUdS	ND		0.29	0.046	ug/Kg	☆	11/24/21 18:30	11/29/21 05:12	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	ND		0.29	0.057	ug/Kg	☆	11/24/21 18:30	11/29/21 05:12	1

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C2 PFHxA	91		50 - 150	11/24/21 18:30	11/29/21 05:12	1
13C4 PFHpA	91		50 - 150	11/24/21 18:30	11/29/21 05:12	1
13C4 PFOA	103		50 - 150	11/24/21 18:30	11/29/21 05:12	1
13C5 PFNA	106		50 - 150	11/24/21 18:30	11/29/21 05:12	1
13C2 PFDA	101		50 - 150	11/24/21 18:30	11/29/21 05:12	1
13C2 PFUnA	101		50 - 150	11/24/21 18:30	11/29/21 05:12	1
13C2 PFDoA	101		50 - 150	11/24/21 18:30	11/29/21 05:12	1
13C2 PFTeDA	109		50 - 150	11/24/21 18:30	11/29/21 05:12	1
13C3 PFBS	117		50 - 150	11/24/21 18:30	11/29/21 05:12	1
18O2 PFHxS	91		50 - 150	11/24/21 18:30	11/29/21 05:12	1
13C4 PFOS	99		50 - 150	11/24/21 18:30	11/29/21 05:12	1
d3-NMeFOSAA	117		50 - 150	11/24/21 18:30	11/29/21 05:12	1
d5-NEtFOSAA	129		50 - 150	11/24/21 18:30	11/29/21 05:12	1
13C3 HFPO-DA	94		50 - 150	11/24/21 18:30	11/29/21 05:12	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	36.2		0.1	0.1	%			11/24/21 16:05	1
Percent Solids	63.8		0.1	0.1	%			11/24/21 16:05	1

Client Sample Results

Client: Shannon & Wilson, Inc
 Project/Site: Kodiak DOT&PF PFAS (107471)

Job ID: 320-82154-1

Client Sample ID: ADQ-Site35-03

Lab Sample ID: 320-82154-3

Date Collected: 11/13/21 10:19

Matrix: Solid

Date Received: 11/23/21 16:45

Percent Solids: 72.3

Method: 8260C SIM - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,2,2-Tetrachloroethane	ND	H	3.8	0.84	ug/Kg	✱	11/24/21 10:53	11/30/21 12:40	1
1,1,2-Trichloroethane	ND	H	3.8	1.2	ug/Kg	✱	11/24/21 10:53	11/30/21 12:40	1
1,2-Dichloroethane	ND	H	3.8	0.63	ug/Kg	✱	11/24/21 10:53	11/30/21 12:40	1
Bromomethane	ND	H	7.5	2.4	ug/Kg	✱	11/24/21 10:53	11/30/21 12:40	1
Chlorodibromomethane	ND	H	3.8	0.60	ug/Kg	✱	11/24/21 10:53	11/30/21 12:40	1
Chloroform	ND	H	7.5	3.0	ug/Kg	✱	11/24/21 10:53	11/30/21 12:40	1
Dichlorobromomethane	ND	H	3.8	0.49	ug/Kg	✱	11/24/21 10:53	11/30/21 12:40	1
Ethylene Dibromide	ND	H	3.8	0.60	ug/Kg	✱	11/24/21 10:53	11/30/21 12:40	1
Trichloroethene	ND	H	3.8	0.74	ug/Kg	✱	11/24/21 10:53	11/30/21 12:40	1
Vinyl chloride	ND	H	3.8	0.95	ug/Kg	✱	11/24/21 10:53	11/30/21 12:40	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	84		69 - 129				11/24/21 10:53	11/30/21 12:40	1
Dibromofluoromethane (Surr)	121		72 - 132				11/24/21 10:53	11/30/21 12:40	1
1,2-Dichloroethane-d4 (Surr)	120		72 - 132				11/24/21 10:53	11/30/21 12:40	1
Toluene-d8 (Surr)	110		78 - 138				11/24/21 10:53	11/30/21 12:40	1

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND	H	75	8.9	ug/Kg	✱	11/24/21 10:53	12/03/21 14:59	1
1,1,1-Trichloroethane	ND	H	75	5.6	ug/Kg	✱	11/24/21 10:53	12/03/21 14:59	1
1,1-Dichloroethane	ND	H	75	4.1	ug/Kg	✱	11/24/21 10:53	12/03/21 14:59	1
1,1-Dichloroethene	ND	H	75	7.1	ug/Kg	✱	11/24/21 10:53	12/03/21 14:59	1
1,1-Dichloropropene	ND	H	75	6.5	ug/Kg	✱	11/24/21 10:53	12/03/21 14:59	1
1,2,3-Trichlorobenzene	ND	H	75	9.3	ug/Kg	✱	11/24/21 10:53	12/03/21 14:59	1
1,2,3-Trichloropropane	ND	H	75	7.1	ug/Kg	✱	11/24/21 10:53	12/03/21 14:59	1
1,2,4-Trichlorobenzene	ND	H	75	5.1	ug/Kg	✱	11/24/21 10:53	12/03/21 14:59	1
1,2,4-Trimethylbenzene	ND	H	75	5.3	ug/Kg	✱	11/24/21 10:53	12/03/21 14:59	1
1,2-Dibromo-3-Chloropropane	ND	H	150	9.5	ug/Kg	✱	11/24/21 10:53	12/03/21 14:59	1
1,2-Dichlorobenzene	ND	H	75	3.3	ug/Kg	✱	11/24/21 10:53	12/03/21 14:59	1
1,2-Dichloropropane	ND	H	75	7.1	ug/Kg	✱	11/24/21 10:53	12/03/21 14:59	1
1,3,5-Trimethylbenzene	ND	H	75	5.3	ug/Kg	✱	11/24/21 10:53	12/03/21 14:59	1
1,3-Dichlorobenzene	ND	H	75	5.0	ug/Kg	✱	11/24/21 10:53	12/03/21 14:59	1
1,3-Dichloropropane	ND	H	75	3.5	ug/Kg	✱	11/24/21 10:53	12/03/21 14:59	1
1,4-Dichlorobenzene	ND	H	75	3.3	ug/Kg	✱	11/24/21 10:53	12/03/21 14:59	1
2,2-Dichloropropane	ND	H	75	6.5	ug/Kg	✱	11/24/21 10:53	12/03/21 14:59	1
2-Butanone (MEK)	ND	H	150	39	ug/Kg	✱	11/24/21 10:53	12/03/21 14:59	1
2-Chlorotoluene	ND	H	75	5.4	ug/Kg	✱	11/24/21 10:53	12/03/21 14:59	1
2-Hexanone	ND	H	150	7.8	ug/Kg	✱	11/24/21 10:53	12/03/21 14:59	1
4-Chlorotoluene	ND	H	75	4.2	ug/Kg	✱	11/24/21 10:53	12/03/21 14:59	1
4-Methyl-2-pentanone (MIBK)	ND	H	150	4.7	ug/Kg	✱	11/24/21 10:53	12/03/21 14:59	1
p-Isopropyltoluene	17	J H	75	2.4	ug/Kg	✱	11/24/21 10:53	12/03/21 14:59	1
Acetone	ND	H	750	75	ug/Kg	✱	11/24/21 10:53	12/03/21 14:59	1
Benzene	ND	H	75	5.0	ug/Kg	✱	11/24/21 10:53	12/03/21 14:59	1
Bromoform	ND	H	75	17	ug/Kg	✱	11/24/21 10:53	12/03/21 14:59	1
Bromobenzene	ND	H	75	8.4	ug/Kg	✱	11/24/21 10:53	12/03/21 14:59	1
Carbon disulfide	ND	H	150	5.3	ug/Kg	✱	11/24/21 10:53	12/03/21 14:59	1
Carbon tetrachloride	ND	H	75	5.3	ug/Kg	✱	11/24/21 10:53	12/03/21 14:59	1
Chlorobenzene	ND	H	75	6.6	ug/Kg	✱	11/24/21 10:53	12/03/21 14:59	1
Chlorobromomethane	ND	H	75	11	ug/Kg	✱	11/24/21 10:53	12/03/21 14:59	1

Eurofins TestAmerica, Sacramento

Client Sample Results

Client: Shannon & Wilson, Inc
 Project/Site: Kodiak DOT&PF PFAS (107471)

Job ID: 320-82154-1

Client Sample ID: ADQ-Site35-03

Lab Sample ID: 320-82154-3

Date Collected: 11/13/21 10:19

Matrix: Solid

Date Received: 11/23/21 16:45

Percent Solids: 72.3

Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloroethane	ND	H	75	9.9	ug/Kg	☼	11/24/21 10:53	12/03/21 14:59	1
Chloromethane	ND	H	75	3.8	ug/Kg	☼	11/24/21 10:53	12/03/21 14:59	1
cis-1,2-Dichloroethene	ND	H	75	12	ug/Kg	☼	11/24/21 10:53	12/03/21 14:59	1
cis-1,3-Dichloropropene	ND	H	75	6.2	ug/Kg	☼	11/24/21 10:53	12/03/21 14:59	1
Dibromomethane	ND	H	75	9.8	ug/Kg	☼	11/24/21 10:53	12/03/21 14:59	1
Dichlorodifluoromethane	ND	H	75	14	ug/Kg	☼	11/24/21 10:53	12/03/21 14:59	1
Ethylbenzene	ND	H	75	9.9	ug/Kg	☼	11/24/21 10:53	12/03/21 14:59	1
Hexachlorobutadiene	ND	H	75	7.7	ug/Kg	☼	11/24/21 10:53	12/03/21 14:59	1
Isopropylbenzene	ND	H	75	5.3	ug/Kg	☼	11/24/21 10:53	12/03/21 14:59	1
Methyl tert-butyl ether	ND	H	150	5.4	ug/Kg	☼	11/24/21 10:53	12/03/21 14:59	1
Methylene Chloride	ND	H	75	8.1	ug/Kg	☼	11/24/21 10:53	12/03/21 14:59	1
m-Xylene & p-Xylene	ND	H	75	7.5	ug/Kg	☼	11/24/21 10:53	12/03/21 14:59	1
Naphthalene	ND	H	75	2.7	ug/Kg	☼	11/24/21 10:53	12/03/21 14:59	1
n-Butylbenzene	ND	H	75	4.7	ug/Kg	☼	11/24/21 10:53	12/03/21 14:59	1
N-Propylbenzene	ND	H	75	7.1	ug/Kg	☼	11/24/21 10:53	12/03/21 14:59	1
o-Xylene	ND	H	75	7.8	ug/Kg	☼	11/24/21 10:53	12/03/21 14:59	1
sec-Butylbenzene	ND	H	75	3.6	ug/Kg	☼	11/24/21 10:53	12/03/21 14:59	1
Styrene	ND	H	75	1.7	ug/Kg	☼	11/24/21 10:53	12/03/21 14:59	1
tert-Butylbenzene	ND	H	75	6.2	ug/Kg	☼	11/24/21 10:53	12/03/21 14:59	1
Tetrachloroethene	ND	H	75	6.3	ug/Kg	☼	11/24/21 10:53	12/03/21 14:59	1
Toluene	ND	H	75	6.8	ug/Kg	☼	11/24/21 10:53	12/03/21 14:59	1
trans-1,2-Dichloroethene	ND	H	75	9.3	ug/Kg	☼	11/24/21 10:53	12/03/21 14:59	1
trans-1,3-Dichloropropene	ND	H	75	4.2	ug/Kg	☼	11/24/21 10:53	12/03/21 14:59	1
Trichlorofluoromethane	ND	H	75	18	ug/Kg	☼	11/24/21 10:53	12/03/21 14:59	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	117		52 - 126	11/24/21 10:53	12/03/21 14:59	1
4-Bromofluorobenzene (Surr)	110		67 - 135	11/24/21 10:53	12/03/21 14:59	1
Dibromofluoromethane (Surr)	107		61 - 123	11/24/21 10:53	12/03/21 14:59	1
Toluene-d8 (Surr)	114		65 - 131	11/24/21 10:53	12/03/21 14:59	1

Method: AK101 - Alaska - Gasoline Range Organics (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
C6-C10 AK	ND		7.5	1.5	mg/Kg	☼	11/24/21 10:53	12/03/21 14:59	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	110		60 - 120	11/24/21 10:53	12/03/21 14:59	1
Trifluorotoluene (Surr)	75		60 - 120	11/24/21 10:53	12/03/21 14:59	1

Method: 8011 - EDB, DBCP, and 1,2,3-TCP (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ethylene Dibromide	ND	H	0.35	0.053	ug/Kg	☼	12/03/21 13:26	12/04/21 01:07	1
1,2,3-Trichloropropane	ND	H	0.35	0.19	ug/Kg	☼	12/03/21 13:26	12/04/21 01:07	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dibromopropane	115		55 - 130	12/03/21 13:26	12/04/21 01:07	1

Method: AK102 - DRO

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
DRO (nC10-<nC25)	3.0	B	2.7	0.68	mg/Kg	☼	11/24/21 09:17	12/11/21 16:56	1

Eurofins TestAmerica, Sacramento

Client Sample Results

Client: Shannon & Wilson, Inc
 Project/Site: Kodiak DOT&PF PFAS (107471)

Job ID: 320-82154-1

Client Sample ID: ADQ-Site35-03

Lab Sample ID: 320-82154-3

Date Collected: 11/13/21 10:19

Matrix: Solid

Date Received: 11/23/21 16:45

Percent Solids: 72.3

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
<i>o</i> -Terphenyl (Surr)	61		60 - 120	11/24/21 09:17	12/11/21 16:56	1
<i>n</i> -Triacontane-d62	74		60 - 120	11/24/21 09:17	12/11/21 16:56	1

Method: EPA 537(Mod) - PFAS for QSM 5.3, Table B-15

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorohexanoic acid (PFHxA)	ND		0.26	0.040	ug/Kg	☆	11/24/21 18:30	11/29/21 05:23	1
Perfluoroheptanoic acid (PFHpA)	0.079	J	0.26	0.049	ug/Kg	☆	11/24/21 18:30	11/29/21 05:23	1
Perfluorooctanoic acid (PFOA)	0.30		0.26	0.069	ug/Kg	☆	11/24/21 18:30	11/29/21 05:23	1
Perfluorononanoic acid (PFNA)	0.095	J	0.26	0.028	ug/Kg	☆	11/24/21 18:30	11/29/21 05:23	1
Perfluorodecanoic acid (PFDA)	ND		0.26	0.062	ug/Kg	☆	11/24/21 18:30	11/29/21 05:23	1
Perfluoroundecanoic acid (PFUnA)	ND		0.26	0.054	ug/Kg	☆	11/24/21 18:30	11/29/21 05:23	1
Perfluorododecanoic acid (PFDoA)	ND		0.26	0.039	ug/Kg	☆	11/24/21 18:30	11/29/21 05:23	1
Perfluorotridecanoic acid (PFTrDA)	ND		0.26	0.027	ug/Kg	☆	11/24/21 18:30	11/29/21 05:23	1
Perfluorotetradecanoic acid (PFTeA)	ND		0.26	0.048	ug/Kg	☆	11/24/21 18:30	11/29/21 05:23	1
Perfluorobutanesulfonic acid (PFBS)	ND		0.26	0.049	ug/Kg	☆	11/24/21 18:30	11/29/21 05:23	1
Perfluorohexanesulfonic acid (PFHxS)	ND		0.26	0.038	ug/Kg	☆	11/24/21 18:30	11/29/21 05:23	1
Perfluorooctanesulfonic acid (PFOS)	0.53		0.26	0.056	ug/Kg	☆	11/24/21 18:30	11/29/21 05:23	1
NEtFOSAA	ND		0.26	0.062	ug/Kg	☆	11/24/21 18:30	11/29/21 05:23	1
NMeFOSAA	ND		0.26	0.030	ug/Kg	☆	11/24/21 18:30	11/29/21 05:23	1
HFPO-DA (GenX)	ND		0.26	0.053	ug/Kg	☆	11/24/21 18:30	11/29/21 05:23	1
9CI-PF3ONS	ND		0.26	0.045	ug/Kg	☆	11/24/21 18:30	11/29/21 05:23	1
11CI-PF3OUdS	ND		0.26	0.040	ug/Kg	☆	11/24/21 18:30	11/29/21 05:23	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	ND		0.26	0.050	ug/Kg	☆	11/24/21 18:30	11/29/21 05:23	1

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C2 PFHxA	83		50 - 150	11/24/21 18:30	11/29/21 05:23	1
13C4 PFHpA	86		50 - 150	11/24/21 18:30	11/29/21 05:23	1
13C4 PFOA	91		50 - 150	11/24/21 18:30	11/29/21 05:23	1
13C5 PFNA	95		50 - 150	11/24/21 18:30	11/29/21 05:23	1
13C2 PFDA	90		50 - 150	11/24/21 18:30	11/29/21 05:23	1
13C2 PFUnA	96		50 - 150	11/24/21 18:30	11/29/21 05:23	1
13C2 PFDoA	101		50 - 150	11/24/21 18:30	11/29/21 05:23	1
13C2 PFTeDA	94		50 - 150	11/24/21 18:30	11/29/21 05:23	1
13C3 PFBS	92		50 - 150	11/24/21 18:30	11/29/21 05:23	1
18O2 PFHxS	81		50 - 150	11/24/21 18:30	11/29/21 05:23	1
13C4 PFOS	95		50 - 150	11/24/21 18:30	11/29/21 05:23	1
d3-NMeFOSAA	100		50 - 150	11/24/21 18:30	11/29/21 05:23	1
d5-NEtFOSAA	106		50 - 150	11/24/21 18:30	11/29/21 05:23	1
13C3 HFPO-DA	82		50 - 150	11/24/21 18:30	11/29/21 05:23	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	27.7		0.1	0.1	%			11/24/21 16:05	1
Percent Solids	72.3		0.1	0.1	%			11/24/21 16:05	1

Client Sample Results

Client: Shannon & Wilson, Inc
 Project/Site: Kodiak DOT&PF PFAS (107471)

Job ID: 320-82154-1

Client Sample ID: ADQ-Site35-04

Lab Sample ID: 320-82154-4

Date Collected: 11/13/21 10:40

Matrix: Solid

Date Received: 11/23/21 16:45

Percent Solids: 89.7

Method: 8260C SIM - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,2,2-Tetrachloroethane	ND	H	1.6	0.37	ug/Kg	☼	11/24/21 10:53	11/30/21 13:03	1
1,1,2-Trichloroethane	ND	H	1.6	0.54	ug/Kg	☼	11/24/21 10:53	11/30/21 13:03	1
1,2-Dichloroethane	ND	H	1.6	0.28	ug/Kg	☼	11/24/21 10:53	11/30/21 13:03	1
Bromomethane	ND	H	3.3	1.1	ug/Kg	☼	11/24/21 10:53	11/30/21 13:03	1
Chlorodibromomethane	ND	H	1.6	0.26	ug/Kg	☼	11/24/21 10:53	11/30/21 13:03	1
Chloroform	ND	H	3.3	1.3	ug/Kg	☼	11/24/21 10:53	11/30/21 13:03	1
Dichlorobromomethane	ND	H	1.6	0.21	ug/Kg	☼	11/24/21 10:53	11/30/21 13:03	1
Ethylene Dibromide	ND	H	1.6	0.26	ug/Kg	☼	11/24/21 10:53	11/30/21 13:03	1
Trichloroethene	ND	H	1.6	0.32	ug/Kg	☼	11/24/21 10:53	11/30/21 13:03	1
Vinyl chloride	ND	H	1.6	0.41	ug/Kg	☼	11/24/21 10:53	11/30/21 13:03	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	88		69 - 129	11/24/21 10:53	11/30/21 13:03	1
Dibromofluoromethane (Surr)	122		72 - 132	11/24/21 10:53	11/30/21 13:03	1
1,2-Dichloroethane-d4 (Surr)	120		72 - 132	11/24/21 10:53	11/30/21 13:03	1
Toluene-d8 (Surr)	111		78 - 138	11/24/21 10:53	11/30/21 13:03	1

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND	H	33	3.9	ug/Kg	☼	11/24/21 10:53	12/03/21 15:23	1
1,1,1-Trichloroethane	ND	H	33	2.4	ug/Kg	☼	11/24/21 10:53	12/03/21 15:23	1
1,1-Dichloroethane	ND	H	33	1.8	ug/Kg	☼	11/24/21 10:53	12/03/21 15:23	1
1,1-Dichloroethene	ND	H	33	3.1	ug/Kg	☼	11/24/21 10:53	12/03/21 15:23	1
1,1-Dichloropropene	ND	H	33	2.8	ug/Kg	☼	11/24/21 10:53	12/03/21 15:23	1
1,2,3-Trichlorobenzene	ND	H	33	4.1	ug/Kg	☼	11/24/21 10:53	12/03/21 15:23	1
1,2,3-Trichloropropane	ND	H	33	3.1	ug/Kg	☼	11/24/21 10:53	12/03/21 15:23	1
1,2,4-Trichlorobenzene	ND	H	33	2.2	ug/Kg	☼	11/24/21 10:53	12/03/21 15:23	1
1,2,4-Trimethylbenzene	ND	H	33	2.3	ug/Kg	☼	11/24/21 10:53	12/03/21 15:23	1
1,2-Dibromo-3-Chloropropane	ND	H	66	4.1	ug/Kg	☼	11/24/21 10:53	12/03/21 15:23	1
1,2-Dichlorobenzene	ND	H	33	1.4	ug/Kg	☼	11/24/21 10:53	12/03/21 15:23	1
1,2-Dichloropropane	ND	H	33	3.1	ug/Kg	☼	11/24/21 10:53	12/03/21 15:23	1
1,3,5-Trimethylbenzene	ND	H	33	2.3	ug/Kg	☼	11/24/21 10:53	12/03/21 15:23	1
1,3-Dichlorobenzene	ND	H	33	2.2	ug/Kg	☼	11/24/21 10:53	12/03/21 15:23	1
1,3-Dichloropropane	ND	H	33	1.5	ug/Kg	☼	11/24/21 10:53	12/03/21 15:23	1
1,4-Dichlorobenzene	ND	H	33	1.4	ug/Kg	☼	11/24/21 10:53	12/03/21 15:23	1
2,2-Dichloropropane	ND	H	33	2.8	ug/Kg	☼	11/24/21 10:53	12/03/21 15:23	1
2-Butanone (MEK)	ND	H	66	17	ug/Kg	☼	11/24/21 10:53	12/03/21 15:23	1
2-Chlorotoluene	ND	H	33	2.4	ug/Kg	☼	11/24/21 10:53	12/03/21 15:23	1
2-Hexanone	ND	H	66	3.4	ug/Kg	☼	11/24/21 10:53	12/03/21 15:23	1
4-Chlorotoluene	ND	H	33	1.8	ug/Kg	☼	11/24/21 10:53	12/03/21 15:23	1
4-Methyl-2-pentanone (MIBK)	ND	H	66	2.0	ug/Kg	☼	11/24/21 10:53	12/03/21 15:23	1
p-Isopropyltoluene	4.7	J H	33	1.0	ug/Kg	☼	11/24/21 10:53	12/03/21 15:23	1
Acetone	ND	H	330	33	ug/Kg	☼	11/24/21 10:53	12/03/21 15:23	1
Benzene	ND	H	33	2.2	ug/Kg	☼	11/24/21 10:53	12/03/21 15:23	1
Bromoform	ND	H	33	7.2	ug/Kg	☼	11/24/21 10:53	12/03/21 15:23	1
Bromobenzene	ND	H	33	3.7	ug/Kg	☼	11/24/21 10:53	12/03/21 15:23	1
Carbon disulfide	ND	H	66	2.3	ug/Kg	☼	11/24/21 10:53	12/03/21 15:23	1
Carbon tetrachloride	ND	H	33	2.3	ug/Kg	☼	11/24/21 10:53	12/03/21 15:23	1
Chlorobenzene	ND	H	33	2.9	ug/Kg	☼	11/24/21 10:53	12/03/21 15:23	1
Chlorobromomethane	ND	H	33	4.8	ug/Kg	☼	11/24/21 10:53	12/03/21 15:23	1

Eurofins TestAmerica, Sacramento

Client Sample Results

Client: Shannon & Wilson, Inc
 Project/Site: Kodiak DOT&PF PFAS (107471)

Job ID: 320-82154-1

Client Sample ID: ADQ-Site35-04

Lab Sample ID: 320-82154-4

Date Collected: 11/13/21 10:40

Matrix: Solid

Date Received: 11/23/21 16:45

Percent Solids: 89.7

Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloroethane	ND	H	33	4.3	ug/Kg	☼	11/24/21 10:53	12/03/21 15:23	1
Chloromethane	ND	H	33	1.6	ug/Kg	☼	11/24/21 10:53	12/03/21 15:23	1
cis-1,2-Dichloroethene	ND	H	33	5.4	ug/Kg	☼	11/24/21 10:53	12/03/21 15:23	1
cis-1,3-Dichloropropene	ND	H	33	2.7	ug/Kg	☼	11/24/21 10:53	12/03/21 15:23	1
Dibromomethane	ND	H	33	4.3	ug/Kg	☼	11/24/21 10:53	12/03/21 15:23	1
Dichlorodifluoromethane	ND	H	33	6.2	ug/Kg	☼	11/24/21 10:53	12/03/21 15:23	1
Ethylbenzene	ND	H	33	4.3	ug/Kg	☼	11/24/21 10:53	12/03/21 15:23	1
Hexachlorobutadiene	ND	H	33	3.3	ug/Kg	☼	11/24/21 10:53	12/03/21 15:23	1
Isopropylbenzene	ND	H	33	2.3	ug/Kg	☼	11/24/21 10:53	12/03/21 15:23	1
Methyl tert-butyl ether	ND	H	66	2.4	ug/Kg	☼	11/24/21 10:53	12/03/21 15:23	1
Methylene Chloride	ND	H	33	3.5	ug/Kg	☼	11/24/21 10:53	12/03/21 15:23	1
m-Xylene & p-Xylene	ND	H	33	3.3	ug/Kg	☼	11/24/21 10:53	12/03/21 15:23	1
Naphthalene	ND	H	33	1.2	ug/Kg	☼	11/24/21 10:53	12/03/21 15:23	1
n-Butylbenzene	ND	H	33	2.0	ug/Kg	☼	11/24/21 10:53	12/03/21 15:23	1
N-Propylbenzene	ND	H	33	3.1	ug/Kg	☼	11/24/21 10:53	12/03/21 15:23	1
o-Xylene	ND	H	33	3.4	ug/Kg	☼	11/24/21 10:53	12/03/21 15:23	1
sec-Butylbenzene	ND	H	33	1.6	ug/Kg	☼	11/24/21 10:53	12/03/21 15:23	1
Styrene	ND	H	33	0.72	ug/Kg	☼	11/24/21 10:53	12/03/21 15:23	1
tert-Butylbenzene	ND	H	33	2.7	ug/Kg	☼	11/24/21 10:53	12/03/21 15:23	1
Tetrachloroethene	ND	H	33	2.8	ug/Kg	☼	11/24/21 10:53	12/03/21 15:23	1
Toluene	ND	H	33	3.0	ug/Kg	☼	11/24/21 10:53	12/03/21 15:23	1
trans-1,2-Dichloroethene	ND	H	33	4.1	ug/Kg	☼	11/24/21 10:53	12/03/21 15:23	1
trans-1,3-Dichloropropene	ND	H	33	1.8	ug/Kg	☼	11/24/21 10:53	12/03/21 15:23	1
Trichlorofluoromethane	ND	H	33	7.9	ug/Kg	☼	11/24/21 10:53	12/03/21 15:23	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	113		52 - 126	11/24/21 10:53	12/03/21 15:23	1
4-Bromofluorobenzene (Surr)	107		67 - 135	11/24/21 10:53	12/03/21 15:23	1
Dibromofluoromethane (Surr)	106		61 - 123	11/24/21 10:53	12/03/21 15:23	1
Toluene-d8 (Surr)	113		65 - 131	11/24/21 10:53	12/03/21 15:23	1

Method: AK101 - Alaska - Gasoline Range Organics (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
C6-C10 AK	0.95	J	3.3	0.66	mg/Kg	☼	11/24/21 10:53	12/03/21 15:23	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	107		60 - 120	11/24/21 10:53	12/03/21 15:23	1
Trifluorotoluene (Surr)	85		60 - 120	11/24/21 10:53	12/03/21 15:23	1

Method: 8011 - EDB, DBCP, and 1,2,3-TCP (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ethylene Dibromide	ND	H	0.28	0.042	ug/Kg	☼	12/03/21 13:26	12/04/21 01:31	1
1,2,3-Trichloropropane	ND	H	0.28	0.15	ug/Kg	☼	12/03/21 13:26	12/04/21 01:31	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dibromopropane	120		55 - 130	12/03/21 13:26	12/04/21 01:31	1

Method: AK102 - DRO

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
DRO (nC10-<nC25)	1.9	J B	2.2	0.54	mg/Kg	☼	11/24/21 09:17	12/11/21 17:20	1

Eurofins TestAmerica, Sacramento

Client Sample Results

Client: Shannon & Wilson, Inc
 Project/Site: Kodiak DOT&PF PFAS (107471)

Job ID: 320-82154-1

Client Sample ID: ADQ-Site35-04

Lab Sample ID: 320-82154-4

Date Collected: 11/13/21 10:40

Matrix: Solid

Date Received: 11/23/21 16:45

Percent Solids: 89.7

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
<i>o</i> -Terphenyl (Surr)	61		60 - 120	11/24/21 09:17	12/11/21 17:20	1
<i>n</i> -Triacontane-d62	77		60 - 120	11/24/21 09:17	12/11/21 17:20	1

Method: EPA 537(Mod) - PFAS for QSM 5.3, Table B-15

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorohexanoic acid (PFHxA)	ND		0.21	0.032	ug/Kg	☆	11/24/21 18:30	11/29/21 05:33	1
Perfluoroheptanoic acid (PFHpA)	ND		0.21	0.039	ug/Kg	☆	11/24/21 18:30	11/29/21 05:33	1
Perfluorooctanoic acid (PFOA)	ND		0.21	0.055	ug/Kg	☆	11/24/21 18:30	11/29/21 05:33	1
Perfluorononanoic acid (PFNA)	ND		0.21	0.023	ug/Kg	☆	11/24/21 18:30	11/29/21 05:33	1
Perfluorodecanoic acid (PFDA)	ND		0.21	0.050	ug/Kg	☆	11/24/21 18:30	11/29/21 05:33	1
Perfluoroundecanoic acid (PFUnA)	ND		0.21	0.044	ug/Kg	☆	11/24/21 18:30	11/29/21 05:33	1
Perfluorododecanoic acid (PFDoA)	ND		0.21	0.031	ug/Kg	☆	11/24/21 18:30	11/29/21 05:33	1
Perfluorotridecanoic acid (PFTrDA)	ND		0.21	0.022	ug/Kg	☆	11/24/21 18:30	11/29/21 05:33	1
Perfluorotetradecanoic acid (PFTeA)	ND		0.21	0.038	ug/Kg	☆	11/24/21 18:30	11/29/21 05:33	1
Perfluorobutanesulfonic acid (PFBS)	ND		0.21	0.039	ug/Kg	☆	11/24/21 18:30	11/29/21 05:33	1
Perfluorohexanesulfonic acid (PFHxS)	ND		0.21	0.030	ug/Kg	☆	11/24/21 18:30	11/29/21 05:33	1
Perfluorooctanesulfonic acid (PFOS)	0.047	J I	0.21	0.045	ug/Kg	☆	11/24/21 18:30	11/29/21 05:33	1
NEtFOSAA	ND		0.21	0.050	ug/Kg	☆	11/24/21 18:30	11/29/21 05:33	1
NMeFOSAA	ND		0.21	0.024	ug/Kg	☆	11/24/21 18:30	11/29/21 05:33	1
HFPO-DA (GenX)	ND		0.21	0.043	ug/Kg	☆	11/24/21 18:30	11/29/21 05:33	1
9CI-PF3ONS	ND		0.21	0.036	ug/Kg	☆	11/24/21 18:30	11/29/21 05:33	1
11CI-PF3OUdS	ND		0.21	0.032	ug/Kg	☆	11/24/21 18:30	11/29/21 05:33	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	ND		0.21	0.040	ug/Kg	☆	11/24/21 18:30	11/29/21 05:33	1

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C2 PFHxA	113		50 - 150	11/24/21 18:30	11/29/21 05:33	1
13C4 PFHpA	113		50 - 150	11/24/21 18:30	11/29/21 05:33	1
13C4 PFOA	123		50 - 150	11/24/21 18:30	11/29/21 05:33	1
13C5 PFNA	130		50 - 150	11/24/21 18:30	11/29/21 05:33	1
13C2 PFDA	118		50 - 150	11/24/21 18:30	11/29/21 05:33	1
13C2 PFUnA	122		50 - 150	11/24/21 18:30	11/29/21 05:33	1
13C2 PFDoA	122		50 - 150	11/24/21 18:30	11/29/21 05:33	1
13C2 PFTeDA	131		50 - 150	11/24/21 18:30	11/29/21 05:33	1
13C3 PFBS	127		50 - 150	11/24/21 18:30	11/29/21 05:33	1
18O2 PFHxS	112		50 - 150	11/24/21 18:30	11/29/21 05:33	1
13C4 PFOS	130		50 - 150	11/24/21 18:30	11/29/21 05:33	1
d3-NMeFOSAA	140		50 - 150	11/24/21 18:30	11/29/21 05:33	1
d5-NEtFOSAA	147		50 - 150	11/24/21 18:30	11/29/21 05:33	1
13C3 HFPO-DA	108		50 - 150	11/24/21 18:30	11/29/21 05:33	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	10.3		0.1	0.1	%			11/24/21 16:05	1
Percent Solids	89.7		0.1	0.1	%			11/24/21 16:05	1

Client Sample Results

Client: Shannon & Wilson, Inc
 Project/Site: Kodiak DOT&PF PFAS (107471)

Job ID: 320-82154-1

Client Sample ID: ADQ-Site35-05

Lab Sample ID: 320-82154-5

Date Collected: 11/13/21 12:23

Matrix: Solid

Date Received: 11/23/21 16:45

Percent Solids: 86.8

Method: 8260C SIM - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,2,2-Tetrachloroethane	ND	H	1.9	0.42	ug/Kg	✱	11/24/21 10:53	11/30/21 13:27	1
1,1,2-Trichloroethane	ND	H	1.9	0.62	ug/Kg	✱	11/24/21 10:53	11/30/21 13:27	1
1,2-Dichloroethane	ND	H	1.9	0.31	ug/Kg	✱	11/24/21 10:53	11/30/21 13:27	1
Bromomethane	ND	H	3.7	1.2	ug/Kg	✱	11/24/21 10:53	11/30/21 13:27	1
Chlorodibromomethane	ND	H	1.9	0.30	ug/Kg	✱	11/24/21 10:53	11/30/21 13:27	1
Chloroform	ND	H	3.7	1.5	ug/Kg	✱	11/24/21 10:53	11/30/21 13:27	1
Dichlorobromomethane	ND	H	1.9	0.24	ug/Kg	✱	11/24/21 10:53	11/30/21 13:27	1
Ethylene Dibromide	ND	H	1.9	0.30	ug/Kg	✱	11/24/21 10:53	11/30/21 13:27	1
Trichloroethene	ND	H	1.9	0.37	ug/Kg	✱	11/24/21 10:53	11/30/21 13:27	1
Vinyl chloride	ND	H	1.9	0.47	ug/Kg	✱	11/24/21 10:53	11/30/21 13:27	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	84		69 - 129				11/24/21 10:53	11/30/21 13:27	1
Dibromofluoromethane (Surr)	117		72 - 132				11/24/21 10:53	11/30/21 13:27	1
1,2-Dichloroethane-d4 (Surr)	116		72 - 132				11/24/21 10:53	11/30/21 13:27	1
Toluene-d8 (Surr)	110		78 - 138				11/24/21 10:53	11/30/21 13:27	1

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND	H	37	4.4	ug/Kg	✱	11/24/21 10:53	12/03/21 15:46	1
1,1,1-Trichloroethane	ND	H	37	2.8	ug/Kg	✱	11/24/21 10:53	12/03/21 15:46	1
1,1-Dichloroethane	ND	H	37	2.0	ug/Kg	✱	11/24/21 10:53	12/03/21 15:46	1
1,1-Dichloroethene	ND	H	37	3.5	ug/Kg	✱	11/24/21 10:53	12/03/21 15:46	1
1,1-Dichloropropene	ND	H	37	3.2	ug/Kg	✱	11/24/21 10:53	12/03/21 15:46	1
1,2,3-Trichlorobenzene	ND	H	37	4.6	ug/Kg	✱	11/24/21 10:53	12/03/21 15:46	1
1,2,3-Trichloropropane	ND	H	37	3.5	ug/Kg	✱	11/24/21 10:53	12/03/21 15:46	1
1,2,4-Trichlorobenzene	ND	H	37	2.5	ug/Kg	✱	11/24/21 10:53	12/03/21 15:46	1
1,2,4-Trimethylbenzene	ND	H	37	2.6	ug/Kg	✱	11/24/21 10:53	12/03/21 15:46	1
1,2-Dibromo-3-Chloropropane	ND	H	75	4.7	ug/Kg	✱	11/24/21 10:53	12/03/21 15:46	1
1,2-Dichlorobenzene	ND	H	37	1.6	ug/Kg	✱	11/24/21 10:53	12/03/21 15:46	1
1,2-Dichloropropane	ND	H	37	3.5	ug/Kg	✱	11/24/21 10:53	12/03/21 15:46	1
1,3,5-Trimethylbenzene	ND	H	37	2.6	ug/Kg	✱	11/24/21 10:53	12/03/21 15:46	1
1,3-Dichlorobenzene	ND	H	37	2.5	ug/Kg	✱	11/24/21 10:53	12/03/21 15:46	1
1,3-Dichloropropane	ND	H	37	1.7	ug/Kg	✱	11/24/21 10:53	12/03/21 15:46	1
1,4-Dichlorobenzene	ND	H	37	1.6	ug/Kg	✱	11/24/21 10:53	12/03/21 15:46	1
2,2-Dichloropropane	ND	H	37	3.2	ug/Kg	✱	11/24/21 10:53	12/03/21 15:46	1
2-Butanone (MEK)	ND	H	75	19	ug/Kg	✱	11/24/21 10:53	12/03/21 15:46	1
2-Chlorotoluene	ND	H	37	2.7	ug/Kg	✱	11/24/21 10:53	12/03/21 15:46	1
2-Hexanone	ND	H	75	3.9	ug/Kg	✱	11/24/21 10:53	12/03/21 15:46	1
4-Chlorotoluene	ND	H	37	2.1	ug/Kg	✱	11/24/21 10:53	12/03/21 15:46	1
4-Methyl-2-pentanone (MIBK)	ND	H	75	2.3	ug/Kg	✱	11/24/21 10:53	12/03/21 15:46	1
p-Isopropyltoluene	9.7	J H	37	1.2	ug/Kg	✱	11/24/21 10:53	12/03/21 15:46	1
Acetone	62	J H	370	37	ug/Kg	✱	11/24/21 10:53	12/03/21 15:46	1
Benzene	ND	H	37	2.5	ug/Kg	✱	11/24/21 10:53	12/03/21 15:46	1
Bromoform	ND	H	37	8.2	ug/Kg	✱	11/24/21 10:53	12/03/21 15:46	1
Bromobenzene	ND	H	37	4.2	ug/Kg	✱	11/24/21 10:53	12/03/21 15:46	1
Carbon disulfide	ND	H	75	2.6	ug/Kg	✱	11/24/21 10:53	12/03/21 15:46	1
Carbon tetrachloride	ND	H	37	2.6	ug/Kg	✱	11/24/21 10:53	12/03/21 15:46	1
Chlorobenzene	ND	H	37	3.3	ug/Kg	✱	11/24/21 10:53	12/03/21 15:46	1
Chlorobromomethane	ND	H	37	5.5	ug/Kg	✱	11/24/21 10:53	12/03/21 15:46	1

Eurofins TestAmerica, Sacramento

Client Sample Results

Client: Shannon & Wilson, Inc
 Project/Site: Kodiak DOT&PF PFAS (107471)

Job ID: 320-82154-1

Client Sample ID: ADQ-Site35-05

Lab Sample ID: 320-82154-5

Date Collected: 11/13/21 12:23

Matrix: Solid

Date Received: 11/23/21 16:45

Percent Solids: 86.8

Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloroethane	ND	H	37	4.9	ug/Kg	☼	11/24/21 10:53	12/03/21 15:46	1
Chloromethane	ND	H	37	1.9	ug/Kg	☼	11/24/21 10:53	12/03/21 15:46	1
cis-1,2-Dichloroethene	ND	H	37	6.1	ug/Kg	☼	11/24/21 10:53	12/03/21 15:46	1
cis-1,3-Dichloropropene	ND	H	37	3.1	ug/Kg	☼	11/24/21 10:53	12/03/21 15:46	1
Dibromomethane	ND	H	37	4.9	ug/Kg	☼	11/24/21 10:53	12/03/21 15:46	1
Dichlorodifluoromethane	ND	H	37	7.0	ug/Kg	☼	11/24/21 10:53	12/03/21 15:46	1
Ethylbenzene	ND	H	37	4.9	ug/Kg	☼	11/24/21 10:53	12/03/21 15:46	1
Hexachlorobutadiene	ND	H	37	3.8	ug/Kg	☼	11/24/21 10:53	12/03/21 15:46	1
Isopropylbenzene	ND	H	37	2.6	ug/Kg	☼	11/24/21 10:53	12/03/21 15:46	1
Methyl tert-butyl ether	ND	H	75	2.7	ug/Kg	☼	11/24/21 10:53	12/03/21 15:46	1
Methylene Chloride	ND	H	37	4.0	ug/Kg	☼	11/24/21 10:53	12/03/21 15:46	1
m-Xylene & p-Xylene	ND	H	37	3.7	ug/Kg	☼	11/24/21 10:53	12/03/21 15:46	1
Naphthalene	ND	H	37	1.3	ug/Kg	☼	11/24/21 10:53	12/03/21 15:46	1
n-Butylbenzene	ND	H	37	2.3	ug/Kg	☼	11/24/21 10:53	12/03/21 15:46	1
N-Propylbenzene	ND	H	37	3.5	ug/Kg	☼	11/24/21 10:53	12/03/21 15:46	1
o-Xylene	ND	H	37	3.9	ug/Kg	☼	11/24/21 10:53	12/03/21 15:46	1
sec-Butylbenzene	ND	H	37	1.8	ug/Kg	☼	11/24/21 10:53	12/03/21 15:46	1
Styrene	ND	H	37	0.82	ug/Kg	☼	11/24/21 10:53	12/03/21 15:46	1
tert-Butylbenzene	ND	H	37	3.1	ug/Kg	☼	11/24/21 10:53	12/03/21 15:46	1
Tetrachloroethene	ND	H	37	3.1	ug/Kg	☼	11/24/21 10:53	12/03/21 15:46	1
Toluene	5.9	J H	37	3.4	ug/Kg	☼	11/24/21 10:53	12/03/21 15:46	1
trans-1,2-Dichloroethene	ND	H	37	4.6	ug/Kg	☼	11/24/21 10:53	12/03/21 15:46	1
trans-1,3-Dichloropropene	ND	H	37	2.1	ug/Kg	☼	11/24/21 10:53	12/03/21 15:46	1
Trichlorofluoromethane	ND	H	37	9.0	ug/Kg	☼	11/24/21 10:53	12/03/21 15:46	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	110		52 - 126	11/24/21 10:53	12/03/21 15:46	1
4-Bromofluorobenzene (Surr)	101		67 - 135	11/24/21 10:53	12/03/21 15:46	1
Dibromofluoromethane (Surr)	102		61 - 123	11/24/21 10:53	12/03/21 15:46	1
Toluene-d8 (Surr)	112		65 - 131	11/24/21 10:53	12/03/21 15:46	1

Method: AK101 - Alaska - Gasoline Range Organics (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
C6-C10 AK	ND		3.7	0.75	mg/Kg	☼	11/24/21 10:53	12/03/21 15:46	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	101		60 - 120	11/24/21 10:53	12/03/21 15:46	1
Trifluorotoluene (Surr)	82		60 - 120	11/24/21 10:53	12/03/21 15:46	1

Method: 8011 - EDB, DBCP, and 1,2,3-TCP (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ethylene Dibromide	0.072	J H	0.29	0.044	ug/Kg	☼	12/03/21 13:26	12/04/21 01:55	1
1,2,3-Trichloropropane	0.30	H	0.29	0.16	ug/Kg	☼	12/03/21 13:26	12/04/21 01:55	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dibromopropane	114		55 - 130	12/03/21 13:26	12/04/21 01:55	1

Method: AK102 - DRO

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
DRO (nC10-<nC25)	11	B	2.3	0.57	mg/Kg	☼	11/24/21 09:17	12/11/21 17:43	1

Eurofins TestAmerica, Sacramento

Client Sample Results

Client: Shannon & Wilson, Inc
 Project/Site: Kodiak DOT&PF PFAS (107471)

Job ID: 320-82154-1

Client Sample ID: ADQ-Site35-05

Lab Sample ID: 320-82154-5

Date Collected: 11/13/21 12:23

Matrix: Solid

Date Received: 11/23/21 16:45

Percent Solids: 86.8

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
<i>o</i> -Terphenyl (Surr)	65		60 - 120	11/24/21 09:17	12/11/21 17:43	1
<i>n</i> -Triacontane-d62	88		60 - 120	11/24/21 09:17	12/11/21 17:43	1

Method: EPA 537(Mod) - PFAS for QSM 5.3, Table B-15

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorohexanoic acid (PFHxA)	ND		0.22	0.034	ug/Kg	☆	11/24/21 18:30	11/29/21 05:43	1
Perfluoroheptanoic acid (PFHpA)	ND		0.22	0.042	ug/Kg	☆	11/24/21 18:30	11/29/21 05:43	1
Perfluorooctanoic acid (PFOA)	ND		0.22	0.059	ug/Kg	☆	11/24/21 18:30	11/29/21 05:43	1
Perfluorononanoic acid (PFNA)	0.052	J	0.22	0.024	ug/Kg	☆	11/24/21 18:30	11/29/21 05:43	1
Perfluorodecanoic acid (PFDA)	ND		0.22	0.053	ug/Kg	☆	11/24/21 18:30	11/29/21 05:43	1
Perfluoroundecanoic acid (PFUnA)	ND		0.22	0.047	ug/Kg	☆	11/24/21 18:30	11/29/21 05:43	1
Perfluorododecanoic acid (PFDoA)	ND		0.22	0.033	ug/Kg	☆	11/24/21 18:30	11/29/21 05:43	1
Perfluorotridecanoic acid (PFTrDA)	ND		0.22	0.023	ug/Kg	☆	11/24/21 18:30	11/29/21 05:43	1
Perfluorotetradecanoic acid (PFTeA)	ND		0.22	0.041	ug/Kg	☆	11/24/21 18:30	11/29/21 05:43	1
Perfluorobutanesulfonic acid (PFBS)	ND		0.22	0.042	ug/Kg	☆	11/24/21 18:30	11/29/21 05:43	1
Perfluorohexanesulfonic acid (PFHxS)	ND		0.22	0.032	ug/Kg	☆	11/24/21 18:30	11/29/21 05:43	1
Perfluorooctanesulfonic acid (PFOS)	0.21	J I	0.22	0.048	ug/Kg	☆	11/24/21 18:30	11/29/21 05:43	1
NEtFOSAA	ND		0.22	0.053	ug/Kg	☆	11/24/21 18:30	11/29/21 05:43	1
NMeFOSAA	ND		0.22	0.026	ug/Kg	☆	11/24/21 18:30	11/29/21 05:43	1
HFPO-DA (GenX)	ND		0.22	0.046	ug/Kg	☆	11/24/21 18:30	11/29/21 05:43	1
9Cl-PF3ONS	ND		0.22	0.039	ug/Kg	☆	11/24/21 18:30	11/29/21 05:43	1
11Cl-PF3OUdS	ND		0.22	0.034	ug/Kg	☆	11/24/21 18:30	11/29/21 05:43	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	ND		0.22	0.043	ug/Kg	☆	11/24/21 18:30	11/29/21 05:43	1

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C2 PFHxA	99		50 - 150	11/24/21 18:30	11/29/21 05:43	1
13C4 PFHpA	115		50 - 150	11/24/21 18:30	11/29/21 05:43	1
13C4 PFOA	110		50 - 150	11/24/21 18:30	11/29/21 05:43	1
13C5 PFNA	120		50 - 150	11/24/21 18:30	11/29/21 05:43	1
13C2 PFDA	118		50 - 150	11/24/21 18:30	11/29/21 05:43	1
13C2 PFUnA	116		50 - 150	11/24/21 18:30	11/29/21 05:43	1
13C2 PFDoA	105		50 - 150	11/24/21 18:30	11/29/21 05:43	1
13C2 PFTeDA	98		50 - 150	11/24/21 18:30	11/29/21 05:43	1
13C3 PFBS	126		50 - 150	11/24/21 18:30	11/29/21 05:43	1
18O2 PFHxS	111		50 - 150	11/24/21 18:30	11/29/21 05:43	1
13C4 PFOS	112		50 - 150	11/24/21 18:30	11/29/21 05:43	1
d3-NMeFOSAA	130		50 - 150	11/24/21 18:30	11/29/21 05:43	1
d5-NEtFOSAA	136		50 - 150	11/24/21 18:30	11/29/21 05:43	1
13C3 HFPO-DA	98		50 - 150	11/24/21 18:30	11/29/21 05:43	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	13.2		0.1	0.1	%			11/24/21 16:05	1
Percent Solids	86.8		0.1	0.1	%			11/24/21 16:05	1

Client Sample Results

Client: Shannon & Wilson, Inc
 Project/Site: Kodiak DOT&PF PFAS (107471)

Job ID: 320-82154-1

Client Sample ID: ADQ-Site35-06

Lab Sample ID: 320-82154-6

Date Collected: 11/13/21 12:04

Matrix: Solid

Date Received: 11/23/21 16:45

Percent Solids: 81.4

Method: 8260C SIM - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,2,2-Tetrachloroethane	ND	H	2.3	0.53	ug/Kg	☼	11/24/21 10:53	11/30/21 13:51	1
1,1,2-Trichloroethane	ND	H	2.3	0.78	ug/Kg	☼	11/24/21 10:53	11/30/21 13:51	1
1,2-Dichloroethane	ND	H	2.3	0.39	ug/Kg	☼	11/24/21 10:53	11/30/21 13:51	1
Bromomethane	ND	H	4.7	1.5	ug/Kg	☼	11/24/21 10:53	11/30/21 13:51	1
Chlorodibromomethane	ND	H	2.3	0.37	ug/Kg	☼	11/24/21 10:53	11/30/21 13:51	1
Chloroform	ND	H	4.7	1.9	ug/Kg	☼	11/24/21 10:53	11/30/21 13:51	1
Dichlorobromomethane	ND	H	2.3	0.31	ug/Kg	☼	11/24/21 10:53	11/30/21 13:51	1
Ethylene Dibromide	ND	H	2.3	0.38	ug/Kg	☼	11/24/21 10:53	11/30/21 13:51	1
Trichloroethene	ND	H	2.3	0.46	ug/Kg	☼	11/24/21 10:53	11/30/21 13:51	1
Vinyl chloride	ND	H	2.3	0.59	ug/Kg	☼	11/24/21 10:53	11/30/21 13:51	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	84		69 - 129	11/24/21 10:53	11/30/21 13:51	1
Dibromofluoromethane (Surr)	121		72 - 132	11/24/21 10:53	11/30/21 13:51	1
1,2-Dichloroethane-d4 (Surr)	115		72 - 132	11/24/21 10:53	11/30/21 13:51	1
Toluene-d8 (Surr)	109		78 - 138	11/24/21 10:53	11/30/21 13:51	1

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND	H	47	5.5	ug/Kg	☼	11/24/21 10:53	12/03/21 16:09	1
1,1,1-Trichloroethane	ND	H	47	3.5	ug/Kg	☼	11/24/21 10:53	12/03/21 16:09	1
1,1-Dichloroethane	ND	H	47	2.5	ug/Kg	☼	11/24/21 10:53	12/03/21 16:09	1
1,1-Dichloroethene	ND	H	47	4.4	ug/Kg	☼	11/24/21 10:53	12/03/21 16:09	1
1,1-Dichloropropene	ND	H	47	4.0	ug/Kg	☼	11/24/21 10:53	12/03/21 16:09	1
1,2,3-Trichlorobenzene	ND	H	47	5.8	ug/Kg	☼	11/24/21 10:53	12/03/21 16:09	1
1,2,3-Trichloropropane	ND	H	47	4.4	ug/Kg	☼	11/24/21 10:53	12/03/21 16:09	1
1,2,4-Trichlorobenzene	ND	H	47	3.2	ug/Kg	☼	11/24/21 10:53	12/03/21 16:09	1
1,2,4-Trimethylbenzene	ND	H	47	3.3	ug/Kg	☼	11/24/21 10:53	12/03/21 16:09	1
1,2-Dibromo-3-Chloropropane	ND	H	94	5.9	ug/Kg	☼	11/24/21 10:53	12/03/21 16:09	1
1,2-Dichlorobenzene	ND	H	47	2.1	ug/Kg	☼	11/24/21 10:53	12/03/21 16:09	1
1,2-Dichloropropane	ND	H	47	4.4	ug/Kg	☼	11/24/21 10:53	12/03/21 16:09	1
1,3,5-Trimethylbenzene	ND	H	47	3.3	ug/Kg	☼	11/24/21 10:53	12/03/21 16:09	1
1,3-Dichlorobenzene	ND	H	47	3.1	ug/Kg	☼	11/24/21 10:53	12/03/21 16:09	1
1,3-Dichloropropane	ND	H	47	2.2	ug/Kg	☼	11/24/21 10:53	12/03/21 16:09	1
1,4-Dichlorobenzene	ND	H	47	2.1	ug/Kg	☼	11/24/21 10:53	12/03/21 16:09	1
2,2-Dichloropropane	ND	H	47	4.0	ug/Kg	☼	11/24/21 10:53	12/03/21 16:09	1
2-Butanone (MEK)	ND	H	94	24	ug/Kg	☼	11/24/21 10:53	12/03/21 16:09	1
2-Chlorotoluene	ND	H	47	3.4	ug/Kg	☼	11/24/21 10:53	12/03/21 16:09	1
2-Hexanone	ND	H	94	4.9	ug/Kg	☼	11/24/21 10:53	12/03/21 16:09	1
4-Chlorotoluene	ND	H	47	2.6	ug/Kg	☼	11/24/21 10:53	12/03/21 16:09	1
4-Methyl-2-pentanone (MIBK)	ND	H	94	2.9	ug/Kg	☼	11/24/21 10:53	12/03/21 16:09	1
p-Isopropyltoluene	ND	H	47	1.5	ug/Kg	☼	11/24/21 10:53	12/03/21 16:09	1
Acetone	ND	H	470	47	ug/Kg	☼	11/24/21 10:53	12/03/21 16:09	1
Benzene	ND	H	47	3.1	ug/Kg	☼	11/24/21 10:53	12/03/21 16:09	1
Bromoform	ND	H	47	10	ug/Kg	☼	11/24/21 10:53	12/03/21 16:09	1
Bromobenzene	ND	H	47	5.2	ug/Kg	☼	11/24/21 10:53	12/03/21 16:09	1
Carbon disulfide	ND	H	94	3.3	ug/Kg	☼	11/24/21 10:53	12/03/21 16:09	1
Carbon tetrachloride	ND	H	47	3.3	ug/Kg	☼	11/24/21 10:53	12/03/21 16:09	1
Chlorobenzene	ND	H	47	4.1	ug/Kg	☼	11/24/21 10:53	12/03/21 16:09	1
Chlorobromomethane	ND	H	47	6.8	ug/Kg	☼	11/24/21 10:53	12/03/21 16:09	1

Eurofins TestAmerica, Sacramento

Client Sample Results

Client: Shannon & Wilson, Inc
Project/Site: Kodiak DOT&PF PFAS (107471)

Job ID: 320-82154-1

Client Sample ID: ADQ-Site35-06

Lab Sample ID: 320-82154-6

Date Collected: 11/13/21 12:04

Matrix: Solid

Date Received: 11/23/21 16:45

Percent Solids: 81.4

Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloroethane	ND	H	47	6.2	ug/Kg	☼	11/24/21 10:53	12/03/21 16:09	1
Chloromethane	ND	H	47	2.3	ug/Kg	☼	11/24/21 10:53	12/03/21 16:09	1
cis-1,2-Dichloroethene	ND	H	47	7.7	ug/Kg	☼	11/24/21 10:53	12/03/21 16:09	1
cis-1,3-Dichloropropene	ND	H	47	3.8	ug/Kg	☼	11/24/21 10:53	12/03/21 16:09	1
Dibromomethane	ND	H	47	6.1	ug/Kg	☼	11/24/21 10:53	12/03/21 16:09	1
Dichlorodifluoromethane	ND	H	47	8.8	ug/Kg	☼	11/24/21 10:53	12/03/21 16:09	1
Ethylbenzene	ND	H	47	6.2	ug/Kg	☼	11/24/21 10:53	12/03/21 16:09	1
Hexachlorobutadiene	ND	H	47	4.8	ug/Kg	☼	11/24/21 10:53	12/03/21 16:09	1
Isopropylbenzene	ND	H	47	3.3	ug/Kg	☼	11/24/21 10:53	12/03/21 16:09	1
Methyl tert-butyl ether	ND	H	94	3.4	ug/Kg	☼	11/24/21 10:53	12/03/21 16:09	1
Methylene Chloride	ND	H	47	5.1	ug/Kg	☼	11/24/21 10:53	12/03/21 16:09	1
m-Xylene & p-Xylene	ND	H	47	4.7	ug/Kg	☼	11/24/21 10:53	12/03/21 16:09	1
Naphthalene	ND	H	47	1.7	ug/Kg	☼	11/24/21 10:53	12/03/21 16:09	1
n-Butylbenzene	ND	H	47	2.9	ug/Kg	☼	11/24/21 10:53	12/03/21 16:09	1
N-Propylbenzene	ND	H	47	4.4	ug/Kg	☼	11/24/21 10:53	12/03/21 16:09	1
o-Xylene	ND	H	47	4.9	ug/Kg	☼	11/24/21 10:53	12/03/21 16:09	1
sec-Butylbenzene	ND	H	47	2.2	ug/Kg	☼	11/24/21 10:53	12/03/21 16:09	1
Styrene	ND	H	47	1.0	ug/Kg	☼	11/24/21 10:53	12/03/21 16:09	1
tert-Butylbenzene	ND	H	47	3.8	ug/Kg	☼	11/24/21 10:53	12/03/21 16:09	1
Tetrachloroethene	ND	H	47	3.9	ug/Kg	☼	11/24/21 10:53	12/03/21 16:09	1
Toluene	ND	H	47	4.2	ug/Kg	☼	11/24/21 10:53	12/03/21 16:09	1
trans-1,2-Dichloroethene	ND	H	47	5.8	ug/Kg	☼	11/24/21 10:53	12/03/21 16:09	1
trans-1,3-Dichloropropene	ND	H	47	2.6	ug/Kg	☼	11/24/21 10:53	12/03/21 16:09	1
Trichlorofluoromethane	ND	H	47	11	ug/Kg	☼	11/24/21 10:53	12/03/21 16:09	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	112		52 - 126	11/24/21 10:53	12/03/21 16:09	1
4-Bromofluorobenzene (Surr)	104		67 - 135	11/24/21 10:53	12/03/21 16:09	1
Dibromofluoromethane (Surr)	104		61 - 123	11/24/21 10:53	12/03/21 16:09	1
Toluene-d8 (Surr)	111		65 - 131	11/24/21 10:53	12/03/21 16:09	1

Method: AK101 - Alaska - Gasoline Range Organics (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
C6-C10 AK	ND		4.7	0.94	mg/Kg	☼	11/24/21 10:53	12/03/21 16:09	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	104		60 - 120	11/24/21 10:53	12/03/21 16:09	1
Trifluorotoluene (Surr)	76		60 - 120	11/24/21 10:53	12/03/21 16:09	1

Method: 8011 - EDB, DBCP, and 1,2,3-TCP (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ethylene Dibromide	ND	H	0.31	0.047	ug/Kg	☼	12/03/21 13:26	12/07/21 09:18	1
1,2,3-Trichloropropane	ND	H	0.31	0.17	ug/Kg	☼	12/03/21 13:26	12/07/21 09:18	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dibromopropane	167	S1+	55 - 130	12/03/21 13:26	12/07/21 09:18	1

Method: AK102 - DRO

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
DRO (nC10-<nC25)	2.5	B	2.4	0.60	mg/Kg	☼	11/24/21 09:17	12/11/21 18:07	1

Eurofins TestAmerica, Sacramento

Client Sample Results

Client: Shannon & Wilson, Inc
 Project/Site: Kodiak DOT&PF PFAS (107471)

Job ID: 320-82154-1

Client Sample ID: ADQ-Site35-06

Lab Sample ID: 320-82154-6

Date Collected: 11/13/21 12:04

Matrix: Solid

Date Received: 11/23/21 16:45

Percent Solids: 81.4

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
<i>o</i> -Terphenyl (Surr)	60		60 - 120	11/24/21 09:17	12/11/21 18:07	1
<i>n</i> -Triacontane-d62	76		60 - 120	11/24/21 09:17	12/11/21 18:07	1

Method: EPA 537(Mod) - PFAS for QSM 5.3, Table B-15

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorohexanoic acid (PFHxA)	0.19	J	0.23	0.036	ug/Kg	☼	11/24/21 18:30	11/29/21 05:54	1
Perfluoroheptanoic acid (PFHpA)	0.16	J	0.23	0.044	ug/Kg	☼	11/24/21 18:30	11/29/21 05:54	1
Perfluorooctanoic acid (PFOA)	0.81		0.23	0.062	ug/Kg	☼	11/24/21 18:30	11/29/21 05:54	1
Perfluorononanoic acid (PFNA)	0.13	J	0.23	0.026	ug/Kg	☼	11/24/21 18:30	11/29/21 05:54	1
Perfluorodecanoic acid (PFDA)	ND		0.23	0.056	ug/Kg	☼	11/24/21 18:30	11/29/21 05:54	1
Perfluoroundecanoic acid (PFUnA)	ND		0.23	0.049	ug/Kg	☼	11/24/21 18:30	11/29/21 05:54	1
Perfluorododecanoic acid (PFDoA)	ND		0.23	0.035	ug/Kg	☼	11/24/21 18:30	11/29/21 05:54	1
Perfluorotridecanoic acid (PFTTrDA)	ND		0.23	0.024	ug/Kg	☼	11/24/21 18:30	11/29/21 05:54	1
Perfluorotetradecanoic acid (PFTeA)	ND		0.23	0.043	ug/Kg	☼	11/24/21 18:30	11/29/21 05:54	1
Perfluorobutanesulfonic acid (PFBS)	ND		0.23	0.044	ug/Kg	☼	11/24/21 18:30	11/29/21 05:54	1
Perfluorohexanesulfonic acid (PFHxS)	0.048	J	0.23	0.034	ug/Kg	☼	11/24/21 18:30	11/29/21 05:54	1
Perfluorooctanesulfonic acid (PFOS)	1.4		0.23	0.050	ug/Kg	☼	11/24/21 18:30	11/29/21 05:54	1
NEtFOSAA	ND		0.23	0.056	ug/Kg	☼	11/24/21 18:30	11/29/21 05:54	1
NMeFOSAA	ND		0.23	0.027	ug/Kg	☼	11/24/21 18:30	11/29/21 05:54	1
HFPO-DA (GenX)	ND		0.23	0.048	ug/Kg	☼	11/24/21 18:30	11/29/21 05:54	1
9Cl-PF3ONS	ND		0.23	0.041	ug/Kg	☼	11/24/21 18:30	11/29/21 05:54	1
11Cl-PF3OUdS	ND		0.23	0.036	ug/Kg	☼	11/24/21 18:30	11/29/21 05:54	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	ND		0.23	0.045	ug/Kg	☼	11/24/21 18:30	11/29/21 05:54	1

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C2 PFHxA	87		50 - 150	11/24/21 18:30	11/29/21 05:54	1
13C4 PFHpA	91		50 - 150	11/24/21 18:30	11/29/21 05:54	1
13C4 PFOA	95		50 - 150	11/24/21 18:30	11/29/21 05:54	1
13C5 PFNA	99		50 - 150	11/24/21 18:30	11/29/21 05:54	1
13C2 PFDA	99		50 - 150	11/24/21 18:30	11/29/21 05:54	1
13C2 PFUnA	102		50 - 150	11/24/21 18:30	11/29/21 05:54	1
13C2 PFDoA	98		50 - 150	11/24/21 18:30	11/29/21 05:54	1
13C2 PFTeDA	97		50 - 150	11/24/21 18:30	11/29/21 05:54	1
13C3 PFBS	109		50 - 150	11/24/21 18:30	11/29/21 05:54	1
18O2 PFHxS	90		50 - 150	11/24/21 18:30	11/29/21 05:54	1
13C4 PFOS	104		50 - 150	11/24/21 18:30	11/29/21 05:54	1
d3-NMeFOSAA	106		50 - 150	11/24/21 18:30	11/29/21 05:54	1
d5-NEtFOSAA	114		50 - 150	11/24/21 18:30	11/29/21 05:54	1
13C3 HFPO-DA	87		50 - 150	11/24/21 18:30	11/29/21 05:54	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	18.6		0.1	0.1	%			11/24/21 16:05	1
Percent Solids	81.4		0.1	0.1	%			11/24/21 16:05	1

Client Sample Results

Client: Shannon & Wilson, Inc
 Project/Site: Kodiak DOT&PF PFAS (107471)

Job ID: 320-82154-1

Client Sample ID: ADQ-Site35-07

Lab Sample ID: 320-82154-7

Date Collected: 11/13/21 11:50

Matrix: Solid

Date Received: 11/23/21 16:45

Percent Solids: 86.3

Method: 8260C SIM - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,2,2-Tetrachloroethane	ND	H	3.1	0.70	ug/Kg	☼	11/24/21 10:53	11/30/21 14:15	1
1,1,2-Trichloroethane	ND	H	3.1	1.0	ug/Kg	☼	11/24/21 10:53	11/30/21 14:15	1
1,2-Dichloroethane	ND	H	3.1	0.52	ug/Kg	☼	11/24/21 10:53	11/30/21 14:15	1
Bromomethane	ND	H	6.2	2.0	ug/Kg	☼	11/24/21 10:53	11/30/21 14:15	1
Chlorodibromomethane	ND	H	3.1	0.49	ug/Kg	☼	11/24/21 10:53	11/30/21 14:15	1
Chloroform	ND	H	6.2	2.5	ug/Kg	☼	11/24/21 10:53	11/30/21 14:15	1
Dichlorobromomethane	ND	H	3.1	0.41	ug/Kg	☼	11/24/21 10:53	11/30/21 14:15	1
Ethylene Dibromide	ND	H	3.1	0.50	ug/Kg	☼	11/24/21 10:53	11/30/21 14:15	1
Trichloroethene	ND	H	3.1	0.61	ug/Kg	☼	11/24/21 10:53	11/30/21 14:15	1
Vinyl chloride	ND	H	3.1	0.78	ug/Kg	☼	11/24/21 10:53	11/30/21 14:15	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	87		69 - 129	11/24/21 10:53	11/30/21 14:15	1
Dibromofluoromethane (Surr)	121		72 - 132	11/24/21 10:53	11/30/21 14:15	1
1,2-Dichloroethane-d4 (Surr)	121		72 - 132	11/24/21 10:53	11/30/21 14:15	1
Toluene-d8 (Surr)	109		78 - 138	11/24/21 10:53	11/30/21 14:15	1

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND	H	62	7.3	ug/Kg	☼	11/24/21 10:53	12/03/21 16:33	1
1,1,1-Trichloroethane	ND	H	62	4.6	ug/Kg	☼	11/24/21 10:53	12/03/21 16:33	1
1,1-Dichloroethane	ND	H	62	3.3	ug/Kg	☼	11/24/21 10:53	12/03/21 16:33	1
1,1-Dichloroethene	ND	H	62	5.8	ug/Kg	☼	11/24/21 10:53	12/03/21 16:33	1
1,1-Dichloropropene	ND	H	62	5.3	ug/Kg	☼	11/24/21 10:53	12/03/21 16:33	1
1,2,3-Trichlorobenzene	ND	H	62	7.7	ug/Kg	☼	11/24/21 10:53	12/03/21 16:33	1
1,2,3-Trichloropropane	ND	H	62	5.8	ug/Kg	☼	11/24/21 10:53	12/03/21 16:33	1
1,2,4-Trichlorobenzene	ND	H	62	4.2	ug/Kg	☼	11/24/21 10:53	12/03/21 16:33	1
1,2,4-Trimethylbenzene	ND	H	62	4.3	ug/Kg	☼	11/24/21 10:53	12/03/21 16:33	1
1,2-Dibromo-3-Chloropropane	ND	H	120	7.8	ug/Kg	☼	11/24/21 10:53	12/03/21 16:33	1
1,2-Dichlorobenzene	ND	H	62	2.7	ug/Kg	☼	11/24/21 10:53	12/03/21 16:33	1
1,2-Dichloropropane	ND	H	62	5.8	ug/Kg	☼	11/24/21 10:53	12/03/21 16:33	1
1,3,5-Trimethylbenzene	ND	H	62	4.3	ug/Kg	☼	11/24/21 10:53	12/03/21 16:33	1
1,3-Dichlorobenzene	ND	H	62	4.1	ug/Kg	☼	11/24/21 10:53	12/03/21 16:33	1
1,3-Dichloropropane	ND	H	62	2.9	ug/Kg	☼	11/24/21 10:53	12/03/21 16:33	1
1,4-Dichlorobenzene	ND	H	62	2.7	ug/Kg	☼	11/24/21 10:53	12/03/21 16:33	1
2,2-Dichloropropane	ND	H	62	5.3	ug/Kg	☼	11/24/21 10:53	12/03/21 16:33	1
2-Butanone (MEK)	ND	H	120	32	ug/Kg	☼	11/24/21 10:53	12/03/21 16:33	1
2-Chlorotoluene	ND	H	62	4.5	ug/Kg	☼	11/24/21 10:53	12/03/21 16:33	1
2-Hexanone	ND	H	120	6.4	ug/Kg	☼	11/24/21 10:53	12/03/21 16:33	1
4-Chlorotoluene	ND	H	62	3.5	ug/Kg	☼	11/24/21 10:53	12/03/21 16:33	1
4-Methyl-2-pentanone (MIBK)	ND	H	120	3.8	ug/Kg	☼	11/24/21 10:53	12/03/21 16:33	1
p-Isopropyltoluene	ND	H	62	2.0	ug/Kg	☼	11/24/21 10:53	12/03/21 16:33	1
Acetone	75	J H	620	62	ug/Kg	☼	11/24/21 10:53	12/03/21 16:33	1
Benzene	ND	H	62	4.1	ug/Kg	☼	11/24/21 10:53	12/03/21 16:33	1
Bromoform	ND	H	62	14	ug/Kg	☼	11/24/21 10:53	12/03/21 16:33	1
Bromobenzene	ND	H	62	6.9	ug/Kg	☼	11/24/21 10:53	12/03/21 16:33	1
Carbon disulfide	ND	H	120	4.3	ug/Kg	☼	11/24/21 10:53	12/03/21 16:33	1
Carbon tetrachloride	ND	H	62	4.3	ug/Kg	☼	11/24/21 10:53	12/03/21 16:33	1
Chlorobenzene	ND	H	62	5.5	ug/Kg	☼	11/24/21 10:53	12/03/21 16:33	1
Chlorobromomethane	ND	H	62	9.0	ug/Kg	☼	11/24/21 10:53	12/03/21 16:33	1

Eurofins TestAmerica, Sacramento

Client Sample Results

Client: Shannon & Wilson, Inc
 Project/Site: Kodiak DOT&PF PFAS (107471)

Job ID: 320-82154-1

Client Sample ID: ADQ-Site35-07

Lab Sample ID: 320-82154-7

Date Collected: 11/13/21 11:50

Matrix: Solid

Date Received: 11/23/21 16:45

Percent Solids: 86.3

Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloroethane	ND	H	62	8.2	ug/Kg	✱	11/24/21 10:53	12/03/21 16:33	1
Chloromethane	ND	H	62	3.1	ug/Kg	✱	11/24/21 10:53	12/03/21 16:33	1
cis-1,2-Dichloroethene	ND	H	62	10	ug/Kg	✱	11/24/21 10:53	12/03/21 16:33	1
cis-1,3-Dichloropropene	ND	H	62	5.1	ug/Kg	✱	11/24/21 10:53	12/03/21 16:33	1
Dibromomethane	ND	H	62	8.1	ug/Kg	✱	11/24/21 10:53	12/03/21 16:33	1
Dichlorodifluoromethane	ND	H	62	12	ug/Kg	✱	11/24/21 10:53	12/03/21 16:33	1
Ethylbenzene	ND	H	62	8.2	ug/Kg	✱	11/24/21 10:53	12/03/21 16:33	1
Hexachlorobutadiene	ND	H	62	6.3	ug/Kg	✱	11/24/21 10:53	12/03/21 16:33	1
Isopropylbenzene	ND	H	62	4.3	ug/Kg	✱	11/24/21 10:53	12/03/21 16:33	1
Methyl tert-butyl ether	ND	H	120	4.5	ug/Kg	✱	11/24/21 10:53	12/03/21 16:33	1
Methylene Chloride	ND	H	62	6.7	ug/Kg	✱	11/24/21 10:53	12/03/21 16:33	1
m-Xylene & p-Xylene	ND	H	62	6.2	ug/Kg	✱	11/24/21 10:53	12/03/21 16:33	1
Naphthalene	ND	H	62	2.2	ug/Kg	✱	11/24/21 10:53	12/03/21 16:33	1
n-Butylbenzene	ND	H	62	3.8	ug/Kg	✱	11/24/21 10:53	12/03/21 16:33	1
N-Propylbenzene	ND	H	62	5.8	ug/Kg	✱	11/24/21 10:53	12/03/21 16:33	1
o-Xylene	ND	H	62	6.4	ug/Kg	✱	11/24/21 10:53	12/03/21 16:33	1
sec-Butylbenzene	ND	H	62	3.0	ug/Kg	✱	11/24/21 10:53	12/03/21 16:33	1
Styrene	ND	H	62	1.4	ug/Kg	✱	11/24/21 10:53	12/03/21 16:33	1
tert-Butylbenzene	ND	H	62	5.1	ug/Kg	✱	11/24/21 10:53	12/03/21 16:33	1
Tetrachloroethene	ND	H	62	5.2	ug/Kg	✱	11/24/21 10:53	12/03/21 16:33	1
Toluene	ND	H	62	5.6	ug/Kg	✱	11/24/21 10:53	12/03/21 16:33	1
trans-1,2-Dichloroethene	ND	H	62	7.7	ug/Kg	✱	11/24/21 10:53	12/03/21 16:33	1
trans-1,3-Dichloropropene	ND	H	62	3.5	ug/Kg	✱	11/24/21 10:53	12/03/21 16:33	1
Trichlorofluoromethane	ND	H	62	15	ug/Kg	✱	11/24/21 10:53	12/03/21 16:33	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	111		52 - 126	11/24/21 10:53	12/03/21 16:33	1
4-Bromofluorobenzene (Surr)	105		67 - 135	11/24/21 10:53	12/03/21 16:33	1
Dibromofluoromethane (Surr)	105		61 - 123	11/24/21 10:53	12/03/21 16:33	1
Toluene-d8 (Surr)	113		65 - 131	11/24/21 10:53	12/03/21 16:33	1

Method: AK101 - Alaska - Gasoline Range Organics (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
C6-C10 AK	ND		6.2	1.2	mg/Kg	✱	11/24/21 10:53	12/03/21 16:33	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	105		60 - 120	11/24/21 10:53	12/03/21 16:33	1
Trifluorotoluene (Surr)	74		60 - 120	11/24/21 10:53	12/03/21 16:33	1

Method: 8011 - EDB, DBCP, and 1,2,3-TCP (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ethylene Dibromide	ND	H	0.29	0.044	ug/Kg	✱	12/03/21 13:26	12/04/21 02:44	1
1,2,3-Trichloropropane	0.20	J H	0.29	0.16	ug/Kg	✱	12/03/21 13:26	12/04/21 02:44	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dibromopropane	108		55 - 130	12/03/21 13:26	12/04/21 02:44	1

Method: AK102 - DRO

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
DRO (nC10-<nC25)	62	J B	110	29	mg/Kg	✱	11/24/21 09:17	12/11/21 18:31	50

Eurofins TestAmerica, Sacramento

Client Sample Results

Client: Shannon & Wilson, Inc
 Project/Site: Kodiak DOT&PF PFAS (107471)

Job ID: 320-82154-1

Client Sample ID: ADQ-Site35-07

Lab Sample ID: 320-82154-7

Date Collected: 11/13/21 11:50

Matrix: Solid

Date Received: 11/23/21 16:45

Percent Solids: 86.3

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
<i>o</i> -Terphenyl (Surr)	100		60 - 120	11/24/21 09:17	12/11/21 18:31	50
<i>n</i> -Triacontane-d62	143	S1+	60 - 120	11/24/21 09:17	12/11/21 18:31	50

Method: EPA 537(Mod) - PFAS for QSM 5.3, Table B-15

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorohexanoic acid (PFHxA)	0.080	J	0.22	0.034	ug/Kg	☆	11/24/21 18:30	11/29/21 06:04	1
Perfluoroheptanoic acid (PFHpA)	0.046	J	0.22	0.041	ug/Kg	☆	11/24/21 18:30	11/29/21 06:04	1
Perfluorooctanoic acid (PFOA)	0.39		0.22	0.058	ug/Kg	☆	11/24/21 18:30	11/29/21 06:04	1
Perfluorononanoic acid (PFNA)	ND		0.22	0.024	ug/Kg	☆	11/24/21 18:30	11/29/21 06:04	1
Perfluorodecanoic acid (PFDA)	ND		0.22	0.052	ug/Kg	☆	11/24/21 18:30	11/29/21 06:04	1
Perfluoroundecanoic acid (PFUnA)	0.078	J	0.22	0.046	ug/Kg	☆	11/24/21 18:30	11/29/21 06:04	1
Perfluorododecanoic acid (PFDoA)	ND		0.22	0.033	ug/Kg	☆	11/24/21 18:30	11/29/21 06:04	1
Perfluorotridecanoic acid (PFTrDA)	ND		0.22	0.023	ug/Kg	☆	11/24/21 18:30	11/29/21 06:04	1
Perfluorotetradecanoic acid (PFTeA)	ND		0.22	0.040	ug/Kg	☆	11/24/21 18:30	11/29/21 06:04	1
Perfluorobutanesulfonic acid (PFBS)	ND		0.22	0.041	ug/Kg	☆	11/24/21 18:30	11/29/21 06:04	1
Perfluorohexanesulfonic acid (PFHxS)	0.14	J	0.22	0.032	ug/Kg	☆	11/24/21 18:30	11/29/21 06:04	1
Perfluorooctanesulfonic acid (PFOS)	0.72		0.22	0.047	ug/Kg	☆	11/24/21 18:30	11/29/21 06:04	1
NEtFOSAA	ND		0.22	0.052	ug/Kg	☆	11/24/21 18:30	11/29/21 06:04	1
NMeFOSAA	ND		0.22	0.025	ug/Kg	☆	11/24/21 18:30	11/29/21 06:04	1
HFPO-DA (GenX)	ND		0.22	0.045	ug/Kg	☆	11/24/21 18:30	11/29/21 06:04	1
9Cl-PF3ONS	ND		0.22	0.038	ug/Kg	☆	11/24/21 18:30	11/29/21 06:04	1
11Cl-PF3OUdS	ND		0.22	0.034	ug/Kg	☆	11/24/21 18:30	11/29/21 06:04	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	ND		0.22	0.043	ug/Kg	☆	11/24/21 18:30	11/29/21 06:04	1

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C2 PFHxA	86		50 - 150	11/24/21 18:30	11/29/21 06:04	1
13C4 PFHpA	94		50 - 150	11/24/21 18:30	11/29/21 06:04	1
13C4 PFOA	97		50 - 150	11/24/21 18:30	11/29/21 06:04	1
13C5 PFNA	105		50 - 150	11/24/21 18:30	11/29/21 06:04	1
13C2 PFDA	94		50 - 150	11/24/21 18:30	11/29/21 06:04	1
13C2 PFUnA	97		50 - 150	11/24/21 18:30	11/29/21 06:04	1
13C2 PFDoA	90		50 - 150	11/24/21 18:30	11/29/21 06:04	1
13C2 PFTeDA	84		50 - 150	11/24/21 18:30	11/29/21 06:04	1
13C3 PFBS	111		50 - 150	11/24/21 18:30	11/29/21 06:04	1
18O2 PFHxS	89		50 - 150	11/24/21 18:30	11/29/21 06:04	1
13C4 PFOS	98		50 - 150	11/24/21 18:30	11/29/21 06:04	1
d3-NMeFOSAA	104		50 - 150	11/24/21 18:30	11/29/21 06:04	1
d5-NEtFOSAA	89		50 - 150	11/24/21 18:30	11/29/21 06:04	1
13C3 HFPO-DA	88		50 - 150	11/24/21 18:30	11/29/21 06:04	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	13.7		0.1	0.1	%			11/24/21 16:05	1
Percent Solids	86.3		0.1	0.1	%			11/24/21 16:05	1

Client Sample Results

Client: Shannon & Wilson, Inc
 Project/Site: Kodiak DOT&PF PFAS (107471)

Job ID: 320-82154-1

Client Sample ID: ADQ-Site35-08

Lab Sample ID: 320-82154-8

Date Collected: 11/13/21 12:01

Matrix: Solid

Date Received: 11/23/21 16:45

Percent Solids: 91.1

Method: 8260C SIM - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,2,2-Tetrachloroethane	ND	H	1.9	0.43	ug/Kg	☼	11/24/21 10:53	11/30/21 14:39	1
1,1,2-Trichloroethane	ND	H	1.9	0.63	ug/Kg	☼	11/24/21 10:53	11/30/21 14:39	1
1,2-Dichloroethane	ND	H	1.9	0.32	ug/Kg	☼	11/24/21 10:53	11/30/21 14:39	1
Bromomethane	ND	H	3.8	1.2	ug/Kg	☼	11/24/21 10:53	11/30/21 14:39	1
Chlorodibromomethane	ND	H	1.9	0.30	ug/Kg	☼	11/24/21 10:53	11/30/21 14:39	1
Chloroform	ND	H	3.8	1.5	ug/Kg	☼	11/24/21 10:53	11/30/21 14:39	1
Dichlorobromomethane	ND	H	1.9	0.25	ug/Kg	☼	11/24/21 10:53	11/30/21 14:39	1
Ethylene Dibromide	ND	H	1.9	0.31	ug/Kg	☼	11/24/21 10:53	11/30/21 14:39	1
Trichloroethene	ND	H	1.9	0.38	ug/Kg	☼	11/24/21 10:53	11/30/21 14:39	1
Vinyl chloride	ND	H	1.9	0.48	ug/Kg	☼	11/24/21 10:53	11/30/21 14:39	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	85		69 - 129				11/24/21 10:53	11/30/21 14:39	1
Dibromofluoromethane (Surr)	120		72 - 132				11/24/21 10:53	11/30/21 14:39	1
1,2-Dichloroethane-d4 (Surr)	114		72 - 132				11/24/21 10:53	11/30/21 14:39	1
Toluene-d8 (Surr)	108		78 - 138				11/24/21 10:53	11/30/21 14:39	1

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND	H	38	4.5	ug/Kg	☼	11/24/21 10:53	12/03/21 16:56	1
1,1,1-Trichloroethane	ND	H	38	2.8	ug/Kg	☼	11/24/21 10:53	12/03/21 16:56	1
1,1-Dichloroethane	ND	H	38	2.1	ug/Kg	☼	11/24/21 10:53	12/03/21 16:56	1
1,1-Dichloroethene	ND	H	38	3.6	ug/Kg	☼	11/24/21 10:53	12/03/21 16:56	1
1,1-Dichloropropene	ND	H	38	3.3	ug/Kg	☼	11/24/21 10:53	12/03/21 16:56	1
1,2,3-Trichlorobenzene	ND	H	38	4.7	ug/Kg	☼	11/24/21 10:53	12/03/21 16:56	1
1,2,3-Trichloropropane	ND	H	38	3.6	ug/Kg	☼	11/24/21 10:53	12/03/21 16:56	1
1,2,4-Trichlorobenzene	ND	H	38	2.6	ug/Kg	☼	11/24/21 10:53	12/03/21 16:56	1
1,2,4-Trimethylbenzene	ND	H	38	2.7	ug/Kg	☼	11/24/21 10:53	12/03/21 16:56	1
1,2-Dibromo-3-Chloropropane	ND	H	76	4.8	ug/Kg	☼	11/24/21 10:53	12/03/21 16:56	1
1,2-Dichlorobenzene	ND	H	38	1.7	ug/Kg	☼	11/24/21 10:53	12/03/21 16:56	1
1,2-Dichloropropane	ND	H	38	3.6	ug/Kg	☼	11/24/21 10:53	12/03/21 16:56	1
1,3,5-Trimethylbenzene	ND	H	38	2.7	ug/Kg	☼	11/24/21 10:53	12/03/21 16:56	1
1,3-Dichlorobenzene	ND	H	38	2.5	ug/Kg	☼	11/24/21 10:53	12/03/21 16:56	1
1,3-Dichloropropane	ND	H	38	1.8	ug/Kg	☼	11/24/21 10:53	12/03/21 16:56	1
1,4-Dichlorobenzene	ND	H	38	1.7	ug/Kg	☼	11/24/21 10:53	12/03/21 16:56	1
2,2-Dichloropropane	ND	H	38	3.3	ug/Kg	☼	11/24/21 10:53	12/03/21 16:56	1
2-Butanone (MEK)	ND	H	76	20	ug/Kg	☼	11/24/21 10:53	12/03/21 16:56	1
2-Chlorotoluene	ND	H	38	2.8	ug/Kg	☼	11/24/21 10:53	12/03/21 16:56	1
2-Hexanone	ND	H	76	4.0	ug/Kg	☼	11/24/21 10:53	12/03/21 16:56	1
4-Chlorotoluene	ND	H	38	2.1	ug/Kg	☼	11/24/21 10:53	12/03/21 16:56	1
4-Methyl-2-pentanone (MIBK)	ND	H	76	2.4	ug/Kg	☼	11/24/21 10:53	12/03/21 16:56	1
p-Isopropyltoluene	2.0	J H	38	1.2	ug/Kg	☼	11/24/21 10:53	12/03/21 16:56	1
Acetone	ND	H	380	38	ug/Kg	☼	11/24/21 10:53	12/03/21 16:56	1
Benzene	ND	H	38	2.5	ug/Kg	☼	11/24/21 10:53	12/03/21 16:56	1
Bromoform	ND	H	38	8.4	ug/Kg	☼	11/24/21 10:53	12/03/21 16:56	1
Bromobenzene	ND	H	38	4.3	ug/Kg	☼	11/24/21 10:53	12/03/21 16:56	1
Carbon disulfide	ND	H	76	2.7	ug/Kg	☼	11/24/21 10:53	12/03/21 16:56	1
Carbon tetrachloride	ND	H	38	2.7	ug/Kg	☼	11/24/21 10:53	12/03/21 16:56	1
Chlorobenzene	ND	H	38	3.4	ug/Kg	☼	11/24/21 10:53	12/03/21 16:56	1
Chlorobromomethane	ND	H	38	5.6	ug/Kg	☼	11/24/21 10:53	12/03/21 16:56	1

Eurofins TestAmerica, Sacramento

Client Sample Results

Client: Shannon & Wilson, Inc
Project/Site: Kodiak DOT&PF PFAS (107471)

Job ID: 320-82154-1

Client Sample ID: ADQ-Site35-08

Lab Sample ID: 320-82154-8

Date Collected: 11/13/21 12:01

Matrix: Solid

Date Received: 11/23/21 16:45

Percent Solids: 91.1

Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloroethane	ND	H	38	5.0	ug/Kg	☼	11/24/21 10:53	12/03/21 16:56	1
Chloromethane	ND	H	38	1.9	ug/Kg	☼	11/24/21 10:53	12/03/21 16:56	1
cis-1,2-Dichloroethene	ND	H	38	6.3	ug/Kg	☼	11/24/21 10:53	12/03/21 16:56	1
cis-1,3-Dichloropropene	ND	H	38	3.1	ug/Kg	☼	11/24/21 10:53	12/03/21 16:56	1
Dibromomethane	ND	H	38	5.0	ug/Kg	☼	11/24/21 10:53	12/03/21 16:56	1
Dichlorodifluoromethane	ND	H	38	7.2	ug/Kg	☼	11/24/21 10:53	12/03/21 16:56	1
Ethylbenzene	ND	H	38	5.0	ug/Kg	☼	11/24/21 10:53	12/03/21 16:56	1
Hexachlorobutadiene	ND	H	38	3.9	ug/Kg	☼	11/24/21 10:53	12/03/21 16:56	1
Isopropylbenzene	ND	H	38	2.7	ug/Kg	☼	11/24/21 10:53	12/03/21 16:56	1
Methyl tert-butyl ether	ND	H	76	2.8	ug/Kg	☼	11/24/21 10:53	12/03/21 16:56	1
Methylene Chloride	ND	H	38	4.1	ug/Kg	☼	11/24/21 10:53	12/03/21 16:56	1
m-Xylene & p-Xylene	ND	H	38	3.8	ug/Kg	☼	11/24/21 10:53	12/03/21 16:56	1
Naphthalene	ND	H	38	1.4	ug/Kg	☼	11/24/21 10:53	12/03/21 16:56	1
n-Butylbenzene	ND	H	38	2.4	ug/Kg	☼	11/24/21 10:53	12/03/21 16:56	1
N-Propylbenzene	ND	H	38	3.6	ug/Kg	☼	11/24/21 10:53	12/03/21 16:56	1
o-Xylene	ND	H	38	4.0	ug/Kg	☼	11/24/21 10:53	12/03/21 16:56	1
sec-Butylbenzene	ND	H	38	1.8	ug/Kg	☼	11/24/21 10:53	12/03/21 16:56	1
Styrene	ND	H	38	0.84	ug/Kg	☼	11/24/21 10:53	12/03/21 16:56	1
tert-Butylbenzene	ND	H	38	3.1	ug/Kg	☼	11/24/21 10:53	12/03/21 16:56	1
Tetrachloroethene	ND	H	38	3.2	ug/Kg	☼	11/24/21 10:53	12/03/21 16:56	1
Toluene	ND	H	38	3.4	ug/Kg	☼	11/24/21 10:53	12/03/21 16:56	1
trans-1,2-Dichloroethene	ND	H	38	4.7	ug/Kg	☼	11/24/21 10:53	12/03/21 16:56	1
trans-1,3-Dichloropropene	ND	H	38	2.1	ug/Kg	☼	11/24/21 10:53	12/03/21 16:56	1
Trichlorofluoromethane	ND	H	38	9.2	ug/Kg	☼	11/24/21 10:53	12/03/21 16:56	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	115		52 - 126	11/24/21 10:53	12/03/21 16:56	1
4-Bromofluorobenzene (Surr)	109		67 - 135	11/24/21 10:53	12/03/21 16:56	1
Dibromofluoromethane (Surr)	109		61 - 123	11/24/21 10:53	12/03/21 16:56	1
Toluene-d8 (Surr)	115		65 - 131	11/24/21 10:53	12/03/21 16:56	1

Method: AK101 - Alaska - Gasoline Range Organics (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
C6-C10 AK	ND		3.8	0.76	mg/Kg	☼	11/24/21 10:53	12/03/21 16:56	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	109		60 - 120	11/24/21 10:53	12/03/21 16:56	1
Trifluorotoluene (Surr)	83		60 - 120	11/24/21 10:53	12/03/21 16:56	1

Method: 8011 - EDB, DBCP, and 1,2,3-TCP (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ethylene Dibromide	ND	H	0.28	0.042	ug/Kg	☼	12/03/21 13:26	12/04/21 03:08	1
1,2,3-Trichloropropane	ND	H	0.28	0.15	ug/Kg	☼	12/03/21 13:26	12/04/21 03:08	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dibromopropane	109		55 - 130	12/03/21 13:26	12/04/21 03:08	1

Method: AK102 - DRO

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
DRO (nC10-<nC25)	3.1	B	2.2	0.54	mg/Kg	☼	11/24/21 09:17	12/11/21 18:55	1

Eurofins TestAmerica, Sacramento

Client Sample Results

Client: Shannon & Wilson, Inc
 Project/Site: Kodiak DOT&PF PFAS (107471)

Job ID: 320-82154-1

Client Sample ID: ADQ-Site35-08

Lab Sample ID: 320-82154-8

Date Collected: 11/13/21 12:01

Matrix: Solid

Date Received: 11/23/21 16:45

Percent Solids: 91.1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
<i>o</i> -Terphenyl (Surr)	66		60 - 120	11/24/21 09:17	12/11/21 18:55	1
<i>n</i> -Triacontane-d62	77		60 - 120	11/24/21 09:17	12/11/21 18:55	1

Method: EPA 537(Mod) - PFAS for QSM 5.3, Table B-15

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorohexanoic acid (PFHxA)	ND		0.21	0.033	ug/Kg	☆	11/24/21 18:30	11/29/21 06:15	1
Perfluoroheptanoic acid (PFHpA)	ND		0.21	0.040	ug/Kg	☆	11/24/21 18:30	11/29/21 06:15	1
Perfluorooctanoic acid (PFOA)	ND		0.21	0.056	ug/Kg	☆	11/24/21 18:30	11/29/21 06:15	1
Perfluorononanoic acid (PFNA)	ND		0.21	0.023	ug/Kg	☆	11/24/21 18:30	11/29/21 06:15	1
Perfluorodecanoic acid (PFDA)	ND		0.21	0.050	ug/Kg	☆	11/24/21 18:30	11/29/21 06:15	1
Perfluoroundecanoic acid (PFUnA)	ND		0.21	0.044	ug/Kg	☆	11/24/21 18:30	11/29/21 06:15	1
Perfluorododecanoic acid (PFDoA)	ND		0.21	0.032	ug/Kg	☆	11/24/21 18:30	11/29/21 06:15	1
Perfluorotridecanoic acid (PFTTrDA)	ND		0.21	0.022	ug/Kg	☆	11/24/21 18:30	11/29/21 06:15	1
Perfluorotetradecanoic acid (PFTTeA)	ND		0.21	0.039	ug/Kg	☆	11/24/21 18:30	11/29/21 06:15	1
Perfluorobutanesulfonic acid (PFBS)	ND		0.21	0.040	ug/Kg	☆	11/24/21 18:30	11/29/21 06:15	1
Perfluorohexanesulfonic acid (PFHxS)	ND		0.21	0.031	ug/Kg	☆	11/24/21 18:30	11/29/21 06:15	1
Perfluorooctanesulfonic acid (PFOS)	0.086	J I	0.21	0.045	ug/Kg	☆	11/24/21 18:30	11/29/21 06:15	1
NEtFOSAA	ND		0.21	0.050	ug/Kg	☆	11/24/21 18:30	11/29/21 06:15	1
NMeFOSAA	ND		0.21	0.024	ug/Kg	☆	11/24/21 18:30	11/29/21 06:15	1
HFPO-DA (GenX)	ND		0.21	0.043	ug/Kg	☆	11/24/21 18:30	11/29/21 06:15	1
9CI-PF3ONS	ND		0.21	0.037	ug/Kg	☆	11/24/21 18:30	11/29/21 06:15	1
11CI-PF3OUdS	ND		0.21	0.033	ug/Kg	☆	11/24/21 18:30	11/29/21 06:15	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	ND		0.21	0.041	ug/Kg	☆	11/24/21 18:30	11/29/21 06:15	1
Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
13C2 PFHxA	100		50 - 150				11/24/21 18:30	11/29/21 06:15	1
13C4 PFHpA	108		50 - 150				11/24/21 18:30	11/29/21 06:15	1
13C4 PFOA	113		50 - 150				11/24/21 18:30	11/29/21 06:15	1
13C5 PFNA	113		50 - 150				11/24/21 18:30	11/29/21 06:15	1
13C2 PFDA	113		50 - 150				11/24/21 18:30	11/29/21 06:15	1
13C2 PFUnA	113		50 - 150				11/24/21 18:30	11/29/21 06:15	1
13C2 PFDoA	112		50 - 150				11/24/21 18:30	11/29/21 06:15	1
13C2 PFTTeDA	114		50 - 150				11/24/21 18:30	11/29/21 06:15	1
13C3 PFBS	120		50 - 150				11/24/21 18:30	11/29/21 06:15	1
18O2 PFHxS	109		50 - 150				11/24/21 18:30	11/29/21 06:15	1
13C4 PFOS	114		50 - 150				11/24/21 18:30	11/29/21 06:15	1
d3-NMeFOSAA	136		50 - 150				11/24/21 18:30	11/29/21 06:15	1
d5-NEtFOSAA	131		50 - 150				11/24/21 18:30	11/29/21 06:15	1
13C3 HFPO-DA	96		50 - 150				11/24/21 18:30	11/29/21 06:15	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	8.9		0.1	0.1	%			11/24/21 16:05	1
Percent Solids	91.1		0.1	0.1	%			11/24/21 16:05	1

Client Sample Results

Client: Shannon & Wilson, Inc
 Project/Site: Kodiak DOT&PF PFAS (107471)

Job ID: 320-82154-1

Client Sample ID: ADQ-Site35-09

Lab Sample ID: 320-82154-9

Date Collected: 11/13/21 12:37

Matrix: Solid

Date Received: 11/23/21 16:45

Percent Solids: 94.3

Method: 8260C SIM - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND	H	1.0	0.22	ug/Kg	✱	11/24/21 10:53	11/30/21 15:02	1
1,1,2-Trichloroethane	ND	H	1.0	0.33	ug/Kg	✱	11/24/21 10:53	11/30/21 15:02	1
1,2-Dichloroethane	ND	H	1.0	0.17	ug/Kg	✱	11/24/21 10:53	11/30/21 15:02	1
Bromomethane	ND	H	2.0	0.65	ug/Kg	✱	11/24/21 10:53	11/30/21 15:02	1
Chlorodibromomethane	ND	H	1.0	0.16	ug/Kg	✱	11/24/21 10:53	11/30/21 15:02	1
Chloroform	ND	H	2.0	0.80	ug/Kg	✱	11/24/21 10:53	11/30/21 15:02	1
Dichlorobromomethane	ND	H	1.0	0.13	ug/Kg	✱	11/24/21 10:53	11/30/21 15:02	1
Ethylene Dibromide	ND	H	1.0	0.16	ug/Kg	✱	11/24/21 10:53	11/30/21 15:02	1
Trichloroethene	ND	H	1.0	0.20	ug/Kg	✱	11/24/21 10:53	11/30/21 15:02	1
Vinyl chloride	ND	H	1.0	0.25	ug/Kg	✱	11/24/21 10:53	11/30/21 15:02	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	87		69 - 129	11/24/21 10:53	11/30/21 15:02	1
Dibromofluoromethane (Surr)	120		72 - 132	11/24/21 10:53	11/30/21 15:02	1
1,2-Dichloroethane-d4 (Surr)	117		72 - 132	11/24/21 10:53	11/30/21 15:02	1
Toluene-d8 (Surr)	111		78 - 138	11/24/21 10:53	11/30/21 15:02	1

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND	H	20	2.4	ug/Kg	✱	11/24/21 10:53	12/03/21 17:19	1
1,1,1-Trichloroethane	ND	H	20	1.5	ug/Kg	✱	11/24/21 10:53	12/03/21 17:19	1
1,1-Dichloroethane	ND	H	20	1.1	ug/Kg	✱	11/24/21 10:53	12/03/21 17:19	1
1,1-Dichloroethene	ND	H	20	1.9	ug/Kg	✱	11/24/21 10:53	12/03/21 17:19	1
1,1-Dichloropropene	ND	H	20	1.7	ug/Kg	✱	11/24/21 10:53	12/03/21 17:19	1
1,2,3-Trichlorobenzene	ND	H	20	2.5	ug/Kg	✱	11/24/21 10:53	12/03/21 17:19	1
1,2,3-Trichloropropane	ND	H	20	1.9	ug/Kg	✱	11/24/21 10:53	12/03/21 17:19	1
1,2,4-Trichlorobenzene	ND	H	20	1.4	ug/Kg	✱	11/24/21 10:53	12/03/21 17:19	1
1,2,4-Trimethylbenzene	ND	H	20	1.4	ug/Kg	✱	11/24/21 10:53	12/03/21 17:19	1
1,2-Dibromo-3-Chloropropane	ND	H	40	2.5	ug/Kg	✱	11/24/21 10:53	12/03/21 17:19	1
1,2-Dichlorobenzene	ND	H	20	0.88	ug/Kg	✱	11/24/21 10:53	12/03/21 17:19	1
1,2-Dichloropropane	ND	H	20	1.9	ug/Kg	✱	11/24/21 10:53	12/03/21 17:19	1
1,3,5-Trimethylbenzene	ND	H	20	1.4	ug/Kg	✱	11/24/21 10:53	12/03/21 17:19	1
1,3-Dichlorobenzene	ND	H	20	1.3	ug/Kg	✱	11/24/21 10:53	12/03/21 17:19	1
1,3-Dichloropropane	ND	H	20	0.92	ug/Kg	✱	11/24/21 10:53	12/03/21 17:19	1
1,4-Dichlorobenzene	ND	H	20	0.88	ug/Kg	✱	11/24/21 10:53	12/03/21 17:19	1
2,2-Dichloropropane	ND	H	20	1.7	ug/Kg	✱	11/24/21 10:53	12/03/21 17:19	1
2-Butanone (MEK)	ND	H	40	10	ug/Kg	✱	11/24/21 10:53	12/03/21 17:19	1
2-Chlorotoluene	ND	H	20	1.4	ug/Kg	✱	11/24/21 10:53	12/03/21 17:19	1
2-Hexanone	ND	H	40	2.1	ug/Kg	✱	11/24/21 10:53	12/03/21 17:19	1
4-Chlorotoluene	ND	H	20	1.1	ug/Kg	✱	11/24/21 10:53	12/03/21 17:19	1
4-Methyl-2-pentanone (MIBK)	ND	H	40	1.2	ug/Kg	✱	11/24/21 10:53	12/03/21 17:19	1
p-Isopropyltoluene	ND	H	20	0.64	ug/Kg	✱	11/24/21 10:53	12/03/21 17:19	1
Acetone	ND	H	200	20	ug/Kg	✱	11/24/21 10:53	12/03/21 17:19	1
Benzene	ND	H	20	1.3	ug/Kg	✱	11/24/21 10:53	12/03/21 17:19	1
Bromoform	ND	H	20	4.4	ug/Kg	✱	11/24/21 10:53	12/03/21 17:19	1
Bromobenzene	ND	H	20	2.2	ug/Kg	✱	11/24/21 10:53	12/03/21 17:19	1
Carbon disulfide	ND	H	40	1.4	ug/Kg	✱	11/24/21 10:53	12/03/21 17:19	1
Carbon tetrachloride	ND	H	20	1.4	ug/Kg	✱	11/24/21 10:53	12/03/21 17:19	1
Chlorobenzene	ND	H	20	1.8	ug/Kg	✱	11/24/21 10:53	12/03/21 17:19	1
Chlorobromomethane	ND	H	20	2.9	ug/Kg	✱	11/24/21 10:53	12/03/21 17:19	1

Eurofins TestAmerica, Sacramento

Client Sample Results

Client: Shannon & Wilson, Inc
Project/Site: Kodiak DOT&PF PFAS (107471)

Job ID: 320-82154-1

Client Sample ID: ADQ-Site35-09

Lab Sample ID: 320-82154-9

Date Collected: 11/13/21 12:37

Matrix: Solid

Date Received: 11/23/21 16:45

Percent Solids: 94.3

Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloroethane	ND	H	20	2.6	ug/Kg	✳	11/24/21 10:53	12/03/21 17:19	1
Chloromethane	ND	H	20	1.0	ug/Kg	✳	11/24/21 10:53	12/03/21 17:19	1
cis-1,2-Dichloroethene	ND	H	20	3.3	ug/Kg	✳	11/24/21 10:53	12/03/21 17:19	1
cis-1,3-Dichloropropene	ND	H	20	1.6	ug/Kg	✳	11/24/21 10:53	12/03/21 17:19	1
Dibromomethane	ND	H	20	2.6	ug/Kg	✳	11/24/21 10:53	12/03/21 17:19	1
Dichlorodifluoromethane	ND	H	20	3.8	ug/Kg	✳	11/24/21 10:53	12/03/21 17:19	1
Ethylbenzene	ND	H	20	2.6	ug/Kg	✳	11/24/21 10:53	12/03/21 17:19	1
Hexachlorobutadiene	ND	H	20	2.0	ug/Kg	✳	11/24/21 10:53	12/03/21 17:19	1
Isopropylbenzene	ND	H	20	1.4	ug/Kg	✳	11/24/21 10:53	12/03/21 17:19	1
Methyl tert-butyl ether	ND	H	40	1.4	ug/Kg	✳	11/24/21 10:53	12/03/21 17:19	1
Methylene Chloride	ND	H	20	2.2	ug/Kg	✳	11/24/21 10:53	12/03/21 17:19	1
m-Xylene & p-Xylene	ND	H	20	2.0	ug/Kg	✳	11/24/21 10:53	12/03/21 17:19	1
Naphthalene	ND	H	20	0.72	ug/Kg	✳	11/24/21 10:53	12/03/21 17:19	1
n-Butylbenzene	ND	H	20	1.2	ug/Kg	✳	11/24/21 10:53	12/03/21 17:19	1
N-Propylbenzene	ND	H	20	1.9	ug/Kg	✳	11/24/21 10:53	12/03/21 17:19	1
o-Xylene	ND	H	20	2.1	ug/Kg	✳	11/24/21 10:53	12/03/21 17:19	1
sec-Butylbenzene	ND	H	20	0.96	ug/Kg	✳	11/24/21 10:53	12/03/21 17:19	1
Styrene	ND	H	20	0.44	ug/Kg	✳	11/24/21 10:53	12/03/21 17:19	1
tert-Butylbenzene	ND	H	20	1.6	ug/Kg	✳	11/24/21 10:53	12/03/21 17:19	1
Tetrachloroethene	ND	H	20	1.7	ug/Kg	✳	11/24/21 10:53	12/03/21 17:19	1
Toluene	2.0	J H	20	1.8	ug/Kg	✳	11/24/21 10:53	12/03/21 17:19	1
trans-1,2-Dichloroethene	ND	H	20	2.5	ug/Kg	✳	11/24/21 10:53	12/03/21 17:19	1
trans-1,3-Dichloropropene	ND	H	20	1.1	ug/Kg	✳	11/24/21 10:53	12/03/21 17:19	1
Trichlorofluoromethane	ND	H	20	4.8	ug/Kg	✳	11/24/21 10:53	12/03/21 17:19	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	114		52 - 126	11/24/21 10:53	12/03/21 17:19	1
4-Bromofluorobenzene (Surr)	109		67 - 135	11/24/21 10:53	12/03/21 17:19	1
Dibromofluoromethane (Surr)	106		61 - 123	11/24/21 10:53	12/03/21 17:19	1
Toluene-d8 (Surr)	114		65 - 131	11/24/21 10:53	12/03/21 17:19	1

Method: AK101 - Alaska - Gasoline Range Organics (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
C6-C10 AK	ND		2.0	0.40	mg/Kg	✳	11/24/21 10:53	12/03/21 17:19	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	109		60 - 120	11/24/21 10:53	12/03/21 17:19	1
Trifluorotoluene (Surr)	81		60 - 120	11/24/21 10:53	12/03/21 17:19	1

Method: 8011 - EDB, DBCP, and 1,2,3-TCP (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ethylene Dibromide	ND	H	0.27	0.040	ug/Kg	✳	12/03/21 13:26	12/04/21 03:32	1
1,2,3-Trichloropropane	ND	H	0.27	0.15	ug/Kg	✳	12/03/21 13:26	12/04/21 03:32	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dibromopropane	107		55 - 130	12/03/21 13:26	12/04/21 03:32	1

Method: AK102 - DRO

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
DRO (nC10-<nC25)	1.9	J B	2.1	0.53	mg/Kg	✳	11/24/21 09:17	12/11/21 19:19	1

Eurofins TestAmerica, Sacramento

Client Sample Results

Client: Shannon & Wilson, Inc
 Project/Site: Kodiak DOT&PF PFAS (107471)

Job ID: 320-82154-1

Client Sample ID: ADQ-Site35-09

Lab Sample ID: 320-82154-9

Date Collected: 11/13/21 12:37

Matrix: Solid

Date Received: 11/23/21 16:45

Percent Solids: 94.3

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
<i>o</i> -Terphenyl (Surr)	69		60 - 120	11/24/21 09:17	12/11/21 19:19	1
<i>n</i> -Triacontane-d62	76		60 - 120	11/24/21 09:17	12/11/21 19:19	1

Method: EPA 537(Mod) - PFAS for QSM 5.3, Table B-15

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorohexanoic acid (PFHxA)	ND		0.20	0.031	ug/Kg	☆	11/24/21 18:30	11/29/21 06:46	1
Perfluoroheptanoic acid (PFHpA)	ND		0.20	0.038	ug/Kg	☆	11/24/21 18:30	11/29/21 06:46	1
Perfluorooctanoic acid (PFOA)	ND		0.20	0.053	ug/Kg	☆	11/24/21 18:30	11/29/21 06:46	1
Perfluorononanoic acid (PFNA)	ND		0.20	0.022	ug/Kg	☆	11/24/21 18:30	11/29/21 06:46	1
Perfluorodecanoic acid (PFDA)	ND		0.20	0.048	ug/Kg	☆	11/24/21 18:30	11/29/21 06:46	1
Perfluoroundecanoic acid (PFUnA)	ND		0.20	0.042	ug/Kg	☆	11/24/21 18:30	11/29/21 06:46	1
Perfluorododecanoic acid (PFDoA)	ND		0.20	0.030	ug/Kg	☆	11/24/21 18:30	11/29/21 06:46	1
Perfluorotridecanoic acid (PFTTrDA)	ND		0.20	0.021	ug/Kg	☆	11/24/21 18:30	11/29/21 06:46	1
Perfluorotetradecanoic acid (PFTeA)	ND		0.20	0.037	ug/Kg	☆	11/24/21 18:30	11/29/21 06:46	1
Perfluorobutanesulfonic acid (PFBS)	ND		0.20	0.038	ug/Kg	☆	11/24/21 18:30	11/29/21 06:46	1
Perfluorohexanesulfonic acid (PFHxS)	ND		0.20	0.029	ug/Kg	☆	11/24/21 18:30	11/29/21 06:46	1
Perfluorooctanesulfonic acid (PFOS)	0.043	J I	0.20	0.043	ug/Kg	☆	11/24/21 18:30	11/29/21 06:46	1
NEtFOSAA	ND		0.20	0.048	ug/Kg	☆	11/24/21 18:30	11/29/21 06:46	1
NMeFOSAA	ND		0.20	0.023	ug/Kg	☆	11/24/21 18:30	11/29/21 06:46	1
HFPO-DA (GenX)	ND		0.20	0.041	ug/Kg	☆	11/24/21 18:30	11/29/21 06:46	1
9CI-PF3ONS	ND		0.20	0.035	ug/Kg	☆	11/24/21 18:30	11/29/21 06:46	1
11CI-PF3OUdS	ND		0.20	0.031	ug/Kg	☆	11/24/21 18:30	11/29/21 06:46	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	ND		0.20	0.039	ug/Kg	☆	11/24/21 18:30	11/29/21 06:46	1
Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
13C2 PFHxA	112		50 - 150				11/24/21 18:30	11/29/21 06:46	1
13C4 PFHpA	112		50 - 150				11/24/21 18:30	11/29/21 06:46	1
13C4 PFOA	113		50 - 150				11/24/21 18:30	11/29/21 06:46	1
13C5 PFNA	119		50 - 150				11/24/21 18:30	11/29/21 06:46	1
13C2 PFDA	118		50 - 150				11/24/21 18:30	11/29/21 06:46	1
13C2 PFUnA	121		50 - 150				11/24/21 18:30	11/29/21 06:46	1
13C2 PFDoA	127		50 - 150				11/24/21 18:30	11/29/21 06:46	1
13C2 PFTeDA	135		50 - 150				11/24/21 18:30	11/29/21 06:46	1
13C3 PFBS	133		50 - 150				11/24/21 18:30	11/29/21 06:46	1
18O2 PFHxS	109		50 - 150				11/24/21 18:30	11/29/21 06:46	1
13C4 PFOS	122		50 - 150				11/24/21 18:30	11/29/21 06:46	1
d3-NMeFOSAA	138		50 - 150				11/24/21 18:30	11/29/21 06:46	1
d5-NEtFOSAA	152	*5+	50 - 150				11/24/21 18:30	11/29/21 06:46	1
13C3 HFPO-DA	101		50 - 150				11/24/21 18:30	11/29/21 06:46	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	5.7		0.1	0.1	%			11/24/21 16:05	1
Percent Solids	94.3		0.1	0.1	%			11/24/21 16:05	1

Client Sample Results

Client: Shannon & Wilson, Inc
 Project/Site: Kodiak DOT&PF PFAS (107471)

Job ID: 320-82154-1

Client Sample ID: ADQ-Site35-10

Lab Sample ID: 320-82154-10

Date Collected: 11/13/21 12:53

Matrix: Solid

Date Received: 11/23/21 16:45

Percent Solids: 93.1

Method: 8260C SIM - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND	H	1.3	0.28	ug/Kg	☼	11/24/21 10:53	11/30/21 15:26	1
1,1,2-Trichloroethane	ND	H	1.3	0.42	ug/Kg	☼	11/24/21 10:53	11/30/21 15:26	1
1,2-Dichloroethane	ND	H	1.3	0.21	ug/Kg	☼	11/24/21 10:53	11/30/21 15:26	1
Bromomethane	ND	H	2.5	0.82	ug/Kg	☼	11/24/21 10:53	11/30/21 15:26	1
Chlorodibromomethane	ND	H	1.3	0.20	ug/Kg	☼	11/24/21 10:53	11/30/21 15:26	1
Chloroform	ND	H	2.5	1.0	ug/Kg	☼	11/24/21 10:53	11/30/21 15:26	1
Dichlorobromomethane	ND	H	1.3	0.16	ug/Kg	☼	11/24/21 10:53	11/30/21 15:26	1
Ethylene Dibromide	ND	H	1.3	0.20	ug/Kg	☼	11/24/21 10:53	11/30/21 15:26	1
Trichloroethene	ND	H	1.3	0.25	ug/Kg	☼	11/24/21 10:53	11/30/21 15:26	1
Vinyl chloride	ND	H	1.3	0.32	ug/Kg	☼	11/24/21 10:53	11/30/21 15:26	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	85		69 - 129				11/24/21 10:53	11/30/21 15:26	1
Dibromofluoromethane (Surr)	119		72 - 132				11/24/21 10:53	11/30/21 15:26	1
1,2-Dichloroethane-d4 (Surr)	120		72 - 132				11/24/21 10:53	11/30/21 15:26	1
Toluene-d8 (Surr)	108		78 - 138				11/24/21 10:53	11/30/21 15:26	1

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND	H	25	3.0	ug/Kg	☼	11/24/21 10:53	12/03/21 18:06	1
1,1,1-Trichloroethane	ND	H	25	1.9	ug/Kg	☼	11/24/21 10:53	12/03/21 18:06	1
1,1-Dichloroethane	ND	H	25	1.4	ug/Kg	☼	11/24/21 10:53	12/03/21 18:06	1
1,1-Dichloroethene	ND	H	25	2.4	ug/Kg	☼	11/24/21 10:53	12/03/21 18:06	1
1,1-Dichloropropene	ND	H	25	2.2	ug/Kg	☼	11/24/21 10:53	12/03/21 18:06	1
1,2,3-Trichlorobenzene	ND	H	25	3.1	ug/Kg	☼	11/24/21 10:53	12/03/21 18:06	1
1,2,3-Trichloropropane	ND	H	25	2.4	ug/Kg	☼	11/24/21 10:53	12/03/21 18:06	1
1,2,4-Trichlorobenzene	ND	H	25	1.7	ug/Kg	☼	11/24/21 10:53	12/03/21 18:06	1
1,2,4-Trimethylbenzene	2.6	J H	25	1.8	ug/Kg	☼	11/24/21 10:53	12/03/21 18:06	1
1,2-Dibromo-3-Chloropropane	ND	H	50	3.2	ug/Kg	☼	11/24/21 10:53	12/03/21 18:06	1
1,2-Dichlorobenzene	ND	H	25	1.1	ug/Kg	☼	11/24/21 10:53	12/03/21 18:06	1
1,2-Dichloropropane	ND	H	25	2.4	ug/Kg	☼	11/24/21 10:53	12/03/21 18:06	1
1,3,5-Trimethylbenzene	ND	H	25	1.8	ug/Kg	☼	11/24/21 10:53	12/03/21 18:06	1
1,3-Dichlorobenzene	ND	H	25	1.7	ug/Kg	☼	11/24/21 10:53	12/03/21 18:06	1
1,3-Dichloropropane	ND	H	25	1.2	ug/Kg	☼	11/24/21 10:53	12/03/21 18:06	1
1,4-Dichlorobenzene	ND	H	25	1.1	ug/Kg	☼	11/24/21 10:53	12/03/21 18:06	1
2,2-Dichloropropane	ND	H	25	2.2	ug/Kg	☼	11/24/21 10:53	12/03/21 18:06	1
2-Butanone (MEK)	ND	H	50	13	ug/Kg	☼	11/24/21 10:53	12/03/21 18:06	1
2-Chlorotoluene	ND	H	25	1.8	ug/Kg	☼	11/24/21 10:53	12/03/21 18:06	1
2-Hexanone	ND	H	50	2.6	ug/Kg	☼	11/24/21 10:53	12/03/21 18:06	1
4-Chlorotoluene	ND	H	25	1.4	ug/Kg	☼	11/24/21 10:53	12/03/21 18:06	1
4-Methyl-2-pentanone (MIBK)	ND	H	50	1.6	ug/Kg	☼	11/24/21 10:53	12/03/21 18:06	1
p-Isopropyltoluene	ND	H	25	0.81	ug/Kg	☼	11/24/21 10:53	12/03/21 18:06	1
Acetone	ND	H	250	25	ug/Kg	☼	11/24/21 10:53	12/03/21 18:06	1
Benzene	ND	H	25	1.7	ug/Kg	☼	11/24/21 10:53	12/03/21 18:06	1
Bromoform	ND	H	25	5.5	ug/Kg	☼	11/24/21 10:53	12/03/21 18:06	1
Bromobenzene	ND	H	25	2.8	ug/Kg	☼	11/24/21 10:53	12/03/21 18:06	1
Carbon disulfide	ND	H	50	1.8	ug/Kg	☼	11/24/21 10:53	12/03/21 18:06	1
Carbon tetrachloride	ND	H	25	1.8	ug/Kg	☼	11/24/21 10:53	12/03/21 18:06	1
Chlorobenzene	ND	H	25	2.2	ug/Kg	☼	11/24/21 10:53	12/03/21 18:06	1
Chlorobromomethane	ND	H	25	3.7	ug/Kg	☼	11/24/21 10:53	12/03/21 18:06	1

Eurofins TestAmerica, Sacramento

Client Sample Results

Client: Shannon & Wilson, Inc
Project/Site: Kodiak DOT&PF PFAS (107471)

Job ID: 320-82154-1

Client Sample ID: ADQ-Site35-10

Lab Sample ID: 320-82154-10

Date Collected: 11/13/21 12:53

Matrix: Solid

Date Received: 11/23/21 16:45

Percent Solids: 93.1

Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloroethane	ND	H	25	3.3	ug/Kg	✳	11/24/21 10:53	12/03/21 18:06	1
Chloromethane	ND	H	25	1.3	ug/Kg	✳	11/24/21 10:53	12/03/21 18:06	1
cis-1,2-Dichloroethene	ND	H	25	4.1	ug/Kg	✳	11/24/21 10:53	12/03/21 18:06	1
cis-1,3-Dichloropropene	ND	H	25	2.1	ug/Kg	✳	11/24/21 10:53	12/03/21 18:06	1
Dibromomethane	ND	H	25	3.3	ug/Kg	✳	11/24/21 10:53	12/03/21 18:06	1
Dichlorodifluoromethane	ND	H	25	4.7	ug/Kg	✳	11/24/21 10:53	12/03/21 18:06	1
Ethylbenzene	ND	H	25	3.3	ug/Kg	✳	11/24/21 10:53	12/03/21 18:06	1
Hexachlorobutadiene	ND	H	25	2.6	ug/Kg	✳	11/24/21 10:53	12/03/21 18:06	1
Isopropylbenzene	ND	H	25	1.8	ug/Kg	✳	11/24/21 10:53	12/03/21 18:06	1
Methyl tert-butyl ether	ND	H	50	1.8	ug/Kg	✳	11/24/21 10:53	12/03/21 18:06	1
Methylene Chloride	ND	H	25	2.7	ug/Kg	✳	11/24/21 10:53	12/03/21 18:06	1
m-Xylene & p-Xylene	4.1	J H	25	2.5	ug/Kg	✳	11/24/21 10:53	12/03/21 18:06	1
Naphthalene	ND	H	25	0.91	ug/Kg	✳	11/24/21 10:53	12/03/21 18:06	1
n-Butylbenzene	ND	H	25	1.6	ug/Kg	✳	11/24/21 10:53	12/03/21 18:06	1
N-Propylbenzene	ND	H	25	2.4	ug/Kg	✳	11/24/21 10:53	12/03/21 18:06	1
o-Xylene	ND	H	25	2.6	ug/Kg	✳	11/24/21 10:53	12/03/21 18:06	1
sec-Butylbenzene	ND	H	25	1.2	ug/Kg	✳	11/24/21 10:53	12/03/21 18:06	1
Styrene	ND	H	25	0.55	ug/Kg	✳	11/24/21 10:53	12/03/21 18:06	1
tert-Butylbenzene	ND	H	25	2.1	ug/Kg	✳	11/24/21 10:53	12/03/21 18:06	1
Tetrachloroethene	ND	H	25	2.1	ug/Kg	✳	11/24/21 10:53	12/03/21 18:06	1
Toluene	6.0	J H	25	2.3	ug/Kg	✳	11/24/21 10:53	12/03/21 18:06	1
trans-1,2-Dichloroethene	ND	H	25	3.1	ug/Kg	✳	11/24/21 10:53	12/03/21 18:06	1
trans-1,3-Dichloropropene	ND	H	25	1.4	ug/Kg	✳	11/24/21 10:53	12/03/21 18:06	1
Trichlorofluoromethane	ND	H	25	6.1	ug/Kg	✳	11/24/21 10:53	12/03/21 18:06	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	113		52 - 126	11/24/21 10:53	12/03/21 18:06	1
4-Bromofluorobenzene (Surr)	106		67 - 135	11/24/21 10:53	12/03/21 18:06	1
Dibromofluoromethane (Surr)	107		61 - 123	11/24/21 10:53	12/03/21 18:06	1
Toluene-d8 (Surr)	115		65 - 131	11/24/21 10:53	12/03/21 18:06	1

Method: AK101 - Alaska - Gasoline Range Organics (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
C6-C10 AK	ND		2.5	0.50	mg/Kg	✳	11/24/21 10:53	12/03/21 18:06	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	106		60 - 120	11/24/21 10:53	12/03/21 18:06	1
Trifluorotoluene (Surr)	77		60 - 120	11/24/21 10:53	12/03/21 18:06	1

Method: 8011 - EDB, DBCP, and 1,2,3-TCP (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ethylene Dibromide	ND	H	0.27	0.041	ug/Kg	✳	12/03/21 13:26	12/04/21 03:56	1
1,2,3-Trichloropropane	ND	H	0.27	0.15	ug/Kg	✳	12/03/21 13:26	12/04/21 03:56	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dibromopropane	113		55 - 130	12/03/21 13:26	12/04/21 03:56	1

Method: AK102 - DRO

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
DRO (nC10-<nC25)	1.5	J B	2.1	0.53	mg/Kg	✳	11/24/21 09:17	12/11/21 19:43	1

Eurofins TestAmerica, Sacramento

Client Sample Results

Client: Shannon & Wilson, Inc
 Project/Site: Kodiak DOT&PF PFAS (107471)

Job ID: 320-82154-1

Client Sample ID: ADQ-Site35-10

Lab Sample ID: 320-82154-10

Date Collected: 11/13/21 12:53

Matrix: Solid

Date Received: 11/23/21 16:45

Percent Solids: 93.1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
<i>o</i> -Terphenyl (Surr)	70		60 - 120	11/24/21 09:17	12/11/21 19:43	1
<i>n</i> -Triacontane-d62	75		60 - 120	11/24/21 09:17	12/11/21 19:43	1

Method: EPA 537(Mod) - PFAS for QSM 5.3, Table B-15

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorohexanoic acid (PFHxA)	ND		0.20	0.031	ug/Kg	☆	11/24/21 18:30	11/29/21 06:56	1
Perfluoroheptanoic acid (PFHpA)	ND		0.20	0.038	ug/Kg	☆	11/24/21 18:30	11/29/21 06:56	1
Perfluorooctanoic acid (PFOA)	0.055	J	0.20	0.053	ug/Kg	☆	11/24/21 18:30	11/29/21 06:56	1
Perfluorononanoic acid (PFNA)	ND		0.20	0.022	ug/Kg	☆	11/24/21 18:30	11/29/21 06:56	1
Perfluorodecanoic acid (PFDA)	ND		0.20	0.048	ug/Kg	☆	11/24/21 18:30	11/29/21 06:56	1
Perfluoroundecanoic acid (PFUnA)	ND		0.20	0.042	ug/Kg	☆	11/24/21 18:30	11/29/21 06:56	1
Perfluorododecanoic acid (PFDoA)	ND		0.20	0.030	ug/Kg	☆	11/24/21 18:30	11/29/21 06:56	1
Perfluorotridecanoic acid (PFTrDA)	ND		0.20	0.021	ug/Kg	☆	11/24/21 18:30	11/29/21 06:56	1
Perfluorotetradecanoic acid (PFTeA)	ND		0.20	0.037	ug/Kg	☆	11/24/21 18:30	11/29/21 06:56	1
Perfluorobutanesulfonic acid (PFBS)	ND		0.20	0.038	ug/Kg	☆	11/24/21 18:30	11/29/21 06:56	1
Perfluorohexanesulfonic acid (PFHxS)	ND		0.20	0.029	ug/Kg	☆	11/24/21 18:30	11/29/21 06:56	1
Perfluorooctanesulfonic acid (PFOS)	0.070	J I	0.20	0.043	ug/Kg	☆	11/24/21 18:30	11/29/21 06:56	1
NEtFOSAA	ND		0.20	0.048	ug/Kg	☆	11/24/21 18:30	11/29/21 06:56	1
NMeFOSAA	ND		0.20	0.023	ug/Kg	☆	11/24/21 18:30	11/29/21 06:56	1
HFPO-DA (GenX)	ND		0.20	0.041	ug/Kg	☆	11/24/21 18:30	11/29/21 06:56	1
9CI-PF3ONS	ND		0.20	0.035	ug/Kg	☆	11/24/21 18:30	11/29/21 06:56	1
11CI-PF3OUdS	ND		0.20	0.031	ug/Kg	☆	11/24/21 18:30	11/29/21 06:56	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	ND		0.20	0.039	ug/Kg	☆	11/24/21 18:30	11/29/21 06:56	1

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C2 PFHxA	107		50 - 150	11/24/21 18:30	11/29/21 06:56	1
13C4 PFHpA	113		50 - 150	11/24/21 18:30	11/29/21 06:56	1
13C4 PFOA	114		50 - 150	11/24/21 18:30	11/29/21 06:56	1
13C5 PFNA	110		50 - 150	11/24/21 18:30	11/29/21 06:56	1
13C2 PFDA	112		50 - 150	11/24/21 18:30	11/29/21 06:56	1
13C2 PFUnA	123		50 - 150	11/24/21 18:30	11/29/21 06:56	1
13C2 PFDoA	124		50 - 150	11/24/21 18:30	11/29/21 06:56	1
13C2 PFTeDA	125		50 - 150	11/24/21 18:30	11/29/21 06:56	1
13C3 PFBS	127		50 - 150	11/24/21 18:30	11/29/21 06:56	1
18O2 PFHxS	101		50 - 150	11/24/21 18:30	11/29/21 06:56	1
13C4 PFOS	119		50 - 150	11/24/21 18:30	11/29/21 06:56	1
d3-NMeFOSAA	136		50 - 150	11/24/21 18:30	11/29/21 06:56	1
d5-NEtFOSAA	138		50 - 150	11/24/21 18:30	11/29/21 06:56	1
13C3 HFPO-DA	101		50 - 150	11/24/21 18:30	11/29/21 06:56	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	6.9		0.1	0.1	%			11/24/21 16:05	1
Percent Solids	93.1		0.1	0.1	%			11/24/21 16:05	1

Client Sample Results

Client: Shannon & Wilson, Inc
 Project/Site: Kodiak DOT&PF PFAS (107471)

Job ID: 320-82154-1

Client Sample ID: ADQ-Site35-11

Lab Sample ID: 320-82154-11

Date Collected: 11/13/21 12:28

Matrix: Solid

Date Received: 11/23/21 16:45

Percent Solids: 64.3

Method: 8260C SIM - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,2,2-Tetrachloroethane	ND	H	5.6	1.3	ug/Kg	☼	11/24/21 10:53	11/30/21 15:50	1
1,1,2-Trichloroethane	ND	H	5.6	1.9	ug/Kg	☼	11/24/21 10:53	11/30/21 15:50	1
1,2-Dichloroethane	ND	H	5.6	0.95	ug/Kg	☼	11/24/21 10:53	11/30/21 15:50	1
Bromomethane	ND	H	11	3.7	ug/Kg	☼	11/24/21 10:53	11/30/21 15:50	1
Chlorodibromomethane	ND	H	5.6	0.90	ug/Kg	☼	11/24/21 10:53	11/30/21 15:50	1
Chloroform	ND	H	11	4.5	ug/Kg	☼	11/24/21 10:53	11/30/21 15:50	1
Dichlorobromomethane	ND	H	5.6	0.74	ug/Kg	☼	11/24/21 10:53	11/30/21 15:50	1
Ethylene Dibromide	ND	H	5.6	0.91	ug/Kg	☼	11/24/21 10:53	11/30/21 15:50	1
Trichloroethene	ND	H	5.6	1.1	ug/Kg	☼	11/24/21 10:53	11/30/21 15:50	1
Vinyl chloride	ND	H	5.6	1.4	ug/Kg	☼	11/24/21 10:53	11/30/21 15:50	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	83		69 - 129	11/24/21 10:53	11/30/21 15:50	1
Dibromofluoromethane (Surr)	118		72 - 132	11/24/21 10:53	11/30/21 15:50	1
1,2-Dichloroethane-d4 (Surr)	119		72 - 132	11/24/21 10:53	11/30/21 15:50	1
Toluene-d8 (Surr)	106		78 - 138	11/24/21 10:53	11/30/21 15:50	1

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND	H	110	13	ug/Kg	☼	11/24/21 10:53	12/03/21 18:29	1
1,1,1-Trichloroethane	ND	H	110	8.3	ug/Kg	☼	11/24/21 10:53	12/03/21 18:29	1
1,1-Dichloroethane	ND	H	110	6.1	ug/Kg	☼	11/24/21 10:53	12/03/21 18:29	1
1,1-Dichloroethene	ND	H	110	11	ug/Kg	☼	11/24/21 10:53	12/03/21 18:29	1
1,1-Dichloropropene	ND	H	110	9.7	ug/Kg	☼	11/24/21 10:53	12/03/21 18:29	1
1,2,3-Trichlorobenzene	ND	H	110	14	ug/Kg	☼	11/24/21 10:53	12/03/21 18:29	1
1,2,3-Trichloropropane	ND	H	110	11	ug/Kg	☼	11/24/21 10:53	12/03/21 18:29	1
1,2,4-Trichlorobenzene	ND	H	110	7.7	ug/Kg	☼	11/24/21 10:53	12/03/21 18:29	1
1,2,4-Trimethylbenzene	ND	H	110	7.9	ug/Kg	☼	11/24/21 10:53	12/03/21 18:29	1
1,2-Dibromo-3-Chloropropane	ND	H	230	14	ug/Kg	☼	11/24/21 10:53	12/03/21 18:29	1
1,2-Dichlorobenzene	ND	H	110	5.0	ug/Kg	☼	11/24/21 10:53	12/03/21 18:29	1
1,2-Dichloropropane	ND	H	110	11	ug/Kg	☼	11/24/21 10:53	12/03/21 18:29	1
1,3,5-Trimethylbenzene	ND	H	110	7.9	ug/Kg	☼	11/24/21 10:53	12/03/21 18:29	1
1,3-Dichlorobenzene	ND	H	110	7.4	ug/Kg	☼	11/24/21 10:53	12/03/21 18:29	1
1,3-Dichloropropane	ND	H	110	5.2	ug/Kg	☼	11/24/21 10:53	12/03/21 18:29	1
1,4-Dichlorobenzene	ND	H	110	5.0	ug/Kg	☼	11/24/21 10:53	12/03/21 18:29	1
2,2-Dichloropropane	ND	H	110	9.7	ug/Kg	☼	11/24/21 10:53	12/03/21 18:29	1
2-Butanone (MEK)	ND	H	230	59	ug/Kg	☼	11/24/21 10:53	12/03/21 18:29	1
2-Chlorotoluene	ND	H	110	8.1	ug/Kg	☼	11/24/21 10:53	12/03/21 18:29	1
2-Hexanone	ND	H	230	12	ug/Kg	☼	11/24/21 10:53	12/03/21 18:29	1
4-Chlorotoluene	ND	H	110	6.3	ug/Kg	☼	11/24/21 10:53	12/03/21 18:29	1
4-Methyl-2-pentanone (MIBK)	ND	H	230	7.0	ug/Kg	☼	11/24/21 10:53	12/03/21 18:29	1
p-Isopropyltoluene	ND	H	110	3.6	ug/Kg	☼	11/24/21 10:53	12/03/21 18:29	1
Acetone	ND	H	1100	110	ug/Kg	☼	11/24/21 10:53	12/03/21 18:29	1
Benzene	ND	H	110	7.4	ug/Kg	☼	11/24/21 10:53	12/03/21 18:29	1
Bromoform	ND	H	110	25	ug/Kg	☼	11/24/21 10:53	12/03/21 18:29	1
Bromobenzene	ND	H	110	13	ug/Kg	☼	11/24/21 10:53	12/03/21 18:29	1
Carbon disulfide	ND	H	230	7.9	ug/Kg	☼	11/24/21 10:53	12/03/21 18:29	1
Carbon tetrachloride	ND	H	110	7.9	ug/Kg	☼	11/24/21 10:53	12/03/21 18:29	1
Chlorobenzene	ND	H	110	9.9	ug/Kg	☼	11/24/21 10:53	12/03/21 18:29	1
Chlorobromomethane	ND	H	110	16	ug/Kg	☼	11/24/21 10:53	12/03/21 18:29	1

Eurofins TestAmerica, Sacramento

Client Sample Results

Client: Shannon & Wilson, Inc
Project/Site: Kodiak DOT&PF PFAS (107471)

Job ID: 320-82154-1

Client Sample ID: ADQ-Site35-11

Lab Sample ID: 320-82154-11

Date Collected: 11/13/21 12:28

Matrix: Solid

Date Received: 11/23/21 16:45

Percent Solids: 64.3

Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloroethane	ND	H	110	15	ug/Kg	☼	11/24/21 10:53	12/03/21 18:29	1
Chloromethane	ND	H	110	5.6	ug/Kg	☼	11/24/21 10:53	12/03/21 18:29	1
cis-1,2-Dichloroethene	ND	H	110	18	ug/Kg	☼	11/24/21 10:53	12/03/21 18:29	1
cis-1,3-Dichloropropene	ND	H	110	9.2	ug/Kg	☼	11/24/21 10:53	12/03/21 18:29	1
Dibromomethane	ND	H	110	15	ug/Kg	☼	11/24/21 10:53	12/03/21 18:29	1
Dichlorodifluoromethane	ND	H	110	21	ug/Kg	☼	11/24/21 10:53	12/03/21 18:29	1
Ethylbenzene	ND	H	110	15	ug/Kg	☼	11/24/21 10:53	12/03/21 18:29	1
Hexachlorobutadiene	ND	H	110	12	ug/Kg	☼	11/24/21 10:53	12/03/21 18:29	1
Isopropylbenzene	ND	H	110	7.9	ug/Kg	☼	11/24/21 10:53	12/03/21 18:29	1
Methyl tert-butyl ether	ND	H	230	8.1	ug/Kg	☼	11/24/21 10:53	12/03/21 18:29	1
Methylene Chloride	ND	H	110	12	ug/Kg	☼	11/24/21 10:53	12/03/21 18:29	1
m-Xylene & p-Xylene	ND	H	110	11	ug/Kg	☼	11/24/21 10:53	12/03/21 18:29	1
Naphthalene	ND	H	110	4.1	ug/Kg	☼	11/24/21 10:53	12/03/21 18:29	1
n-Butylbenzene	ND	H	110	7.0	ug/Kg	☼	11/24/21 10:53	12/03/21 18:29	1
N-Propylbenzene	ND	H	110	11	ug/Kg	☼	11/24/21 10:53	12/03/21 18:29	1
o-Xylene	ND	H	110	12	ug/Kg	☼	11/24/21 10:53	12/03/21 18:29	1
sec-Butylbenzene	ND	H	110	5.4	ug/Kg	☼	11/24/21 10:53	12/03/21 18:29	1
Styrene	ND	H	110	2.5	ug/Kg	☼	11/24/21 10:53	12/03/21 18:29	1
tert-Butylbenzene	ND	H	110	9.2	ug/Kg	☼	11/24/21 10:53	12/03/21 18:29	1
Tetrachloroethene	ND	H	110	9.5	ug/Kg	☼	11/24/21 10:53	12/03/21 18:29	1
Toluene	13	J H	110	10	ug/Kg	☼	11/24/21 10:53	12/03/21 18:29	1
trans-1,2-Dichloroethene	ND	H	110	14	ug/Kg	☼	11/24/21 10:53	12/03/21 18:29	1
trans-1,3-Dichloropropene	ND	H	110	6.3	ug/Kg	☼	11/24/21 10:53	12/03/21 18:29	1
Trichlorofluoromethane	ND	H	110	27	ug/Kg	☼	11/24/21 10:53	12/03/21 18:29	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	107		52 - 126	11/24/21 10:53	12/03/21 18:29	1
4-Bromofluorobenzene (Surr)	104		67 - 135	11/24/21 10:53	12/03/21 18:29	1
Dibromofluoromethane (Surr)	103		61 - 123	11/24/21 10:53	12/03/21 18:29	1
Toluene-d8 (Surr)	110		65 - 131	11/24/21 10:53	12/03/21 18:29	1

Method: AK101 - Alaska - Gasoline Range Organics (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
C6-C10 AK	ND		11	2.3	mg/Kg	☼	11/24/21 10:53	12/03/21 18:29	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	104		60 - 120	11/24/21 10:53	12/03/21 18:29	1
Trifluorotoluene (Surr)	76		60 - 120	11/24/21 10:53	12/03/21 18:29	1

Method: 8011 - EDB, DBCP, and 1,2,3-TCP (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ethylene Dibromide	ND	H	0.39	0.059	ug/Kg	☼	12/03/21 13:26	12/04/21 04:45	1
1,2,3-Trichloropropane	ND	H	0.39	0.21	ug/Kg	☼	12/03/21 13:26	12/04/21 04:45	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dibromopropane	114		55 - 130	12/03/21 13:26	12/04/21 04:45	1

Method: AK102 - DRO

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
DRO (nC10-<nC25)	6.9	J B	15	3.8	mg/Kg	☼	11/24/21 09:17	12/11/21 20:55	5

Eurofins TestAmerica, Sacramento

Client Sample Results

Client: Shannon & Wilson, Inc
 Project/Site: Kodiak DOT&PF PFAS (107471)

Job ID: 320-82154-1

Client Sample ID: ADQ-Site35-11

Lab Sample ID: 320-82154-11

Date Collected: 11/13/21 12:28

Matrix: Solid

Date Received: 11/23/21 16:45

Percent Solids: 64.3

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
<i>o</i> -Terphenyl (Surr)	56	S1-	60 - 120	11/24/21 09:17	12/11/21 20:55	5
<i>n</i> -Triacontane-d62	81		60 - 120	11/24/21 09:17	12/11/21 20:55	5

Method: EPA 537(Mod) - PFAS for QSM 5.3, Table B-15

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorohexanoic acid (PFHxA)	ND		0.28	0.044	ug/Kg	☆	11/24/21 18:30	11/29/21 07:07	1
Perfluoroheptanoic acid (PFHpA)	ND		0.28	0.054	ug/Kg	☆	11/24/21 18:30	11/29/21 07:07	1
Perfluorooctanoic acid (PFOA)	0.40		0.28	0.075	ug/Kg	☆	11/24/21 18:30	11/29/21 07:07	1
Perfluorononanoic acid (PFNA)	ND		0.28	0.031	ug/Kg	☆	11/24/21 18:30	11/29/21 07:07	1
Perfluorodecanoic acid (PFDA)	ND		0.28	0.068	ug/Kg	☆	11/24/21 18:30	11/29/21 07:07	1
Perfluoroundecanoic acid (PFUnA)	ND		0.28	0.059	ug/Kg	☆	11/24/21 18:30	11/29/21 07:07	1
Perfluorododecanoic acid (PFDoA)	0.052	J	0.28	0.042	ug/Kg	☆	11/24/21 18:30	11/29/21 07:07	1
Perfluorotridecanoic acid (PFTriDA)	ND		0.28	0.030	ug/Kg	☆	11/24/21 18:30	11/29/21 07:07	1
Perfluorotetradecanoic acid (PFTeA)	ND		0.28	0.052	ug/Kg	☆	11/24/21 18:30	11/29/21 07:07	1
Perfluorobutanesulfonic acid (PFBS)	ND		0.28	0.054	ug/Kg	☆	11/24/21 18:30	11/29/21 07:07	1
Perfluorohexanesulfonic acid (PFHxS)	0.093	J	0.28	0.041	ug/Kg	☆	11/24/21 18:30	11/29/21 07:07	1
Perfluorooctanesulfonic acid (PFOS)	1.1		0.28	0.061	ug/Kg	☆	11/24/21 18:30	11/29/21 07:07	1
NEtFOSAA	ND		0.28	0.068	ug/Kg	☆	11/24/21 18:30	11/29/21 07:07	1
NMeFOSAA	ND		0.28	0.033	ug/Kg	☆	11/24/21 18:30	11/29/21 07:07	1
HFPO-DA (GenX)	ND		0.28	0.058	ug/Kg	☆	11/24/21 18:30	11/29/21 07:07	1
9Cl-PF3ONS	ND		0.28	0.050	ug/Kg	☆	11/24/21 18:30	11/29/21 07:07	1
11Cl-PF3OUdS	ND		0.28	0.044	ug/Kg	☆	11/24/21 18:30	11/29/21 07:07	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	ND		0.28	0.055	ug/Kg	☆	11/24/21 18:30	11/29/21 07:07	1

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C2 PFHxA	124		50 - 150	11/24/21 18:30	11/29/21 07:07	1
13C4 PFHpA	134		50 - 150	11/24/21 18:30	11/29/21 07:07	1
13C4 PFOA	136		50 - 150	11/24/21 18:30	11/29/21 07:07	1
13C5 PFNA	139		50 - 150	11/24/21 18:30	11/29/21 07:07	1
13C2 PFDA	138		50 - 150	11/24/21 18:30	11/29/21 07:07	1
13C2 PFUnA	147		50 - 150	11/24/21 18:30	11/29/21 07:07	1
13C2 PFDoA	139		50 - 150	11/24/21 18:30	11/29/21 07:07	1
13C2 PFTeDA	130		50 - 150	11/24/21 18:30	11/29/21 07:07	1
13C3 PFBS	157	*5+	50 - 150	11/24/21 18:30	11/29/21 07:07	1
18O2 PFHxS	130		50 - 150	11/24/21 18:30	11/29/21 07:07	1
13C4 PFOS	141		50 - 150	11/24/21 18:30	11/29/21 07:07	1
d3-NMeFOSAA	172	*5+	50 - 150	11/24/21 18:30	11/29/21 07:07	1
d5-NEtFOSAA	182	*5+	50 - 150	11/24/21 18:30	11/29/21 07:07	1
13C3 HFPO-DA	116		50 - 150	11/24/21 18:30	11/29/21 07:07	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	35.7		0.1	0.1	%			11/24/21 16:05	1
Percent Solids	64.3		0.1	0.1	%			11/24/21 16:05	1

Client Sample Results

Client: Shannon & Wilson, Inc
 Project/Site: Kodiak DOT&PF PFAS (107471)

Job ID: 320-82154-1

Client Sample ID: ADQ-Site35-12

Lab Sample ID: 320-82154-12

Date Collected: 11/13/21 11:50

Matrix: Solid

Date Received: 11/23/21 16:45

Percent Solids: 82.6

Method: 8260C SIM - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND	H	1.8	0.41	ug/Kg	☼	11/24/21 10:53	11/30/21 16:14	1
1,1,2-Trichloroethane	ND	H	1.8	0.61	ug/Kg	☼	11/24/21 10:53	11/30/21 16:14	1
1,2-Dichloroethane	ND	H	1.8	0.31	ug/Kg	☼	11/24/21 10:53	11/30/21 16:14	1
Bromomethane	ND	H	3.7	1.2	ug/Kg	☼	11/24/21 10:53	11/30/21 16:14	1
Chlorodibromomethane	ND	H	1.8	0.29	ug/Kg	☼	11/24/21 10:53	11/30/21 16:14	1
Chloroform	ND	H	3.7	1.5	ug/Kg	☼	11/24/21 10:53	11/30/21 16:14	1
Dichlorobromomethane	ND	H	1.8	0.24	ug/Kg	☼	11/24/21 10:53	11/30/21 16:14	1
Ethylene Dibromide	ND	H	1.8	0.29	ug/Kg	☼	11/24/21 10:53	11/30/21 16:14	1
Trichloroethene	ND	H	1.8	0.36	ug/Kg	☼	11/24/21 10:53	11/30/21 16:14	1
Vinyl chloride	ND	H	1.8	0.46	ug/Kg	☼	11/24/21 10:53	11/30/21 16:14	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	86		69 - 129	11/24/21 10:53	11/30/21 16:14	1
Dibromofluoromethane (Surr)	122		72 - 132	11/24/21 10:53	11/30/21 16:14	1
1,2-Dichloroethane-d4 (Surr)	124		72 - 132	11/24/21 10:53	11/30/21 16:14	1
Toluene-d8 (Surr)	109		78 - 138	11/24/21 10:53	11/30/21 16:14	1

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND	H	37	4.3	ug/Kg	☼	11/24/21 10:53	12/03/21 18:52	1
1,1,1-Trichloroethane	ND	H	37	2.7	ug/Kg	☼	11/24/21 10:53	12/03/21 18:52	1
1,1-Dichloroethane	ND	H	37	2.0	ug/Kg	☼	11/24/21 10:53	12/03/21 18:52	1
1,1-Dichloroethene	ND	H	37	3.4	ug/Kg	☼	11/24/21 10:53	12/03/21 18:52	1
1,1-Dichloropropene	ND	H	37	3.2	ug/Kg	☼	11/24/21 10:53	12/03/21 18:52	1
1,2,3-Trichlorobenzene	ND	H	37	4.5	ug/Kg	☼	11/24/21 10:53	12/03/21 18:52	1
1,2,3-Trichloropropane	ND	H	37	3.4	ug/Kg	☼	11/24/21 10:53	12/03/21 18:52	1
1,2,4-Trichlorobenzene	ND	H	37	2.5	ug/Kg	☼	11/24/21 10:53	12/03/21 18:52	1
1,2,4-Trimethylbenzene	ND	H	37	2.6	ug/Kg	☼	11/24/21 10:53	12/03/21 18:52	1
1,2-Dibromo-3-Chloropropane	ND	H	73	4.6	ug/Kg	☼	11/24/21 10:53	12/03/21 18:52	1
1,2-Dichlorobenzene	ND	H	37	1.6	ug/Kg	☼	11/24/21 10:53	12/03/21 18:52	1
1,2-Dichloropropane	ND	H	37	3.4	ug/Kg	☼	11/24/21 10:53	12/03/21 18:52	1
1,3,5-Trimethylbenzene	ND	H	37	2.6	ug/Kg	☼	11/24/21 10:53	12/03/21 18:52	1
1,3-Dichlorobenzene	ND	H	37	2.4	ug/Kg	☼	11/24/21 10:53	12/03/21 18:52	1
1,3-Dichloropropane	ND	H	37	1.7	ug/Kg	☼	11/24/21 10:53	12/03/21 18:52	1
1,4-Dichlorobenzene	ND	H	37	1.6	ug/Kg	☼	11/24/21 10:53	12/03/21 18:52	1
2,2-Dichloropropane	ND	H	37	3.2	ug/Kg	☼	11/24/21 10:53	12/03/21 18:52	1
2-Butanone (MEK)	ND	H	73	19	ug/Kg	☼	11/24/21 10:53	12/03/21 18:52	1
2-Chlorotoluene	ND	H	37	2.6	ug/Kg	☼	11/24/21 10:53	12/03/21 18:52	1
2-Hexanone	ND	H	73	3.8	ug/Kg	☼	11/24/21 10:53	12/03/21 18:52	1
4-Chlorotoluene	ND	H	37	2.1	ug/Kg	☼	11/24/21 10:53	12/03/21 18:52	1
4-Methyl-2-pentanone (MIBK)	ND	H	73	2.3	ug/Kg	☼	11/24/21 10:53	12/03/21 18:52	1
p-Isopropyltoluene	ND	H	37	1.2	ug/Kg	☼	11/24/21 10:53	12/03/21 18:52	1
Acetone	ND	H	370	37	ug/Kg	☼	11/24/21 10:53	12/03/21 18:52	1
Benzene	ND	H	37	2.4	ug/Kg	☼	11/24/21 10:53	12/03/21 18:52	1
Bromoform	ND	H	37	8.1	ug/Kg	☼	11/24/21 10:53	12/03/21 18:52	1
Bromobenzene	ND	H	37	4.1	ug/Kg	☼	11/24/21 10:53	12/03/21 18:52	1
Carbon disulfide	ND	H	73	2.6	ug/Kg	☼	11/24/21 10:53	12/03/21 18:52	1
Carbon tetrachloride	ND	H	37	2.6	ug/Kg	☼	11/24/21 10:53	12/03/21 18:52	1
Chlorobenzene	ND	H	37	3.2	ug/Kg	☼	11/24/21 10:53	12/03/21 18:52	1
Chlorobromomethane	ND	H	37	5.4	ug/Kg	☼	11/24/21 10:53	12/03/21 18:52	1

Eurofins TestAmerica, Sacramento

Client Sample Results

Client: Shannon & Wilson, Inc
Project/Site: Kodiak DOT&PF PFAS (107471)

Job ID: 320-82154-1

Client Sample ID: ADQ-Site35-12

Lab Sample ID: 320-82154-12

Date Collected: 11/13/21 11:50

Matrix: Solid

Date Received: 11/23/21 16:45

Percent Solids: 82.6

Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloroethane	ND	H	37	4.8	ug/Kg	✳	11/24/21 10:53	12/03/21 18:52	1
Chloromethane	ND	H	37	1.8	ug/Kg	✳	11/24/21 10:53	12/03/21 18:52	1
cis-1,2-Dichloroethene	ND	H	37	6.0	ug/Kg	✳	11/24/21 10:53	12/03/21 18:52	1
cis-1,3-Dichloropropene	ND	H	37	3.0	ug/Kg	✳	11/24/21 10:53	12/03/21 18:52	1
Dibromomethane	ND	H	37	4.8	ug/Kg	✳	11/24/21 10:53	12/03/21 18:52	1
Dichlorodifluoromethane	ND	H	37	6.9	ug/Kg	✳	11/24/21 10:53	12/03/21 18:52	1
Ethylbenzene	ND	H	37	4.8	ug/Kg	✳	11/24/21 10:53	12/03/21 18:52	1
Hexachlorobutadiene	ND	H	37	3.7	ug/Kg	✳	11/24/21 10:53	12/03/21 18:52	1
Isopropylbenzene	ND	H	37	2.6	ug/Kg	✳	11/24/21 10:53	12/03/21 18:52	1
Methyl tert-butyl ether	ND	H	73	2.6	ug/Kg	✳	11/24/21 10:53	12/03/21 18:52	1
Methylene Chloride	ND	H	37	4.0	ug/Kg	✳	11/24/21 10:53	12/03/21 18:52	1
m-Xylene & p-Xylene	4.2	J H	37	3.7	ug/Kg	✳	11/24/21 10:53	12/03/21 18:52	1
Naphthalene	ND	H	37	1.3	ug/Kg	✳	11/24/21 10:53	12/03/21 18:52	1
n-Butylbenzene	ND	H	37	2.3	ug/Kg	✳	11/24/21 10:53	12/03/21 18:52	1
N-Propylbenzene	ND	H	37	3.4	ug/Kg	✳	11/24/21 10:53	12/03/21 18:52	1
o-Xylene	ND	H	37	3.8	ug/Kg	✳	11/24/21 10:53	12/03/21 18:52	1
sec-Butylbenzene	ND	H	37	1.8	ug/Kg	✳	11/24/21 10:53	12/03/21 18:52	1
Styrene	ND	H	37	0.81	ug/Kg	✳	11/24/21 10:53	12/03/21 18:52	1
tert-Butylbenzene	ND	H	37	3.0	ug/Kg	✳	11/24/21 10:53	12/03/21 18:52	1
Tetrachloroethene	ND	H	37	3.1	ug/Kg	✳	11/24/21 10:53	12/03/21 18:52	1
Toluene	6.4	J H	37	3.3	ug/Kg	✳	11/24/21 10:53	12/03/21 18:52	1
trans-1,2-Dichloroethene	ND	H	37	4.5	ug/Kg	✳	11/24/21 10:53	12/03/21 18:52	1
trans-1,3-Dichloropropene	ND	H	37	2.1	ug/Kg	✳	11/24/21 10:53	12/03/21 18:52	1
Trichlorofluoromethane	ND	H	37	8.8	ug/Kg	✳	11/24/21 10:53	12/03/21 18:52	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	107		52 - 126	11/24/21 10:53	12/03/21 18:52	1
4-Bromofluorobenzene (Surr)	104		67 - 135	11/24/21 10:53	12/03/21 18:52	1
Dibromofluoromethane (Surr)	101		61 - 123	11/24/21 10:53	12/03/21 18:52	1
Toluene-d8 (Surr)	109		65 - 131	11/24/21 10:53	12/03/21 18:52	1

Method: AK101 - Alaska - Gasoline Range Organics (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
C6-C10 AK	ND		3.7	0.73	mg/Kg	✳	11/24/21 10:53	12/03/21 18:52	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	104		60 - 120	11/24/21 10:53	12/03/21 18:52	1
Trifluorotoluene (Surr)	85		60 - 120	11/24/21 10:53	12/03/21 18:52	1

Method: 8011 - EDB, DBCP, and 1,2,3-TCP (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ethylene Dibromide	0.18	J H	0.31	0.046	ug/Kg	✳	12/03/21 13:26	12/04/21 05:09	1
1,2,3-Trichloropropane	ND	H	0.31	0.17	ug/Kg	✳	12/03/21 13:26	12/04/21 05:09	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dibromopropane	119		55 - 130	12/03/21 13:26	12/04/21 05:09	1

Method: AK102 - DRO

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
DRO (nC10-<nC25)	8.5	J B	12	3.0	mg/Kg	✳	11/24/21 09:17	12/11/21 21:18	5

Eurofins TestAmerica, Sacramento

Client Sample Results

Client: Shannon & Wilson, Inc
 Project/Site: Kodiak DOT&PF PFAS (107471)

Job ID: 320-82154-1

Client Sample ID: ADQ-Site35-12

Lab Sample ID: 320-82154-12

Date Collected: 11/13/21 11:50

Matrix: Solid

Date Received: 11/23/21 16:45

Percent Solids: 82.6

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
<i>o</i> -Terphenyl (Surr)	68		60 - 120	11/24/21 09:17	12/11/21 21:18	5
<i>n</i> -Triacontane-d62	85		60 - 120	11/24/21 09:17	12/11/21 21:18	5

Method: EPA 537(Mod) - PFAS for QSM 5.3, Table B-15

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorohexanoic acid (PFHxA)	0.13	J	0.23	0.036	ug/Kg	☼	11/24/21 18:30	11/29/21 07:17	1
Perfluoroheptanoic acid (PFHpA)	ND		0.23	0.044	ug/Kg	☼	11/24/21 18:30	11/29/21 07:17	1
Perfluorooctanoic acid (PFOA)	1.6		0.23	0.061	ug/Kg	☼	11/24/21 18:30	11/29/21 07:17	1
Perfluorononanoic acid (PFNA)	0.049	J	0.23	0.025	ug/Kg	☼	11/24/21 18:30	11/29/21 07:17	1
Perfluorodecanoic acid (PFDA)	0.13	J	0.23	0.055	ug/Kg	☼	11/24/21 18:30	11/29/21 07:17	1
Perfluoroundecanoic acid (PFUnA)	0.25		0.23	0.048	ug/Kg	☼	11/24/21 18:30	11/29/21 07:17	1
Perfluorododecanoic acid (PFDoA)	0.10	J	0.23	0.034	ug/Kg	☼	11/24/21 18:30	11/29/21 07:17	1
Perfluorotridecanoic acid (PFTrDA)	ND		0.23	0.024	ug/Kg	☼	11/24/21 18:30	11/29/21 07:17	1
Perfluorotetradecanoic acid (PFTeA)	ND		0.23	0.042	ug/Kg	☼	11/24/21 18:30	11/29/21 07:17	1
Perfluorobutanesulfonic acid (PFBS)	ND		0.23	0.044	ug/Kg	☼	11/24/21 18:30	11/29/21 07:17	1
Perfluorohexanesulfonic acid (PFHxS)	0.39		0.23	0.033	ug/Kg	☼	11/24/21 18:30	11/29/21 07:17	1
Perfluorooctanesulfonic acid (PFOS)	3.7		0.23	0.049	ug/Kg	☼	11/24/21 18:30	11/29/21 07:17	1
NEtFOSAA	ND		0.23	0.055	ug/Kg	☼	11/24/21 18:30	11/29/21 07:17	1
NMeFOSAA	ND		0.23	0.026	ug/Kg	☼	11/24/21 18:30	11/29/21 07:17	1
HFPO-DA (GenX)	ND		0.23	0.047	ug/Kg	☼	11/24/21 18:30	11/29/21 07:17	1
9Cl-PF3ONS	ND		0.23	0.040	ug/Kg	☼	11/24/21 18:30	11/29/21 07:17	1
11Cl-PF3OUdS	ND		0.23	0.036	ug/Kg	☼	11/24/21 18:30	11/29/21 07:17	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	ND		0.23	0.045	ug/Kg	☼	11/24/21 18:30	11/29/21 07:17	1

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C2 PFHxA	102		50 - 150	11/24/21 18:30	11/29/21 07:17	1
13C4 PFHpA	108		50 - 150	11/24/21 18:30	11/29/21 07:17	1
13C4 PFOA	123		50 - 150	11/24/21 18:30	11/29/21 07:17	1
13C5 PFNA	123		50 - 150	11/24/21 18:30	11/29/21 07:17	1
13C2 PFDA	132		50 - 150	11/24/21 18:30	11/29/21 07:17	1
13C2 PFUnA	128		50 - 150	11/24/21 18:30	11/29/21 07:17	1
13C2 PFDoA	124		50 - 150	11/24/21 18:30	11/29/21 07:17	1
13C2 PFTeDA	115		50 - 150	11/24/21 18:30	11/29/21 07:17	1
13C3 PFBS	129		50 - 150	11/24/21 18:30	11/29/21 07:17	1
18O2 PFHxS	111		50 - 150	11/24/21 18:30	11/29/21 07:17	1
13C4 PFOS	125		50 - 150	11/24/21 18:30	11/29/21 07:17	1
d3-NMeFOSAA	145		50 - 150	11/24/21 18:30	11/29/21 07:17	1
d5-NEtFOSAA	145		50 - 150	11/24/21 18:30	11/29/21 07:17	1
13C3 HFPO-DA	103		50 - 150	11/24/21 18:30	11/29/21 07:17	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	17.4		0.1	0.1	%			11/24/21 16:05	1
Percent Solids	82.6		0.1	0.1	%			11/24/21 16:05	1

Client Sample Results

Client: Shannon & Wilson, Inc
 Project/Site: Kodiak DOT&PF PFAS (107471)

Job ID: 320-82154-1

Client Sample ID: ADQ-Site35-13

Lab Sample ID: 320-82154-13

Date Collected: 11/13/21 12:57

Matrix: Solid

Date Received: 11/23/21 16:45

Percent Solids: 87.0

Method: 8260C SIM - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,2,2-Tetrachloroethane	ND	H	2.1	0.48	ug/Kg	☼	11/24/21 10:53	11/30/21 16:37	1
1,1,2-Trichloroethane	ND	H	2.1	0.71	ug/Kg	☼	11/24/21 10:53	11/30/21 16:37	1
1,2-Dichloroethane	ND	H	2.1	0.36	ug/Kg	☼	11/24/21 10:53	11/30/21 16:37	1
Bromomethane	ND	H	4.3	1.4	ug/Kg	☼	11/24/21 10:53	11/30/21 16:37	1
Chlorodibromomethane	ND	H	2.1	0.34	ug/Kg	☼	11/24/21 10:53	11/30/21 16:37	1
Chloroform	ND	H	4.3	1.7	ug/Kg	☼	11/24/21 10:53	11/30/21 16:37	1
Dichlorobromomethane	ND	H	2.1	0.28	ug/Kg	☼	11/24/21 10:53	11/30/21 16:37	1
Ethylene Dibromide	ND	H	2.1	0.34	ug/Kg	☼	11/24/21 10:53	11/30/21 16:37	1
Trichloroethene	ND	H	2.1	0.42	ug/Kg	☼	11/24/21 10:53	11/30/21 16:37	1
Vinyl chloride	ND	H	2.1	0.54	ug/Kg	☼	11/24/21 10:53	11/30/21 16:37	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	82		69 - 129	11/24/21 10:53	11/30/21 16:37	1
Dibromofluoromethane (Surr)	118		72 - 132	11/24/21 10:53	11/30/21 16:37	1
1,2-Dichloroethane-d4 (Surr)	116		72 - 132	11/24/21 10:53	11/30/21 16:37	1
Toluene-d8 (Surr)	106		78 - 138	11/24/21 10:53	11/30/21 16:37	1

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND	H	43	5.0	ug/Kg	☼	11/24/21 10:53	12/03/21 19:15	1
1,1,1-Trichloroethane	ND	H	43	3.2	ug/Kg	☼	11/24/21 10:53	12/03/21 19:15	1
1,1-Dichloroethane	ND	H	43	2.3	ug/Kg	☼	11/24/21 10:53	12/03/21 19:15	1
1,1-Dichloroethene	ND	H	43	4.0	ug/Kg	☼	11/24/21 10:53	12/03/21 19:15	1
1,1-Dichloropropene	ND	H	43	3.7	ug/Kg	☼	11/24/21 10:53	12/03/21 19:15	1
1,2,3-Trichlorobenzene	ND	H	43	5.3	ug/Kg	☼	11/24/21 10:53	12/03/21 19:15	1
1,2,3-Trichloropropane	ND	H	43	4.0	ug/Kg	☼	11/24/21 10:53	12/03/21 19:15	1
1,2,4-Trichlorobenzene	ND	H	43	2.9	ug/Kg	☼	11/24/21 10:53	12/03/21 19:15	1
1,2,4-Trimethylbenzene	16	J H	43	3.0	ug/Kg	☼	11/24/21 10:53	12/03/21 19:15	1
1,2-Dibromo-3-Chloropropane	ND	H	85	5.4	ug/Kg	☼	11/24/21 10:53	12/03/21 19:15	1
1,2-Dichlorobenzene	ND	H	43	1.9	ug/Kg	☼	11/24/21 10:53	12/03/21 19:15	1
1,2-Dichloropropane	ND	H	43	4.0	ug/Kg	☼	11/24/21 10:53	12/03/21 19:15	1
1,3,5-Trimethylbenzene	ND	H	43	3.0	ug/Kg	☼	11/24/21 10:53	12/03/21 19:15	1
1,3-Dichlorobenzene	ND	H	43	2.8	ug/Kg	☼	11/24/21 10:53	12/03/21 19:15	1
1,3-Dichloropropane	ND	H	43	2.0	ug/Kg	☼	11/24/21 10:53	12/03/21 19:15	1
1,4-Dichlorobenzene	ND	H	43	1.9	ug/Kg	☼	11/24/21 10:53	12/03/21 19:15	1
2,2-Dichloropropane	ND	H	43	3.7	ug/Kg	☼	11/24/21 10:53	12/03/21 19:15	1
2-Butanone (MEK)	ND	H	85	22	ug/Kg	☼	11/24/21 10:53	12/03/21 19:15	1
2-Chlorotoluene	ND	H	43	3.1	ug/Kg	☼	11/24/21 10:53	12/03/21 19:15	1
2-Hexanone	ND	H	85	4.4	ug/Kg	☼	11/24/21 10:53	12/03/21 19:15	1
4-Chlorotoluene	ND	H	43	2.4	ug/Kg	☼	11/24/21 10:53	12/03/21 19:15	1
4-Methyl-2-pentanone (MIBK)	ND	H	85	2.6	ug/Kg	☼	11/24/21 10:53	12/03/21 19:15	1
p-Isopropyltoluene	ND	H	43	1.4	ug/Kg	☼	11/24/21 10:53	12/03/21 19:15	1
Acetone	ND	H	430	43	ug/Kg	☼	11/24/21 10:53	12/03/21 19:15	1
Benzene	ND	H	43	2.8	ug/Kg	☼	11/24/21 10:53	12/03/21 19:15	1
Bromoform	ND	H	43	9.4	ug/Kg	☼	11/24/21 10:53	12/03/21 19:15	1
Bromobenzene	ND	H	43	4.8	ug/Kg	☼	11/24/21 10:53	12/03/21 19:15	1
Carbon disulfide	ND	H	85	3.0	ug/Kg	☼	11/24/21 10:53	12/03/21 19:15	1
Carbon tetrachloride	ND	H	43	3.0	ug/Kg	☼	11/24/21 10:53	12/03/21 19:15	1
Chlorobenzene	ND	H	43	3.8	ug/Kg	☼	11/24/21 10:53	12/03/21 19:15	1
Chlorobromomethane	ND	H	43	6.2	ug/Kg	☼	11/24/21 10:53	12/03/21 19:15	1

Eurofins TestAmerica, Sacramento

Client Sample Results

Client: Shannon & Wilson, Inc
Project/Site: Kodiak DOT&PF PFAS (107471)

Job ID: 320-82154-1

Client Sample ID: ADQ-Site35-13

Lab Sample ID: 320-82154-13

Date Collected: 11/13/21 12:57

Matrix: Solid

Date Received: 11/23/21 16:45

Percent Solids: 87.0

Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloroethane	ND	H	43	5.6	ug/Kg	☼	11/24/21 10:53	12/03/21 19:15	1
Chloromethane	ND	H	43	2.1	ug/Kg	☼	11/24/21 10:53	12/03/21 19:15	1
cis-1,2-Dichloroethene	ND	H	43	7.0	ug/Kg	☼	11/24/21 10:53	12/03/21 19:15	1
cis-1,3-Dichloropropene	ND	H	43	3.5	ug/Kg	☼	11/24/21 10:53	12/03/21 19:15	1
Dibromomethane	ND	H	43	5.6	ug/Kg	☼	11/24/21 10:53	12/03/21 19:15	1
Dichlorodifluoromethane	ND	H	43	8.0	ug/Kg	☼	11/24/21 10:53	12/03/21 19:15	1
Ethylbenzene	ND	H	43	5.6	ug/Kg	☼	11/24/21 10:53	12/03/21 19:15	1
Hexachlorobutadiene	ND	H	43	4.4	ug/Kg	☼	11/24/21 10:53	12/03/21 19:15	1
Isopropylbenzene	ND	H	43	3.0	ug/Kg	☼	11/24/21 10:53	12/03/21 19:15	1
Methyl tert-butyl ether	ND	H	85	3.1	ug/Kg	☼	11/24/21 10:53	12/03/21 19:15	1
Methylene Chloride	ND	H	43	4.6	ug/Kg	☼	11/24/21 10:53	12/03/21 19:15	1
m-Xylene & p-Xylene	30	J H	43	4.3	ug/Kg	☼	11/24/21 10:53	12/03/21 19:15	1
Naphthalene	22	J H	43	1.5	ug/Kg	☼	11/24/21 10:53	12/03/21 19:15	1
n-Butylbenzene	ND	H	43	2.6	ug/Kg	☼	11/24/21 10:53	12/03/21 19:15	1
N-Propylbenzene	ND	H	43	4.0	ug/Kg	☼	11/24/21 10:53	12/03/21 19:15	1
o-Xylene	8.3	J H	43	4.4	ug/Kg	☼	11/24/21 10:53	12/03/21 19:15	1
sec-Butylbenzene	ND	H	43	2.1	ug/Kg	☼	11/24/21 10:53	12/03/21 19:15	1
Styrene	ND	H	43	0.94	ug/Kg	☼	11/24/21 10:53	12/03/21 19:15	1
tert-Butylbenzene	ND	H	43	3.5	ug/Kg	☼	11/24/21 10:53	12/03/21 19:15	1
Tetrachloroethene	ND	H	43	3.6	ug/Kg	☼	11/24/21 10:53	12/03/21 19:15	1
Toluene	59	H	43	3.8	ug/Kg	☼	11/24/21 10:53	12/03/21 19:15	1
trans-1,2-Dichloroethene	ND	H	43	5.3	ug/Kg	☼	11/24/21 10:53	12/03/21 19:15	1
trans-1,3-Dichloropropene	ND	H	43	2.4	ug/Kg	☼	11/24/21 10:53	12/03/21 19:15	1
Trichlorofluoromethane	ND	H	43	10	ug/Kg	☼	11/24/21 10:53	12/03/21 19:15	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	111		52 - 126	11/24/21 10:53	12/03/21 19:15	1
4-Bromofluorobenzene (Surr)	105		67 - 135	11/24/21 10:53	12/03/21 19:15	1
Dibromofluoromethane (Surr)	105		61 - 123	11/24/21 10:53	12/03/21 19:15	1
Toluene-d8 (Surr)	113		65 - 131	11/24/21 10:53	12/03/21 19:15	1

Method: AK101 - Alaska - Gasoline Range Organics (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
C6-C10 AK	1.2	J	4.3	0.85	mg/Kg	☼	11/24/21 10:53	12/03/21 19:15	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	105		60 - 120	11/24/21 10:53	12/03/21 19:15	1
Trifluorotoluene (Surr)	85		60 - 120	11/24/21 10:53	12/03/21 19:15	1

Method: 8011 - EDB, DBCP, and 1,2,3-TCP (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ethylene Dibromide	0.066	J H	0.29	0.044	ug/Kg	☼	12/03/21 13:26	12/04/21 05:33	1
1,2,3-Trichloropropane	ND	H	0.29	0.16	ug/Kg	☼	12/03/21 13:26	12/04/21 05:33	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dibromopropane	108		55 - 130	12/03/21 13:26	12/04/21 05:33	1

Method: AK102 - DRO

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
DRO (nC10-<nC25)	6.1	B	2.3	0.57	mg/Kg	☼	11/24/21 09:17	12/11/21 21:42	1

Eurofins TestAmerica, Sacramento

Client Sample Results

Client: Shannon & Wilson, Inc
 Project/Site: Kodiak DOT&PF PFAS (107471)

Job ID: 320-82154-1

Client Sample ID: ADQ-Site35-13

Lab Sample ID: 320-82154-13

Date Collected: 11/13/21 12:57

Matrix: Solid

Date Received: 11/23/21 16:45

Percent Solids: 87.0

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
<i>o</i> -Terphenyl (Surr)	58	S1-	60 - 120	11/24/21 09:17	12/11/21 21:42	1
<i>n</i> -Triacontane-d62	81		60 - 120	11/24/21 09:17	12/11/21 21:42	1

Method: EPA 537(Mod) - PFAS for QSM 5.3, Table B-15

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorohexanoic acid (PFHxA)	0.10	J	0.21	0.033	ug/Kg	☼	11/24/21 18:30	11/29/21 07:28	1
Perfluoroheptanoic acid (PFHpA)	0.073	J	0.21	0.041	ug/Kg	☼	11/24/21 18:30	11/29/21 07:28	1
Perfluorooctanoic acid (PFOA)	1.7		0.21	0.057	ug/Kg	☼	11/24/21 18:30	11/29/21 07:28	1
Perfluorononanoic acid (PFNA)	0.028	J	0.21	0.023	ug/Kg	☼	11/24/21 18:30	11/29/21 07:28	1
Perfluorodecanoic acid (PFDA)	0.057	J	0.21	0.051	ug/Kg	☼	11/24/21 18:30	11/29/21 07:28	1
Perfluoroundecanoic acid (PFUnA)	ND		0.21	0.045	ug/Kg	☼	11/24/21 18:30	11/29/21 07:28	1
Perfluorododecanoic acid (PFDoA)	ND		0.21	0.032	ug/Kg	☼	11/24/21 18:30	11/29/21 07:28	1
Perfluorotridecanoic acid (PFTrDA)	ND		0.21	0.022	ug/Kg	☼	11/24/21 18:30	11/29/21 07:28	1
Perfluorotetradecanoic acid (PFTeA)	ND		0.21	0.039	ug/Kg	☼	11/24/21 18:30	11/29/21 07:28	1
Perfluorobutanesulfonic acid (PFBS)	ND		0.21	0.041	ug/Kg	☼	11/24/21 18:30	11/29/21 07:28	1
Perfluorohexanesulfonic acid (PFHxS)	1.3		0.21	0.031	ug/Kg	☼	11/24/21 18:30	11/29/21 07:28	1
NEtFOSAA	ND		0.21	0.051	ug/Kg	☼	11/24/21 18:30	11/29/21 07:28	1
NMeFOSAA	ND		0.21	0.025	ug/Kg	☼	11/24/21 18:30	11/29/21 07:28	1
HFPO-DA (GenX)	ND		0.21	0.044	ug/Kg	☼	11/24/21 18:30	11/29/21 07:28	1
9CI-PF3ONS	ND		0.21	0.037	ug/Kg	☼	11/24/21 18:30	11/29/21 07:28	1
11CI-PF3OUdS	ND		0.21	0.033	ug/Kg	☼	11/24/21 18:30	11/29/21 07:28	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	ND		0.21	0.042	ug/Kg	☼	11/24/21 18:30	11/29/21 07:28	1

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C2 PFHxA	90		50 - 150	11/24/21 18:30	11/29/21 07:28	1
13C4 PFHpA	90		50 - 150	11/24/21 18:30	11/29/21 07:28	1
13C4 PFOA	97		50 - 150	11/24/21 18:30	11/29/21 07:28	1
13C5 PFNA	99		50 - 150	11/24/21 18:30	11/29/21 07:28	1
13C2 PFDA	99		50 - 150	11/24/21 18:30	11/29/21 07:28	1
13C2 PFUnA	102		50 - 150	11/24/21 18:30	11/29/21 07:28	1
13C2 PFDoA	90		50 - 150	11/24/21 18:30	11/29/21 07:28	1
13C2 PFTeDA	98		50 - 150	11/24/21 18:30	11/29/21 07:28	1
13C3 PFBS	98		50 - 150	11/24/21 18:30	11/29/21 07:28	1
18O2 PFHxS	91		50 - 150	11/24/21 18:30	11/29/21 07:28	1
13C4 PFOS	94		50 - 150	11/24/21 18:30	11/29/21 07:28	1
d3-NMeFOSAA	119		50 - 150	11/24/21 18:30	11/29/21 07:28	1
d5-NEtFOSAA	121		50 - 150	11/24/21 18:30	11/29/21 07:28	1
13C3 HFPO-DA	87		50 - 150	11/24/21 18:30	11/29/21 07:28	1

Method: EPA 537(Mod) - PFAS for QSM 5.3, Table B-15 - DL

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorooctanesulfonic acid (PFOS)	20		1.1	0.23	ug/Kg	☼	11/24/21 18:30	12/01/21 21:52	5

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C4 PFOS	95		50 - 150	11/24/21 18:30	12/01/21 21:52	5

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	13.0		0.1	0.1	%			11/24/21 16:05	1
Percent Solids	87.0		0.1	0.1	%			11/24/21 16:05	1

Eurofins TestAmerica, Sacramento

Client Sample Results

Client: Shannon & Wilson, Inc
 Project/Site: Kodiak DOT&PF PFAS (107471)

Job ID: 320-82154-1

Client Sample ID: ADQ-Site35-113

Lab Sample ID: 320-82154-14

Date Collected: 11/13/21 13:07

Matrix: Solid

Date Received: 11/23/21 16:45

Percent Solids: 87.6

Method: 8260C SIM - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND	H	2.2	0.49	ug/Kg	☼	11/24/21 10:53	11/30/21 17:01	1
1,1,2-Trichloroethane	ND	H	2.2	0.72	ug/Kg	☼	11/24/21 10:53	11/30/21 17:01	1
1,2-Dichloroethane	ND	H	2.2	0.37	ug/Kg	☼	11/24/21 10:53	11/30/21 17:01	1
Bromomethane	ND	H	4.4	1.4	ug/Kg	☼	11/24/21 10:53	11/30/21 17:01	1
Chlorodibromomethane	ND	H	2.2	0.35	ug/Kg	☼	11/24/21 10:53	11/30/21 17:01	1
Chloroform	ND	H	4.4	1.7	ug/Kg	☼	11/24/21 10:53	11/30/21 17:01	1
Dichlorobromomethane	ND	H	2.2	0.29	ug/Kg	☼	11/24/21 10:53	11/30/21 17:01	1
Ethylene Dibromide	ND	H	2.2	0.35	ug/Kg	☼	11/24/21 10:53	11/30/21 17:01	1
Trichloroethene	ND	H	2.2	0.43	ug/Kg	☼	11/24/21 10:53	11/30/21 17:01	1
Vinyl chloride	ND	H	2.2	0.55	ug/Kg	☼	11/24/21 10:53	11/30/21 17:01	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	83		69 - 129	11/24/21 10:53	11/30/21 17:01	1
Dibromofluoromethane (Surr)	119		72 - 132	11/24/21 10:53	11/30/21 17:01	1
1,2-Dichloroethane-d4 (Surr)	118		72 - 132	11/24/21 10:53	11/30/21 17:01	1
Toluene-d8 (Surr)	107		78 - 138	11/24/21 10:53	11/30/21 17:01	1

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND	H	44	5.1	ug/Kg	☼	11/24/21 10:53	12/03/21 19:39	1
1,1,1-Trichloroethane	ND	H	44	3.2	ug/Kg	☼	11/24/21 10:53	12/03/21 19:39	1
1,1-Dichloroethane	ND	H	44	2.4	ug/Kg	☼	11/24/21 10:53	12/03/21 19:39	1
1,1-Dichloroethene	ND	H	44	4.1	ug/Kg	☼	11/24/21 10:53	12/03/21 19:39	1
1,1-Dichloropropene	ND	H	44	3.8	ug/Kg	☼	11/24/21 10:53	12/03/21 19:39	1
1,2,3-Trichlorobenzene	ND	H	44	5.4	ug/Kg	☼	11/24/21 10:53	12/03/21 19:39	1
1,2,3-Trichloropropane	ND	H	44	4.1	ug/Kg	☼	11/24/21 10:53	12/03/21 19:39	1
1,2,4-Trichlorobenzene	ND	H	44	3.0	ug/Kg	☼	11/24/21 10:53	12/03/21 19:39	1
1,2,4-Trimethylbenzene	4.1	J H	44	3.1	ug/Kg	☼	11/24/21 10:53	12/03/21 19:39	1
1,2-Dibromo-3-Chloropropane	ND	H	87	5.5	ug/Kg	☼	11/24/21 10:53	12/03/21 19:39	1
1,2-Dichlorobenzene	ND	H	44	1.9	ug/Kg	☼	11/24/21 10:53	12/03/21 19:39	1
1,2-Dichloropropane	ND	H	44	4.1	ug/Kg	☼	11/24/21 10:53	12/03/21 19:39	1
1,3,5-Trimethylbenzene	ND	H	44	3.1	ug/Kg	☼	11/24/21 10:53	12/03/21 19:39	1
1,3-Dichlorobenzene	ND	H	44	2.9	ug/Kg	☼	11/24/21 10:53	12/03/21 19:39	1
1,3-Dichloropropane	ND	H	44	2.0	ug/Kg	☼	11/24/21 10:53	12/03/21 19:39	1
1,4-Dichlorobenzene	ND	H	44	1.9	ug/Kg	☼	11/24/21 10:53	12/03/21 19:39	1
2,2-Dichloropropane	ND	H	44	3.8	ug/Kg	☼	11/24/21 10:53	12/03/21 19:39	1
2-Butanone (MEK)	ND	H	87	23	ug/Kg	☼	11/24/21 10:53	12/03/21 19:39	1
2-Chlorotoluene	ND	H	44	3.1	ug/Kg	☼	11/24/21 10:53	12/03/21 19:39	1
2-Hexanone	ND	H	87	4.5	ug/Kg	☼	11/24/21 10:53	12/03/21 19:39	1
4-Chlorotoluene	ND	H	44	2.4	ug/Kg	☼	11/24/21 10:53	12/03/21 19:39	1
4-Methyl-2-pentanone (MIBK)	ND	H	87	2.7	ug/Kg	☼	11/24/21 10:53	12/03/21 19:39	1
p-Isopropyltoluene	ND	H	44	1.4	ug/Kg	☼	11/24/21 10:53	12/03/21 19:39	1
Acetone	ND	H	440	44	ug/Kg	☼	11/24/21 10:53	12/03/21 19:39	1
Benzene	ND	H	44	2.9	ug/Kg	☼	11/24/21 10:53	12/03/21 19:39	1
Bromoform	ND	H	44	9.6	ug/Kg	☼	11/24/21 10:53	12/03/21 19:39	1
Bromobenzene	ND	H	44	4.9	ug/Kg	☼	11/24/21 10:53	12/03/21 19:39	1
Carbon disulfide	ND	H	87	3.1	ug/Kg	☼	11/24/21 10:53	12/03/21 19:39	1
Carbon tetrachloride	ND	H	44	3.1	ug/Kg	☼	11/24/21 10:53	12/03/21 19:39	1
Chlorobenzene	ND	H	44	3.8	ug/Kg	☼	11/24/21 10:53	12/03/21 19:39	1
Chlorobromomethane	ND	H	44	6.4	ug/Kg	☼	11/24/21 10:53	12/03/21 19:39	1

Eurofins TestAmerica, Sacramento

Client Sample Results

Client: Shannon & Wilson, Inc
Project/Site: Kodiak DOT&PF PFAS (107471)

Job ID: 320-82154-1

Client Sample ID: ADQ-Site35-113

Lab Sample ID: 320-82154-14

Date Collected: 11/13/21 13:07

Matrix: Solid

Date Received: 11/23/21 16:45

Percent Solids: 87.6

Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloroethane	ND	H	44	5.8	ug/Kg	✳	11/24/21 10:53	12/03/21 19:39	1
Chloromethane	ND	H	44	2.2	ug/Kg	✳	11/24/21 10:53	12/03/21 19:39	1
cis-1,2-Dichloroethene	ND	H	44	7.2	ug/Kg	✳	11/24/21 10:53	12/03/21 19:39	1
cis-1,3-Dichloropropene	ND	H	44	3.6	ug/Kg	✳	11/24/21 10:53	12/03/21 19:39	1
Dibromomethane	ND	H	44	5.7	ug/Kg	✳	11/24/21 10:53	12/03/21 19:39	1
Dichlorodifluoromethane	ND	H	44	8.2	ug/Kg	✳	11/24/21 10:53	12/03/21 19:39	1
Ethylbenzene	ND	H	44	5.8	ug/Kg	✳	11/24/21 10:53	12/03/21 19:39	1
Hexachlorobutadiene	ND	H	44	4.4	ug/Kg	✳	11/24/21 10:53	12/03/21 19:39	1
Isopropylbenzene	ND	H	44	3.1	ug/Kg	✳	11/24/21 10:53	12/03/21 19:39	1
Methyl tert-butyl ether	ND	H	87	3.1	ug/Kg	✳	11/24/21 10:53	12/03/21 19:39	1
Methylene Chloride	ND	H	44	4.7	ug/Kg	✳	11/24/21 10:53	12/03/21 19:39	1
m-Xylene & p-Xylene	8.5	J H	44	4.4	ug/Kg	✳	11/24/21 10:53	12/03/21 19:39	1
Naphthalene	7.0	J H	44	1.6	ug/Kg	✳	11/24/21 10:53	12/03/21 19:39	1
n-Butylbenzene	ND	H	44	2.7	ug/Kg	✳	11/24/21 10:53	12/03/21 19:39	1
N-Propylbenzene	ND	H	44	4.1	ug/Kg	✳	11/24/21 10:53	12/03/21 19:39	1
o-Xylene	ND	H	44	4.5	ug/Kg	✳	11/24/21 10:53	12/03/21 19:39	1
sec-Butylbenzene	ND	H	44	2.1	ug/Kg	✳	11/24/21 10:53	12/03/21 19:39	1
Styrene	ND	H	44	0.96	ug/Kg	✳	11/24/21 10:53	12/03/21 19:39	1
tert-Butylbenzene	ND	H	44	3.6	ug/Kg	✳	11/24/21 10:53	12/03/21 19:39	1
Tetrachloroethene	ND	H	44	3.7	ug/Kg	✳	11/24/21 10:53	12/03/21 19:39	1
Toluene	21	J H	44	3.9	ug/Kg	✳	11/24/21 10:53	12/03/21 19:39	1
trans-1,2-Dichloroethene	ND	H	44	5.4	ug/Kg	✳	11/24/21 10:53	12/03/21 19:39	1
trans-1,3-Dichloropropene	ND	H	44	2.4	ug/Kg	✳	11/24/21 10:53	12/03/21 19:39	1
Trichlorofluoromethane	ND	H	44	10	ug/Kg	✳	11/24/21 10:53	12/03/21 19:39	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	114		52 - 126	11/24/21 10:53	12/03/21 19:39	1
4-Bromofluorobenzene (Surr)	107		67 - 135	11/24/21 10:53	12/03/21 19:39	1
Dibromofluoromethane (Surr)	107		61 - 123	11/24/21 10:53	12/03/21 19:39	1
Toluene-d8 (Surr)	115		65 - 131	11/24/21 10:53	12/03/21 19:39	1

Method: AK101 - Alaska - Gasoline Range Organics (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
C6-C10 AK	ND		4.4	0.87	mg/Kg	✳	11/24/21 10:53	12/03/21 19:39	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	107		60 - 120	11/24/21 10:53	12/03/21 19:39	1
Trifluorotoluene (Surr)	87		60 - 120	11/24/21 10:53	12/03/21 19:39	1

Method: 8011 - EDB, DBCP, and 1,2,3-TCP (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ethylene Dibromide	0.21	J H	0.29	0.043	ug/Kg	✳	12/03/21 13:26	12/04/21 05:57	1
1,2,3-Trichloropropane	ND	H	0.29	0.16	ug/Kg	✳	12/03/21 13:26	12/04/21 05:57	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dibromopropane	108		55 - 130	12/03/21 13:26	12/04/21 05:57	1

Method: AK102 - DRO

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
DRO (nC10-<nC25)	6.3	B	2.2	0.56	mg/Kg	✳	11/24/21 09:17	12/11/21 22:06	1

Eurofins TestAmerica, Sacramento

Client Sample Results

Client: Shannon & Wilson, Inc
 Project/Site: Kodiak DOT&PF PFAS (107471)

Job ID: 320-82154-1

Client Sample ID: ADQ-Site35-113

Lab Sample ID: 320-82154-14

Date Collected: 11/13/21 13:07

Matrix: Solid

Date Received: 11/23/21 16:45

Percent Solids: 87.6

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
<i>o</i> -Terphenyl (Surr)	66		60 - 120	11/24/21 09:17	12/11/21 22:06	1
<i>n</i> -Triacontane-d62	78		60 - 120	11/24/21 09:17	12/11/21 22:06	1

Method: EPA 537(Mod) - PFAS for QSM 5.3, Table B-15

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorohexanoic acid (PFHxA)	0.096	J	0.21	0.033	ug/Kg	☼	11/24/21 18:30	11/29/21 07:38	1
Perfluoroheptanoic acid (PFHpA)	ND		0.21	0.040	ug/Kg	☼	11/24/21 18:30	11/29/21 07:38	1
Perfluorooctanoic acid (PFOA)	1.3		0.21	0.056	ug/Kg	☼	11/24/21 18:30	11/29/21 07:38	1
Perfluorononanoic acid (PFNA)	0.036	J	0.21	0.023	ug/Kg	☼	11/24/21 18:30	11/29/21 07:38	1
Perfluorodecanoic acid (PFDA)	ND		0.21	0.051	ug/Kg	☼	11/24/21 18:30	11/29/21 07:38	1
Perfluoroundecanoic acid (PFUnA)	ND		0.21	0.044	ug/Kg	☼	11/24/21 18:30	11/29/21 07:38	1
Perfluorododecanoic acid (PFDoA)	ND		0.21	0.032	ug/Kg	☼	11/24/21 18:30	11/29/21 07:38	1
Perfluorotridecanoic acid (PFTTrDA)	ND		0.21	0.022	ug/Kg	☼	11/24/21 18:30	11/29/21 07:38	1
Perfluorotetradecanoic acid (PFTeA)	ND		0.21	0.039	ug/Kg	☼	11/24/21 18:30	11/29/21 07:38	1
Perfluorobutanesulfonic acid (PFBS)	ND		0.21	0.040	ug/Kg	☼	11/24/21 18:30	11/29/21 07:38	1
Perfluorohexanesulfonic acid (PFHxS)	1.2		0.21	0.031	ug/Kg	☼	11/24/21 18:30	11/29/21 07:38	1
Perfluorooctanesulfonic acid (PFOS)	16		0.21	0.045	ug/Kg	☼	11/24/21 18:30	11/29/21 07:38	1
NEtFOSAA	ND		0.21	0.051	ug/Kg	☼	11/24/21 18:30	11/29/21 07:38	1
NMeFOSAA	ND		0.21	0.024	ug/Kg	☼	11/24/21 18:30	11/29/21 07:38	1
HFPO-DA (GenX)	ND		0.21	0.043	ug/Kg	☼	11/24/21 18:30	11/29/21 07:38	1
9Cl-PF3ONS	ND		0.21	0.037	ug/Kg	☼	11/24/21 18:30	11/29/21 07:38	1
11Cl-PF3OUdS	ND		0.21	0.033	ug/Kg	☼	11/24/21 18:30	11/29/21 07:38	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	ND		0.21	0.041	ug/Kg	☼	11/24/21 18:30	11/29/21 07:38	1

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C2 PFHxA	103		50 - 150	11/24/21 18:30	11/29/21 07:38	1
13C4 PFHpA	113		50 - 150	11/24/21 18:30	11/29/21 07:38	1
13C4 PFOA	121		50 - 150	11/24/21 18:30	11/29/21 07:38	1
13C5 PFNA	117		50 - 150	11/24/21 18:30	11/29/21 07:38	1
13C2 PFDA	120		50 - 150	11/24/21 18:30	11/29/21 07:38	1
13C2 PFUnA	129		50 - 150	11/24/21 18:30	11/29/21 07:38	1
13C2 PFDoA	128		50 - 150	11/24/21 18:30	11/29/21 07:38	1
13C2 PFTeDA	116		50 - 150	11/24/21 18:30	11/29/21 07:38	1
13C3 PFBS	123		50 - 150	11/24/21 18:30	11/29/21 07:38	1
18O2 PFHxS	107		50 - 150	11/24/21 18:30	11/29/21 07:38	1
13C4 PFOS	117		50 - 150	11/24/21 18:30	11/29/21 07:38	1
d3-NMeFOSAA	149		50 - 150	11/24/21 18:30	11/29/21 07:38	1
d5-NEtFOSAA	145		50 - 150	11/24/21 18:30	11/29/21 07:38	1
13C3 HFPO-DA	105		50 - 150	11/24/21 18:30	11/29/21 07:38	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	12.3		0.1	0.1	%			11/24/21 16:05	1
Percent Solids	87.7		0.1	0.1	%			11/24/21 16:05	1

Client Sample Results

Client: Shannon & Wilson, Inc
 Project/Site: Kodiak DOT&PF PFAS (107471)

Job ID: 320-82154-1

Client Sample ID: ADQ-Site35-14

Lab Sample ID: 320-82154-15

Date Collected: 11/13/21 13:10

Matrix: Solid

Date Received: 11/23/21 16:45

Percent Solids: 89.6

Method: 8260C SIM - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,2,2-Tetrachloroethane	ND	H	1.4	0.32	ug/Kg	☼	11/24/21 10:53	11/30/21 17:24	1
1,1,2-Trichloroethane	ND	H	1.4	0.47	ug/Kg	☼	11/24/21 10:53	11/30/21 17:24	1
1,2-Dichloroethane	ND	H	1.4	0.24	ug/Kg	☼	11/24/21 10:53	11/30/21 17:24	1
Bromomethane	ND	H	2.8	0.92	ug/Kg	☼	11/24/21 10:53	11/30/21 17:24	1
Chlorodibromomethane	ND	H	1.4	0.23	ug/Kg	☼	11/24/21 10:53	11/30/21 17:24	1
Chloroform	ND	H	2.8	1.1	ug/Kg	☼	11/24/21 10:53	11/30/21 17:24	1
Dichlorobromomethane	ND	H	1.4	0.19	ug/Kg	☼	11/24/21 10:53	11/30/21 17:24	1
Ethylene Dibromide	ND	H	1.4	0.23	ug/Kg	☼	11/24/21 10:53	11/30/21 17:24	1
Trichloroethene	ND	H	1.4	0.28	ug/Kg	☼	11/24/21 10:53	11/30/21 17:24	1
Vinyl chloride	ND	H	1.4	0.36	ug/Kg	☼	11/24/21 10:53	11/30/21 17:24	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	81		69 - 129				11/24/21 10:53	11/30/21 17:24	1
Dibromofluoromethane (Surr)	116		72 - 132				11/24/21 10:53	11/30/21 17:24	1
1,2-Dichloroethane-d4 (Surr)	119		72 - 132				11/24/21 10:53	11/30/21 17:24	1
Toluene-d8 (Surr)	104		78 - 138				11/24/21 10:53	11/30/21 17:24	1

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND	H	28	3.3	ug/Kg	☼	11/24/21 10:53	12/03/21 20:02	1
1,1,1-Trichloroethane	ND	H	28	2.1	ug/Kg	☼	11/24/21 10:53	12/03/21 20:02	1
1,1-Dichloroethane	ND	H	28	1.5	ug/Kg	☼	11/24/21 10:53	12/03/21 20:02	1
1,1-Dichloroethene	ND	H	28	2.7	ug/Kg	☼	11/24/21 10:53	12/03/21 20:02	1
1,1-Dichloropropene	ND	H	28	2.4	ug/Kg	☼	11/24/21 10:53	12/03/21 20:02	1
1,2,3-Trichlorobenzene	ND	H	28	3.5	ug/Kg	☼	11/24/21 10:53	12/03/21 20:02	1
1,2,3-Trichloropropane	ND	H	28	2.7	ug/Kg	☼	11/24/21 10:53	12/03/21 20:02	1
1,2,4-Trichlorobenzene	ND	H	28	1.9	ug/Kg	☼	11/24/21 10:53	12/03/21 20:02	1
1,2,4-Trimethylbenzene	ND	H	28	2.0	ug/Kg	☼	11/24/21 10:53	12/03/21 20:02	1
1,2-Dibromo-3-Chloropropane	ND	H	57	3.6	ug/Kg	☼	11/24/21 10:53	12/03/21 20:02	1
1,2-Dichlorobenzene	ND	H	28	1.2	ug/Kg	☼	11/24/21 10:53	12/03/21 20:02	1
1,2-Dichloropropane	ND	H	28	2.7	ug/Kg	☼	11/24/21 10:53	12/03/21 20:02	1
1,3,5-Trimethylbenzene	ND	H	28	2.0	ug/Kg	☼	11/24/21 10:53	12/03/21 20:02	1
1,3-Dichlorobenzene	ND	H	28	1.9	ug/Kg	☼	11/24/21 10:53	12/03/21 20:02	1
1,3-Dichloropropane	ND	H	28	1.3	ug/Kg	☼	11/24/21 10:53	12/03/21 20:02	1
1,4-Dichlorobenzene	ND	H	28	1.2	ug/Kg	☼	11/24/21 10:53	12/03/21 20:02	1
2,2-Dichloropropane	ND	H	28	2.4	ug/Kg	☼	11/24/21 10:53	12/03/21 20:02	1
2-Butanone (MEK)	ND	H	57	15	ug/Kg	☼	11/24/21 10:53	12/03/21 20:02	1
2-Chlorotoluene	ND	H	28	2.0	ug/Kg	☼	11/24/21 10:53	12/03/21 20:02	1
2-Hexanone	ND	H	57	2.9	ug/Kg	☼	11/24/21 10:53	12/03/21 20:02	1
4-Chlorotoluene	ND	H	28	1.6	ug/Kg	☼	11/24/21 10:53	12/03/21 20:02	1
4-Methyl-2-pentanone (MIBK)	ND	H	57	1.8	ug/Kg	☼	11/24/21 10:53	12/03/21 20:02	1
p-Isopropyltoluene	4.8	J H	28	0.91	ug/Kg	☼	11/24/21 10:53	12/03/21 20:02	1
Acetone	53	J H	280	28	ug/Kg	☼	11/24/21 10:53	12/03/21 20:02	1
Benzene	ND	H	28	1.9	ug/Kg	☼	11/24/21 10:53	12/03/21 20:02	1
Bromoform	ND	H	28	6.2	ug/Kg	☼	11/24/21 10:53	12/03/21 20:02	1
Bromobenzene	ND	H	28	3.2	ug/Kg	☼	11/24/21 10:53	12/03/21 20:02	1
Carbon disulfide	ND	H	57	2.0	ug/Kg	☼	11/24/21 10:53	12/03/21 20:02	1
Carbon tetrachloride	ND	H	28	2.0	ug/Kg	☼	11/24/21 10:53	12/03/21 20:02	1
Chlorobenzene	ND	H	28	2.5	ug/Kg	☼	11/24/21 10:53	12/03/21 20:02	1
Chlorobromomethane	ND	H	28	4.1	ug/Kg	☼	11/24/21 10:53	12/03/21 20:02	1

Eurofins TestAmerica, Sacramento

Client Sample Results

Client: Shannon & Wilson, Inc
Project/Site: Kodiak DOT&PF PFAS (107471)

Job ID: 320-82154-1

Client Sample ID: ADQ-Site35-14

Lab Sample ID: 320-82154-15

Date Collected: 11/13/21 13:10

Matrix: Solid

Date Received: 11/23/21 16:45

Percent Solids: 89.6

Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloroethane	ND	H	28	3.7	ug/Kg	✱	11/24/21 10:53	12/03/21 20:02	1
Chloromethane	ND	H	28	1.4	ug/Kg	✱	11/24/21 10:53	12/03/21 20:02	1
cis-1,2-Dichloroethene	ND	H	28	4.6	ug/Kg	✱	11/24/21 10:53	12/03/21 20:02	1
cis-1,3-Dichloropropene	ND	H	28	2.3	ug/Kg	✱	11/24/21 10:53	12/03/21 20:02	1
Dibromomethane	ND	H	28	3.7	ug/Kg	✱	11/24/21 10:53	12/03/21 20:02	1
Dichlorodifluoromethane	ND	H	28	5.3	ug/Kg	✱	11/24/21 10:53	12/03/21 20:02	1
Ethylbenzene	ND	H	28	3.7	ug/Kg	✱	11/24/21 10:53	12/03/21 20:02	1
Hexachlorobutadiene	ND	H	28	2.9	ug/Kg	✱	11/24/21 10:53	12/03/21 20:02	1
Isopropylbenzene	ND	H	28	2.0	ug/Kg	✱	11/24/21 10:53	12/03/21 20:02	1
Methyl tert-butyl ether	ND	H	57	2.0	ug/Kg	✱	11/24/21 10:53	12/03/21 20:02	1
Methylene Chloride	ND	H	28	3.1	ug/Kg	✱	11/24/21 10:53	12/03/21 20:02	1
m-Xylene & p-Xylene	3.4	J H	28	2.8	ug/Kg	✱	11/24/21 10:53	12/03/21 20:02	1
Naphthalene	ND	H	28	1.0	ug/Kg	✱	11/24/21 10:53	12/03/21 20:02	1
n-Butylbenzene	ND	H	28	1.8	ug/Kg	✱	11/24/21 10:53	12/03/21 20:02	1
N-Propylbenzene	ND	H	28	2.7	ug/Kg	✱	11/24/21 10:53	12/03/21 20:02	1
o-Xylene	ND	H	28	2.9	ug/Kg	✱	11/24/21 10:53	12/03/21 20:02	1
sec-Butylbenzene	ND	H	28	1.4	ug/Kg	✱	11/24/21 10:53	12/03/21 20:02	1
Styrene	ND	H	28	0.62	ug/Kg	✱	11/24/21 10:53	12/03/21 20:02	1
tert-Butylbenzene	ND	H	28	2.3	ug/Kg	✱	11/24/21 10:53	12/03/21 20:02	1
Tetrachloroethene	ND	H	28	2.4	ug/Kg	✱	11/24/21 10:53	12/03/21 20:02	1
Toluene	3.6	J H	28	2.6	ug/Kg	✱	11/24/21 10:53	12/03/21 20:02	1
trans-1,2-Dichloroethene	ND	H	28	3.5	ug/Kg	✱	11/24/21 10:53	12/03/21 20:02	1
trans-1,3-Dichloropropene	ND	H	28	1.6	ug/Kg	✱	11/24/21 10:53	12/03/21 20:02	1
Trichlorofluoromethane	ND	H	28	6.8	ug/Kg	✱	11/24/21 10:53	12/03/21 20:02	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	110		52 - 126	11/24/21 10:53	12/03/21 20:02	1
4-Bromofluorobenzene (Surr)	106		67 - 135	11/24/21 10:53	12/03/21 20:02	1
Dibromofluoromethane (Surr)	103		61 - 123	11/24/21 10:53	12/03/21 20:02	1
Toluene-d8 (Surr)	112		65 - 131	11/24/21 10:53	12/03/21 20:02	1

Method: AK101 - Alaska - Gasoline Range Organics (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
C6-C10 AK	1.2	J	2.8	0.57	mg/Kg	✱	11/24/21 10:53	12/03/21 20:02	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	106		60 - 120	11/24/21 10:53	12/03/21 20:02	1
Trifluorotoluene (Surr)	73		60 - 120	11/24/21 10:53	12/03/21 20:02	1

Method: 8011 - EDB, DBCP, and 1,2,3-TCP (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ethylene Dibromide	0.36	H	0.28	0.042	ug/Kg	✱	12/03/21 13:26	12/04/21 06:22	1
1,2,3-Trichloropropane	ND	H	0.28	0.15	ug/Kg	✱	12/03/21 13:26	12/04/21 06:22	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dibromopropane	112		55 - 130	12/03/21 13:26	12/04/21 06:22	1

Method: AK102 - DRO

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
DRO (nC10-<nC25)	2.6	B	2.2	0.55	mg/Kg	✱	11/24/21 09:17	12/11/21 22:30	1

Eurofins TestAmerica, Sacramento

Client Sample Results

Client: Shannon & Wilson, Inc
 Project/Site: Kodiak DOT&PF PFAS (107471)

Job ID: 320-82154-1

Client Sample ID: ADQ-Site35-14

Lab Sample ID: 320-82154-15

Date Collected: 11/13/21 13:10

Matrix: Solid

Date Received: 11/23/21 16:45

Percent Solids: 89.6

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
<i>o</i> -Terphenyl (Surr)	65		60 - 120	11/24/21 09:17	12/11/21 22:30	1
<i>n</i> -Triacontane-d62	78		60 - 120	11/24/21 09:17	12/11/21 22:30	1

Method: EPA 537(Mod) - PFAS for QSM 5.3, Table B-15

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorohexanoic acid (PFHxA)	0.044	J	0.20	0.031	ug/Kg	☆	11/24/21 18:30	11/29/21 07:48	1
Perfluoroheptanoic acid (PFHpA)	0.059	J	0.20	0.038	ug/Kg	☆	11/24/21 18:30	11/29/21 07:48	1
Perfluorooctanoic acid (PFOA)	0.63		0.20	0.053	ug/Kg	☆	11/24/21 18:30	11/29/21 07:48	1
Perfluorononanoic acid (PFNA)	0.039	J	0.20	0.022	ug/Kg	☆	11/24/21 18:30	11/29/21 07:48	1
Perfluorodecanoic acid (PFDA)	ND		0.20	0.048	ug/Kg	☆	11/24/21 18:30	11/29/21 07:48	1
Perfluoroundecanoic acid (PFUnA)	ND		0.20	0.042	ug/Kg	☆	11/24/21 18:30	11/29/21 07:48	1
Perfluorododecanoic acid (PFDoA)	0.030	J	0.20	0.030	ug/Kg	☆	11/24/21 18:30	11/29/21 07:48	1
Perfluorotridecanoic acid (PFTTrDA)	ND		0.20	0.021	ug/Kg	☆	11/24/21 18:30	11/29/21 07:48	1
Perfluorotetradecanoic acid (PFTeA)	ND		0.20	0.037	ug/Kg	☆	11/24/21 18:30	11/29/21 07:48	1
Perfluorobutanesulfonic acid (PFBS)	ND		0.20	0.038	ug/Kg	☆	11/24/21 18:30	11/29/21 07:48	1
Perfluorohexanesulfonic acid (PFHxS)	0.10	J	0.20	0.029	ug/Kg	☆	11/24/21 18:30	11/29/21 07:48	1
Perfluorooctanesulfonic acid (PFOS)	0.47		0.20	0.043	ug/Kg	☆	11/24/21 18:30	11/29/21 07:48	1
NEtFOSAA	ND		0.20	0.048	ug/Kg	☆	11/24/21 18:30	11/29/21 07:48	1
NMeFOSAA	ND		0.20	0.023	ug/Kg	☆	11/24/21 18:30	11/29/21 07:48	1
HFPO-DA (GenX)	ND		0.20	0.041	ug/Kg	☆	11/24/21 18:30	11/29/21 07:48	1
9Cl-PF3ONS	ND		0.20	0.035	ug/Kg	☆	11/24/21 18:30	11/29/21 07:48	1
11Cl-PF3OUdS	ND		0.20	0.031	ug/Kg	☆	11/24/21 18:30	11/29/21 07:48	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	ND		0.20	0.039	ug/Kg	☆	11/24/21 18:30	11/29/21 07:48	1

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C2 PFHxA	104		50 - 150	11/24/21 18:30	11/29/21 07:48	1
13C4 PFHpA	108		50 - 150	11/24/21 18:30	11/29/21 07:48	1
13C4 PFOA	111		50 - 150	11/24/21 18:30	11/29/21 07:48	1
13C5 PFNA	114		50 - 150	11/24/21 18:30	11/29/21 07:48	1
13C2 PFDA	116		50 - 150	11/24/21 18:30	11/29/21 07:48	1
13C2 PFUnA	125		50 - 150	11/24/21 18:30	11/29/21 07:48	1
13C2 PFDoA	118		50 - 150	11/24/21 18:30	11/29/21 07:48	1
13C2 PFTeDA	123		50 - 150	11/24/21 18:30	11/29/21 07:48	1
13C3 PFBS	117		50 - 150	11/24/21 18:30	11/29/21 07:48	1
18O2 PFHxS	104		50 - 150	11/24/21 18:30	11/29/21 07:48	1
13C4 PFOS	117		50 - 150	11/24/21 18:30	11/29/21 07:48	1
d3-NMeFOSAA	135		50 - 150	11/24/21 18:30	11/29/21 07:48	1
d5-NEtFOSAA	149		50 - 150	11/24/21 18:30	11/29/21 07:48	1
13C3 HFPO-DA	110		50 - 150	11/24/21 18:30	11/29/21 07:48	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	10.4		0.1	0.1	%			11/24/21 16:05	1
Percent Solids	89.6		0.1	0.1	%			11/24/21 16:05	1

Client Sample Results

Client: Shannon & Wilson, Inc
 Project/Site: Kodiak DOT&PF PFAS (107471)

Job ID: 320-82154-1

Client Sample ID: ADQ-Site35-15

Lab Sample ID: 320-82154-16

Date Collected: 11/13/21 12:52

Matrix: Solid

Date Received: 11/23/21 16:45

Percent Solids: 91.9

Method: 8260C SIM - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,2,2-Tetrachloroethane	ND	H	2.3	0.51	ug/Kg	☼	11/24/21 10:53	11/30/21 17:48	1
1,1,2-Trichloroethane	ND	H	2.3	0.75	ug/Kg	☼	11/24/21 10:53	11/30/21 17:48	1
1,2-Dichloroethane	ND	H	2.3	0.38	ug/Kg	☼	11/24/21 10:53	11/30/21 17:48	1
Bromomethane	ND	H	4.5	1.5	ug/Kg	☼	11/24/21 10:53	11/30/21 17:48	1
Chlorodibromomethane	ND	H	2.3	0.36	ug/Kg	☼	11/24/21 10:53	11/30/21 17:48	1
Chloroform	ND	H	4.5	1.8	ug/Kg	☼	11/24/21 10:53	11/30/21 17:48	1
Dichlorobromomethane	ND	H	2.3	0.30	ug/Kg	☼	11/24/21 10:53	11/30/21 17:48	1
Ethylene Dibromide	ND	H	2.3	0.36	ug/Kg	☼	11/24/21 10:53	11/30/21 17:48	1
Trichloroethene	ND	H	2.3	0.45	ug/Kg	☼	11/24/21 10:53	11/30/21 17:48	1
Vinyl chloride	ND	H	2.3	0.57	ug/Kg	☼	11/24/21 10:53	11/30/21 17:48	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	87		69 - 129				11/24/21 10:53	11/30/21 17:48	1
Dibromofluoromethane (Surr)	120		72 - 132				11/24/21 10:53	11/30/21 17:48	1
1,2-Dichloroethane-d4 (Surr)	119		72 - 132				11/24/21 10:53	11/30/21 17:48	1
Toluene-d8 (Surr)	113		78 - 138				11/24/21 10:53	11/30/21 17:48	1

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND	H	45	5.3	ug/Kg	☼	11/24/21 10:53	12/03/21 20:26	1
1,1,1-Trichloroethane	ND	H	45	3.3	ug/Kg	☼	11/24/21 10:53	12/03/21 20:26	1
1,1-Dichloroethane	ND	H	45	2.4	ug/Kg	☼	11/24/21 10:53	12/03/21 20:26	1
1,1-Dichloroethene	ND	H	45	4.2	ug/Kg	☼	11/24/21 10:53	12/03/21 20:26	1
1,1-Dichloropropene	ND	H	45	3.9	ug/Kg	☼	11/24/21 10:53	12/03/21 20:26	1
1,2,3-Trichlorobenzene	ND	H	45	5.6	ug/Kg	☼	11/24/21 10:53	12/03/21 20:26	1
1,2,3-Trichloropropane	ND	H	45	4.2	ug/Kg	☼	11/24/21 10:53	12/03/21 20:26	1
1,2,4-Trichlorobenzene	ND	H	45	3.1	ug/Kg	☼	11/24/21 10:53	12/03/21 20:26	1
1,2,4-Trimethylbenzene	ND	H	45	3.2	ug/Kg	☼	11/24/21 10:53	12/03/21 20:26	1
1,2-Dibromo-3-Chloropropane	ND	H	90	5.7	ug/Kg	☼	11/24/21 10:53	12/03/21 20:26	1
1,2-Dichlorobenzene	ND	H	45	2.0	ug/Kg	☼	11/24/21 10:53	12/03/21 20:26	1
1,2-Dichloropropane	ND	H	45	4.2	ug/Kg	☼	11/24/21 10:53	12/03/21 20:26	1
1,3,5-Trimethylbenzene	ND	H	45	3.2	ug/Kg	☼	11/24/21 10:53	12/03/21 20:26	1
1,3-Dichlorobenzene	ND	H	45	3.0	ug/Kg	☼	11/24/21 10:53	12/03/21 20:26	1
1,3-Dichloropropane	ND	H	45	2.1	ug/Kg	☼	11/24/21 10:53	12/03/21 20:26	1
1,4-Dichlorobenzene	ND	H	45	2.0	ug/Kg	☼	11/24/21 10:53	12/03/21 20:26	1
2,2-Dichloropropane	ND	H	45	3.9	ug/Kg	☼	11/24/21 10:53	12/03/21 20:26	1
2-Butanone (MEK)	ND	H	90	23	ug/Kg	☼	11/24/21 10:53	12/03/21 20:26	1
2-Chlorotoluene	ND	H	45	3.3	ug/Kg	☼	11/24/21 10:53	12/03/21 20:26	1
2-Hexanone	ND	H	90	4.7	ug/Kg	☼	11/24/21 10:53	12/03/21 20:26	1
4-Chlorotoluene	ND	H	45	2.5	ug/Kg	☼	11/24/21 10:53	12/03/21 20:26	1
4-Methyl-2-pentanone (MIBK)	ND	H	90	2.8	ug/Kg	☼	11/24/21 10:53	12/03/21 20:26	1
p-Isopropyltoluene	ND	H	45	1.4	ug/Kg	☼	11/24/21 10:53	12/03/21 20:26	1
Acetone	ND	H	450	45	ug/Kg	☼	11/24/21 10:53	12/03/21 20:26	1
Benzene	ND	H	45	3.0	ug/Kg	☼	11/24/21 10:53	12/03/21 20:26	1
Bromoform	ND	H	45	9.9	ug/Kg	☼	11/24/21 10:53	12/03/21 20:26	1
Bromobenzene	ND	H	45	5.1	ug/Kg	☼	11/24/21 10:53	12/03/21 20:26	1
Carbon disulfide	ND	H	90	3.2	ug/Kg	☼	11/24/21 10:53	12/03/21 20:26	1
Carbon tetrachloride	ND	H	45	3.2	ug/Kg	☼	11/24/21 10:53	12/03/21 20:26	1
Chlorobenzene	ND	H	45	4.0	ug/Kg	☼	11/24/21 10:53	12/03/21 20:26	1
Chlorobromomethane	ND	H	45	6.6	ug/Kg	☼	11/24/21 10:53	12/03/21 20:26	1

Eurofins TestAmerica, Sacramento

Client Sample Results

Client: Shannon & Wilson, Inc
Project/Site: Kodiak DOT&PF PFAS (107471)

Job ID: 320-82154-1

Client Sample ID: ADQ-Site35-15

Lab Sample ID: 320-82154-16

Date Collected: 11/13/21 12:52

Matrix: Solid

Date Received: 11/23/21 16:45

Percent Solids: 91.9

Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloroethane	ND	H	45	6.0	ug/Kg	☼	11/24/21 10:53	12/03/21 20:26	1
Chloromethane	ND	H	45	2.3	ug/Kg	☼	11/24/21 10:53	12/03/21 20:26	1
cis-1,2-Dichloroethene	ND	H	45	7.4	ug/Kg	☼	11/24/21 10:53	12/03/21 20:26	1
cis-1,3-Dichloropropene	ND	H	45	3.7	ug/Kg	☼	11/24/21 10:53	12/03/21 20:26	1
Dibromomethane	ND	H	45	5.9	ug/Kg	☼	11/24/21 10:53	12/03/21 20:26	1
Dichlorodifluoromethane	ND	H	45	8.5	ug/Kg	☼	11/24/21 10:53	12/03/21 20:26	1
Ethylbenzene	ND	H	45	6.0	ug/Kg	☼	11/24/21 10:53	12/03/21 20:26	1
Hexachlorobutadiene	ND	H	45	4.6	ug/Kg	☼	11/24/21 10:53	12/03/21 20:26	1
Isopropylbenzene	ND	H	45	3.2	ug/Kg	☼	11/24/21 10:53	12/03/21 20:26	1
Methyl tert-butyl ether	ND	H	90	3.3	ug/Kg	☼	11/24/21 10:53	12/03/21 20:26	1
Methylene Chloride	ND	H	45	4.9	ug/Kg	☼	11/24/21 10:53	12/03/21 20:26	1
m-Xylene & p-Xylene	ND	H	45	4.5	ug/Kg	☼	11/24/21 10:53	12/03/21 20:26	1
Naphthalene	ND	H	45	1.6	ug/Kg	☼	11/24/21 10:53	12/03/21 20:26	1
n-Butylbenzene	ND	H	45	2.8	ug/Kg	☼	11/24/21 10:53	12/03/21 20:26	1
N-Propylbenzene	ND	H	45	4.2	ug/Kg	☼	11/24/21 10:53	12/03/21 20:26	1
o-Xylene	ND	H	45	4.7	ug/Kg	☼	11/24/21 10:53	12/03/21 20:26	1
sec-Butylbenzene	ND	H	45	2.2	ug/Kg	☼	11/24/21 10:53	12/03/21 20:26	1
Styrene	ND	H	45	0.99	ug/Kg	☼	11/24/21 10:53	12/03/21 20:26	1
tert-Butylbenzene	ND	H	45	3.7	ug/Kg	☼	11/24/21 10:53	12/03/21 20:26	1
Tetrachloroethene	ND	H	45	3.8	ug/Kg	☼	11/24/21 10:53	12/03/21 20:26	1
Toluene	6.5	J H	45	4.1	ug/Kg	☼	11/24/21 10:53	12/03/21 20:26	1
trans-1,2-Dichloroethene	ND	H	45	5.6	ug/Kg	☼	11/24/21 10:53	12/03/21 20:26	1
trans-1,3-Dichloropropene	ND	H	45	2.5	ug/Kg	☼	11/24/21 10:53	12/03/21 20:26	1
Trichlorofluoromethane	ND	H	45	11	ug/Kg	☼	11/24/21 10:53	12/03/21 20:26	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	113		52 - 126	11/24/21 10:53	12/03/21 20:26	1
4-Bromofluorobenzene (Surr)	108		67 - 135	11/24/21 10:53	12/03/21 20:26	1
Dibromofluoromethane (Surr)	105		61 - 123	11/24/21 10:53	12/03/21 20:26	1
Toluene-d8 (Surr)	113		65 - 131	11/24/21 10:53	12/03/21 20:26	1

Method: AK101 - Alaska - Gasoline Range Organics (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
C6-C10 AK	ND		4.5	0.90	mg/Kg	☼	11/24/21 10:53	12/03/21 20:26	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	108		60 - 120	11/24/21 10:53	12/03/21 20:26	1
Trifluorotoluene (Surr)	74		60 - 120	11/24/21 10:53	12/03/21 20:26	1

Method: 8011 - EDB, DBCP, and 1,2,3-TCP (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ethylene Dibromide	ND	H	0.28	0.041	ug/Kg	☼	12/03/21 13:26	12/04/21 06:46	1
1,2,3-Trichloropropane	ND	H	0.28	0.15	ug/Kg	☼	12/03/21 13:26	12/04/21 06:46	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dibromopropane	111		55 - 130	12/03/21 13:26	12/04/21 06:46	1

Method: AK102 - DRO

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
DRO (nC10-<nC25)	1.3	J B	2.2	0.54	mg/Kg	☼	11/24/21 09:17	12/11/21 22:54	1

Eurofins TestAmerica, Sacramento

Client Sample Results

Client: Shannon & Wilson, Inc
Project/Site: Kodiak DOT&PF PFAS (107471)

Job ID: 320-82154-1

Client Sample ID: ADQ-Site35-15

Lab Sample ID: 320-82154-16

Date Collected: 11/13/21 12:52

Matrix: Solid

Date Received: 11/23/21 16:45

Percent Solids: 91.9

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
<i>o</i> -Terphenyl (Surr)	65		60 - 120	11/24/21 09:17	12/11/21 22:54	1
<i>n</i> -Triacontane-d62	73		60 - 120	11/24/21 09:17	12/11/21 22:54	1

Method: EPA 537(Mod) - PFAS for QSM 5.3, Table B-15

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorohexanoic acid (PFHxA)	ND		0.20	0.030	ug/Kg	☆	11/24/21 18:30	11/29/21 08:51	1
Perfluoroheptanoic acid (PFHpA)	ND		0.20	0.037	ug/Kg	☆	11/24/21 18:30	11/29/21 08:51	1
Perfluorooctanoic acid (PFOA)	0.085	J	0.20	0.052	ug/Kg	☆	11/24/21 18:30	11/29/21 08:51	1
Perfluorononanoic acid (PFNA)	ND		0.20	0.022	ug/Kg	☆	11/24/21 18:30	11/29/21 08:51	1
Perfluorodecanoic acid (PFDA)	ND		0.20	0.047	ug/Kg	☆	11/24/21 18:30	11/29/21 08:51	1
Perfluoroundecanoic acid (PFUnA)	ND		0.20	0.041	ug/Kg	☆	11/24/21 18:30	11/29/21 08:51	1
Perfluorododecanoic acid (PFDoA)	ND		0.20	0.029	ug/Kg	☆	11/24/21 18:30	11/29/21 08:51	1
Perfluorotridecanoic acid (PFTrDA)	ND		0.20	0.021	ug/Kg	☆	11/24/21 18:30	11/29/21 08:51	1
Perfluorotetradecanoic acid (PFTeA)	ND		0.20	0.036	ug/Kg	☆	11/24/21 18:30	11/29/21 08:51	1
Perfluorobutanesulfonic acid (PFBS)	ND		0.20	0.037	ug/Kg	☆	11/24/21 18:30	11/29/21 08:51	1
Perfluorohexanesulfonic acid (PFHxS)	ND		0.20	0.028	ug/Kg	☆	11/24/21 18:30	11/29/21 08:51	1
Perfluorooctanesulfonic acid (PFOS)	0.13	J	0.20	0.042	ug/Kg	☆	11/24/21 18:30	11/29/21 08:51	1
NEtFOSAA	ND		0.20	0.047	ug/Kg	☆	11/24/21 18:30	11/29/21 08:51	1
NMeFOSAA	ND		0.20	0.023	ug/Kg	☆	11/24/21 18:30	11/29/21 08:51	1
HFPO-DA (GenX)	ND		0.20	0.040	ug/Kg	☆	11/24/21 18:30	11/29/21 08:51	1
9Cl-PF3ONS	ND		0.20	0.034	ug/Kg	☆	11/24/21 18:30	11/29/21 08:51	1
11Cl-PF3OUdS	ND		0.20	0.030	ug/Kg	☆	11/24/21 18:30	11/29/21 08:51	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	ND		0.20	0.038	ug/Kg	☆	11/24/21 18:30	11/29/21 08:51	1

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C2 PFHxA	103		50 - 150	11/24/21 18:30	11/29/21 08:51	1
13C4 PFHpA	102		50 - 150	11/24/21 18:30	11/29/21 08:51	1
13C4 PFOA	106		50 - 150	11/24/21 18:30	11/29/21 08:51	1
13C5 PFNA	106		50 - 150	11/24/21 18:30	11/29/21 08:51	1
13C2 PFDA	109		50 - 150	11/24/21 18:30	11/29/21 08:51	1
13C2 PFUnA	107		50 - 150	11/24/21 18:30	11/29/21 08:51	1
13C2 PFDoA	103		50 - 150	11/24/21 18:30	11/29/21 08:51	1
13C2 PFTeDA	117		50 - 150	11/24/21 18:30	11/29/21 08:51	1
13C3 PFBS	115		50 - 150	11/24/21 18:30	11/29/21 08:51	1
18O2 PFHxS	97		50 - 150	11/24/21 18:30	11/29/21 08:51	1
13C4 PFOS	100		50 - 150	11/24/21 18:30	11/29/21 08:51	1
d3-NMeFOSAA	118		50 - 150	11/24/21 18:30	11/29/21 08:51	1
d5-NEtFOSAA	136		50 - 150	11/24/21 18:30	11/29/21 08:51	1
13C3 HFPO-DA	95		50 - 150	11/24/21 18:30	11/29/21 08:51	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	8.1		0.1	0.1	%			11/24/21 16:05	1
Percent Solids	91.9		0.1	0.1	%			11/24/21 16:05	1

Client Sample Results

Client: Shannon & Wilson, Inc
Project/Site: Kodiak DOT&PF PFAS (107471)

Job ID: 320-82154-1

Client Sample ID: ADQ-Site35-115

Lab Sample ID: 320-82154-17

Date Collected: 11/13/21 12:42

Matrix: Solid

Date Received: 11/23/21 16:45

Percent Solids: 90.2

Method: 8260C SIM - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,2,2-Tetrachloroethane	ND	H	1.7	0.37	ug/Kg	☼	11/24/21 10:53	11/30/21 18:11	1
1,1,2-Trichloroethane	ND	H	1.7	0.55	ug/Kg	☼	11/24/21 10:53	11/30/21 18:11	1
1,2-Dichloroethane	ND	H	1.7	0.28	ug/Kg	☼	11/24/21 10:53	11/30/21 18:11	1
Bromomethane	ND	H	3.3	1.1	ug/Kg	☼	11/24/21 10:53	11/30/21 18:11	1
Chlorodibromomethane	ND	H	1.7	0.26	ug/Kg	☼	11/24/21 10:53	11/30/21 18:11	1
Chloroform	ND	H	3.3	1.3	ug/Kg	☼	11/24/21 10:53	11/30/21 18:11	1
Dichlorobromomethane	ND	H	1.7	0.22	ug/Kg	☼	11/24/21 10:53	11/30/21 18:11	1
Ethylene Dibromide	ND	H	1.7	0.27	ug/Kg	☼	11/24/21 10:53	11/30/21 18:11	1
Trichloroethene	ND	H	1.7	0.33	ug/Kg	☼	11/24/21 10:53	11/30/21 18:11	1
Vinyl chloride	ND	H	1.7	0.42	ug/Kg	☼	11/24/21 10:53	11/30/21 18:11	1
Surrogate							Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	87		69 - 129				11/24/21 10:53	11/30/21 18:11	1
Dibromofluoromethane (Surr)	118		72 - 132				11/24/21 10:53	11/30/21 18:11	1
1,2-Dichloroethane-d4 (Surr)	119		72 - 132				11/24/21 10:53	11/30/21 18:11	1
Toluene-d8 (Surr)	113		78 - 138				11/24/21 10:53	11/30/21 18:11	1

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND	H	33	3.9	ug/Kg	☼	11/24/21 10:53	12/03/21 20:50	1
1,1,1-Trichloroethane	ND	H	33	2.4	ug/Kg	☼	11/24/21 10:53	12/03/21 20:50	1
1,1-Dichloroethane	ND	H	33	1.8	ug/Kg	☼	11/24/21 10:53	12/03/21 20:50	1
1,1-Dichloroethene	ND	H	33	3.1	ug/Kg	☼	11/24/21 10:53	12/03/21 20:50	1
1,1-Dichloropropene	ND	H	33	2.8	ug/Kg	☼	11/24/21 10:53	12/03/21 20:50	1
1,2,3-Trichlorobenzene	ND	H	33	4.1	ug/Kg	☼	11/24/21 10:53	12/03/21 20:50	1
1,2,3-Trichloropropane	ND	H	33	3.1	ug/Kg	☼	11/24/21 10:53	12/03/21 20:50	1
1,2,4-Trichlorobenzene	ND	H	33	2.2	ug/Kg	☼	11/24/21 10:53	12/03/21 20:50	1
1,2,4-Trimethylbenzene	ND	H	33	2.3	ug/Kg	☼	11/24/21 10:53	12/03/21 20:50	1
1,2-Dibromo-3-Chloropropane	ND	H	66	4.2	ug/Kg	☼	11/24/21 10:53	12/03/21 20:50	1
1,2-Dichlorobenzene	ND	H	33	1.5	ug/Kg	☼	11/24/21 10:53	12/03/21 20:50	1
1,2-Dichloropropane	ND	H	33	3.1	ug/Kg	☼	11/24/21 10:53	12/03/21 20:50	1
1,3,5-Trimethylbenzene	ND	H	33	2.3	ug/Kg	☼	11/24/21 10:53	12/03/21 20:50	1
1,3-Dichlorobenzene	ND	H	33	2.2	ug/Kg	☼	11/24/21 10:53	12/03/21 20:50	1
1,3-Dichloropropane	ND	H	33	1.5	ug/Kg	☼	11/24/21 10:53	12/03/21 20:50	1
1,4-Dichlorobenzene	ND	H	33	1.5	ug/Kg	☼	11/24/21 10:53	12/03/21 20:50	1
2,2-Dichloropropane	ND	H	33	2.8	ug/Kg	☼	11/24/21 10:53	12/03/21 20:50	1
2-Butanone (MEK)	ND	H	66	17	ug/Kg	☼	11/24/21 10:53	12/03/21 20:50	1
2-Chlorotoluene	ND	H	33	2.4	ug/Kg	☼	11/24/21 10:53	12/03/21 20:50	1
2-Hexanone	ND	H	66	3.4	ug/Kg	☼	11/24/21 10:53	12/03/21 20:50	1
4-Chlorotoluene	ND	H	33	1.8	ug/Kg	☼	11/24/21 10:53	12/03/21 20:50	1
4-Methyl-2-pentanone (MIBK)	ND	H	66	2.0	ug/Kg	☼	11/24/21 10:53	12/03/21 20:50	1
p-Isopropyltoluene	ND	H	33	1.1	ug/Kg	☼	11/24/21 10:53	12/03/21 20:50	1
Acetone	ND	H	330	33	ug/Kg	☼	11/24/21 10:53	12/03/21 20:50	1
Benzene	ND	H	33	2.2	ug/Kg	☼	11/24/21 10:53	12/03/21 20:50	1
Bromoform	ND	H	33	7.3	ug/Kg	☼	11/24/21 10:53	12/03/21 20:50	1
Bromobenzene	ND	H	33	3.7	ug/Kg	☼	11/24/21 10:53	12/03/21 20:50	1
Carbon disulfide	ND	H	66	2.3	ug/Kg	☼	11/24/21 10:53	12/03/21 20:50	1
Carbon tetrachloride	ND	H	33	2.3	ug/Kg	☼	11/24/21 10:53	12/03/21 20:50	1
Chlorobenzene	ND	H	33	2.9	ug/Kg	☼	11/24/21 10:53	12/03/21 20:50	1
Chlorobromomethane	ND	H	33	4.8	ug/Kg	☼	11/24/21 10:53	12/03/21 20:50	1

Eurofins TestAmerica, Sacramento

Client Sample Results

Client: Shannon & Wilson, Inc
Project/Site: Kodiak DOT&PF PFAS (107471)

Job ID: 320-82154-1

Client Sample ID: ADQ-Site35-115

Lab Sample ID: 320-82154-17

Date Collected: 11/13/21 12:42

Matrix: Solid

Date Received: 11/23/21 16:45

Percent Solids: 90.2

Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloroethane	ND	H	33	4.4	ug/Kg	✱	11/24/21 10:53	12/03/21 20:50	1
Chloromethane	ND	H	33	1.7	ug/Kg	✱	11/24/21 10:53	12/03/21 20:50	1
cis-1,2-Dichloroethene	ND	H	33	5.4	ug/Kg	✱	11/24/21 10:53	12/03/21 20:50	1
cis-1,3-Dichloropropene	ND	H	33	2.7	ug/Kg	✱	11/24/21 10:53	12/03/21 20:50	1
Dibromomethane	ND	H	33	4.3	ug/Kg	✱	11/24/21 10:53	12/03/21 20:50	1
Dichlorodifluoromethane	ND	H	33	6.2	ug/Kg	✱	11/24/21 10:53	12/03/21 20:50	1
Ethylbenzene	ND	H	33	4.4	ug/Kg	✱	11/24/21 10:53	12/03/21 20:50	1
Hexachlorobutadiene	ND	H	33	3.4	ug/Kg	✱	11/24/21 10:53	12/03/21 20:50	1
Isopropylbenzene	ND	H	33	2.3	ug/Kg	✱	11/24/21 10:53	12/03/21 20:50	1
Methyl tert-butyl ether	ND	H	66	2.4	ug/Kg	✱	11/24/21 10:53	12/03/21 20:50	1
Methylene Chloride	ND	H	33	3.6	ug/Kg	✱	11/24/21 10:53	12/03/21 20:50	1
m-Xylene & p-Xylene	ND	H	33	3.3	ug/Kg	✱	11/24/21 10:53	12/03/21 20:50	1
Naphthalene	ND	H	33	1.2	ug/Kg	✱	11/24/21 10:53	12/03/21 20:50	1
n-Butylbenzene	ND	H	33	2.0	ug/Kg	✱	11/24/21 10:53	12/03/21 20:50	1
N-Propylbenzene	ND	H	33	3.1	ug/Kg	✱	11/24/21 10:53	12/03/21 20:50	1
o-Xylene	ND	H	33	3.4	ug/Kg	✱	11/24/21 10:53	12/03/21 20:50	1
sec-Butylbenzene	ND	H	33	1.6	ug/Kg	✱	11/24/21 10:53	12/03/21 20:50	1
Styrene	ND	H	33	0.73	ug/Kg	✱	11/24/21 10:53	12/03/21 20:50	1
tert-Butylbenzene	ND	H	33	2.7	ug/Kg	✱	11/24/21 10:53	12/03/21 20:50	1
Tetrachloroethene	ND	H	33	2.8	ug/Kg	✱	11/24/21 10:53	12/03/21 20:50	1
Toluene	ND	H	33	3.0	ug/Kg	✱	11/24/21 10:53	12/03/21 20:50	1
trans-1,2-Dichloroethene	ND	H	33	4.1	ug/Kg	✱	11/24/21 10:53	12/03/21 20:50	1
trans-1,3-Dichloropropene	ND	H	33	1.8	ug/Kg	✱	11/24/21 10:53	12/03/21 20:50	1
Trichlorofluoromethane	ND	H	33	7.9	ug/Kg	✱	11/24/21 10:53	12/03/21 20:50	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	111		52 - 126	11/24/21 10:53	12/03/21 20:50	1
4-Bromofluorobenzene (Surr)	105		67 - 135	11/24/21 10:53	12/03/21 20:50	1
Dibromofluoromethane (Surr)	105		61 - 123	11/24/21 10:53	12/03/21 20:50	1
Toluene-d8 (Surr)	113		65 - 131	11/24/21 10:53	12/03/21 20:50	1

Method: AK101 - Alaska - Gasoline Range Organics (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
C6-C10 AK	ND		3.3	0.66	mg/Kg	✱	11/24/21 10:53	12/03/21 20:50	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	105		60 - 120	11/24/21 10:53	12/03/21 20:50	1
Trifluorotoluene (Surr)	85		60 - 120	11/24/21 10:53	12/03/21 20:50	1

Method: 8011 - EDB, DBCP, and 1,2,3-TCP (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ethylene Dibromide	ND	H	0.28	0.042	ug/Kg	✱	12/03/21 13:26	12/04/21 07:10	1
1,2,3-Trichloropropane	ND	H	0.28	0.15	ug/Kg	✱	12/03/21 13:26	12/04/21 07:10	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dibromopropane	115		55 - 130	12/03/21 13:26	12/04/21 07:10	1

Method: AK102 - DRO

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
DRO (nC10-<nC25)	1.2	J B	2.2	0.54	mg/Kg	✱	11/24/21 09:17	12/11/21 23:18	1

Eurofins TestAmerica, Sacramento

Client Sample Results

Client: Shannon & Wilson, Inc
 Project/Site: Kodiak DOT&PF PFAS (107471)

Job ID: 320-82154-1

Client Sample ID: ADQ-Site35-115

Lab Sample ID: 320-82154-17

Date Collected: 11/13/21 12:42

Matrix: Solid

Date Received: 11/23/21 16:45

Percent Solids: 90.2

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
<i>o</i> -Terphenyl (Surr)	67		60 - 120	11/24/21 09:17	12/11/21 23:18	1
<i>n</i> -Triacontane-d62	76		60 - 120	11/24/21 09:17	12/11/21 23:18	1

Method: EPA 537(Mod) - PFAS for QSM 5.3, Table B-15

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorohexanoic acid (PFHxA)	ND		0.20	0.031	ug/Kg	☆	11/24/21 18:30	11/29/21 07:59	1
Perfluoroheptanoic acid (PFHpA)	ND		0.20	0.038	ug/Kg	☆	11/24/21 18:30	11/29/21 07:59	1
Perfluorooctanoic acid (PFOA)	0.076	J	0.20	0.054	ug/Kg	☆	11/24/21 18:30	11/29/21 07:59	1
Perfluorononanoic acid (PFNA)	ND		0.20	0.022	ug/Kg	☆	11/24/21 18:30	11/29/21 07:59	1
Perfluorodecanoic acid (PFDA)	ND		0.20	0.049	ug/Kg	☆	11/24/21 18:30	11/29/21 07:59	1
Perfluoroundecanoic acid (PFUnA)	ND		0.20	0.042	ug/Kg	☆	11/24/21 18:30	11/29/21 07:59	1
Perfluorododecanoic acid (PFDoA)	ND		0.20	0.030	ug/Kg	☆	11/24/21 18:30	11/29/21 07:59	1
Perfluorotridecanoic acid (PFTrDA)	ND		0.20	0.021	ug/Kg	☆	11/24/21 18:30	11/29/21 07:59	1
Perfluorotetradecanoic acid (PFTeA)	ND		0.20	0.037	ug/Kg	☆	11/24/21 18:30	11/29/21 07:59	1
Perfluorobutanesulfonic acid (PFBS)	ND		0.20	0.038	ug/Kg	☆	11/24/21 18:30	11/29/21 07:59	1
Perfluorohexanesulfonic acid (PFHxS)	ND		0.20	0.029	ug/Kg	☆	11/24/21 18:30	11/29/21 07:59	1
Perfluorooctanesulfonic acid (PFOS)	0.12	J I	0.20	0.043	ug/Kg	☆	11/24/21 18:30	11/29/21 07:59	1
NEtFOSAA	ND		0.20	0.049	ug/Kg	☆	11/24/21 18:30	11/29/21 07:59	1
NMeFOSAA	ND		0.20	0.023	ug/Kg	☆	11/24/21 18:30	11/29/21 07:59	1
HFPO-DA (GenX)	ND		0.20	0.041	ug/Kg	☆	11/24/21 18:30	11/29/21 07:59	1
9CI-PF3ONS	ND		0.20	0.035	ug/Kg	☆	11/24/21 18:30	11/29/21 07:59	1
11CI-PF3OUdS	ND		0.20	0.031	ug/Kg	☆	11/24/21 18:30	11/29/21 07:59	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	ND		0.20	0.039	ug/Kg	☆	11/24/21 18:30	11/29/21 07:59	1

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C2 PFHxA	111		50 - 150	11/24/21 18:30	11/29/21 07:59	1
13C4 PFHpA	122		50 - 150	11/24/21 18:30	11/29/21 07:59	1
13C4 PFOA	132		50 - 150	11/24/21 18:30	11/29/21 07:59	1
13C5 PFNA	127		50 - 150	11/24/21 18:30	11/29/21 07:59	1
13C2 PFDA	130		50 - 150	11/24/21 18:30	11/29/21 07:59	1
13C2 PFUnA	141		50 - 150	11/24/21 18:30	11/29/21 07:59	1
13C2 PFDoA	128		50 - 150	11/24/21 18:30	11/29/21 07:59	1
13C2 PFTeDA	131		50 - 150	11/24/21 18:30	11/29/21 07:59	1
13C3 PFBS	132		50 - 150	11/24/21 18:30	11/29/21 07:59	1
18O2 PFHxS	114		50 - 150	11/24/21 18:30	11/29/21 07:59	1
13C4 PFOS	121		50 - 150	11/24/21 18:30	11/29/21 07:59	1
d3-NMeFOSAA	149		50 - 150	11/24/21 18:30	11/29/21 07:59	1
d5-NEtFOSAA	157	*5+	50 - 150	11/24/21 18:30	11/29/21 07:59	1
13C3 HFPO-DA	113		50 - 150	11/24/21 18:30	11/29/21 07:59	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	9.8		0.1	0.1	%			11/24/21 16:05	1
Percent Solids	90.2		0.1	0.1	%			11/24/21 16:05	1

Client Sample Results

Client: Shannon & Wilson, Inc
 Project/Site: Kodiak DOT&PF PFAS (107471)

Job ID: 320-82154-1

Client Sample ID: Trip Blank 1

Lab Sample ID: 320-82154-18

Date Collected: 11/13/21 00:00

Matrix: Solid

Date Received: 11/23/21 16:45

Method: 8260C SIM - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,2,2-Tetrachloroethane	ND	H	2.5	0.56	ug/Kg		11/24/21 10:53	11/30/21 18:35	1
1,1,2-Trichloroethane	ND	H	2.5	0.83	ug/Kg		11/24/21 10:53	11/30/21 18:35	1
1,2-Dichloroethane	ND	H	2.5	0.42	ug/Kg		11/24/21 10:53	11/30/21 18:35	1
Bromomethane	ND	H	5.0	1.6	ug/Kg		11/24/21 10:53	11/30/21 18:35	1
Chlorodibromomethane	ND	H	2.5	0.40	ug/Kg		11/24/21 10:53	11/30/21 18:35	1
Chloroform	ND	H	5.0	2.0	ug/Kg		11/24/21 10:53	11/30/21 18:35	1
Dichlorobromomethane	ND	H	2.5	0.33	ug/Kg		11/24/21 10:53	11/30/21 18:35	1
Ethylene Dibromide	ND	H	2.5	0.40	ug/Kg		11/24/21 10:53	11/30/21 18:35	1
Trichloroethene	ND	H	2.5	0.49	ug/Kg		11/24/21 10:53	11/30/21 18:35	1
Vinyl chloride	ND	H	2.5	0.63	ug/Kg		11/24/21 10:53	11/30/21 18:35	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	82		69 - 129	11/24/21 10:53	11/30/21 18:35	1
Dibromofluoromethane (Surr)	113		72 - 132	11/24/21 10:53	11/30/21 18:35	1
1,2-Dichloroethane-d4 (Surr)	112		72 - 132	11/24/21 10:53	11/30/21 18:35	1
Toluene-d8 (Surr)	107		78 - 138	11/24/21 10:53	11/30/21 18:35	1

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND	H	50	5.9	ug/Kg		11/24/21 10:53	12/03/21 13:50	1
1,1,1-Trichloroethane	ND	H	50	3.7	ug/Kg		11/24/21 10:53	12/03/21 13:50	1
1,1-Dichloroethane	ND	H	50	2.7	ug/Kg		11/24/21 10:53	12/03/21 13:50	1
1,1-Dichloroethene	ND	H	50	4.7	ug/Kg		11/24/21 10:53	12/03/21 13:50	1
1,1-Dichloropropene	ND	H	50	4.3	ug/Kg		11/24/21 10:53	12/03/21 13:50	1
1,2,3-Trichlorobenzene	ND	H	50	6.2	ug/Kg		11/24/21 10:53	12/03/21 13:50	1
1,2,3-Trichloropropane	ND	H	50	4.7	ug/Kg		11/24/21 10:53	12/03/21 13:50	1
1,2,4-Trichlorobenzene	ND	H	50	3.4	ug/Kg		11/24/21 10:53	12/03/21 13:50	1
1,2,4-Trimethylbenzene	ND	H	50	3.5	ug/Kg		11/24/21 10:53	12/03/21 13:50	1
1,2-Dibromo-3-Chloropropane	ND	H	100	6.3	ug/Kg		11/24/21 10:53	12/03/21 13:50	1
1,2-Dichlorobenzene	ND	H	50	2.2	ug/Kg		11/24/21 10:53	12/03/21 13:50	1
1,2-Dichloropropane	ND	H	50	4.7	ug/Kg		11/24/21 10:53	12/03/21 13:50	1
1,3,5-Trimethylbenzene	ND	H	50	3.5	ug/Kg		11/24/21 10:53	12/03/21 13:50	1
1,3-Dichlorobenzene	ND	H	50	3.3	ug/Kg		11/24/21 10:53	12/03/21 13:50	1
1,3-Dichloropropane	ND	H	50	2.3	ug/Kg		11/24/21 10:53	12/03/21 13:50	1
1,4-Dichlorobenzene	ND	H	50	2.2	ug/Kg		11/24/21 10:53	12/03/21 13:50	1
2,2-Dichloropropane	ND	H	50	4.3	ug/Kg		11/24/21 10:53	12/03/21 13:50	1
2-Butanone (MEK)	ND	H	100	26	ug/Kg		11/24/21 10:53	12/03/21 13:50	1
2-Chlorotoluene	ND	H	50	3.6	ug/Kg		11/24/21 10:53	12/03/21 13:50	1
2-Hexanone	ND	H	100	5.2	ug/Kg		11/24/21 10:53	12/03/21 13:50	1
4-Chlorotoluene	ND	H	50	2.8	ug/Kg		11/24/21 10:53	12/03/21 13:50	1
4-Methyl-2-pentanone (MIBK)	ND	H	100	3.1	ug/Kg		11/24/21 10:53	12/03/21 13:50	1
p-Isopropyltoluene	ND	H	50	1.6	ug/Kg		11/24/21 10:53	12/03/21 13:50	1
Acetone	ND	H	500	50	ug/Kg		11/24/21 10:53	12/03/21 13:50	1
Benzene	ND	H	50	3.3	ug/Kg		11/24/21 10:53	12/03/21 13:50	1
Bromoform	ND	H	50	11	ug/Kg		11/24/21 10:53	12/03/21 13:50	1
Bromobenzene	ND	H	50	5.6	ug/Kg		11/24/21 10:53	12/03/21 13:50	1
Carbon disulfide	ND	H	100	3.5	ug/Kg		11/24/21 10:53	12/03/21 13:50	1
Carbon tetrachloride	ND	H	50	3.5	ug/Kg		11/24/21 10:53	12/03/21 13:50	1
Chlorobenzene	ND	H	50	4.4	ug/Kg		11/24/21 10:53	12/03/21 13:50	1
Chlorobromomethane	ND	H	50	7.3	ug/Kg		11/24/21 10:53	12/03/21 13:50	1

Eurofins TestAmerica, Sacramento

Client Sample Results

Client: Shannon & Wilson, Inc
 Project/Site: Kodiak DOT&PF PFAS (107471)

Job ID: 320-82154-1

Client Sample ID: Trip Blank 1

Lab Sample ID: 320-82154-18

Date Collected: 11/13/21 00:00

Matrix: Solid

Date Received: 11/23/21 16:45

Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloroethane	ND	H	50	6.6	ug/Kg		11/24/21 10:53	12/03/21 13:50	1
Chloromethane	ND	H	50	2.5	ug/Kg		11/24/21 10:53	12/03/21 13:50	1
cis-1,2-Dichloroethene	ND	H	50	8.2	ug/Kg		11/24/21 10:53	12/03/21 13:50	1
cis-1,3-Dichloropropene	ND	H	50	4.1	ug/Kg		11/24/21 10:53	12/03/21 13:50	1
Dibromomethane	ND	H	50	6.5	ug/Kg		11/24/21 10:53	12/03/21 13:50	1
Dichlorodifluoromethane	ND	H	50	9.4	ug/Kg		11/24/21 10:53	12/03/21 13:50	1
Ethylbenzene	ND	H	50	6.6	ug/Kg		11/24/21 10:53	12/03/21 13:50	1
Hexachlorobutadiene	ND	H	50	5.1	ug/Kg		11/24/21 10:53	12/03/21 13:50	1
Isopropylbenzene	ND	H	50	3.5	ug/Kg		11/24/21 10:53	12/03/21 13:50	1
Methyl tert-butyl ether	ND	H	100	3.6	ug/Kg		11/24/21 10:53	12/03/21 13:50	1
Methylene Chloride	ND	H	50	5.4	ug/Kg		11/24/21 10:53	12/03/21 13:50	1
m-Xylene & p-Xylene	ND	H	50	5.0	ug/Kg		11/24/21 10:53	12/03/21 13:50	1
Naphthalene	ND	H	50	1.8	ug/Kg		11/24/21 10:53	12/03/21 13:50	1
n-Butylbenzene	ND	H	50	3.1	ug/Kg		11/24/21 10:53	12/03/21 13:50	1
N-Propylbenzene	ND	H	50	4.7	ug/Kg		11/24/21 10:53	12/03/21 13:50	1
o-Xylene	ND	H	50	5.2	ug/Kg		11/24/21 10:53	12/03/21 13:50	1
sec-Butylbenzene	ND	H	50	2.4	ug/Kg		11/24/21 10:53	12/03/21 13:50	1
Styrene	ND	H	50	1.1	ug/Kg		11/24/21 10:53	12/03/21 13:50	1
tert-Butylbenzene	ND	H	50	4.1	ug/Kg		11/24/21 10:53	12/03/21 13:50	1
Tetrachloroethene	ND	H	50	4.2	ug/Kg		11/24/21 10:53	12/03/21 13:50	1
Toluene	4.9	J H	50	4.5	ug/Kg		11/24/21 10:53	12/03/21 13:50	1
trans-1,2-Dichloroethene	ND	H	50	6.2	ug/Kg		11/24/21 10:53	12/03/21 13:50	1
trans-1,3-Dichloropropene	ND	H	50	2.8	ug/Kg		11/24/21 10:53	12/03/21 13:50	1
Trichlorofluoromethane	ND	H	50	12	ug/Kg		11/24/21 10:53	12/03/21 13:50	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	113		52 - 126	11/24/21 10:53	12/03/21 13:50	1
4-Bromofluorobenzene (Surr)	107		67 - 135	11/24/21 10:53	12/03/21 13:50	1
Dibromofluoromethane (Surr)	108		61 - 123	11/24/21 10:53	12/03/21 13:50	1
Toluene-d8 (Surr)	114		65 - 131	11/24/21 10:53	12/03/21 13:50	1

Method: AK101 - Alaska - Gasoline Range Organics (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
C6-C10 AK	ND		5.0	1.0	mg/Kg		11/24/21 10:53	12/03/21 13:50	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	107		60 - 120	11/24/21 10:53	12/03/21 13:50	1
Trifluorotoluene (Surr)	87		60 - 120	11/24/21 10:53	12/03/21 13:50	1

Method: 8011 - EDB, DBCP, and 1,2,3-TCP (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ethylene Dibromide	ND	H	0.25	0.038	ug/Kg		12/03/21 13:26	12/04/21 07:35	1
1,2,3-Trichloropropane	ND	H	0.25	0.14	ug/Kg		12/03/21 13:26	12/04/21 07:35	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dibromopropane	112		55 - 130	12/03/21 13:26	12/04/21 07:35	1

Eurofins TestAmerica, Sacramento

Surrogate Summary

Client: Shannon & Wilson, Inc
 Project/Site: Kodiak DOT&PF PFAS (107471)

Job ID: 320-82154-1

Method: 8260C - Volatile Organic Compounds by GC/MS

Matrix: Solid

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)			
		DCA (52-126)	BFB (67-135)	DBFM (61-123)	TOL (65-131)
320-82154-1	ADQ-Site35-01	117	110	109	115
320-82154-2	ADQ-Site35-02	112	106	107	114
320-82154-3	ADQ-Site35-03	117	110	107	114
320-82154-4	ADQ-Site35-04	113	107	106	113
320-82154-5	ADQ-Site35-05	110	101	102	112
320-82154-6	ADQ-Site35-06	112	104	104	111
320-82154-7	ADQ-Site35-07	111	105	105	113
320-82154-8	ADQ-Site35-08	115	109	109	115
320-82154-9	ADQ-Site35-09	114	109	106	114
320-82154-10	ADQ-Site35-10	113	106	107	115
320-82154-11	ADQ-Site35-11	107	104	103	110
320-82154-12	ADQ-Site35-12	107	104	101	109
320-82154-13	ADQ-Site35-13	111	105	105	113
320-82154-14	ADQ-Site35-113	114	107	107	115
320-82154-15	ADQ-Site35-14	110	106	103	112
320-82154-16	ADQ-Site35-15	113	108	105	113
320-82154-17	ADQ-Site35-115	111	105	105	113
320-82154-18	Trip Blank 1	113	107	108	114
LCS 320-545528/2-A	Lab Control Sample	116	108	110	115
LCS 320-545528/3-A	Lab Control Sample Dup	112	106	107	115
MB 320-545528/1-A	Method Blank	114	108	107	116

Surrogate Legend

- DCA = 1,2-Dichloroethane-d4 (Surr)
- BFB = 4-Bromofluorobenzene (Surr)
- DBFM = Dibromofluoromethane (Surr)
- TOL = Toluene-d8 (Surr)

Method: 8260C SIM - Volatile Organic Compounds (GC/MS)

Matrix: Solid

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)			
		BFB (69-129)	DBFM (72-132)	DCA (72-132)	TOL (78-138)
320-82154-1	ADQ-Site35-01	83	116	114	107
320-82154-2	ADQ-Site35-02	83	121	116	108
320-82154-3	ADQ-Site35-03	84	121	120	110
320-82154-4	ADQ-Site35-04	88	122	120	111
320-82154-5	ADQ-Site35-05	84	117	116	110
320-82154-6	ADQ-Site35-06	84	121	115	109
320-82154-7	ADQ-Site35-07	87	121	121	109
320-82154-8	ADQ-Site35-08	85	120	114	108
320-82154-9	ADQ-Site35-09	87	120	117	111
320-82154-10	ADQ-Site35-10	85	119	120	108
320-82154-11	ADQ-Site35-11	83	118	119	106
320-82154-12	ADQ-Site35-12	86	122	124	109
320-82154-13	ADQ-Site35-13	82	118	116	106
320-82154-14	ADQ-Site35-113	83	119	118	107
320-82154-15	ADQ-Site35-14	81	116	119	104
320-82154-16	ADQ-Site35-15	87	120	119	113

Surrogate Summary

Client: Shannon & Wilson, Inc
 Project/Site: Kodiak DOT&PF PFAS (107471)

Job ID: 320-82154-1

Method: 8260C SIM - Volatile Organic Compounds (GC/MS) (Continued)

Matrix: Solid

Prep Type: Total/NA

Percent Surrogate Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)			
		BFB (69-129)	DBFM (72-132)	DCA (72-132)	TOL (78-138)
320-82154-17	ADQ-Site35-115	87	118	119	113
320-82154-18	Trip Blank 1	82	113	112	107
LCS 320-545528/26-A	Lab Control Sample	87	118	112	105
LCSD 320-545528/27-A	Lab Control Sample Dup	88	119	115	108
MB 320-545528/1-A	Method Blank	83	124	122	104

Surrogate Legend

BFB = 4-Bromofluorobenzene (Surr)

DBFM = Dibromofluoromethane (Surr)

DCA = 1,2-Dichloroethane-d4 (Surr)

TOL = Toluene-d8 (Surr)

Method: AK101 - Alaska - Gasoline Range Organics (GC/MS)

Matrix: Solid

Prep Type: Total/NA

Percent Surrogate Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)	
		BFB (60-120)	TFT (60-120)
320-82154-1	ADQ-Site35-01	103	29 S1-
320-82154-2	ADQ-Site35-02	106	65
320-82154-3	ADQ-Site35-03	110	75
320-82154-4	ADQ-Site35-04	107	85
320-82154-5	ADQ-Site35-05	101	82
320-82154-6	ADQ-Site35-06	104	76
320-82154-7	ADQ-Site35-07	105	74
320-82154-8	ADQ-Site35-08	109	83
320-82154-9	ADQ-Site35-09	109	81
320-82154-10	ADQ-Site35-10	106	77
320-82154-11	ADQ-Site35-11	104	76
320-82154-12	ADQ-Site35-12	104	85
320-82154-13	ADQ-Site35-13	105	85
320-82154-14	ADQ-Site35-113	107	87
320-82154-15	ADQ-Site35-14	106	73
320-82154-16	ADQ-Site35-15	108	74
320-82154-17	ADQ-Site35-115	105	85
320-82154-18	Trip Blank 1	107	87
LCS 320-545528/4-A	Lab Control Sample	102	110
LCSD 320-545528/5-A	Lab Control Sample Dup	105	108
MB 320-545528/1-A	Method Blank	108	117

Surrogate Legend

BFB = 4-Bromofluorobenzene (Surr)

TFT = Trifluorotoluene (Surr)

Method: 8011 - EDB, DBCP, and 1,2,3-TCP (GC)

Matrix: Solid

Prep Type: Total/NA

Percent Surrogate Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)
		12DBP1 (55-130)
320-82154-1	ADQ-Site35-01	123
320-82154-2	ADQ-Site35-02	125

Eurofins TestAmerica, Sacramento

Surrogate Summary

Client: Shannon & Wilson, Inc
 Project/Site: Kodiak DOT&PF PFAS (107471)

Job ID: 320-82154-1

Method: 8011 - EDB, DBCP, and 1,2,3-TCP (GC) (Continued)

Matrix: Solid

Prep Type: Total/NA

Percent Surrogate Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	12DBP1 (55-130)
320-82154-3	ADQ-Site35-03	115
320-82154-4	ADQ-Site35-04	120
320-82154-5	ADQ-Site35-05	114
320-82154-6	ADQ-Site35-06	167 S1+
320-82154-7	ADQ-Site35-07	108
320-82154-8	ADQ-Site35-08	109
320-82154-9	ADQ-Site35-09	107
320-82154-10	ADQ-Site35-10	113
320-82154-11	ADQ-Site35-11	114
320-82154-12	ADQ-Site35-12	119
320-82154-13	ADQ-Site35-13	108
320-82154-14	ADQ-Site35-113	108
320-82154-15	ADQ-Site35-14	112
320-82154-16	ADQ-Site35-15	111
320-82154-17	ADQ-Site35-115	115
320-82154-18	Trip Blank 1	112
LCS 280-559547/2-A	Lab Control Sample	87
LCSD 280-559547/3-A	Lab Control Sample Dup	83
MB 280-559547/1-A	Method Blank	80

Surrogate Legend

12DBP = 1,2-Dibromopropane

Method: AK102 - DRO

Matrix: Solid

Prep Type: Total/NA

Percent Surrogate Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	OTPH (60-120)	NTC (60-120)
320-82154-1	ADQ-Site35-01	38 S1-	77
320-82154-2	ADQ-Site35-02	56 S1-	76
320-82154-3	ADQ-Site35-03	61	74
320-82154-4	ADQ-Site35-04	61	77
320-82154-5	ADQ-Site35-05	65	88
320-82154-6	ADQ-Site35-06	60	76
320-82154-7	ADQ-Site35-07	100	143 S1+
320-82154-8	ADQ-Site35-08	66	77
320-82154-9	ADQ-Site35-09	69	76
320-82154-10	ADQ-Site35-10	70	75
320-82154-11	ADQ-Site35-11	56 S1-	81
320-82154-12	ADQ-Site35-12	68	85
320-82154-13	ADQ-Site35-13	58 S1-	81
320-82154-14	ADQ-Site35-113	66	78
320-82154-15	ADQ-Site35-14	65	78
320-82154-16	ADQ-Site35-15	65	73
320-82154-17	ADQ-Site35-115	67	76
320-82154-17 MS	ADQ-Site35-115	70	74
320-82154-17 MSD	ADQ-Site35-115	71	73
LCS 320-545524/2-A	Lab Control Sample	77	78
LCSD 320-545524/4-A	Lab Control Sample Dup	77	79
MB 320-545524/1-A	Method Blank	70	73

Surrogate Summary

Client: Shannon & Wilson, Inc
Project/Site: Kodiak DOT&PF PFAS (107471)

Job ID: 320-82154-1

Surrogate Legend

OTPH = o-Terphenyl (Surr)

NTC = n-Triacontane-d62

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11
- 12
- 13
- 14
- 15
- 16

Isotope Dilution Summary

Client: Shannon & Wilson, Inc
 Project/Site: Kodiak DOT&PF PFAS (107471)

Job ID: 320-82154-1

Method: EPA 537(Mod) - PFAS for QSM 5.3, Table B-15

Matrix: Solid

Prep Type: Total/NA

Percent Isotope Dilution Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	PFHxA (50-150)	C4PFHA (50-150)	PFOA (50-150)	PFNA (50-150)	PFDA (50-150)	PFUnA (50-150)	PFDaA (50-150)	PFTDA (50-150)
320-82154-1	ADQ-Site35-01	86	90	92	97	99	101	90	99
320-82154-2	ADQ-Site35-02	91	91	103	106	101	101	101	109
320-82154-3	ADQ-Site35-03	83	86	91	95	90	96	101	94
320-82154-4	ADQ-Site35-04	113	113	123	130	118	122	122	131
320-82154-5	ADQ-Site35-05	99	115	110	120	118	116	105	98
320-82154-6	ADQ-Site35-06	87	91	95	99	99	102	98	97
320-82154-7	ADQ-Site35-07	86	94	97	105	94	97	90	84
320-82154-8	ADQ-Site35-08	100	108	113	113	113	113	112	114
320-82154-9	ADQ-Site35-09	112	112	113	119	118	121	127	135
320-82154-10	ADQ-Site35-10	107	113	114	110	112	123	124	125
320-82154-11	ADQ-Site35-11	124	134	136	139	138	147	139	130
320-82154-12	ADQ-Site35-12	102	108	123	123	132	128	124	115
320-82154-13	ADQ-Site35-13	90	90	97	99	99	102	90	98
320-82154-13 - DL	ADQ-Site35-13								
320-82154-14	ADQ-Site35-113	103	113	121	117	120	129	128	116
320-82154-15	ADQ-Site35-14	104	108	111	114	116	125	118	123
320-82154-16	ADQ-Site35-15	103	102	106	106	109	107	103	117
320-82154-17	ADQ-Site35-115	111	122	132	127	130	141	128	131
320-82154-17 MS	ADQ-Site35-115	104	106	112	120	111	123	121	124
320-82154-17 MSD	ADQ-Site35-115	110	116	117	118	120	118	128	132
LCS 320-545891/2-A	Lab Control Sample	107	118	116	115	108	125	120	122
MB 320-545891/1-A	Method Blank	114	111	119	114	114	121	121	120

Percent Isotope Dilution Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	C3PFBS (50-150)	PFHxS (50-150)	PFOS (50-150)	d3NMFOS (50-150)	d5NEFOS (50-150)	HFPODA (50-150)
320-82154-1	ADQ-Site35-01	99	85	97	112	122	87
320-82154-2	ADQ-Site35-02	117	91	99	117	129	94
320-82154-3	ADQ-Site35-03	92	81	95	100	106	82
320-82154-4	ADQ-Site35-04	127	112	130	140	147	108
320-82154-5	ADQ-Site35-05	126	111	112	130	136	98
320-82154-6	ADQ-Site35-06	109	90	104	106	114	87
320-82154-7	ADQ-Site35-07	111	89	98	104	89	88
320-82154-8	ADQ-Site35-08	120	109	114	136	131	96
320-82154-9	ADQ-Site35-09	133	109	122	138	152 *5+	101
320-82154-10	ADQ-Site35-10	127	101	119	136	138	101
320-82154-11	ADQ-Site35-11	157 *5+	130	141	172 *5+	182 *5+	116
320-82154-12	ADQ-Site35-12	129	111	125	145	145	103
320-82154-13	ADQ-Site35-13	98	91	94	119	121	87
320-82154-13 - DL	ADQ-Site35-13			95			
320-82154-14	ADQ-Site35-113	123	107	117	149	145	105
320-82154-15	ADQ-Site35-14	117	104	117	135	149	110
320-82154-16	ADQ-Site35-15	115	97	100	118	136	95
320-82154-17	ADQ-Site35-115	132	114	121	149	157 *5+	113
320-82154-17 MS	ADQ-Site35-115	121	103	117	132	143	96
320-82154-17 MSD	ADQ-Site35-115	120	109	122	142	153 *5+	105
LCS 320-545891/2-A	Lab Control Sample	122	111	107	133	144	103
MB 320-545891/1-A	Method Blank	135	111	123	134	145	110

Surrogate Legend

PFHxA = 13C2 PFHxA

Isotope Dilution Summary

Client: Shannon & Wilson, Inc

Project/Site: Kodiak DOT&PF PFAS (107471)

Job ID: 320-82154-1

C4PFHA = 13C4 PFHpA
PFOA = 13C4 PFOA
PFNA = 13C5 PFNA
PFDA = 13C2 PFDA
PFUnA = 13C2 PFUnA
PFDoA = 13C2 PFDoA
PFTDA = 13C2 PFTeDA
C3PFBS = 13C3 PFBS
PFHxS = 18O2 PFHxS
PFOS = 13C4 PFOS
d3NMFOS = d3-NMeFOSAA
d5NEFOS = d5-NEtFOSAA
HFPODA = 13C3 HFPO-DA

- 1
- 2
- 3
- 4
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- 10
- 11
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- 14
- 15
- 16

QC Sample Results

Client: Shannon & Wilson, Inc
 Project/Site: Kodiak DOT&PF PFAS (107471)

Job ID: 320-82154-1

Method: 8260C - Volatile Organic Compounds by GC/MS

Lab Sample ID: MB 320-545528/1-A
Matrix: Solid
Analysis Batch: 547871

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 545528

Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
1,1,1,2-Tetrachloroethane	ND		50	5.9	ug/Kg		11/24/21 09:28	12/03/21 13:26	1
1,1,1-Trichloroethane	ND		50	3.7	ug/Kg		11/24/21 09:28	12/03/21 13:26	1
1,1-Dichloroethane	ND		50	2.7	ug/Kg		11/24/21 09:28	12/03/21 13:26	1
1,1-Dichloroethene	ND		50	4.7	ug/Kg		11/24/21 09:28	12/03/21 13:26	1
1,1-Dichloropropene	ND		50	4.3	ug/Kg		11/24/21 09:28	12/03/21 13:26	1
1,2,3-Trichlorobenzene	ND		50	6.2	ug/Kg		11/24/21 09:28	12/03/21 13:26	1
1,2,3-Trichloropropane	ND		50	4.7	ug/Kg		11/24/21 09:28	12/03/21 13:26	1
1,2,4-Trichlorobenzene	ND		50	3.4	ug/Kg		11/24/21 09:28	12/03/21 13:26	1
1,2,4-Trimethylbenzene	ND		50	3.5	ug/Kg		11/24/21 09:28	12/03/21 13:26	1
1,2-Dibromo-3-Chloropropane	ND		100	6.3	ug/Kg		11/24/21 09:28	12/03/21 13:26	1
1,2-Dichlorobenzene	ND		50	2.2	ug/Kg		11/24/21 09:28	12/03/21 13:26	1
1,2-Dichloropropane	ND		50	4.7	ug/Kg		11/24/21 09:28	12/03/21 13:26	1
1,3,5-Trimethylbenzene	ND		50	3.5	ug/Kg		11/24/21 09:28	12/03/21 13:26	1
1,3-Dichlorobenzene	ND		50	3.3	ug/Kg		11/24/21 09:28	12/03/21 13:26	1
1,3-Dichloropropane	ND		50	2.3	ug/Kg		11/24/21 09:28	12/03/21 13:26	1
1,4-Dichlorobenzene	ND		50	2.2	ug/Kg		11/24/21 09:28	12/03/21 13:26	1
2,2-Dichloropropane	ND		50	4.3	ug/Kg		11/24/21 09:28	12/03/21 13:26	1
2-Butanone (MEK)	ND		100	26	ug/Kg		11/24/21 09:28	12/03/21 13:26	1
2-Chlorotoluene	ND		50	3.6	ug/Kg		11/24/21 09:28	12/03/21 13:26	1
2-Hexanone	ND		100	5.2	ug/Kg		11/24/21 09:28	12/03/21 13:26	1
4-Chlorotoluene	ND		50	2.8	ug/Kg		11/24/21 09:28	12/03/21 13:26	1
4-Methyl-2-pentanone (MIBK)	ND		100	3.1	ug/Kg		11/24/21 09:28	12/03/21 13:26	1
p-Isopropyltoluene	ND		50	1.6	ug/Kg		11/24/21 09:28	12/03/21 13:26	1
Acetone	ND		500	50	ug/Kg		11/24/21 09:28	12/03/21 13:26	1
Benzene	ND		50	3.3	ug/Kg		11/24/21 09:28	12/03/21 13:26	1
Bromoform	ND		50	11	ug/Kg		11/24/21 09:28	12/03/21 13:26	1
Bromobenzene	ND		50	5.6	ug/Kg		11/24/21 09:28	12/03/21 13:26	1
Carbon disulfide	ND		100	3.5	ug/Kg		11/24/21 09:28	12/03/21 13:26	1
Carbon tetrachloride	ND		50	3.5	ug/Kg		11/24/21 09:28	12/03/21 13:26	1
Chlorobenzene	ND		50	4.4	ug/Kg		11/24/21 09:28	12/03/21 13:26	1
Chlorobromomethane	ND		50	7.3	ug/Kg		11/24/21 09:28	12/03/21 13:26	1
Chloroethane	ND		50	6.6	ug/Kg		11/24/21 09:28	12/03/21 13:26	1
Chloromethane	ND		50	2.5	ug/Kg		11/24/21 09:28	12/03/21 13:26	1
cis-1,2-Dichloroethene	ND		50	8.2	ug/Kg		11/24/21 09:28	12/03/21 13:26	1
cis-1,3-Dichloropropene	ND		50	4.1	ug/Kg		11/24/21 09:28	12/03/21 13:26	1
Dibromomethane	ND		50	6.5	ug/Kg		11/24/21 09:28	12/03/21 13:26	1
Dichlorodifluoromethane	ND		50	9.4	ug/Kg		11/24/21 09:28	12/03/21 13:26	1
Ethylbenzene	ND		50	6.6	ug/Kg		11/24/21 09:28	12/03/21 13:26	1
Hexachlorobutadiene	ND		50	5.1	ug/Kg		11/24/21 09:28	12/03/21 13:26	1
Isopropylbenzene	ND		50	3.5	ug/Kg		11/24/21 09:28	12/03/21 13:26	1
Methyl tert-butyl ether	ND		100	3.6	ug/Kg		11/24/21 09:28	12/03/21 13:26	1
Methylene Chloride	ND		50	5.4	ug/Kg		11/24/21 09:28	12/03/21 13:26	1
m-Xylene & p-Xylene	ND		50	5.0	ug/Kg		11/24/21 09:28	12/03/21 13:26	1
Naphthalene	ND		50	1.8	ug/Kg		11/24/21 09:28	12/03/21 13:26	1
n-Butylbenzene	ND		50	3.1	ug/Kg		11/24/21 09:28	12/03/21 13:26	1
N-Propylbenzene	ND		50	4.7	ug/Kg		11/24/21 09:28	12/03/21 13:26	1
o-Xylene	ND		50	5.2	ug/Kg		11/24/21 09:28	12/03/21 13:26	1
sec-Butylbenzene	ND		50	2.4	ug/Kg		11/24/21 09:28	12/03/21 13:26	1

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QC Sample Results

Client: Shannon & Wilson, Inc
 Project/Site: Kodiak DOT&PF PFAS (107471)

Job ID: 320-82154-1

Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: MB 320-545528/1-A
Matrix: Solid
Analysis Batch: 547871

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 545528

Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Styrene	ND		50	1.1	ug/Kg		11/24/21 09:28	12/03/21 13:26	1
tert-Butylbenzene	ND		50	4.1	ug/Kg		11/24/21 09:28	12/03/21 13:26	1
Tetrachloroethene	ND		50	4.2	ug/Kg		11/24/21 09:28	12/03/21 13:26	1
Toluene	ND		50	4.5	ug/Kg		11/24/21 09:28	12/03/21 13:26	1
trans-1,2-Dichloroethene	ND		50	6.2	ug/Kg		11/24/21 09:28	12/03/21 13:26	1
trans-1,3-Dichloropropene	ND		50	2.8	ug/Kg		11/24/21 09:28	12/03/21 13:26	1
Trichlorofluoromethane	ND		50	12	ug/Kg		11/24/21 09:28	12/03/21 13:26	1

Surrogate	MB	MB	Limits	Prepared	Analyzed	Dil Fac
	%Recovery	Qualifier				
1,2-Dichloroethane-d4 (Surr)	114		52 - 126	11/24/21 09:28	12/03/21 13:26	1
4-Bromofluorobenzene (Surr)	108		67 - 135	11/24/21 09:28	12/03/21 13:26	1
Dibromofluoromethane (Surr)	107		61 - 123	11/24/21 09:28	12/03/21 13:26	1
Toluene-d8 (Surr)	116		65 - 131	11/24/21 09:28	12/03/21 13:26	1

Lab Sample ID: LCS 320-545528/2-A
Matrix: Solid
Analysis Batch: 547871

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 545528

Analyte	Spike Added	LCS	LCS	Unit	D	%Rec	Limits
		Result	Qualifier				
1,1,1,2-Tetrachloroethane	1000	951		ug/Kg		95	72 - 120
1,1,1-Trichloroethane	1000	929		ug/Kg		93	67 - 120
1,1-Dichloroethane	1000	981		ug/Kg		98	70 - 120
1,1-Dichloroethene	1000	957		ug/Kg		96	59 - 120
1,1-Dichloropropene	1000	975		ug/Kg		98	71 - 126
1,2,3-Trichlorobenzene	1000	1040		ug/Kg		104	35 - 169
1,2,3-Trichloropropane	1000	911		ug/Kg		91	62 - 120
1,2,4-Trichlorobenzene	1000	1040		ug/Kg		104	53 - 141
1,2,4-Trimethylbenzene	1000	965		ug/Kg		97	78 - 120
1,2-Dibromo-3-Chloropropane	1000	799		ug/Kg		80	46 - 120
1,2-Dichlorobenzene	1000	948		ug/Kg		95	74 - 120
1,2-Dichloropropane	1000	1010		ug/Kg		101	77 - 120
1,3,5-Trimethylbenzene	1000	967		ug/Kg		97	80 - 121
1,3-Dichlorobenzene	1000	982		ug/Kg		98	78 - 120
1,3-Dichloropropane	1000	998		ug/Kg		100	76 - 120
1,4-Dichlorobenzene	1000	950		ug/Kg		95	75 - 120
2,2-Dichloropropane	1000	716		ug/Kg		72	50 - 120
2-Butanone (MEK)	2500	2570		ug/Kg		103	41 - 121
2-Chlorotoluene	1000	973		ug/Kg		97	77 - 122
2-Hexanone	2500	2790		ug/Kg		111	49 - 120
4-Chlorotoluene	1000	976		ug/Kg		98	79 - 124
4-Methyl-2-pentanone (MIBK)	2500	2710		ug/Kg		108	56 - 120
p-Isopropyltoluene	1000	971		ug/Kg		97	80 - 122
Acetone	2500	1960		ug/Kg		78	17 - 154
Benzene	1000	1000		ug/Kg		100	76 - 120
Bromoform	1000	932		ug/Kg		93	59 - 120
Bromobenzene	1000	963		ug/Kg		96	77 - 120
Carbon disulfide	1000	855		ug/Kg		86	42 - 120
Carbon tetrachloride	1000	914		ug/Kg		91	61 - 125

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QC Sample Results

Client: Shannon & Wilson, Inc
 Project/Site: Kodiak DOT&PF PFAS (107471)

Job ID: 320-82154-1

Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: LCS 320-545528/2-A
Matrix: Solid
Analysis Batch: 547871

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 545528

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Chlorobenzene	1000	1000		ug/Kg		100	78 - 120
Chlorobromomethane	1000	996		ug/Kg		100	71 - 120
Chloroethane	1000	605		ug/Kg		61	11 - 120
Chloromethane	1000	999		ug/Kg		100	45 - 120
cis-1,2-Dichloroethene	1000	999		ug/Kg		100	73 - 120
cis-1,3-Dichloropropene	1000	1010		ug/Kg		101	74 - 124
Dibromomethane	1000	961		ug/Kg		96	70 - 120
Dichlorodifluoromethane	1000	771		ug/Kg		77	11 - 120
Ethylbenzene	1000	953		ug/Kg		95	80 - 122
Hexachlorobutadiene	1000	1010		ug/Kg		101	61 - 136
Isopropylbenzene	1000	963		ug/Kg		96	80 - 122
Methyl tert-butyl ether	1000	960		ug/Kg		96	51 - 120
Methylene Chloride	1000	996		ug/Kg		100	62 - 120
m-Xylene & p-Xylene	1000	974		ug/Kg		97	80 - 123
Naphthalene	1000	880		ug/Kg		88	50 - 138
n-Butylbenzene	1000	989		ug/Kg		99	76 - 127
N-Propylbenzene	1000	966		ug/Kg		97	80 - 121
o-Xylene	1000	973		ug/Kg		97	80 - 120
sec-Butylbenzene	1000	957		ug/Kg		96	80 - 121
Styrene	1000	970		ug/Kg		97	79 - 120
tert-Butylbenzene	1000	953		ug/Kg		95	80 - 122
Tetrachloroethene	1000	959		ug/Kg		96	78 - 121
Toluene	1000	1010		ug/Kg		101	78 - 125
trans-1,2-Dichloroethene	1000	984		ug/Kg		98	67 - 120
trans-1,3-Dichloropropene	1000	982		ug/Kg		98	70 - 127
Trichlorofluoromethane	1000	775		ug/Kg		78	12 - 144

Surrogate	LCS %Recovery	LCS Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	116		52 - 126
4-Bromofluorobenzene (Surr)	108		67 - 135
Dibromofluoromethane (Surr)	110		61 - 123
Toluene-d8 (Surr)	115		65 - 131

Lab Sample ID: LCSD 320-545528/3-A
Matrix: Solid
Analysis Batch: 547871

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 545528

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
1,1,1,2-Tetrachloroethane	1000	937		ug/Kg		94	72 - 120	2	25
1,1,1-Trichloroethane	1000	971		ug/Kg		97	67 - 120	4	30
1,1-Dichloroethane	1000	989		ug/Kg		99	70 - 120	1	26
1,1-Dichloroethene	1000	968		ug/Kg		97	59 - 120	1	30
1,1-Dichloropropene	1000	998		ug/Kg		100	71 - 126	2	27
1,2,3-Trichlorobenzene	1000	1060		ug/Kg		106	35 - 169	2	65
1,2,3-Trichloropropane	1000	926		ug/Kg		93	62 - 120	2	30
1,2,4-Trichlorobenzene	1000	1060		ug/Kg		106	53 - 141	2	42
1,2,4-Trimethylbenzene	1000	965		ug/Kg		96	78 - 120	0	25
1,2-Dibromo-3-Chloropropane	1000	810		ug/Kg		81	46 - 120	1	46

Eurofins TestAmerica, Sacramento

QC Sample Results

Client: Shannon & Wilson, Inc
 Project/Site: Kodiak DOT&PF PFAS (107471)

Job ID: 320-82154-1

Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: LCSD 320-545528/3-A
Matrix: Solid
Analysis Batch: 547871

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 545528

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec.		RPD	Limit
							Limits	RPD		
1,2-Dichlorobenzene	1000	950		ug/Kg		95	74 - 120	0	25	
1,2-Dichloropropane	1000	1020		ug/Kg		102	77 - 120	1	25	
1,3,5-Trimethylbenzene	1000	987		ug/Kg		99	80 - 121	2	25	
1,3-Dichlorobenzene	1000	989		ug/Kg		99	78 - 120	1	25	
1,3-Dichloropropane	1000	983		ug/Kg		98	76 - 120	2	25	
1,4-Dichlorobenzene	1000	976		ug/Kg		98	75 - 120	3	25	
2,2-Dichloropropane	1000	782		ug/Kg		78	50 - 120	9	35	
2-Butanone (MEK)	2500	2680		ug/Kg		107	41 - 121	4	47	
2-Chlorotoluene	1000	973		ug/Kg		97	77 - 122	0	25	
2-Hexanone	2500	2750		ug/Kg		110	49 - 120	1	39	
4-Chlorotoluene	1000	978		ug/Kg		98	79 - 124	0	25	
4-Methyl-2-pentanone (MIBK)	2500	2680		ug/Kg		107	56 - 120	1	33	
p-Isopropyltoluene	1000	977		ug/Kg		98	80 - 122	1	25	
Acetone	2500	1970		ug/Kg		79	17 - 154	1	77	
Benzene	1000	1010		ug/Kg		101	76 - 120	1	25	
Bromoform	1000	903		ug/Kg		90	59 - 120	3	25	
Bromobenzene	1000	931		ug/Kg		93	77 - 120	3	25	
Carbon disulfide	1000	897		ug/Kg		90	42 - 120	5	44	
Carbon tetrachloride	1000	953		ug/Kg		95	61 - 125	4	34	
Chlorobenzene	1000	992		ug/Kg		99	78 - 120	1	25	
Chlorobromomethane	1000	958		ug/Kg		96	71 - 120	4	25	
Chloroethane	1000	631		ug/Kg		63	11 - 120	4	91	
Chloromethane	1000	940		ug/Kg		94	45 - 120	6	43	
cis-1,2-Dichloroethene	1000	1010		ug/Kg		101	73 - 120	1	25	
cis-1,3-Dichloropropene	1000	1000		ug/Kg		100	74 - 124	1	26	
Dibromomethane	1000	948		ug/Kg		95	70 - 120	1	26	
Dichlorodifluoromethane	1000	796		ug/Kg		80	11 - 120	3	75	
Ethylbenzene	1000	964		ug/Kg		96	80 - 122	1	25	
Hexachlorobutadiene	1000	1070		ug/Kg		107	61 - 136	6	35	
Isopropylbenzene	1000	976		ug/Kg		98	80 - 122	1	25	
Methyl tert-butyl ether	1000	952		ug/Kg		95	51 - 120	1	48	
Methylene Chloride	1000	996		ug/Kg		100	62 - 120	0	28	
m-Xylene & p-Xylene	1000	972		ug/Kg		97	80 - 123	0	25	
Naphthalene	1000	901		ug/Kg		90	50 - 138	2	48	
n-Butylbenzene	1000	1020		ug/Kg		102	76 - 127	3	28	
N-Propylbenzene	1000	993		ug/Kg		99	80 - 121	3	25	
o-Xylene	1000	960		ug/Kg		96	80 - 120	1	25	
sec-Butylbenzene	1000	999		ug/Kg		100	80 - 121	4	25	
Styrene	1000	941		ug/Kg		94	79 - 120	3	25	
tert-Butylbenzene	1000	968		ug/Kg		97	80 - 122	2	25	
Tetrachloroethene	1000	976		ug/Kg		98	78 - 121	2	25	
Toluene	1000	1020		ug/Kg		102	78 - 125	1	25	
trans-1,2-Dichloroethene	1000	1010		ug/Kg		101	67 - 120	3	25	
trans-1,3-Dichloropropene	1000	975		ug/Kg		97	70 - 127	1	31	
Trichlorofluoromethane	1000	796		ug/Kg		80	12 - 144	3	107	

Surrogate	LCSD LCSD		Limits
	%Recovery	Qualifier	
1,2-Dichloroethane-d4 (Surr)	112		52 - 126

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QC Sample Results

Client: Shannon & Wilson, Inc
 Project/Site: Kodiak DOT&PF PFAS (107471)

Job ID: 320-82154-1

Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: LCSD 320-545528/3-A
Matrix: Solid
Analysis Batch: 547871

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 545528

Surrogate	LCSD LCSD		Limits
	%Recovery	Qualifier	
4-Bromofluorobenzene (Surr)	106		67 - 135
Dibromofluoromethane (Surr)	107		61 - 123
Toluene-d8 (Surr)	115		65 - 131

Method: 8260C SIM - Volatile Organic Compounds (GC/MS)

Lab Sample ID: MB 320-545528/1-A
Matrix: Solid
Analysis Batch: 546763

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 545528

Analyte	MB MB		RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
1,1,2,2-Tetrachloroethane	ND		2.5	0.56	ug/Kg		11/24/21 09:28	11/30/21 11:29	1
1,1,2-Trichloroethane	ND		2.5	0.83	ug/Kg		11/24/21 09:28	11/30/21 11:29	1
1,2-Dichloroethane	ND		2.5	0.42	ug/Kg		11/24/21 09:28	11/30/21 11:29	1
Bromomethane	ND		5.0	1.6	ug/Kg		11/24/21 09:28	11/30/21 11:29	1
Chlorodibromomethane	ND		2.5	0.40	ug/Kg		11/24/21 09:28	11/30/21 11:29	1
Chloroform	ND		5.0	2.0	ug/Kg		11/24/21 09:28	11/30/21 11:29	1
Dichlorobromomethane	ND		2.5	0.33	ug/Kg		11/24/21 09:28	11/30/21 11:29	1
Ethylene Dibromide	ND		2.5	0.40	ug/Kg		11/24/21 09:28	11/30/21 11:29	1
Trichloroethene	ND		2.5	0.49	ug/Kg		11/24/21 09:28	11/30/21 11:29	1
Vinyl chloride	ND		2.5	0.63	ug/Kg		11/24/21 09:28	11/30/21 11:29	1

Surrogate	MB MB		Limits	Prepared	Analyzed	Dil Fac
	%Recovery	Qualifier				
4-Bromofluorobenzene (Surr)	83		69 - 129	11/24/21 09:28	11/30/21 11:29	1
Dibromofluoromethane (Surr)	124		72 - 132	11/24/21 09:28	11/30/21 11:29	1
1,2-Dichloroethane-d4 (Surr)	122		72 - 132	11/24/21 09:28	11/30/21 11:29	1
Toluene-d8 (Surr)	104		78 - 138	11/24/21 09:28	11/30/21 11:29	1

Lab Sample ID: LCS 320-545528/26-A
Matrix: Solid
Analysis Batch: 546763

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 545528

Analyte	Spike Added	LCS LCS		Unit	D	%Rec	Limits
		Result	Qualifier				
1,1,2,2-Tetrachloroethane	100	97.9		ug/Kg		98	70 - 124
1,1,2-Trichloroethane	100	102		ug/Kg		102	78 - 121
1,2-Dichloroethane	100	108		ug/Kg		108	73 - 128
Bromomethane	100	93.9		ug/Kg		94	53 - 143
Chlorodibromomethane	100	98.7		ug/Kg		99	74 - 126
Chloroform	100	110		ug/Kg		110	78 - 123
Dichlorobromomethane	100	108		ug/Kg		108	75 - 127
Ethylene Dibromide	100	94.7		ug/Kg		95	78 - 122
Trichloroethene	100	102		ug/Kg		102	77 - 123
Vinyl chloride	100	110		ug/Kg		110	56 - 135

Surrogate	LCS LCS		Limits
	%Recovery	Qualifier	
4-Bromofluorobenzene (Surr)	87		69 - 129
Dibromofluoromethane (Surr)	118		72 - 132
1,2-Dichloroethane-d4 (Surr)	112		72 - 132

QC Sample Results

Client: Shannon & Wilson, Inc
 Project/Site: Kodiak DOT&PF PFAS (107471)

Job ID: 320-82154-1

Method: 8260C SIM - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 320-545528/26-A
Matrix: Solid
Analysis Batch: 546763

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 545528

Surrogate	LCS LCS		Limits
	%Recovery	Qualifier	
Toluene-d8 (Surr)	105		78 - 138

Lab Sample ID: LCSD 320-545528/27-A
Matrix: Solid
Analysis Batch: 546763

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 545528

Analyte	Spike Added	LCSD LCSD		Unit	D	%Rec	%Rec.		RPD	Limit
		Result	Qualifier				Limits	RPD		
1,1,2,2-Tetrachloroethane	100	97.1		ug/Kg		97	70 - 124	1	20	
1,1,2-Trichloroethane	100	103		ug/Kg		103	78 - 121	1	20	
1,2-Dichloroethane	100	107		ug/Kg		107	73 - 128	0	20	
Bromomethane	100	90.2		ug/Kg		90	53 - 143	4	20	
Chlorodibromomethane	100	98.0		ug/Kg		98	74 - 126	1	20	
Chloroform	100	109		ug/Kg		109	78 - 123	2	20	
Dichlorobromomethane	100	106		ug/Kg		106	75 - 127	2	20	
Ethylene Dibromide	100	94.2		ug/Kg		94	78 - 122	1	20	
Trichloroethene	100	99.7		ug/Kg		100	77 - 123	2	20	
Vinyl chloride	100	107		ug/Kg		107	56 - 135	3	20	

Surrogate	LCSD LCSD		Limits
	%Recovery	Qualifier	
4-Bromofluorobenzene (Surr)	88		69 - 129
Dibromofluoromethane (Surr)	119		72 - 132
1,2-Dichloroethane-d4 (Surr)	115		72 - 132
Toluene-d8 (Surr)	108		78 - 138

Method: AK101 - Alaska - Gasoline Range Organics (GC/MS)

Lab Sample ID: MB 320-545528/1-A
Matrix: Solid
Analysis Batch: 548241

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 545528

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
C6-C10 AK	ND		5.0	1.0	mg/Kg		11/24/21 09:28	12/05/21 15:46	1

Surrogate	MB MB		Limits	Prepared	Analyzed	Dil Fac
	%Recovery	Qualifier				
4-Bromofluorobenzene (Surr)	108		60 - 120	11/24/21 09:28	12/05/21 15:46	1
Trifluorotoluene (Surr)	117		60 - 120	11/24/21 09:28	12/05/21 15:46	1

Lab Sample ID: LCS 320-545528/4-A
Matrix: Solid
Analysis Batch: 548241

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 545528

Analyte	Spike Added	LCS LCS		Unit	D	%Rec	%Rec.	
		Result	Qualifier				Limits	RPD
C6-C10 AK	50.0	57.7		mg/Kg		115	60 - 120	

Surrogate	LCS LCS		Limits
	%Recovery	Qualifier	
4-Bromofluorobenzene (Surr)	102		60 - 120
Trifluorotoluene (Surr)	110		60 - 120

QC Sample Results

Client: Shannon & Wilson, Inc
 Project/Site: Kodiak DOT&PF PFAS (107471)

Job ID: 320-82154-1

Method: AK101 - Alaska - Gasoline Range Organics (GC/MS) (Continued)

Lab Sample ID: LCSD 320-545528/5-A

Matrix: Solid

Analysis Batch: 548241

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 545528

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
C6-C10 AK	50.0	57.2		mg/Kg		114	60 - 120	1	20
Surrogate									
	%Recovery	Qualifier	Limits						
4-Bromofluorobenzene (Surr)	105		60 - 120						
Trifluorotoluene (Surr)	108		60 - 120						

Method: 8011 - EDB, DBCP, and 1,2,3-TCP (GC)

Lab Sample ID: MB 280-559547/1-A

Matrix: Solid

Analysis Batch: 559580

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 559547

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ethylene Dibromide	ND		0.10	0.015	ug/Kg		12/03/21 13:26	12/03/21 23:06	1
1,2,3-Trichloropropane	ND		0.10	0.054	ug/Kg		12/03/21 13:26	12/03/21 23:06	1
Surrogate									
	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dibromopropane	80		55 - 130				12/03/21 13:26	12/03/21 23:06	1

Lab Sample ID: LCS 280-559547/2-A

Matrix: Solid

Analysis Batch: 559580

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 559547

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Ethylene Dibromide	0.875	0.720		ug/Kg		82	70 - 130
1,2,3-Trichloropropane	0.878	0.720		ug/Kg		82	70 - 130
Surrogate							
	%Recovery	Qualifier	Limits				
1,2-Dibromopropane	87		55 - 130				

Lab Sample ID: LCSD 280-559547/3-A

Matrix: Solid

Analysis Batch: 559580

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 559547

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Ethylene Dibromide	0.875	0.699		ug/Kg		80	70 - 130	3	10
1,2,3-Trichloropropane	0.878	0.713		ug/Kg		81	70 - 130	1	10
Surrogate									
	%Recovery	Qualifier	Limits						
1,2-Dibromopropane	83		55 - 130						

QC Sample Results

Client: Shannon & Wilson, Inc
 Project/Site: Kodiak DOT&PF PFAS (107471)

Job ID: 320-82154-1

Method: AK102 - DRO

Lab Sample ID: MB 320-545524/1-A
Matrix: Solid
Analysis Batch: 550005

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 545524

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
DRO (nC10-<nC25)	0.792	J	2.0	0.50	mg/Kg		11/24/21 09:17	12/11/21 14:56	1
Surrogate	MB %Recovery	MB Qualifier	Limits				Prepared	Analyzed	Dil Fac
<i>o</i> -Terphenyl (Surr)	70		60 - 120				11/24/21 09:17	12/11/21 14:56	1
<i>n</i> -Triacontane-d62	73		60 - 120				11/24/21 09:17	12/11/21 14:56	1

Lab Sample ID: LCS 320-545524/2-A
Matrix: Solid
Analysis Batch: 550005

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 545524

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits	
DRO (nC10-<nC25)	10.0	9.07		mg/Kg		91	75 - 125	
Surrogate	LCS %Recovery	LCS Qualifier	Limits					
<i>o</i> -Terphenyl (Surr)	77		60 - 120					
<i>n</i> -Triacontane-d62	78		60 - 120					

Lab Sample ID: LCSD 320-545524/4-A
Matrix: Solid
Analysis Batch: 550005

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 545524

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	Limits	RPD	RPD Limit
DRO (nC10-<nC25)	10.0	8.95		mg/Kg		89	75 - 125	1	20
Surrogate	LCSD %Recovery	LCSD Qualifier	Limits						
<i>o</i> -Terphenyl (Surr)	77		60 - 120						
<i>n</i> -Triacontane-d62	79		60 - 120						

Lab Sample ID: 320-82154-17 MS
Matrix: Solid
Analysis Batch: 550005

Client Sample ID: ADQ-Site35-115
Prep Type: Total/NA
Prep Batch: 545524

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	Limits
DRO (nC10-<nC25)	1.2	J B	10.9	11.0		mg/Kg	⊛	90	60 - 140
Surrogate	MS %Recovery	MS Qualifier	Limits						
<i>o</i> -Terphenyl (Surr)	70		60 - 120						
<i>n</i> -Triacontane-d62	74		60 - 120						

Lab Sample ID: 320-82154-17 MSD
Matrix: Solid
Analysis Batch: 550005

Client Sample ID: ADQ-Site35-115
Prep Type: Total/NA
Prep Batch: 545524

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	Limits	RPD	RPD Limit
DRO (nC10-<nC25)	1.2	J B	10.9	11.0		mg/Kg	⊛	91	60 - 140	0	50

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QC Sample Results

Client: Shannon & Wilson, Inc
 Project/Site: Kodiak DOT&PF PFAS (107471)

Job ID: 320-82154-1

Method: AK102 - DRO (Continued)

Lab Sample ID: 320-82154-17 MSD
 Matrix: Solid
 Analysis Batch: 550005

Client Sample ID: ADQ-Site35-115
 Prep Type: Total/NA
 Prep Batch: 545524

Surrogate	MSD %Recovery	MSD Qualifier	Limits
<i>o</i> -Terphenyl (Surr)	71		60 - 120
<i>n</i> -Triacontane-d62	73		60 - 120

Method: EPA 537(Mod) - PFAS for QSM 5.3, Table B-15

Lab Sample ID: MB 320-545891/1-A
 Matrix: Solid
 Analysis Batch: 546357

Client Sample ID: Method Blank
 Prep Type: Total/NA
 Prep Batch: 545891

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorohexanoic acid (PFHxA)	ND		0.20	0.031	ug/Kg		11/24/21 18:30	11/29/21 04:41	1
Perfluoroheptanoic acid (PFHpA)	ND		0.20	0.038	ug/Kg		11/24/21 18:30	11/29/21 04:41	1
Perfluorooctanoic acid (PFOA)	ND		0.20	0.053	ug/Kg		11/24/21 18:30	11/29/21 04:41	1
Perfluorononanoic acid (PFNA)	ND		0.20	0.022	ug/Kg		11/24/21 18:30	11/29/21 04:41	1
Perfluorodecanoic acid (PFDA)	ND		0.20	0.048	ug/Kg		11/24/21 18:30	11/29/21 04:41	1
Perfluoroundecanoic acid (PFUnA)	ND		0.20	0.042	ug/Kg		11/24/21 18:30	11/29/21 04:41	1
Perfluorododecanoic acid (PFDoA)	ND		0.20	0.030	ug/Kg		11/24/21 18:30	11/29/21 04:41	1
Perfluorotridecanoic acid (PFTrDA)	ND		0.20	0.021	ug/Kg		11/24/21 18:30	11/29/21 04:41	1
Perfluorotetradecanoic acid (PFTeA)	ND		0.20	0.037	ug/Kg		11/24/21 18:30	11/29/21 04:41	1
Perfluorobutanesulfonic acid (PFBS)	ND		0.20	0.038	ug/Kg		11/24/21 18:30	11/29/21 04:41	1
Perfluorohexanesulfonic acid (PFHxS)	ND		0.20	0.029	ug/Kg		11/24/21 18:30	11/29/21 04:41	1
Perfluorooctanesulfonic acid (PFOS)	ND		0.20	0.043	ug/Kg		11/24/21 18:30	11/29/21 04:41	1
NEtFOSAA	ND		0.20	0.048	ug/Kg		11/24/21 18:30	11/29/21 04:41	1
NMeFOSAA	ND		0.20	0.023	ug/Kg		11/24/21 18:30	11/29/21 04:41	1
HFPO-DA (GenX)	ND		0.20	0.041	ug/Kg		11/24/21 18:30	11/29/21 04:41	1
9Cl-PF3ONS	ND		0.20	0.035	ug/Kg		11/24/21 18:30	11/29/21 04:41	1
11Cl-PF3OUdS	ND		0.20	0.031	ug/Kg		11/24/21 18:30	11/29/21 04:41	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	ND		0.20	0.039	ug/Kg		11/24/21 18:30	11/29/21 04:41	1

Isotope Dilution	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C2 PFHxA	114		50 - 150	11/24/21 18:30	11/29/21 04:41	1
13C4 PFHpA	111		50 - 150	11/24/21 18:30	11/29/21 04:41	1
13C4 PFOA	119		50 - 150	11/24/21 18:30	11/29/21 04:41	1
13C5 PFNA	114		50 - 150	11/24/21 18:30	11/29/21 04:41	1
13C2 PFDA	114		50 - 150	11/24/21 18:30	11/29/21 04:41	1
13C2 PFUnA	121		50 - 150	11/24/21 18:30	11/29/21 04:41	1
13C2 PFDoA	121		50 - 150	11/24/21 18:30	11/29/21 04:41	1
13C2 PFTeDA	120		50 - 150	11/24/21 18:30	11/29/21 04:41	1
13C3 PFBS	135		50 - 150	11/24/21 18:30	11/29/21 04:41	1
18O2 PFHxS	111		50 - 150	11/24/21 18:30	11/29/21 04:41	1
13C4 PFOS	123		50 - 150	11/24/21 18:30	11/29/21 04:41	1
d3-NMeFOSAA	134		50 - 150	11/24/21 18:30	11/29/21 04:41	1
d5-NEtFOSAA	145		50 - 150	11/24/21 18:30	11/29/21 04:41	1
13C3 HFPO-DA	110		50 - 150	11/24/21 18:30	11/29/21 04:41	1

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QC Sample Results

Client: Shannon & Wilson, Inc
 Project/Site: Kodiak DOT&PF PFAS (107471)

Job ID: 320-82154-1

Method: EPA 537(Mod) - PFAS for QSM 5.3, Table B-15 (Continued)

Lab Sample ID: LCS 320-545891/2-A
Matrix: Solid
Analysis Batch: 546357

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 545891
%Rec.

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
Perfluorohexanoic acid (PFHxA)	2.00	2.09		ug/Kg		105	70 - 132
Perfluoroheptanoic acid (PFHpA)	2.00	1.85		ug/Kg		93	71 - 131
Perfluorooctanoic acid (PFOA)	2.00	1.90		ug/Kg		95	69 - 133
Perfluorononanoic acid (PFNA)	2.00	1.92		ug/Kg		96	72 - 129
Perfluorodecanoic acid (PFDA)	2.00	2.07		ug/Kg		104	69 - 133
Perfluoroundecanoic acid (PFUnA)	2.00	1.82		ug/Kg		91	64 - 136
Perfluorododecanoic acid (PFDoA)	2.00	2.09		ug/Kg		104	69 - 135
Perfluorotridecanoic acid (PFTrDA)	2.00	2.08		ug/Kg		104	66 - 139
Perfluorotetradecanoic acid (PFTeA)	2.00	1.87		ug/Kg		93	69 - 133
Perfluorobutanesulfonic acid (PFBS)	1.77	1.56		ug/Kg		88	72 - 128
Perfluorohexanesulfonic acid (PFHxS)	1.82	1.84		ug/Kg		101	67 - 130
Perfluorooctanesulfonic acid (PFOS)	1.86	1.84		ug/Kg		99	68 - 136
NEtFOSAA	2.00	1.88		ug/Kg		94	61 - 139
NMeFOSAA	2.00	1.93		ug/Kg		97	63 - 144
HFPO-DA (GenX)	2.00	1.88		ug/Kg		94	77 - 137
9Cl-PF3ONS	1.86	1.84		ug/Kg		99	75 - 135
11Cl-PF3OUdS	1.88	2.01		ug/Kg		106	76 - 136
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	1.88	1.96		ug/Kg		104	79 - 139

Isotope Dilution	LCS %Recovery	LCS Qualifier	Limits
13C2 PFHxA	107		50 - 150
13C4 PFHpA	118		50 - 150
13C4 PFOA	116		50 - 150
13C5 PFNA	115		50 - 150
13C2 PFDA	108		50 - 150
13C2 PFUnA	125		50 - 150
13C2 PFDoA	120		50 - 150
13C2 PFTeDA	122		50 - 150
13C3 PFBS	122		50 - 150
18O2 PFHxS	111		50 - 150
13C4 PFOS	107		50 - 150
d3-NMeFOSAA	133		50 - 150
d5-NEtFOSAA	144		50 - 150
13C3 HFPO-DA	103		50 - 150

Lab Sample ID: 320-82154-17 MS
Matrix: Solid
Analysis Batch: 546357

Client Sample ID: ADQ-Site35-115
Prep Type: Total/NA
Prep Batch: 545891
%Rec.

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	Limits
Perfluorohexanoic acid (PFHxA)	ND		1.97	2.00		ug/Kg	⊛	102	70 - 132
Perfluoroheptanoic acid (PFHpA)	ND		1.97	2.11		ug/Kg	⊛	107	71 - 131
Perfluorooctanoic acid (PFOA)	0.076	J	1.97	2.02		ug/Kg	⊛	99	69 - 133

Eurofins TestAmerica, Sacramento

QC Sample Results

Client: Shannon & Wilson, Inc
 Project/Site: Kodiak DOT&PF PFAS (107471)

Job ID: 320-82154-1

Method: EPA 537(Mod) - PFAS for QSM 5.3, Table B-15 (Continued)

Lab Sample ID: 320-82154-17 MS

Matrix: Solid

Analysis Batch: 546357

Client Sample ID: ADQ-Site35-115

Prep Type: Total/NA

Prep Batch: 545891

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Perfluorononanoic acid (PFNA)	ND		1.97	1.94		ug/Kg	⊛	99	72 - 129
Perfluorodecanoic acid (PFDA)	ND		1.97	1.96		ug/Kg	⊛	100	69 - 133
Perfluoroundecanoic acid (PFUnA)	ND		1.97	2.01		ug/Kg	⊛	102	64 - 136
Perfluorododecanoic acid (PFDoA)	ND		1.97	1.84		ug/Kg	⊛	94	69 - 135
Perfluorotridecanoic acid (PFTrDA)	ND		1.97	2.03		ug/Kg	⊛	103	66 - 139
Perfluorotetradecanoic acid (PFTeA)	ND		1.97	1.97		ug/Kg	⊛	100	69 - 133
Perfluorobutanesulfonic acid (PFBS)	ND		1.74	1.51		ug/Kg	⊛	87	72 - 128
Perfluorohexanesulfonic acid (PFHxS)	ND		1.79	1.87		ug/Kg	⊛	104	67 - 130
Perfluorooctanesulfonic acid (PFOS)	0.12	J I	1.82	1.79		ug/Kg	⊛	92	68 - 136
NEtFOSAA	ND		1.97	1.87		ug/Kg	⊛	95	61 - 139
NMeFOSAA	ND		1.97	1.91		ug/Kg	⊛	97	63 - 144
HFPO-DA (GenX)	ND		1.97	2.17		ug/Kg	⊛	110	77 - 137
9CI-PF3ONS	ND		1.83	1.59		ug/Kg	⊛	87	75 - 135
11CI-PF3OUdS	ND		1.85	1.78		ug/Kg	⊛	96	76 - 136
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	ND		1.85	1.62		ug/Kg	⊛	88	79 - 139

Isotope Dilution	MS MS		Limits
	%Recovery	Qualifier	
13C2 PFHxA	104		50 - 150
13C4 PFHpA	106		50 - 150
13C4 PFOA	112		50 - 150
13C5 PFNA	120		50 - 150
13C2 PFDA	111		50 - 150
13C2 PFUnA	123		50 - 150
13C2 PFDoA	121		50 - 150
13C2 PFTeDA	124		50 - 150
13C3 PFBS	121		50 - 150
18O2 PFHxS	103		50 - 150
13C4 PFOS	117		50 - 150
d3-NMeFOSAA	132		50 - 150
d5-NEtFOSAA	143		50 - 150
13C3 HFPO-DA	96		50 - 150

Lab Sample ID: 320-82154-17 MSD

Matrix: Solid

Analysis Batch: 546357

Client Sample ID: ADQ-Site35-115

Prep Type: Total/NA

Prep Batch: 545891

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	Limit
Perfluorohexanoic acid (PFHxA)	ND		2.09	2.18		ug/Kg	⊛	104	70 - 132	8	30
Perfluoroheptanoic acid (PFHpA)	ND		2.09	2.21		ug/Kg	⊛	106	71 - 131	5	30
Perfluorooctanoic acid (PFOA)	0.076	J	2.09	2.06		ug/Kg	⊛	95	69 - 133	2	30
Perfluorononanoic acid (PFNA)	ND		2.09	2.28		ug/Kg	⊛	109	72 - 129	16	30
Perfluorodecanoic acid (PFDA)	ND		2.09	2.08		ug/Kg	⊛	100	69 - 133	6	30

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QC Sample Results

Client: Shannon & Wilson, Inc
 Project/Site: Kodiak DOT&PF PFAS (107471)

Job ID: 320-82154-1

Method: EPA 537(Mod) - PFAS for QSM 5.3, Table B-15 (Continued)

Lab Sample ID: 320-82154-17 MSD

Matrix: Solid

Analysis Batch: 546357

Client Sample ID: ADQ-Site35-115

Prep Type: Total/NA

Prep Batch: 545891

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Perfluoroundecanoic acid (PFUnA)	ND		2.09	2.39		ug/Kg	⊛	114	64 - 136	17	30
Perfluorododecanoic acid (PFDoA)	ND		2.09	2.02		ug/Kg	⊛	97	69 - 135	9	30
Perfluorotridecanoic acid (PFTrDA)	ND		2.09	2.09		ug/Kg	⊛	100	66 - 139	3	30
Perfluorotetradecanoic acid (PFTeA)	ND		2.09	1.95		ug/Kg	⊛	93	69 - 133	1	30
Perfluorobutanesulfonic acid (PFBS)	ND		1.85	1.74		ug/Kg	⊛	94	72 - 128	15	30
Perfluorohexanesulfonic acid (PFHxS)	ND		1.90	2.05		ug/Kg	⊛	108	67 - 130	10	30
Perfluorooctanesulfonic acid (PFOS)	0.12	J I	1.94	2.00		ug/Kg	⊛	97	68 - 136	11	30
NEtFOSAA	ND		2.09	1.95		ug/Kg	⊛	93	61 - 139	4	30
NMeFOSAA	ND		2.09	2.15		ug/Kg	⊛	103	63 - 144	12	30
HFPO-DA (GenX)	ND		2.09	1.89		ug/Kg	⊛	90	77 - 137	14	30
9CI-PF3ONS	ND		1.95	1.83		ug/Kg	⊛	94	75 - 135	14	30
11CI-PF3OUdS	ND		1.97	1.92		ug/Kg	⊛	97	76 - 136	8	30
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	ND		1.97	1.93		ug/Kg	⊛	98	79 - 139	17	30

Isotope Dilution	MSD %Recovery	MSD Qualifier	Limits
¹³ C2 PFHxA	110		50 - 150
¹³ C4 PFHpA	116		50 - 150
¹³ C4 PFOA	117		50 - 150
¹³ C5 PFNA	118		50 - 150
¹³ C2 PFDA	120		50 - 150
¹³ C2 PFUnA	118		50 - 150
¹³ C2 PFDoA	128		50 - 150
¹³ C2 PFTeDA	132		50 - 150
¹³ C3 PFBS	120		50 - 150
¹⁸ O2 PFHxS	109		50 - 150
¹³ C4 PFOS	122		50 - 150
d3-NMeFOSAA	142		50 - 150
d5-NEtFOSAA	153	*5+	50 - 150
¹³ C3 HFPO-DA	105		50 - 150

QC Association Summary

Client: Shannon & Wilson, Inc
 Project/Site: Kodiak DOT&PF PFAS (107471)

Job ID: 320-82154-1

GC/MS VOA

Prep Batch: 545528

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-82154-1	ADQ-Site35-01	Total/NA	Solid	5035	
320-82154-2	ADQ-Site35-02	Total/NA	Solid	5035	
320-82154-3	ADQ-Site35-03	Total/NA	Solid	5035	
320-82154-4	ADQ-Site35-04	Total/NA	Solid	5035	
320-82154-5	ADQ-Site35-05	Total/NA	Solid	5035	
320-82154-6	ADQ-Site35-06	Total/NA	Solid	5035	
320-82154-7	ADQ-Site35-07	Total/NA	Solid	5035	
320-82154-8	ADQ-Site35-08	Total/NA	Solid	5035	
320-82154-9	ADQ-Site35-09	Total/NA	Solid	5035	
320-82154-10	ADQ-Site35-10	Total/NA	Solid	5035	
320-82154-11	ADQ-Site35-11	Total/NA	Solid	5035	
320-82154-12	ADQ-Site35-12	Total/NA	Solid	5035	
320-82154-13	ADQ-Site35-13	Total/NA	Solid	5035	
320-82154-14	ADQ-Site35-113	Total/NA	Solid	5035	
320-82154-15	ADQ-Site35-14	Total/NA	Solid	5035	
320-82154-16	ADQ-Site35-15	Total/NA	Solid	5035	
320-82154-17	ADQ-Site35-115	Total/NA	Solid	5035	
320-82154-18	Trip Blank 1	Total/NA	Solid	5035	
MB 320-545528/1-A	Method Blank	Total/NA	Solid	5035	
LCS 320-545528/26-A	Lab Control Sample	Total/NA	Solid	5035	
LCS 320-545528/2-A	Lab Control Sample	Total/NA	Solid	5035	
LCS 320-545528/4-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 320-545528/27-A	Lab Control Sample Dup	Total/NA	Solid	5035	
LCSD 320-545528/3-A	Lab Control Sample Dup	Total/NA	Solid	5035	
LCSD 320-545528/5-A	Lab Control Sample Dup	Total/NA	Solid	5035	

Analysis Batch: 546763

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-82154-1	ADQ-Site35-01	Total/NA	Solid	8260C SIM	545528
320-82154-2	ADQ-Site35-02	Total/NA	Solid	8260C SIM	545528
320-82154-3	ADQ-Site35-03	Total/NA	Solid	8260C SIM	545528
320-82154-4	ADQ-Site35-04	Total/NA	Solid	8260C SIM	545528
320-82154-5	ADQ-Site35-05	Total/NA	Solid	8260C SIM	545528
320-82154-6	ADQ-Site35-06	Total/NA	Solid	8260C SIM	545528
320-82154-7	ADQ-Site35-07	Total/NA	Solid	8260C SIM	545528
320-82154-8	ADQ-Site35-08	Total/NA	Solid	8260C SIM	545528
320-82154-9	ADQ-Site35-09	Total/NA	Solid	8260C SIM	545528
320-82154-10	ADQ-Site35-10	Total/NA	Solid	8260C SIM	545528
320-82154-11	ADQ-Site35-11	Total/NA	Solid	8260C SIM	545528
320-82154-12	ADQ-Site35-12	Total/NA	Solid	8260C SIM	545528
320-82154-13	ADQ-Site35-13	Total/NA	Solid	8260C SIM	545528
320-82154-14	ADQ-Site35-113	Total/NA	Solid	8260C SIM	545528
320-82154-15	ADQ-Site35-14	Total/NA	Solid	8260C SIM	545528
320-82154-16	ADQ-Site35-15	Total/NA	Solid	8260C SIM	545528
320-82154-17	ADQ-Site35-115	Total/NA	Solid	8260C SIM	545528
320-82154-18	Trip Blank 1	Total/NA	Solid	8260C SIM	545528
MB 320-545528/1-A	Method Blank	Total/NA	Solid	8260C SIM	545528
LCS 320-545528/26-A	Lab Control Sample	Total/NA	Solid	8260C SIM	545528
LCSD 320-545528/27-A	Lab Control Sample Dup	Total/NA	Solid	8260C SIM	545528

QC Association Summary

Client: Shannon & Wilson, Inc
 Project/Site: Kodiak DOT&PF PFAS (107471)

Job ID: 320-82154-1

GC/MS VOA

Analysis Batch: 547871

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-82154-1	ADQ-Site35-01	Total/NA	Solid	8260C	545528
320-82154-2	ADQ-Site35-02	Total/NA	Solid	8260C	545528
320-82154-3	ADQ-Site35-03	Total/NA	Solid	8260C	545528
320-82154-4	ADQ-Site35-04	Total/NA	Solid	8260C	545528
320-82154-5	ADQ-Site35-05	Total/NA	Solid	8260C	545528
320-82154-6	ADQ-Site35-06	Total/NA	Solid	8260C	545528
320-82154-7	ADQ-Site35-07	Total/NA	Solid	8260C	545528
320-82154-8	ADQ-Site35-08	Total/NA	Solid	8260C	545528
320-82154-9	ADQ-Site35-09	Total/NA	Solid	8260C	545528
320-82154-10	ADQ-Site35-10	Total/NA	Solid	8260C	545528
320-82154-11	ADQ-Site35-11	Total/NA	Solid	8260C	545528
320-82154-12	ADQ-Site35-12	Total/NA	Solid	8260C	545528
320-82154-13	ADQ-Site35-13	Total/NA	Solid	8260C	545528
320-82154-14	ADQ-Site35-113	Total/NA	Solid	8260C	545528
320-82154-15	ADQ-Site35-14	Total/NA	Solid	8260C	545528
320-82154-16	ADQ-Site35-15	Total/NA	Solid	8260C	545528
320-82154-17	ADQ-Site35-115	Total/NA	Solid	8260C	545528
320-82154-18	Trip Blank 1	Total/NA	Solid	8260C	545528
MB 320-545528/1-A	Method Blank	Total/NA	Solid	8260C	545528
LCS 320-545528/2-A	Lab Control Sample	Total/NA	Solid	8260C	545528
LCSD 320-545528/3-A	Lab Control Sample Dup	Total/NA	Solid	8260C	545528

Analysis Batch: 547873

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-82154-2	ADQ-Site35-02	Total/NA	Solid	AK101	545528
320-82154-3	ADQ-Site35-03	Total/NA	Solid	AK101	545528
320-82154-4	ADQ-Site35-04	Total/NA	Solid	AK101	545528
320-82154-5	ADQ-Site35-05	Total/NA	Solid	AK101	545528
320-82154-6	ADQ-Site35-06	Total/NA	Solid	AK101	545528
320-82154-7	ADQ-Site35-07	Total/NA	Solid	AK101	545528
320-82154-8	ADQ-Site35-08	Total/NA	Solid	AK101	545528
320-82154-9	ADQ-Site35-09	Total/NA	Solid	AK101	545528
320-82154-10	ADQ-Site35-10	Total/NA	Solid	AK101	545528
320-82154-11	ADQ-Site35-11	Total/NA	Solid	AK101	545528
320-82154-12	ADQ-Site35-12	Total/NA	Solid	AK101	545528
320-82154-13	ADQ-Site35-13	Total/NA	Solid	AK101	545528
320-82154-14	ADQ-Site35-113	Total/NA	Solid	AK101	545528
320-82154-15	ADQ-Site35-14	Total/NA	Solid	AK101	545528
320-82154-16	ADQ-Site35-15	Total/NA	Solid	AK101	545528
320-82154-17	ADQ-Site35-115	Total/NA	Solid	AK101	545528
320-82154-18	Trip Blank 1	Total/NA	Solid	AK101	545528

Analysis Batch: 548241

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 320-545528/1-A	Method Blank	Total/NA	Solid	AK101	545528
LCS 320-545528/4-A	Lab Control Sample	Total/NA	Solid	AK101	545528
LCSD 320-545528/5-A	Lab Control Sample Dup	Total/NA	Solid	AK101	545528

Analysis Batch: 548753

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-82154-1	ADQ-Site35-01	Total/NA	Solid	AK101	545528

Eurofins TestAmerica, Sacramento

QC Association Summary

Client: Shannon & Wilson, Inc
 Project/Site: Kodiak DOT&PF PFAS (107471)

Job ID: 320-82154-1

GC Semi VOA

Prep Batch: 545524

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-82154-1	ADQ-Site35-01	Total/NA	Solid	AK102	
320-82154-2	ADQ-Site35-02	Total/NA	Solid	AK102	
320-82154-3	ADQ-Site35-03	Total/NA	Solid	AK102	
320-82154-4	ADQ-Site35-04	Total/NA	Solid	AK102	
320-82154-5	ADQ-Site35-05	Total/NA	Solid	AK102	
320-82154-6	ADQ-Site35-06	Total/NA	Solid	AK102	
320-82154-7	ADQ-Site35-07	Total/NA	Solid	AK102	
320-82154-8	ADQ-Site35-08	Total/NA	Solid	AK102	
320-82154-9	ADQ-Site35-09	Total/NA	Solid	AK102	
320-82154-10	ADQ-Site35-10	Total/NA	Solid	AK102	
320-82154-11	ADQ-Site35-11	Total/NA	Solid	AK102	
320-82154-12	ADQ-Site35-12	Total/NA	Solid	AK102	
320-82154-13	ADQ-Site35-13	Total/NA	Solid	AK102	
320-82154-14	ADQ-Site35-113	Total/NA	Solid	AK102	
320-82154-15	ADQ-Site35-14	Total/NA	Solid	AK102	
320-82154-16	ADQ-Site35-15	Total/NA	Solid	AK102	
320-82154-17	ADQ-Site35-115	Total/NA	Solid	AK102	
MB 320-545524/1-A	Method Blank	Total/NA	Solid	AK102	
LCS 320-545524/2-A	Lab Control Sample	Total/NA	Solid	AK102	
LCSD 320-545524/4-A	Lab Control Sample Dup	Total/NA	Solid	AK102	
320-82154-17 MS	ADQ-Site35-115	Total/NA	Solid	AK102	
320-82154-17 MSD	ADQ-Site35-115	Total/NA	Solid	AK102	

Analysis Batch: 550005

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-82154-1	ADQ-Site35-01	Total/NA	Solid	AK102	545524
320-82154-2	ADQ-Site35-02	Total/NA	Solid	AK102	545524
320-82154-3	ADQ-Site35-03	Total/NA	Solid	AK102	545524
320-82154-4	ADQ-Site35-04	Total/NA	Solid	AK102	545524
320-82154-5	ADQ-Site35-05	Total/NA	Solid	AK102	545524
320-82154-6	ADQ-Site35-06	Total/NA	Solid	AK102	545524
320-82154-7	ADQ-Site35-07	Total/NA	Solid	AK102	545524
320-82154-8	ADQ-Site35-08	Total/NA	Solid	AK102	545524
320-82154-9	ADQ-Site35-09	Total/NA	Solid	AK102	545524
320-82154-10	ADQ-Site35-10	Total/NA	Solid	AK102	545524
320-82154-11	ADQ-Site35-11	Total/NA	Solid	AK102	545524
320-82154-12	ADQ-Site35-12	Total/NA	Solid	AK102	545524
320-82154-13	ADQ-Site35-13	Total/NA	Solid	AK102	545524
320-82154-14	ADQ-Site35-113	Total/NA	Solid	AK102	545524
320-82154-15	ADQ-Site35-14	Total/NA	Solid	AK102	545524
320-82154-16	ADQ-Site35-15	Total/NA	Solid	AK102	545524
320-82154-17	ADQ-Site35-115	Total/NA	Solid	AK102	545524
MB 320-545524/1-A	Method Blank	Total/NA	Solid	AK102	545524
LCS 320-545524/2-A	Lab Control Sample	Total/NA	Solid	AK102	545524
LCSD 320-545524/4-A	Lab Control Sample Dup	Total/NA	Solid	AK102	545524
320-82154-17 MS	ADQ-Site35-115	Total/NA	Solid	AK102	545524
320-82154-17 MSD	ADQ-Site35-115	Total/NA	Solid	AK102	545524

Prep Batch: 559547

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-82154-1	ADQ-Site35-01	Total/NA	Solid	8011	

Eurofins TestAmerica, Sacramento

QC Association Summary

Client: Shannon & Wilson, Inc
 Project/Site: Kodiak DOT&PF PFAS (107471)

Job ID: 320-82154-1

GC Semi VOA (Continued)

Prep Batch: 559547 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-82154-2	ADQ-Site35-02	Total/NA	Solid	8011	
320-82154-3	ADQ-Site35-03	Total/NA	Solid	8011	
320-82154-4	ADQ-Site35-04	Total/NA	Solid	8011	
320-82154-5	ADQ-Site35-05	Total/NA	Solid	8011	
320-82154-6	ADQ-Site35-06	Total/NA	Solid	8011	
320-82154-7	ADQ-Site35-07	Total/NA	Solid	8011	
320-82154-8	ADQ-Site35-08	Total/NA	Solid	8011	
320-82154-9	ADQ-Site35-09	Total/NA	Solid	8011	
320-82154-10	ADQ-Site35-10	Total/NA	Solid	8011	
320-82154-11	ADQ-Site35-11	Total/NA	Solid	8011	
320-82154-12	ADQ-Site35-12	Total/NA	Solid	8011	
320-82154-13	ADQ-Site35-13	Total/NA	Solid	8011	
320-82154-14	ADQ-Site35-113	Total/NA	Solid	8011	
320-82154-15	ADQ-Site35-14	Total/NA	Solid	8011	
320-82154-16	ADQ-Site35-15	Total/NA	Solid	8011	
320-82154-17	ADQ-Site35-115	Total/NA	Solid	8011	
320-82154-18	Trip Blank 1	Total/NA	Solid	8011	
MB 280-559547/1-A	Method Blank	Total/NA	Solid	8011	
LCS 280-559547/2-A	Lab Control Sample	Total/NA	Solid	8011	
LCSD 280-559547/3-A	Lab Control Sample Dup	Total/NA	Solid	8011	

Analysis Batch: 559580

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-82154-1	ADQ-Site35-01	Total/NA	Solid	8011	559547
320-82154-2	ADQ-Site35-02	Total/NA	Solid	8011	559547
320-82154-3	ADQ-Site35-03	Total/NA	Solid	8011	559547
320-82154-4	ADQ-Site35-04	Total/NA	Solid	8011	559547
320-82154-5	ADQ-Site35-05	Total/NA	Solid	8011	559547
320-82154-7	ADQ-Site35-07	Total/NA	Solid	8011	559547
320-82154-8	ADQ-Site35-08	Total/NA	Solid	8011	559547
320-82154-9	ADQ-Site35-09	Total/NA	Solid	8011	559547
320-82154-10	ADQ-Site35-10	Total/NA	Solid	8011	559547
320-82154-11	ADQ-Site35-11	Total/NA	Solid	8011	559547
320-82154-12	ADQ-Site35-12	Total/NA	Solid	8011	559547
320-82154-13	ADQ-Site35-13	Total/NA	Solid	8011	559547
320-82154-14	ADQ-Site35-113	Total/NA	Solid	8011	559547
320-82154-15	ADQ-Site35-14	Total/NA	Solid	8011	559547
320-82154-16	ADQ-Site35-15	Total/NA	Solid	8011	559547
320-82154-17	ADQ-Site35-115	Total/NA	Solid	8011	559547
320-82154-18	Trip Blank 1	Total/NA	Solid	8011	559547
MB 280-559547/1-A	Method Blank	Total/NA	Solid	8011	559547
LCS 280-559547/2-A	Lab Control Sample	Total/NA	Solid	8011	559547
LCSD 280-559547/3-A	Lab Control Sample Dup	Total/NA	Solid	8011	559547

Analysis Batch: 559736

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-82154-6	ADQ-Site35-06	Total/NA	Solid	8011	559547

QC Association Summary

Client: Shannon & Wilson, Inc
 Project/Site: Kodiak DOT&PF PFAS (107471)

Job ID: 320-82154-1

LCMS

Prep Batch: 545891

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-82154-1	ADQ-Site35-01	Total/NA	Solid	SHAKE	
320-82154-2	ADQ-Site35-02	Total/NA	Solid	SHAKE	
320-82154-3	ADQ-Site35-03	Total/NA	Solid	SHAKE	
320-82154-4	ADQ-Site35-04	Total/NA	Solid	SHAKE	
320-82154-5	ADQ-Site35-05	Total/NA	Solid	SHAKE	
320-82154-6	ADQ-Site35-06	Total/NA	Solid	SHAKE	
320-82154-7	ADQ-Site35-07	Total/NA	Solid	SHAKE	
320-82154-8	ADQ-Site35-08	Total/NA	Solid	SHAKE	
320-82154-9	ADQ-Site35-09	Total/NA	Solid	SHAKE	
320-82154-10	ADQ-Site35-10	Total/NA	Solid	SHAKE	
320-82154-11	ADQ-Site35-11	Total/NA	Solid	SHAKE	
320-82154-12	ADQ-Site35-12	Total/NA	Solid	SHAKE	
320-82154-13	ADQ-Site35-13	Total/NA	Solid	SHAKE	
320-82154-13 - DL	ADQ-Site35-13	Total/NA	Solid	SHAKE	
320-82154-14	ADQ-Site35-113	Total/NA	Solid	SHAKE	
320-82154-15	ADQ-Site35-14	Total/NA	Solid	SHAKE	
320-82154-16	ADQ-Site35-15	Total/NA	Solid	SHAKE	
320-82154-17	ADQ-Site35-115	Total/NA	Solid	SHAKE	
MB 320-545891/1-A	Method Blank	Total/NA	Solid	SHAKE	
LCS 320-545891/2-A	Lab Control Sample	Total/NA	Solid	SHAKE	
320-82154-17 MS	ADQ-Site35-115	Total/NA	Solid	SHAKE	
320-82154-17 MSD	ADQ-Site35-115	Total/NA	Solid	SHAKE	

Analysis Batch: 546357

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-82154-1	ADQ-Site35-01	Total/NA	Solid	EPA 537(Mod)	545891
320-82154-2	ADQ-Site35-02	Total/NA	Solid	EPA 537(Mod)	545891
320-82154-3	ADQ-Site35-03	Total/NA	Solid	EPA 537(Mod)	545891
320-82154-4	ADQ-Site35-04	Total/NA	Solid	EPA 537(Mod)	545891
320-82154-5	ADQ-Site35-05	Total/NA	Solid	EPA 537(Mod)	545891
320-82154-6	ADQ-Site35-06	Total/NA	Solid	EPA 537(Mod)	545891
320-82154-7	ADQ-Site35-07	Total/NA	Solid	EPA 537(Mod)	545891
320-82154-8	ADQ-Site35-08	Total/NA	Solid	EPA 537(Mod)	545891
320-82154-9	ADQ-Site35-09	Total/NA	Solid	EPA 537(Mod)	545891
320-82154-10	ADQ-Site35-10	Total/NA	Solid	EPA 537(Mod)	545891
320-82154-11	ADQ-Site35-11	Total/NA	Solid	EPA 537(Mod)	545891
320-82154-12	ADQ-Site35-12	Total/NA	Solid	EPA 537(Mod)	545891
320-82154-13	ADQ-Site35-13	Total/NA	Solid	EPA 537(Mod)	545891
320-82154-14	ADQ-Site35-113	Total/NA	Solid	EPA 537(Mod)	545891
320-82154-15	ADQ-Site35-14	Total/NA	Solid	EPA 537(Mod)	545891
320-82154-16	ADQ-Site35-15	Total/NA	Solid	EPA 537(Mod)	545891
320-82154-17	ADQ-Site35-115	Total/NA	Solid	EPA 537(Mod)	545891
MB 320-545891/1-A	Method Blank	Total/NA	Solid	EPA 537(Mod)	545891
LCS 320-545891/2-A	Lab Control Sample	Total/NA	Solid	EPA 537(Mod)	545891
320-82154-17 MS	ADQ-Site35-115	Total/NA	Solid	EPA 537(Mod)	545891
320-82154-17 MSD	ADQ-Site35-115	Total/NA	Solid	EPA 537(Mod)	545891

Analysis Batch: 547359

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-82154-13 - DL	ADQ-Site35-13	Total/NA	Solid	EPA 537(Mod)	545891

QC Association Summary

Client: Shannon & Wilson, Inc
Project/Site: Kodiak DOT&PF PFAS (107471)

Job ID: 320-82154-1

General Chemistry

Analysis Batch: 545743

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-82154-1	ADQ-Site35-01	Total/NA	Solid	D 2216	
320-82154-2	ADQ-Site35-02	Total/NA	Solid	D 2216	
320-82154-3	ADQ-Site35-03	Total/NA	Solid	D 2216	
320-82154-4	ADQ-Site35-04	Total/NA	Solid	D 2216	
320-82154-5	ADQ-Site35-05	Total/NA	Solid	D 2216	
320-82154-6	ADQ-Site35-06	Total/NA	Solid	D 2216	

Analysis Batch: 545805

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-82154-7	ADQ-Site35-07	Total/NA	Solid	D 2216	
320-82154-8	ADQ-Site35-08	Total/NA	Solid	D 2216	
320-82154-9	ADQ-Site35-09	Total/NA	Solid	D 2216	
320-82154-10	ADQ-Site35-10	Total/NA	Solid	D 2216	
320-82154-11	ADQ-Site35-11	Total/NA	Solid	D 2216	
320-82154-12	ADQ-Site35-12	Total/NA	Solid	D 2216	
320-82154-13	ADQ-Site35-13	Total/NA	Solid	D 2216	
320-82154-14	ADQ-Site35-113	Total/NA	Solid	D 2216	
320-82154-15	ADQ-Site35-14	Total/NA	Solid	D 2216	
320-82154-16	ADQ-Site35-15	Total/NA	Solid	D 2216	
320-82154-17	ADQ-Site35-115	Total/NA	Solid	D 2216	

Lab Chronicle

Client: Shannon & Wilson, Inc
 Project/Site: Kodiak DOT&PF PFAS (107471)

Job ID: 320-82154-1

Client Sample ID: ADQ-Site35-01

Lab Sample ID: 320-82154-1

Date Collected: 11/13/21 10:02

Matrix: Solid

Date Received: 11/23/21 16:45

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	D 2216		1			545743	11/24/21 16:05	CFR	TAL SAC

Client Sample ID: ADQ-Site35-01

Lab Sample ID: 320-82154-1

Date Collected: 11/13/21 10:02

Matrix: Solid

Date Received: 11/23/21 16:45

Percent Solids: 39.9

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			42.637 g	25 mL	545528	11/24/21 10:53	CLF	TAL SAC
Total/NA	Analysis	8260C		1	1 mL	50 mL	547871	12/03/21 14:13	AP1	TAL SAC
Total/NA	Prep	5035			42.637 g	25 mL	545528	11/24/21 10:53	CLF	TAL SAC
Total/NA	Analysis	8260C SIM		1	1 mL	50 mL	546763	11/30/21 11:52	SS	TAL SAC
Total/NA	Prep	5035			42.637 g	25 mL	545528	11/24/21 10:53	CLF	TAL SAC
Total/NA	Analysis	AK101		1	1 mL	50 mL	548753	12/07/21 15:18	AP1	TAL SAC
Total/NA	Prep	8011			3.95 g	35 mL	559547	12/03/21 13:26	KSA	TAL DEN
Total/NA	Analysis	8011		1			559580	12/04/21 00:19	KSA	TAL DEN
Total/NA	Prep	AK102			30.34 g	3 mL	545524	11/24/21 09:17	NGK	TAL SAC
Total/NA	Analysis	AK102		1			550005	12/11/21 16:08	K1D	TAL SAC
Total/NA	Prep	SHAKE			5.31 g	10.0 mL	545891	11/24/21 18:30	AM	TAL SAC
Total/NA	Analysis	EPA 537(Mod)		1			546357	11/29/21 05:02	AF	TAL SAC

Client Sample ID: ADQ-Site35-02

Lab Sample ID: 320-82154-2

Date Collected: 11/13/21 10:08

Matrix: Solid

Date Received: 11/23/21 16:45

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	D 2216		1			545743	11/24/21 16:05	CFR	TAL SAC

Client Sample ID: ADQ-Site35-02

Lab Sample ID: 320-82154-2

Date Collected: 11/13/21 10:08

Matrix: Solid

Date Received: 11/23/21 16:45

Percent Solids: 63.8

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			20.335 g	25 mL	545528	11/24/21 10:53	CLF	TAL SAC
Total/NA	Analysis	8260C		1	1 mL	50 mL	547871	12/03/21 14:36	AP1	TAL SAC
Total/NA	Prep	5035			20.335 g	25 mL	545528	11/24/21 10:53	CLF	TAL SAC
Total/NA	Analysis	8260C SIM		1	1 mL	50 mL	546763	11/30/21 12:16	SS	TAL SAC
Total/NA	Prep	5035			20.335 g	25 mL	545528	11/24/21 10:53	CLF	TAL SAC
Total/NA	Analysis	AK101		1	1 mL	50 mL	547873	12/03/21 14:36	AP1	TAL SAC
Total/NA	Prep	8011			3.95 g	35 mL	559547	12/03/21 13:26	KSA	TAL DEN
Total/NA	Analysis	8011		1			559580	12/04/21 00:43	KSA	TAL DEN
Total/NA	Prep	AK102			30.68 g	3 mL	545524	11/24/21 09:17	NGK	TAL SAC
Total/NA	Analysis	AK102		1			550005	12/11/21 16:32	K1D	TAL SAC
Total/NA	Prep	SHAKE			5.33 g	10.0 mL	545891	11/24/21 18:30	AM	TAL SAC
Total/NA	Analysis	EPA 537(Mod)		1			546357	11/29/21 05:12	AF	TAL SAC

Lab Chronicle

Client: Shannon & Wilson, Inc
 Project/Site: Kodiak DOT&PF PFAS (107471)

Job ID: 320-82154-1

Client Sample ID: ADQ-Site35-03

Lab Sample ID: 320-82154-3

Date Collected: 11/13/21 10:19

Matrix: Solid

Date Received: 11/23/21 16:45

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	D 2216		1			545743	11/24/21 16:05	CFR	TAL SAC

Client Sample ID: ADQ-Site35-03

Lab Sample ID: 320-82154-3

Date Collected: 11/13/21 10:19

Matrix: Solid

Date Received: 11/23/21 16:45

Percent Solids: 72.3

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			30.967 g	25 mL	545528	11/24/21 10:53	CLF	TAL SAC
Total/NA	Analysis	8260C		1	1 mL	50 mL	547871	12/03/21 14:59	AP1	TAL SAC
Total/NA	Prep	5035			30.967 g	25 mL	545528	11/24/21 10:53	CLF	TAL SAC
Total/NA	Analysis	8260C SIM		1	1 mL	50 mL	546763	11/30/21 12:40	SS	TAL SAC
Total/NA	Prep	5035			30.967 g	25 mL	545528	11/24/21 10:53	CLF	TAL SAC
Total/NA	Analysis	AK101		1	1 mL	50 mL	547873	12/03/21 14:59	AP1	TAL SAC
Total/NA	Prep	8011			3.95 g	35 mL	559547	12/03/21 13:26	KSA	TAL DEN
Total/NA	Analysis	8011		1			559580	12/04/21 01:07	KSA	TAL DEN
Total/NA	Prep	AK102			30.49 g	3 mL	545524	11/24/21 09:17	NGK	TAL SAC
Total/NA	Analysis	AK102		1			550005	12/11/21 16:56	K1D	TAL SAC
Total/NA	Prep	SHAKE			5.35 g	10.0 mL	545891	11/24/21 18:30	AM	TAL SAC
Total/NA	Analysis	EPA 537(Mod)		1			546357	11/29/21 05:23	AF	TAL SAC

Client Sample ID: ADQ-Site35-04

Lab Sample ID: 320-82154-4

Date Collected: 11/13/21 10:40

Matrix: Solid

Date Received: 11/23/21 16:45

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	D 2216		1			545743	11/24/21 16:05	CFR	TAL SAC

Client Sample ID: ADQ-Site35-04

Lab Sample ID: 320-82154-4

Date Collected: 11/13/21 10:40

Matrix: Solid

Date Received: 11/23/21 16:45

Percent Solids: 89.7

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			51.438 g	25 mL	545528	11/24/21 10:53	CLF	TAL SAC
Total/NA	Analysis	8260C		1	1 mL	50 mL	547871	12/03/21 15:23	AP1	TAL SAC
Total/NA	Prep	5035			51.438 g	25 mL	545528	11/24/21 10:53	CLF	TAL SAC
Total/NA	Analysis	8260C SIM		1	1 mL	50 mL	546763	11/30/21 13:03	SS	TAL SAC
Total/NA	Prep	5035			51.438 g	25 mL	545528	11/24/21 10:53	CLF	TAL SAC
Total/NA	Analysis	AK101		1	1 mL	50 mL	547873	12/03/21 15:23	AP1	TAL SAC
Total/NA	Prep	8011			3.95 g	35 mL	559547	12/03/21 13:26	KSA	TAL DEN
Total/NA	Analysis	8011		1			559580	12/04/21 01:31	KSA	TAL DEN
Total/NA	Prep	AK102			30.76 g	3 mL	545524	11/24/21 09:17	NGK	TAL SAC
Total/NA	Analysis	AK102		1			550005	12/11/21 17:20	K1D	TAL SAC
Total/NA	Prep	SHAKE			5.37 g	10.0 mL	545891	11/24/21 18:30	AM	TAL SAC
Total/NA	Analysis	EPA 537(Mod)		1			546357	11/29/21 05:33	AF	TAL SAC

Lab Chronicle

Client: Shannon & Wilson, Inc
 Project/Site: Kodiak DOT&PF PFAS (107471)

Job ID: 320-82154-1

Client Sample ID: ADQ-Site35-05

Lab Sample ID: 320-82154-5

Date Collected: 11/13/21 12:23

Matrix: Solid

Date Received: 11/23/21 16:45

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	D 2216		1			545743	11/24/21 16:05	CFR	TAL SAC

Client Sample ID: ADQ-Site35-05

Lab Sample ID: 320-82154-5

Date Collected: 11/13/21 12:23

Matrix: Solid

Date Received: 11/23/21 16:45

Percent Solids: 86.8

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			48.295 g	25 mL	545528	11/24/21 10:53	CLF	TAL SAC
Total/NA	Analysis	8260C		1	1 mL	50 mL	547871	12/03/21 15:46	AP1	TAL SAC
Total/NA	Prep	5035			48.295 g	25 mL	545528	11/24/21 10:53	CLF	TAL SAC
Total/NA	Analysis	8260C SIM		1	1 mL	50 mL	546763	11/30/21 13:27	SS	TAL SAC
Total/NA	Prep	5035			48.295 g	25 mL	545528	11/24/21 10:53	CLF	TAL SAC
Total/NA	Analysis	AK101		1	1 mL	50 mL	547873	12/03/21 15:46	AP1	TAL SAC
Total/NA	Prep	8011			3.95 g	35 mL	559547	12/03/21 13:26	KSA	TAL DEN
Total/NA	Analysis	8011		1			559580	12/04/21 01:55	KSA	TAL DEN
Total/NA	Prep	AK102			30.29 g	3 mL	545524	11/24/21 09:17	NGK	TAL SAC
Total/NA	Analysis	AK102		1			550005	12/11/21 17:43	K1D	TAL SAC
Total/NA	Prep	SHAKE			5.18 g	10.0 mL	545891	11/24/21 18:30	AM	TAL SAC
Total/NA	Analysis	EPA 537(Mod)		1			546357	11/29/21 05:43	AF	TAL SAC

Client Sample ID: ADQ-Site35-06

Lab Sample ID: 320-82154-6

Date Collected: 11/13/21 12:04

Matrix: Solid

Date Received: 11/23/21 16:45

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	D 2216		1			545743	11/24/21 16:05	CFR	TAL SAC

Client Sample ID: ADQ-Site35-06

Lab Sample ID: 320-82154-6

Date Collected: 11/13/21 12:04

Matrix: Solid

Date Received: 11/23/21 16:45

Percent Solids: 81.4

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			43.415 g	25 mL	545528	11/24/21 10:53	CLF	TAL SAC
Total/NA	Analysis	8260C		1	1 mL	50 mL	547871	12/03/21 16:09	AP1	TAL SAC
Total/NA	Prep	5035			43.415 g	25 mL	545528	11/24/21 10:53	CLF	TAL SAC
Total/NA	Analysis	8260C SIM		1	1 mL	50 mL	546763	11/30/21 13:51	SS	TAL SAC
Total/NA	Prep	5035			43.415 g	25 mL	545528	11/24/21 10:53	CLF	TAL SAC
Total/NA	Analysis	AK101		1	1 mL	50 mL	547873	12/03/21 16:09	AP1	TAL SAC
Total/NA	Prep	8011			3.95 g	35 mL	559547	12/03/21 13:26	KSA	TAL DEN
Total/NA	Analysis	8011		1			559736	12/07/21 09:18	KSA	TAL DEN
Total/NA	Prep	AK102			30.58 g	3 mL	545524	11/24/21 09:17	NGK	TAL SAC
Total/NA	Analysis	AK102		1			550005	12/11/21 18:07	K1D	TAL SAC
Total/NA	Prep	SHAKE			5.29 g	10.0 mL	545891	11/24/21 18:30	AM	TAL SAC
Total/NA	Analysis	EPA 537(Mod)		1			546357	11/29/21 05:54	AF	TAL SAC

Lab Chronicle

Client: Shannon & Wilson, Inc
 Project/Site: Kodiak DOT&PF PFAS (107471)

Job ID: 320-82154-1

Client Sample ID: ADQ-Site35-07

Lab Sample ID: 320-82154-7

Date Collected: 11/13/21 11:50

Matrix: Solid

Date Received: 11/23/21 16:45

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	D 2216		1			545805	11/24/21 16:05	CFR	TAL SAC

Client Sample ID: ADQ-Site35-07

Lab Sample ID: 320-82154-7

Date Collected: 11/13/21 11:50

Matrix: Solid

Date Received: 11/23/21 16:45

Percent Solids: 86.3

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			26.812 g	25 mL	545528	11/24/21 10:53	CLF	TAL SAC
Total/NA	Analysis	8260C		1	1 mL	50 mL	547871	12/03/21 16:33	AP1	TAL SAC
Total/NA	Prep	5035			26.812 g	25 mL	545528	11/24/21 10:53	CLF	TAL SAC
Total/NA	Analysis	8260C SIM		1	1 mL	50 mL	546763	11/30/21 14:15	SS	TAL SAC
Total/NA	Prep	5035			26.812 g	25 mL	545528	11/24/21 10:53	CLF	TAL SAC
Total/NA	Analysis	AK101		1	1 mL	50 mL	547873	12/03/21 16:33	AP1	TAL SAC
Total/NA	Prep	8011			3.95 g	35 mL	559547	12/03/21 13:26	KSA	TAL DEN
Total/NA	Analysis	8011		1			559580	12/04/21 02:44	KSA	TAL DEN
Total/NA	Prep	AK102			30.49 g	3 mL	545524	11/24/21 09:17	NGK	TAL SAC
Total/NA	Analysis	AK102		50			550005	12/11/21 18:31	K1D	TAL SAC
Total/NA	Prep	SHAKE			5.31 g	10.0 mL	545891	11/24/21 18:30	AM	TAL SAC
Total/NA	Analysis	EPA 537(Mod)		1			546357	11/29/21 06:04	AF	TAL SAC

Client Sample ID: ADQ-Site35-08

Lab Sample ID: 320-82154-8

Date Collected: 11/13/21 12:01

Matrix: Solid

Date Received: 11/23/21 16:45

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	D 2216		1			545805	11/24/21 16:05	CFR	TAL SAC

Client Sample ID: ADQ-Site35-08

Lab Sample ID: 320-82154-8

Date Collected: 11/13/21 12:01

Matrix: Solid

Date Received: 11/23/21 16:45

Percent Solids: 91.1

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			41.205 g	25 mL	545528	11/24/21 10:53	CLF	TAL SAC
Total/NA	Analysis	8260C		1	1 mL	50 mL	547871	12/03/21 16:56	AP1	TAL SAC
Total/NA	Prep	5035			41.205 g	25 mL	545528	11/24/21 10:53	CLF	TAL SAC
Total/NA	Analysis	8260C SIM		1	1 mL	50 mL	546763	11/30/21 14:39	SS	TAL SAC
Total/NA	Prep	5035			41.205 g	25 mL	545528	11/24/21 10:53	CLF	TAL SAC
Total/NA	Analysis	AK101		1	1 mL	50 mL	547873	12/03/21 16:56	AP1	TAL SAC
Total/NA	Prep	8011			3.95 g	35 mL	559547	12/03/21 13:26	KSA	TAL DEN
Total/NA	Analysis	8011		1			559580	12/04/21 03:08	KSA	TAL DEN
Total/NA	Prep	AK102			30.23 g	3 mL	545524	11/24/21 09:17	NGK	TAL SAC
Total/NA	Analysis	AK102		1			550005	12/11/21 18:55	K1D	TAL SAC
Total/NA	Prep	SHAKE			5.22 g	10.0 mL	545891	11/24/21 18:30	AM	TAL SAC
Total/NA	Analysis	EPA 537(Mod)		1			546357	11/29/21 06:15	AF	TAL SAC

Lab Chronicle

Client: Shannon & Wilson, Inc
 Project/Site: Kodiak DOT&PF PFAS (107471)

Job ID: 320-82154-1

Client Sample ID: ADQ-Site35-09

Lab Sample ID: 320-82154-9

Date Collected: 11/13/21 12:37

Matrix: Solid

Date Received: 11/23/21 16:45

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	D 2216		1			545805	11/24/21 16:05	CFR	TAL SAC

Client Sample ID: ADQ-Site35-09

Lab Sample ID: 320-82154-9

Date Collected: 11/13/21 12:37

Matrix: Solid

Date Received: 11/23/21 16:45

Percent Solids: 94.3

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			78.414 g	25 mL	545528	11/24/21 10:53	CLF	TAL SAC
Total/NA	Analysis	8260C		1	1 mL	50 mL	547871	12/03/21 17:19	AP1	TAL SAC
Total/NA	Prep	5035			78.414 g	25 mL	545528	11/24/21 10:53	CLF	TAL SAC
Total/NA	Analysis	8260C SIM		1	1 mL	50 mL	546763	11/30/21 15:02	SS	TAL SAC
Total/NA	Prep	5035			78.414 g	25 mL	545528	11/24/21 10:53	CLF	TAL SAC
Total/NA	Analysis	AK101		1	1 mL	50 mL	547873	12/03/21 17:19	AP1	TAL SAC
Total/NA	Prep	8011			3.95 g	35 mL	559547	12/03/21 13:26	KSA	TAL DEN
Total/NA	Analysis	8011		1			559580	12/04/21 03:32	KSA	TAL DEN
Total/NA	Prep	AK102			30.31 g	3 mL	545524	11/24/21 09:17	NGK	TAL SAC
Total/NA	Analysis	AK102		1			550005	12/11/21 19:19	K1D	TAL SAC
Total/NA	Prep	SHAKE			5.26 g	10.0 mL	545891	11/24/21 18:30	AM	TAL SAC
Total/NA	Analysis	EPA 537(Mod)		1			546357	11/29/21 06:46	AF	TAL SAC

Client Sample ID: ADQ-Site35-10

Lab Sample ID: 320-82154-10

Date Collected: 11/13/21 12:53

Matrix: Solid

Date Received: 11/23/21 16:45

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	D 2216		1			545805	11/24/21 16:05	CFR	TAL SAC

Client Sample ID: ADQ-Site35-10

Lab Sample ID: 320-82154-10

Date Collected: 11/13/21 12:53

Matrix: Solid

Date Received: 11/23/21 16:45

Percent Solids: 93.1

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			62.324 g	25 mL	545528	11/24/21 10:53	CLF	TAL SAC
Total/NA	Analysis	8260C		1	1 mL	50 mL	547871	12/03/21 18:06	AP1	TAL SAC
Total/NA	Prep	5035			62.324 g	25 mL	545528	11/24/21 10:53	CLF	TAL SAC
Total/NA	Analysis	8260C SIM		1	1 mL	50 mL	546763	11/30/21 15:26	SS	TAL SAC
Total/NA	Prep	5035			62.324 g	25 mL	545528	11/24/21 10:53	CLF	TAL SAC
Total/NA	Analysis	AK101		1	1 mL	50 mL	547873	12/03/21 18:06	AP1	TAL SAC
Total/NA	Prep	8011			3.95 g	35 mL	559547	12/03/21 13:26	KSA	TAL DEN
Total/NA	Analysis	8011		1			559580	12/04/21 03:56	KSA	TAL DEN
Total/NA	Prep	AK102			30.59 g	3 mL	545524	11/24/21 09:17	NGK	TAL SAC
Total/NA	Analysis	AK102		1			550005	12/11/21 19:43	K1D	TAL SAC
Total/NA	Prep	SHAKE			5.32 g	10.0 mL	545891	11/24/21 18:30	AM	TAL SAC
Total/NA	Analysis	EPA 537(Mod)		1			546357	11/29/21 06:56	AF	TAL SAC

Lab Chronicle

Client: Shannon & Wilson, Inc
 Project/Site: Kodiak DOT&PF PFAS (107471)

Job ID: 320-82154-1

Client Sample ID: ADQ-Site35-11

Lab Sample ID: 320-82154-11

Date Collected: 11/13/21 12:28

Matrix: Solid

Date Received: 11/23/21 16:45

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	D 2216		1			545805	11/24/21 16:05	CFR	TAL SAC

Client Sample ID: ADQ-Site35-11

Lab Sample ID: 320-82154-11

Date Collected: 11/13/21 12:28

Matrix: Solid

Date Received: 11/23/21 16:45

Percent Solids: 64.3

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			22.847 g	25 mL	545528	11/24/21 10:53	CLF	TAL SAC
Total/NA	Analysis	8260C		1	1 mL	50 mL	547871	12/03/21 18:29	AP1	TAL SAC
Total/NA	Prep	5035			22.847 g	25 mL	545528	11/24/21 10:53	CLF	TAL SAC
Total/NA	Analysis	8260C SIM		1	1 mL	50 mL	546763	11/30/21 15:50	SS	TAL SAC
Total/NA	Prep	5035			22.847 g	25 mL	545528	11/24/21 10:53	CLF	TAL SAC
Total/NA	Analysis	AK101		1	1 mL	50 mL	547873	12/03/21 18:29	AP1	TAL SAC
Total/NA	Prep	8011			3.95 g	35 mL	559547	12/03/21 13:26	KSA	TAL DEN
Total/NA	Analysis	8011		1			559580	12/04/21 04:45	KSA	TAL DEN
Total/NA	Prep	AK102			30.80 g	3 mL	545524	11/24/21 09:17	NGK	TAL SAC
Total/NA	Analysis	AK102		5			550005	12/11/21 20:55	K1D	TAL SAC
Total/NA	Prep	SHAKE			5.49 g	10.0 mL	545891	11/24/21 18:30	AM	TAL SAC
Total/NA	Analysis	EPA 537(Mod)		1			546357	11/29/21 07:07	AF	TAL SAC

Client Sample ID: ADQ-Site35-12

Lab Sample ID: 320-82154-12

Date Collected: 11/13/21 11:50

Matrix: Solid

Date Received: 11/23/21 16:45

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	D 2216		1			545805	11/24/21 16:05	CFR	TAL SAC

Client Sample ID: ADQ-Site35-12

Lab Sample ID: 320-82154-12

Date Collected: 11/13/21 11:50

Matrix: Solid

Date Received: 11/23/21 16:45

Percent Solids: 82.6

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			57.922 g	25 mL	545528	11/24/21 10:53	CLF	TAL SAC
Total/NA	Analysis	8260C		1	1 mL	50 mL	547871	12/03/21 18:52	AP1	TAL SAC
Total/NA	Prep	5035			57.922 g	25 mL	545528	11/24/21 10:53	CLF	TAL SAC
Total/NA	Analysis	8260C SIM		1	1 mL	50 mL	546763	11/30/21 16:14	SS	TAL SAC
Total/NA	Prep	5035			57.922 g	25 mL	545528	11/24/21 10:53	CLF	TAL SAC
Total/NA	Analysis	AK101		1	1 mL	50 mL	547873	12/03/21 18:52	AP1	TAL SAC
Total/NA	Prep	8011			3.95 g	35 mL	559547	12/03/21 13:26	KSA	TAL DEN
Total/NA	Analysis	8011		1			559580	12/04/21 05:09	KSA	TAL DEN
Total/NA	Prep	AK102			30.34 g	3 mL	545524	11/24/21 09:17	NGK	TAL SAC
Total/NA	Analysis	AK102		5			550005	12/11/21 21:18	K1D	TAL SAC
Total/NA	Prep	SHAKE			5.28 g	10.0 mL	545891	11/24/21 18:30	AM	TAL SAC
Total/NA	Analysis	EPA 537(Mod)		1			546357	11/29/21 07:17	AF	TAL SAC

Lab Chronicle

Client: Shannon & Wilson, Inc
 Project/Site: Kodiak DOT&PF PFAS (107471)

Job ID: 320-82154-1

Client Sample ID: ADQ-Site35-13

Lab Sample ID: 320-82154-13

Date Collected: 11/13/21 12:57

Matrix: Solid

Date Received: 11/23/21 16:45

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	D 2216		1			545805	11/24/21 16:05	CFR	TAL SAC

Client Sample ID: ADQ-Site35-13

Lab Sample ID: 320-82154-13

Date Collected: 11/13/21 12:57

Matrix: Solid

Date Received: 11/23/21 16:45

Percent Solids: 87.0

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			40.746 g	25 mL	545528	11/24/21 10:53	CLF	TAL SAC
Total/NA	Analysis	8260C		1	1 mL	50 mL	547871	12/03/21 19:15	AP1	TAL SAC
Total/NA	Prep	5035			40.746 g	25 mL	545528	11/24/21 10:53	CLF	TAL SAC
Total/NA	Analysis	8260C SIM		1	1 mL	50 mL	546763	11/30/21 16:37	SS	TAL SAC
Total/NA	Prep	5035			40.746 g	25 mL	545528	11/24/21 10:53	CLF	TAL SAC
Total/NA	Analysis	AK101		1	1 mL	50 mL	547873	12/03/21 19:15	AP1	TAL SAC
Total/NA	Prep	8011			3.95 g	35 mL	559547	12/03/21 13:26	KSA	TAL DEN
Total/NA	Analysis	8011		1			559580	12/04/21 05:33	KSA	TAL DEN
Total/NA	Prep	AK102			30.08 g	3 mL	545524	11/24/21 09:17	NGK	TAL SAC
Total/NA	Analysis	AK102		1			550005	12/11/21 21:42	K1D	TAL SAC
Total/NA	Prep	SHAKE			5.39 g	10.0 mL	545891	11/24/21 18:30	AM	TAL SAC
Total/NA	Analysis	EPA 537(Mod)		1			546357	11/29/21 07:28	AF	TAL SAC
Total/NA	Prep	SHAKE	DL		5.39 g	10.0 mL	545891	11/24/21 18:30	AM	TAL SAC
Total/NA	Analysis	EPA 537(Mod)	DL	5			547359	12/01/21 21:52	RS1	TAL SAC

Client Sample ID: ADQ-Site35-113

Lab Sample ID: 320-82154-14

Date Collected: 11/13/21 13:07

Matrix: Solid

Date Received: 11/23/21 16:45

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	D 2216		1			545805	11/24/21 16:05	CFR	TAL SAC

Client Sample ID: ADQ-Site35-113

Lab Sample ID: 320-82154-14

Date Collected: 11/13/21 13:07

Matrix: Solid

Date Received: 11/23/21 16:45

Percent Solids: 87.6

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			38.998 g	25 mL	545528	11/24/21 10:53	CLF	TAL SAC
Total/NA	Analysis	8260C		1	1 mL	50 mL	547871	12/03/21 19:39	AP1	TAL SAC
Total/NA	Prep	5035			38.998 g	25 mL	545528	11/24/21 10:53	CLF	TAL SAC
Total/NA	Analysis	8260C SIM		1	1 mL	50 mL	546763	11/30/21 17:01	SS	TAL SAC
Total/NA	Prep	5035			38.998 g	25 mL	545528	11/24/21 10:53	CLF	TAL SAC
Total/NA	Analysis	AK101		1	1 mL	50 mL	547873	12/03/21 19:39	AP1	TAL SAC
Total/NA	Prep	8011			3.95 g	35 mL	559547	12/03/21 13:26	KSA	TAL DEN
Total/NA	Analysis	8011		1			559580	12/04/21 05:57	KSA	TAL DEN
Total/NA	Prep	AK102			30.48 g	3 mL	545524	11/24/21 09:17	NGK	TAL SAC
Total/NA	Analysis	AK102		1			550005	12/11/21 22:06	K1D	TAL SAC

Lab Chronicle

Client: Shannon & Wilson, Inc
 Project/Site: Kodiak DOT&PF PFAS (107471)

Job ID: 320-82154-1

Client Sample ID: ADQ-Site35-113

Lab Sample ID: 320-82154-14

Date Collected: 11/13/21 13:07

Matrix: Solid

Date Received: 11/23/21 16:45

Percent Solids: 87.6

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	SHAKE			5.42 g	10.0 mL	545891	11/24/21 18:30	AM	TAL SAC
Total/NA	Analysis	EPA 537(Mod)		1			546357	11/29/21 07:38	AF	TAL SAC

Client Sample ID: ADQ-Site35-14

Lab Sample ID: 320-82154-15

Date Collected: 11/13/21 13:10

Matrix: Solid

Date Received: 11/23/21 16:45

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	D 2216		1			545805	11/24/21 16:05	CFR	TAL SAC

Client Sample ID: ADQ-Site35-14

Lab Sample ID: 320-82154-15

Date Collected: 11/13/21 13:10

Matrix: Solid

Date Received: 11/23/21 16:45

Percent Solids: 89.6

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			61.815 g	25 mL	545528	11/24/21 10:53	CLF	TAL SAC
Total/NA	Analysis	8260C		1	1 mL	50 mL	547871	12/03/21 20:02	AP1	TAL SAC
Total/NA	Prep	5035			61.815 g	25 mL	545528	11/24/21 10:53	CLF	TAL SAC
Total/NA	Analysis	8260C SIM		1	1 mL	50 mL	546763	11/30/21 17:24	SS	TAL SAC
Total/NA	Prep	5035			61.815 g	25 mL	545528	11/24/21 10:53	CLF	TAL SAC
Total/NA	Analysis	AK101		1	1 mL	50 mL	547873	12/03/21 20:02	AP1	TAL SAC
Total/NA	Prep	8011			3.95 g	35 mL	559547	12/03/21 13:26	KSA	TAL DEN
Total/NA	Analysis	8011		1			559580	12/04/21 06:22	KSA	TAL DEN
Total/NA	Prep	AK102			30.54 g	3 mL	545524	11/24/21 09:17	NGK	TAL SAC
Total/NA	Analysis	AK102		1			550005	12/11/21 22:30	K1D	TAL SAC
Total/NA	Prep	SHAKE			5.53 g	10.0 mL	545891	11/24/21 18:30	AM	TAL SAC
Total/NA	Analysis	EPA 537(Mod)		1			546357	11/29/21 07:48	AF	TAL SAC

Client Sample ID: ADQ-Site35-15

Lab Sample ID: 320-82154-16

Date Collected: 11/13/21 12:52

Matrix: Solid

Date Received: 11/23/21 16:45

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	D 2216		1			545805	11/24/21 16:05	CFR	TAL SAC

Client Sample ID: ADQ-Site35-15

Lab Sample ID: 320-82154-16

Date Collected: 11/13/21 12:52

Matrix: Solid

Date Received: 11/23/21 16:45

Percent Solids: 91.9

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			33.373 g	25 mL	545528	11/24/21 10:53	CLF	TAL SAC
Total/NA	Analysis	8260C		1	1 mL	50 mL	547871	12/03/21 20:26	AP1	TAL SAC
Total/NA	Prep	5035			33.373 g	25 mL	545528	11/24/21 10:53	CLF	TAL SAC
Total/NA	Analysis	8260C SIM		1	1 mL	50 mL	546763	11/30/21 17:48	SS	TAL SAC
Total/NA	Prep	5035			33.373 g	25 mL	545528	11/24/21 10:53	CLF	TAL SAC
Total/NA	Analysis	AK101		1	1 mL	50 mL	547873	12/03/21 20:26	AP1	TAL SAC

Eurofins TestAmerica, Sacramento

Lab Chronicle

Client: Shannon & Wilson, Inc
 Project/Site: Kodiak DOT&PF PFAS (107471)

Job ID: 320-82154-1

Client Sample ID: ADQ-Site35-15

Lab Sample ID: 320-82154-16

Date Collected: 11/13/21 12:52

Matrix: Solid

Date Received: 11/23/21 16:45

Percent Solids: 91.9

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	8011			3.95 g	35 mL	559547	12/03/21 13:26	KSA	TAL DEN
Total/NA	Analysis	8011		1			559580	12/04/21 06:46	KSA	TAL DEN
Total/NA	Prep	AK102			30.06 g	3 mL	545524	11/24/21 09:17	NGK	TAL SAC
Total/NA	Analysis	AK102		1			550005	12/11/21 22:54	K1D	TAL SAC
Total/NA	Prep	SHAKE			5.56 g	10.0 mL	545891	11/24/21 18:30	AM	TAL SAC
Total/NA	Analysis	EPA 537(Mod)		1			546357	11/29/21 08:51	AF	TAL SAC

Client Sample ID: ADQ-Site35-115

Lab Sample ID: 320-82154-17

Date Collected: 11/13/21 12:42

Matrix: Solid

Date Received: 11/23/21 16:45

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	D 2216		1			545805	11/24/21 16:05	CFR	TAL SAC

Client Sample ID: ADQ-Site35-115

Lab Sample ID: 320-82154-17

Date Collected: 11/13/21 12:42

Matrix: Solid

Date Received: 11/23/21 16:45

Percent Solids: 90.2

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			50.241 g	25 mL	545528	11/24/21 10:53	CLF	TAL SAC
Total/NA	Analysis	8260C		1	1 mL	50 mL	547871	12/03/21 20:50	AP1	TAL SAC
Total/NA	Prep	5035			50.241 g	25 mL	545528	11/24/21 10:53	CLF	TAL SAC
Total/NA	Analysis	8260C SIM		1	1 mL	50 mL	546763	11/30/21 18:11	SS	TAL SAC
Total/NA	Prep	5035			50.241 g	25 mL	545528	11/24/21 10:53	CLF	TAL SAC
Total/NA	Analysis	AK101		1	1 mL	50 mL	547873	12/03/21 20:50	AP1	TAL SAC
Total/NA	Prep	8011			3.95 g	35 mL	559547	12/03/21 13:26	KSA	TAL DEN
Total/NA	Analysis	8011		1			559580	12/04/21 07:10	KSA	TAL DEN
Total/NA	Prep	AK102			30.87 g	3 mL	545524	11/24/21 09:17	NGK	TAL SAC
Total/NA	Analysis	AK102		1			550005	12/11/21 23:18	K1D	TAL SAC
Total/NA	Prep	SHAKE			5.48 g	10.0 mL	545891	11/24/21 18:30	AM	TAL SAC
Total/NA	Analysis	EPA 537(Mod)		1			546357	11/29/21 07:59	AF	TAL SAC

Client Sample ID: Trip Blank 1

Lab Sample ID: 320-82154-18

Date Collected: 11/13/21 00:00

Matrix: Solid

Date Received: 11/23/21 16:45

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			25 g	25 mL	545528	11/24/21 10:53	CLF	TAL SAC
Total/NA	Analysis	8260C		1	1 mL	50 mL	547871	12/03/21 13:50	AP1	TAL SAC
Total/NA	Prep	5035			25 g	25 mL	545528	11/24/21 10:53	CLF	TAL SAC
Total/NA	Analysis	8260C SIM		1	1 mL	50 mL	546763	11/30/21 18:35	SS	TAL SAC
Total/NA	Prep	5035			25 g	25 mL	545528	11/24/21 10:53	CLF	TAL SAC
Total/NA	Analysis	AK101		1	1 mL	50 mL	547873	12/03/21 13:50	AP1	TAL SAC
Total/NA	Prep	8011			3.95 g	35 mL	559547	12/03/21 13:26	KSA	TAL DEN
Total/NA	Analysis	8011		1			559580	12/04/21 07:35	KSA	TAL DEN

Lab Chronicle

Client: Shannon & Wilson, Inc
Project/Site: Kodiak DOT&PF PFAS (107471)

Job ID: 320-82154-1

Laboratory References:

TAL DEN = Eurofins TestAmerica, Denver, 4955 Yarrow Street, Arvada, CO 80002, TEL (303)736-0100

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

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Accreditation/Certification Summary

Client: Shannon & Wilson, Inc
Project/Site: Kodiak DOT&PF PFAS (107471)

Job ID: 320-82154-1

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
8260C	5035	Solid	1,1-Dichloropropene
8260C	5035	Solid	1,2-Dibromo-3-Chloropropane
8260C	5035	Solid	1,3-Dichloropropane
8260C	5035	Solid	2,2-Dichloropropane
8260C	5035	Solid	2-Chlorotoluene
8260C	5035	Solid	4-Chlorotoluene
8260C	5035	Solid	Chlorobromomethane
8260C	5035	Solid	p-Isopropyltoluene
D 2216		Solid	Percent Moisture
D 2216		Solid	Percent Solids

Laboratory: Eurofins TestAmerica, Denver

The accreditations/certifications listed below are applicable to this report.

Authority	Program	Identification Number	Expiration Date
Alaska (UST)	State	18-001	02-28-22

Method Summary

Client: Shannon & Wilson, Inc
Project/Site: Kodiak DOT&PF PFAS (107471)

Job ID: 320-82154-1

Method	Method Description	Protocol	Laboratory
8260C	Volatile Organic Compounds by GC/MS	SW846	TAL SAC
8260C SIM	Volatile Organic Compounds (GC/MS)	SW846	TAL SAC
AK101	Alaska - Gasoline Range Organics (GC/MS)	ADEC	TAL SAC
8011	EDB, DBCP, and 1,2,3-TCP (GC)	SW846	TAL DEN
AK102	DRO	ADEC	TAL SAC
EPA 537(Mod)	PFAS for QSM 5.3, Table B-15	EPA	TAL SAC
D 2216	Percent Moisture	ASTM	TAL SAC
5035	Closed System Purge and Trap	SW846	TAL SAC
8011	Microextraction	SW846	TAL DEN
AK102	Alaska Extraction (Diesel Range Organic Compounds)	ADEC	TAL SAC
SHAKE	Shake Extraction with Ultrasonic Bath Extraction	SW846	TAL SAC

Protocol References:

ADEC = Alaska Department of Environmental Conservation
ASTM = ASTM International
EPA = US Environmental Protection Agency
SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

TAL DEN = Eurofins TestAmerica, Denver, 4955 Yarrow Street, Arvada, CO 80002, TEL (303)736-0100
TAL SAC = Eurofins TestAmerica, Sacramento, 880 Riverside Parkway, West Sacramento, CA 95605, TEL (916)373-5600

Sample Summary

Client: Shannon & Wilson, Inc
Project/Site: Kodiak DOT&PF PFAS (107471)

Job ID: 320-82154-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
320-82154-1	ADQ-Site35-01	Solid	11/13/21 10:02	11/23/21 16:45
320-82154-2	ADQ-Site35-02	Solid	11/13/21 10:08	11/23/21 16:45
320-82154-3	ADQ-Site35-03	Solid	11/13/21 10:19	11/23/21 16:45
320-82154-4	ADQ-Site35-04	Solid	11/13/21 10:40	11/23/21 16:45
320-82154-5	ADQ-Site35-05	Solid	11/13/21 12:23	11/23/21 16:45
320-82154-6	ADQ-Site35-06	Solid	11/13/21 12:04	11/23/21 16:45
320-82154-7	ADQ-Site35-07	Solid	11/13/21 11:50	11/23/21 16:45
320-82154-8	ADQ-Site35-08	Solid	11/13/21 12:01	11/23/21 16:45
320-82154-9	ADQ-Site35-09	Solid	11/13/21 12:37	11/23/21 16:45
320-82154-10	ADQ-Site35-10	Solid	11/13/21 12:53	11/23/21 16:45
320-82154-11	ADQ-Site35-11	Solid	11/13/21 12:28	11/23/21 16:45
320-82154-12	ADQ-Site35-12	Solid	11/13/21 11:50	11/23/21 16:45
320-82154-13	ADQ-Site35-13	Solid	11/13/21 12:57	11/23/21 16:45
320-82154-14	ADQ-Site35-113	Solid	11/13/21 13:07	11/23/21 16:45
320-82154-15	ADQ-Site35-14	Solid	11/13/21 13:10	11/23/21 16:45
320-82154-16	ADQ-Site35-15	Solid	11/13/21 12:52	11/23/21 16:45
320-82154-17	ADQ-Site35-115	Solid	11/13/21 12:42	11/23/21 16:45
320-82154-18	Trip Blank 1	Solid	11/13/21 00:00	11/23/21 16:45



CHAIN-OF-CUSTODY RECORD

Analytical Methods (include preservative if used)

PFH5 x 18 (S37M)
 GRO (AK101) (B2600)
 DPO (AK102)



320-82154 Chain of Custody

Quote No: _____

Turn Around Time:
 Normal Rush
 Please Specify _____

J-Flags: Yes No

Sample Identity	Lab No.	Date Time	Time Date	Sampled
ADQ-Site 35-01		11/13/21	1002	
ADQ-Site 35-02			1008	
ADQ-Site 35-03			1019	
ADQ-Site 35-04			1040	
ADQ-Site 35-05			1223	
ADQ-Site 35-06			1204	
ADQ-Site 35-07			1150	
ADQ-Site 35-08			1201	
ADQ-Site 35-09			1237	
ADQ-Site 35-10			1253	

Total: 3 Soil
 Composition/Grab?
 Sample Containers

Project Information

Number: 107471-001
 Name: Kodiak DOT/PPF, Site 35
 Contact: Kristen Freiburger
 Ongoing Project? Yes No
 Sampler: RLW, ZJT

Sample Receipt

Total No. of Containers: 52
 COC Seals/Intact? Y/N/NA _____
 Received Good Cond./Cold _____
 Temp: _____
 Delivery Method: Boldstreak

Notes:
 Trip blank in cooler w/ samples at
 all times

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

Relinquished By:	Relinquished By:	Relinquished By:
Signature: <u>[Signature]</u> Printed Name: <u>Rachel Willis</u> Company: <u>Shannon & Wilson, Inc.</u>	Signature: <u>[Signature]</u> Printed Name: <u>[Signature]</u> Company: <u>[Signature]</u>	Signature: _____ Printed Name: _____ Company: _____
Time: <u>1200</u> Date: <u>11/16/21</u>	Time: <u>1615</u> Date: <u>11/16/21</u>	Time: _____ Date: _____
Received By: <u>[Signature]</u>	Received By: <u>[Signature]</u>	Received By: <u>[Signature]</u>

Temp: 4.4°C, 5.0°C



CHAIN-OF-CUSTODY RECORD

Analytical Methods (include preservative if used)

PTAS x 10 (537M)					
GRO (AK10) (8260D)					
DRO (AK102)					

Quote No: _____

J-Flags: Yes No

Turn Around Time: Normal Rush

Please Specify _____

Sample Identity	Lab No.	Time	Date Sampled	Total Number of Containers	Remarks/Matrix Composition/Grab? Sample Containers
ADQ - Site 35-11		1228	11/13/21	3	Soil
ADQ - Site 35-12		1150			
ADQ - Site 35-13		1257			
ADQ - Site 35-113		1307			
ADQ - Site 35-14		1310			
ADQ - Site 35-15		1252			
ADQ - Site 35-115		1242			
Trip Blank 1				1	

Relinquished By: 1.	Relinquished By: 2.	Relinquished By: 3.
Signature: <u>[Signature]</u> Printed Name: <u>Rachel Willis</u> Date: <u>11/16/21</u> Company: <u>Shannon & Wilson, Inc.</u>	Signature: <u>[Signature]</u> Printed Name: <u>Debra Jimenez</u> Date: <u>11/18/21</u> Company: <u>ES&S</u>	Signature: _____ Printed Name: _____ Date: _____ Company: _____
Received By: 1.	Received By: 2.	Received By: 3.
Signature: _____ Printed Name: _____ Date: _____ Company: _____	Signature: _____ Printed Name: _____ Date: _____ Company: _____	Signature: _____ Printed Name: _____ Date: _____ Company: _____

Project Information

Number: See Pg 1

Name: _____

Contact: _____

Ongoing Project? Yes No

Sampler: _____

Sample Receipt

Total No. of Containers: 52

COC Seals/Intact? Y/N/NA _____

Received Good Cond./Cold _____

Temp: _____

Delivery Method: Goldstreak

Notes:

Trip blank in cooler w/ samples at all times

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

Chain of Custody Record



Client Information (Sub Contract Lab)
 Client Contact: Lab PM Alltucker, David R
 Shipping/Receiving: State of Origin: Alaska
 Company: TestAmerica Laboratories, Inc. Accreditations Required (See note): State - Alaska (UST)
 Address: 4955 Yarrow Street, City: Arvada, State: CO, Zip: 80002
 Phone: 303-736-0100(Tel) 303-431-7171(Fax)
 Email: Project Name: Kodiak DOT&PF PFAS (107471)
 Site: SOW#: 32018601

Sampler Information
 Sampler: Alltucker, David R
 Lab PM: Alltucker, David R
 State of Origin: Alaska
 E-Mail: David.Alltucker@Eurofins.com
 Tracking No: 320-250908.1
 Page: Page 1 of 2
 Job #: 320-82154-1

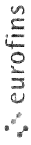
Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, B=tissue, A=air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	TCP 801/1811_Soil_Prep (MOD) EDB, DBCP, and 1,2,3-	Analysis Requested		Special Instructions/Note:
								Preservation Code:	Total Number of containers	
ADQ-Site35-01 (320-82154-1)	11/13/21	10:02 Alaskan	Solid	Solid	X	X				
ADQ-Site35-02 (320-82154-2)	11/13/21	10:08 Alaskan	Solid	Solid	X	X				
ADQ-Site35-03 (320-82154-3)	11/13/21	10:19 Alaskan	Solid	Solid	X	X				
ADQ-Site35-04 (320-82154-4)	11/13/21	10:40 Alaskan	Solid	Solid	X	X				
ADQ-Site35-05 (320-82154-5)	11/13/21	12:23 Alaskan	Solid	Solid	X	X				
ADQ-Site35-06 (320-82154-6)	11/13/21	12:04 Alaskan	Solid	Solid	X	X				
ADQ-Site35-07 (320-82154-7)	11/13/21	11:50 Alaskan	Solid	Solid	X	X				
ADQ-Site35-08 (320-82154-8)	11/13/21	12:01 Alaskan	Solid	Solid	X	X				
ADQ-Site35-09 (320-82154-9)	11/13/21	12:37 Alaskan	Solid	Solid	X	X				

Note: Since laboratory accreditations are subject to change, Eurofins TestAmerica places the ownership of method, analyte & accreditation compliance upon out subcontract laboratories. This sample shipment is forwarded under chain-of-custody. If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/test/matrix being analyzed, the samples must be shipped back to the Eurofins TestAmerica laboratory or other instructions will be provided. Any changes to accreditation status should be brought to Eurofins TestAmerica attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said compliance to Eurofins TestAmerica.

Possible Hazard Identification
 Unconfirmed
 Deliverable Requested: I, II, III, IV, Other (specify) _____
 Empty Kit Relinquished by: _____ Date: _____
 Relinquished by: _____ Date/Time: 11/16/21 10:20
 Relinquished by: _____ Date/Time: _____
 Relinquished by: _____ Date/Time: _____

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
 Return To Client Disposal By Lab Archive For _____ Months
 Special Instructions/QC Requirements: _____
 Method of Shipment: _____
 Received by: _____ Date/Time: 11/30/21 10:25
 Received by: _____ Date/Time: _____
 Received by: _____ Date/Time: _____
 Cooler Temperature(s) °C and Other Remarks: 0.3, 1.4, 12.9, CF, -0.1
 Custody Seal No.: 1086469, 1086468
 Yes No

Chain of Custody Record



Client Information (Sub Contract Lab)		Lab PM: Alltucker, David R	Carrier Tracking No(s): 320-250908.2
Client Contact: West Sacramento, CA 95605		E-Mail: David.Alltucker@Eurofinset.com	Page: Page 2 of 2
Shipping/Receiving		State of Origin: Alaska	Job #: 320-82154-1
Company: TestAmerica Laboratories, Inc.		Accreditations Required (See note): State - Alaska (UST)	
Address: 4955 Yarrow Street,		Analysis Requested	
City: Anvada	State, Zip: CO, 80002	M - Hexane N - None O - AsNaO2 P - Na2O4S Q - Na2SO3 R - Na2S2O3 S - H2SO4 G - Amchlor H - Ascorbic Acid I - Ice J - DI Water K - EDTA L - EDA Other:	
Phone: 303-736-0100(Tel) 303-431-7171(Fax)	PO #:	Preservation Codes:	
Email:	WO #:	A - HCL B - NaOH C - Zn Acetate D - Nitric Acid E - NaHSO4 F - MeOH G - Amchlor H - Ascorbic Acid I - Ice J - DI Water K - EDTA L - EDA Other:	
Project Name: Kodiak DOT&PF PFAS (107471)	Project #: 32018601	M - Hexane N - None O - AsNaO2 P - Na2O4S Q - Na2SO3 R - Na2S2O3 S - H2SO4 G - Amchlor H - Ascorbic Acid I - Ice J - DI Water K - EDTA L - EDA Other:	
Site:	SSOW#:	T - TSP Dodecahydrate V - MCAA W - pH 4.5 Z - other (specify)	
Sample Identification - Client ID (Lab ID)		Total Number of containers	
Due Date Requested: 12/8/2021	TAT Requested (days):	X	
Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=tissue, A=Alt)
11/13/21	12:53 Alaskan	X	Solid
11/13/21	12:28 Alaskan	X	Solid
11/13/21	11:50 Alaskan	X	Solid
11/13/21	12:57 Alaskan	X	Solid
11/13/21	13:07 Alaskan	X	Solid
11/13/21	13:10 Alaskan	X	Solid
11/13/21	12:52 Alaskan	X	Solid
11/13/21	12:42 Alaskan	X	Solid
11/13/21	Alaskan	X	Solid
Trip Blank 1 (320-82154-18)			
Special Instructions/Note:		Perform MS/MSD (Yes or No) <input checked="" type="checkbox"/>	
Field Filtered Sample (Yes or No) <input checked="" type="checkbox"/>		801/18011_Soil_Prep (MOD) EDB, DBCP, and 1,2,3-TCF <input checked="" type="checkbox"/>	
Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)		Return To Client <input type="checkbox"/> Disposal By Lab <input type="checkbox"/> Archive For _____ Months	
Unconfirmed		Special Instructions/QC Requirements:	
Deliverable Requested: I, II, III, IV, Other (specify)		Primary Deliverable Rank: 2	
Empty Kit Relinquished by:		Date:	
Relinquished by: <i>[Signature]</i>		Date/Time: 11/30/21 1025	
Relinquished by:		Date/Time:	
Relinquished by:		Date/Time:	
Custody Seals Intact: <input type="checkbox"/> Yes <input type="checkbox"/> No		Cooler Temperature(s) °C and Other Remarks:	

Note: Since laboratory accreditations are subject to change, Eurofins TestAmerica places the ownership of method, analyte & accreditation compliance upon out subcontract laboratories. This sample shipment is forwarded under chain-of-custody. If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/test/matrix being analyzed, the samples must be shipped back to the Eurofins TestAmerica laboratory or other instructions will be provided. Any changes to accreditation status should be brought to Eurofins TestAmerica attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said compliance to Eurofins TestAmerica.

Possible Hazard Identification

Unconfirmed

Deliverable Requested: I, II, III, IV, Other (specify)

Empty Kit Relinquished by:

Relinquished by: *[Signature]*

Relinquished by:

Relinquished by:

Custody Seals Intact: Yes No

Cooler Temperature(s) °C and Other Remarks:

Login Sample Receipt Checklist

Client: Shannon & Wilson, Inc

Job Number: 320-82154-1

Login Number: 82154

List Source: Eurofins TestAmerica, Sacramento

List Number: 1

Creator: Cahill, Nicholas P

Question	Answer	Comment
Radioactivity wasn't checked or is \leq background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	Seal/1503335/1503334
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?	False	
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 <math><6\text{mm}</math> (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Login Sample Receipt Checklist

Client: Shannon & Wilson, Inc

Job Number: 320-82154-1

Login Number: 82154

List Number: 2

Creator: Lee, Jerry

List Source: Eurofins TestAmerica, Denver

List Creation: 11/30/21 12:24 PM

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	
Sample custody seals, if present, are intact.	True	
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.	True	
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	



Laboratory Data Review Checklist

Completed By:

Reviewed by Mason Craker / Validated by Kristen Freiburger

Title:

Geologist / Associate

Date:

12/15/2021

Consultant Firm:

Shannon & Wilson, Inc.

Laboratory Name:

Eurofins Test America

Laboratory Report Number:

320-82154-1

Laboratory Report Date:

12/13/2021

CS Site Name:

Kodiak Airport Fencing Project

ADEC File Number:

Hazard Identification Number:

320-82154-1

Laboratory Report Date:

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Note: Any N/A or No box checked must have an explanation in the comments box.

1. Laboratory

a. Did an ADEC CS approved laboratory receive and perform all of the submitted sample analyses?

Yes No N/A Comments:

The Eurofins Sacramento, CA laboratory has been approved by the DEC CS program for the analysis of 32 per- and poly-fluoroalkyl substances (PFAS) by LCMSMS compliant with QSM 5.3 Table B-15.

b. If the samples were transferred to another “network” laboratory or sub-contracted to an alternate laboratory, was the laboratory performing the analyses ADEC CS approved?

Yes No N/A Comments:

2. Chain of Custody (CoC)

a. CoC information completed, signed, and dated (including released/received by)?

Yes No N/A Comments:

The CoC is missing a “received by” signature. It appears the receiver signed in the “relinquished by” section. We do not consider the project sample results to be affected.

b. Correct analyses requested?

Yes No N/A Comments:

3. Laboratory Sample Receipt Documentation

a. Sample/cooler temperature documented and within range at receipt (0° to 6° C)?

Yes No N/A Comments:

b. Sample preservation acceptable – acidified waters, Methanol preserved VOC soil (GRO, BTEX, Volatile Chlorinated Solvents, etc.)?

Yes No N/A Comments:

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c. Sample condition documented – broken, leaking (Methanol), zero headspace (VOC vials)?

Yes No N/A Comments:

The sample receipt documentation notes the samples arrived in good condition.

d. If there were any discrepancies, were they documented? For example, incorrect sample containers/preservation, sample temperature outside of acceptable range, insufficient or missing samples, etc.?

Yes No N/A Comments:

There were no sample handling or receipt discrepancies documented by the laboratory affecting the data quality or usability, with the exception of shipping delays discussed below.

e. Data quality or usability affected?

Comments:

The data quality/usability is not affected.

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4. Case Narrative

a. Present and understandable?

Yes No N/A

Comments:

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Method 8260C SIM: The following samples were delayed in shipping and the lab received with insufficient time to run within holding time. *ADQ-Site35-01* (320-82154-1), *ADQ-Site35-02* (320-82154-2), *ADQ-Site35-03* (320-82154-3), *ADQ-Site35-04* (320-82154-4), *ADQ-Site35-05* (320-82154-5), *ADQ-Site35-06* (320-82154-6), *ADQ-Site35-07* (320-82154-7), *ADQ-Site35-08* (320-82154-8), *ADQ-Site35-09* (320-82154-9), *ADQ-Site35-10* (320-82154-10), *ADQ-Site35-11* (320-82154-11), *ADQ-Site35-12* (320-82154-12), *ADQ-Site35-13* (320-82154-13), *ADQ-Site35-113* (320-82154-14), *ADQ-Site35-14* (320-82154-15), *ADQ-Site35-15* (320-82154-16), *ADQ-Site35-115* (320-82154-17) and *Trip Blank 1* (320-82154-18).

Method 8260C: The following samples were delayed in shipping and the lab received with insufficient time to run within holding time. *ADQ-Site35-01* (320-82154-1), *ADQ-Site35-02* (320-82154-2), *ADQ-Site35-03* (320-82154-3), *ADQ-Site35-04* (320-82154-4), *ADQ-Site35-05* (320-82154-5), *ADQ-Site35-06* (320-82154-6), *ADQ-Site35-07* (320-82154-7), *ADQ-Site35-08* (320-82154-8), *ADQ-Site35-09* (320-82154-9), *ADQ-Site35-10* (320-82154-10), *ADQ-Site35-11* (320-82154-11), *ADQ-Site35-12* (320-82154-12), *ADQ-Site35-13* (320-82154-13), *ADQ-Site35-113* (320-82154-14), *ADQ-Site35-14* (320-82154-15), *ADQ-Site35-15* (320-82154-16), *ADQ-Site35-115* (320-82154-17) and *Trip Blank 1* (320-82154-18).

Method 8011: The following samples were analyzed outside of analytical holding time due to received out of hold: *ADQ-Site35-01* (320-82154-1), *ADQ-Site35-02* (320-82154-2), *ADQ-Site35-03* (320-82154-3), *ADQ-Site35-04* (320-82154-4), *ADQ-Site35-05* (320-82154-5), *ADQ-Site35-06* (320-82154-6), *ADQ-Site35-07* (320-82154-7), *ADQ-Site35-08* (320-82154-8), *ADQ-Site35-09* (320-82154-9), *ADQ-Site35-10* (320-82154-10), *ADQ-Site35-11* (320-82154-11), *ADQ-Site35-12* (320-82154-12), *ADQ-Site35-13* (320-82154-13), *ADQ-Site35-113* (320-82154-14), *ADQ-Site35-14* (320-82154-15), *ADQ-Site35-15* (320-82154-16), *ADQ-Site35-115* (320-82154-17) and *Trip Blank 1* (320-82154-18).

Method AK102 & 103: Surrogate recovery for the following samples were outside control limits: *ADQ-Site35-01* (320-82154-1), *ADQ-Site35-02* (320-82154-2), *ADQ-Site35-11* (320-82154-11) and *ADQ-Site35-13* (320-82154-13). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

Method AK102 & 103: The method blank for preparation batch 320-545524 and analytical batch 320-550005 contained DRO (nC10-<nC25) above the method detection limit. This target analyte concentration was less than half the reporting limit (1/2RL); therefore, re-analysis of samples was not performed.

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b. Discrepancies, errors, or QC failures identified by the lab?

Yes No N/A Comments:

Method AK102 & 103: The Diesel Range Organics (DRO), C10-C25, concentration reported for the following samples is partially due to the presence of discrete peaks: *ADQ-Site35-04* (320-82154-4), *ADQ-Site35-08* (320-82154-8), *ADQ-Site35-14* (320-82154-15), *ADQ-Site35-15* (320-82154-16) and *ADQ-Site35-115* (320-82154-17).

Method AK102 & 103: The following samples contained a hydrocarbon pattern in the diesel range; however, the elution pattern was later than the typical diesel fuel pattern used by the laboratory for quantitative purposes: *ADQ-Site35-02* (320-82154-2), *ADQ-Site35-03* (320-82154-3), *ADQ-Site35-04* (320-82154-4), *ADQ-Site35-05* (320-82154-5), *ADQ-Site35-06* (320-82154-6), *ADQ-Site35-07* (320-82154-7), *ADQ-Site35-09* (320-82154-9), *ADQ-Site35-10* (320-82154-10), *ADQ-Site35-11* (320-82154-11), *ADQ-Site35-12* (320-82154-12) and *ADQ-Site35-113* (320-82154-14).

Method 8011: MB, LCS, LCSD were prepared as SOP states due to the provided blank not having enough volume for all three QC. *ADQ-Site35-01* (320-82154-1), *ADQ-Site35-02* (320-82154-2), *ADQ-Site35-03* (320-82154-3), *ADQ-Site35-04* (320-82154-4), *ADQ-Site35-05* (320-82154-5), *ADQ-Site35-06* (320-82154-6), *ADQ-Site35-07* (320-82154-7), *ADQ-Site35-08* (320-82154-8), *ADQ-Site35-09* (320-82154-9), *ADQ-Site35-10* (320-82154-10), *ADQ-Site35-11* (320-82154-11), *ADQ-Site35-12* (320-82154-12), *ADQ-Site35-13* (320-82154-13), *ADQ-Site35-113* (320-82154-14), *ADQ-Site35-14* (320-82154-15), *ADQ-Site35-15* (320-82154-16), *ADQ-Site35-115* (320-82154-17) and *Trip Blank 1* (320-82154-18)

Method EPA 537(Mod): Isotope Dilution Analyte (IDA) recovery is above the method recommended limit for the following samples: *ADQ-Site35-09* (320-82154-9), *ADQ-Site35-11* (320-82154-11), *ADQ-Site35-115* (320-82154-17) and (320-82154-A-17-C MSD). Quantitation by isotope dilution generally precludes any adverse effect on data quality due to elevated IDA recoveries.

Method EPA 537(Mod): The "I" qualifier means the transition mass ratio for the indicated analyte was below the established ratio limits. The qualitative identification of the analyte has some degree of uncertainty. However, analyst judgment was used to positively identify the analyte.

Method EPA 537(Mod): Results for sample *ADQ-Site35-13* (320-82154-13) were reported from the analysis of a diluted extract due to high concentration of the target analyte in the analysis of the undiluted extract. The dilution factor was applied to the labeled internal standard area counts and these area counts were within acceptance limits.

Method SHAKE: The following samples were yellow after extraction/final volume: *ADQ-Site35-07* (320-82154-7) and *ADQ-Site35-11* (320-82154-11). preparation batch 320-545891

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c. Were all corrective actions documented?

Yes No N/A Comments:

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Method 8260C: Internal standard (ISTD) response for TBA-d9 for the following samples in analytical batch 320-547871 was outside acceptance criteria: *ADQ-Site35-02* (320-82154-2), *ADQ-Site35-03* (320-82154-3), *ADQ-Site35-04* (320-82154-4), *ADQ-Site35-05* (320-82154-5), *ADQ-Site35-08* (320-82154-8), *ADQ-Site35-09* (320-82154-9), *ADQ-Site35-10* (320-82154-10), *ADQ-Site35-11* (320-82154-11), *ADQ-Site35-12* (320-82154-12), *ADQ-Site35-13* (320-82154-13), *ADQ-Site35-113* (320-82154-14), *ADQ-Site35-14* (320-82154-15), *ADQ-Site35-15* (320-82154-16), *ADQ-Site35-115* (320-82154-17), *Trip Blank 1* (320-82154-18), (LCS 320-545528/2-A), (LCSD 320-545528/3-A) and (MB 320-545528/1-A). This ISTD does not correspond to any of the requested target compounds reported from this analytical batch; therefore, the data have been reported.

Method AK101: Surrogate recovery for the following sample was outside control limits: *ADQ-Site35-01* (320-82154-1). Re-extraction and/or re-analysis was performed and surrogate recovery was outside control limits.

Method AK102 & 103: The following samples were diluted due to the abundance of non-target analytes: *ADQ-Site35-11* (320-82154-11) and *ADQ-Site35-12* (320-82154-12). Elevated reporting limits (RLs) are provided.

Method AK102 & 103: The following sample was diluted due to the abundance of non-target analytes: *ADQ-Site35-07* (320-82154-7). As such, surrogate recoveries are below the calibration range or are not reported, and elevated reporting limits (RLs) are provided.

Method 8011: The %RPD between the primary and confirmation column / detector exceeded 40% for Ethylene Dibromide for the following sample: *ADQ-Site35-13* (320-82154-13). The lower value has been reported and qualified in accordance with the laboratory's SOP.

Method 8011: The %RPD between the primary and confirmation column / detector exceeded 40% for 1,2,3-Trichloropropane for the following sample: *ADQ-Site35-07* (320-82154-7). The lower value has been reported and qualified in accordance with the laboratory's SOP.

Method 8011: Insufficient sample volume was available to perform a matrix spike/matrix spike duplicate (MS/MSD) associated with preparation batch 280-559547. LCSD was run to ensure lab precision.

Method 8011: The samples provided were 5 mL of methanol. This method normally uses 10g of soil as the sample volume. As TSO instructed the 5 mL of sample were spiked with the normal spikes of surrogate and then 2 mL of hexane were added to the sample vial followed by 15 mL of reagent water. This volume was then placed on the auto shaker for 2 minutes. Most of the samples had bad emulsions and were then put into the centrifuge for 5 minutes. This allowed the hexane to raise to the top of the sample. The hexane was then extracted as normal. The resulting data will be qualified.

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ADQ-Site35-01 (320-82154-1), *ADQ-Site35-02* (320-82154-2), *ADQ-Site35-03* (320-82154-3), *ADQ-Site35-04* (320-82154-4), *ADQ-Site35-05* (320-82154-5), *ADQ-Site35-06* (320-82154-6), *ADQ-Site35-07* (320-82154-7), *ADQ-Site35-08* (320-82154-8), *ADQ-Site35-09* (320-82154-9), *ADQ-Site35-10* (320-82154-10), *ADQ-Site35-11* (320-82154-11), *ADQ-Site35-12* (320-82154-12), *ADQ-Site35-13* (320-82154-13), *ADQ-Site35-113* (320-82154-14), *ADQ-Site35-14* (320-82154-15), *ADQ-Site35-15* (320-82154-16), *ADQ-Site35-115* (320-82154-17) and *Trip Blank 1* (320-82154-18).

d. What is the effect on data quality/usability according to the case narrative?

Comments:

Analytes assigned the ‘I’ qualifier by the laboratory are affected by transition mass ratio failures and quantified manually by the analyst. The case narrative states that these results may have some degree of uncertainty. We consider the results to be estimated, flagged with a “J” in the analytical database.

Method AK102 and 103 have elevated RL for samples *ADQ-Site35-11*, *ADQ-Site35-12*, and *ADQ-Site35-07*.

Please see the following sections for our assessment of the data quality associated with the failures listed above.

5. Samples Results

a. Correct analyses performed/reported as requested on COC?

Yes No N/A Comments:

b. All applicable holding times met?

Yes No N/A Comments:

The samples analyzed by Method 8011, Method 8260, and Method 8260C were collected and prepared outside of the laboratory holding time due to shipping delays. The samples were analyzed within two times the holding time, therefore results are considered estimated, flagged “JL” (detected) and “UJ” (non-detect).

c. All soils reported on a dry weight basis?

Yes No N/A Comments:

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d. Are the reported LOQs less than the Cleanup Level or the minimum required detection level for the project?

Yes No N/A Comments:

e. Data quality or usability affected?

The quality of the data is affected due to hold time failures (see above). The results are considered usable with the applied qualifiers listed above.

6. QC Samples

a. Method Blank

i. One method blank reported per matrix, analysis and 20 samples?

Yes No N/A Comments:

ii. All method blank results less than limit of quantitation (LOQ) or project specified objectives?

Yes No N/A Comments:

However, DRO were detected at 0.792 J mg/kg in the method blank associated with preparatory batch 545524. This batch number is associated with each of the DRO samples reported in this work order.

iii. If above LOQ or project specified objectives, what samples are affected?

Comments:

Samples with concentrations detected within 10 times of the MB concentration. Many of the samples in this work order were affected, see below.

DRO were detected above 10 times the MB concentration in samples *ADQ-Site35-05*, *ADQ-Site35-07*, and *ADQ-Site35-12*; these results are not affected by the MB detection.

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CS Site Name:

Kodiak Airport Fencing Project

iv. Do the affected sample(s) have data flags? If so, are the data flags clearly defined?

Yes No N/A Comments:

Results within 5 times the MB concentration are considered not detected, flagged “UB” at the reporting limit (RL) or detected concentration, whichever is greater.

The following DRO results are flagged “UB” at the RL.

- *ADQ-Site35-01*
- *ADQ-Site35-04*
- *ADQ-Site35-09*
- *ADQ-Site35-10*
- *ADQ-Site35-15*
- *ADQ-Site35-115*

The following DRO results are flagged “UB” at the detected concentration.

- *ADQ-Site35-02*
- *ADQ-Site35-03*
- *ADQ-Site35-06*
- *ADQ-Site35-08*
- *ADQ-Site35-14*

Results within 10 times the MB concentration are considered estimated, biased high, flagged with a “JH” in the analytical table.

The following results are flagged “JH” at the detected concentration.

- *ADQ-Site35-11*
- *ADQ-Site35-13*
- *ADQ-Site35-113*

v. Data quality or usability affected?

Comments:

The data quality is affected; see above. The data are considered usable with the applied qualifiers listed above.

320-82154-1

Laboratory Report Date:

12/13/2021

CS Site Name:

Kodiak Airport Fencing Project

b. Laboratory Control Sample/Duplicate (LCS/LCSD)

- i. Organics – One LCS/LCSD reported per matrix, analysis and 20 samples? (LCS/LCSD required per AK methods, LCS required per SW846)

Yes No N/A Comments:

An LCS/LCSD was reported for Method 8260C (VOC), Method 8260C SIM (VOC-SIM), Method AK101 (GRO), Method 8011 (EDB, DBCP, and 1,2,3-TCP), and Method AK102 (DRO).

An LCS was reported for method EPA 537M (PFAS) for preparation batch 545891.

- ii. Metals/Inorganics – one LCS and one sample duplicate reported per matrix, analysis and 20 samples?

Yes No N/A Comments:

Metals/Inorganics analyses were not requested for this work order.

- iii. Accuracy – All percent recoveries (%R) reported and within method or laboratory limits and project specified objectives, if applicable? (AK Petroleum methods: AK101 60%-120%, AK102 75%-125%, AK103 60%-120%; all other analyses see the laboratory QC pages)

Yes No N/A Comments:

- iv. Precision – All relative percent differences (RPD) reported and less than method or laboratory limits and project specified objectives, if applicable? RPD reported from LCS/LCSD, and or sample/sample duplicate. (AK Petroleum methods 20%; all other analyses see the laboratory QC pages)

Yes No N/A Comments:

- v. If %R or RPD is outside of acceptable limits, what samples are affected?

Comments:

No samples are affected. Method accuracy and, where applicable, precision were demonstrated to be within acceptable limits.

- vi. Do the affected sample(s) have data flags? If so, are the data flags clearly defined?

Yes No N/A Comments:

Qualification was not required; see above.

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Laboratory Report Date:

12/13/2021

CS Site Name:

Kodiak Airport Fencing Project

vii. Data quality or usability affected? (Use comment box to explain.)

Comments:

The data quality/usability is not affected.

c. Matrix Spike/Matrix Spike Duplicate (MS/MSD)

Note: Leave blank if not required for project

i. Organics – One MS/MSD reported per matrix, analysis and 20 samples?

Yes No N/A Comments:

MS and MSD samples were reported for Method AK102 (DRO) associated with preparation batch 545524 and Method EPA 537M (PFAS) associated with preparation batch 545891.

ii. Metals/Inorganics – one MS and one MSD reported per matrix, analysis and 20 samples?

Yes No N/A Comments:

Metals/Inorganics analyses were not requested for this work order.

iii. Accuracy – All percent recoveries (%R) reported and within method or laboratory limits and project specified objectives, if applicable?

Yes No N/A Comments:

However, we note the IDA d5-NEtFOSAA was recovered above QC limits. The associated analyte NEtFOSAA was reported within limits for the MS and MSD and the project sample results are not affected.

iv. Precision – All relative percent differences (RPD) reported and less than method or laboratory limits and project specified objectives, if applicable? RPD reported from MS/MSD, and or sample/sample duplicate.

Yes No N/A Comments:

v. If %R or RPD is outside of acceptable limits, what samples are affected?

Comments:

None; see above.

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12/13/2021

CS Site Name:

Kodiak Airport Fencing Project

vi. Do the affected sample(s) have data flags? If so, are the data flags clearly defined?

Yes No N/A Comments:

Qualification was not required; see above.

vii. Data quality or usability affected? (Use comment box to explain.)

Comments:

The data quality/usability is not affected.

d. Surrogates – Organics Only or Isotope Dilution Analytes (IDA) – Isotope Dilution Methods Only

i. Are surrogate/IDA recoveries reported for organic analyses – field, QC and laboratory samples?

Yes No N/A Comments:

ii. Accuracy – All percent recoveries (%R) reported and within method or laboratory limits and project specified objectives, if applicable? (AK Petroleum methods 50-150 %R for field samples and 60-120 %R for QC samples; all other analyses see the laboratory report pages)

Yes No N/A Comments:

Sample *ADQ-Site35-01* exhibited low surrogate recovery for trifluorotoluene (GRO surrogate).

Samples *ADQ-Site35-01*, *ADQ-Site35-02*, *ADQ-Site35-11*, and *ADQ-Site35-13* exhibited low IDA recoveries for o-terphenyl (DRO surrogate).

Sample *ADQ-Site35-06* exhibited high surrogate recovery for 1,2-dibromopropane (8011 surrogate).

Sample *ADQ-Site35-07* exhibited high surrogate recovery for n-triacontane-d62 (DRO surrogate).

Samples *ADQ-Site35-09*, *ADQ-Site35-11*, and *ADQ-Site35-115* exhibited high IDA recoveries for d5-NEtFOSAA.

Sample *ADQ-Site35-11* exhibited high IDA recoveries for 12C3 PFBS and d3-NMeFOSAA.

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Kodiak Airport Fencing Project

iii. Do the sample results with failed surrogate/IDA recoveries have data flags? If so, are the data flags clearly defined?

Yes No N/A Comments:

The non-detect GRO result for the sample listed below is considered estimated and flagged "UJ" for reporting purposes.

- GRO: *ADQ-Site35-01*

The following samples have already been flagged "UB" due to a DRO method blank detection; no further flagging has been applied for the below limit recovery of o-terphenyl.

- DRO: *ADQ-Site35-01* and *ADQ-Site35-02*

The following samples have been flagged as biased high due to a method blank detection. They are also considered biased low due to surrogate recovery. Therefore, we consider the DRO results for the following samples to be estimated, flagged "J" in the associated data table.

- DRO: *ADQ-Site35-11* and *ADQ-Site35-13*

The 8011 sample results associated with *ADQ-Site35-06* were non-detect and therefore not affected by the above limit surrogate recovery. No flags are required.

The DRO result for the following sample is considered biased high, flagged with a "JH" due to the above limit surrogate recovery.

- DRO: *ADQ-Site35-07*

The following samples and analytes are affected by the IDA recovery failure. Results are considered estimated, flagged with a "UJ" (non-detect) in the analytical data table.

- NEtFOSAA: *ADQ-Site35-09*, *ADQ-Site35-11*, and *ADQ-Site35-115*
- NMeFOSAA and PFBS: *ADQ-Site-Site35-11*

iv. Data quality or usability affected?

Comments:

The data quality is affected, as described above. The data are usable with the applied qualifiers listed above.

320-82154-1

Laboratory Report Date:

12/13/2021

CS Site Name:

Kodiak Airport Fencing Project

e. Trip Blanks

- i. One trip blank reported per matrix, analysis and for each cooler containing volatile samples?
(If not, enter explanation below.)

Yes No N/A Comments:

- ii. Is the cooler used to transport the trip blank and VOA samples clearly indicated on the COC?
(If not, a comment explaining why must be entered below)

Yes No N/A Comments:

- iii. All results less than LOQ and project specified objectives?

Yes No N/A Comments:

However, toluene was detected at an estimate concentration below the RL at 4.9 J $\mu\text{g}/\text{kg}$.

- iv. If above LOQ or project specified objectives, what samples are affected?

Comments:

Each project sample is associated with the trip blank. Toluene results within 5 times the TB concentration are considered not detected, reported as "UB" at the RL.

- *ADQ-Site35-05*
- *ADQ-Site35-09*
- *ADQ-Site35-10*
- *ADQ-Site35-11*
- *ADQ-Site35-12*
- *ADQ-Site35-113*
- *ADQ-Site35-14*
- *ADQ-Site35-15*

- v. Data quality or usability affected?

Comments:

The data quality is affected, as noted above. The data is usable with the applied qualifiers.

320-82154-1

Laboratory Report Date:

12/13/2021

CS Site Name:

Kodiak Airport Fencing Project

f. Field Duplicate

i. One field duplicate submitted per matrix, analysis and 10 project samples?

Yes No N/A Comments:

ii. Submitted blind to lab?

Yes No N/A Comments:

The field duplicate sample pairs *ADQ-Site35-13 / ADQ-Site35-113* and *ADQ-Site35-15 / ADQ-Site35-115* were submitted with this work order.

iii. Precision – All relative percent differences (RPD) less than specified project objectives?
(Recommended: 30% water, 50% soil)

$$\text{RPD (\%)} = \text{Absolute value of: } \frac{(R_1 - R_2)}{((R_1 + R_2)/2)} \times 100$$

Where R_1 = Sample Concentration
 R_2 = Field Duplicate Concentration

Yes No N/A Comments:

RPDs were below the DQO of 50% with the following exceptions. These results are considered estimated. These results have been flagged for hold time exceedance and no further flagging has been applied.

ADQ-Site35-13 / ADQ-Site35-113

- 1,2,4-trimethylbenzene
- m-xylene & p-xylene
- naphthalene
- toluene
- ethylene dibromide

ADQ-Site35-15 / ADQ-Site35-115

- RPDs within limits.

iv. Data quality or usability affected? (Use the comment box to explain why or why not.)

Comments:

The data quality is affected; see above. The data is considered usable with the applied qualifiers listed above.

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Laboratory Report Date:

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CS Site Name:

Kodiak Airport Fencing Project

g. Decontamination or Equipment Blank (If not applicable, a comment stating why must be entered below)?

Yes No N/A Comments:

N/A, soil sampling is done with one-time use equipment.

i. All results less than LOQ and project specified objectives?

Yes No N/A Comments:

ii. If above LOQ or project specified objectives, what samples are affected?

Comments:

N/A see above.

iii. Data quality or usability affected?

Comments:

The data quality/usability is not affected.

7. Other Data Flags/Qualifiers (ACOE, AFCEE, Lab Specific, etc.)

a. Defined and appropriate?

Yes No N/A Comments:

WORK ORDER 320-82155-1 AND LDRC

APPENDIX B: LAB REPORTS AND LDRCS

ANALYTICAL REPORT

Eurofins TestAmerica, Sacramento
880 Riverside Parkway
West Sacramento, CA 95605
Tel: (916)373-5600

Laboratory Job ID: 320-82155-1
Client Project/Site: Kodiak DOT&PF PFAS (107471)

For:
Shannon & Wilson, Inc
2355 Hill Rd.
Fairbanks, Alaska 99709-5244

Attn: Kristen Freiburger



Authorized for release by:
12/8/2021 8:38:02 AM

David Alltucker, Project Manager I
(916)374-4383
David.Alltucker@Eurofinset.com

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The test results in this report meet all 2003 NELAC, 2009 TNI, and 2016 TNI requirements for accredited parameters, exceptions are noted in this report. This report may not be reproduced except in full, and with written approval from the laboratory. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

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: Kodiak DOT&PF PFAS (107471)

Job ID: 320-82155-1

Qualifiers

LCMS

Qualifier	Qualifier Description
*5-	Isotope dilution analyte is outside acceptance limits, low biased.
F1	MS and/or MSD recovery exceeds control limits.
I	Value is EMPC (estimated maximum possible concentration).
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

General Chemistry

Qualifier	Qualifier Description
H	Sample was prepped or analyzed beyond the specified holding time

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: Kodiak DOT&PF PFAS (107471)

Job ID: 320-82155-1

Job ID: 320-82155-1

Laboratory: Eurofins TestAmerica, Sacramento

Narrative

Job Narrative 320-82155-1

Receipt

The samples were received on 11/23/2021 4:45 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 5.4° C.

LCMS

Method EPA 537(Mod): The Isotope Dilution Analyte (IDA) recovery associated with the following samples is below the method recommended limit: ADQ-AC3-05 (320-82155-4), ADQ-AC3-02 (320-82155-8), ADQ-AC3-01 (320-82155-9), ADQ-AC7-101 (320-82155-11) and ADQ-AC7-02 (320-82155-12). Generally, data quality is not considered affected if the IDA signal-to-noise ratio is greater than 10:1, which is achieved for all IDA in the samples.

Method EPA 537(Mod): The "I" qualifier means the transition mass ratio for the indicated analyte was below the established ratio limits. The qualitative identification of the analyte has some degree of uncertainty. However, analyst judgment was used to positively identify the analyte.

Method EPA 537(Mod): The matrix spike duplicate (MSD) recovery for Perfluorooctanesulfonic acid (PFOS) preparation batch 320-545562 and analytical batch 320-546590 was outside control limits. Sample matrix interference is suspected because the associated laboratory control sample (LCS) recovery was within acceptance limits.

Method EPA 537(Mod): Results for sample ADQ-AC11-01 (320-82155-16) was reported from the analysis of a diluted extract due to high concentration of the target analyte in the analysis of the undiluted extract. The dilution factor was applied to the labeled internal standard area counts and these area counts were within acceptance limits.

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

General Chemistry

Method Moisture: The reference method does not list a specific holding time for this procedure; therefore, the laboratory defaults to an in-house holding time of 14 days. The following samples in analytical batch 320-546536 were prepared and/or analyzed outside this time period: ADQ-AC3-06 (320-82155-1), ADQ-AC3-07 (320-82155-2), ADQ-AC3-107 (320-82155-3), ADQ-AC3-05 (320-82155-4), ADQ-AC3-04 (320-82155-5), ADQ-AC3-03 (320-82155-6), ADQ-AC3-02 (320-82155-8), ADQ-AC3-01 (320-82155-9), ADQ-AC7-01 (320-82155-10), ADQ-AC7-101 (320-82155-11), ADQ-AC7-02 (320-82155-12), ADQ-AC6-01 (320-82155-13), ADQ-AC6-02 (320-82155-14), ADQ-AC11-01 (320-82155-16) and ADQ-AC11-02 (320-82155-17).

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

Organic Prep

Method 3535: The following samples were received in a plastic 4 oz soils jar: ADQ-AC3-03-EB1 (320-82155-7) and ADQ-AC6-EB2 (320-82155-15).
preparation batch 320-545634

Method 3535: Insufficient sample volume was available to perform a matrix spike/matrix spike duplicate (MS/MSD) associated with preparation batch 320-545634.

Method 3535: Elevated reporting limits are provided for the following samples due to insufficient sample provided for preparation: ADQ-AC3-03-EB1 (320-82155-7) and ADQ-AC6-EB2 (320-82155-15).

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: Kodiak DOT&PF PFAS (107471)

Job ID: 320-82155-1

Client Sample ID: ADQ-AC3-06

Lab Sample ID: 320-82155-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Perfluorooctanesulfonic acid (PFOS)	0.15	J	0.21	0.046	ug/Kg	1	☼	EPA 537(Mod)	Total/NA

Client Sample ID: ADQ-AC3-07

Lab Sample ID: 320-82155-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Perfluorooctanesulfonic acid (PFOS)	0.052	J	0.20	0.043	ug/Kg	1	☼	EPA 537(Mod)	Total/NA

Client Sample ID: ADQ-AC3-107

Lab Sample ID: 320-82155-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Perfluorooctanesulfonic acid (PFOS)	0.048	J	0.22	0.047	ug/Kg	1	☼	EPA 537(Mod)	Total/NA

Client Sample ID: ADQ-AC3-05

Lab Sample ID: 320-82155-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Perfluorooctanesulfonic acid (PFOS)	0.11	J	0.21	0.045	ug/Kg	1	☼	EPA 537(Mod)	Total/NA

Client Sample ID: ADQ-AC3-04

Lab Sample ID: 320-82155-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Perfluorooctanesulfonic acid (PFOS)	0.058	J I	0.21	0.046	ug/Kg	1	☼	EPA 537(Mod)	Total/NA

Client Sample ID: ADQ-AC3-03

Lab Sample ID: 320-82155-6

No Detections.

Client Sample ID: ADQ-AC3-03-EB1

Lab Sample ID: 320-82155-7

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Perfluorobutanesulfonic acid (PFBS)	0.33	J	3.3	0.33	ng/L	1		EPA 537(Mod)	Total/NA

Client Sample ID: ADQ-AC3-02

Lab Sample ID: 320-82155-8

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Perfluorohexanoic acid (PFHxA)	0.061	J	0.21	0.033	ug/Kg	1	☼	EPA 537(Mod)	Total/NA
Perfluorononanoic acid (PFNA)	0.046	J	0.21	0.023	ug/Kg	1	☼	EPA 537(Mod)	Total/NA
Perfluorodecanoic acid (PFDA)	0.055	J	0.21	0.051	ug/Kg	1	☼	EPA 537(Mod)	Total/NA
Perfluorododecanoic acid (PFDoA)	0.053	J	0.21	0.032	ug/Kg	1	☼	EPA 537(Mod)	Total/NA
Perfluorotridecanoic acid (PFTTrDA)	0.049	J	0.21	0.022	ug/Kg	1	☼	EPA 537(Mod)	Total/NA
Perfluorotetradecanoic acid (PFTeA)	0.051	J	0.21	0.039	ug/Kg	1	☼	EPA 537(Mod)	Total/NA
Perfluorohexanesulfonic acid (PFHxS)	0.12	J	0.21	0.031	ug/Kg	1	☼	EPA 537(Mod)	Total/NA
Perfluorooctanesulfonic acid (PFOS)	0.36		0.21	0.046	ug/Kg	1	☼	EPA 537(Mod)	Total/NA
NMeFOSAA	0.051	J	0.21	0.024	ug/Kg	1	☼	EPA 537(Mod)	Total/NA
9CI-PF3ONS	0.037	J	0.21	0.037	ug/Kg	1	☼	EPA 537(Mod)	Total/NA
11CI-PF3OUdS	0.042	J	0.21	0.033	ug/Kg	1	☼	EPA 537(Mod)	Total/NA
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	0.050	J	0.21	0.042	ug/Kg	1	☼	EPA 537(Mod)	Total/NA

Client Sample ID: ADQ-AC3-01

Lab Sample ID: 320-82155-9

No Detections.

Client Sample ID: ADQ-AC7-01

Lab Sample ID: 320-82155-10

No Detections.

This Detection Summary does not include radiochemical test results.

Eurofins TestAmerica, Sacramento

Detection Summary

Client: Shannon & Wilson, Inc
Project/Site: Kodiak DOT&PF PFAS (107471)

Job ID: 320-82155-1

Client Sample ID: ADQ-AC7-01

Lab Sample ID: 320-82155-11

No Detections.

Client Sample ID: ADQ-AC7-02

Lab Sample ID: 320-82155-12

No Detections.

Client Sample ID: ADQ-AC6-01

Lab Sample ID: 320-82155-13

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Perfluorooctanesulfonic acid (PFOS)	0.10	J	0.19	0.041	ug/Kg	1	✳	EPA 537(Mod)	Total/NA

Client Sample ID: ADQ-AC6-02

Lab Sample ID: 320-82155-14

No Detections.

Client Sample ID: ADQ-AC6-EB2

Lab Sample ID: 320-82155-15

No Detections.

Client Sample ID: ADQ-AC11-01

Lab Sample ID: 320-82155-16

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Perfluorohexanoic acid (PFHxA)	0.54		0.20	0.031	ug/Kg	1	✳	EPA 537(Mod)	Total/NA
Perfluoroheptanoic acid (PFHpA)	0.18	J	0.20	0.038	ug/Kg	1	✳	EPA 537(Mod)	Total/NA
Perfluorooctanoic acid (PFOA)	0.40		0.20	0.052	ug/Kg	1	✳	EPA 537(Mod)	Total/NA
Perfluorononanoic acid (PFNA)	0.055	J	0.20	0.022	ug/Kg	1	✳	EPA 537(Mod)	Total/NA
Perfluorobutanesulfonic acid (PFBS)	0.20		0.20	0.038	ug/Kg	1	✳	EPA 537(Mod)	Total/NA
Perfluorohexanesulfonic acid (PFHxS)	3.7		0.20	0.029	ug/Kg	1	✳	EPA 537(Mod)	Total/NA
NMeFOSAA	0.058	J	0.20	0.023	ug/Kg	1	✳	EPA 537(Mod)	Total/NA
Perfluorooctanesulfonic acid (PFOS) - DL	26		0.99	0.21	ug/Kg	5	✳	EPA 537(Mod)	Total/NA

Client Sample ID: ADQ-AC11-02

Lab Sample ID: 320-82155-17

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Perfluorohexanoic acid (PFHxA)	0.067	J	0.22	0.033	ug/Kg	1	✳	EPA 537(Mod)	Total/NA
Perfluorohexanesulfonic acid (PFHxS)	0.41		0.22	0.031	ug/Kg	1	✳	EPA 537(Mod)	Total/NA
Perfluorooctanesulfonic acid (PFOS)	5.0	F1	0.22	0.046	ug/Kg	1	✳	EPA 537(Mod)	Total/NA

This Detection Summary does not include radiochemical test results.

Eurofins TestAmerica, Sacramento

Client Sample Results

Client: Shannon & Wilson, Inc
 Project/Site: Kodiak DOT&PF PFAS (107471)

Job ID: 320-82155-1

Client Sample ID: ADQ-AC3-06

Lab Sample ID: 320-82155-1

Date Collected: 11/13/21 16:01

Matrix: Solid

Date Received: 11/23/21 16:45

Percent Solids: 92.7

Method: EPA 537(Mod) - PFAS for QSM 5.3, Table B-15

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorohexanoic acid (PFHxA)	ND		0.21	0.033	ug/Kg	✱	11/24/21 11:07	11/29/21 01:28	1
Perfluoroheptanoic acid (PFHpA)	ND		0.21	0.041	ug/Kg	✱	11/24/21 11:07	11/29/21 01:28	1
Perfluorooctanoic acid (PFOA)	ND		0.21	0.057	ug/Kg	✱	11/24/21 11:07	11/29/21 01:28	1
Perfluorononanoic acid (PFNA)	ND		0.21	0.024	ug/Kg	✱	11/24/21 11:07	11/29/21 01:28	1
Perfluorodecanoic acid (PFDA)	ND		0.21	0.051	ug/Kg	✱	11/24/21 11:07	11/29/21 01:28	1
Perfluoroundecanoic acid (PFUnA)	ND		0.21	0.045	ug/Kg	✱	11/24/21 11:07	11/29/21 01:28	1
Perfluorododecanoic acid (PFDoA)	ND		0.21	0.032	ug/Kg	✱	11/24/21 11:07	11/29/21 01:28	1
Perfluorotridecanoic acid (PFTTrDA)	ND		0.21	0.022	ug/Kg	✱	11/24/21 11:07	11/29/21 01:28	1
Perfluorotetradecanoic acid (PFTTeA)	ND		0.21	0.040	ug/Kg	✱	11/24/21 11:07	11/29/21 01:28	1
Perfluorobutanesulfonic acid (PFBS)	ND		0.21	0.041	ug/Kg	✱	11/24/21 11:07	11/29/21 01:28	1
Perfluorohexanesulfonic acid (PFHxS)	ND		0.21	0.031	ug/Kg	✱	11/24/21 11:07	11/29/21 01:28	1
Perfluorooctanesulfonic acid (PFOS)	0.15	J	0.21	0.046	ug/Kg	✱	11/24/21 11:07	11/29/21 01:28	1
NEtFOSAA	ND		0.21	0.051	ug/Kg	✱	11/24/21 11:07	11/29/21 01:28	1
NMeFOSAA	ND		0.21	0.025	ug/Kg	✱	11/24/21 11:07	11/29/21 01:28	1
HFPO-DA (GenX)	ND		0.21	0.044	ug/Kg	✱	11/24/21 11:07	11/29/21 01:28	1
9CI-PF3ONS	ND		0.21	0.037	ug/Kg	✱	11/24/21 11:07	11/29/21 01:28	1
11CI-PF3OUdS	ND		0.21	0.033	ug/Kg	✱	11/24/21 11:07	11/29/21 01:28	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	ND		0.21	0.042	ug/Kg	✱	11/24/21 11:07	11/29/21 01:28	1

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C2 PFHxA	78		50 - 150	11/24/21 11:07	11/29/21 01:28	1
13C4 PFHpA	83		50 - 150	11/24/21 11:07	11/29/21 01:28	1
13C4 PFOA	91		50 - 150	11/24/21 11:07	11/29/21 01:28	1
13C5 PFNA	85		50 - 150	11/24/21 11:07	11/29/21 01:28	1
13C2 PFDA	78		50 - 150	11/24/21 11:07	11/29/21 01:28	1
13C2 PFUnA	80		50 - 150	11/24/21 11:07	11/29/21 01:28	1
13C2 PFDoA	76		50 - 150	11/24/21 11:07	11/29/21 01:28	1
13C2 PFTTeDA	77		50 - 150	11/24/21 11:07	11/29/21 01:28	1
13C3 PFBS	68		50 - 150	11/24/21 11:07	11/29/21 01:28	1
18O2 PFHxS	60		50 - 150	11/24/21 11:07	11/29/21 01:28	1
13C4 PFOS	57		50 - 150	11/24/21 11:07	11/29/21 01:28	1
d3-NMeFOSAA	85		50 - 150	11/24/21 11:07	11/29/21 01:28	1
d5-NEtFOSAA	86		50 - 150	11/24/21 11:07	11/29/21 01:28	1
13C3 HFPO-DA	79		50 - 150	11/24/21 11:07	11/29/21 01:28	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	7.3	H	0.1	0.1	%			11/29/21 14:01	1
Percent Solids	92.7	H	0.1	0.1	%			11/29/21 14:01	1

Client Sample ID: ADQ-AC3-07

Lab Sample ID: 320-82155-2

Date Collected: 11/13/21 16:20

Matrix: Solid

Date Received: 11/23/21 16:45

Percent Solids: 91.8

Method: EPA 537(Mod) - PFAS for QSM 5.3, Table B-15

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorohexanoic acid (PFHxA)	ND		0.20	0.031	ug/Kg	✱	11/24/21 11:07	11/29/21 01:39	1
Perfluoroheptanoic acid (PFHpA)	ND		0.20	0.038	ug/Kg	✱	11/24/21 11:07	11/29/21 01:39	1
Perfluorooctanoic acid (PFOA)	ND		0.20	0.053	ug/Kg	✱	11/24/21 11:07	11/29/21 01:39	1

Eurofins TestAmerica, Sacramento

Client Sample Results

Client: Shannon & Wilson, Inc
 Project/Site: Kodiak DOT&PF PFAS (107471)

Job ID: 320-82155-1

Client Sample ID: ADQ-AC3-07

Lab Sample ID: 320-82155-2

Date Collected: 11/13/21 16:20

Matrix: Solid

Date Received: 11/23/21 16:45

Percent Solids: 91.8

Method: EPA 537(Mod) - PFAS for QSM 5.3, Table B-15 (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorononanoic acid (PFNA)	ND		0.20	0.022	ug/Kg	☼	11/24/21 11:07	11/29/21 01:39	1
Perfluorodecanoic acid (PFDA)	ND		0.20	0.048	ug/Kg	☼	11/24/21 11:07	11/29/21 01:39	1
Perfluoroundecanoic acid (PFUnA)	ND		0.20	0.042	ug/Kg	☼	11/24/21 11:07	11/29/21 01:39	1
Perfluorododecanoic acid (PFDoA)	ND		0.20	0.030	ug/Kg	☼	11/24/21 11:07	11/29/21 01:39	1
Perfluorotridecanoic acid (PFTrDA)	ND		0.20	0.021	ug/Kg	☼	11/24/21 11:07	11/29/21 01:39	1
Perfluorotetradecanoic acid (PFTeA)	ND		0.20	0.037	ug/Kg	☼	11/24/21 11:07	11/29/21 01:39	1
Perfluorobutanesulfonic acid (PFBS)	ND		0.20	0.038	ug/Kg	☼	11/24/21 11:07	11/29/21 01:39	1
Perfluorohexanesulfonic acid (PFHxS)	ND		0.20	0.029	ug/Kg	☼	11/24/21 11:07	11/29/21 01:39	1
Perfluorooctanesulfonic acid (PFOS)	0.052	J	0.20	0.043	ug/Kg	☼	11/24/21 11:07	11/29/21 01:39	1
NEtFOSAA	ND		0.20	0.048	ug/Kg	☼	11/24/21 11:07	11/29/21 01:39	1
NMeFOSAA	ND		0.20	0.023	ug/Kg	☼	11/24/21 11:07	11/29/21 01:39	1
HFPO-DA (GenX)	ND		0.20	0.041	ug/Kg	☼	11/24/21 11:07	11/29/21 01:39	1
9CI-PF3ONS	ND		0.20	0.035	ug/Kg	☼	11/24/21 11:07	11/29/21 01:39	1
11CI-PF3OUdS	ND		0.20	0.031	ug/Kg	☼	11/24/21 11:07	11/29/21 01:39	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	ND		0.20	0.039	ug/Kg	☼	11/24/21 11:07	11/29/21 01:39	1

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C2 PFHxA	59		50 - 150	11/24/21 11:07	11/29/21 01:39	1
13C4 PFHpA	60		50 - 150	11/24/21 11:07	11/29/21 01:39	1
13C4 PFOA	80		50 - 150	11/24/21 11:07	11/29/21 01:39	1
13C5 PFNA	62		50 - 150	11/24/21 11:07	11/29/21 01:39	1
13C2 PFDA	75		50 - 150	11/24/21 11:07	11/29/21 01:39	1
13C2 PFUnA	72		50 - 150	11/24/21 11:07	11/29/21 01:39	1
13C2 PFDoA	74		50 - 150	11/24/21 11:07	11/29/21 01:39	1
13C2 PFTeDA	77		50 - 150	11/24/21 11:07	11/29/21 01:39	1
13C3 PFBS	56		50 - 150	11/24/21 11:07	11/29/21 01:39	1
18O2 PFHxS	59		50 - 150	11/24/21 11:07	11/29/21 01:39	1
13C4 PFOS	59		50 - 150	11/24/21 11:07	11/29/21 01:39	1
d3-NMeFOSAA	69		50 - 150	11/24/21 11:07	11/29/21 01:39	1
d5-NEtFOSAA	78		50 - 150	11/24/21 11:07	11/29/21 01:39	1
13C3 HFPO-DA	63		50 - 150	11/24/21 11:07	11/29/21 01:39	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	8.2	H	0.1	0.1	%			11/29/21 14:01	1
Percent Solids	91.8	H	0.1	0.1	%			11/29/21 14:01	1

Client Sample ID: ADQ-AC3-107

Lab Sample ID: 320-82155-3

Date Collected: 11/13/21 16:10

Matrix: Solid

Date Received: 11/23/21 16:45

Percent Solids: 91.7

Method: EPA 537(Mod) - PFAS for QSM 5.3, Table B-15

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorohexanoic acid (PFHxA)	ND		0.22	0.034	ug/Kg	☼	11/24/21 11:07	11/29/21 01:49	1
Perfluoroheptanoic acid (PFHpA)	ND		0.22	0.041	ug/Kg	☼	11/24/21 11:07	11/29/21 01:49	1
Perfluorooctanoic acid (PFOA)	ND		0.22	0.057	ug/Kg	☼	11/24/21 11:07	11/29/21 01:49	1
Perfluorononanoic acid (PFNA)	ND		0.22	0.024	ug/Kg	☼	11/24/21 11:07	11/29/21 01:49	1
Perfluorodecanoic acid (PFDA)	ND		0.22	0.052	ug/Kg	☼	11/24/21 11:07	11/29/21 01:49	1
Perfluoroundecanoic acid (PFUnA)	ND		0.22	0.045	ug/Kg	☼	11/24/21 11:07	11/29/21 01:49	1

Eurofins TestAmerica, Sacramento

Client Sample Results

Client: Shannon & Wilson, Inc
 Project/Site: Kodiak DOT&PF PFAS (107471)

Job ID: 320-82155-1

Client Sample ID: ADQ-AC3-107

Lab Sample ID: 320-82155-3

Date Collected: 11/13/21 16:10

Matrix: Solid

Date Received: 11/23/21 16:45

Percent Solids: 91.7

Method: EPA 537(Mod) - PFAS for QSM 5.3, Table B-15 (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorododecanoic acid (PFDoA)	ND		0.22	0.032	ug/Kg	☼	11/24/21 11:07	11/29/21 01:49	1
Perfluorotridecanoic acid (PFTTrDA)	ND		0.22	0.023	ug/Kg	☼	11/24/21 11:07	11/29/21 01:49	1
Perfluorotetradecanoic acid (PFTeA)	ND		0.22	0.040	ug/Kg	☼	11/24/21 11:07	11/29/21 01:49	1
Perfluorobutanesulfonic acid (PFBS)	ND		0.22	0.041	ug/Kg	☼	11/24/21 11:07	11/29/21 01:49	1
Perfluorohexanesulfonic acid (PFHxS)	ND		0.22	0.031	ug/Kg	☼	11/24/21 11:07	11/29/21 01:49	1
Perfluorooctanesulfonic acid (PFOS)	0.048	J	0.22	0.047	ug/Kg	☼	11/24/21 11:07	11/29/21 01:49	1
NEtFOSAA	ND		0.22	0.052	ug/Kg	☼	11/24/21 11:07	11/29/21 01:49	1
NMeFOSAA	ND		0.22	0.025	ug/Kg	☼	11/24/21 11:07	11/29/21 01:49	1
HFPO-DA (GenX)	ND		0.22	0.044	ug/Kg	☼	11/24/21 11:07	11/29/21 01:49	1
9CI-PF3ONS	ND		0.22	0.038	ug/Kg	☼	11/24/21 11:07	11/29/21 01:49	1
11CI-PF3OUdS	ND		0.22	0.034	ug/Kg	☼	11/24/21 11:07	11/29/21 01:49	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	ND		0.22	0.042	ug/Kg	☼	11/24/21 11:07	11/29/21 01:49	1

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C2 PFHxA	81		50 - 150	11/24/21 11:07	11/29/21 01:49	1
13C4 PFHpA	81		50 - 150	11/24/21 11:07	11/29/21 01:49	1
13C4 PFOA	93		50 - 150	11/24/21 11:07	11/29/21 01:49	1
13C5 PFNA	81		50 - 150	11/24/21 11:07	11/29/21 01:49	1
13C2 PFDA	90		50 - 150	11/24/21 11:07	11/29/21 01:49	1
13C2 PFUnA	93		50 - 150	11/24/21 11:07	11/29/21 01:49	1
13C2 PFDoA	108		50 - 150	11/24/21 11:07	11/29/21 01:49	1
13C2 PFTeDA	98		50 - 150	11/24/21 11:07	11/29/21 01:49	1
13C3 PFBS	76		50 - 150	11/24/21 11:07	11/29/21 01:49	1
18O2 PFHxS	76		50 - 150	11/24/21 11:07	11/29/21 01:49	1
13C4 PFOS	75		50 - 150	11/24/21 11:07	11/29/21 01:49	1
d3-NMeFOSAA	91		50 - 150	11/24/21 11:07	11/29/21 01:49	1
d5-NEtFOSAA	102		50 - 150	11/24/21 11:07	11/29/21 01:49	1
13C3 HFPO-DA	79		50 - 150	11/24/21 11:07	11/29/21 01:49	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	8.3	H	0.1	0.1	%			11/29/21 14:01	1
Percent Solids	91.7	H	0.1	0.1	%			11/29/21 14:01	1

Client Sample ID: ADQ-AC3-05

Lab Sample ID: 320-82155-4

Date Collected: 11/13/21 16:50

Matrix: Solid

Date Received: 11/23/21 16:45

Percent Solids: 93.7

Method: EPA 537(Mod) - PFAS for QSM 5.3, Table B-15

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorohexanoic acid (PFHxA)	ND		0.21	0.033	ug/Kg	☼	11/24/21 11:07	11/29/21 02:00	1
Perfluoroheptanoic acid (PFHpA)	ND		0.21	0.040	ug/Kg	☼	11/24/21 11:07	11/29/21 02:00	1
Perfluorooctanoic acid (PFOA)	ND		0.21	0.056	ug/Kg	☼	11/24/21 11:07	11/29/21 02:00	1
Perfluorononanoic acid (PFNA)	ND		0.21	0.023	ug/Kg	☼	11/24/21 11:07	11/29/21 02:00	1
Perfluorodecanoic acid (PFDA)	ND		0.21	0.051	ug/Kg	☼	11/24/21 11:07	11/29/21 02:00	1
Perfluoroundecanoic acid (PFUnA)	ND		0.21	0.044	ug/Kg	☼	11/24/21 11:07	11/29/21 02:00	1
Perfluorododecanoic acid (PFDoA)	ND		0.21	0.032	ug/Kg	☼	11/24/21 11:07	11/29/21 02:00	1
Perfluorotridecanoic acid (PFTTrDA)	ND		0.21	0.022	ug/Kg	☼	11/24/21 11:07	11/29/21 02:00	1
Perfluorotetradecanoic acid (PFTeA)	ND		0.21	0.039	ug/Kg	☼	11/24/21 11:07	11/29/21 02:00	1

Eurofins TestAmerica, Sacramento

Client Sample Results

Client: Shannon & Wilson, Inc
 Project/Site: Kodiak DOT&PF PFAS (107471)

Job ID: 320-82155-1

Client Sample ID: ADQ-AC3-05

Lab Sample ID: 320-82155-4

Date Collected: 11/13/21 16:50

Matrix: Solid

Date Received: 11/23/21 16:45

Percent Solids: 93.7

Method: EPA 537(Mod) - PFAS for QSM 5.3, Table B-15 (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanesulfonic acid (PFBS)	ND		0.21	0.040	ug/Kg	☼	11/24/21 11:07	11/29/21 02:00	1
Perfluorohexanesulfonic acid (PFHxS)	ND		0.21	0.031	ug/Kg	☼	11/24/21 11:07	11/29/21 02:00	1
Perfluorooctanesulfonic acid (PFOS)	0.11	J	0.21	0.045	ug/Kg	☼	11/24/21 11:07	11/29/21 02:00	1
NEtFOSAA	ND		0.21	0.051	ug/Kg	☼	11/24/21 11:07	11/29/21 02:00	1
NMeFOSAA	ND		0.21	0.024	ug/Kg	☼	11/24/21 11:07	11/29/21 02:00	1
HFPO-DA (GenX)	ND		0.21	0.043	ug/Kg	☼	11/24/21 11:07	11/29/21 02:00	1
9CI-PF3ONS	ND		0.21	0.037	ug/Kg	☼	11/24/21 11:07	11/29/21 02:00	1
11CI-PF3OUdS	ND		0.21	0.033	ug/Kg	☼	11/24/21 11:07	11/29/21 02:00	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	ND		0.21	0.041	ug/Kg	☼	11/24/21 11:07	11/29/21 02:00	1

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C2 PFHxA	74		50 - 150	11/24/21 11:07	11/29/21 02:00	1
13C4 PFHpA	70		50 - 150	11/24/21 11:07	11/29/21 02:00	1
13C4 PFOA	92		50 - 150	11/24/21 11:07	11/29/21 02:00	1
13C5 PFNA	73		50 - 150	11/24/21 11:07	11/29/21 02:00	1
13C2 PFDA	79		50 - 150	11/24/21 11:07	11/29/21 02:00	1
13C2 PFUnA	80		50 - 150	11/24/21 11:07	11/29/21 02:00	1
13C2 PFDoA	85		50 - 150	11/24/21 11:07	11/29/21 02:00	1
13C2 PFTeDA	88		50 - 150	11/24/21 11:07	11/29/21 02:00	1
13C3 PFBS	51		50 - 150	11/24/21 11:07	11/29/21 02:00	1
18O2 PFHxS	52		50 - 150	11/24/21 11:07	11/29/21 02:00	1
13C4 PFOS	48	*5-	50 - 150	11/24/21 11:07	11/29/21 02:00	1
d3-NMeFOSAA	71		50 - 150	11/24/21 11:07	11/29/21 02:00	1
d5-NEtFOSAA	79		50 - 150	11/24/21 11:07	11/29/21 02:00	1
13C3 HFPO-DA	76		50 - 150	11/24/21 11:07	11/29/21 02:00	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	6.3	H	0.1	0.1	%			11/29/21 14:01	1
Percent Solids	93.7	H	0.1	0.1	%			11/29/21 14:01	1

Client Sample ID: ADQ-AC3-04

Lab Sample ID: 320-82155-5

Date Collected: 11/13/21 17:00

Matrix: Solid

Date Received: 11/23/21 16:45

Percent Solids: 86.6

Method: EPA 537(Mod) - PFAS for QSM 5.3, Table B-15

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorohexanoic acid (PFHxA)	ND		0.21	0.033	ug/Kg	☼	11/24/21 11:07	11/29/21 02:10	1
Perfluoroheptanoic acid (PFHpA)	ND		0.21	0.040	ug/Kg	☼	11/24/21 11:07	11/29/21 02:10	1
Perfluorooctanoic acid (PFOA)	ND		0.21	0.056	ug/Kg	☼	11/24/21 11:07	11/29/21 02:10	1
Perfluorononanoic acid (PFNA)	ND		0.21	0.023	ug/Kg	☼	11/24/21 11:07	11/29/21 02:10	1
Perfluorodecanoic acid (PFDA)	ND		0.21	0.051	ug/Kg	☼	11/24/21 11:07	11/29/21 02:10	1
Perfluoroundecanoic acid (PFUnA)	ND		0.21	0.045	ug/Kg	☼	11/24/21 11:07	11/29/21 02:10	1
Perfluorododecanoic acid (PFDoA)	ND		0.21	0.032	ug/Kg	☼	11/24/21 11:07	11/29/21 02:10	1
Perfluorotridecanoic acid (PFTrDA)	ND		0.21	0.022	ug/Kg	☼	11/24/21 11:07	11/29/21 02:10	1
Perfluorotetradecanoic acid (PFTeA)	ND		0.21	0.039	ug/Kg	☼	11/24/21 11:07	11/29/21 02:10	1
Perfluorobutanesulfonic acid (PFBS)	ND		0.21	0.040	ug/Kg	☼	11/24/21 11:07	11/29/21 02:10	1
Perfluorohexanesulfonic acid (PFHxS)	ND		0.21	0.031	ug/Kg	☼	11/24/21 11:07	11/29/21 02:10	1
Perfluorooctanesulfonic acid (PFOS)	0.058	J I	0.21	0.046	ug/Kg	☼	11/24/21 11:07	11/29/21 02:10	1

Eurofins TestAmerica, Sacramento

Client Sample Results

Client: Shannon & Wilson, Inc
 Project/Site: Kodiak DOT&PF PFAS (107471)

Job ID: 320-82155-1

Client Sample ID: ADQ-AC3-04

Lab Sample ID: 320-82155-5

Date Collected: 11/13/21 17:00

Matrix: Solid

Date Received: 11/23/21 16:45

Percent Solids: 86.6

Method: EPA 537(Mod) - PFAS for QSM 5.3, Table B-15 (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
NEtFOSAA	ND		0.21	0.051	ug/Kg	☼	11/24/21 11:07	11/29/21 02:10	1
NMeFOSAA	ND		0.21	0.024	ug/Kg	☼	11/24/21 11:07	11/29/21 02:10	1
HFPO-DA (GenX)	ND		0.21	0.044	ug/Kg	☼	11/24/21 11:07	11/29/21 02:10	1
9Cl-PF3ONS	ND		0.21	0.037	ug/Kg	☼	11/24/21 11:07	11/29/21 02:10	1
11Cl-PF3OUdS	ND		0.21	0.033	ug/Kg	☼	11/24/21 11:07	11/29/21 02:10	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	ND		0.21	0.041	ug/Kg	☼	11/24/21 11:07	11/29/21 02:10	1

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C2 PFHxA	78		50 - 150	11/24/21 11:07	11/29/21 02:10	1
13C4 PFHpA	73		50 - 150	11/24/21 11:07	11/29/21 02:10	1
13C4 PFOA	92		50 - 150	11/24/21 11:07	11/29/21 02:10	1
13C5 PFNA	75		50 - 150	11/24/21 11:07	11/29/21 02:10	1
13C2 PFDA	85		50 - 150	11/24/21 11:07	11/29/21 02:10	1
13C2 PFUnA	79		50 - 150	11/24/21 11:07	11/29/21 02:10	1
13C2 PFDoA	88		50 - 150	11/24/21 11:07	11/29/21 02:10	1
13C2 PFTeDA	87		50 - 150	11/24/21 11:07	11/29/21 02:10	1
13C3 PFBS	81		50 - 150	11/24/21 11:07	11/29/21 02:10	1
18O2 PFHxS	77		50 - 150	11/24/21 11:07	11/29/21 02:10	1
13C4 PFOS	72		50 - 150	11/24/21 11:07	11/29/21 02:10	1
d3-NMeFOSAA	75		50 - 150	11/24/21 11:07	11/29/21 02:10	1
d5-NEtFOSAA	86		50 - 150	11/24/21 11:07	11/29/21 02:10	1
13C3 HFPO-DA	77		50 - 150	11/24/21 11:07	11/29/21 02:10	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	13.4	H	0.1	0.1	%			11/29/21 14:01	1
Percent Solids	86.6	H	0.1	0.1	%			11/29/21 14:01	1

Client Sample ID: ADQ-AC3-03

Lab Sample ID: 320-82155-6

Date Collected: 11/13/21 17:28

Matrix: Solid

Date Received: 11/23/21 16:45

Percent Solids: 93.8

Method: EPA 537(Mod) - PFAS for QSM 5.3, Table B-15

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorohexanoic acid (PFHxA)	ND		0.21	0.033	ug/Kg	☼	11/24/21 11:07	11/29/21 02:20	1
Perfluoroheptanoic acid (PFHpA)	ND		0.21	0.040	ug/Kg	☼	11/24/21 11:07	11/29/21 02:20	1
Perfluorooctanoic acid (PFOA)	ND		0.21	0.056	ug/Kg	☼	11/24/21 11:07	11/29/21 02:20	1
Perfluorononanoic acid (PFNA)	ND		0.21	0.023	ug/Kg	☼	11/24/21 11:07	11/29/21 02:20	1
Perfluorodecanoic acid (PFDA)	ND		0.21	0.051	ug/Kg	☼	11/24/21 11:07	11/29/21 02:20	1
Perfluoroundecanoic acid (PFUnA)	ND		0.21	0.045	ug/Kg	☼	11/24/21 11:07	11/29/21 02:20	1
Perfluorododecanoic acid (PFDoA)	ND		0.21	0.032	ug/Kg	☼	11/24/21 11:07	11/29/21 02:20	1
Perfluorotridecanoic acid (PFTTrDA)	ND		0.21	0.022	ug/Kg	☼	11/24/21 11:07	11/29/21 02:20	1
Perfluorotetradecanoic acid (PFTeA)	ND		0.21	0.039	ug/Kg	☼	11/24/21 11:07	11/29/21 02:20	1
Perfluorobutanesulfonic acid (PFBS)	ND		0.21	0.040	ug/Kg	☼	11/24/21 11:07	11/29/21 02:20	1
Perfluorohexanesulfonic acid (PFHxS)	ND		0.21	0.031	ug/Kg	☼	11/24/21 11:07	11/29/21 02:20	1
Perfluorooctanesulfonic acid (PFOS)	ND		0.21	0.046	ug/Kg	☼	11/24/21 11:07	11/29/21 02:20	1
NEtFOSAA	ND		0.21	0.051	ug/Kg	☼	11/24/21 11:07	11/29/21 02:20	1
NMeFOSAA	ND		0.21	0.024	ug/Kg	☼	11/24/21 11:07	11/29/21 02:20	1
HFPO-DA (GenX)	ND		0.21	0.044	ug/Kg	☼	11/24/21 11:07	11/29/21 02:20	1
9Cl-PF3ONS	ND		0.21	0.037	ug/Kg	☼	11/24/21 11:07	11/29/21 02:20	1

Eurofins TestAmerica, Sacramento

Client Sample Results

Client: Shannon & Wilson, Inc
 Project/Site: Kodiak DOT&PF PFAS (107471)

Job ID: 320-82155-1

Client Sample ID: ADQ-AC3-03

Lab Sample ID: 320-82155-6

Date Collected: 11/13/21 17:28

Matrix: Solid

Date Received: 11/23/21 16:45

Percent Solids: 93.8

Method: EPA 537(Mod) - PFAS for QSM 5.3, Table B-15 (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
11CI-PF3OUdS	ND		0.21	0.033	ug/Kg	☼	11/24/21 11:07	11/29/21 02:20	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	ND		0.21	0.041	ug/Kg	☼	11/24/21 11:07	11/29/21 02:20	1
Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
13C2 PFHxA	68		50 - 150				11/24/21 11:07	11/29/21 02:20	1
13C4 PFHpA	73		50 - 150				11/24/21 11:07	11/29/21 02:20	1
13C4 PFOA	76		50 - 150				11/24/21 11:07	11/29/21 02:20	1
13C5 PFNA	64		50 - 150				11/24/21 11:07	11/29/21 02:20	1
13C2 PFDA	73		50 - 150				11/24/21 11:07	11/29/21 02:20	1
13C2 PFUnA	72		50 - 150				11/24/21 11:07	11/29/21 02:20	1
13C2 PFDoA	81		50 - 150				11/24/21 11:07	11/29/21 02:20	1
13C2 PFTeDA	85		50 - 150				11/24/21 11:07	11/29/21 02:20	1
13C3 PFBS	56		50 - 150				11/24/21 11:07	11/29/21 02:20	1
18O2 PFHxS	56		50 - 150				11/24/21 11:07	11/29/21 02:20	1
13C4 PFOS	55		50 - 150				11/24/21 11:07	11/29/21 02:20	1
d3-NMeFOSAA	73		50 - 150				11/24/21 11:07	11/29/21 02:20	1
d5-NEtFOSAA	81		50 - 150				11/24/21 11:07	11/29/21 02:20	1
13C3 HFPO-DA	68		50 - 150				11/24/21 11:07	11/29/21 02:20	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	6.2	H	0.1	0.1	%			11/29/21 14:01	1
Percent Solids	93.8	H	0.1	0.1	%			11/29/21 14:01	1

Client Sample ID: ADQ-AC3-03-EB1

Lab Sample ID: 320-82155-7

Date Collected: 11/13/21 17:20

Matrix: Water

Date Received: 11/23/21 16:45

Method: EPA 537(Mod) - PFAS for QSM 5.3, Table B-15

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorohexanoic acid (PFHxA)	ND		3.3	0.96	ng/L		11/24/21 12:34	12/03/21 18:49	1
Perfluoroheptanoic acid (PFHpA)	ND		3.3	0.41	ng/L		11/24/21 12:34	12/03/21 18:49	1
Perfluorooctanoic acid (PFOA)	ND		3.3	1.4	ng/L		11/24/21 12:34	12/03/21 18:49	1
Perfluorononanoic acid (PFNA)	ND		3.3	0.45	ng/L		11/24/21 12:34	12/03/21 18:49	1
Perfluorodecanoic acid (PFDA)	ND		3.3	0.51	ng/L		11/24/21 12:34	12/03/21 18:49	1
Perfluoroundecanoic acid (PFUnA)	ND		3.3	1.8	ng/L		11/24/21 12:34	12/03/21 18:49	1
Perfluorododecanoic acid (PFDoA)	ND		3.3	0.91	ng/L		11/24/21 12:34	12/03/21 18:49	1
Perfluorotridecanoic acid (PFTTrDA)	ND		3.3	2.2	ng/L		11/24/21 12:34	12/03/21 18:49	1
Perfluorotetradecanoic acid (PFTeA)	ND		3.3	1.2	ng/L		11/24/21 12:34	12/03/21 18:49	1
Perfluorobutanesulfonic acid (PFBS)	0.33	J	3.3	0.33	ng/L		11/24/21 12:34	12/03/21 18:49	1
Perfluorohexanesulfonic acid (PFHxS)	ND		3.3	0.94	ng/L		11/24/21 12:34	12/03/21 18:49	1
Perfluorooctanesulfonic acid (PFOS)	ND		3.3	0.89	ng/L		11/24/21 12:34	12/03/21 18:49	1
NEtFOSAA	ND		8.3	2.2	ng/L		11/24/21 12:34	12/03/21 18:49	1
NMeFOSAA	ND		8.3	2.0	ng/L		11/24/21 12:34	12/03/21 18:49	1
HFPO-DA (GenX)	ND		6.6	2.5	ng/L		11/24/21 12:34	12/03/21 18:49	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	ND		3.3	0.66	ng/L		11/24/21 12:34	12/03/21 18:49	1
9CI-PF3ONS	ND		3.3	0.40	ng/L		11/24/21 12:34	12/03/21 18:49	1
11CI-PF3OUdS	ND		3.3	0.53	ng/L		11/24/21 12:34	12/03/21 18:49	1

Eurofins TestAmerica, Sacramento

Client Sample Results

Client: Shannon & Wilson, Inc
 Project/Site: Kodiak DOT&PF PFAS (107471)

Job ID: 320-82155-1

Client Sample ID: ADQ-AC3-03-EB1

Lab Sample ID: 320-82155-7

Date Collected: 11/13/21 17:20

Matrix: Water

Date Received: 11/23/21 16:45

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C2 PFHxA	85		50 - 150	11/24/21 12:34	12/03/21 18:49	1
13C4 PFHpA	85		50 - 150	11/24/21 12:34	12/03/21 18:49	1
13C4 PFOA	89		50 - 150	11/24/21 12:34	12/03/21 18:49	1
13C5 PFNA	91		50 - 150	11/24/21 12:34	12/03/21 18:49	1
13C2 PFDA	79		50 - 150	11/24/21 12:34	12/03/21 18:49	1
13C2 PFUnA	86		50 - 150	11/24/21 12:34	12/03/21 18:49	1
13C2 PFDoA	85		50 - 150	11/24/21 12:34	12/03/21 18:49	1
13C2 PFTeDA	97		50 - 150	11/24/21 12:34	12/03/21 18:49	1
13C3 PFBS	94		50 - 150	11/24/21 12:34	12/03/21 18:49	1
18O2 PFHxS	80		50 - 150	11/24/21 12:34	12/03/21 18:49	1
13C4 PFOS	87		50 - 150	11/24/21 12:34	12/03/21 18:49	1
d5-NEtFOSAA	88		50 - 150	11/24/21 12:34	12/03/21 18:49	1
d3-NMeFOSAA	89		50 - 150	11/24/21 12:34	12/03/21 18:49	1
13C3 HFPO-DA	83		50 - 150	11/24/21 12:34	12/03/21 18:49	1

Client Sample ID: ADQ-AC3-02

Lab Sample ID: 320-82155-8

Date Collected: 11/13/21 17:45

Matrix: Solid

Date Received: 11/23/21 16:45

Percent Solids: 93.2

Method: EPA 537(Mod) - PFAS for QSM 5.3, Table B-15

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorohexanoic acid (PFHxA)	0.061	J	0.21	0.033	ug/Kg	✱	11/24/21 11:07	11/29/21 02:31	1
Perfluoroheptanoic acid (PFHpA)	ND		0.21	0.040	ug/Kg	✱	11/24/21 11:07	11/29/21 02:31	1
Perfluorooctanoic acid (PFOA)	ND		0.21	0.056	ug/Kg	✱	11/24/21 11:07	11/29/21 02:31	1
Perfluorononanoic acid (PFNA)	0.046	J	0.21	0.023	ug/Kg	✱	11/24/21 11:07	11/29/21 02:31	1
Perfluorodecanoic acid (PFDA)	0.055	J	0.21	0.051	ug/Kg	✱	11/24/21 11:07	11/29/21 02:31	1
Perfluoroundecanoic acid (PFUnA)	ND		0.21	0.045	ug/Kg	✱	11/24/21 11:07	11/29/21 02:31	1
Perfluorododecanoic acid (PFDoA)	0.053	J	0.21	0.032	ug/Kg	✱	11/24/21 11:07	11/29/21 02:31	1
Perfluorotridecanoic acid (PFTTrDA)	0.049	J	0.21	0.022	ug/Kg	✱	11/24/21 11:07	11/29/21 02:31	1
Perfluorotetradecanoic acid (PFTeA)	0.051	J	0.21	0.039	ug/Kg	✱	11/24/21 11:07	11/29/21 02:31	1
Perfluorobutanesulfonic acid (PFBS)	ND		0.21	0.040	ug/Kg	✱	11/24/21 11:07	11/29/21 02:31	1
Perfluorohexanesulfonic acid (PFHxS)	0.12	J	0.21	0.031	ug/Kg	✱	11/24/21 11:07	11/29/21 02:31	1
Perfluorooctanesulfonic acid (PFOS)	0.36		0.21	0.046	ug/Kg	✱	11/24/21 11:07	11/29/21 02:31	1
NEtFOSAA	ND		0.21	0.051	ug/Kg	✱	11/24/21 11:07	11/29/21 02:31	1
NMeFOSAA	0.051	J	0.21	0.024	ug/Kg	✱	11/24/21 11:07	11/29/21 02:31	1
HFPO-DA (GenX)	ND		0.21	0.044	ug/Kg	✱	11/24/21 11:07	11/29/21 02:31	1
9CI-PF3ONS	0.037	J	0.21	0.037	ug/Kg	✱	11/24/21 11:07	11/29/21 02:31	1
11CI-PF3OUdS	0.042	J	0.21	0.033	ug/Kg	✱	11/24/21 11:07	11/29/21 02:31	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	0.050	J	0.21	0.042	ug/Kg	✱	11/24/21 11:07	11/29/21 02:31	1

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C2 PFHxA	53		50 - 150	11/24/21 11:07	11/29/21 02:31	1
13C4 PFHpA	56		50 - 150	11/24/21 11:07	11/29/21 02:31	1
13C4 PFOA	66		50 - 150	11/24/21 11:07	11/29/21 02:31	1
13C5 PFNA	57		50 - 150	11/24/21 11:07	11/29/21 02:31	1
13C2 PFDA	61		50 - 150	11/24/21 11:07	11/29/21 02:31	1
13C2 PFUnA	66		50 - 150	11/24/21 11:07	11/29/21 02:31	1

Eurofins TestAmerica, Sacramento

Client Sample Results

Client: Shannon & Wilson, Inc
 Project/Site: Kodiak DOT&PF PFAS (107471)

Job ID: 320-82155-1

Client Sample ID: ADQ-AC3-02

Lab Sample ID: 320-82155-8

Date Collected: 11/13/21 17:45

Matrix: Solid

Date Received: 11/23/21 16:45

Percent Solids: 93.2

Method: EPA 537(Mod) - PFAS for QSM 5.3, Table B-15 (Continued)

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C2 PFDoA	69		50 - 150	11/24/21 11:07	11/29/21 02:31	1
13C2 PFTeDA	74		50 - 150	11/24/21 11:07	11/29/21 02:31	1
13C3 PFBS	50		50 - 150	11/24/21 11:07	11/29/21 02:31	1
18O2 PFHxS	49	*5-	50 - 150	11/24/21 11:07	11/29/21 02:31	1
13C4 PFOS	50		50 - 150	11/24/21 11:07	11/29/21 02:31	1
d3-NMeFOSAA	64		50 - 150	11/24/21 11:07	11/29/21 02:31	1
d5-NEtFOSAA	70		50 - 150	11/24/21 11:07	11/29/21 02:31	1
13C3 HFPO-DA	57		50 - 150	11/24/21 11:07	11/29/21 02:31	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	6.8	H	0.1	0.1	%			11/29/21 14:01	1
Percent Solids	93.2	H	0.1	0.1	%			11/29/21 14:01	1

Client Sample ID: ADQ-AC3-01

Lab Sample ID: 320-82155-9

Date Collected: 11/14/21 10:45

Matrix: Solid

Date Received: 11/23/21 16:45

Percent Solids: 96.7

Method: EPA 537(Mod) - PFAS for QSM 5.3, Table B-15

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorohexanoic acid (PFHxA)	ND		0.19	0.030	ug/Kg	☼	11/24/21 11:07	11/29/21 02:41	1
Perfluoroheptanoic acid (PFHpA)	ND		0.19	0.037	ug/Kg	☼	11/24/21 11:07	11/29/21 02:41	1
Perfluorooctanoic acid (PFOA)	ND		0.19	0.052	ug/Kg	☼	11/24/21 11:07	11/29/21 02:41	1
Perfluorononanoic acid (PFNA)	ND		0.19	0.021	ug/Kg	☼	11/24/21 11:07	11/29/21 02:41	1
Perfluorodecanoic acid (PFDA)	ND		0.19	0.047	ug/Kg	☼	11/24/21 11:07	11/29/21 02:41	1
Perfluoroundecanoic acid (PFUnA)	ND		0.19	0.041	ug/Kg	☼	11/24/21 11:07	11/29/21 02:41	1
Perfluorododecanoic acid (PFDoA)	ND		0.19	0.029	ug/Kg	☼	11/24/21 11:07	11/29/21 02:41	1
Perfluorotridecanoic acid (PFTriDA)	ND		0.19	0.020	ug/Kg	☼	11/24/21 11:07	11/29/21 02:41	1
Perfluorotetradecanoic acid (PFTeA)	ND		0.19	0.036	ug/Kg	☼	11/24/21 11:07	11/29/21 02:41	1
Perfluorobutanesulfonic acid (PFBS)	ND		0.19	0.037	ug/Kg	☼	11/24/21 11:07	11/29/21 02:41	1
Perfluorohexanesulfonic acid (PFHxS)	ND		0.19	0.028	ug/Kg	☼	11/24/21 11:07	11/29/21 02:41	1
Perfluorooctanesulfonic acid (PFOS)	ND		0.19	0.042	ug/Kg	☼	11/24/21 11:07	11/29/21 02:41	1
NEtFOSAA	ND		0.19	0.047	ug/Kg	☼	11/24/21 11:07	11/29/21 02:41	1
NMeFOSAA	ND		0.19	0.022	ug/Kg	☼	11/24/21 11:07	11/29/21 02:41	1
HFPO-DA (GenX)	ND		0.19	0.040	ug/Kg	☼	11/24/21 11:07	11/29/21 02:41	1
9CI-PF3ONS	ND		0.19	0.034	ug/Kg	☼	11/24/21 11:07	11/29/21 02:41	1
11CI-PF3OUdS	ND		0.19	0.030	ug/Kg	☼	11/24/21 11:07	11/29/21 02:41	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	ND		0.19	0.038	ug/Kg	☼	11/24/21 11:07	11/29/21 02:41	1

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C2 PFHxA	59		50 - 150	11/24/21 11:07	11/29/21 02:41	1
13C4 PFHpA	65		50 - 150	11/24/21 11:07	11/29/21 02:41	1
13C4 PFOA	72		50 - 150	11/24/21 11:07	11/29/21 02:41	1
13C5 PFNA	70		50 - 150	11/24/21 11:07	11/29/21 02:41	1
13C2 PFDA	71		50 - 150	11/24/21 11:07	11/29/21 02:41	1
13C2 PFUnA	69		50 - 150	11/24/21 11:07	11/29/21 02:41	1
13C2 PFDoA	75		50 - 150	11/24/21 11:07	11/29/21 02:41	1
13C2 PFTeDA	78		50 - 150	11/24/21 11:07	11/29/21 02:41	1
13C3 PFBS	50		50 - 150	11/24/21 11:07	11/29/21 02:41	1
18O2 PFHxS	47	*5-	50 - 150	11/24/21 11:07	11/29/21 02:41	1

Eurofins TestAmerica, Sacramento

Client Sample Results

Client: Shannon & Wilson, Inc
 Project/Site: Kodiak DOT&PF PFAS (107471)

Job ID: 320-82155-1

Client Sample ID: ADQ-AC3-01

Lab Sample ID: 320-82155-9

Date Collected: 11/14/21 10:45

Matrix: Solid

Date Received: 11/23/21 16:45

Percent Solids: 96.7

Method: EPA 537(Mod) - PFAS for QSM 5.3, Table B-15 (Continued)

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C4 PFOS	48	*5-	50 - 150	11/24/21 11:07	11/29/21 02:41	1
d3-NMeFOSAA	65		50 - 150	11/24/21 11:07	11/29/21 02:41	1
d5-NEtFOSAA	76		50 - 150	11/24/21 11:07	11/29/21 02:41	1
13C3 HFPO-DA	59		50 - 150	11/24/21 11:07	11/29/21 02:41	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	3.3	H	0.1	0.1	%			11/29/21 14:01	1
Percent Solids	96.7	H	0.1	0.1	%			11/29/21 14:01	1

Client Sample ID: ADQ-AC7-01

Lab Sample ID: 320-82155-10

Date Collected: 11/14/21 08:39

Matrix: Solid

Date Received: 11/23/21 16:45

Percent Solids: 92.8

Method: EPA 537(Mod) - PFAS for QSM 5.3, Table B-15

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorohexanoic acid (PFHxA)	ND		0.21	0.033	ug/Kg	☼	11/24/21 11:07	11/29/21 03:12	1
Perfluoroheptanoic acid (PFHpA)	ND		0.21	0.041	ug/Kg	☼	11/24/21 11:07	11/29/21 03:12	1
Perfluorooctanoic acid (PFOA)	ND		0.21	0.057	ug/Kg	☼	11/24/21 11:07	11/29/21 03:12	1
Perfluorononanoic acid (PFNA)	ND		0.21	0.023	ug/Kg	☼	11/24/21 11:07	11/29/21 03:12	1
Perfluorodecanoic acid (PFDA)	ND		0.21	0.051	ug/Kg	☼	11/24/21 11:07	11/29/21 03:12	1
Perfluoroundecanoic acid (PFUnA)	ND		0.21	0.045	ug/Kg	☼	11/24/21 11:07	11/29/21 03:12	1
Perfluorododecanoic acid (PFDoA)	ND		0.21	0.032	ug/Kg	☼	11/24/21 11:07	11/29/21 03:12	1
Perfluorotridecanoic acid (PFTrDA)	ND		0.21	0.022	ug/Kg	☼	11/24/21 11:07	11/29/21 03:12	1
Perfluorotetradecanoic acid (PFTeA)	ND		0.21	0.039	ug/Kg	☼	11/24/21 11:07	11/29/21 03:12	1
Perfluorobutanesulfonic acid (PFBS)	ND		0.21	0.041	ug/Kg	☼	11/24/21 11:07	11/29/21 03:12	1
Perfluorohexanesulfonic acid (PFHxS)	ND		0.21	0.031	ug/Kg	☼	11/24/21 11:07	11/29/21 03:12	1
Perfluorooctanesulfonic acid (PFOS)	ND		0.21	0.046	ug/Kg	☼	11/24/21 11:07	11/29/21 03:12	1
NEtFOSAA	ND		0.21	0.051	ug/Kg	☼	11/24/21 11:07	11/29/21 03:12	1
NMeFOSAA	ND		0.21	0.025	ug/Kg	☼	11/24/21 11:07	11/29/21 03:12	1
HFPO-DA (GenX)	ND		0.21	0.044	ug/Kg	☼	11/24/21 11:07	11/29/21 03:12	1
9Cl-PF3ONS	ND		0.21	0.037	ug/Kg	☼	11/24/21 11:07	11/29/21 03:12	1
11Cl-PF3OUdS	ND		0.21	0.033	ug/Kg	☼	11/24/21 11:07	11/29/21 03:12	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	ND		0.21	0.042	ug/Kg	☼	11/24/21 11:07	11/29/21 03:12	1

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C2 PFHxA	64		50 - 150	11/24/21 11:07	11/29/21 03:12	1
13C4 PFHpA	71		50 - 150	11/24/21 11:07	11/29/21 03:12	1
13C4 PFOA	80		50 - 150	11/24/21 11:07	11/29/21 03:12	1
13C5 PFNA	73		50 - 150	11/24/21 11:07	11/29/21 03:12	1
13C2 PFDA	75		50 - 150	11/24/21 11:07	11/29/21 03:12	1
13C2 PFUnA	72		50 - 150	11/24/21 11:07	11/29/21 03:12	1
13C2 PFDoA	76		50 - 150	11/24/21 11:07	11/29/21 03:12	1
13C2 PFTeDA	77		50 - 150	11/24/21 11:07	11/29/21 03:12	1
13C3 PFBS	57		50 - 150	11/24/21 11:07	11/29/21 03:12	1
18O2 PFHxS	56		50 - 150	11/24/21 11:07	11/29/21 03:12	1
13C4 PFOS	57		50 - 150	11/24/21 11:07	11/29/21 03:12	1
d3-NMeFOSAA	74		50 - 150	11/24/21 11:07	11/29/21 03:12	1
d5-NEtFOSAA	88		50 - 150	11/24/21 11:07	11/29/21 03:12	1
13C3 HFPO-DA	66		50 - 150	11/24/21 11:07	11/29/21 03:12	1

Eurofins TestAmerica, Sacramento

Client Sample Results

Client: Shannon & Wilson, Inc
Project/Site: Kodiak DOT&PF PFAS (107471)

Job ID: 320-82155-1

Client Sample ID: ADQ-AC7-01

Lab Sample ID: 320-82155-10

Date Collected: 11/14/21 08:39

Matrix: Solid

Date Received: 11/23/21 16:45

Percent Solids: 92.8

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	7.2	H	0.1	0.1	%			11/29/21 14:01	1
Percent Solids	92.8	H	0.1	0.1	%			11/29/21 14:01	1

Client Sample ID: ADQ-AC7-101

Lab Sample ID: 320-82155-11

Date Collected: 11/14/21 08:29

Matrix: Solid

Date Received: 11/23/21 16:45

Percent Solids: 92.8

Method: EPA 537(Mod) - PFAS for QSM 5.3, Table B-15

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorohexanoic acid (PFHxA)	ND		0.21	0.033	ug/Kg	☼	11/24/21 11:07	11/29/21 03:23	1
Perfluoroheptanoic acid (PFHpA)	ND		0.21	0.040	ug/Kg	☼	11/24/21 11:07	11/29/21 03:23	1
Perfluorooctanoic acid (PFOA)	ND		0.21	0.056	ug/Kg	☼	11/24/21 11:07	11/29/21 03:23	1
Perfluorononanoic acid (PFNA)	ND		0.21	0.023	ug/Kg	☼	11/24/21 11:07	11/29/21 03:23	1
Perfluorodecanoic acid (PFDA)	ND		0.21	0.051	ug/Kg	☼	11/24/21 11:07	11/29/21 03:23	1
Perfluoroundecanoic acid (PFUnA)	ND		0.21	0.045	ug/Kg	☼	11/24/21 11:07	11/29/21 03:23	1
Perfluorododecanoic acid (PFDoA)	ND		0.21	0.032	ug/Kg	☼	11/24/21 11:07	11/29/21 03:23	1
Perfluorotridecanoic acid (PFTTrDA)	ND		0.21	0.022	ug/Kg	☼	11/24/21 11:07	11/29/21 03:23	1
Perfluorotetradecanoic acid (PFTeA)	ND		0.21	0.039	ug/Kg	☼	11/24/21 11:07	11/29/21 03:23	1
Perfluorobutanesulfonic acid (PFBS)	ND		0.21	0.040	ug/Kg	☼	11/24/21 11:07	11/29/21 03:23	1
Perfluorohexanesulfonic acid (PFHxS)	ND		0.21	0.031	ug/Kg	☼	11/24/21 11:07	11/29/21 03:23	1
Perfluorooctanesulfonic acid (PFOS)	ND		0.21	0.046	ug/Kg	☼	11/24/21 11:07	11/29/21 03:23	1
NEtFOSAA	ND		0.21	0.051	ug/Kg	☼	11/24/21 11:07	11/29/21 03:23	1
NMeFOSAA	ND		0.21	0.024	ug/Kg	☼	11/24/21 11:07	11/29/21 03:23	1
HFPO-DA (GenX)	ND		0.21	0.044	ug/Kg	☼	11/24/21 11:07	11/29/21 03:23	1
9CI-PF3ONS	ND		0.21	0.037	ug/Kg	☼	11/24/21 11:07	11/29/21 03:23	1
11CI-PF3OUdS	ND		0.21	0.033	ug/Kg	☼	11/24/21 11:07	11/29/21 03:23	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	ND		0.21	0.041	ug/Kg	☼	11/24/21 11:07	11/29/21 03:23	1

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C2 PFHxA	60		50 - 150	11/24/21 11:07	11/29/21 03:23	1
13C4 PFHpA	63		50 - 150	11/24/21 11:07	11/29/21 03:23	1
13C4 PFOA	81		50 - 150	11/24/21 11:07	11/29/21 03:23	1
13C5 PFNA	67		50 - 150	11/24/21 11:07	11/29/21 03:23	1
13C2 PFDA	72		50 - 150	11/24/21 11:07	11/29/21 03:23	1
13C2 PFUnA	72		50 - 150	11/24/21 11:07	11/29/21 03:23	1
13C2 PFDoA	78		50 - 150	11/24/21 11:07	11/29/21 03:23	1
13C2 PFTeDA	73		50 - 150	11/24/21 11:07	11/29/21 03:23	1
13C3 PFBS	55		50 - 150	11/24/21 11:07	11/29/21 03:23	1
18O2 PFHxS	52		50 - 150	11/24/21 11:07	11/29/21 03:23	1
13C4 PFOS	49	*5-	50 - 150	11/24/21 11:07	11/29/21 03:23	1
d3-NMeFOSAA	63		50 - 150	11/24/21 11:07	11/29/21 03:23	1
d5-NEtFOSAA	74		50 - 150	11/24/21 11:07	11/29/21 03:23	1
13C3 HFPO-DA	61		50 - 150	11/24/21 11:07	11/29/21 03:23	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	7.2	H	0.1	0.1	%			11/29/21 14:01	1
Percent Solids	92.8	H	0.1	0.1	%			11/29/21 14:01	1

Eurofins TestAmerica, Sacramento

Client Sample Results

Client: Shannon & Wilson, Inc
 Project/Site: Kodiak DOT&PF PFAS (107471)

Job ID: 320-82155-1

Client Sample ID: ADQ-AC7-02

Lab Sample ID: 320-82155-12

Date Collected: 11/14/21 09:15

Matrix: Solid

Date Received: 11/23/21 16:45

Percent Solids: 92.5

Method: EPA 537(Mod) - PFAS for QSM 5.3, Table B-15

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorohexanoic acid (PFHxA)	ND		0.21	0.032	ug/Kg	☼	11/24/21 11:07	11/29/21 03:33	1
Perfluoroheptanoic acid (PFHpA)	ND		0.21	0.039	ug/Kg	☼	11/24/21 11:07	11/29/21 03:33	1
Perfluorooctanoic acid (PFOA)	ND		0.21	0.055	ug/Kg	☼	11/24/21 11:07	11/29/21 03:33	1
Perfluorononanoic acid (PFNA)	ND		0.21	0.023	ug/Kg	☼	11/24/21 11:07	11/29/21 03:33	1
Perfluorodecanoic acid (PFDA)	ND		0.21	0.050	ug/Kg	☼	11/24/21 11:07	11/29/21 03:33	1
Perfluoroundecanoic acid (PFUnA)	ND		0.21	0.044	ug/Kg	☼	11/24/21 11:07	11/29/21 03:33	1
Perfluorododecanoic acid (PFDoA)	ND		0.21	0.031	ug/Kg	☼	11/24/21 11:07	11/29/21 03:33	1
Perfluorotridecanoic acid (PFTeA)	ND		0.21	0.022	ug/Kg	☼	11/24/21 11:07	11/29/21 03:33	1
Perfluorotetradecanoic acid (PFTeDA)	ND		0.21	0.038	ug/Kg	☼	11/24/21 11:07	11/29/21 03:33	1
Perfluorobutanesulfonic acid (PFBS)	ND		0.21	0.039	ug/Kg	☼	11/24/21 11:07	11/29/21 03:33	1
Perfluorohexanesulfonic acid (PFHxS)	ND		0.21	0.030	ug/Kg	☼	11/24/21 11:07	11/29/21 03:33	1
Perfluorooctanesulfonic acid (PFOS)	ND		0.21	0.045	ug/Kg	☼	11/24/21 11:07	11/29/21 03:33	1
NEtFOSAA	ND		0.21	0.050	ug/Kg	☼	11/24/21 11:07	11/29/21 03:33	1
NMeFOSAA	ND		0.21	0.024	ug/Kg	☼	11/24/21 11:07	11/29/21 03:33	1
HFPO-DA (GenX)	ND		0.21	0.043	ug/Kg	☼	11/24/21 11:07	11/29/21 03:33	1
9Cl-PF3ONS	ND		0.21	0.036	ug/Kg	☼	11/24/21 11:07	11/29/21 03:33	1
11Cl-PF3OUdS	ND		0.21	0.032	ug/Kg	☼	11/24/21 11:07	11/29/21 03:33	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	ND		0.21	0.040	ug/Kg	☼	11/24/21 11:07	11/29/21 03:33	1

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C2 PFHxA	48	*5-	50 - 150	11/24/21 11:07	11/29/21 03:33	1
13C4 PFHpA	50		50 - 150	11/24/21 11:07	11/29/21 03:33	1
13C4 PFOA	57		50 - 150	11/24/21 11:07	11/29/21 03:33	1
13C5 PFNA	55		50 - 150	11/24/21 11:07	11/29/21 03:33	1
13C2 PFDA	56		50 - 150	11/24/21 11:07	11/29/21 03:33	1
13C2 PFUnA	55		50 - 150	11/24/21 11:07	11/29/21 03:33	1
13C2 PFDoA	51		50 - 150	11/24/21 11:07	11/29/21 03:33	1
13C2 PFTeDA	55		50 - 150	11/24/21 11:07	11/29/21 03:33	1
13C3 PFBS	52		50 - 150	11/24/21 11:07	11/29/21 03:33	1
18O2 PFHxS	53		50 - 150	11/24/21 11:07	11/29/21 03:33	1
13C4 PFOS	48	*5-	50 - 150	11/24/21 11:07	11/29/21 03:33	1
d3-NMeFOSAA	22	*5-	50 - 150	11/24/21 11:07	11/29/21 03:33	1
d5-NEtFOSAA	27	*5-	50 - 150	11/24/21 11:07	11/29/21 03:33	1
13C3 HFPO-DA	56		50 - 150	11/24/21 11:07	11/29/21 03:33	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	7.5	H	0.1	0.1	%			11/29/21 14:01	1
Percent Solids	92.5	H	0.1	0.1	%			11/29/21 14:01	1

Client Sample ID: ADQ-AC6-01

Lab Sample ID: 320-82155-13

Date Collected: 11/14/21 09:39

Matrix: Solid

Date Received: 11/23/21 16:45

Percent Solids: 93.1

Method: EPA 537(Mod) - PFAS for QSM 5.3, Table B-15

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorohexanoic acid (PFHxA)	ND		0.19	0.030	ug/Kg	☼	11/24/21 11:07	11/29/21 03:44	1
Perfluoroheptanoic acid (PFHpA)	ND		0.19	0.036	ug/Kg	☼	11/24/21 11:07	11/29/21 03:44	1
Perfluorooctanoic acid (PFOA)	ND		0.19	0.051	ug/Kg	☼	11/24/21 11:07	11/29/21 03:44	1
Perfluorononanoic acid (PFNA)	ND		0.19	0.021	ug/Kg	☼	11/24/21 11:07	11/29/21 03:44	1

Eurofins TestAmerica, Sacramento

Client Sample Results

Client: Shannon & Wilson, Inc
 Project/Site: Kodiak DOT&PF PFAS (107471)

Job ID: 320-82155-1

Client Sample ID: ADQ-AC6-01

Lab Sample ID: 320-82155-13

Date Collected: 11/14/21 09:39

Matrix: Solid

Date Received: 11/23/21 16:45

Percent Solids: 93.1

Method: EPA 537(Mod) - PFAS for QSM 5.3, Table B-15 (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorodecanoic acid (PFDA)	ND		0.19	0.046	ug/Kg	☼	11/24/21 11:07	11/29/21 03:44	1
Perfluoroundecanoic acid (PFUnA)	ND		0.19	0.040	ug/Kg	☼	11/24/21 11:07	11/29/21 03:44	1
Perfluorododecanoic acid (PFDoA)	ND		0.19	0.029	ug/Kg	☼	11/24/21 11:07	11/29/21 03:44	1
Perfluorotridecanoic acid (PFTrDA)	ND		0.19	0.020	ug/Kg	☼	11/24/21 11:07	11/29/21 03:44	1
Perfluorotetradecanoic acid (PFTeA)	ND		0.19	0.035	ug/Kg	☼	11/24/21 11:07	11/29/21 03:44	1
Perfluorobutanesulfonic acid (PFBS)	ND		0.19	0.036	ug/Kg	☼	11/24/21 11:07	11/29/21 03:44	1
Perfluorohexanesulfonic acid (PFHxS)	ND		0.19	0.028	ug/Kg	☼	11/24/21 11:07	11/29/21 03:44	1
Perfluorooctanesulfonic acid (PFOS)	0.10	J	0.19	0.041	ug/Kg	☼	11/24/21 11:07	11/29/21 03:44	1
NEtFOSAA	ND		0.19	0.046	ug/Kg	☼	11/24/21 11:07	11/29/21 03:44	1
NMeFOSAA	ND		0.19	0.022	ug/Kg	☼	11/24/21 11:07	11/29/21 03:44	1
HFPO-DA (GenX)	ND		0.19	0.039	ug/Kg	☼	11/24/21 11:07	11/29/21 03:44	1
9CI-PF3ONS	ND		0.19	0.034	ug/Kg	☼	11/24/21 11:07	11/29/21 03:44	1
11CI-PF3OUdS	ND		0.19	0.030	ug/Kg	☼	11/24/21 11:07	11/29/21 03:44	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	ND		0.19	0.037	ug/Kg	☼	11/24/21 11:07	11/29/21 03:44	1
Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
13C2 PFHxA	74		50 - 150				11/24/21 11:07	11/29/21 03:44	1
13C4 PFHpA	82		50 - 150				11/24/21 11:07	11/29/21 03:44	1
13C4 PFOA	97		50 - 150				11/24/21 11:07	11/29/21 03:44	1
13C5 PFNA	76		50 - 150				11/24/21 11:07	11/29/21 03:44	1
13C2 PFDA	84		50 - 150				11/24/21 11:07	11/29/21 03:44	1
13C2 PFUnA	96		50 - 150				11/24/21 11:07	11/29/21 03:44	1
13C2 PFDoA	98		50 - 150				11/24/21 11:07	11/29/21 03:44	1
13C2 PFTeDA	97		50 - 150				11/24/21 11:07	11/29/21 03:44	1
13C3 PFBS	75		50 - 150				11/24/21 11:07	11/29/21 03:44	1
18O2 PFHxS	68		50 - 150				11/24/21 11:07	11/29/21 03:44	1
13C4 PFOS	64		50 - 150				11/24/21 11:07	11/29/21 03:44	1
d3-NMeFOSAA	82		50 - 150				11/24/21 11:07	11/29/21 03:44	1
d5-NEtFOSAA	112		50 - 150				11/24/21 11:07	11/29/21 03:44	1
13C3 HFPO-DA	71		50 - 150				11/24/21 11:07	11/29/21 03:44	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	6.9	H	0.1	0.1	%			11/29/21 14:01	1
Percent Solids	93.1	H	0.1	0.1	%			11/29/21 14:01	1

Client Sample ID: ADQ-AC6-02

Lab Sample ID: 320-82155-14

Date Collected: 11/14/21 09:45

Matrix: Solid

Date Received: 11/23/21 16:45

Percent Solids: 96.0

Method: EPA 537(Mod) - PFAS for QSM 5.3, Table B-15

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorohexanoic acid (PFHxA)	ND		0.19	0.029	ug/Kg	☼	11/24/21 11:07	11/29/21 03:54	1
Perfluoroheptanoic acid (PFHpA)	ND		0.19	0.036	ug/Kg	☼	11/24/21 11:07	11/29/21 03:54	1
Perfluorooctanoic acid (PFOA)	ND		0.19	0.050	ug/Kg	☼	11/24/21 11:07	11/29/21 03:54	1
Perfluorononanoic acid (PFNA)	ND		0.19	0.021	ug/Kg	☼	11/24/21 11:07	11/29/21 03:54	1
Perfluorodecanoic acid (PFDA)	ND		0.19	0.045	ug/Kg	☼	11/24/21 11:07	11/29/21 03:54	1
Perfluoroundecanoic acid (PFUnA)	ND		0.19	0.039	ug/Kg	☼	11/24/21 11:07	11/29/21 03:54	1
Perfluorododecanoic acid (PFDoA)	ND		0.19	0.028	ug/Kg	☼	11/24/21 11:07	11/29/21 03:54	1

Eurofins TestAmerica, Sacramento

Client Sample Results

Client: Shannon & Wilson, Inc
Project/Site: Kodiak DOT&PF PFAS (107471)

Job ID: 320-82155-1

Client Sample ID: ADQ-AC6-02

Lab Sample ID: 320-82155-14

Date Collected: 11/14/21 09:45

Matrix: Solid

Date Received: 11/23/21 16:45

Percent Solids: 96.0

Method: EPA 537(Mod) - PFAS for QSM 5.3, Table B-15 (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorotridecanoic acid (PFTrDA)	ND		0.19	0.020	ug/Kg	☼	11/24/21 11:07	11/29/21 03:54	1
Perfluorotetradecanoic acid (PFTeA)	ND		0.19	0.035	ug/Kg	☼	11/24/21 11:07	11/29/21 03:54	1
Perfluorobutanesulfonic acid (PFBS)	ND		0.19	0.036	ug/Kg	☼	11/24/21 11:07	11/29/21 03:54	1
Perfluorohexanesulfonic acid (PFHxS)	ND		0.19	0.027	ug/Kg	☼	11/24/21 11:07	11/29/21 03:54	1
Perfluorooctanesulfonic acid (PFOS)	ND		0.19	0.040	ug/Kg	☼	11/24/21 11:07	11/29/21 03:54	1
NEtFOSAA	ND		0.19	0.045	ug/Kg	☼	11/24/21 11:07	11/29/21 03:54	1
NMeFOSAA	ND		0.19	0.022	ug/Kg	☼	11/24/21 11:07	11/29/21 03:54	1
HFPO-DA (GenX)	ND		0.19	0.038	ug/Kg	☼	11/24/21 11:07	11/29/21 03:54	1
9Cl-PF3ONS	ND		0.19	0.033	ug/Kg	☼	11/24/21 11:07	11/29/21 03:54	1
11Cl-PF3OUdS	ND		0.19	0.029	ug/Kg	☼	11/24/21 11:07	11/29/21 03:54	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	ND		0.19	0.037	ug/Kg	☼	11/24/21 11:07	11/29/21 03:54	1

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C2 PFHxA	76		50 - 150	11/24/21 11:07	11/29/21 03:54	1
13C4 PFHpA	75		50 - 150	11/24/21 11:07	11/29/21 03:54	1
13C4 PFOA	96		50 - 150	11/24/21 11:07	11/29/21 03:54	1
13C5 PFNA	78		50 - 150	11/24/21 11:07	11/29/21 03:54	1
13C2 PFDA	85		50 - 150	11/24/21 11:07	11/29/21 03:54	1
13C2 PFUnA	88		50 - 150	11/24/21 11:07	11/29/21 03:54	1
13C2 PFDoA	93		50 - 150	11/24/21 11:07	11/29/21 03:54	1
13C2 PFTeDA	93		50 - 150	11/24/21 11:07	11/29/21 03:54	1
13C3 PFBS	65		50 - 150	11/24/21 11:07	11/29/21 03:54	1
18O2 PFHxS	69		50 - 150	11/24/21 11:07	11/29/21 03:54	1
13C4 PFOS	67		50 - 150	11/24/21 11:07	11/29/21 03:54	1
d3-NMeFOSAA	87		50 - 150	11/24/21 11:07	11/29/21 03:54	1
d5-NEtFOSAA	98		50 - 150	11/24/21 11:07	11/29/21 03:54	1
13C3 HFPO-DA	73		50 - 150	11/24/21 11:07	11/29/21 03:54	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	4.0	H	0.1	0.1	%			11/29/21 14:01	1
Percent Solids	96.0	H	0.1	0.1	%			11/29/21 14:01	1

Client Sample ID: ADQ-AC6-EB2

Lab Sample ID: 320-82155-15

Date Collected: 11/14/21 09:52

Matrix: Water

Date Received: 11/23/21 16:45

Method: EPA 537(Mod) - PFAS for QSM 5.3, Table B-15

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorohexanoic acid (PFHxA)	ND		2.6	0.76	ng/L		11/24/21 12:34	12/03/21 18:59	1
Perfluoroheptanoic acid (PFHpA)	ND		2.6	0.33	ng/L		11/24/21 12:34	12/03/21 18:59	1
Perfluorooctanoic acid (PFOA)	ND		2.6	1.1	ng/L		11/24/21 12:34	12/03/21 18:59	1
Perfluorononanoic acid (PFNA)	ND		2.6	0.35	ng/L		11/24/21 12:34	12/03/21 18:59	1
Perfluorodecanoic acid (PFDA)	ND		2.6	0.40	ng/L		11/24/21 12:34	12/03/21 18:59	1
Perfluoroundecanoic acid (PFUnA)	ND		2.6	1.4	ng/L		11/24/21 12:34	12/03/21 18:59	1
Perfluorododecanoic acid (PFDoA)	ND		2.6	0.72	ng/L		11/24/21 12:34	12/03/21 18:59	1
Perfluorotridecanoic acid (PFTrDA)	ND		2.6	1.7	ng/L		11/24/21 12:34	12/03/21 18:59	1
Perfluorotetradecanoic acid (PFTeA)	ND		2.6	0.95	ng/L		11/24/21 12:34	12/03/21 18:59	1
Perfluorobutanesulfonic acid (PFBS)	ND		2.6	0.26	ng/L		11/24/21 12:34	12/03/21 18:59	1
Perfluorohexanesulfonic acid (PFHxS)	ND		2.6	0.74	ng/L		11/24/21 12:34	12/03/21 18:59	1

Eurofins TestAmerica, Sacramento

Client Sample Results

Client: Shannon & Wilson, Inc
Project/Site: Kodiak DOT&PF PFAS (107471)

Job ID: 320-82155-1

Client Sample ID: ADQ-AC6-EB2

Lab Sample ID: 320-82155-15

Date Collected: 11/14/21 09:52

Matrix: Water

Date Received: 11/23/21 16:45

Method: EPA 537(Mod) - PFAS for QSM 5.3, Table B-15 (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorooctanesulfonic acid (PFOS)	ND		2.6	0.70	ng/L		11/24/21 12:34	12/03/21 18:59	1
NEtFOSAA	ND		6.5	1.7	ng/L		11/24/21 12:34	12/03/21 18:59	1
NMeFOSAA	ND		6.5	1.6	ng/L		11/24/21 12:34	12/03/21 18:59	1
HFPO-DA (GenX)	ND		5.2	2.0	ng/L		11/24/21 12:34	12/03/21 18:59	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	ND		2.6	0.52	ng/L		11/24/21 12:34	12/03/21 18:59	1
9CI-PF3ONS	ND		2.6	0.31	ng/L		11/24/21 12:34	12/03/21 18:59	1
11CI-PF3OUdS	ND		2.6	0.42	ng/L		11/24/21 12:34	12/03/21 18:59	1
Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
13C2 PFHxA	87		50 - 150				11/24/21 12:34	12/03/21 18:59	1
13C4 PFHpA	91		50 - 150				11/24/21 12:34	12/03/21 18:59	1
13C4 PFOA	91		50 - 150				11/24/21 12:34	12/03/21 18:59	1
13C5 PFNA	92		50 - 150				11/24/21 12:34	12/03/21 18:59	1
13C2 PFDA	83		50 - 150				11/24/21 12:34	12/03/21 18:59	1
13C2 PFUnA	93		50 - 150				11/24/21 12:34	12/03/21 18:59	1
13C2 PFDoA	93		50 - 150				11/24/21 12:34	12/03/21 18:59	1
13C2 PFTeDA	109		50 - 150				11/24/21 12:34	12/03/21 18:59	1
13C3 PFBS	97		50 - 150				11/24/21 12:34	12/03/21 18:59	1
18O2 PFHxS	82		50 - 150				11/24/21 12:34	12/03/21 18:59	1
13C4 PFOS	89		50 - 150				11/24/21 12:34	12/03/21 18:59	1
d5-NEtFOSAA	92		50 - 150				11/24/21 12:34	12/03/21 18:59	1
d3-NMeFOSAA	85		50 - 150				11/24/21 12:34	12/03/21 18:59	1
13C3 HFPO-DA	88		50 - 150				11/24/21 12:34	12/03/21 18:59	1

Client Sample ID: ADQ-AC11-01

Lab Sample ID: 320-82155-16

Date Collected: 11/14/21 11:05

Matrix: Solid

Date Received: 11/23/21 16:45

Percent Solids: 91.8

Method: EPA 537(Mod) - PFAS for QSM 5.3, Table B-15

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorohexanoic acid (PFHxA)	0.54		0.20	0.031	ug/Kg	☼	11/24/21 11:07	11/29/21 04:04	1
Perfluoroheptanoic acid (PFHpA)	0.18	J	0.20	0.038	ug/Kg	☼	11/24/21 11:07	11/29/21 04:04	1
Perfluorooctanoic acid (PFOA)	0.40		0.20	0.052	ug/Kg	☼	11/24/21 11:07	11/29/21 04:04	1
Perfluorononanoic acid (PFNA)	0.055	J	0.20	0.022	ug/Kg	☼	11/24/21 11:07	11/29/21 04:04	1
Perfluorodecanoic acid (PFDA)	ND		0.20	0.048	ug/Kg	☼	11/24/21 11:07	11/29/21 04:04	1
Perfluoroundecanoic acid (PFUnA)	ND		0.20	0.042	ug/Kg	☼	11/24/21 11:07	11/29/21 04:04	1
Perfluorododecanoic acid (PFDoA)	ND		0.20	0.030	ug/Kg	☼	11/24/21 11:07	11/29/21 04:04	1
Perfluorotridecanoic acid (PFTTrDA)	ND		0.20	0.021	ug/Kg	☼	11/24/21 11:07	11/29/21 04:04	1
Perfluorotetradecanoic acid (PFTeA)	ND		0.20	0.037	ug/Kg	☼	11/24/21 11:07	11/29/21 04:04	1
Perfluorobutanesulfonic acid (PFBS)	0.20		0.20	0.038	ug/Kg	☼	11/24/21 11:07	11/29/21 04:04	1
Perfluorohexanesulfonic acid (PFHxS)	3.7		0.20	0.029	ug/Kg	☼	11/24/21 11:07	11/29/21 04:04	1
NEtFOSAA	ND		0.20	0.048	ug/Kg	☼	11/24/21 11:07	11/29/21 04:04	1
NMeFOSAA	0.058	J	0.20	0.023	ug/Kg	☼	11/24/21 11:07	11/29/21 04:04	1
HFPO-DA (GenX)	ND		0.20	0.041	ug/Kg	☼	11/24/21 11:07	11/29/21 04:04	1
9CI-PF3ONS	ND		0.20	0.035	ug/Kg	☼	11/24/21 11:07	11/29/21 04:04	1
11CI-PF3OUdS	ND		0.20	0.031	ug/Kg	☼	11/24/21 11:07	11/29/21 04:04	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	ND		0.20	0.039	ug/Kg	☼	11/24/21 11:07	11/29/21 04:04	1

Eurofins TestAmerica, Sacramento

Client Sample Results

Client: Shannon & Wilson, Inc
 Project/Site: Kodiak DOT&PF PFAS (107471)

Job ID: 320-82155-1

Client Sample ID: ADQ-AC11-01

Lab Sample ID: 320-82155-16

Date Collected: 11/14/21 11:05

Matrix: Solid

Date Received: 11/23/21 16:45

Percent Solids: 91.8

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C2 PFHxA	76		50 - 150	11/24/21 11:07	11/29/21 04:04	1
13C4 PFHpA	73		50 - 150	11/24/21 11:07	11/29/21 04:04	1
13C4 PFOA	92		50 - 150	11/24/21 11:07	11/29/21 04:04	1
13C5 PFNA	74		50 - 150	11/24/21 11:07	11/29/21 04:04	1
13C2 PFDA	86		50 - 150	11/24/21 11:07	11/29/21 04:04	1
13C2 PFUnA	81		50 - 150	11/24/21 11:07	11/29/21 04:04	1
13C2 PFDoA	94		50 - 150	11/24/21 11:07	11/29/21 04:04	1
13C2 PFTeDA	94		50 - 150	11/24/21 11:07	11/29/21 04:04	1
13C3 PFBS	69		50 - 150	11/24/21 11:07	11/29/21 04:04	1
18O2 PFHxS	63		50 - 150	11/24/21 11:07	11/29/21 04:04	1
13C4 PFOS	56		50 - 150	11/24/21 11:07	11/29/21 04:04	1
d3-NMeFOSAA	76		50 - 150	11/24/21 11:07	11/29/21 04:04	1
d5-NEtFOSAA	82		50 - 150	11/24/21 11:07	11/29/21 04:04	1
13C3 HFPO-DA	77		50 - 150	11/24/21 11:07	11/29/21 04:04	1

Method: EPA 537(Mod) - PFAS for QSM 5.3, Table B-15 - DL

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorooctanesulfonic acid (PFOS)	26		0.99	0.21	ug/Kg	☼	11/24/21 11:07	11/30/21 16:02	5

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C4 PFOS	50		50 - 150	11/24/21 11:07	11/30/21 16:02	5

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	8.2	H	0.1	0.1	%			11/29/21 14:01	1
Percent Solids	91.8	H	0.1	0.1	%			11/29/21 14:01	1

Client Sample ID: ADQ-AC11-02

Lab Sample ID: 320-82155-17

Date Collected: 11/14/21 11:20

Matrix: Solid

Date Received: 11/23/21 16:45

Percent Solids: 91.1

Method: EPA 537(Mod) - PFAS for QSM 5.3, Table B-15

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorohexanoic acid (PFHxA)	0.067	J	0.22	0.033	ug/Kg	☼	11/24/21 11:07	11/29/21 04:15	1
Perfluoroheptanoic acid (PFHpA)	ND		0.22	0.041	ug/Kg	☼	11/24/21 11:07	11/29/21 04:15	1
Perfluorooctanoic acid (PFOA)	ND		0.22	0.057	ug/Kg	☼	11/24/21 11:07	11/29/21 04:15	1
Perfluorononanoic acid (PFNA)	ND		0.22	0.024	ug/Kg	☼	11/24/21 11:07	11/29/21 04:15	1
Perfluorodecanoic acid (PFDA)	ND		0.22	0.052	ug/Kg	☼	11/24/21 11:07	11/29/21 04:15	1
Perfluoroundecanoic acid (PFUnA)	ND		0.22	0.045	ug/Kg	☼	11/24/21 11:07	11/29/21 04:15	1
Perfluorododecanoic acid (PFDoA)	ND		0.22	0.032	ug/Kg	☼	11/24/21 11:07	11/29/21 04:15	1
Perfluorotridecanoic acid (PFTeDA)	ND		0.22	0.023	ug/Kg	☼	11/24/21 11:07	11/29/21 04:15	1
Perfluorotetradecanoic acid (PFTeA)	ND		0.22	0.040	ug/Kg	☼	11/24/21 11:07	11/29/21 04:15	1
Perfluorobutanesulfonic acid (PFBS)	ND		0.22	0.041	ug/Kg	☼	11/24/21 11:07	11/29/21 04:15	1
Perfluorohexanesulfonic acid (PFHxS)	0.41		0.22	0.031	ug/Kg	☼	11/24/21 11:07	11/29/21 04:15	1
Perfluorooctanesulfonic acid (PFOS)	5.0	F1	0.22	0.046	ug/Kg	☼	11/24/21 11:07	11/29/21 04:15	1
NEtFOSAA	ND		0.22	0.052	ug/Kg	☼	11/24/21 11:07	11/29/21 04:15	1
NMeFOSAA	ND		0.22	0.025	ug/Kg	☼	11/24/21 11:07	11/29/21 04:15	1
HFPO-DA (GenX)	ND		0.22	0.044	ug/Kg	☼	11/24/21 11:07	11/29/21 04:15	1
9CI-PF3ONS	ND		0.22	0.038	ug/Kg	☼	11/24/21 11:07	11/29/21 04:15	1
11CI-PF3OUdS	ND		0.22	0.033	ug/Kg	☼	11/24/21 11:07	11/29/21 04:15	1

Eurofins TestAmerica, Sacramento

Client Sample Results

Client: Shannon & Wilson, Inc
 Project/Site: Kodiak DOT&PF PFAS (107471)

Job ID: 320-82155-1

Client Sample ID: ADQ-AC11-02

Lab Sample ID: 320-82155-17

Date Collected: 11/14/21 11:20

Matrix: Solid

Date Received: 11/23/21 16:45

Percent Solids: 91.1

Method: EPA 537(Mod) - PFAS for QSM 5.3, Table B-15 (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	ND		0.22	0.042	ug/Kg	☼	11/24/21 11:07	11/29/21 04:15	1
<i>Isotope Dilution</i>	<i>%Recovery</i>	<i>Qualifier</i>	<i>Limits</i>				<i>Prepared</i>	<i>Analyzed</i>	<i>Dil Fac</i>
13C2 PFHxA	63		50 - 150				11/24/21 11:07	11/29/21 04:15	1
13C4 PFHpA	63		50 - 150				11/24/21 11:07	11/29/21 04:15	1
13C4 PFOA	83		50 - 150				11/24/21 11:07	11/29/21 04:15	1
13C5 PFNA	64		50 - 150				11/24/21 11:07	11/29/21 04:15	1
13C2 PFDA	78		50 - 150				11/24/21 11:07	11/29/21 04:15	1
13C2 PFOA	78		50 - 150				11/24/21 11:07	11/29/21 04:15	1
13C2 PFDoA	81		50 - 150				11/24/21 11:07	11/29/21 04:15	1
13C2 PFTeDA	81		50 - 150				11/24/21 11:07	11/29/21 04:15	1
13C3 PFBS	58		50 - 150				11/24/21 11:07	11/29/21 04:15	1
18O2 PFHxS	55		50 - 150				11/24/21 11:07	11/29/21 04:15	1
13C4 PFOS	55		50 - 150				11/24/21 11:07	11/29/21 04:15	1
d3-NMeFOSAA	69		50 - 150				11/24/21 11:07	11/29/21 04:15	1
d5-NEtFOSAA	78		50 - 150				11/24/21 11:07	11/29/21 04:15	1
13C3 HFPO-DA	60		50 - 150				11/24/21 11:07	11/29/21 04:15	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	8.9	H	0.1	0.1	%			11/29/21 14:01	1
Percent Solids	91.1	H	0.1	0.1	%			11/29/21 14:01	1

Isotope Dilution Summary

Client: Shannon & Wilson, Inc
 Project/Site: Kodiak DOT&PF PFAS (107471)

Job ID: 320-82155-1

Method: EPA 537(Mod) - PFAS for QSM 5.3, Table B-15

Matrix: Solid

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Isotope Dilution Recovery (Acceptance Limits)							
		PFHxA (50-150)	C4PFHA (50-150)	PFOA (50-150)	PFNA (50-150)	PFDA (50-150)	PFUnA (50-150)	PFDoA (50-150)	PFTDA (50-150)
320-82155-1	ADQ-AC3-06	78	83	91	85	78	80	76	77
320-82155-2	ADQ-AC3-07	59	60	80	62	75	72	74	77
320-82155-3	ADQ-AC3-107	81	81	93	81	90	93	108	98
320-82155-4	ADQ-AC3-05	74	70	92	73	79	80	85	88
320-82155-5	ADQ-AC3-04	78	73	92	75	85	79	88	87
320-82155-6	ADQ-AC3-03	68	73	76	64	73	72	81	85
320-82155-8	ADQ-AC3-02	53	56	66	57	61	66	69	74
320-82155-9	ADQ-AC3-01	59	65	72	70	71	69	75	78
320-82155-10	ADQ-AC7-01	64	71	80	73	75	72	76	77
320-82155-11	ADQ-AC7-101	60	63	81	67	72	72	78	73
320-82155-12	ADQ-AC7-02	48 *5-	50	57	55	56	55	51	55
320-82155-13	ADQ-AC6-01	74	82	97	76	84	96	98	97
320-82155-14	ADQ-AC6-02	76	75	96	78	85	88	93	93
320-82155-16	ADQ-AC11-01	76	73	92	74	86	81	94	94
320-82155-16 - DL	ADQ-AC11-01								
320-82155-17	ADQ-AC11-02	63	63	83	64	78	78	81	81
320-82155-17 MS	ADQ-AC11-02	65	73	87	69	77	82	91	89
320-82155-17 MSD	ADQ-AC11-02	68	72	95	75	84	84	85	91
LCS 320-545562/2-A	Lab Control Sample	85	89	99	92	84	87	89	93
MB 320-545562/1-A	Method Blank	89	91	103	87	85	91	93	92

Lab Sample ID	Client Sample ID	Percent Isotope Dilution Recovery (Acceptance Limits)					
		C3PFBS (50-150)	PFHxS (50-150)	PFOS (50-150)	d3NMFOS (50-150)	d5NEFOS (50-150)	HFPODA (50-150)
320-82155-1	ADQ-AC3-06	68	60	57	85	86	79
320-82155-2	ADQ-AC3-07	56	59	59	69	78	63
320-82155-3	ADQ-AC3-107	76	76	75	91	102	79
320-82155-4	ADQ-AC3-05	51	52	48 *5-	71	79	76
320-82155-5	ADQ-AC3-04	81	77	72	75	86	77
320-82155-6	ADQ-AC3-03	56	56	55	73	81	68
320-82155-8	ADQ-AC3-02	50	49 *5-	50	64	70	57
320-82155-9	ADQ-AC3-01	50	47 *5-	48 *5-	65	76	59
320-82155-10	ADQ-AC7-01	57	56	57	74	88	66
320-82155-11	ADQ-AC7-101	55	52	49 *5-	63	74	61
320-82155-12	ADQ-AC7-02	52	53	48 *5-	22 *5-	27 *5-	56
320-82155-13	ADQ-AC6-01	75	68	64	82	112	71
320-82155-14	ADQ-AC6-02	65	69	67	87	98	73
320-82155-16	ADQ-AC11-01	69	63	56	76	82	77
320-82155-16 - DL	ADQ-AC11-01			50			
320-82155-17	ADQ-AC11-02	58	55	55	69	78	60
320-82155-17 MS	ADQ-AC11-02	60	63	62	77	90	68
320-82155-17 MSD	ADQ-AC11-02	64	64	62	90	93	69
LCS 320-545562/2-A	Lab Control Sample	95	102	87	78	81	80
MB 320-545562/1-A	Method Blank	95	91	95	77	86	86

Surrogate Legend

- PFHxA = 13C2 PFHxA
- C4PFHA = 13C4 PFHpA
- PFOA = 13C4 PFOA
- PFNA = 13C5 PFNA
- PFDA = 13C2 PFDA

Isotope Dilution Summary

Client: Shannon & Wilson, Inc
 Project/Site: Kodiak DOT&PF PFAS (107471)

Job ID: 320-82155-1

PFUnA = 13C2 PFUnA
 PFDaA = 13C2 PFDaA
 PFTDA = 13C2 PFTeDA
 C3PFBS = 13C3 PFBS
 PFHxS = 18O2 PFHxS
 PFOS = 13C4 PFOS
 d3NMFOS = d3-NMeFOSAA
 d5NEFOS = d5-NEtFOSAA
 HFPODA = 13C3 HFPO-DA

Method: EPA 537(Mod) - PFAS for QSM 5.3, Table B-15

Matrix: Water

Prep Type: Total/NA

Percent Isotope Dilution Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	PFHxA (50-150)	C4PFHA (50-150)	PFOA (50-150)	PFNA (50-150)	PFDA (50-150)	PFUnA (50-150)	PFDaA (50-150)	PFTDA (50-150)
320-82155-7	ADQ-AC3-03-EB1	85	85	89	91	79	86	85	97
320-82155-15	ADQ-AC6-EB2	87	91	91	92	83	93	93	109
LCS 320-545634/2-A	Lab Control Sample	112	111	110	108	109	104	110	120
LCSD 320-545634/3-A	Lab Control Sample Dup	64	64	65	67	64	66	68	72
MB 320-545634/1-A	Method Blank	75	78	77	75	76	80	74	79

Percent Isotope Dilution Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	C3PFBS (50-150)	PFHxS (50-150)	PFOS (50-150)	d5NEFOS (50-150)	d3NMFOS (50-150)	HFPODA (50-150)
320-82155-7	ADQ-AC3-03-EB1	94	80	87	88	89	83
320-82155-15	ADQ-AC6-EB2	97	82	89	92	85	88
LCS 320-545634/2-A	Lab Control Sample	124	100	106	114	111	112
LCSD 320-545634/3-A	Lab Control Sample Dup	72	64	68	83	78	64
MB 320-545634/1-A	Method Blank	89	71	79	91	83	79

Surrogate Legend

PFHxA = 13C2 PFHxA
 C4PFHA = 13C4 PFHpA
 PFOA = 13C4 PFOA
 PFNA = 13C5 PFNA
 PFDA = 13C2 PFDA
 PFUnA = 13C2 PFUnA
 PFDaA = 13C2 PFDaA
 PFTDA = 13C2 PFTeDA
 C3PFBS = 13C3 PFBS
 PFHxS = 18O2 PFHxS
 PFOS = 13C4 PFOS
 d5NEFOS = d5-NEtFOSAA
 d3NMFOS = d3-NMeFOSAA
 HFPODA = 13C3 HFPO-DA

QC Sample Results

Client: Shannon & Wilson, Inc
 Project/Site: Kodiak DOT&PF PFAS (107471)

Job ID: 320-82155-1

Method: EPA 537(Mod) - PFAS for QSM 5.3, Table B-15

Lab Sample ID: MB 320-545562/1-A
Matrix: Solid
Analysis Batch: 546590

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 545562

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorohexanoic acid (PFHxA)	ND		0.20	0.031	ug/Kg		11/24/21 11:07	11/29/21 01:08	1
Perfluoroheptanoic acid (PFHpA)	ND		0.20	0.038	ug/Kg		11/24/21 11:07	11/29/21 01:08	1
Perfluorooctanoic acid (PFOA)	ND		0.20	0.053	ug/Kg		11/24/21 11:07	11/29/21 01:08	1
Perfluorononanoic acid (PFNA)	ND		0.20	0.022	ug/Kg		11/24/21 11:07	11/29/21 01:08	1
Perfluorodecanoic acid (PFDA)	ND		0.20	0.048	ug/Kg		11/24/21 11:07	11/29/21 01:08	1
Perfluoroundecanoic acid (PFUnA)	ND		0.20	0.042	ug/Kg		11/24/21 11:07	11/29/21 01:08	1
Perfluorododecanoic acid (PFDoA)	ND		0.20	0.030	ug/Kg		11/24/21 11:07	11/29/21 01:08	1
Perfluorotridecanoic acid (PFTrDA)	ND		0.20	0.021	ug/Kg		11/24/21 11:07	11/29/21 01:08	1
Perfluorotetradecanoic acid (PFTeA)	ND		0.20	0.037	ug/Kg		11/24/21 11:07	11/29/21 01:08	1
Perfluorobutanesulfonic acid (PFBS)	ND		0.20	0.038	ug/Kg		11/24/21 11:07	11/29/21 01:08	1
Perfluorohexanesulfonic acid (PFHxS)	ND		0.20	0.029	ug/Kg		11/24/21 11:07	11/29/21 01:08	1
Perfluorooctanesulfonic acid (PFOS)	ND		0.20	0.043	ug/Kg		11/24/21 11:07	11/29/21 01:08	1
NEtFOSAA	ND		0.20	0.048	ug/Kg		11/24/21 11:07	11/29/21 01:08	1
NMeFOSAA	ND		0.20	0.023	ug/Kg		11/24/21 11:07	11/29/21 01:08	1
HFPO-DA (GenX)	ND		0.20	0.041	ug/Kg		11/24/21 11:07	11/29/21 01:08	1
9CI-PF3ONS	ND		0.20	0.035	ug/Kg		11/24/21 11:07	11/29/21 01:08	1
11CI-PF3OUdS	ND		0.20	0.031	ug/Kg		11/24/21 11:07	11/29/21 01:08	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	ND		0.20	0.039	ug/Kg		11/24/21 11:07	11/29/21 01:08	1

Isotope Dilution	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C2 PFHxA	89		50 - 150	11/24/21 11:07	11/29/21 01:08	1
13C4 PFHpA	91		50 - 150	11/24/21 11:07	11/29/21 01:08	1
13C4 PFOA	103		50 - 150	11/24/21 11:07	11/29/21 01:08	1
13C5 PFNA	87		50 - 150	11/24/21 11:07	11/29/21 01:08	1
13C2 PFDA	85		50 - 150	11/24/21 11:07	11/29/21 01:08	1
13C2 PFUnA	91		50 - 150	11/24/21 11:07	11/29/21 01:08	1
13C2 PFDoA	93		50 - 150	11/24/21 11:07	11/29/21 01:08	1
13C2 PFTeDA	92		50 - 150	11/24/21 11:07	11/29/21 01:08	1
13C3 PFBS	95		50 - 150	11/24/21 11:07	11/29/21 01:08	1
18O2 PFHxS	91		50 - 150	11/24/21 11:07	11/29/21 01:08	1
13C4 PFOS	95		50 - 150	11/24/21 11:07	11/29/21 01:08	1
d5-NEtFOSAA	86		50 - 150	11/24/21 11:07	11/29/21 01:08	1
d3-NMeFOSAA	77		50 - 150	11/24/21 11:07	11/29/21 01:08	1
13C3 HFPO-DA	86		50 - 150	11/24/21 11:07	11/29/21 01:08	1

Lab Sample ID: LCS 320-545562/2-A
Matrix: Solid
Analysis Batch: 546590

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 545562

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
Perfluorohexanoic acid (PFHxA)	2.00	1.93		ug/Kg		97	70 - 132
Perfluoroheptanoic acid (PFHpA)	2.00	1.96		ug/Kg		98	71 - 131
Perfluorooctanoic acid (PFOA)	2.00	1.90		ug/Kg		95	69 - 133
Perfluorononanoic acid (PFNA)	2.00	1.90		ug/Kg		95	72 - 129
Perfluorodecanoic acid (PFDA)	2.00	1.98		ug/Kg		99	69 - 133
Perfluoroundecanoic acid (PFUnA)	2.00	1.96		ug/Kg		98	64 - 136

Eurofins TestAmerica, Sacramento

QC Sample Results

Client: Shannon & Wilson, Inc
 Project/Site: Kodiak DOT&PF PFAS (107471)

Job ID: 320-82155-1

Method: EPA 537(Mod) - PFAS for QSM 5.3, Table B-15 (Continued)

Lab Sample ID: LCS 320-545562/2-A
Matrix: Solid
Analysis Batch: 546590

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 545562

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Perfluorododecanoic acid (PFDoA)	2.00	1.97		ug/Kg		99	69 - 135
Perfluorotridecanoic acid (PFTrDA)	2.00	2.24		ug/Kg		112	66 - 139
Perfluorotetradecanoic acid (PFTeA)	2.00	1.84		ug/Kg		92	69 - 133
Perfluorobutanesulfonic acid (PFBS)	1.77	1.56		ug/Kg		88	72 - 128
Perfluorohexanesulfonic acid (PFHxS)	1.82	1.65		ug/Kg		91	67 - 130
Perfluorooctanesulfonic acid (PFOS)	1.86	1.79		ug/Kg		96	68 - 136
NEtFOSAA	2.00	1.92		ug/Kg		96	61 - 139
NMeFOSAA	2.00	2.04		ug/Kg		102	63 - 144
HFPO-DA (GenX)	2.00	2.16		ug/Kg		108	77 - 137
9Cl-PF3ONS	1.86	1.75		ug/Kg		94	75 - 135
11Cl-PF3OUdS	1.88	1.93		ug/Kg		103	76 - 136
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	1.88	2.10		ug/Kg		111	79 - 139

Isotope Dilution	LCS %Recovery	LCS Qualifier	Limits
13C2 PFHxA	85		50 - 150
13C4 PFHpA	89		50 - 150
13C4 PFOA	99		50 - 150
13C5 PFNA	92		50 - 150
13C2 PFDA	84		50 - 150
13C2 PFUnA	87		50 - 150
13C2 PFDoA	89		50 - 150
13C2 PFTeDA	93		50 - 150
13C3 PFBS	95		50 - 150
18O2 PFHxS	102		50 - 150
13C4 PFOS	87		50 - 150
d5-NEtFOSAA	81		50 - 150
d3-NMeFOSAA	78		50 - 150
13C3 HFPO-DA	80		50 - 150

Lab Sample ID: 320-82155-17 MS
Matrix: Solid
Analysis Batch: 546590

Client Sample ID: ADQ-AC11-02
Prep Type: Total/NA
Prep Batch: 545562

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Perfluorohexanoic acid (PFHxA)	0.067	J	2.15	2.03		ug/Kg	⊛	91	70 - 132
Perfluoroheptanoic acid (PFHpA)	ND		2.15	2.01		ug/Kg	⊛	94	71 - 131
Perfluorooctanoic acid (PFOA)	ND		2.15	1.88		ug/Kg	⊛	87	69 - 133
Perfluorononanoic acid (PFNA)	ND		2.15	2.14		ug/Kg	⊛	99	72 - 129
Perfluorodecanoic acid (PFDA)	ND		2.15	2.18		ug/Kg	⊛	101	69 - 133
Perfluoroundecanoic acid (PFUnA)	ND		2.15	2.08		ug/Kg	⊛	97	64 - 136
Perfluorododecanoic acid (PFDoA)	ND		2.15	2.01		ug/Kg	⊛	93	69 - 135

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QC Sample Results

Client: Shannon & Wilson, Inc
 Project/Site: Kodiak DOT&PF PFAS (107471)

Job ID: 320-82155-1

Method: EPA 537(Mod) - PFAS for QSM 5.3, Table B-15 (Continued)

Lab Sample ID: 320-82155-17 MS
Matrix: Solid
Analysis Batch: 546590

Client Sample ID: ADQ-AC11-02
Prep Type: Total/NA
Prep Batch: 545562

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Perfluorotridecanoic acid (PFTrDA)	ND		2.15	2.27		ug/Kg	⊛	105	66 - 139
Perfluorotetradecanoic acid (PFTeA)	ND		2.15	2.04		ug/Kg	⊛	95	69 - 133
Perfluorobutanesulfonic acid (PFBS)	ND		1.90	1.66		ug/Kg	⊛	87	72 - 128
Perfluorohexanesulfonic acid (PFHxS)	0.41		1.96	2.28		ug/Kg	⊛	96	67 - 130
Perfluorooctanesulfonic acid (PFOS)	5.0	F1	2.00	6.70		ug/Kg	⊛	87	68 - 136
NEtFOSAA	ND		2.15	1.96		ug/Kg	⊛	91	61 - 139
NMeFOSAA	ND		2.15	2.06		ug/Kg	⊛	96	63 - 144
HFPO-DA (GenX)	ND		2.15	2.04		ug/Kg	⊛	95	77 - 137
9Cl-PF3ONS	ND		2.00	1.82		ug/Kg	⊛	91	75 - 135
11Cl-PF3OUdS	ND		2.03	2.19		ug/Kg	⊛	108	76 - 136
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	ND		2.03	2.27		ug/Kg	⊛	112	79 - 139

Isotope Dilution	MS %Recovery	MS Qualifier	MS Limits
13C2 PFHxA	65		50 - 150
13C4 PFHpA	73		50 - 150
13C4 PFOA	87		50 - 150
13C5 PFNA	69		50 - 150
13C2 PFDA	77		50 - 150
13C2 PFUnA	82		50 - 150
13C2 PFDoA	91		50 - 150
13C2 PFTeDA	89		50 - 150
13C3 PFBS	60		50 - 150
18O2 PFHxS	63		50 - 150
13C4 PFOS	62		50 - 150
d5-NEtFOSAA	90		50 - 150
d3-NMeFOSAA	77		50 - 150
13C3 HFPO-DA	68		50 - 150

Lab Sample ID: 320-82155-17 MSD
Matrix: Solid
Analysis Batch: 546590

Client Sample ID: ADQ-AC11-02
Prep Type: Total/NA
Prep Batch: 545562

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Perfluorohexanoic acid (PFHxA)	0.067	J	2.17	2.04		ug/Kg	⊛	91	70 - 132	0	30
Perfluoroheptanoic acid (PFHpA)	ND		2.17	1.91		ug/Kg	⊛	88	71 - 131	6	30
Perfluorooctanoic acid (PFOA)	ND		2.17	1.85		ug/Kg	⊛	85	69 - 133	1	30
Perfluorononanoic acid (PFNA)	ND		2.17	2.09		ug/Kg	⊛	96	72 - 129	3	30
Perfluorodecanoic acid (PFDA)	ND		2.17	2.32		ug/Kg	⊛	107	69 - 133	6	30
Perfluoroundecanoic acid (PFUnA)	ND		2.17	2.00		ug/Kg	⊛	92	64 - 136	4	30
Perfluorododecanoic acid (PFDoA)	ND		2.17	2.21		ug/Kg	⊛	102	69 - 135	10	30
Perfluorotridecanoic acid (PFTrDA)	ND		2.17	2.53		ug/Kg	⊛	117	66 - 139	11	30

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QC Sample Results

Client: Shannon & Wilson, Inc
 Project/Site: Kodiak DOT&PF PFAS (107471)

Job ID: 320-82155-1

Method: EPA 537(Mod) - PFAS for QSM 5.3, Table B-15 (Continued)

Lab Sample ID: 320-82155-17 MSD

Matrix: Solid

Analysis Batch: 546590

Client Sample ID: ADQ-AC11-02

Prep Type: Total/NA

Prep Batch: 545562

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Perfluorotetradecanoic acid (PFTeA)	ND		2.17	2.17		ug/Kg	☼	100	69 - 133	6	30
Perfluorobutanesulfonic acid (PFBS)	ND		1.92	1.42		ug/Kg	☼	74	72 - 128	16	30
Perfluorohexanesulfonic acid (PFHxS)	0.41		1.97	2.21		ug/Kg	☼	91	67 - 130	3	30
Perfluorooctanesulfonic acid (PFOS)	5.0	F1	2.01	6.05	F1	ug/Kg	☼	54	68 - 136	10	30
NEtFOSAA	ND		2.17	1.87		ug/Kg	☼	86	61 - 139	5	30
NMeFOSAA	ND		2.17	1.97		ug/Kg	☼	91	63 - 144	4	30
HFPO-DA (GenX)	ND		2.17	2.21		ug/Kg	☼	102	77 - 137	8	30
9CI-PF3ONS	ND		2.02	1.95		ug/Kg	☼	97	75 - 135	7	30
11CI-PF3OUdS	ND		2.04	2.21		ug/Kg	☼	108	76 - 136	1	30
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	ND		2.04	2.33		ug/Kg	☼	114	79 - 139	3	30

Isotope Dilution	MSD %Recovery	MSD Qualifier	MSD Limits
13C2 PFHxA	68		50 - 150
13C4 PFHpA	72		50 - 150
13C4 PFOA	95		50 - 150
13C5 PFNA	75		50 - 150
13C2 PFDA	84		50 - 150
13C2 PFUnA	84		50 - 150
13C2 PFDoA	85		50 - 150
13C2 PFTeDA	91		50 - 150
13C3 PFBS	64		50 - 150
18O2 PFHxS	64		50 - 150
13C4 PFOS	62		50 - 150
d5-NEtFOSAA	93		50 - 150
d3-NMeFOSAA	90		50 - 150
13C3 HFPO-DA	69		50 - 150

Lab Sample ID: MB 320-545634/1-A

Matrix: Water

Analysis Batch: 546624

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 545634

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorohexanoic acid (PFHxA)	ND		2.0	0.58	ng/L		11/24/21 12:34	11/29/21 23:46	1
Perfluoroheptanoic acid (PFHpA)	ND		2.0	0.25	ng/L		11/24/21 12:34	11/29/21 23:46	1
Perfluorooctanoic acid (PFOA)	ND		2.0	0.85	ng/L		11/24/21 12:34	11/29/21 23:46	1
Perfluorononanoic acid (PFNA)	ND		2.0	0.27	ng/L		11/24/21 12:34	11/29/21 23:46	1
Perfluorodecanoic acid (PFDA)	ND		2.0	0.31	ng/L		11/24/21 12:34	11/29/21 23:46	1
Perfluoroundecanoic acid (PFUnA)	ND		2.0	1.1	ng/L		11/24/21 12:34	11/29/21 23:46	1
Perfluorododecanoic acid (PFDoA)	ND		2.0	0.55	ng/L		11/24/21 12:34	11/29/21 23:46	1
Perfluorotridecanoic acid (PFTrDA)	ND		2.0	1.3	ng/L		11/24/21 12:34	11/29/21 23:46	1
Perfluorotetradecanoic acid (PFTeA)	ND		2.0	0.73	ng/L		11/24/21 12:34	11/29/21 23:46	1
Perfluorobutanesulfonic acid (PFBS)	ND		2.0	0.20	ng/L		11/24/21 12:34	11/29/21 23:46	1
Perfluorohexanesulfonic acid (PFHxS)	ND		2.0	0.57	ng/L		11/24/21 12:34	11/29/21 23:46	1
Perfluorooctanesulfonic acid (PFOS)	ND		2.0	0.54	ng/L		11/24/21 12:34	11/29/21 23:46	1
NEtFOSAA	ND		5.0	1.3	ng/L		11/24/21 12:34	11/29/21 23:46	1

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QC Sample Results

Client: Shannon & Wilson, Inc
 Project/Site: Kodiak DOT&PF PFAS (107471)

Job ID: 320-82155-1

Method: EPA 537(Mod) - PFAS for QSM 5.3, Table B-15 (Continued)

Lab Sample ID: MB 320-545634/1-A
Matrix: Water
Analysis Batch: 546624

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 545634

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
NMeFOSAA	ND		5.0	1.2	ng/L		11/24/21 12:34	11/29/21 23:46	1
HFPO-DA (GenX)	ND		4.0	1.5	ng/L		11/24/21 12:34	11/29/21 23:46	1
9CI-PF3ONS	ND		2.0	0.24	ng/L		11/24/21 12:34	11/29/21 23:46	1
11CI-PF3OUdS	ND		2.0	0.32	ng/L		11/24/21 12:34	11/29/21 23:46	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	ND		2.0	0.40	ng/L		11/24/21 12:34	11/29/21 23:46	1

Isotope Dilution	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C2 PFHxA	75		50 - 150	11/24/21 12:34	11/29/21 23:46	1
13C4 PFHpA	78		50 - 150	11/24/21 12:34	11/29/21 23:46	1
13C4 PFOA	77		50 - 150	11/24/21 12:34	11/29/21 23:46	1
13C5 PFNA	75		50 - 150	11/24/21 12:34	11/29/21 23:46	1
13C2 PFDA	76		50 - 150	11/24/21 12:34	11/29/21 23:46	1
13C2 PFUnA	80		50 - 150	11/24/21 12:34	11/29/21 23:46	1
13C2 PFDoA	74		50 - 150	11/24/21 12:34	11/29/21 23:46	1
13C2 PFTeDA	79		50 - 150	11/24/21 12:34	11/29/21 23:46	1
13C3 PFBS	89		50 - 150	11/24/21 12:34	11/29/21 23:46	1
18O2 PFHxS	71		50 - 150	11/24/21 12:34	11/29/21 23:46	1
13C4 PFOS	79		50 - 150	11/24/21 12:34	11/29/21 23:46	1
d5-NEtFOSAA	91		50 - 150	11/24/21 12:34	11/29/21 23:46	1
d3-NMeFOSAA	83		50 - 150	11/24/21 12:34	11/29/21 23:46	1
13C3 HFPO-DA	79		50 - 150	11/24/21 12:34	11/29/21 23:46	1

Lab Sample ID: LCS 320-545634/2-A
Matrix: Water
Analysis Batch: 548179

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 545634

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
Perfluorohexanoic acid (PFHxA)	40.0	37.7		ng/L		94	72 - 129
Perfluoroheptanoic acid (PFHpA)	40.0	37.0		ng/L		93	72 - 130
Perfluorooctanoic acid (PFOA)	40.0	36.6		ng/L		91	71 - 133
Perfluorononanoic acid (PFNA)	40.0	39.9		ng/L		100	69 - 130
Perfluorodecanoic acid (PFDA)	40.0	38.0		ng/L		95	71 - 129
Perfluoroundecanoic acid (PFUnA)	40.0	40.2		ng/L		101	69 - 133
Perfluorododecanoic acid (PFDoA)	40.0	37.9		ng/L		95	72 - 134
Perfluorotridecanoic acid (PFTTrDA)	40.0	42.0		ng/L		105	65 - 144
Perfluorotetradecanoic acid (PFTeA)	40.0	36.6		ng/L		92	71 - 132
Perfluorobutanesulfonic acid (PFBS)	35.4	29.1		ng/L		82	72 - 130
Perfluorohexanesulfonic acid (PFHxS)	36.4	36.8		ng/L		101	68 - 131
Perfluorooctanesulfonic acid (PFOS)	37.1	35.3		ng/L		95	65 - 140
NEtFOSAA	40.0	35.0		ng/L		88	61 - 135
NMeFOSAA	40.0	37.4		ng/L		94	65 - 136
HFPO-DA (GenX)	40.0	37.5		ng/L		94	72 - 132
9CI-PF3ONS	37.3	34.6		ng/L		93	77 - 137

Eurofins TestAmerica, Sacramento

QC Sample Results

Client: Shannon & Wilson, Inc
 Project/Site: Kodiak DOT&PF PFAS (107471)

Job ID: 320-82155-1

Method: EPA 537(Mod) - PFAS for QSM 5.3, Table B-15 (Continued)

Lab Sample ID: LCS 320-545634/2-A
Matrix: Water
Analysis Batch: 548179

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 545634

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
11CI-PF3OUdS	37.7	37.8		ng/L		100	76 - 136
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	37.7	40.2		ng/L		107	81 - 141
		LCS LCS					
Isotope Dilution	%Recovery	Qualifier	Limits				
13C2 PFHxA	112		50 - 150				
13C4 PFHpA	111		50 - 150				
13C4 PFOA	110		50 - 150				
13C5 PFNA	108		50 - 150				
13C2 PFDA	109		50 - 150				
13C2 PFUnA	104		50 - 150				
13C2 PFDoA	110		50 - 150				
13C2 PFTeDA	120		50 - 150				
13C3 PFBS	124		50 - 150				
18O2 PFHxS	100		50 - 150				
13C4 PFOS	106		50 - 150				
d5-NEtFOSAA	114		50 - 150				
d3-NMeFOSAA	111		50 - 150				
13C3 HFPO-DA	112		50 - 150				

Lab Sample ID: LCSD 320-545634/3-A
Matrix: Water
Analysis Batch: 546624

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 545634

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Perfluorohexanoic acid (PFHxA)	40.0	37.4		ng/L		94	72 - 129	5	30
Perfluoroheptanoic acid (PFHpA)	40.0	40.4		ng/L		101	72 - 130	9	30
Perfluorooctanoic acid (PFOA)	40.0	39.0		ng/L		97	71 - 133	3	30
Perfluorononanoic acid (PFNA)	40.0	38.5		ng/L		96	69 - 130	1	30
Perfluorodecanoic acid (PFDA)	40.0	39.4		ng/L		98	71 - 129	1	30
Perfluoroundecanoic acid (PFUnA)	40.0	39.4		ng/L		98	69 - 133	9	30
Perfluorododecanoic acid (PFDoA)	40.0	39.1		ng/L		98	72 - 134	5	30
Perfluorotridecanoic acid (PFTTrDA)	40.0	39.9		ng/L		100	65 - 144	2	30
Perfluorotetradecanoic acid (PFTeA)	40.0	39.6		ng/L		99	71 - 132	2	30
Perfluorobutanesulfonic acid (PFBS)	35.4	32.0		ng/L		90	72 - 130	5	30
Perfluorohexanesulfonic acid (PFHxS)	36.4	36.6		ng/L		101	68 - 131	10	30
Perfluorooctanesulfonic acid (PFOS)	37.1	34.5		ng/L		93	65 - 140	5	30
NEtFOSAA	40.0	34.9		ng/L		87	61 - 135	8	30
NMeFOSAA	40.0	39.9		ng/L		100	65 - 136	5	30
HFPO-DA (GenX)	40.0	33.8		ng/L		85	72 - 132	17	30
9CI-PF3ONS	37.3	33.5		ng/L		90	77 - 137	7	30
11CI-PF3OUdS	37.7	36.6		ng/L		97	76 - 136	7	30
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	37.7	35.6		ng/L		94	81 - 141	1	30

Eurofins TestAmerica, Sacramento

QC Sample Results

Client: Shannon & Wilson, Inc
 Project/Site: Kodiak DOT&PF PFAS (107471)

Job ID: 320-82155-1

Method: EPA 537(Mod) - PFAS for QSM 5.3, Table B-15 (Continued)

Isotope Dilution	LCSD		Limits
	%Recovery	Qualifier	
13C2 PFHxA	64		50 - 150
13C4 PFHpA	64		50 - 150
13C4 PFOA	65		50 - 150
13C5 PFNA	67		50 - 150
13C2 PFDA	64		50 - 150
13C2 PFUnA	66		50 - 150
13C2 PFDoA	68		50 - 150
13C2 PFTeDA	72		50 - 150
13C3 PFBS	72		50 - 150
18O2 PFHxS	64		50 - 150
13C4 PFOS	68		50 - 150
d5-NEtFOSAA	83		50 - 150
d3-NMeFOSAA	78		50 - 150
13C3 HFPO-DA	64		50 - 150

Method: D 2216 - Percent Moisture

Lab Sample ID: 320-82155-1 DU
 Matrix: Solid
 Analysis Batch: 546536

Client Sample ID: ADQ-AC3-06
 Prep Type: Total/NA

Analyte	Sample		DU		Unit	D	RPD	Limit
	Result	Qualifier	Result	Qualifier				
Percent Moisture	7.3	H	7.2		%		1	20
Percent Solids	92.7	H	92.8		%		0.1	20

QC Association Summary

Client: Shannon & Wilson, Inc
 Project/Site: Kodiak DOT&PF PFAS (107471)

Job ID: 320-82155-1

LCMS

Prep Batch: 545562

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-82155-1	ADQ-AC3-06	Total/NA	Solid	SHAKE	
320-82155-2	ADQ-AC3-07	Total/NA	Solid	SHAKE	
320-82155-3	ADQ-AC3-107	Total/NA	Solid	SHAKE	
320-82155-4	ADQ-AC3-05	Total/NA	Solid	SHAKE	
320-82155-5	ADQ-AC3-04	Total/NA	Solid	SHAKE	
320-82155-6	ADQ-AC3-03	Total/NA	Solid	SHAKE	
320-82155-8	ADQ-AC3-02	Total/NA	Solid	SHAKE	
320-82155-9	ADQ-AC3-01	Total/NA	Solid	SHAKE	
320-82155-10	ADQ-AC7-01	Total/NA	Solid	SHAKE	
320-82155-11	ADQ-AC7-101	Total/NA	Solid	SHAKE	
320-82155-12	ADQ-AC7-02	Total/NA	Solid	SHAKE	
320-82155-13	ADQ-AC6-01	Total/NA	Solid	SHAKE	
320-82155-14	ADQ-AC6-02	Total/NA	Solid	SHAKE	
320-82155-16 - DL	ADQ-AC11-01	Total/NA	Solid	SHAKE	
320-82155-16	ADQ-AC11-01	Total/NA	Solid	SHAKE	
320-82155-17	ADQ-AC11-02	Total/NA	Solid	SHAKE	
MB 320-545562/1-A	Method Blank	Total/NA	Solid	SHAKE	
LCS 320-545562/2-A	Lab Control Sample	Total/NA	Solid	SHAKE	
320-82155-17 MS	ADQ-AC11-02	Total/NA	Solid	SHAKE	
320-82155-17 MSD	ADQ-AC11-02	Total/NA	Solid	SHAKE	

Prep Batch: 545634

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-82155-7	ADQ-AC3-03-EB1	Total/NA	Water	3535	
320-82155-15	ADQ-AC6-EB2	Total/NA	Water	3535	
MB 320-545634/1-A	Method Blank	Total/NA	Water	3535	
LCS 320-545634/2-A	Lab Control Sample	Total/NA	Water	3535	
LCSD 320-545634/3-A	Lab Control Sample Dup	Total/NA	Water	3535	

Analysis Batch: 546590

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-82155-1	ADQ-AC3-06	Total/NA	Solid	EPA 537(Mod)	545562
320-82155-2	ADQ-AC3-07	Total/NA	Solid	EPA 537(Mod)	545562
320-82155-3	ADQ-AC3-107	Total/NA	Solid	EPA 537(Mod)	545562
320-82155-4	ADQ-AC3-05	Total/NA	Solid	EPA 537(Mod)	545562
320-82155-5	ADQ-AC3-04	Total/NA	Solid	EPA 537(Mod)	545562
320-82155-6	ADQ-AC3-03	Total/NA	Solid	EPA 537(Mod)	545562
320-82155-8	ADQ-AC3-02	Total/NA	Solid	EPA 537(Mod)	545562
320-82155-9	ADQ-AC3-01	Total/NA	Solid	EPA 537(Mod)	545562
320-82155-10	ADQ-AC7-01	Total/NA	Solid	EPA 537(Mod)	545562
320-82155-11	ADQ-AC7-101	Total/NA	Solid	EPA 537(Mod)	545562
320-82155-12	ADQ-AC7-02	Total/NA	Solid	EPA 537(Mod)	545562
320-82155-13	ADQ-AC6-01	Total/NA	Solid	EPA 537(Mod)	545562
320-82155-14	ADQ-AC6-02	Total/NA	Solid	EPA 537(Mod)	545562
320-82155-16	ADQ-AC11-01	Total/NA	Solid	EPA 537(Mod)	545562
320-82155-17	ADQ-AC11-02	Total/NA	Solid	EPA 537(Mod)	545562
MB 320-545562/1-A	Method Blank	Total/NA	Solid	EPA 537(Mod)	545562
LCS 320-545562/2-A	Lab Control Sample	Total/NA	Solid	EPA 537(Mod)	545562
320-82155-17 MS	ADQ-AC11-02	Total/NA	Solid	EPA 537(Mod)	545562
320-82155-17 MSD	ADQ-AC11-02	Total/NA	Solid	EPA 537(Mod)	545562

Eurofins TestAmerica, Sacramento

QC Association Summary

Client: Shannon & Wilson, Inc
 Project/Site: Kodiak DOT&PF PFAS (107471)

Job ID: 320-82155-1

LCMS

Analysis Batch: 546624

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 320-545634/1-A	Method Blank	Total/NA	Water	EPA 537(Mod)	545634
LCSD 320-545634/3-A	Lab Control Sample Dup	Total/NA	Water	EPA 537(Mod)	545634

Analysis Batch: 546975

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-82155-16 - DL	ADQ-AC11-01	Total/NA	Solid	EPA 537(Mod)	545562

Analysis Batch: 548179

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-82155-7	ADQ-AC3-03-EB1	Total/NA	Water	EPA 537(Mod)	545634
320-82155-15	ADQ-AC6-EB2	Total/NA	Water	EPA 537(Mod)	545634
LCS 320-545634/2-A	Lab Control Sample	Total/NA	Water	EPA 537(Mod)	545634

General Chemistry

Analysis Batch: 546536

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-82155-1	ADQ-AC3-06	Total/NA	Solid	D 2216	
320-82155-2	ADQ-AC3-07	Total/NA	Solid	D 2216	
320-82155-3	ADQ-AC3-107	Total/NA	Solid	D 2216	
320-82155-4	ADQ-AC3-05	Total/NA	Solid	D 2216	
320-82155-5	ADQ-AC3-04	Total/NA	Solid	D 2216	
320-82155-6	ADQ-AC3-03	Total/NA	Solid	D 2216	
320-82155-8	ADQ-AC3-02	Total/NA	Solid	D 2216	
320-82155-9	ADQ-AC3-01	Total/NA	Solid	D 2216	
320-82155-10	ADQ-AC7-01	Total/NA	Solid	D 2216	
320-82155-11	ADQ-AC7-101	Total/NA	Solid	D 2216	
320-82155-12	ADQ-AC7-02	Total/NA	Solid	D 2216	
320-82155-13	ADQ-AC6-01	Total/NA	Solid	D 2216	
320-82155-14	ADQ-AC6-02	Total/NA	Solid	D 2216	
320-82155-16	ADQ-AC11-01	Total/NA	Solid	D 2216	
320-82155-17	ADQ-AC11-02	Total/NA	Solid	D 2216	
320-82155-1 DU	ADQ-AC3-06	Total/NA	Solid	D 2216	

Lab Chronicle

Client: Shannon & Wilson, Inc
Project/Site: Kodiak DOT&PF PFAS (107471)

Job ID: 320-82155-1

Client Sample ID: ADQ-AC3-06

Lab Sample ID: 320-82155-1

Date Collected: 11/13/21 16:01

Matrix: Solid

Date Received: 11/23/21 16:45

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	D 2216		1			546536	11/29/21 14:01	KDB	TAL SAC

Client Sample ID: ADQ-AC3-06

Lab Sample ID: 320-82155-1

Date Collected: 11/13/21 16:01

Matrix: Solid

Date Received: 11/23/21 16:45

Percent Solids: 92.7

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	SHAKE			5.04 g	10.0 mL	545562	11/24/21 11:07	RAC	TAL SAC
Total/NA	Analysis	EPA 537(Mod)		1			546590	11/29/21 01:28	S1M	TAL SAC

Client Sample ID: ADQ-AC3-07

Lab Sample ID: 320-82155-2

Date Collected: 11/13/21 16:20

Matrix: Solid

Date Received: 11/23/21 16:45

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	D 2216		1			546536	11/29/21 14:01	KDB	TAL SAC

Client Sample ID: ADQ-AC3-07

Lab Sample ID: 320-82155-2

Date Collected: 11/13/21 16:20

Matrix: Solid

Date Received: 11/23/21 16:45

Percent Solids: 91.8

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	SHAKE			5.44 g	10.0 mL	545562	11/24/21 11:07	RAC	TAL SAC
Total/NA	Analysis	EPA 537(Mod)		1			546590	11/29/21 01:39	S1M	TAL SAC

Client Sample ID: ADQ-AC3-107

Lab Sample ID: 320-82155-3

Date Collected: 11/13/21 16:10

Matrix: Solid

Date Received: 11/23/21 16:45

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	D 2216		1			546536	11/29/21 14:01	KDB	TAL SAC

Client Sample ID: ADQ-AC3-107

Lab Sample ID: 320-82155-3

Date Collected: 11/13/21 16:10

Matrix: Solid

Date Received: 11/23/21 16:45

Percent Solids: 91.7

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	SHAKE			5.04 g	10.0 mL	545562	11/24/21 11:07	RAC	TAL SAC
Total/NA	Analysis	EPA 537(Mod)		1			546590	11/29/21 01:49	S1M	TAL SAC

Client Sample ID: ADQ-AC3-05

Lab Sample ID: 320-82155-4

Date Collected: 11/13/21 16:50

Matrix: Solid

Date Received: 11/23/21 16:45

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	D 2216		1			546536	11/29/21 14:01	KDB	TAL SAC

Eurofins TestAmerica, Sacramento

Lab Chronicle

Client: Shannon & Wilson, Inc
Project/Site: Kodiak DOT&PF PFAS (107471)

Job ID: 320-82155-1

Client Sample ID: ADQ-AC3-05

Date Collected: 11/13/21 16:50

Date Received: 11/23/21 16:45

Lab Sample ID: 320-82155-4

Matrix: Solid

Percent Solids: 93.7

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	SHAKE			5.07 g	10.0 mL	545562	11/24/21 11:07	RAC	TAL SAC
Total/NA	Analysis	EPA 537(Mod)		1			546590	11/29/21 02:00	S1M	TAL SAC

Client Sample ID: ADQ-AC3-04

Date Collected: 11/13/21 17:00

Date Received: 11/23/21 16:45

Lab Sample ID: 320-82155-5

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	D 2216		1			546536	11/29/21 14:01	KDB	TAL SAC

Client Sample ID: ADQ-AC3-04

Date Collected: 11/13/21 17:00

Date Received: 11/23/21 16:45

Lab Sample ID: 320-82155-5

Matrix: Solid

Percent Solids: 86.6

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	SHAKE			5.43 g	10.0 mL	545562	11/24/21 11:07	RAC	TAL SAC
Total/NA	Analysis	EPA 537(Mod)		1			546590	11/29/21 02:10	S1M	TAL SAC

Client Sample ID: ADQ-AC3-03

Date Collected: 11/13/21 17:28

Date Received: 11/23/21 16:45

Lab Sample ID: 320-82155-6

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	D 2216		1			546536	11/29/21 14:01	KDB	TAL SAC

Client Sample ID: ADQ-AC3-03

Date Collected: 11/13/21 17:28

Date Received: 11/23/21 16:45

Lab Sample ID: 320-82155-6

Matrix: Solid

Percent Solids: 93.8

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	SHAKE			5.02 g	10.0 mL	545562	11/24/21 11:07	RAC	TAL SAC
Total/NA	Analysis	EPA 537(Mod)		1			546590	11/29/21 02:20	S1M	TAL SAC

Client Sample ID: ADQ-AC3-03-EB1

Date Collected: 11/13/21 17:20

Date Received: 11/23/21 16:45

Lab Sample ID: 320-82155-7

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	3535			151 mL	10.0 mL	545634	11/24/21 12:34	LN	TAL SAC
Total/NA	Analysis	EPA 537(Mod)		1			548179	12/03/21 18:49	S1M	TAL SAC

Lab Chronicle

Client: Shannon & Wilson, Inc
Project/Site: Kodiak DOT&PF PFAS (107471)

Job ID: 320-82155-1

Client Sample ID: ADQ-AC3-02

Lab Sample ID: 320-82155-8

Date Collected: 11/13/21 17:45

Matrix: Solid

Date Received: 11/23/21 16:45

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	D 2216		1			546536	11/29/21 14:01	KDB	TAL SAC

Client Sample ID: ADQ-AC3-02

Lab Sample ID: 320-82155-8

Date Collected: 11/13/21 17:45

Matrix: Solid

Date Received: 11/23/21 16:45

Percent Solids: 93.2

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	SHAKE			5.04 g	10.0 mL	545562	11/24/21 11:07	RAC	TAL SAC
Total/NA	Analysis	EPA 537(Mod)		1			546590	11/29/21 02:31	S1M	TAL SAC

Client Sample ID: ADQ-AC3-01

Lab Sample ID: 320-82155-9

Date Collected: 11/14/21 10:45

Matrix: Solid

Date Received: 11/23/21 16:45

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	D 2216		1			546536	11/29/21 14:01	KDB	TAL SAC

Client Sample ID: ADQ-AC3-01

Lab Sample ID: 320-82155-9

Date Collected: 11/14/21 10:45

Matrix: Solid

Date Received: 11/23/21 16:45

Percent Solids: 96.7

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	SHAKE			5.32 g	10.0 mL	545562	11/24/21 11:07	RAC	TAL SAC
Total/NA	Analysis	EPA 537(Mod)		1			546590	11/29/21 02:41	S1M	TAL SAC

Client Sample ID: ADQ-AC7-01

Lab Sample ID: 320-82155-10

Date Collected: 11/14/21 08:39

Matrix: Solid

Date Received: 11/23/21 16:45

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	D 2216		1			546536	11/29/21 14:01	KDB	TAL SAC

Client Sample ID: ADQ-AC7-01

Lab Sample ID: 320-82155-10

Date Collected: 11/14/21 08:39

Matrix: Solid

Date Received: 11/23/21 16:45

Percent Solids: 92.8

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	SHAKE			5.05 g	10.0 mL	545562	11/24/21 11:07	RAC	TAL SAC
Total/NA	Analysis	EPA 537(Mod)		1			546590	11/29/21 03:12	S1M	TAL SAC

Client Sample ID: ADQ-AC7-101

Lab Sample ID: 320-82155-11

Date Collected: 11/14/21 08:29

Matrix: Solid

Date Received: 11/23/21 16:45

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	D 2216		1			546536	11/29/21 14:01	KDB	TAL SAC

Eurofins TestAmerica, Sacramento

Lab Chronicle

Client: Shannon & Wilson, Inc
Project/Site: Kodiak DOT&PF PFAS (107471)

Job ID: 320-82155-1

Client Sample ID: ADQ-AC7-01

Lab Sample ID: 320-82155-11

Date Collected: 11/14/21 08:29

Matrix: Solid

Date Received: 11/23/21 16:45

Percent Solids: 92.8

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	SHAKE			5.07 g	10.0 mL	545562	11/24/21 11:07	RAC	TAL SAC
Total/NA	Analysis	EPA 537(Mod)		1			546590	11/29/21 03:23	S1M	TAL SAC

Client Sample ID: ADQ-AC7-02

Lab Sample ID: 320-82155-12

Date Collected: 11/14/21 09:15

Matrix: Solid

Date Received: 11/23/21 16:45

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	D 2216		1			546536	11/29/21 14:01	KDB	TAL SAC

Client Sample ID: ADQ-AC7-02

Lab Sample ID: 320-82155-12

Date Collected: 11/14/21 09:15

Matrix: Solid

Date Received: 11/23/21 16:45

Percent Solids: 92.5

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	SHAKE			5.21 g	10.0 mL	545562	11/24/21 11:07	RAC	TAL SAC
Total/NA	Analysis	EPA 537(Mod)		1			546590	11/29/21 03:33	S1M	TAL SAC

Client Sample ID: ADQ-AC6-01

Lab Sample ID: 320-82155-13

Date Collected: 11/14/21 09:39

Matrix: Solid

Date Received: 11/23/21 16:45

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	D 2216		1			546536	11/29/21 14:01	KDB	TAL SAC

Client Sample ID: ADQ-AC6-01

Lab Sample ID: 320-82155-13

Date Collected: 11/14/21 09:39

Matrix: Solid

Date Received: 11/23/21 16:45

Percent Solids: 93.1

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	SHAKE			5.61 g	10.0 mL	545562	11/24/21 11:07	RAC	TAL SAC
Total/NA	Analysis	EPA 537(Mod)		1			546590	11/29/21 03:44	S1M	TAL SAC

Client Sample ID: ADQ-AC6-02

Lab Sample ID: 320-82155-14

Date Collected: 11/14/21 09:45

Matrix: Solid

Date Received: 11/23/21 16:45

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	D 2216		1			546536	11/29/21 14:01	KDB	TAL SAC

Lab Chronicle

Client: Shannon & Wilson, Inc
 Project/Site: Kodiak DOT&PF PFAS (107471)

Job ID: 320-82155-1

Client Sample ID: ADQ-AC6-02

Lab Sample ID: 320-82155-14

Date Collected: 11/14/21 09:45

Matrix: Solid

Date Received: 11/23/21 16:45

Percent Solids: 96.0

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	SHAKE			5.56 g	10.0 mL	545562	11/24/21 11:07	RAC	TAL SAC
Total/NA	Analysis	EPA 537(Mod)		1			546590	11/29/21 03:54	S1M	TAL SAC

Client Sample ID: ADQ-AC6-EB2

Lab Sample ID: 320-82155-15

Date Collected: 11/14/21 09:52

Matrix: Water

Date Received: 11/23/21 16:45

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3535			191.8 mL	10.0 mL	545634	11/24/21 12:34	LN	TAL SAC
Total/NA	Analysis	EPA 537(Mod)		1			548179	12/03/21 18:59	S1M	TAL SAC

Client Sample ID: ADQ-AC11-01

Lab Sample ID: 320-82155-16

Date Collected: 11/14/21 11:05

Matrix: Solid

Date Received: 11/23/21 16:45

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	D 2216		1			546536	11/29/21 14:01	KDB	TAL SAC

Client Sample ID: ADQ-AC11-01

Lab Sample ID: 320-82155-16

Date Collected: 11/14/21 11:05

Matrix: Solid

Date Received: 11/23/21 16:45

Percent Solids: 91.8

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	SHAKE			5.50 g	10.0 mL	545562	11/24/21 11:07	RAC	TAL SAC
Total/NA	Analysis	EPA 537(Mod)		1			546590	11/29/21 04:04	S1M	TAL SAC
Total/NA	Prep	SHAKE	DL		5.50 g	10.0 mL	545562	11/24/21 11:07	RAC	TAL SAC
Total/NA	Analysis	EPA 537(Mod)	DL	5			546975	11/30/21 16:02	S1M	TAL SAC

Client Sample ID: ADQ-AC11-02

Lab Sample ID: 320-82155-17

Date Collected: 11/14/21 11:20

Matrix: Solid

Date Received: 11/23/21 16:45

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	D 2216		1			546536	11/29/21 14:01	KDB	TAL SAC

Client Sample ID: ADQ-AC11-02

Lab Sample ID: 320-82155-17

Date Collected: 11/14/21 11:20

Matrix: Solid

Date Received: 11/23/21 16:45

Percent Solids: 91.1

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	SHAKE			5.08 g	10.0 mL	545562	11/24/21 11:07	RAC	TAL SAC
Total/NA	Analysis	EPA 537(Mod)		1			546590	11/29/21 04:15	S1M	TAL SAC

Laboratory References:

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

Accreditation/Certification Summary

Client: Shannon & Wilson, Inc
Project/Site: Kodiak DOT&PF PFAS (107471)

Job ID: 320-82155-1

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
D 2216		Solid	Percent Moisture
D 2216		Solid	Percent Solids



Method Summary

Client: Shannon & Wilson, Inc
Project/Site: Kodiak DOT&PF PFAS (107471)

Job ID: 320-82155-1

Method	Method Description	Protocol	Laboratory
EPA 537(Mod)	PFAS for QSM 5.3, Table B-15	EPA	TAL SAC
D 2216	Percent Moisture	ASTM	TAL SAC
3535	Solid-Phase Extraction (SPE)	SW846	TAL SAC
SHAKE	Shake Extraction with Ultrasonic Bath Extraction	SW846	TAL SAC

Protocol References:

ASTM = ASTM International

EPA = US Environmental Protection Agency

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

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: Kodiak DOT&PF PFAS (107471)

Job ID: 320-82155-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
320-82155-1	ADQ-AC3-06	Solid	11/13/21 16:01	11/23/21 16:45
320-82155-2	ADQ-AC3-07	Solid	11/13/21 16:20	11/23/21 16:45
320-82155-3	ADQ-AC3-107	Solid	11/13/21 16:10	11/23/21 16:45
320-82155-4	ADQ-AC3-05	Solid	11/13/21 16:50	11/23/21 16:45
320-82155-5	ADQ-AC3-04	Solid	11/13/21 17:00	11/23/21 16:45
320-82155-6	ADQ-AC3-03	Solid	11/13/21 17:28	11/23/21 16:45
320-82155-7	ADQ-AC3-03-EB1	Water	11/13/21 17:20	11/23/21 16:45
320-82155-8	ADQ-AC3-02	Solid	11/13/21 17:45	11/23/21 16:45
320-82155-9	ADQ-AC3-01	Solid	11/14/21 10:45	11/23/21 16:45
320-82155-10	ADQ-AC7-01	Solid	11/14/21 08:39	11/23/21 16:45
320-82155-11	ADQ-AC7-101	Solid	11/14/21 08:29	11/23/21 16:45
320-82155-12	ADQ-AC7-02	Solid	11/14/21 09:15	11/23/21 16:45
320-82155-13	ADQ-AC6-01	Solid	11/14/21 09:39	11/23/21 16:45
320-82155-14	ADQ-AC6-02	Solid	11/14/21 09:45	11/23/21 16:45
320-82155-15	ADQ-AC6-EB2	Water	11/14/21 09:52	11/23/21 16:45
320-82155-16	ADQ-AC11-01	Solid	11/14/21 11:05	11/23/21 16:45
320-82155-17	ADQ-AC11-02	Solid	11/14/21 11:20	11/23/21 16:45

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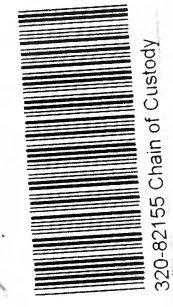
15

CHAIN-OF-CUSTODY RECORD

Analytical Methods (include preservative if used)

Quote No: _____
 J-Flags: Yes No

Turn Around Time:
 Normal Rush
 Please Specify _____



PFS (537M) GYS

Total Number of Containers

Sample Identity	Lab No.	Time	Date Sampled	Remarks/Matrix Composition/Grab? Sample Containers
ADQ-AC3-06		1601	11/13/21	<i>X</i>
ADQ-AC3-07		1620		
ADQ-AC3-107		1610		
ADQ-AC3-05		1650		
ADQ-AC3-04		1700		
ADQ-AC3-03		1728		
ADQ- AC3 AC3-EB1		1720		<i>Water</i>
ADQ-AC3-02		1745		<i>Soil Asphalt</i>
ADQ-AC3-01		1045	11/14/21	<i>Soil Asphalt</i>

Project Information	Sample Receipt	Relinquished By: 1.	Relinquished By: 2.	Relinquished By: 3.
Number: 107471-001 Name: Kodiak DOT+PF, ASDM Contact: Kristen Freiburger Ongoing Project? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Sampler: RLW, ZJT	Total No. of Containers: _____ Seals/Intact? Y/N/NA _____ Received Good Cond./Cold Temp: _____ Delivery Method: _____	Signature: <i>David W.</i> Printed Name: Rachel Willis Company: Shannon+Wilson, Inc	Signature: _____ Printed Name: _____ Company: _____	Signature: _____ Printed Name: _____ Company: _____
Notes: <i>Water samples BWA have limited volume</i>		Received By: 1. Signature: _____ Printed Name: Jason Jimmings Company: _____	Received By: 2. Signature: _____ Printed Name: _____ Company: _____	Received By: 3. Signature: _____ Printed Name: _____ Company: _____

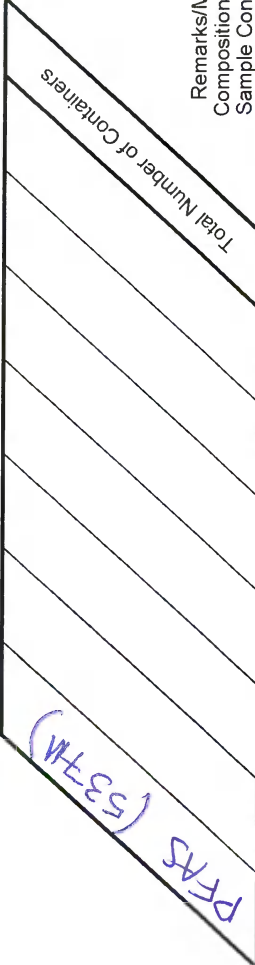
Distribution: White - w/shipment - returned to Shannon & Wilson w/ laboratory report
 Yellow - w/shipment - for consignee files
 Pink - Shannon & Wilson - job file

S. 42c



CHAIN-OF-CUSTODY RECORD

Analytical Methods (include preservative if used)



Quote No: _____

J-Flags: Yes No

Turn Around Time:
 Normal Rush

Please Specify _____

Sample Identity	Lab No.	Time	Date Sampled	Total Number of Containers	Remarks/Matrix Composition/Grab? Sample Containers
ADQ-AC7-01		0839	11/1/12	1	Soil Asphalt
ADQ-AC7-101		0829		1	
ADQ-AC7-02		0915		1	
ADQ-AC6-01		0939		1	
ADQ-AC6-02		0945		1	
ADQ-AC6-EB2		0952		2	Water
ADQ-AC11-01		1105		1	Soil Asphalt
ADQ-AC11-02		1120		1	Soil Asphalt

Project Information	Sample Receipt	Relinquished By: 1.	Relinquished By: 2.	Relinquished By: 3.
Number: <u>see 207</u>	Total No. of Containers: _____	Signature: <u>[Signature]</u>	Signature: _____	Signature: _____
Name: _____	COC Seals/Intact? <u>Y/N/NA</u>	Printed Name: <u>Rachel Willis</u>	Printed Name: _____	Printed Name: _____
Contact: _____	Received Good Cond./Cold _____	Date: <u>11/1/12</u>	Date: _____	Date: _____
Ongoing Project? Yes <input type="checkbox"/> No <input type="checkbox"/>	Temp: _____	Company: <u>Shannon + Wilson, Inc</u>	Company: _____	Company: _____
Sampler: _____	Delivery Method: _____	Time: <u>1:00</u>	Time: _____	Time: _____
Notes: _____		Received By: 1. Signature: <u>[Signature]</u> Time: <u>1:05</u>		
		Received By: 2. Signature: _____ Time: _____		
		Received By: 3. Signature: _____ Time: _____		

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



Login Sample Receipt Checklist

Client: Shannon & Wilson, Inc

Job Number: 320-82155-1

Login Number: 82155

List Source: Eurofins TestAmerica, Sacramento

List Number: 1

Creator: Oropeza, Salvador

Question	Answer	Comment
Radioactivity wasn't checked or is \leq background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	1714709/1714708
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 <math><6\text{mm}</math> (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Laboratory Data Review Checklist

Completed By:

Adam Wyborny, PE

Title:

Senior Environmental Engineer

Date:

12/08/2021

Consultant Firm:

Shannon & Wilson, Inc.

Laboratory Name:

Eurofins Environment Testing

Laboratory Report Number:

320-82155-1

Laboratory Report Date:

12/08/2021

CS Site Name:

Kodiak Airport Fencing Project

ADEC File Number:

Hazard Identification Number:

320-82155-1

Laboratory Report Date:

12/08/2021

CS Site Name:

Kodiak Airport Fencing Project

Note: Any N/A or No box checked must have an explanation in the comments box.

1. Laboratory

a. Did an ADEC CS approved laboratory receive and perform all of the submitted sample analyses?

Yes No N/A Comments:

The Eurofins Sacramento, CA laboratory has been approved by the DEC CS program for the analysis of 32 per- and poly-fluoroalkyl substances (PFAS) by LCMSMS compliant with QSM 5.3 Table B-15.

b. If the samples were transferred to another “network” laboratory or sub-contracted to an alternate laboratory, was the laboratory performing the analyses ADEC CS approved?

Yes No N/A Comments:

The sample analyses were not subcontracted to a network laboratory.

2. Chain of Custody (CoC)

a. CoC information completed, signed, and dated (including released/received by)?

Yes No N/A Comments:

b. Correct analyses requested?

Yes No N/A Comments:

3. Laboratory Sample Receipt Documentation

a. Sample/cooler temperature documented and within range at receipt (0° to 6° C)?

Yes No N/A Comments:

b. Sample preservation acceptable – acidified waters, Methanol preserved VOC soil (GRO, BTEX, Volatile Chlorinated Solvents, etc.)?

Yes No N/A Comments:

Samples analyzed for PFAS do not require chemical preservation.

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Kodiak Airport Fencing Project

c. Sample condition documented – broken, leaking (Methanol), zero headspace (VOC vials)?

Yes No N/A Comments:

The sample receipt documentation notes the samples arrived in good condition.

d. If there were any discrepancies, were they documented? For example, incorrect sample containers/preservation, sample temperature outside of acceptable range, insufficient or missing samples, etc.?

Yes No N/A Comments:

There were no sample handling or receipt discrepancies documented by the laboratory.

e. Data quality or usability affected?

Comments:

The data quality/usability is not affected.

4. Case Narrative

a. Present and understandable?

Yes No N/A Comments:

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b. Discrepancies, errors, or QC failures identified by the lab?

Yes No N/A Comments:

Method EPA 537(Mod): The recoveries of one or more isotope dilution analytes (IDAs) associated with the samples *ADQ-AC3-05*, *ADQ-AC3-02*, *ADQ-AC3-01*, *ADQ-AC7-101*, and *ADQ-AC7-02* were below the method recommended limit. Generally, data quality is not considered affected if the IDA signal-to-noise ratio is greater than 10:1, which is achieved for all IDA in the samples.

Method EPA 537(Mod): The 'I' qualifier means the transition mass ratio for the indicated analyte was below the established ratio limits. The qualitative identification of the analyte has some degree of uncertainty. However, analyst judgment was used to positively identify the analyte.

Method EPA 537(Mod): The matrix spike duplicate (MSD) reported with preparation batch 320-545562 exhibited a recovery for perfluorooctanesulfonic acid (PFOS) which was outside of laboratory control limits. Sample matrix interference is suspected because the associated laboratory control sample (LCS) recovery was within acceptance limits.

Method EPA 537(Mod): The results for sample *ADQ-AC11-01* were reported from the analysis of a diluted extract. The sample was diluted due to a high concentration of the target analyte in the analysis of the undiluted extract. The dilution factor was applied to the labeled internal standard area counts and these area counts were within acceptance limits.

Method Moisture: The reference method does not list a specific holding time for this procedure; therefore, the laboratory defaults to an in-house holding time of 14 days. The following samples in analytical batch 320-546536 were prepared and/or analyzed outside this time period: *ADQ-AC3-06*, *ADQ-AC3-07*, *ADQ-AC3-107*, *ADQ-AC3-05*, *ADQ-AC3-04*, *ADQ-AC3-03*, *ADQ-AC3-02*, *ADQ-AC3-01*, *ADQ-AC7-01*, *ADQ-AC7-101*, *ADQ-AC7-02*, *ADQ-AC6-01*, *ADQ-AC6-02*, *ADQ-AC11-01*, and *ADQ-AC11-02*.

Method 3535: The samples *ADQ-AC3-03-EB1* and *ADQ-AC6-EB2* were received in a plastic 4 oz soil jars.

Method 3535: Insufficient sample volume was available to perform a matrix spike/matrix spike duplicate (MS/MSD) associated with preparation batch 320-545634.

Method 3535: Elevated reporting limits are provided for the samples *ADQ-AC3-03-EB1* and *ADQ-AC6-EB2* due to insufficient sample provided for preparation.

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c. Were all corrective actions documented?

Yes No N/A Comments:

Sample *ADQ-AC11-01* was diluted to bring the concentration of a target PFAS within the instrument's calibration range. A dilution factor was applied to the internal standard area counts.

d. What is the effect on data quality/usability according to the case narrative?

Comments:

Analytes assigned the 'I' qualifier by the laboratory are affected by transition mass ratio failures and quantified manually by the analyst. The case narrative states that these results may have some degree of uncertainty.

The equipment blank samples *ADQ-AC3-03-EB1* and *ADQ-AC6-EB2* have elevated reporting limits.

Please see the following sections for our assessment of the data quality.

5. Samples Results

a. Correct analyses performed/reported as requested on COC?

Yes No N/A Comments:

b. All applicable holding times met?

Yes No N/A Comments:

The percent moisture analysis of the field samples was prepared and/or analyzed outside of the laboratory's default 14-day holding time. However, the reference method does not specify a holding time for this analysis. We note the moisture analysis was completed 15 to 16 days past collection.

c. All soils reported on a dry weight basis?

Yes No N/A Comments:

Only asphalt and liquid samples were submitted for this work order. Asphalt samples were reported as a dry weight.

d. Are the reported LOQs less than the Cleanup Level or the minimum required detection level for the project?

Yes No N/A Comments:

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e. Data quality or usability affected?

PFAS are the target analytes for this project. We do not consider the results affected by the subjective holding time exceedance for percent moisture.

6. QC Samples

a. Method Blank

i. One method blank reported per matrix, analysis and 20 samples?

Yes No N/A Comments:

ii. All method blank results less than limit of quantitation (LOQ) or project specified objectives?

Yes No N/A Comments:

iii. If above LOQ or project specified objectives, what samples are affected?

Comments:

No samples are affected. Target PFAS were not detected in the method blank samples associated with the reported preparation batches.

iv. Do the affected sample(s) have data flags? If so, are the data flags clearly defined?

Yes No N/A Comments:

See above

v. Data quality or usability affected?

Comments:

The data quality/usability is not affected.

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b. Laboratory Control Sample/Duplicate (LCS/LCSD)

i. Organics – One LCS/LCSD reported per matrix, analysis and 20 samples? (LCS/LCSD required per AK methods, LCS required per SW846)

Yes No N/A Comments:

An LCS and LCSD were reported for PFAS analysis of the liquid matrix in preparation batch 545634.

An LCS was reported for PFAS analysis of the solid matrix in preparation batch 545562. See MS/MSD discussion for assessment of method precision.

ii. Metals/Inorganics – one LCS and one sample duplicate reported per matrix, analysis and 20 samples?

Yes No N/A Comments:

Metals/Inorganics analyses were not requested for this work order.

iii. Accuracy – All percent recoveries (%R) reported and within method or laboratory limits and project specified objectives, if applicable? (AK Petroleum methods: AK101 60%-120%, AK102 75%-125%, AK103 60%-120%; all other analyses see the laboratory QC pages)

Yes No N/A Comments:

iv. Precision – All relative percent differences (RPD) reported and less than method or laboratory limits and project specified objectives, if applicable? RPD reported from LCS/LCSD, and or sample/sample duplicate. (AK Petroleum methods 20%; all other analyses see the laboratory QC pages)

Yes No N/A Comments:

v. If %R or RPD is outside of acceptable limits, what samples are affected?

Comments:

No samples are affected. Method accuracy and, where applicable, precision were demonstrated to be within acceptable limits.

vi. Do the affected sample(s) have data flags? If so, are the data flags clearly defined?

Yes No N/A Comments:

Qualification was not required; see above.

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vii. Data quality or usability affected? (Use comment box to explain.)

Comments:

The data quality/usability is not affected.

c. Matrix Spike/Matrix Spike Duplicate (MS/MSD)

Note: Leave blank if not required for project

i. Organics – One MS/MSD reported per matrix, analysis and 20 samples?

Yes No N/A Comments:

MS and MSD samples were reported for PFAS analysis of the solid matrix in preparation batch 545562.

ii. Metals/Inorganics – one MS and one MSD reported per matrix, analysis and 20 samples?

Yes No N/A Comments:

Metals/Inorganics analyses were not requested for this work order.

iii. Accuracy – All percent recoveries (%R) reported and within method or laboratory limits and project specified objectives, if applicable?

Yes No N/A Comments:

The MSD reported with preparation batch 545562 exhibited low recovery for PFOS.

iv. Precision – All relative percent differences (RPD) reported and less than method or laboratory limits and project specified objectives, if applicable? RPD reported from MS/MSD, and or sample/sample duplicate.

Yes No N/A Comments:

v. If %R or RPD is outside of acceptable limits, what samples are affected?

Comments:

The MSD was prepared from the field sample *ADQ-AC11-02*. However, the PFOS spike added to the matrix was low relative to the native concentration in the parent sample. The resulting uncertainty may render the PFOS recovery unrepresentative of actual method performance. Potential adverse matrix effects on method recovery have therefore not been demonstrated. We do not consider the results to be affected.

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vi. Do the affected sample(s) have data flags? If so, are the data flags clearly defined?

Yes No N/A Comments:

Qualification was not required; see above.

vii. Data quality or usability affected? (Use comment box to explain.)

Comments:

The data quality/usability is not affected.

d. Surrogates – Organics Only or Isotope Dilution Analytes (IDA) – Isotope Dilution Methods Only

i. Are surrogate/IDA recoveries reported for organic analyses – field, QC and laboratory samples?

Yes No N/A Comments:

ii. Accuracy – All percent recoveries (%R) reported and within method or laboratory limits and project specified objectives, if applicable? (AK Petroleum methods 50-150 %R for field samples and 60-120 %R for QC samples; all other analyses see the laboratory report pages)

Yes No N/A Comments:

Sample *ADQ-AC7-02* exhibited low IDA recoveries for 13C2-PFHxA, 13C4-PFOS, d3-NMeFOSAA, and d5-NEtFOSAA.

Samples *ADQ-AC3-05* and *ADQ-AC7-101* exhibited low IDA recovery for 13C4-PFOS.

Sample *ADQ-AC3-02* exhibited low IDA recovery for 18O2-PFHxS.

Sample *ADQ-AC3-01* exhibited low IDA recoveries for 18O2-PFHxS and 13C4-PFOS.

iii. Do the sample results with failed surrogate/IDA recoveries have data flags? If so, are the data flags clearly defined?

Yes No N/A Comments:

Non-detect results for the samples and analytes listed below are considered estimated and flagged “UJ” for reporting purposes.

Detected results for the samples analytes listed above are considered estimated and flagged ‘J’ for reporting purposes.

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iv. Data quality or usability affected?

Comments:

The data quality is affected; see above for applied qualifiers.

e. Trip Blanks

i. One trip blank reported per matrix, analysis and for each cooler containing volatile samples? (If not, enter explanation below.)

Yes No N/A Comments:

PFAS are not volatile compounds. A trip blank is therefore not required for these samples.

ii. Is the cooler used to transport the trip blank and VOA samples clearly indicated on the COC? (If not, a comment explaining why must be entered below)

Yes No N/A Comments:

A trip blank is not required for PFAS analysis.

iii. All results less than LOQ and project specified objectives?

Yes No N/A Comments:

A trip blank is not required for PFAS analysis.

iv. If above LOQ or project specified objectives, what samples are affected?

Comments:

N/A; a trip blank is not required for PFAS analysis.

v. Data quality or usability affected?

Comments:

The data quality/usability is not affected.

f. Field Duplicate

i. One field duplicate submitted per matrix, analysis and 10 project samples?

Yes No N/A Comments:

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ii. Submitted blind to lab?

Yes No N/A Comments:

The field duplicate sample pairs *ADQ-AC3-07 / ADQ-AC3-107* and *ADQ-AC7-01 / ADQ-AC7-101* were submitted with this work order.

iii. Precision – All relative percent differences (RPD) less than specified project objectives? (Recommended: 30% water, 50% soil)

$$\text{RPD (\%)} = \text{Absolute value of: } \frac{(R_1 - R_2)}{((R_1 + R_2)/2)} \times 100$$

Where R_1 = Sample Concentration
 R_2 = Field Duplicate Concentration

Yes No N/A Comments:

iv. Data quality or usability affected? (Use the comment box to explain why or why not.)

Comments:

The data quality/usability is not affected.

g. Decontamination or Equipment Blank (If not applicable, a comment stating why must be entered below)?

Yes No N/A Comments:

The equipment/rinsate blank samples *ADQ-AC3-03-EB1* and *ADQ-AC6-EB2* were submitted with this work order.

i. All results less than LOQ and project specified objectives?

Yes No N/A Comments:

Perfluorobutanesulfonic acid (PFBS) was detected at an estimated concentration of 0.33J ng/L in the equipment blank sample *ADQ-AC3-03-EB1*.

ii. If above LOQ or project specified objectives, what samples are affected?

Comments:

The sample collected on the same day as *ADQ-AC3-03-EB1* did not contain detectable concentrations of PFBS. The results are not considered affected by the EB detection.

320-82155-1

Laboratory Report Date:

12/08/2021

CS Site Name:

Kodiak Airport Fencing Project

iii. Data quality or usability affected?

Comments:

The data quality/usability is not affected.

7. Other Data Flags/Qualifiers (ACOE, AFCEE, Lab Specific, etc.)

a. Defined and appropriate?

Yes No N/A Comments:

The PFOS result of sample *ADQ-AC3-04* was affected by a transition mass ratio failure and subsequently quantified manually by the analyst. We consider this result an estimate and have applied the 'J' qualifier.

WORK ORDER 320-82156-1 AND LDRC

APPENDIX B: LAB REPORTS AND LDRCS

ANALYTICAL REPORT

Eurofins TestAmerica, Sacramento
880 Riverside Parkway
West Sacramento, CA 95605
Tel: (916)373-5600

Laboratory Job ID: 320-82156-1
Client Project/Site: Kodiak DOT&PF PFAS (107471)

For:
Shannon & Wilson, Inc
2355 Hill Rd.
Fairbanks, Alaska 99709-5244

Attn: Rachel Willis



Authorized for release by:
12/14/2021 2:23:02 PM

David Alltucker, Project Manager I
(916)374-4383
David.Alltucker@Eurofinset.com

LINKS

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The test results in this report meet all 2003 NELAC, 2009 TNI, and 2016 TNI requirements for accredited parameters, exceptions are noted in this report. This report may not be reproduced except in full, and with written approval from the laboratory. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

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: Kodiak DOT&PF PFAS (107471)

Job ID: 320-82156-1

Qualifiers

GC/MS VOA

Qualifier	Qualifier Description
*+	LCS and/or LCSD is outside acceptance limits, high biased.
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.
S1+	Surrogate recovery exceeds control limits, high biased.

GC Semi VOA

Qualifier	Qualifier Description
4	MS, MSD: The analyte present in the original sample is greater than 4 times the matrix spike concentration; therefore, control limits are not applicable.
B	Compound was found in the blank and sample.
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.
S1-	Surrogate recovery exceeds control limits, low biased.
S1+	Surrogate recovery exceeds control limits, high biased.

LCMS

Qualifier	Qualifier Description
*5-	Isotope dilution analyte is outside acceptance limits, low biased.
F1	MS and/or MSD recovery exceeds control limits.
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.

General Chemistry

Qualifier	Qualifier Description
H	Sample was prepped or analyzed beyond the specified holding time

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

Definitions/Glossary

Client: Shannon & Wilson, Inc
Project/Site: Kodiak DOT&PF PFAS (107471)

Job ID: 320-82156-1

Glossary (Continued)

Abbreviation	These commonly used abbreviations may or may not be present in this report.
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

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11
- 12
- 13
- 14
- 15
- 16

Case Narrative

Client: Shannon & Wilson, Inc
Project/Site: Kodiak DOT&PF PFAS (107471)

Job ID: 320-82156-1

Job ID: 320-82156-1

Laboratory: Eurofins TestAmerica, Sacramento

Narrative

Job Narrative 320-82156-1

Receipt

The samples were received on 11/23/2021 4:45 PM. Unless otherwise noted below, the samples arrived in good condition, and where required, properly preserved and on ice. The temperatures of the 6 coolers at receipt time were 1.7° C, 2.1° C, 2.4° C, 2.5° C, 3.1° C and 3.7° C.

GC/MS VOA

Method 8260C SIM: The following samples were delayed in shipping and the lab received with insufficient time to run within holding time. ADQ-ISM1-01 (320-82156-1), ADQ-ISM1-101 (320-82156-2), ADQ-ISM1-201 (320-82156-3), ADQ-ISM1-02 (320-82156-4), ADQ-ISM1-03 (320-82156-5), ADQ-ISM1-04 (320-82156-6), ADQ-ISM2-02 (320-82156-8), ADQ-ISM2-102 (320-82156-9), ADQ-ISM2-202 (320-82156-10), Trip Blank 2 (320-82156-14), Trip Blank 3 (320-82156-15) and Trip Blank 4 (320-82156-16).

Method 8260C SIM: The laboratory control sample (LCS) and / or laboratory control sample duplicate (LCSD) for preparation batch 320-545695 and analytical batch 320-547089 recovered outside control limits for the following analytes: Chloroform. These analytes were biased high in the LCS and were not detected in the associated samples; therefore, the data have been reported.

Method 8260C SIM: Surrogate recovery for the following sample was outside the upper control limit: (MB 320-545695/1-A). This sample did not contain any target analytes; therefore, re-extraction and/or re-analysis was not performed.

Method 8260C: Internal standard (ISTD) response for TBA-d9 and/or Dioxane-d8 for the following samples in analytical batch 320-548328 was outside acceptance criteria: ADQ-ISM1-01 (320-82156-1), ADQ-ISM1-101 (320-82156-2), ADQ-ISM1-201 (320-82156-3), ADQ-ISM1-02 (320-82156-4), ADQ-ISM1-03 (320-82156-5), ADQ-ISM1-04 (320-82156-6), ADQ-ISM2-01 (320-82156-7), ADQ-ISM2-02 (320-82156-8), ADQ-ISM2-102 (320-82156-9), ADQ-ISM2-202 (320-82156-10), ADQ-ISM2-03 (320-82156-11), ADQ-ISM2-04 (320-82156-12), ADQ-ISM2-05 (320-82156-13), Trip Blank 2 (320-82156-14), Trip Blank 3 (320-82156-15), Trip Blank 4 (320-82156-16), Trip Blank 5 (320-82156-17), (LCS 320-545695/2-A), (LCSD 320-545695/3-A) and (MB 320-545695/1-A). This ISTD does not correspond to any of the requested target compounds reported from this analytical batch; therefore, the data have been reported.

Method 8260C: The following samples were delayed in shipping and the lab received with insufficient time to run within holding time. ADQ-ISM1-01 (320-82156-1), ADQ-ISM1-101 (320-82156-2), ADQ-ISM1-201 (320-82156-3), ADQ-ISM1-02 (320-82156-4), ADQ-ISM1-03 (320-82156-5), ADQ-ISM1-04 (320-82156-6), ADQ-ISM2-01 (320-82156-7), ADQ-ISM2-02 (320-82156-8), ADQ-ISM2-102 (320-82156-9), ADQ-ISM2-202 (320-82156-10), ADQ-ISM2-03 (320-82156-11), ADQ-ISM2-04 (320-82156-12), ADQ-ISM2-05 (320-82156-13), Trip Blank 2 (320-82156-14), Trip Blank 3 (320-82156-15), Trip Blank 4 (320-82156-16) and Trip Blank 5 (320-82156-17).

Method 8260C: Surrogate recovery for the following samples were outside the upper control limit: ADQ-ISM2-01 (320-82156-7), ADQ-ISM2-02 (320-82156-8) and ADQ-ISM2-202 (320-82156-10). This sample did not contain any target analytes associated with the failing surrogate; therefore, re-analysis was not performed.

Method 8260C: Internal standard (ISTD) response for TBA-d9 for the following sample in analytical batch 320-548756 was outside acceptance criteria: ADQ-ISM2-04 (320-82156-12). This ISTD does not correspond to any of the requested target compounds reported from this analytical batch; therefore, the data have been reported.

Method 8260C: Surrogate 1,2-Dichloroethane-d4 (Surr), 4-Bromofluorobenzene (Surr) and Toluene-d8 (Surr) recovery for the following sample was outside the upper control limit: ADQ-ISM2-04 (320-82156-12). This sample did not contain any target analytes associated with these surrogates.

Method AK101: Surrogate recovery for the following samples were outside the upper control limit: ADQ-ISM1-03 (320-82156-5), ADQ-ISM2-01 (320-82156-7), ADQ-ISM2-02 (320-82156-8) and ADQ-ISM2-202 (320-82156-10). This sample did not contain any target analytes; therefore, re-analysis was not performed.

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

GC Semi VOA

Case Narrative

Client: Shannon & Wilson, Inc
Project/Site: Kodiak DOT&PF PFAS (107471)

Job ID: 320-82156-1

Job ID: 320-82156-1 (Continued)

Laboratory: Eurofins TestAmerica, Sacramento (Continued)

Method AK102 & 103: The method blank for preparation batch 320-546878 and analytical batch 320-550444 contained DRO (nC10-<nC25) above the method detection limit. This target analyte concentration was less than half the reporting limit (1/2RL); therefore, re-analysis of samples was not performed.

Method AK102 & 103: The following samples were diluted due to abundance of target analytes: ADQ-ISM1-01 (320-82156-1), ADQ-ISM1-101 (320-82156-2), ADQ-ISM1-201 (320-82156-3), ADQ-ISM1-02 (320-82156-4), ADQ-ISM1-03 (320-82156-5) and ADQ-ISM1-04 (320-82156-6). As such, surrogate recoveries are below the calibration range or are not reported, and elevated reporting limits (RLs) are provided.

Method AK102 & 103: The following samples were diluted due to the abundance of target analytes : (320-82156-G-1-I MS) and (320-82156-G-1-J MSD). Because of this dilution, the surrogate spike and matrix spike concentration in the sample was reduced to a level where the recovery calculation does not provide useful information.

Method AK102 & 103: The following sample was diluted due to the abundance of non-target analytes: ADQ-ISM2-01 (320-82156-7). Elevated reporting limits (RLs) are provided.

Method AK102 & 103: The following samples contained a hydrocarbon pattern in the diesel range; however, the elution pattern was later than the typical diesel fuel pattern used by the laboratory for quantitative purposes: ADQ-ISM1-01 (320-82156-1), ADQ-ISM1-101 (320-82156-2), ADQ-ISM1-201 (320-82156-3), ADQ-ISM1-02 (320-82156-4), ADQ-ISM1-03 (320-82156-5), ADQ-ISM1-04 (320-82156-6), ADQ-ISM2-01 (320-82156-7), ADQ-ISM2-02 (320-82156-8), ADQ-ISM2-102 (320-82156-9), ADQ-ISM2-202 (320-82156-10), ADQ-ISM2-03 (320-82156-11), ADQ-ISM2-04 (320-82156-12) and ADQ-ISM2-05 (320-82156-13).

Method AK102 & 103: Surrogate recovery for the following samples were outside control limits: ADQ-ISM2-102 (320-82156-9) and ADQ-ISM2-03 (320-82156-11). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

Method AK102 & 103: The Diesel Range Organics (DRO), C10-C25, concentration reported for the following samples is partially due to the presence of discrete peaks: ADQ-ISM2-02 (320-82156-8) and ADQ-ISM2-102 (320-82156-9).

Method 8011: The following samples were analyzed outside of analytical holding time due to samples received out of hold: ADQ-ISM1-01 (320-82156-1), ADQ-ISM1-101 (320-82156-2), ADQ-ISM1-201 (320-82156-3), ADQ-ISM1-02 (320-82156-4), ADQ-ISM1-03 (320-82156-5), ADQ-ISM1-04 (320-82156-6), ADQ-ISM2-01 (320-82156-7), ADQ-ISM2-02 (320-82156-8), ADQ-ISM2-102 (320-82156-9), ADQ-ISM2-202 (320-82156-10), ADQ-ISM2-03 (320-82156-11), ADQ-ISM2-04 (320-82156-12), ADQ-ISM2-05 (320-82156-13), Trip Blank 2 (320-82156-14), Trip Blank 3 (320-82156-15), Trip Blank 4 (320-82156-16) and Trip Blank 5 (320-82156-17).

Method 8011: Insufficient sample volume was available to perform a matrix spike/matrix spike duplicate (MS/MSD) associated with preparation batch 280-559548. A LCSD was run to ensure lab precision.

Method 8011: The samples provided were 5 mL of methanol. This method normally uses 10g of soil as the sample volume. As TSO instructed the 5 mL of sample were spiked with the normal spikes of surrogate and then 2 mL of hexane were added to the sample vial followed by 15 mL of reagent water. This volume was then placed on the auto shaker for 2 minutes. Most of the samples had bad emulsions and were then put into the centrifuge for 5 minutes. this allowed the hexane to raise to the top of the sample. The hexane was then extracted as normal. The resulting data will be qualified. ADQ-ISM1-01 (320-82156-1), ADQ-ISM1-101 (320-82156-2), ADQ-ISM1-201 (320-82156-3), ADQ-ISM1-02 (320-82156-4), ADQ-ISM1-03 (320-82156-5), ADQ-ISM1-04 (320-82156-6), ADQ-ISM2-01 (320-82156-7), ADQ-ISM2-02 (320-82156-8), ADQ-ISM2-102 (320-82156-9), ADQ-ISM2-202 (320-82156-10), ADQ-ISM2-03 (320-82156-11), ADQ-ISM2-04 (320-82156-12), ADQ-ISM2-05 (320-82156-13), Trip Blank 2 (320-82156-14), Trip Blank 3 (320-82156-15), Trip Blank 4 (320-82156-16) and Trip Blank 5 (320-82156-17)

Method 8011: MB, LCS, LCSD were prepared as SOP states due to the provided blank not having enough volume for all three QC. ADQ-ISM1-01 (320-82156-1), ADQ-ISM1-101 (320-82156-2), ADQ-ISM1-201 (320-82156-3), ADQ-ISM1-02 (320-82156-4), ADQ-ISM1-03 (320-82156-5), ADQ-ISM1-04 (320-82156-6), ADQ-ISM2-01 (320-82156-7), ADQ-ISM2-02 (320-82156-8), ADQ-ISM2-102 (320-82156-9), ADQ-ISM2-202 (320-82156-10), ADQ-ISM2-03 (320-82156-11), ADQ-ISM2-04 (320-82156-12), ADQ-ISM2-05 (320-82156-13), Trip Blank 2 (320-82156-14), Trip Blank 3 (320-82156-15), Trip Blank 4 (320-82156-16) and Trip Blank 5 (320-82156-17)

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

Case Narrative

Client: Shannon & Wilson, Inc
Project/Site: Kodiak DOT&PF PFAS (107471)

Job ID: 320-82156-1

Job ID: 320-82156-1 (Continued)

Laboratory: Eurofins TestAmerica, Sacramento (Continued)

LCMS

Method EPA 537(Mod): Results for samples ADQ-ISM1-01 (320-82156-1), ADQ-ISM1-101 (320-82156-2), ADQ-ISM1-201 (320-82156-3), ADQ-ISM1-02 (320-82156-4), (320-82156-G-1-L MS) and (320-82156-G-1-M MSD) were reported from the analysis of a diluted extract due to effects of the sample matrix in the analysis of the undiluted extract. The dilution factor was applied to the labeled internal standard area counts and these area counts were within acceptance limits

Method EPA 537(Mod): The matrix spike (MS) recoveries for preparation batch 320-545596 and 320-547064 and analytical batch 320-548024 were outside control limits. Sample matrix interference is suspected because the associated laboratory control sample (LCS) recovery was within acceptance limits.

Method EPA 537(Mod): The Isotope Dilution Analyte (IDA) recovery associated with the following sample is below the method recommended limit: ADQ-ISM2-02 (320-82156-8). Generally, data quality is not considered affected if the IDA signal-to-noise ratio is greater than 10:1, which is achieved for all IDA in the sample(s).

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

General Chemistry

Method Moisture: The reference method does not list a specific holding time for this procedure; therefore, the laboratory defaults to an in-house holding time of 14 days. The following samples in preparation batch 320-545579 and analytical batch 320-546537 were prepared and/or analyzed outside this time period: ADQ-ISM1-01 (320-82156-1) and ADQ-ISM1-02 (320-82156-4).

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

Organic Prep

Method 3535: The following samples were received in 4 oz soil jar bottle: ADQ-ISM1-EB1 (320-82156-18), ADQ-ISM2-EB1 (320-82156-19), ADQ-ISM2-EB2 (320-82156-20) and ADQ-ISM2-EB3 (320-82156-21). The samples were transferred into a new 250 mL bottle. After transferring into a new container, the samples were fortified with IDA then extracted.
preparation batch 320-545627

Method 3535: Elevated reporting limits are provided for the following samples due to insufficient sample provided for preparation: ADQ-ISM1-EB1 (320-82156-18), ADQ-ISM2-EB1 (320-82156-19), ADQ-ISM2-EB2 (320-82156-20) and ADQ-ISM2-EB3 (320-82156-21).
preparation batch 320-545627

Method SHAKE: The following samples were yellow after extraction/final volume: ADQ-ISM1-01 (320-82156-1), ADQ-ISM1-101 (320-82156-2), ADQ-ISM1-201 (320-82156-3), ADQ-ISM1-02 (320-82156-4), (320-82156-G-1-F MS) and (320-82156-G-1-G MSD)
preparation batch 320-545596 and 320-547064

Method SHAKE: The following samples were prepared outside of preparation holding time due to being logged past holding time: ADQ-ISM1-01 (320-82156-1), ADQ-ISM1-101 (320-82156-2), ADQ-ISM1-201 (320-82156-3), ADQ-ISM1-02 (320-82156-4), ADQ-ISM1-03 (320-82156-5), ADQ-ISM1-04 (320-82156-6), (320-82156-G-1-F MS) and (320-82156-G-1-G MSD).
preparation batch 320-545596 and 320-547064

Method AK102: The following samples were prepared outside of preparation holding time due to the samples being received after the hold time expired: ADQ-ISM1-01 (320-82156-1), ADQ-ISM1-101 (320-82156-2), ADQ-ISM1-201 (320-82156-3), ADQ-ISM1-02 (320-82156-4), ADQ-ISM1-03 (320-82156-5), ADQ-ISM1-04 (320-82156-6), (320-82156-G-1-C MS) and (320-82156-G-1-D MSD). Samples are associated with method AK102_P_Solids AK102_103 solids in preparation batch 320-545596 and 320-546878.

Method AK102: Due to the matrix, the following samples could not be concentrated to the final method required volume: 3mL. They were concentrated to final volume of 5mL. The reporting limits (RLs) are elevated proportionately for method AK102_103 solid in preparation batch 320-545596 and 320-546878.

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: Kodiak DOT&PF PFAS (107471)

Job ID: 320-82156-1

Client Sample ID: ADQ-ISM1-01

Lab Sample ID: 320-82156-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Acetone	71	J H	620	62	ug/Kg	1	☼	8260C	Total/NA
Benzene	8.8	J H	62	4.1	ug/Kg	1	☼	8260C	Total/NA
Toluene	7.9	J H	62	5.6	ug/Kg	1	☼	8260C	Total/NA
C6-C10 AK	1.2	J	6.2	1.2	mg/Kg	1	☼	AK101	Total/NA
DRO (nC10-<nC25)	350	H B	160	41	mg/Kg	50		AK102	Total/NA
Prep Complete	1.0				NONE	1		Increment,Prep	Total/NA

Client Sample ID: ADQ-ISM1-101

Lab Sample ID: 320-82156-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Acetone	110	J H	440	44	ug/Kg	1	☼	8260C	Total/NA
m-Xylene & p-Xylene	5.1	J H	44	4.4	ug/Kg	1	☼	8260C	Total/NA
Toluene	9.4	J H	44	4.0	ug/Kg	1	☼	8260C	Total/NA
C6-C10 AK	0.93	J	4.4	0.88	mg/Kg	1	☼	AK101	Total/NA
DRO (nC10-<nC25)	350	H B	65	16	mg/Kg	20		AK102	Total/NA
Prep Complete	1.0				NONE	1		Increment,Prep	Total/NA

Client Sample ID: ADQ-ISM1-201

Lab Sample ID: 320-82156-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
1,2,4-Trimethylbenzene	6.1	J H	76	5.3	ug/Kg	1	☼	8260C	Total/NA
2-Hexanone	12	J H	150	7.9	ug/Kg	1	☼	8260C	Total/NA
Acetone	270	J H	760	76	ug/Kg	1	☼	8260C	Total/NA
m-Xylene & p-Xylene	15	J H	76	7.6	ug/Kg	1	☼	8260C	Total/NA
Toluene	23	J H	76	6.9	ug/Kg	1	☼	8260C	Total/NA
C6-C10 AK	6.6	J	7.6	1.5	mg/Kg	1	☼	AK101	Total/NA
DRO (nC10-<nC25)	400	H B	160	41	mg/Kg	50		AK102	Total/NA
Prep Complete	1.0				NONE	1		Increment,Prep	Total/NA

Client Sample ID: ADQ-ISM1-02

Lab Sample ID: 320-82156-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Acetone	72	J H	500	50	ug/Kg	1	☼	8260C	Total/NA
Toluene	5.4	J H	50	4.5	ug/Kg	1	☼	8260C	Total/NA
DRO (nC10-<nC25)	350	H B	160	41	mg/Kg	50		AK102	Total/NA
Prep Complete	1.0				NONE	1		Increment,Prep	Total/NA

Client Sample ID: ADQ-ISM1-03

Lab Sample ID: 320-82156-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
m-Xylene & p-Xylene	16	J H	85	8.5	ug/Kg	1	☼	8260C	Total/NA
Toluene	17	J H	85	7.6	ug/Kg	1	☼	8260C	Total/NA
DRO (nC10-<nC25)	160	H B	33	8.2	mg/Kg	10		AK102	Total/NA
Perfluorohexanoic acid (PFHxA)	0.053	J H	0.19	0.029	ug/Kg	1		EPA 537(Mod)	Total/NA
Perfluorooctanoic acid (PFOA)	0.053	J H	0.19	0.050	ug/Kg	1		EPA 537(Mod)	Total/NA
Perfluorononanoic acid (PFNA)	0.023	J H	0.19	0.021	ug/Kg	1		EPA 537(Mod)	Total/NA
Perfluorohexanesulfonic acid (PFHxS)	0.057	J H	0.19	0.027	ug/Kg	1		EPA 537(Mod)	Total/NA
Perfluorooctanesulfonic acid (PFOS)	0.20	H	0.19	0.041	ug/Kg	1		EPA 537(Mod)	Total/NA
Prep Complete	1.0				NONE	1		Increment,Prep	Total/NA

This Detection Summary does not include radiochemical test results.

Eurofins TestAmerica, Sacramento

Detection Summary

Client: Shannon & Wilson, Inc
 Project/Site: Kodiak DOT&PF PFAS (107471)

Job ID: 320-82156-1

Client Sample ID: ADQ-ISM1-04

Lab Sample ID: 320-82156-6

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Acetone	95	J H	550	55	ug/Kg	1	☼	8260C	Total/NA
m-Xylene & p-Xylene	12	J H	55	5.5	ug/Kg	1	☼	8260C	Total/NA
Toluene	14	J H	55	5.0	ug/Kg	1	☼	8260C	Total/NA
DRO (nC10-<nC25)	300	H B	33	8.3	mg/Kg	10		AK102	Total/NA
Perfluorooctanoic acid (PFOA)	0.055	J H	0.20	0.053	ug/Kg	1		EPA 537(Mod)	Total/NA
Perfluorohexanesulfonic acid (PFHxS)	0.12	J H	0.20	0.029	ug/Kg	1		EPA 537(Mod)	Total/NA
Perfluorooctanesulfonic acid (PFOS)	0.48	H	0.20	0.043	ug/Kg	1		EPA 537(Mod)	Total/NA
Prep Complete	1.0				NONE	1		Increment,Prep	Total/NA

Client Sample ID: ADQ-ISM2-01

Lab Sample ID: 320-82156-7

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
1,2,4-Trimethylbenzene	9.1	J H	93	6.5	ug/Kg	1	☼	8260C	Total/NA
m-Xylene & p-Xylene	13	J H	93	9.3	ug/Kg	1	☼	8260C	Total/NA
Toluene	15	J H	93	8.4	ug/Kg	1	☼	8260C	Total/NA
DRO (nC10-<nC25)	25	B	16	4.1	mg/Kg	5		AK102	Total/NA
Prep Complete	1.0				NONE	1		Increment,Prep	Total/NA

Client Sample ID: ADQ-ISM2-02

Lab Sample ID: 320-82156-8

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
DRO (nC10-<nC25)	4.8	B	2.0	0.49	mg/Kg	1		AK102	Total/NA
Prep Complete	1.0				NONE	1		Increment,Prep	Total/NA

Client Sample ID: ADQ-ISM2-102

Lab Sample ID: 320-82156-9

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
m-Xylene & p-Xylene	17	J H	100	10	ug/Kg	1	☼	8260C	Total/NA
Toluene	19	J H	100	9.3	ug/Kg	1	☼	8260C	Total/NA
C6-C10 AK	2.7	J	10	2.1	mg/Kg	1	☼	AK101	Total/NA
DRO (nC10-<nC25)	5.4	B	2.0	0.49	mg/Kg	1		AK102	Total/NA
Prep Complete	1.0				NONE	1		Increment,Prep	Total/NA

Client Sample ID: ADQ-ISM2-202

Lab Sample ID: 320-82156-10

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
DRO (nC10-<nC25)	3.4	B	2.0	0.49	mg/Kg	1		AK102	Total/NA
Prep Complete	1.0				NONE	1		Increment,Prep	Total/NA

Client Sample ID: ADQ-ISM2-03

Lab Sample ID: 320-82156-11

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	4.7	J H	67	4.5	ug/Kg	1	☼	8260C	Total/NA
Toluene	7.4	J H	67	6.1	ug/Kg	1	☼	8260C	Total/NA
DRO (nC10-<nC25)	5.1	B	2.0	0.49	mg/Kg	1		AK102	Total/NA
Prep Complete	1.0				NONE	1		Increment,Prep	Total/NA

Client Sample ID: ADQ-ISM2-04

Lab Sample ID: 320-82156-12

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Toluene - RA	7.2	J H	76	6.8	ug/Kg	1	☼	8260C	Total/NA
DRO (nC10-<nC25)	6.5	B	1.9	0.49	mg/Kg	1		AK102	Total/NA
Prep Complete	1.0				NONE	1		Increment,Prep	Total/NA

This Detection Summary does not include radiochemical test results.

Eurofins TestAmerica, Sacramento

Detection Summary

Client: Shannon & Wilson, Inc
Project/Site: Kodiak DOT&PF PFAS (107471)

Job ID: 320-82156-1

Client Sample ID: ADQ-ISM2-05

Lab Sample ID: 320-82156-13

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Toluene	7.9	JH	87	7.8	ug/Kg	1	✳	8260C	Total/NA
DRO (nC10-<nC25)	5.8	B	2.0	0.49	mg/Kg	1		AK102	Total/NA
Prep Complete	1.0				NONE	1		Increment,Prep	Total/NA

Client Sample ID: Trip Blank 2

Lab Sample ID: 320-82156-14

No Detections.

Client Sample ID: Trip Blank 3

Lab Sample ID: 320-82156-15

No Detections.

Client Sample ID: Trip Blank 4

Lab Sample ID: 320-82156-16

No Detections.

Client Sample ID: Trip Blank 5

Lab Sample ID: 320-82156-17

No Detections.

Client Sample ID: ADQ-ISM1-EB1

Lab Sample ID: 320-82156-18

No Detections.

Client Sample ID: ADQ-ISM2-EB1

Lab Sample ID: 320-82156-19

No Detections.

Client Sample ID: ADQ-ISM2-EB2

Lab Sample ID: 320-82156-20

No Detections.

Client Sample ID: ADQ-ISM2-EB3

Lab Sample ID: 320-82156-21

No Detections.

This Detection Summary does not include radiochemical test results.

Eurofins TestAmerica, Sacramento

Client Sample Results

Client: Shannon & Wilson, Inc
 Project/Site: Kodiak DOT&PF PFAS (107471)

Job ID: 320-82156-1

Client Sample ID: ADQ-ISM1-01

Lab Sample ID: 320-82156-1

Date Collected: 11/14/21 14:30

Matrix: Solid

Date Received: 11/23/21 16:45

Percent Solids: 92.4

Method: 8260C SIM - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND	H	3.1	0.70	ug/Kg	✱	11/24/21 13:57	12/01/21 08:05	1
1,1,2-Trichloroethane	ND	H	3.1	1.0	ug/Kg	✱	11/24/21 13:57	12/01/21 08:05	1
1,2-Dichloroethane	ND	H	3.1	0.52	ug/Kg	✱	11/24/21 13:57	12/01/21 08:05	1
Bromomethane	ND	H	6.2	2.0	ug/Kg	✱	11/24/21 13:57	12/01/21 08:05	1
Chlorodibromomethane	ND	H	3.1	0.49	ug/Kg	✱	11/24/21 13:57	12/01/21 08:05	1
Chloroform	ND	*+ H	6.2	2.5	ug/Kg	✱	11/24/21 13:57	12/01/21 08:05	1
Dichlorobromomethane	ND	H	3.1	0.41	ug/Kg	✱	11/24/21 13:57	12/01/21 08:05	1
Ethylene Dibromide	ND	H	3.1	0.50	ug/Kg	✱	11/24/21 13:57	12/01/21 08:05	1
Trichloroethene	ND	H	3.1	0.61	ug/Kg	✱	11/24/21 13:57	12/01/21 08:05	1
Vinyl chloride	ND	H	3.1	0.78	ug/Kg	✱	11/24/21 13:57	12/01/21 08:05	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	83		69 - 129				11/24/21 13:57	12/01/21 08:05	1
Dibromofluoromethane (Surr)	121		72 - 132				11/24/21 13:57	12/01/21 08:05	1
1,2-Dichloroethane-d4 (Surr)	117		72 - 132				11/24/21 13:57	12/01/21 08:05	1
Toluene-d8 (Surr)	106		78 - 138				11/24/21 13:57	12/01/21 08:05	1

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND	H	62	7.3	ug/Kg	✱	11/24/21 13:57	12/05/21 23:08	1
1,1,1-Trichloroethane	ND	H	62	4.6	ug/Kg	✱	11/24/21 13:57	12/05/21 23:08	1
1,1-Dichloroethane	ND	H	62	3.4	ug/Kg	✱	11/24/21 13:57	12/05/21 23:08	1
1,1-Dichloroethene	ND	H	62	5.8	ug/Kg	✱	11/24/21 13:57	12/05/21 23:08	1
1,1-Dichloropropene	ND	H	62	5.3	ug/Kg	✱	11/24/21 13:57	12/05/21 23:08	1
1,2,3-Trichlorobenzene	ND	H	62	7.7	ug/Kg	✱	11/24/21 13:57	12/05/21 23:08	1
1,2,3-Trichloropropane	ND	H	62	5.8	ug/Kg	✱	11/24/21 13:57	12/05/21 23:08	1
1,2,4-Trichlorobenzene	ND	H	62	4.2	ug/Kg	✱	11/24/21 13:57	12/05/21 23:08	1
1,2,4-Trimethylbenzene	ND	H	62	4.3	ug/Kg	✱	11/24/21 13:57	12/05/21 23:08	1
1,2-Dibromo-3-Chloropropane	ND	H	120	7.8	ug/Kg	✱	11/24/21 13:57	12/05/21 23:08	1
1,2-Dichlorobenzene	ND	H	62	2.7	ug/Kg	✱	11/24/21 13:57	12/05/21 23:08	1
1,2-Dichloropropane	ND	H	62	5.8	ug/Kg	✱	11/24/21 13:57	12/05/21 23:08	1
1,3,5-Trimethylbenzene	ND	H	62	4.3	ug/Kg	✱	11/24/21 13:57	12/05/21 23:08	1
1,3-Dichlorobenzene	ND	H	62	4.1	ug/Kg	✱	11/24/21 13:57	12/05/21 23:08	1
1,3-Dichloropropane	ND	H	62	2.9	ug/Kg	✱	11/24/21 13:57	12/05/21 23:08	1
1,4-Dichlorobenzene	ND	H	62	2.7	ug/Kg	✱	11/24/21 13:57	12/05/21 23:08	1
2,2-Dichloropropane	ND	H	62	5.3	ug/Kg	✱	11/24/21 13:57	12/05/21 23:08	1
2-Butanone (MEK)	ND	H	120	32	ug/Kg	✱	11/24/21 13:57	12/05/21 23:08	1
2-Chlorotoluene	ND	H	62	4.5	ug/Kg	✱	11/24/21 13:57	12/05/21 23:08	1
2-Hexanone	ND	H	120	6.5	ug/Kg	✱	11/24/21 13:57	12/05/21 23:08	1
4-Chlorotoluene	ND	H	62	3.5	ug/Kg	✱	11/24/21 13:57	12/05/21 23:08	1
4-Methyl-2-pentanone (MIBK)	ND	H	120	3.9	ug/Kg	✱	11/24/21 13:57	12/05/21 23:08	1
p-Isopropyltoluene	ND	H	62	2.0	ug/Kg	✱	11/24/21 13:57	12/05/21 23:08	1
Acetone	71	J H	620	62	ug/Kg	✱	11/24/21 13:57	12/05/21 23:08	1
Benzene	8.8	J H	62	4.1	ug/Kg	✱	11/24/21 13:57	12/05/21 23:08	1
Bromoform	ND	H	62	14	ug/Kg	✱	11/24/21 13:57	12/05/21 23:08	1
Bromobenzene	ND	H	62	7.0	ug/Kg	✱	11/24/21 13:57	12/05/21 23:08	1
Carbon disulfide	ND	H	120	4.3	ug/Kg	✱	11/24/21 13:57	12/05/21 23:08	1
Carbon tetrachloride	ND	H	62	4.3	ug/Kg	✱	11/24/21 13:57	12/05/21 23:08	1
Chlorobenzene	ND	H	62	5.5	ug/Kg	✱	11/24/21 13:57	12/05/21 23:08	1
Chlorobromomethane	ND	H	62	9.1	ug/Kg	✱	11/24/21 13:57	12/05/21 23:08	1

Eurofins TestAmerica, Sacramento

Client Sample Results

Client: Shannon & Wilson, Inc
 Project/Site: Kodiak DOT&PF PFAS (107471)

Job ID: 320-82156-1

Client Sample ID: ADQ-ISM1-01

Lab Sample ID: 320-82156-1

Date Collected: 11/14/21 14:30

Matrix: Solid

Date Received: 11/23/21 16:45

Percent Solids: 92.4

Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloroethane	ND	H	62	8.2	ug/Kg	✳	11/24/21 13:57	12/05/21 23:08	1
Chloromethane	ND	H	62	3.1	ug/Kg	✳	11/24/21 13:57	12/05/21 23:08	1
cis-1,2-Dichloroethene	ND	H	62	10	ug/Kg	✳	11/24/21 13:57	12/05/21 23:08	1
cis-1,3-Dichloropropene	ND	H	62	5.1	ug/Kg	✳	11/24/21 13:57	12/05/21 23:08	1
Dibromomethane	ND	H	62	8.1	ug/Kg	✳	11/24/21 13:57	12/05/21 23:08	1
Dichlorodifluoromethane	ND	H	62	12	ug/Kg	✳	11/24/21 13:57	12/05/21 23:08	1
Ethylbenzene	ND	H	62	8.2	ug/Kg	✳	11/24/21 13:57	12/05/21 23:08	1
Hexachlorobutadiene	ND	H	62	6.3	ug/Kg	✳	11/24/21 13:57	12/05/21 23:08	1
Isopropylbenzene	ND	H	62	4.3	ug/Kg	✳	11/24/21 13:57	12/05/21 23:08	1
Methyl tert-butyl ether	ND	H	120	4.5	ug/Kg	✳	11/24/21 13:57	12/05/21 23:08	1
Methylene Chloride	ND	H	62	6.7	ug/Kg	✳	11/24/21 13:57	12/05/21 23:08	1
m-Xylene & p-Xylene	ND	H	62	6.2	ug/Kg	✳	11/24/21 13:57	12/05/21 23:08	1
Naphthalene	ND	H	62	2.2	ug/Kg	✳	11/24/21 13:57	12/05/21 23:08	1
n-Butylbenzene	ND	H	62	3.9	ug/Kg	✳	11/24/21 13:57	12/05/21 23:08	1
N-Propylbenzene	ND	H	62	5.8	ug/Kg	✳	11/24/21 13:57	12/05/21 23:08	1
o-Xylene	ND	H	62	6.5	ug/Kg	✳	11/24/21 13:57	12/05/21 23:08	1
sec-Butylbenzene	ND	H	62	3.0	ug/Kg	✳	11/24/21 13:57	12/05/21 23:08	1
Styrene	ND	H	62	1.4	ug/Kg	✳	11/24/21 13:57	12/05/21 23:08	1
tert-Butylbenzene	ND	H	62	5.1	ug/Kg	✳	11/24/21 13:57	12/05/21 23:08	1
Tetrachloroethene	ND	H	62	5.2	ug/Kg	✳	11/24/21 13:57	12/05/21 23:08	1
Toluene	7.9	J H	62	5.6	ug/Kg	✳	11/24/21 13:57	12/05/21 23:08	1
trans-1,2-Dichloroethene	ND	H	62	7.7	ug/Kg	✳	11/24/21 13:57	12/05/21 23:08	1
trans-1,3-Dichloropropene	ND	H	62	3.5	ug/Kg	✳	11/24/21 13:57	12/05/21 23:08	1
Trichlorofluoromethane	ND	H	62	15	ug/Kg	✳	11/24/21 13:57	12/05/21 23:08	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	101		52 - 126	11/24/21 13:57	12/05/21 23:08	1
4-Bromofluorobenzene (Surr)	102		67 - 135	11/24/21 13:57	12/05/21 23:08	1
Dibromofluoromethane (Surr)	96		61 - 123	11/24/21 13:57	12/05/21 23:08	1
Toluene-d8 (Surr)	105		65 - 131	11/24/21 13:57	12/05/21 23:08	1

Method: AK101 - Alaska - Gasoline Range Organics (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
C6-C10 AK	1.2	J	6.2	1.2	mg/Kg	✳	11/24/21 13:57	12/05/21 23:08	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	102		60 - 120	11/24/21 13:57	12/05/21 23:08	1
Trifluorotoluene (Surr)	73		60 - 120	11/24/21 13:57	12/05/21 23:08	1

Method: 8011 - EDB, DBCP, and 1,2,3-TCP (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ethylene Dibromide	ND	H	0.25	0.038	ug/Kg		12/03/21 13:35	12/04/21 09:36	1
1,2,3-Trichloropropane	ND	H	0.25	0.14	ug/Kg		12/03/21 13:35	12/04/21 09:36	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dibromopropane	122		55 - 130	12/03/21 13:35	12/04/21 09:36	1

Method: AK102 - DRO

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
DRO (nC10-<nC25)	350	H B	160	41	mg/Kg		11/30/21 11:46	12/13/21 18:44	50

Eurofins TestAmerica, Sacramento

Client Sample Results

Client: Shannon & Wilson, Inc
 Project/Site: Kodiak DOT&PF PFAS (107471)

Job ID: 320-82156-1

Client Sample ID: ADQ-ISM1-01

Lab Sample ID: 320-82156-1

Date Collected: 11/14/21 14:30

Matrix: Solid

Date Received: 11/23/21 16:45

Percent Solids: 92.4

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
<i>o</i> -Terphenyl (Surr)	130	S1+	60 - 120	11/30/21 11:46	12/13/21 18:44	50
<i>n</i> -Triacontane-d62	279	S1+	60 - 120	11/30/21 11:46	12/13/21 18:44	50

Method: EPA 537(Mod) - PFAS for QSM 5.3, Table B-15

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorohexanoic acid (PFHxA)	ND	H	0.98	0.15	ug/Kg		11/30/21 18:38	12/03/21 23:13	5
Perfluoroheptanoic acid (PFHpA)	ND	H	0.98	0.19	ug/Kg		11/30/21 18:38	12/03/21 23:13	5
Perfluorooctanoic acid (PFOA)	ND	H	0.98	0.26	ug/Kg		11/30/21 18:38	12/03/21 23:13	5
Perfluorononanoic acid (PFNA)	ND	H	0.98	0.11	ug/Kg		11/30/21 18:38	12/03/21 23:13	5
Perfluorodecanoic acid (PFDA)	ND	H	0.98	0.23	ug/Kg		11/30/21 18:38	12/03/21 23:13	5
Perfluoroundecanoic acid (PFUnA)	ND	H	0.98	0.21	ug/Kg		11/30/21 18:38	12/03/21 23:13	5
Perfluorododecanoic acid (PFDoA)	ND	H	0.98	0.15	ug/Kg		11/30/21 18:38	12/03/21 23:13	5
Perfluorotridecanoic acid (PFTTrDA)	ND	H	0.98	0.10	ug/Kg		11/30/21 18:38	12/03/21 23:13	5
Perfluorotetradecanoic acid (PFTTeA)	ND	H	0.98	0.18	ug/Kg		11/30/21 18:38	12/03/21 23:13	5
Perfluorobutanesulfonic acid (PFBS)	ND	H	0.98	0.19	ug/Kg		11/30/21 18:38	12/03/21 23:13	5
Perfluorohexanesulfonic acid (PFHxS)	ND	H	0.98	0.14	ug/Kg		11/30/21 18:38	12/03/21 23:13	5
Perfluorooctanesulfonic acid (PFOS)	ND	H F1	0.98	0.21	ug/Kg		11/30/21 18:38	12/03/21 23:13	5
NEtFOSAA	ND	H	0.98	0.23	ug/Kg		11/30/21 18:38	12/03/21 23:13	5
NMeFOSAA	ND	H	0.98	0.11	ug/Kg		11/30/21 18:38	12/03/21 23:13	5
HFPO-DA (GenX)	ND	H	0.98	0.20	ug/Kg		11/30/21 18:38	12/03/21 23:13	5
9Cl-PF3ONS	ND	H	0.98	0.17	ug/Kg		11/30/21 18:38	12/03/21 23:13	5
11Cl-PF3OUdS	ND	H	0.98	0.15	ug/Kg		11/30/21 18:38	12/03/21 23:13	5
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	ND	H	0.98	0.19	ug/Kg		11/30/21 18:38	12/03/21 23:13	5

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C2 PFHxA	84		50 - 150	11/30/21 18:38	12/03/21 23:13	5
13C4 PFHpA	79		50 - 150	11/30/21 18:38	12/03/21 23:13	5
13C4 PFOA	91		50 - 150	11/30/21 18:38	12/03/21 23:13	5
13C5 PFNA	75		50 - 150	11/30/21 18:38	12/03/21 23:13	5
13C2 PFDA	91		50 - 150	11/30/21 18:38	12/03/21 23:13	5
13C2 PFUnA	93		50 - 150	11/30/21 18:38	12/03/21 23:13	5
13C2 PFDoA	86		50 - 150	11/30/21 18:38	12/03/21 23:13	5
13C2 PFTTeDA	88		50 - 150	11/30/21 18:38	12/03/21 23:13	5
13C3 PFBS	86		50 - 150	11/30/21 18:38	12/03/21 23:13	5
18O2 PFHxS	79		50 - 150	11/30/21 18:38	12/03/21 23:13	5
13C4 PFOS	68		50 - 150	11/30/21 18:38	12/03/21 23:13	5
d3-NMeFOSAA	77		50 - 150	11/30/21 18:38	12/03/21 23:13	5
d5-NEtFOSAA	85		50 - 150	11/30/21 18:38	12/03/21 23:13	5
13C3 HFPO-DA	71		50 - 150	11/30/21 18:38	12/03/21 23:13	5

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	7.6	H	0.1	0.1	%			11/29/21 14:40	1
Percent Solids	92.4	H	0.1	0.1	%			11/29/21 14:40	1
Prep Complete	1.0				NONE			11/24/21 11:22	1

Client Sample Results

Client: Shannon & Wilson, Inc
 Project/Site: Kodiak DOT&PF PFAS (107471)

Job ID: 320-82156-1

Client Sample ID: ADQ-ISM1-101

Lab Sample ID: 320-82156-2

Date Collected: 11/15/21 10:05

Matrix: Solid

Date Received: 11/23/21 16:45

Percent Solids: 90.3

Method: 8260C SIM - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,2,2-Tetrachloroethane	ND	H	2.2	0.49	ug/Kg	☼	11/24/21 13:57	12/01/21 08:29	1
1,1,2-Trichloroethane	ND	H	2.2	0.73	ug/Kg	☼	11/24/21 13:57	12/01/21 08:29	1
1,2-Dichloroethane	ND	H	2.2	0.37	ug/Kg	☼	11/24/21 13:57	12/01/21 08:29	1
Bromomethane	ND	H	4.4	1.4	ug/Kg	☼	11/24/21 13:57	12/01/21 08:29	1
Chlorodibromomethane	ND	H	2.2	0.35	ug/Kg	☼	11/24/21 13:57	12/01/21 08:29	1
Chloroform	ND	*+ H	4.4	1.8	ug/Kg	☼	11/24/21 13:57	12/01/21 08:29	1
Dichlorobromomethane	ND	H	2.2	0.29	ug/Kg	☼	11/24/21 13:57	12/01/21 08:29	1
Ethylene Dibromide	ND	H	2.2	0.35	ug/Kg	☼	11/24/21 13:57	12/01/21 08:29	1
Trichloroethene	ND	H	2.2	0.44	ug/Kg	☼	11/24/21 13:57	12/01/21 08:29	1
Vinyl chloride	ND	H	2.2	0.56	ug/Kg	☼	11/24/21 13:57	12/01/21 08:29	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	81		69 - 129	11/24/21 13:57	12/01/21 08:29	1
Dibromofluoromethane (Surr)	120		72 - 132	11/24/21 13:57	12/01/21 08:29	1
1,2-Dichloroethane-d4 (Surr)	115		72 - 132	11/24/21 13:57	12/01/21 08:29	1
Toluene-d8 (Surr)	103		78 - 138	11/24/21 13:57	12/01/21 08:29	1

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND	H	44	5.2	ug/Kg	☼	11/24/21 13:57	12/05/21 23:31	1
1,1,1-Trichloroethane	ND	H	44	3.3	ug/Kg	☼	11/24/21 13:57	12/05/21 23:31	1
1,1-Dichloroethane	ND	H	44	2.4	ug/Kg	☼	11/24/21 13:57	12/05/21 23:31	1
1,1-Dichloroethene	ND	H	44	4.1	ug/Kg	☼	11/24/21 13:57	12/05/21 23:31	1
1,1-Dichloropropene	ND	H	44	3.8	ug/Kg	☼	11/24/21 13:57	12/05/21 23:31	1
1,2,3-Trichlorobenzene	ND	H	44	5.5	ug/Kg	☼	11/24/21 13:57	12/05/21 23:31	1
1,2,3-Trichloropropane	ND	H	44	4.1	ug/Kg	☼	11/24/21 13:57	12/05/21 23:31	1
1,2,4-Trichlorobenzene	ND	H	44	3.0	ug/Kg	☼	11/24/21 13:57	12/05/21 23:31	1
1,2,4-Trimethylbenzene	ND	H	44	3.1	ug/Kg	☼	11/24/21 13:57	12/05/21 23:31	1
1,2-Dibromo-3-Chloropropane	ND	H	88	5.6	ug/Kg	☼	11/24/21 13:57	12/05/21 23:31	1
1,2-Dichlorobenzene	ND	H	44	1.9	ug/Kg	☼	11/24/21 13:57	12/05/21 23:31	1
1,2-Dichloropropane	ND	H	44	4.1	ug/Kg	☼	11/24/21 13:57	12/05/21 23:31	1
1,3,5-Trimethylbenzene	ND	H	44	3.1	ug/Kg	☼	11/24/21 13:57	12/05/21 23:31	1
1,3-Dichlorobenzene	ND	H	44	2.9	ug/Kg	☼	11/24/21 13:57	12/05/21 23:31	1
1,3-Dichloropropane	ND	H	44	2.0	ug/Kg	☼	11/24/21 13:57	12/05/21 23:31	1
1,4-Dichlorobenzene	ND	H	44	1.9	ug/Kg	☼	11/24/21 13:57	12/05/21 23:31	1
2,2-Dichloropropane	ND	H	44	3.8	ug/Kg	☼	11/24/21 13:57	12/05/21 23:31	1
2-Butanone (MEK)	ND	H	88	23	ug/Kg	☼	11/24/21 13:57	12/05/21 23:31	1
2-Chlorotoluene	ND	H	44	3.2	ug/Kg	☼	11/24/21 13:57	12/05/21 23:31	1
2-Hexanone	ND	H	88	4.6	ug/Kg	☼	11/24/21 13:57	12/05/21 23:31	1
4-Chlorotoluene	ND	H	44	2.5	ug/Kg	☼	11/24/21 13:57	12/05/21 23:31	1
4-Methyl-2-pentanone (MIBK)	ND	H	88	2.7	ug/Kg	☼	11/24/21 13:57	12/05/21 23:31	1
p-Isopropyltoluene	ND	H	44	1.4	ug/Kg	☼	11/24/21 13:57	12/05/21 23:31	1
Acetone	110	J H	440	44	ug/Kg	☼	11/24/21 13:57	12/05/21 23:31	1
Benzene	ND	H	44	2.9	ug/Kg	☼	11/24/21 13:57	12/05/21 23:31	1
Bromoform	ND	H	44	9.7	ug/Kg	☼	11/24/21 13:57	12/05/21 23:31	1
Bromobenzene	ND	H	44	4.9	ug/Kg	☼	11/24/21 13:57	12/05/21 23:31	1
Carbon disulfide	ND	H	88	3.1	ug/Kg	☼	11/24/21 13:57	12/05/21 23:31	1
Carbon tetrachloride	ND	H	44	3.1	ug/Kg	☼	11/24/21 13:57	12/05/21 23:31	1
Chlorobenzene	ND	H	44	3.9	ug/Kg	☼	11/24/21 13:57	12/05/21 23:31	1
Chlorobromomethane	ND	H	44	6.4	ug/Kg	☼	11/24/21 13:57	12/05/21 23:31	1

Eurofins TestAmerica, Sacramento

Client Sample Results

Client: Shannon & Wilson, Inc
Project/Site: Kodiak DOT&PF PFAS (107471)

Job ID: 320-82156-1

Client Sample ID: ADQ-ISM1-101

Lab Sample ID: 320-82156-2

Date Collected: 11/15/21 10:05

Matrix: Solid

Date Received: 11/23/21 16:45

Percent Solids: 90.3

Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloroethane	ND	H	44	5.8	ug/Kg	☼	11/24/21 13:57	12/05/21 23:31	1
Chloromethane	ND	H	44	2.2	ug/Kg	☼	11/24/21 13:57	12/05/21 23:31	1
cis-1,2-Dichloroethene	ND	H	44	7.2	ug/Kg	☼	11/24/21 13:57	12/05/21 23:31	1
cis-1,3-Dichloropropene	ND	H	44	3.6	ug/Kg	☼	11/24/21 13:57	12/05/21 23:31	1
Dibromomethane	ND	H	44	5.7	ug/Kg	☼	11/24/21 13:57	12/05/21 23:31	1
Dichlorodifluoromethane	ND	H	44	8.3	ug/Kg	☼	11/24/21 13:57	12/05/21 23:31	1
Ethylbenzene	ND	H	44	5.8	ug/Kg	☼	11/24/21 13:57	12/05/21 23:31	1
Hexachlorobutadiene	ND	H	44	4.5	ug/Kg	☼	11/24/21 13:57	12/05/21 23:31	1
Isopropylbenzene	ND	H	44	3.1	ug/Kg	☼	11/24/21 13:57	12/05/21 23:31	1
Methyl tert-butyl ether	ND	H	88	3.2	ug/Kg	☼	11/24/21 13:57	12/05/21 23:31	1
Methylene Chloride	ND	H	44	4.8	ug/Kg	☼	11/24/21 13:57	12/05/21 23:31	1
m-Xylene & p-Xylene	5.1	J H	44	4.4	ug/Kg	☼	11/24/21 13:57	12/05/21 23:31	1
Naphthalene	ND	H	44	1.6	ug/Kg	☼	11/24/21 13:57	12/05/21 23:31	1
n-Butylbenzene	ND	H	44	2.7	ug/Kg	☼	11/24/21 13:57	12/05/21 23:31	1
N-Propylbenzene	ND	H	44	4.1	ug/Kg	☼	11/24/21 13:57	12/05/21 23:31	1
o-Xylene	ND	H	44	4.6	ug/Kg	☼	11/24/21 13:57	12/05/21 23:31	1
sec-Butylbenzene	ND	H	44	2.1	ug/Kg	☼	11/24/21 13:57	12/05/21 23:31	1
Styrene	ND	H	44	0.97	ug/Kg	☼	11/24/21 13:57	12/05/21 23:31	1
tert-Butylbenzene	ND	H	44	3.6	ug/Kg	☼	11/24/21 13:57	12/05/21 23:31	1
Tetrachloroethene	ND	H	44	3.7	ug/Kg	☼	11/24/21 13:57	12/05/21 23:31	1
Toluene	9.4	J H	44	4.0	ug/Kg	☼	11/24/21 13:57	12/05/21 23:31	1
trans-1,2-Dichloroethene	ND	H	44	5.5	ug/Kg	☼	11/24/21 13:57	12/05/21 23:31	1
trans-1,3-Dichloropropene	ND	H	44	2.5	ug/Kg	☼	11/24/21 13:57	12/05/21 23:31	1
Trichlorofluoromethane	ND	H	44	11	ug/Kg	☼	11/24/21 13:57	12/05/21 23:31	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	101		52 - 126	11/24/21 13:57	12/05/21 23:31	1
4-Bromofluorobenzene (Surr)	97		67 - 135	11/24/21 13:57	12/05/21 23:31	1
Dibromofluoromethane (Surr)	96		61 - 123	11/24/21 13:57	12/05/21 23:31	1
Toluene-d8 (Surr)	103		65 - 131	11/24/21 13:57	12/05/21 23:31	1

Method: AK101 - Alaska - Gasoline Range Organics (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
C6-C10 AK	0.93	J	4.4	0.88	mg/Kg	☼	11/24/21 13:57	12/05/21 23:31	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	97		60 - 120	11/24/21 13:57	12/05/21 23:31	1
Trifluorotoluene (Surr)	63		60 - 120	11/24/21 13:57	12/05/21 23:31	1

Method: 8011 - EDB, DBCP, and 1,2,3-TCP (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ethylene Dibromide	ND	H	0.25	0.038	ug/Kg		12/03/21 13:35	12/04/21 10:00	1
1,2,3-Trichloropropane	ND	H	0.25	0.14	ug/Kg		12/03/21 13:35	12/04/21 10:00	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dibromopropane	121		55 - 130	12/03/21 13:35	12/04/21 10:00	1

Method: AK102 - DRO

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
DRO (nC10-<nC25)	350	H B	65	16	mg/Kg		11/30/21 11:46	12/13/21 20:11	20

Eurofins TestAmerica, Sacramento

Client Sample Results

Client: Shannon & Wilson, Inc
 Project/Site: Kodiak DOT&PF PFAS (107471)

Job ID: 320-82156-1

Client Sample ID: ADQ-ISM1-101

Lab Sample ID: 320-82156-2

Date Collected: 11/15/21 10:05

Matrix: Solid

Date Received: 11/23/21 16:45

Percent Solids: 90.3

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
<i>o</i> -Terphenyl (Surr)	91		60 - 120	11/30/21 11:46	12/13/21 20:11	20
<i>n</i> -Triacontane-d62	137	S1+	60 - 120	11/30/21 11:46	12/13/21 20:11	20

Method: EPA 537(Mod) - PFAS for QSM 5.3, Table B-15

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorohexanoic acid (PFHxA)	ND	H	0.98	0.15	ug/Kg		11/30/21 18:38	12/03/21 23:45	5
Perfluoroheptanoic acid (PFHpA)	ND	H	0.98	0.19	ug/Kg		11/30/21 18:38	12/03/21 23:45	5
Perfluorooctanoic acid (PFOA)	ND	H	0.98	0.26	ug/Kg		11/30/21 18:38	12/03/21 23:45	5
Perfluorononanoic acid (PFNA)	ND	H	0.98	0.11	ug/Kg		11/30/21 18:38	12/03/21 23:45	5
Perfluorodecanoic acid (PFDA)	ND	H	0.98	0.24	ug/Kg		11/30/21 18:38	12/03/21 23:45	5
Perfluoroundecanoic acid (PFUnA)	ND	H	0.98	0.21	ug/Kg		11/30/21 18:38	12/03/21 23:45	5
Perfluorododecanoic acid (PFDoA)	ND	H	0.98	0.15	ug/Kg		11/30/21 18:38	12/03/21 23:45	5
Perfluorotridecanoic acid (PFTTrDA)	ND	H	0.98	0.10	ug/Kg		11/30/21 18:38	12/03/21 23:45	5
Perfluorotetradecanoic acid (PFTeA)	ND	H	0.98	0.18	ug/Kg		11/30/21 18:38	12/03/21 23:45	5
Perfluorobutanesulfonic acid (PFBS)	ND	H	0.98	0.19	ug/Kg		11/30/21 18:38	12/03/21 23:45	5
Perfluorohexanesulfonic acid (PFHxS)	ND	H	0.98	0.14	ug/Kg		11/30/21 18:38	12/03/21 23:45	5
Perfluorooctanesulfonic acid (PFOS)	ND	H	0.98	0.21	ug/Kg		11/30/21 18:38	12/03/21 23:45	5
NEtFOSAA	ND	H	0.98	0.24	ug/Kg		11/30/21 18:38	12/03/21 23:45	5
NMeFOSAA	ND	H	0.98	0.11	ug/Kg		11/30/21 18:38	12/03/21 23:45	5
HFPO-DA (GenX)	ND	H	0.98	0.20	ug/Kg		11/30/21 18:38	12/03/21 23:45	5
9CI-PF3ONS	ND	H	0.98	0.17	ug/Kg		11/30/21 18:38	12/03/21 23:45	5
11CI-PF3OUdS	ND	H	0.98	0.15	ug/Kg		11/30/21 18:38	12/03/21 23:45	5
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	ND	H	0.98	0.19	ug/Kg		11/30/21 18:38	12/03/21 23:45	5

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C2 PFHxA	86		50 - 150	11/30/21 18:38	12/03/21 23:45	5
13C4 PFHpA	86		50 - 150	11/30/21 18:38	12/03/21 23:45	5
13C4 PFOA	106		50 - 150	11/30/21 18:38	12/03/21 23:45	5
13C5 PFNA	86		50 - 150	11/30/21 18:38	12/03/21 23:45	5
13C2 PFDA	95		50 - 150	11/30/21 18:38	12/03/21 23:45	5
13C2 PFUnA	92		50 - 150	11/30/21 18:38	12/03/21 23:45	5
13C2 PFDoA	89		50 - 150	11/30/21 18:38	12/03/21 23:45	5
13C2 PFTeDA	109		50 - 150	11/30/21 18:38	12/03/21 23:45	5
13C3 PFBS	103		50 - 150	11/30/21 18:38	12/03/21 23:45	5
18O2 PFHxS	105		50 - 150	11/30/21 18:38	12/03/21 23:45	5
13C4 PFOS	88		50 - 150	11/30/21 18:38	12/03/21 23:45	5
d3-NMeFOSAA	85		50 - 150	11/30/21 18:38	12/03/21 23:45	5
d5-NEtFOSAA	103		50 - 150	11/30/21 18:38	12/03/21 23:45	5
13C3 HFPO-DA	90		50 - 150	11/30/21 18:38	12/03/21 23:45	5

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	9.7		0.1	0.1	%			11/29/21 14:40	1
Percent Solids	90.3		0.1	0.1	%			11/29/21 14:40	1
Prep Complete	1.0				NONE			11/24/21 11:22	1

Client Sample Results

Client: Shannon & Wilson, Inc
 Project/Site: Kodiak DOT&PF PFAS (107471)

Job ID: 320-82156-1

Client Sample ID: ADQ-ISM1-201

Lab Sample ID: 320-82156-3

Date Collected: 11/15/21 11:10

Matrix: Solid

Date Received: 11/23/21 16:45

Percent Solids: 94.9

Method: 8260C SIM - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND	H	3.8	0.86	ug/Kg	☼	11/24/21 13:57	12/01/21 08:53	1
1,1,2-Trichloroethane	ND	H	3.8	1.3	ug/Kg	☼	11/24/21 13:57	12/01/21 08:53	1
1,2-Dichloroethane	ND	H	3.8	0.64	ug/Kg	☼	11/24/21 13:57	12/01/21 08:53	1
Bromomethane	ND	H	7.6	2.5	ug/Kg	☼	11/24/21 13:57	12/01/21 08:53	1
Chlorodibromomethane	ND	H	3.8	0.61	ug/Kg	☼	11/24/21 13:57	12/01/21 08:53	1
Chloroform	ND	*+ H	7.6	3.0	ug/Kg	☼	11/24/21 13:57	12/01/21 08:53	1
Dichlorobromomethane	ND	H	3.8	0.50	ug/Kg	☼	11/24/21 13:57	12/01/21 08:53	1
Ethylene Dibromide	ND	H	3.8	0.61	ug/Kg	☼	11/24/21 13:57	12/01/21 08:53	1
Trichloroethene	ND	H	3.8	0.75	ug/Kg	☼	11/24/21 13:57	12/01/21 08:53	1
Vinyl chloride	ND	H	3.8	0.96	ug/Kg	☼	11/24/21 13:57	12/01/21 08:53	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	83		69 - 129				11/24/21 13:57	12/01/21 08:53	1
Dibromofluoromethane (Surr)	118		72 - 132				11/24/21 13:57	12/01/21 08:53	1
1,2-Dichloroethane-d4 (Surr)	116		72 - 132				11/24/21 13:57	12/01/21 08:53	1
Toluene-d8 (Surr)	108		78 - 138				11/24/21 13:57	12/01/21 08:53	1

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND	H	76	9.0	ug/Kg	☼	11/24/21 13:57	12/05/21 23:54	1
1,1,1-Trichloroethane	ND	H	76	5.6	ug/Kg	☼	11/24/21 13:57	12/05/21 23:54	1
1,1-Dichloroethane	ND	H	76	4.1	ug/Kg	☼	11/24/21 13:57	12/05/21 23:54	1
1,1-Dichloroethene	ND	H	76	7.2	ug/Kg	☼	11/24/21 13:57	12/05/21 23:54	1
1,1-Dichloropropene	ND	H	76	6.6	ug/Kg	☼	11/24/21 13:57	12/05/21 23:54	1
1,2,3-Trichlorobenzene	ND	H	76	9.5	ug/Kg	☼	11/24/21 13:57	12/05/21 23:54	1
1,2,3-Trichloropropane	ND	H	76	7.2	ug/Kg	☼	11/24/21 13:57	12/05/21 23:54	1
1,2,4-Trichlorobenzene	ND	H	76	5.2	ug/Kg	☼	11/24/21 13:57	12/05/21 23:54	1
1,2,4-Trimethylbenzene	6.1	J H	76	5.3	ug/Kg	☼	11/24/21 13:57	12/05/21 23:54	1
1,2-Dibromo-3-Chloropropane	ND	H	150	9.6	ug/Kg	☼	11/24/21 13:57	12/05/21 23:54	1
1,2-Dichlorobenzene	ND	H	76	3.4	ug/Kg	☼	11/24/21 13:57	12/05/21 23:54	1
1,2-Dichloropropane	ND	H	76	7.2	ug/Kg	☼	11/24/21 13:57	12/05/21 23:54	1
1,3,5-Trimethylbenzene	ND	H	76	5.3	ug/Kg	☼	11/24/21 13:57	12/05/21 23:54	1
1,3-Dichlorobenzene	ND	H	76	5.0	ug/Kg	☼	11/24/21 13:57	12/05/21 23:54	1
1,3-Dichloropropane	ND	H	76	3.5	ug/Kg	☼	11/24/21 13:57	12/05/21 23:54	1
1,4-Dichlorobenzene	ND	H	76	3.4	ug/Kg	☼	11/24/21 13:57	12/05/21 23:54	1
2,2-Dichloropropane	ND	H	76	6.6	ug/Kg	☼	11/24/21 13:57	12/05/21 23:54	1
2-Butanone (MEK)	ND	H	150	40	ug/Kg	☼	11/24/21 13:57	12/05/21 23:54	1
2-Chlorotoluene	ND	H	76	5.5	ug/Kg	☼	11/24/21 13:57	12/05/21 23:54	1
2-Hexanone	12	J H	150	7.9	ug/Kg	☼	11/24/21 13:57	12/05/21 23:54	1
4-Chlorotoluene	ND	H	76	4.3	ug/Kg	☼	11/24/21 13:57	12/05/21 23:54	1
4-Methyl-2-pentanone (MIBK)	ND	H	150	4.7	ug/Kg	☼	11/24/21 13:57	12/05/21 23:54	1
p-Isopropyltoluene	ND	H	76	2.4	ug/Kg	☼	11/24/21 13:57	12/05/21 23:54	1
Acetone	270	J H	760	76	ug/Kg	☼	11/24/21 13:57	12/05/21 23:54	1
Benzene	ND	H	76	5.0	ug/Kg	☼	11/24/21 13:57	12/05/21 23:54	1
Bromoform	ND	H	76	17	ug/Kg	☼	11/24/21 13:57	12/05/21 23:54	1
Bromobenzene	ND	H	76	8.5	ug/Kg	☼	11/24/21 13:57	12/05/21 23:54	1
Carbon disulfide	ND	H	150	5.3	ug/Kg	☼	11/24/21 13:57	12/05/21 23:54	1
Carbon tetrachloride	ND	H	76	5.3	ug/Kg	☼	11/24/21 13:57	12/05/21 23:54	1
Chlorobenzene	ND	H	76	6.7	ug/Kg	☼	11/24/21 13:57	12/05/21 23:54	1
Chlorobromomethane	ND	H	76	11	ug/Kg	☼	11/24/21 13:57	12/05/21 23:54	1

Eurofins TestAmerica, Sacramento

Client Sample Results

Client: Shannon & Wilson, Inc
 Project/Site: Kodiak DOT&PF PFAS (107471)

Job ID: 320-82156-1

Client Sample ID: ADQ-ISM1-201

Lab Sample ID: 320-82156-3

Date Collected: 11/15/21 11:10

Matrix: Solid

Date Received: 11/23/21 16:45

Percent Solids: 94.9

Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloroethane	ND	H	76	10	ug/Kg	☼	11/24/21 13:57	12/05/21 23:54	1
Chloromethane	ND	H	76	3.8	ug/Kg	☼	11/24/21 13:57	12/05/21 23:54	1
cis-1,2-Dichloroethene	ND	H	76	13	ug/Kg	☼	11/24/21 13:57	12/05/21 23:54	1
cis-1,3-Dichloropropene	ND	H	76	6.3	ug/Kg	☼	11/24/21 13:57	12/05/21 23:54	1
Dibromomethane	ND	H	76	9.9	ug/Kg	☼	11/24/21 13:57	12/05/21 23:54	1
Dichlorodifluoromethane	ND	H	76	14	ug/Kg	☼	11/24/21 13:57	12/05/21 23:54	1
Ethylbenzene	ND	H	76	10	ug/Kg	☼	11/24/21 13:57	12/05/21 23:54	1
Hexachlorobutadiene	ND	H	76	7.8	ug/Kg	☼	11/24/21 13:57	12/05/21 23:54	1
Isopropylbenzene	ND	H	76	5.3	ug/Kg	☼	11/24/21 13:57	12/05/21 23:54	1
Methyl tert-butyl ether	ND	H	150	5.5	ug/Kg	☼	11/24/21 13:57	12/05/21 23:54	1
Methylene Chloride	ND	H	76	8.2	ug/Kg	☼	11/24/21 13:57	12/05/21 23:54	1
m-Xylene & p-Xylene	15	J H	76	7.6	ug/Kg	☼	11/24/21 13:57	12/05/21 23:54	1
Naphthalene	ND	H	76	2.7	ug/Kg	☼	11/24/21 13:57	12/05/21 23:54	1
n-Butylbenzene	ND	H	76	4.7	ug/Kg	☼	11/24/21 13:57	12/05/21 23:54	1
N-Propylbenzene	ND	H	76	7.2	ug/Kg	☼	11/24/21 13:57	12/05/21 23:54	1
o-Xylene	ND	H	76	7.9	ug/Kg	☼	11/24/21 13:57	12/05/21 23:54	1
sec-Butylbenzene	ND	H	76	3.7	ug/Kg	☼	11/24/21 13:57	12/05/21 23:54	1
Styrene	ND	H	76	1.7	ug/Kg	☼	11/24/21 13:57	12/05/21 23:54	1
tert-Butylbenzene	ND	H	76	6.3	ug/Kg	☼	11/24/21 13:57	12/05/21 23:54	1
Tetrachloroethene	ND	H	76	6.4	ug/Kg	☼	11/24/21 13:57	12/05/21 23:54	1
Toluene	23	J H	76	6.9	ug/Kg	☼	11/24/21 13:57	12/05/21 23:54	1
trans-1,2-Dichloroethene	ND	H	76	9.5	ug/Kg	☼	11/24/21 13:57	12/05/21 23:54	1
trans-1,3-Dichloropropene	ND	H	76	4.3	ug/Kg	☼	11/24/21 13:57	12/05/21 23:54	1
Trichlorofluoromethane	ND	H	76	18	ug/Kg	☼	11/24/21 13:57	12/05/21 23:54	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	95		52 - 126	11/24/21 13:57	12/05/21 23:54	1
4-Bromofluorobenzene (Surr)	96		67 - 135	11/24/21 13:57	12/05/21 23:54	1
Dibromofluoromethane (Surr)	93		61 - 123	11/24/21 13:57	12/05/21 23:54	1
Toluene-d8 (Surr)	101		65 - 131	11/24/21 13:57	12/05/21 23:54	1

Method: AK101 - Alaska - Gasoline Range Organics (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
C6-C10 AK	6.6	J	7.6	1.5	mg/Kg	☼	11/24/21 13:57	12/05/21 23:54	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	96		60 - 120	11/24/21 13:57	12/05/21 23:54	1
Trifluorotoluene (Surr)	90		60 - 120	11/24/21 13:57	12/05/21 23:54	1

Method: 8011 - EDB, DBCP, and 1,2,3-TCP (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ethylene Dibromide	ND	H	0.25	0.038	ug/Kg		12/03/21 13:35	12/04/21 10:25	1
1,2,3-Trichloropropane	ND	H	0.25	0.14	ug/Kg		12/03/21 13:35	12/04/21 10:25	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dibromopropane	97		55 - 130	12/03/21 13:35	12/04/21 10:25	1

Method: AK102 - DRO

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
DRO (nC10-<nC25)	400	H B	160	41	mg/Kg		11/30/21 11:46	12/13/21 20:39	50

Eurofins TestAmerica, Sacramento

Client Sample Results

Client: Shannon & Wilson, Inc
 Project/Site: Kodiak DOT&PF PFAS (107471)

Job ID: 320-82156-1

Client Sample ID: ADQ-ISM1-201

Lab Sample ID: 320-82156-3

Date Collected: 11/15/21 11:10

Matrix: Solid

Date Received: 11/23/21 16:45

Percent Solids: 94.9

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
<i>o</i> -Terphenyl (Surr)	140	S1+	60 - 120	11/30/21 11:46	12/13/21 20:39	50
<i>n</i> -Triacontane-d62	313	S1+	60 - 120	11/30/21 11:46	12/13/21 20:39	50

Method: EPA 537(Mod) - PFAS for QSM 5.3, Table B-15

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorohexanoic acid (PFHxA)	ND	H	0.96	0.15	ug/Kg		11/30/21 18:38	12/03/21 23:55	5
Perfluoroheptanoic acid (PFHpA)	ND	H	0.96	0.18	ug/Kg		11/30/21 18:38	12/03/21 23:55	5
Perfluorooctanoic acid (PFOA)	ND	H	0.96	0.25	ug/Kg		11/30/21 18:38	12/03/21 23:55	5
Perfluorononanoic acid (PFNA)	ND	H	0.96	0.11	ug/Kg		11/30/21 18:38	12/03/21 23:55	5
Perfluorodecanoic acid (PFDA)	ND	H	0.96	0.23	ug/Kg		11/30/21 18:38	12/03/21 23:55	5
Perfluoroundecanoic acid (PFUnA)	ND	H	0.96	0.20	ug/Kg		11/30/21 18:38	12/03/21 23:55	5
Perfluorododecanoic acid (PFDoA)	ND	H	0.96	0.14	ug/Kg		11/30/21 18:38	12/03/21 23:55	5
Perfluorotridecanoic acid (PFTrDA)	ND	H	0.96	0.10	ug/Kg		11/30/21 18:38	12/03/21 23:55	5
Perfluorotetradecanoic acid (PFTeA)	ND	H	0.96	0.18	ug/Kg		11/30/21 18:38	12/03/21 23:55	5
Perfluorobutanesulfonic acid (PFBS)	ND	H	0.96	0.18	ug/Kg		11/30/21 18:38	12/03/21 23:55	5
Perfluorohexanesulfonic acid (PFHxS)	ND	H	0.96	0.14	ug/Kg		11/30/21 18:38	12/03/21 23:55	5
Perfluorooctanesulfonic acid (PFOS)	ND	H	0.96	0.21	ug/Kg		11/30/21 18:38	12/03/21 23:55	5
NEtFOSAA	ND	H	0.96	0.23	ug/Kg		11/30/21 18:38	12/03/21 23:55	5
NMeFOSAA	ND	H	0.96	0.11	ug/Kg		11/30/21 18:38	12/03/21 23:55	5
HFPO-DA (GenX)	ND	H	0.96	0.20	ug/Kg		11/30/21 18:38	12/03/21 23:55	5
9CI-PF3ONS	ND	H	0.96	0.17	ug/Kg		11/30/21 18:38	12/03/21 23:55	5
11CI-PF3OUdS	ND	H	0.96	0.15	ug/Kg		11/30/21 18:38	12/03/21 23:55	5
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	ND	H	0.96	0.19	ug/Kg		11/30/21 18:38	12/03/21 23:55	5

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C2 PFHxA	69		50 - 150	11/30/21 18:38	12/03/21 23:55	5
13C4 PFHpA	64		50 - 150	11/30/21 18:38	12/03/21 23:55	5
13C4 PFOA	92		50 - 150	11/30/21 18:38	12/03/21 23:55	5
13C5 PFNA	71		50 - 150	11/30/21 18:38	12/03/21 23:55	5
13C2 PFDA	79		50 - 150	11/30/21 18:38	12/03/21 23:55	5
13C2 PFUnA	81		50 - 150	11/30/21 18:38	12/03/21 23:55	5
13C2 PFDoA	81		50 - 150	11/30/21 18:38	12/03/21 23:55	5
13C2 PFTeDA	88		50 - 150	11/30/21 18:38	12/03/21 23:55	5
13C3 PFBS	72		50 - 150	11/30/21 18:38	12/03/21 23:55	5
18O2 PFHxS	80		50 - 150	11/30/21 18:38	12/03/21 23:55	5
13C4 PFOS	82		50 - 150	11/30/21 18:38	12/03/21 23:55	5
d3-NMeFOSAA	66		50 - 150	11/30/21 18:38	12/03/21 23:55	5
d5-NEtFOSAA	75		50 - 150	11/30/21 18:38	12/03/21 23:55	5
13C3 HFPO-DA	82		50 - 150	11/30/21 18:38	12/03/21 23:55	5

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	5.1		0.1	0.1	%			11/29/21 14:40	1
Percent Solids	94.9		0.1	0.1	%			11/29/21 14:40	1
Prep Complete	1.0				NONE			11/24/21 11:22	1

Client Sample Results

Client: Shannon & Wilson, Inc
 Project/Site: Kodiak DOT&PF PFAS (107471)

Job ID: 320-82156-1

Client Sample ID: ADQ-ISM1-02

Lab Sample ID: 320-82156-4

Date Collected: 11/14/21 16:00

Matrix: Solid

Date Received: 11/23/21 16:45

Percent Solids: 93.3

Method: 8260C SIM - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND	H	2.5	0.56	ug/Kg	☼	11/24/21 13:57	12/01/21 09:17	1
1,1,2-Trichloroethane	ND	H	2.5	0.84	ug/Kg	☼	11/24/21 13:57	12/01/21 09:17	1
1,2-Dichloroethane	ND	H	2.5	0.42	ug/Kg	☼	11/24/21 13:57	12/01/21 09:17	1
Bromomethane	ND	H	5.0	1.6	ug/Kg	☼	11/24/21 13:57	12/01/21 09:17	1
Chlorodibromomethane	ND	H	2.5	0.40	ug/Kg	☼	11/24/21 13:57	12/01/21 09:17	1
Chloroform	ND	*+ H	5.0	2.0	ug/Kg	☼	11/24/21 13:57	12/01/21 09:17	1
Dichlorobromomethane	ND	H	2.5	0.33	ug/Kg	☼	11/24/21 13:57	12/01/21 09:17	1
Ethylene Dibromide	ND	H	2.5	0.40	ug/Kg	☼	11/24/21 13:57	12/01/21 09:17	1
Trichloroethene	ND	H	2.5	0.50	ug/Kg	☼	11/24/21 13:57	12/01/21 09:17	1
Vinyl chloride	ND	H	2.5	0.64	ug/Kg	☼	11/24/21 13:57	12/01/21 09:17	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	85		69 - 129	11/24/21 13:57	12/01/21 09:17	1
Dibromofluoromethane (Surr)	119		72 - 132	11/24/21 13:57	12/01/21 09:17	1
1,2-Dichloroethane-d4 (Surr)	119		72 - 132	11/24/21 13:57	12/01/21 09:17	1
Toluene-d8 (Surr)	107		78 - 138	11/24/21 13:57	12/01/21 09:17	1

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND	H	50	5.9	ug/Kg	☼	11/24/21 13:57	12/06/21 00:17	1
1,1,1-Trichloroethane	ND	H	50	3.7	ug/Kg	☼	11/24/21 13:57	12/06/21 00:17	1
1,1-Dichloroethane	ND	H	50	2.7	ug/Kg	☼	11/24/21 13:57	12/06/21 00:17	1
1,1-Dichloroethene	ND	H	50	4.7	ug/Kg	☼	11/24/21 13:57	12/06/21 00:17	1
1,1-Dichloropropene	ND	H	50	4.3	ug/Kg	☼	11/24/21 13:57	12/06/21 00:17	1
1,2,3-Trichlorobenzene	ND	H	50	6.2	ug/Kg	☼	11/24/21 13:57	12/06/21 00:17	1
1,2,3-Trichloropropane	ND	H	50	4.7	ug/Kg	☼	11/24/21 13:57	12/06/21 00:17	1
1,2,4-Trichlorobenzene	ND	H	50	3.4	ug/Kg	☼	11/24/21 13:57	12/06/21 00:17	1
1,2,4-Trimethylbenzene	ND	H	50	3.5	ug/Kg	☼	11/24/21 13:57	12/06/21 00:17	1
1,2-Dibromo-3-Chloropropane	ND	H	100	6.3	ug/Kg	☼	11/24/21 13:57	12/06/21 00:17	1
1,2-Dichlorobenzene	ND	H	50	2.2	ug/Kg	☼	11/24/21 13:57	12/06/21 00:17	1
1,2-Dichloropropane	ND	H	50	4.7	ug/Kg	☼	11/24/21 13:57	12/06/21 00:17	1
1,3,5-Trimethylbenzene	ND	H	50	3.5	ug/Kg	☼	11/24/21 13:57	12/06/21 00:17	1
1,3-Dichlorobenzene	ND	H	50	3.3	ug/Kg	☼	11/24/21 13:57	12/06/21 00:17	1
1,3-Dichloropropane	ND	H	50	2.3	ug/Kg	☼	11/24/21 13:57	12/06/21 00:17	1
1,4-Dichlorobenzene	ND	H	50	2.2	ug/Kg	☼	11/24/21 13:57	12/06/21 00:17	1
2,2-Dichloropropane	ND	H	50	4.3	ug/Kg	☼	11/24/21 13:57	12/06/21 00:17	1
2-Butanone (MEK)	ND	H	100	26	ug/Kg	☼	11/24/21 13:57	12/06/21 00:17	1
2-Chlorotoluene	ND	H	50	3.6	ug/Kg	☼	11/24/21 13:57	12/06/21 00:17	1
2-Hexanone	ND	H	100	5.2	ug/Kg	☼	11/24/21 13:57	12/06/21 00:17	1
4-Chlorotoluene	ND	H	50	2.8	ug/Kg	☼	11/24/21 13:57	12/06/21 00:17	1
4-Methyl-2-pentanone (MIBK)	ND	H	100	3.1	ug/Kg	☼	11/24/21 13:57	12/06/21 00:17	1
p-Isopropyltoluene	ND	H	50	1.6	ug/Kg	☼	11/24/21 13:57	12/06/21 00:17	1
Acetone	72	J H	500	50	ug/Kg	☼	11/24/21 13:57	12/06/21 00:17	1
Benzene	ND	H	50	3.3	ug/Kg	☼	11/24/21 13:57	12/06/21 00:17	1
Bromoform	ND	H	50	11	ug/Kg	☼	11/24/21 13:57	12/06/21 00:17	1
Bromobenzene	ND	H	50	5.6	ug/Kg	☼	11/24/21 13:57	12/06/21 00:17	1
Carbon disulfide	ND	H	100	3.5	ug/Kg	☼	11/24/21 13:57	12/06/21 00:17	1
Carbon tetrachloride	ND	H	50	3.5	ug/Kg	☼	11/24/21 13:57	12/06/21 00:17	1
Chlorobenzene	ND	H	50	4.4	ug/Kg	☼	11/24/21 13:57	12/06/21 00:17	1
Chlorobromomethane	ND	H	50	7.3	ug/Kg	☼	11/24/21 13:57	12/06/21 00:17	1

Eurofins TestAmerica, Sacramento

Client Sample Results

Client: Shannon & Wilson, Inc
 Project/Site: Kodiak DOT&PF PFAS (107471)

Job ID: 320-82156-1

Client Sample ID: ADQ-ISM1-02

Lab Sample ID: 320-82156-4

Date Collected: 11/14/21 16:00

Matrix: Solid

Date Received: 11/23/21 16:45

Percent Solids: 93.3

Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloroethane	ND	H	50	6.6	ug/Kg	☼	11/24/21 13:57	12/06/21 00:17	1
Chloromethane	ND	H	50	2.5	ug/Kg	☼	11/24/21 13:57	12/06/21 00:17	1
cis-1,2-Dichloroethene	ND	H	50	8.3	ug/Kg	☼	11/24/21 13:57	12/06/21 00:17	1
cis-1,3-Dichloropropene	ND	H	50	4.1	ug/Kg	☼	11/24/21 13:57	12/06/21 00:17	1
Dibromomethane	ND	H	50	6.5	ug/Kg	☼	11/24/21 13:57	12/06/21 00:17	1
Dichlorodifluoromethane	ND	H	50	9.5	ug/Kg	☼	11/24/21 13:57	12/06/21 00:17	1
Ethylbenzene	ND	H	50	6.6	ug/Kg	☼	11/24/21 13:57	12/06/21 00:17	1
Hexachlorobutadiene	ND	H	50	5.1	ug/Kg	☼	11/24/21 13:57	12/06/21 00:17	1
Isopropylbenzene	ND	H	50	3.5	ug/Kg	☼	11/24/21 13:57	12/06/21 00:17	1
Methyl tert-butyl ether	ND	H	100	3.6	ug/Kg	☼	11/24/21 13:57	12/06/21 00:17	1
Methylene Chloride	ND	H	50	5.4	ug/Kg	☼	11/24/21 13:57	12/06/21 00:17	1
m-Xylene & p-Xylene	ND	H	50	5.0	ug/Kg	☼	11/24/21 13:57	12/06/21 00:17	1
Naphthalene	ND	H	50	1.8	ug/Kg	☼	11/24/21 13:57	12/06/21 00:17	1
n-Butylbenzene	ND	H	50	3.1	ug/Kg	☼	11/24/21 13:57	12/06/21 00:17	1
N-Propylbenzene	ND	H	50	4.7	ug/Kg	☼	11/24/21 13:57	12/06/21 00:17	1
o-Xylene	ND	H	50	5.2	ug/Kg	☼	11/24/21 13:57	12/06/21 00:17	1
sec-Butylbenzene	ND	H	50	2.4	ug/Kg	☼	11/24/21 13:57	12/06/21 00:17	1
Styrene	ND	H	50	1.1	ug/Kg	☼	11/24/21 13:57	12/06/21 00:17	1
tert-Butylbenzene	ND	H	50	4.1	ug/Kg	☼	11/24/21 13:57	12/06/21 00:17	1
Tetrachloroethene	ND	H	50	4.2	ug/Kg	☼	11/24/21 13:57	12/06/21 00:17	1
Toluene	5.4	J H	50	4.5	ug/Kg	☼	11/24/21 13:57	12/06/21 00:17	1
trans-1,2-Dichloroethene	ND	H	50	6.2	ug/Kg	☼	11/24/21 13:57	12/06/21 00:17	1
trans-1,3-Dichloropropene	ND	H	50	2.8	ug/Kg	☼	11/24/21 13:57	12/06/21 00:17	1
Trichlorofluoromethane	ND	H	50	12	ug/Kg	☼	11/24/21 13:57	12/06/21 00:17	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	117		52 - 126	11/24/21 13:57	12/06/21 00:17	1
4-Bromofluorobenzene (Surr)	114		67 - 135	11/24/21 13:57	12/06/21 00:17	1
Dibromofluoromethane (Surr)	113		61 - 123	11/24/21 13:57	12/06/21 00:17	1
Toluene-d8 (Surr)	120		65 - 131	11/24/21 13:57	12/06/21 00:17	1

Method: AK101 - Alaska - Gasoline Range Organics (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
C6-C10 AK	ND		5.0	1.0	mg/Kg	☼	11/24/21 13:57	12/06/21 00:17	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	114		60 - 120	11/24/21 13:57	12/06/21 00:17	1
Trifluorotoluene (Surr)	73		60 - 120	11/24/21 13:57	12/06/21 00:17	1

Method: 8011 - EDB, DBCP, and 1,2,3-TCP (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ethylene Dibromide	ND	H	0.25	0.038	ug/Kg		12/03/21 13:35	12/04/21 10:49	1
1,2,3-Trichloropropane	ND	H	0.25	0.14	ug/Kg		12/03/21 13:35	12/04/21 10:49	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dibromopropane	100		55 - 130	12/03/21 13:35	12/04/21 10:49	1

Method: AK102 - DRO

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
DRO (nC10-<nC25)	350	H B	160	41	mg/Kg		11/30/21 11:46	12/13/21 21:08	50

Eurofins TestAmerica, Sacramento

Client Sample Results

Client: Shannon & Wilson, Inc
 Project/Site: Kodiak DOT&PF PFAS (107471)

Job ID: 320-82156-1

Client Sample ID: ADQ-ISM1-02

Lab Sample ID: 320-82156-4

Date Collected: 11/14/21 16:00

Matrix: Solid

Date Received: 11/23/21 16:45

Percent Solids: 93.3

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
<i>o</i> -Terphenyl (Surr)	136	S1+	60 - 120	11/30/21 11:46	12/13/21 21:08	50
<i>n</i> -Triacontane-d62	218	S1+	60 - 120	11/30/21 11:46	12/13/21 21:08	50

Method: EPA 537(Mod) - PFAS for QSM 5.3, Table B-15

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorohexanoic acid (PFHxA)	ND	H	1.9	0.30	ug/Kg		11/30/21 18:38	12/03/21 23:03	10
Perfluoroheptanoic acid (PFHpA)	ND	H	1.9	0.36	ug/Kg		11/30/21 18:38	12/03/21 23:03	10
Perfluorooctanoic acid (PFOA)	ND	H	1.9	0.51	ug/Kg		11/30/21 18:38	12/03/21 23:03	10
Perfluorononanoic acid (PFNA)	ND	H	1.9	0.21	ug/Kg		11/30/21 18:38	12/03/21 23:03	10
Perfluorodecanoic acid (PFDA)	ND	H	1.9	0.46	ug/Kg		11/30/21 18:38	12/03/21 23:03	10
Perfluoroundecanoic acid (PFUnA)	ND	H	1.9	0.40	ug/Kg		11/30/21 18:38	12/03/21 23:03	10
Perfluorododecanoic acid (PFDoA)	ND	H	1.9	0.29	ug/Kg		11/30/21 18:38	12/03/21 23:03	10
Perfluorotridecanoic acid (PFTTrDA)	ND	H	1.9	0.20	ug/Kg		11/30/21 18:38	12/03/21 23:03	10
Perfluorotetradecanoic acid (PFTeA)	ND	H	1.9	0.35	ug/Kg		11/30/21 18:38	12/03/21 23:03	10
Perfluorobutanesulfonic acid (PFBS)	ND	H	1.9	0.36	ug/Kg		11/30/21 18:38	12/03/21 23:03	10
Perfluorohexanesulfonic acid (PFHxS)	ND	H	1.9	0.28	ug/Kg		11/30/21 18:38	12/03/21 23:03	10
Perfluorooctanesulfonic acid (PFOS)	ND	H	1.9	0.41	ug/Kg		11/30/21 18:38	12/03/21 23:03	10
NEtFOSAA	ND	H	1.9	0.46	ug/Kg		11/30/21 18:38	12/03/21 23:03	10
NMeFOSAA	ND	H	1.9	0.22	ug/Kg		11/30/21 18:38	12/03/21 23:03	10
HFPO-DA (GenX)	ND	H	1.9	0.39	ug/Kg		11/30/21 18:38	12/03/21 23:03	10
9Cl-PF3ONS	ND	H	1.9	0.33	ug/Kg		11/30/21 18:38	12/03/21 23:03	10
11Cl-PF3OUdS	ND	H	1.9	0.30	ug/Kg		11/30/21 18:38	12/03/21 23:03	10
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	ND	H	1.9	0.37	ug/Kg		11/30/21 18:38	12/03/21 23:03	10

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C2 PFHxA	91		50 - 150	11/30/21 18:38	12/03/21 23:03	10
13C4 PFHpA	79		50 - 150	11/30/21 18:38	12/03/21 23:03	10
13C4 PFOA	101		50 - 150	11/30/21 18:38	12/03/21 23:03	10
13C5 PFNA	92		50 - 150	11/30/21 18:38	12/03/21 23:03	10
13C2 PFDA	96		50 - 150	11/30/21 18:38	12/03/21 23:03	10
13C2 PFUnA	101		50 - 150	11/30/21 18:38	12/03/21 23:03	10
13C2 PFDoA	101		50 - 150	11/30/21 18:38	12/03/21 23:03	10
13C2 PFTeDA	101		50 - 150	11/30/21 18:38	12/03/21 23:03	10
13C3 PFBS	90		50 - 150	11/30/21 18:38	12/03/21 23:03	10
18O2 PFHxS	90		50 - 150	11/30/21 18:38	12/03/21 23:03	10
13C4 PFOS	99		50 - 150	11/30/21 18:38	12/03/21 23:03	10
d3-NMeFOSAA	82		50 - 150	11/30/21 18:38	12/03/21 23:03	10
d5-NEtFOSAA	104		50 - 150	11/30/21 18:38	12/03/21 23:03	10
13C3 HFPO-DA	95		50 - 150	11/30/21 18:38	12/03/21 23:03	10

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	6.7	H	0.1	0.1	%			11/29/21 14:40	1
Percent Solids	93.3	H	0.1	0.1	%			11/29/21 14:40	1
Prep Complete	1.0				NONE			11/24/21 11:22	1

Client Sample Results

Client: Shannon & Wilson, Inc
 Project/Site: Kodiak DOT&PF PFAS (107471)

Job ID: 320-82156-1

Client Sample ID: ADQ-ISM1-03

Lab Sample ID: 320-82156-5

Date Collected: 11/15/21 15:10

Matrix: Solid

Date Received: 11/23/21 16:45

Percent Solids: 89.7

Method: 8260C SIM - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,2,2-Tetrachloroethane	ND	H	4.2	0.95	ug/Kg	☼	11/24/21 13:57	12/01/21 09:40	1
1,1,2-Trichloroethane	ND	H	4.2	1.4	ug/Kg	☼	11/24/21 13:57	12/01/21 09:40	1
1,2-Dichloroethane	ND	H	4.2	0.71	ug/Kg	☼	11/24/21 13:57	12/01/21 09:40	1
Bromomethane	ND	H	8.5	2.8	ug/Kg	☼	11/24/21 13:57	12/01/21 09:40	1
Chlorodibromomethane	ND	H	4.2	0.67	ug/Kg	☼	11/24/21 13:57	12/01/21 09:40	1
Chloroform	ND	*+ H	8.5	3.4	ug/Kg	☼	11/24/21 13:57	12/01/21 09:40	1
Dichlorobromomethane	ND	H	4.2	0.55	ug/Kg	☼	11/24/21 13:57	12/01/21 09:40	1
Ethylene Dibromide	ND	H	4.2	0.68	ug/Kg	☼	11/24/21 13:57	12/01/21 09:40	1
Trichloroethene	ND	H	4.2	0.84	ug/Kg	☼	11/24/21 13:57	12/01/21 09:40	1
Vinyl chloride	ND	H	4.2	1.1	ug/Kg	☼	11/24/21 13:57	12/01/21 09:40	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	82		69 - 129	11/24/21 13:57	12/01/21 09:40	1
Dibromofluoromethane (Surr)	116		72 - 132	11/24/21 13:57	12/01/21 09:40	1
1,2-Dichloroethane-d4 (Surr)	116		72 - 132	11/24/21 13:57	12/01/21 09:40	1
Toluene-d8 (Surr)	107		78 - 138	11/24/21 13:57	12/01/21 09:40	1

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND	H	85	10	ug/Kg	☼	11/24/21 13:57	12/06/21 00:40	1
1,1,1-Trichloroethane	ND	H	85	6.3	ug/Kg	☼	11/24/21 13:57	12/06/21 00:40	1
1,1-Dichloroethane	ND	H	85	4.6	ug/Kg	☼	11/24/21 13:57	12/06/21 00:40	1
1,1-Dichloroethene	ND	H	85	7.9	ug/Kg	☼	11/24/21 13:57	12/06/21 00:40	1
1,1-Dichloropropene	ND	H	85	7.3	ug/Kg	☼	11/24/21 13:57	12/06/21 00:40	1
1,2,3-Trichlorobenzene	ND	H	85	10	ug/Kg	☼	11/24/21 13:57	12/06/21 00:40	1
1,2,3-Trichloropropane	ND	H	85	7.9	ug/Kg	☼	11/24/21 13:57	12/06/21 00:40	1
1,2,4-Trichlorobenzene	ND	H	85	5.8	ug/Kg	☼	11/24/21 13:57	12/06/21 00:40	1
1,2,4-Trimethylbenzene	ND	H	85	5.9	ug/Kg	☼	11/24/21 13:57	12/06/21 00:40	1
1,2-Dibromo-3-Chloropropane	ND	H	170	11	ug/Kg	☼	11/24/21 13:57	12/06/21 00:40	1
1,2-Dichlorobenzene	ND	H	85	3.7	ug/Kg	☼	11/24/21 13:57	12/06/21 00:40	1
1,2-Dichloropropane	ND	H	85	7.9	ug/Kg	☼	11/24/21 13:57	12/06/21 00:40	1
1,3,5-Trimethylbenzene	ND	H	85	5.9	ug/Kg	☼	11/24/21 13:57	12/06/21 00:40	1
1,3-Dichlorobenzene	ND	H	85	5.6	ug/Kg	☼	11/24/21 13:57	12/06/21 00:40	1
1,3-Dichloropropane	ND	H	85	3.9	ug/Kg	☼	11/24/21 13:57	12/06/21 00:40	1
1,4-Dichlorobenzene	ND	H	85	3.7	ug/Kg	☼	11/24/21 13:57	12/06/21 00:40	1
2,2-Dichloropropane	ND	H	85	7.3	ug/Kg	☼	11/24/21 13:57	12/06/21 00:40	1
2-Butanone (MEK)	ND	H	170	44	ug/Kg	☼	11/24/21 13:57	12/06/21 00:40	1
2-Chlorotoluene	ND	H	85	6.1	ug/Kg	☼	11/24/21 13:57	12/06/21 00:40	1
2-Hexanone	ND	H	170	8.8	ug/Kg	☼	11/24/21 13:57	12/06/21 00:40	1
4-Chlorotoluene	ND	H	85	4.7	ug/Kg	☼	11/24/21 13:57	12/06/21 00:40	1
4-Methyl-2-pentanone (MIBK)	ND	H	170	5.2	ug/Kg	☼	11/24/21 13:57	12/06/21 00:40	1
p-Isopropyltoluene	ND	H	85	2.7	ug/Kg	☼	11/24/21 13:57	12/06/21 00:40	1
Acetone	ND	H	850	85	ug/Kg	☼	11/24/21 13:57	12/06/21 00:40	1
Benzene	ND	H	85	5.6	ug/Kg	☼	11/24/21 13:57	12/06/21 00:40	1
Bromoform	ND	H	85	19	ug/Kg	☼	11/24/21 13:57	12/06/21 00:40	1
Bromobenzene	ND	H	85	9.5	ug/Kg	☼	11/24/21 13:57	12/06/21 00:40	1
Carbon disulfide	ND	H	170	5.9	ug/Kg	☼	11/24/21 13:57	12/06/21 00:40	1
Carbon tetrachloride	ND	H	85	5.9	ug/Kg	☼	11/24/21 13:57	12/06/21 00:40	1
Chlorobenzene	ND	H	85	7.4	ug/Kg	☼	11/24/21 13:57	12/06/21 00:40	1
Chlorobromomethane	ND	H	85	12	ug/Kg	☼	11/24/21 13:57	12/06/21 00:40	1

Eurofins TestAmerica, Sacramento

Client Sample Results

Client: Shannon & Wilson, Inc
 Project/Site: Kodiak DOT&PF PFAS (107471)

Job ID: 320-82156-1

Client Sample ID: ADQ-ISM1-03

Lab Sample ID: 320-82156-5

Date Collected: 11/15/21 15:10

Matrix: Solid

Date Received: 11/23/21 16:45

Percent Solids: 89.7

Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloroethane	ND	H	85	11	ug/Kg	☼	11/24/21 13:57	12/06/21 00:40	1
Chloromethane	ND	H	85	4.2	ug/Kg	☼	11/24/21 13:57	12/06/21 00:40	1
cis-1,2-Dichloroethene	ND	H	85	14	ug/Kg	☼	11/24/21 13:57	12/06/21 00:40	1
cis-1,3-Dichloropropene	ND	H	85	6.9	ug/Kg	☼	11/24/21 13:57	12/06/21 00:40	1
Dibromomethane	ND	H	85	11	ug/Kg	☼	11/24/21 13:57	12/06/21 00:40	1
Dichlorodifluoromethane	ND	H	85	16	ug/Kg	☼	11/24/21 13:57	12/06/21 00:40	1
Ethylbenzene	ND	H	85	11	ug/Kg	☼	11/24/21 13:57	12/06/21 00:40	1
Hexachlorobutadiene	ND	H	85	8.6	ug/Kg	☼	11/24/21 13:57	12/06/21 00:40	1
Isopropylbenzene	ND	H	85	5.9	ug/Kg	☼	11/24/21 13:57	12/06/21 00:40	1
Methyl tert-butyl ether	ND	H	170	6.1	ug/Kg	☼	11/24/21 13:57	12/06/21 00:40	1
Methylene Chloride	ND	H	85	9.1	ug/Kg	☼	11/24/21 13:57	12/06/21 00:40	1
m-Xylene & p-Xylene	16	J H	85	8.5	ug/Kg	☼	11/24/21 13:57	12/06/21 00:40	1
Naphthalene	ND	H	85	3.0	ug/Kg	☼	11/24/21 13:57	12/06/21 00:40	1
n-Butylbenzene	ND	H	85	5.2	ug/Kg	☼	11/24/21 13:57	12/06/21 00:40	1
N-Propylbenzene	ND	H	85	7.9	ug/Kg	☼	11/24/21 13:57	12/06/21 00:40	1
o-Xylene	ND	H	85	8.8	ug/Kg	☼	11/24/21 13:57	12/06/21 00:40	1
sec-Butylbenzene	ND	H	85	4.1	ug/Kg	☼	11/24/21 13:57	12/06/21 00:40	1
Styrene	ND	H	85	1.9	ug/Kg	☼	11/24/21 13:57	12/06/21 00:40	1
tert-Butylbenzene	ND	H	85	6.9	ug/Kg	☼	11/24/21 13:57	12/06/21 00:40	1
Tetrachloroethene	ND	H	85	7.1	ug/Kg	☼	11/24/21 13:57	12/06/21 00:40	1
Toluene	17	J H	85	7.6	ug/Kg	☼	11/24/21 13:57	12/06/21 00:40	1
trans-1,2-Dichloroethene	ND	H	85	10	ug/Kg	☼	11/24/21 13:57	12/06/21 00:40	1
trans-1,3-Dichloropropene	ND	H	85	4.7	ug/Kg	☼	11/24/21 13:57	12/06/21 00:40	1
Trichlorofluoromethane	ND	H	85	20	ug/Kg	☼	11/24/21 13:57	12/06/21 00:40	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	123		52 - 126	11/24/21 13:57	12/06/21 00:40	1
4-Bromofluorobenzene (Surr)	122		67 - 135	11/24/21 13:57	12/06/21 00:40	1
Dibromofluoromethane (Surr)	115		61 - 123	11/24/21 13:57	12/06/21 00:40	1
Toluene-d8 (Surr)	125		65 - 131	11/24/21 13:57	12/06/21 00:40	1

Method: AK101 - Alaska - Gasoline Range Organics (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
C6-C10 AK	ND		8.5	1.7	mg/Kg	☼	11/24/21 13:57	12/06/21 00:40	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	122	S1+	60 - 120	11/24/21 13:57	12/06/21 00:40	1
Trifluorotoluene (Surr)	153	S1+	60 - 120	11/24/21 13:57	12/06/21 00:40	1

Method: 8011 - EDB, DBCP, and 1,2,3-TCP (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ethylene Dibromide	ND	H	0.25	0.038	ug/Kg		12/03/21 13:35	12/04/21 11:13	1
1,2,3-Trichloropropane	ND	H	0.25	0.14	ug/Kg		12/03/21 13:35	12/04/21 11:13	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dibromopropane	96		55 - 130	12/03/21 13:35	12/04/21 11:13	1

Method: AK102 - DRO

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
DRO (nC10-<nC25)	160	H B	33	8.2	mg/Kg		11/30/21 11:46	12/13/21 21:37	10

Eurofins TestAmerica, Sacramento

Client Sample Results

Client: Shannon & Wilson, Inc
 Project/Site: Kodiak DOT&PF PFAS (107471)

Job ID: 320-82156-1

Client Sample ID: ADQ-ISM1-03

Lab Sample ID: 320-82156-5

Date Collected: 11/15/21 15:10

Matrix: Solid

Date Received: 11/23/21 16:45

Percent Solids: 89.7

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
<i>o</i> -Terphenyl (Surr)	76		60 - 120	11/30/21 11:46	12/13/21 21:37	10
<i>n</i> -Triacontane-d62	102		60 - 120	11/30/21 11:46	12/13/21 21:37	10

Method: EPA 537(Mod) - PFAS for QSM 5.3, Table B-15

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorohexanoic acid (PFHxA)	0.053	J H	0.19	0.029	ug/Kg		11/30/21 18:38	12/03/21 21:08	1
Perfluoroheptanoic acid (PFHpA)	ND	H	0.19	0.036	ug/Kg		11/30/21 18:38	12/03/21 21:08	1
Perfluorooctanoic acid (PFOA)	0.053	J H	0.19	0.050	ug/Kg		11/30/21 18:38	12/03/21 21:08	1
Perfluorononanoic acid (PFNA)	0.023	J H	0.19	0.021	ug/Kg		11/30/21 18:38	12/03/21 21:08	1
Perfluorodecanoic acid (PFDA)	ND	H	0.19	0.045	ug/Kg		11/30/21 18:38	12/03/21 21:08	1
Perfluoroundecanoic acid (PFUnA)	ND	H	0.19	0.040	ug/Kg		11/30/21 18:38	12/03/21 21:08	1
Perfluorododecanoic acid (PFDoA)	ND	H	0.19	0.028	ug/Kg		11/30/21 18:38	12/03/21 21:08	1
Perfluorotridecanoic acid (PFTrDA)	ND	H	0.19	0.020	ug/Kg		11/30/21 18:38	12/03/21 21:08	1
Perfluorotetradecanoic acid (PFTeA)	ND	H	0.19	0.035	ug/Kg		11/30/21 18:38	12/03/21 21:08	1
Perfluorobutanesulfonic acid (PFBS)	ND	H	0.19	0.036	ug/Kg		11/30/21 18:38	12/03/21 21:08	1
Perfluorohexanesulfonic acid (PFHxS)	0.057	J H	0.19	0.027	ug/Kg		11/30/21 18:38	12/03/21 21:08	1
Perfluorooctanesulfonic acid (PFOS)	0.20	H	0.19	0.041	ug/Kg		11/30/21 18:38	12/03/21 21:08	1
NEtFOSAA	ND	H	0.19	0.045	ug/Kg		11/30/21 18:38	12/03/21 21:08	1
NMeFOSAA	ND	H	0.19	0.022	ug/Kg		11/30/21 18:38	12/03/21 21:08	1
HFPO-DA (GenX)	ND	H	0.19	0.039	ug/Kg		11/30/21 18:38	12/03/21 21:08	1
9Cl-PF3ONS	ND	H	0.19	0.033	ug/Kg		11/30/21 18:38	12/03/21 21:08	1
11Cl-PF3OUdS	ND	H	0.19	0.029	ug/Kg		11/30/21 18:38	12/03/21 21:08	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	ND	H	0.19	0.037	ug/Kg		11/30/21 18:38	12/03/21 21:08	1

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C2 PFHxA	81		50 - 150	11/30/21 18:38	12/03/21 21:08	1
13C4 PFHpA	76		50 - 150	11/30/21 18:38	12/03/21 21:08	1
13C4 PFOA	91		50 - 150	11/30/21 18:38	12/03/21 21:08	1
13C5 PFNA	75		50 - 150	11/30/21 18:38	12/03/21 21:08	1
13C2 PFDA	85		50 - 150	11/30/21 18:38	12/03/21 21:08	1
13C2 PFUnA	83		50 - 150	11/30/21 18:38	12/03/21 21:08	1
13C2 PFDoA	76		50 - 150	11/30/21 18:38	12/03/21 21:08	1
13C2 PFTeDA	83		50 - 150	11/30/21 18:38	12/03/21 21:08	1
13C3 PFBS	69		50 - 150	11/30/21 18:38	12/03/21 21:08	1
18O2 PFHxS	62		50 - 150	11/30/21 18:38	12/03/21 21:08	1
13C4 PFOS	57		50 - 150	11/30/21 18:38	12/03/21 21:08	1
d3-NMeFOSAA	70		50 - 150	11/30/21 18:38	12/03/21 21:08	1
d5-NEtFOSAA	80		50 - 150	11/30/21 18:38	12/03/21 21:08	1
13C3 HFPO-DA	80		50 - 150	11/30/21 18:38	12/03/21 21:08	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	10.3		0.1	0.1	%			11/29/21 14:40	1
Percent Solids	89.7		0.1	0.1	%			11/29/21 14:40	1
Prep Complete	1.0				NONE			11/24/21 11:22	1

Client Sample Results

Client: Shannon & Wilson, Inc
 Project/Site: Kodiak DOT&PF PFAS (107471)

Job ID: 320-82156-1

Client Sample ID: ADQ-ISM1-04

Lab Sample ID: 320-82156-6

Date Collected: 11/15/21 16:15

Matrix: Solid

Date Received: 11/23/21 16:45

Percent Solids: 92.6

Method: 8260C SIM - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,2,2-Tetrachloroethane	ND	H	2.8	0.62	ug/Kg	✱	11/24/21 13:57	12/01/21 10:04	1
1,1,2-Trichloroethane	ND	H	2.8	0.92	ug/Kg	✱	11/24/21 13:57	12/01/21 10:04	1
1,2-Dichloroethane	ND	H	2.8	0.47	ug/Kg	✱	11/24/21 13:57	12/01/21 10:04	1
Bromomethane	ND	H	5.5	1.8	ug/Kg	✱	11/24/21 13:57	12/01/21 10:04	1
Chlorodibromomethane	ND	H	2.8	0.44	ug/Kg	✱	11/24/21 13:57	12/01/21 10:04	1
Chloroform	ND	*+ H	5.5	2.2	ug/Kg	✱	11/24/21 13:57	12/01/21 10:04	1
Dichlorobromomethane	ND	H	2.8	0.36	ug/Kg	✱	11/24/21 13:57	12/01/21 10:04	1
Ethylene Dibromide	ND	H	2.8	0.45	ug/Kg	✱	11/24/21 13:57	12/01/21 10:04	1
Trichloroethene	ND	H	2.8	0.55	ug/Kg	✱	11/24/21 13:57	12/01/21 10:04	1
Vinyl chloride	ND	H	2.8	0.70	ug/Kg	✱	11/24/21 13:57	12/01/21 10:04	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	83		69 - 129	11/24/21 13:57	12/01/21 10:04	1
Dibromofluoromethane (Surr)	116		72 - 132	11/24/21 13:57	12/01/21 10:04	1
1,2-Dichloroethane-d4 (Surr)	117		72 - 132	11/24/21 13:57	12/01/21 10:04	1
Toluene-d8 (Surr)	109		78 - 138	11/24/21 13:57	12/01/21 10:04	1

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND	H	55	6.5	ug/Kg	✱	11/24/21 13:57	12/06/21 01:03	1
1,1,1-Trichloroethane	ND	H	55	4.1	ug/Kg	✱	11/24/21 13:57	12/06/21 01:03	1
1,1-Dichloroethane	ND	H	55	3.0	ug/Kg	✱	11/24/21 13:57	12/06/21 01:03	1
1,1-Dichloroethene	ND	H	55	5.2	ug/Kg	✱	11/24/21 13:57	12/06/21 01:03	1
1,1-Dichloropropene	ND	H	55	4.8	ug/Kg	✱	11/24/21 13:57	12/06/21 01:03	1
1,2,3-Trichlorobenzene	ND	H	55	6.9	ug/Kg	✱	11/24/21 13:57	12/06/21 01:03	1
1,2,3-Trichloropropane	ND	H	55	5.2	ug/Kg	✱	11/24/21 13:57	12/06/21 01:03	1
1,2,4-Trichlorobenzene	ND	H	55	3.8	ug/Kg	✱	11/24/21 13:57	12/06/21 01:03	1
1,2,4-Trimethylbenzene	ND	H	55	3.9	ug/Kg	✱	11/24/21 13:57	12/06/21 01:03	1
1,2-Dibromo-3-Chloropropane	ND	H	110	7.0	ug/Kg	✱	11/24/21 13:57	12/06/21 01:03	1
1,2-Dichlorobenzene	ND	H	55	2.4	ug/Kg	✱	11/24/21 13:57	12/06/21 01:03	1
1,2-Dichloropropane	ND	H	55	5.2	ug/Kg	✱	11/24/21 13:57	12/06/21 01:03	1
1,3,5-Trimethylbenzene	ND	H	55	3.9	ug/Kg	✱	11/24/21 13:57	12/06/21 01:03	1
1,3-Dichlorobenzene	ND	H	55	3.7	ug/Kg	✱	11/24/21 13:57	12/06/21 01:03	1
1,3-Dichloropropane	ND	H	55	2.6	ug/Kg	✱	11/24/21 13:57	12/06/21 01:03	1
1,4-Dichlorobenzene	ND	H	55	2.4	ug/Kg	✱	11/24/21 13:57	12/06/21 01:03	1
2,2-Dichloropropane	ND	H	55	4.8	ug/Kg	✱	11/24/21 13:57	12/06/21 01:03	1
2-Butanone (MEK)	ND	H	110	29	ug/Kg	✱	11/24/21 13:57	12/06/21 01:03	1
2-Chlorotoluene	ND	H	55	4.0	ug/Kg	✱	11/24/21 13:57	12/06/21 01:03	1
2-Hexanone	ND	H	110	5.8	ug/Kg	✱	11/24/21 13:57	12/06/21 01:03	1
4-Chlorotoluene	ND	H	55	3.1	ug/Kg	✱	11/24/21 13:57	12/06/21 01:03	1
4-Methyl-2-pentanone (MIBK)	ND	H	110	3.4	ug/Kg	✱	11/24/21 13:57	12/06/21 01:03	1
p-Isopropyltoluene	ND	H	55	1.8	ug/Kg	✱	11/24/21 13:57	12/06/21 01:03	1
Acetone	95	J H	550	55	ug/Kg	✱	11/24/21 13:57	12/06/21 01:03	1
Benzene	ND	H	55	3.7	ug/Kg	✱	11/24/21 13:57	12/06/21 01:03	1
Bromoform	ND	H	55	12	ug/Kg	✱	11/24/21 13:57	12/06/21 01:03	1
Bromobenzene	ND	H	55	6.2	ug/Kg	✱	11/24/21 13:57	12/06/21 01:03	1
Carbon disulfide	ND	H	110	3.9	ug/Kg	✱	11/24/21 13:57	12/06/21 01:03	1
Carbon tetrachloride	ND	H	55	3.9	ug/Kg	✱	11/24/21 13:57	12/06/21 01:03	1
Chlorobenzene	ND	H	55	4.9	ug/Kg	✱	11/24/21 13:57	12/06/21 01:03	1
Chlorobromomethane	ND	H	55	8.1	ug/Kg	✱	11/24/21 13:57	12/06/21 01:03	1

Eurofins TestAmerica, Sacramento

Client Sample Results

Client: Shannon & Wilson, Inc
Project/Site: Kodiak DOT&PF PFAS (107471)

Job ID: 320-82156-1

Client Sample ID: ADQ-ISM1-04

Lab Sample ID: 320-82156-6

Date Collected: 11/15/21 16:15

Matrix: Solid

Date Received: 11/23/21 16:45

Percent Solids: 92.6

Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloroethane	ND	H	55	7.3	ug/Kg	☼	11/24/21 13:57	12/06/21 01:03	1
Chloromethane	ND	H	55	2.8	ug/Kg	☼	11/24/21 13:57	12/06/21 01:03	1
cis-1,2-Dichloroethene	ND	H	55	9.1	ug/Kg	☼	11/24/21 13:57	12/06/21 01:03	1
cis-1,3-Dichloropropene	ND	H	55	4.5	ug/Kg	☼	11/24/21 13:57	12/06/21 01:03	1
Dibromomethane	ND	H	55	7.2	ug/Kg	☼	11/24/21 13:57	12/06/21 01:03	1
Dichlorodifluoromethane	ND	H	55	10	ug/Kg	☼	11/24/21 13:57	12/06/21 01:03	1
Ethylbenzene	ND	H	55	7.3	ug/Kg	☼	11/24/21 13:57	12/06/21 01:03	1
Hexachlorobutadiene	ND	H	55	5.7	ug/Kg	☼	11/24/21 13:57	12/06/21 01:03	1
Isopropylbenzene	ND	H	55	3.9	ug/Kg	☼	11/24/21 13:57	12/06/21 01:03	1
Methyl tert-butyl ether	ND	H	110	4.0	ug/Kg	☼	11/24/21 13:57	12/06/21 01:03	1
Methylene Chloride	ND	H	55	6.0	ug/Kg	☼	11/24/21 13:57	12/06/21 01:03	1
m-Xylene & p-Xylene	12	J H	55	5.5	ug/Kg	☼	11/24/21 13:57	12/06/21 01:03	1
Naphthalene	ND	H	55	2.0	ug/Kg	☼	11/24/21 13:57	12/06/21 01:03	1
n-Butylbenzene	ND	H	55	3.4	ug/Kg	☼	11/24/21 13:57	12/06/21 01:03	1
N-Propylbenzene	ND	H	55	5.2	ug/Kg	☼	11/24/21 13:57	12/06/21 01:03	1
o-Xylene	ND	H	55	5.8	ug/Kg	☼	11/24/21 13:57	12/06/21 01:03	1
sec-Butylbenzene	ND	H	55	2.7	ug/Kg	☼	11/24/21 13:57	12/06/21 01:03	1
Styrene	ND	H	55	1.2	ug/Kg	☼	11/24/21 13:57	12/06/21 01:03	1
tert-Butylbenzene	ND	H	55	4.5	ug/Kg	☼	11/24/21 13:57	12/06/21 01:03	1
Tetrachloroethene	ND	H	55	4.7	ug/Kg	☼	11/24/21 13:57	12/06/21 01:03	1
Toluene	14	J H	55	5.0	ug/Kg	☼	11/24/21 13:57	12/06/21 01:03	1
trans-1,2-Dichloroethene	ND	H	55	6.9	ug/Kg	☼	11/24/21 13:57	12/06/21 01:03	1
trans-1,3-Dichloropropene	ND	H	55	3.1	ug/Kg	☼	11/24/21 13:57	12/06/21 01:03	1
Trichlorofluoromethane	ND	H	55	13	ug/Kg	☼	11/24/21 13:57	12/06/21 01:03	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	91		52 - 126	11/24/21 13:57	12/06/21 01:03	1
4-Bromofluorobenzene (Surr)	92		67 - 135	11/24/21 13:57	12/06/21 01:03	1
Dibromofluoromethane (Surr)	88		61 - 123	11/24/21 13:57	12/06/21 01:03	1
Toluene-d8 (Surr)	95		65 - 131	11/24/21 13:57	12/06/21 01:03	1

Method: AK101 - Alaska - Gasoline Range Organics (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
C6-C10 AK	ND		5.5	1.1	mg/Kg	☼	11/24/21 13:57	12/06/21 01:03	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	92		60 - 120	11/24/21 13:57	12/06/21 01:03	1
Trifluorotoluene (Surr)	65		60 - 120	11/24/21 13:57	12/06/21 01:03	1

Method: 8011 - EDB, DBCP, and 1,2,3-TCP (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ethylene Dibromide	ND	H	0.25	0.038	ug/Kg		12/03/21 13:35	12/04/21 11:38	1
1,2,3-Trichloropropane	ND	H	0.25	0.14	ug/Kg		12/03/21 13:35	12/04/21 11:38	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dibromopropane	96		55 - 130	12/03/21 13:35	12/04/21 11:38	1

Method: AK102 - DRO

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
DRO (nC10-<nC25)	300	H B	33	8.3	mg/Kg		11/30/21 11:46	12/13/21 22:06	10

Eurofins TestAmerica, Sacramento

Client Sample Results

Client: Shannon & Wilson, Inc
 Project/Site: Kodiak DOT&PF PFAS (107471)

Job ID: 320-82156-1

Client Sample ID: ADQ-ISM1-04

Lab Sample ID: 320-82156-6

Date Collected: 11/15/21 16:15

Matrix: Solid

Date Received: 11/23/21 16:45

Percent Solids: 92.6

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
<i>o</i> -Terphenyl (Surr)	76		60 - 120	11/30/21 11:46	12/13/21 22:06	10
<i>n</i> -Triacontane-d62	59	S1-	60 - 120	11/30/21 11:46	12/13/21 22:06	10

Method: EPA 537(Mod) - PFAS for QSM 5.3, Table B-15

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorohexanoic acid (PFHxA)	ND	H	0.20	0.031	ug/Kg		11/30/21 18:38	12/03/21 21:19	1
Perfluoroheptanoic acid (PFHpA)	ND	H	0.20	0.038	ug/Kg		11/30/21 18:38	12/03/21 21:19	1
Perfluorooctanoic acid (PFOA)	0.055	J H	0.20	0.053	ug/Kg		11/30/21 18:38	12/03/21 21:19	1
Perfluorononanoic acid (PFNA)	ND	H	0.20	0.022	ug/Kg		11/30/21 18:38	12/03/21 21:19	1
Perfluorodecanoic acid (PFDA)	ND	H	0.20	0.048	ug/Kg		11/30/21 18:38	12/03/21 21:19	1
Perfluoroundecanoic acid (PFUnA)	ND	H	0.20	0.042	ug/Kg		11/30/21 18:38	12/03/21 21:19	1
Perfluorododecanoic acid (PFDoA)	ND	H	0.20	0.030	ug/Kg		11/30/21 18:38	12/03/21 21:19	1
Perfluorotridecanoic acid (PFTTrDA)	ND	H	0.20	0.021	ug/Kg		11/30/21 18:38	12/03/21 21:19	1
Perfluorotetradecanoic acid (PFTeA)	ND	H	0.20	0.037	ug/Kg		11/30/21 18:38	12/03/21 21:19	1
Perfluorobutanesulfonic acid (PFBS)	ND	H	0.20	0.038	ug/Kg		11/30/21 18:38	12/03/21 21:19	1
Perfluorohexanesulfonic acid (PFHxS)	0.12	J H	0.20	0.029	ug/Kg		11/30/21 18:38	12/03/21 21:19	1
Perfluorooctanesulfonic acid (PFOS)	0.48	H	0.20	0.043	ug/Kg		11/30/21 18:38	12/03/21 21:19	1
NEtFOSAA	ND	H	0.20	0.048	ug/Kg		11/30/21 18:38	12/03/21 21:19	1
NMeFOSAA	ND	H	0.20	0.023	ug/Kg		11/30/21 18:38	12/03/21 21:19	1
HFPO-DA (GenX)	ND	H	0.20	0.041	ug/Kg		11/30/21 18:38	12/03/21 21:19	1
9Cl-PF3ONS	ND	H	0.20	0.035	ug/Kg		11/30/21 18:38	12/03/21 21:19	1
11Cl-PF3OUdS	ND	H	0.20	0.031	ug/Kg		11/30/21 18:38	12/03/21 21:19	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	ND	H	0.20	0.039	ug/Kg		11/30/21 18:38	12/03/21 21:19	1

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C2 PFHxA	81		50 - 150	11/30/21 18:38	12/03/21 21:19	1
13C4 PFHpA	69		50 - 150	11/30/21 18:38	12/03/21 21:19	1
13C4 PFOA	93		50 - 150	11/30/21 18:38	12/03/21 21:19	1
13C5 PFNA	63		50 - 150	11/30/21 18:38	12/03/21 21:19	1
13C2 PFDA	76		50 - 150	11/30/21 18:38	12/03/21 21:19	1
13C2 PFUnA	74		50 - 150	11/30/21 18:38	12/03/21 21:19	1
13C2 PFDoA	62		50 - 150	11/30/21 18:38	12/03/21 21:19	1
13C2 PFTeDA	81		50 - 150	11/30/21 18:38	12/03/21 21:19	1
13C3 PFBS	85		50 - 150	11/30/21 18:38	12/03/21 21:19	1
18O2 PFHxS	76		50 - 150	11/30/21 18:38	12/03/21 21:19	1
13C4 PFOS	67		50 - 150	11/30/21 18:38	12/03/21 21:19	1
d3-NMeFOSAA	62		50 - 150	11/30/21 18:38	12/03/21 21:19	1
d5-NEtFOSAA	61		50 - 150	11/30/21 18:38	12/03/21 21:19	1
13C3 HFPO-DA	79		50 - 150	11/30/21 18:38	12/03/21 21:19	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	7.4		0.1	0.1	%			11/29/21 14:40	1
Percent Solids	92.6		0.1	0.1	%			11/29/21 14:40	1
Prep Complete	1.0				NONE			11/24/21 11:22	1

Client Sample Results

Client: Shannon & Wilson, Inc
 Project/Site: Kodiak DOT&PF PFAS (107471)

Job ID: 320-82156-1

Client Sample ID: ADQ-ISM2-01

Lab Sample ID: 320-82156-7

Date Collected: 11/17/21 10:40

Matrix: Solid

Date Received: 11/23/21 16:45

Percent Solids: 90.4

Method: 8260C SIM - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		4.6	1.0	ug/Kg	☼	11/24/21 13:57	12/01/21 10:28	1
1,1,2-Trichloroethane	ND		4.6	1.5	ug/Kg	☼	11/24/21 13:57	12/01/21 10:28	1
1,2-Dichloroethane	ND		4.6	0.78	ug/Kg	☼	11/24/21 13:57	12/01/21 10:28	1
Bromomethane	ND		9.3	3.0	ug/Kg	☼	11/24/21 13:57	12/01/21 10:28	1
Chlorodibromomethane	ND		4.6	0.74	ug/Kg	☼	11/24/21 13:57	12/01/21 10:28	1
Chloroform	ND	+	9.3	3.7	ug/Kg	☼	11/24/21 13:57	12/01/21 10:28	1
Dichlorobromomethane	ND		4.6	0.61	ug/Kg	☼	11/24/21 13:57	12/01/21 10:28	1
Ethylene Dibromide	ND		4.6	0.75	ug/Kg	☼	11/24/21 13:57	12/01/21 10:28	1
Trichloroethene	ND		4.6	0.92	ug/Kg	☼	11/24/21 13:57	12/01/21 10:28	1
Vinyl chloride	ND		4.6	1.2	ug/Kg	☼	11/24/21 13:57	12/01/21 10:28	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	80		69 - 129	11/24/21 13:57	12/01/21 10:28	1
Dibromofluoromethane (Surr)	117		72 - 132	11/24/21 13:57	12/01/21 10:28	1
1,2-Dichloroethane-d4 (Surr)	118		72 - 132	11/24/21 13:57	12/01/21 10:28	1
Toluene-d8 (Surr)	108		78 - 138	11/24/21 13:57	12/01/21 10:28	1

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND	H	93	11	ug/Kg	☼	11/24/21 13:57	12/06/21 01:50	1
1,1,1-Trichloroethane	ND	H	93	6.9	ug/Kg	☼	11/24/21 13:57	12/06/21 01:50	1
1,1-Dichloroethane	ND	H	93	5.0	ug/Kg	☼	11/24/21 13:57	12/06/21 01:50	1
1,1-Dichloroethene	ND	H	93	8.7	ug/Kg	☼	11/24/21 13:57	12/06/21 01:50	1
1,1-Dichloropropene	ND	H	93	8.0	ug/Kg	☼	11/24/21 13:57	12/06/21 01:50	1
1,2,3-Trichlorobenzene	ND	H	93	12	ug/Kg	☼	11/24/21 13:57	12/06/21 01:50	1
1,2,3-Trichloropropane	ND	H	93	8.7	ug/Kg	☼	11/24/21 13:57	12/06/21 01:50	1
1,2,4-Trichlorobenzene	ND	H	93	6.3	ug/Kg	☼	11/24/21 13:57	12/06/21 01:50	1
1,2,4-Trimethylbenzene	9.1	J H	93	6.5	ug/Kg	☼	11/24/21 13:57	12/06/21 01:50	1
1,2-Dibromo-3-Chloropropane	ND	H	190	12	ug/Kg	☼	11/24/21 13:57	12/06/21 01:50	1
1,2-Dichlorobenzene	ND	H	93	4.1	ug/Kg	☼	11/24/21 13:57	12/06/21 01:50	1
1,2-Dichloropropane	ND	H	93	8.7	ug/Kg	☼	11/24/21 13:57	12/06/21 01:50	1
1,3,5-Trimethylbenzene	ND	H	93	6.5	ug/Kg	☼	11/24/21 13:57	12/06/21 01:50	1
1,3-Dichlorobenzene	ND	H	93	6.1	ug/Kg	☼	11/24/21 13:57	12/06/21 01:50	1
1,3-Dichloropropane	ND	H	93	4.3	ug/Kg	☼	11/24/21 13:57	12/06/21 01:50	1
1,4-Dichlorobenzene	ND	H	93	4.1	ug/Kg	☼	11/24/21 13:57	12/06/21 01:50	1
2,2-Dichloropropane	ND	H	93	8.0	ug/Kg	☼	11/24/21 13:57	12/06/21 01:50	1
2-Butanone (MEK)	ND	H	190	48	ug/Kg	☼	11/24/21 13:57	12/06/21 01:50	1
2-Chlorotoluene	ND	H	93	6.7	ug/Kg	☼	11/24/21 13:57	12/06/21 01:50	1
2-Hexanone	ND	H	190	9.7	ug/Kg	☼	11/24/21 13:57	12/06/21 01:50	1
4-Chlorotoluene	ND	H	93	5.2	ug/Kg	☼	11/24/21 13:57	12/06/21 01:50	1
4-Methyl-2-pentanone (MIBK)	ND	H	190	5.8	ug/Kg	☼	11/24/21 13:57	12/06/21 01:50	1
p-Isopropyltoluene	ND	H	93	3.0	ug/Kg	☼	11/24/21 13:57	12/06/21 01:50	1
Acetone	ND	H	930	93	ug/Kg	☼	11/24/21 13:57	12/06/21 01:50	1
Benzene	ND	H	93	6.1	ug/Kg	☼	11/24/21 13:57	12/06/21 01:50	1
Bromoform	ND	H	93	20	ug/Kg	☼	11/24/21 13:57	12/06/21 01:50	1
Bromobenzene	ND	H	93	10	ug/Kg	☼	11/24/21 13:57	12/06/21 01:50	1
Carbon disulfide	ND	H	190	6.5	ug/Kg	☼	11/24/21 13:57	12/06/21 01:50	1
Carbon tetrachloride	ND	H	93	6.5	ug/Kg	☼	11/24/21 13:57	12/06/21 01:50	1
Chlorobenzene	ND	H	93	8.2	ug/Kg	☼	11/24/21 13:57	12/06/21 01:50	1
Chlorobromomethane	ND	H	93	14	ug/Kg	☼	11/24/21 13:57	12/06/21 01:50	1

Eurofins TestAmerica, Sacramento

Client Sample Results

Client: Shannon & Wilson, Inc
 Project/Site: Kodiak DOT&PF PFAS (107471)

Job ID: 320-82156-1

Client Sample ID: ADQ-ISM2-01

Lab Sample ID: 320-82156-7

Date Collected: 11/17/21 10:40

Matrix: Solid

Date Received: 11/23/21 16:45

Percent Solids: 90.4

Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloroethane	ND	H	93	12	ug/Kg	✱	11/24/21 13:57	12/06/21 01:50	1
Chloromethane	ND	H	93	4.6	ug/Kg	✱	11/24/21 13:57	12/06/21 01:50	1
cis-1,2-Dichloroethene	ND	H	93	15	ug/Kg	✱	11/24/21 13:57	12/06/21 01:50	1
cis-1,3-Dichloropropene	ND	H	93	7.6	ug/Kg	✱	11/24/21 13:57	12/06/21 01:50	1
Dibromomethane	ND	H	93	12	ug/Kg	✱	11/24/21 13:57	12/06/21 01:50	1
Dichlorodifluoromethane	ND	H	93	17	ug/Kg	✱	11/24/21 13:57	12/06/21 01:50	1
Ethylbenzene	ND	H	93	12	ug/Kg	✱	11/24/21 13:57	12/06/21 01:50	1
Hexachlorobutadiene	ND	H	93	9.5	ug/Kg	✱	11/24/21 13:57	12/06/21 01:50	1
Isopropylbenzene	ND	H	93	6.5	ug/Kg	✱	11/24/21 13:57	12/06/21 01:50	1
Methyl tert-butyl ether	ND	H	190	6.7	ug/Kg	✱	11/24/21 13:57	12/06/21 01:50	1
Methylene Chloride	ND	H	93	10	ug/Kg	✱	11/24/21 13:57	12/06/21 01:50	1
m-Xylene & p-Xylene	13	J H	93	9.3	ug/Kg	✱	11/24/21 13:57	12/06/21 01:50	1
Naphthalene	ND	H	93	3.3	ug/Kg	✱	11/24/21 13:57	12/06/21 01:50	1
n-Butylbenzene	ND	H	93	5.8	ug/Kg	✱	11/24/21 13:57	12/06/21 01:50	1
N-Propylbenzene	ND	H	93	8.7	ug/Kg	✱	11/24/21 13:57	12/06/21 01:50	1
o-Xylene	ND	H	93	9.7	ug/Kg	✱	11/24/21 13:57	12/06/21 01:50	1
sec-Butylbenzene	ND	H	93	4.5	ug/Kg	✱	11/24/21 13:57	12/06/21 01:50	1
Styrene	ND	H	93	2.0	ug/Kg	✱	11/24/21 13:57	12/06/21 01:50	1
tert-Butylbenzene	ND	H	93	7.6	ug/Kg	✱	11/24/21 13:57	12/06/21 01:50	1
Tetrachloroethene	ND	H	93	7.8	ug/Kg	✱	11/24/21 13:57	12/06/21 01:50	1
Toluene	15	J H	93	8.4	ug/Kg	✱	11/24/21 13:57	12/06/21 01:50	1
trans-1,2-Dichloroethene	ND	H	93	12	ug/Kg	✱	11/24/21 13:57	12/06/21 01:50	1
trans-1,3-Dichloropropene	ND	H	93	5.2	ug/Kg	✱	11/24/21 13:57	12/06/21 01:50	1
Trichlorofluoromethane	ND	H	93	22	ug/Kg	✱	11/24/21 13:57	12/06/21 01:50	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	129	S1+	52 - 126	11/24/21 13:57	12/06/21 01:50	1
4-Bromofluorobenzene (Surr)	129		67 - 135	11/24/21 13:57	12/06/21 01:50	1
Dibromofluoromethane (Surr)	122		61 - 123	11/24/21 13:57	12/06/21 01:50	1
Toluene-d8 (Surr)	130		65 - 131	11/24/21 13:57	12/06/21 01:50	1

Method: AK101 - Alaska - Gasoline Range Organics (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
C6-C10 AK	ND		9.3	1.9	mg/Kg	✱	11/24/21 13:57	12/06/21 01:50	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	129	S1+	60 - 120	11/24/21 13:57	12/06/21 01:50	1
Trifluorotoluene (Surr)	81		60 - 120	11/24/21 13:57	12/06/21 01:50	1

Method: 8011 - EDB, DBCP, and 1,2,3-TCP (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ethylene Dibromide	ND	H	0.25	0.038	ug/Kg		12/03/21 13:35	12/04/21 12:03	1
1,2,3-Trichloropropane	ND	H	0.25	0.14	ug/Kg		12/03/21 13:35	12/04/21 12:03	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dibromopropane	112		55 - 130	12/03/21 13:35	12/04/21 12:03	1

Method: AK102 - DRO

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
DRO (nC10-<nC25)	25	B	16	4.1	mg/Kg		11/30/21 11:46	12/13/21 22:34	5

Eurofins TestAmerica, Sacramento

Client Sample Results

Client: Shannon & Wilson, Inc
 Project/Site: Kodiak DOT&PF PFAS (107471)

Job ID: 320-82156-1

Client Sample ID: ADQ-ISM2-01

Lab Sample ID: 320-82156-7

Date Collected: 11/17/21 10:40

Matrix: Solid

Date Received: 11/23/21 16:45

Percent Solids: 90.4

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
<i>o</i> -Terphenyl (Surr)	68		60 - 120	11/30/21 11:46	12/13/21 22:34	5
<i>n</i> -Triacontane-d62	74		60 - 120	11/30/21 11:46	12/13/21 22:34	5

Method: EPA 537(Mod) - PFAS for QSM 5.3, Table B-15

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorohexanoic acid (PFHxA)	ND		0.20	0.031	ug/Kg		11/30/21 18:38	12/03/21 21:29	1
Perfluoroheptanoic acid (PFHpA)	ND		0.20	0.038	ug/Kg		11/30/21 18:38	12/03/21 21:29	1
Perfluorooctanoic acid (PFOA)	ND		0.20	0.052	ug/Kg		11/30/21 18:38	12/03/21 21:29	1
Perfluorononanoic acid (PFNA)	ND		0.20	0.022	ug/Kg		11/30/21 18:38	12/03/21 21:29	1
Perfluorodecanoic acid (PFDA)	ND		0.20	0.047	ug/Kg		11/30/21 18:38	12/03/21 21:29	1
Perfluoroundecanoic acid (PFUnA)	ND		0.20	0.042	ug/Kg		11/30/21 18:38	12/03/21 21:29	1
Perfluorododecanoic acid (PFDoA)	ND		0.20	0.030	ug/Kg		11/30/21 18:38	12/03/21 21:29	1
Perfluorotridecanoic acid (PFTTrDA)	ND		0.20	0.021	ug/Kg		11/30/21 18:38	12/03/21 21:29	1
Perfluorotetradecanoic acid (PFTTeA)	ND		0.20	0.037	ug/Kg		11/30/21 18:38	12/03/21 21:29	1
Perfluorobutanesulfonic acid (PFBS)	ND		0.20	0.038	ug/Kg		11/30/21 18:38	12/03/21 21:29	1
Perfluorohexanesulfonic acid (PFHxS)	ND		0.20	0.029	ug/Kg		11/30/21 18:38	12/03/21 21:29	1
Perfluorooctanesulfonic acid (PFOS)	ND		0.20	0.042	ug/Kg		11/30/21 18:38	12/03/21 21:29	1
NEtFOSAA	ND		0.20	0.047	ug/Kg		11/30/21 18:38	12/03/21 21:29	1
NMeFOSAA	ND		0.20	0.023	ug/Kg		11/30/21 18:38	12/03/21 21:29	1
HFPO-DA (GenX)	ND		0.20	0.041	ug/Kg		11/30/21 18:38	12/03/21 21:29	1
9CI-PF3ONS	ND		0.20	0.035	ug/Kg		11/30/21 18:38	12/03/21 21:29	1
11CI-PF3OUdS	ND		0.20	0.031	ug/Kg		11/30/21 18:38	12/03/21 21:29	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	ND		0.20	0.039	ug/Kg		11/30/21 18:38	12/03/21 21:29	1

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C2 PFHxA	77		50 - 150	11/30/21 18:38	12/03/21 21:29	1
13C4 PFHpA	76		50 - 150	11/30/21 18:38	12/03/21 21:29	1
13C4 PFOA	92		50 - 150	11/30/21 18:38	12/03/21 21:29	1
13C5 PFNA	77		50 - 150	11/30/21 18:38	12/03/21 21:29	1
13C2 PFDA	83		50 - 150	11/30/21 18:38	12/03/21 21:29	1
13C2 PFUnA	90		50 - 150	11/30/21 18:38	12/03/21 21:29	1
13C2 PFDoA	97		50 - 150	11/30/21 18:38	12/03/21 21:29	1
13C2 PFTTeDA	104		50 - 150	11/30/21 18:38	12/03/21 21:29	1
13C3 PFBS	54		50 - 150	11/30/21 18:38	12/03/21 21:29	1
18O2 PFHxS	59		50 - 150	11/30/21 18:38	12/03/21 21:29	1
13C4 PFOS	60		50 - 150	11/30/21 18:38	12/03/21 21:29	1
d3-NMeFOSAA	69		50 - 150	11/30/21 18:38	12/03/21 21:29	1
d5-NEtFOSAA	76		50 - 150	11/30/21 18:38	12/03/21 21:29	1
13C3 HFPO-DA	77		50 - 150	11/30/21 18:38	12/03/21 21:29	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	9.6		0.1	0.1	%			11/29/21 14:40	1
Percent Solids	90.4		0.1	0.1	%			11/29/21 14:40	1
Prep Complete	1.0				NONE			11/24/21 11:22	1

Client Sample Results

Client: Shannon & Wilson, Inc
 Project/Site: Kodiak DOT&PF PFAS (107471)

Job ID: 320-82156-1

Client Sample ID: ADQ-ISM2-02

Lab Sample ID: 320-82156-8

Date Collected: 11/16/21 14:50

Matrix: Solid

Date Received: 11/23/21 16:45

Percent Solids: 88.6

Method: 8260C SIM - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,2,2-Tetrachloroethane	ND	H	4.7	1.1	ug/Kg	☼	11/24/21 13:57	12/01/21 10:52	1
1,1,2-Trichloroethane	ND	H	4.7	1.6	ug/Kg	☼	11/24/21 13:57	12/01/21 10:52	1
1,2-Dichloroethane	ND	H	4.7	0.79	ug/Kg	☼	11/24/21 13:57	12/01/21 10:52	1
Bromomethane	ND	H	9.5	3.1	ug/Kg	☼	11/24/21 13:57	12/01/21 10:52	1
Chlorodibromomethane	ND	H	4.7	0.75	ug/Kg	☼	11/24/21 13:57	12/01/21 10:52	1
Chloroform	ND	*+ H	9.5	3.8	ug/Kg	☼	11/24/21 13:57	12/01/21 10:52	1
Dichlorobromomethane	ND	H	4.7	0.62	ug/Kg	☼	11/24/21 13:57	12/01/21 10:52	1
Ethylene Dibromide	ND	H	4.7	0.76	ug/Kg	☼	11/24/21 13:57	12/01/21 10:52	1
Trichloroethene	ND	H	4.7	0.93	ug/Kg	☼	11/24/21 13:57	12/01/21 10:52	1
Vinyl chloride	ND	H	4.7	1.2	ug/Kg	☼	11/24/21 13:57	12/01/21 10:52	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	84		69 - 129	11/24/21 13:57	12/01/21 10:52	1
Dibromofluoromethane (Surr)	119		72 - 132	11/24/21 13:57	12/01/21 10:52	1
1,2-Dichloroethane-d4 (Surr)	120		72 - 132	11/24/21 13:57	12/01/21 10:52	1
Toluene-d8 (Surr)	112		78 - 138	11/24/21 13:57	12/01/21 10:52	1

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND	H	95	11	ug/Kg	☼	11/24/21 13:57	12/06/21 02:13	1
1,1,1-Trichloroethane	ND	H	95	7.0	ug/Kg	☼	11/24/21 13:57	12/06/21 02:13	1
1,1-Dichloroethane	ND	H	95	5.1	ug/Kg	☼	11/24/21 13:57	12/06/21 02:13	1
1,1-Dichloroethene	ND	H	95	8.9	ug/Kg	☼	11/24/21 13:57	12/06/21 02:13	1
1,1-Dichloropropene	ND	H	95	8.1	ug/Kg	☼	11/24/21 13:57	12/06/21 02:13	1
1,2,3-Trichlorobenzene	ND	H	95	12	ug/Kg	☼	11/24/21 13:57	12/06/21 02:13	1
1,2,3-Trichloropropane	ND	H	95	8.9	ug/Kg	☼	11/24/21 13:57	12/06/21 02:13	1
1,2,4-Trichlorobenzene	ND	H	95	6.4	ug/Kg	☼	11/24/21 13:57	12/06/21 02:13	1
1,2,4-Trimethylbenzene	ND	H	95	6.6	ug/Kg	☼	11/24/21 13:57	12/06/21 02:13	1
1,2-Dibromo-3-Chloropropane	ND	H	190	12	ug/Kg	☼	11/24/21 13:57	12/06/21 02:13	1
1,2-Dichlorobenzene	ND	H	95	4.2	ug/Kg	☼	11/24/21 13:57	12/06/21 02:13	1
1,2-Dichloropropane	ND	H	95	8.9	ug/Kg	☼	11/24/21 13:57	12/06/21 02:13	1
1,3,5-Trimethylbenzene	ND	H	95	6.6	ug/Kg	☼	11/24/21 13:57	12/06/21 02:13	1
1,3-Dichlorobenzene	ND	H	95	6.2	ug/Kg	☼	11/24/21 13:57	12/06/21 02:13	1
1,3-Dichloropropane	ND	H	95	4.4	ug/Kg	☼	11/24/21 13:57	12/06/21 02:13	1
1,4-Dichlorobenzene	ND	H	95	4.2	ug/Kg	☼	11/24/21 13:57	12/06/21 02:13	1
2,2-Dichloropropane	ND	H	95	8.1	ug/Kg	☼	11/24/21 13:57	12/06/21 02:13	1
2-Butanone (MEK)	ND	H	190	49	ug/Kg	☼	11/24/21 13:57	12/06/21 02:13	1
2-Chlorotoluene	ND	H	95	6.8	ug/Kg	☼	11/24/21 13:57	12/06/21 02:13	1
2-Hexanone	ND	H	190	9.8	ug/Kg	☼	11/24/21 13:57	12/06/21 02:13	1
4-Chlorotoluene	ND	H	95	5.3	ug/Kg	☼	11/24/21 13:57	12/06/21 02:13	1
4-Methyl-2-pentanone (MIBK)	ND	H	190	5.9	ug/Kg	☼	11/24/21 13:57	12/06/21 02:13	1
p-Isopropyltoluene	ND	H	95	3.0	ug/Kg	☼	11/24/21 13:57	12/06/21 02:13	1
Acetone	ND	H	950	95	ug/Kg	☼	11/24/21 13:57	12/06/21 02:13	1
Benzene	ND	H	95	6.2	ug/Kg	☼	11/24/21 13:57	12/06/21 02:13	1
Bromoform	ND	H	95	21	ug/Kg	☼	11/24/21 13:57	12/06/21 02:13	1
Bromobenzene	ND	H	95	11	ug/Kg	☼	11/24/21 13:57	12/06/21 02:13	1
Carbon disulfide	ND	H	190	6.6	ug/Kg	☼	11/24/21 13:57	12/06/21 02:13	1
Carbon tetrachloride	ND	H	95	6.6	ug/Kg	☼	11/24/21 13:57	12/06/21 02:13	1
Chlorobenzene	ND	H	95	8.3	ug/Kg	☼	11/24/21 13:57	12/06/21 02:13	1
Chlorobromomethane	ND	H	95	14	ug/Kg	☼	11/24/21 13:57	12/06/21 02:13	1

Eurofins TestAmerica, Sacramento

Client Sample Results

Client: Shannon & Wilson, Inc
 Project/Site: Kodiak DOT&PF PFAS (107471)

Job ID: 320-82156-1

Client Sample ID: ADQ-ISM2-02

Lab Sample ID: 320-82156-8

Date Collected: 11/16/21 14:50

Matrix: Solid

Date Received: 11/23/21 16:45

Percent Solids: 88.6

Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloroethane	ND	H	95	12	ug/Kg	☼	11/24/21 13:57	12/06/21 02:13	1
Chloromethane	ND	H	95	4.7	ug/Kg	☼	11/24/21 13:57	12/06/21 02:13	1
cis-1,2-Dichloroethene	ND	H	95	16	ug/Kg	☼	11/24/21 13:57	12/06/21 02:13	1
cis-1,3-Dichloropropene	ND	H	95	7.8	ug/Kg	☼	11/24/21 13:57	12/06/21 02:13	1
Dibromomethane	ND	H	95	12	ug/Kg	☼	11/24/21 13:57	12/06/21 02:13	1
Dichlorodifluoromethane	ND	H	95	18	ug/Kg	☼	11/24/21 13:57	12/06/21 02:13	1
Ethylbenzene	ND	H	95	12	ug/Kg	☼	11/24/21 13:57	12/06/21 02:13	1
Hexachlorobutadiene	ND	H	95	9.7	ug/Kg	☼	11/24/21 13:57	12/06/21 02:13	1
Isopropylbenzene	ND	H	95	6.6	ug/Kg	☼	11/24/21 13:57	12/06/21 02:13	1
Methyl tert-butyl ether	ND	H	190	6.8	ug/Kg	☼	11/24/21 13:57	12/06/21 02:13	1
Methylene Chloride	ND	H	95	10	ug/Kg	☼	11/24/21 13:57	12/06/21 02:13	1
m-Xylene & p-Xylene	ND	H	95	9.5	ug/Kg	☼	11/24/21 13:57	12/06/21 02:13	1
Naphthalene	ND	H	95	3.4	ug/Kg	☼	11/24/21 13:57	12/06/21 02:13	1
n-Butylbenzene	ND	H	95	5.9	ug/Kg	☼	11/24/21 13:57	12/06/21 02:13	1
N-Propylbenzene	ND	H	95	8.9	ug/Kg	☼	11/24/21 13:57	12/06/21 02:13	1
o-Xylene	ND	H	95	9.8	ug/Kg	☼	11/24/21 13:57	12/06/21 02:13	1
sec-Butylbenzene	ND	H	95	4.5	ug/Kg	☼	11/24/21 13:57	12/06/21 02:13	1
Styrene	ND	H	95	2.1	ug/Kg	☼	11/24/21 13:57	12/06/21 02:13	1
tert-Butylbenzene	ND	H	95	7.8	ug/Kg	☼	11/24/21 13:57	12/06/21 02:13	1
Tetrachloroethene	ND	H	95	7.9	ug/Kg	☼	11/24/21 13:57	12/06/21 02:13	1
Toluene	ND	H	95	8.5	ug/Kg	☼	11/24/21 13:57	12/06/21 02:13	1
trans-1,2-Dichloroethene	ND	H	95	12	ug/Kg	☼	11/24/21 13:57	12/06/21 02:13	1
trans-1,3-Dichloropropene	ND	H	95	5.3	ug/Kg	☼	11/24/21 13:57	12/06/21 02:13	1
Trichlorofluoromethane	ND	H	95	23	ug/Kg	☼	11/24/21 13:57	12/06/21 02:13	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	129	S1+	52 - 126	11/24/21 13:57	12/06/21 02:13	1
4-Bromofluorobenzene (Surr)	129		67 - 135	11/24/21 13:57	12/06/21 02:13	1
Dibromofluoromethane (Surr)	123		61 - 123	11/24/21 13:57	12/06/21 02:13	1
Toluene-d8 (Surr)	137	S1+	65 - 131	11/24/21 13:57	12/06/21 02:13	1

Method: AK101 - Alaska - Gasoline Range Organics (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
C6-C10 AK	ND		9.5	1.9	mg/Kg	☼	11/24/21 13:57	12/06/21 02:13	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	129	S1+	60 - 120	11/24/21 13:57	12/06/21 02:13	1
Trifluorotoluene (Surr)	75		60 - 120	11/24/21 13:57	12/06/21 02:13	1

Method: 8011 - EDB, DBCP, and 1,2,3-TCP (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ethylene Dibromide	ND	H	0.25	0.038	ug/Kg		12/03/21 13:35	12/04/21 12:27	1
1,2,3-Trichloropropane	ND	H	0.25	0.14	ug/Kg		12/03/21 13:35	12/04/21 12:27	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dibromopropane	102		55 - 130	12/03/21 13:35	12/04/21 12:27	1

Method: AK102 - DRO

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
DRO (nC10-<nC25)	4.8	B	2.0	0.49	mg/Kg		11/30/21 11:46	12/13/21 23:03	1

Eurofins TestAmerica, Sacramento

Client Sample Results

Client: Shannon & Wilson, Inc
 Project/Site: Kodiak DOT&PF PFAS (107471)

Job ID: 320-82156-1

Client Sample ID: ADQ-ISM2-02

Lab Sample ID: 320-82156-8

Date Collected: 11/16/21 14:50

Matrix: Solid

Date Received: 11/23/21 16:45

Percent Solids: 88.6

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
<i>o</i> -Terphenyl (Surr)	67		60 - 120	11/30/21 11:46	12/13/21 23:03	1
<i>n</i> -Triacontane-d62	60		60 - 120	11/30/21 11:46	12/13/21 23:03	1

Method: EPA 537(Mod) - PFAS for QSM 5.3, Table B-15

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorohexanoic acid (PFHxA)	ND		0.20	0.030	ug/Kg		11/30/21 18:38	12/03/21 21:40	1
Perfluoroheptanoic acid (PFHpA)	ND		0.20	0.037	ug/Kg		11/30/21 18:38	12/03/21 21:40	1
Perfluorooctanoic acid (PFOA)	ND		0.20	0.052	ug/Kg		11/30/21 18:38	12/03/21 21:40	1
Perfluorononanoic acid (PFNA)	ND		0.20	0.022	ug/Kg		11/30/21 18:38	12/03/21 21:40	1
Perfluorodecanoic acid (PFDA)	ND		0.20	0.047	ug/Kg		11/30/21 18:38	12/03/21 21:40	1
Perfluoroundecanoic acid (PFUnA)	ND		0.20	0.041	ug/Kg		11/30/21 18:38	12/03/21 21:40	1
Perfluorododecanoic acid (PFDoA)	ND		0.20	0.029	ug/Kg		11/30/21 18:38	12/03/21 21:40	1
Perfluorotridecanoic acid (PFTTrDA)	ND		0.20	0.021	ug/Kg		11/30/21 18:38	12/03/21 21:40	1
Perfluorotetradecanoic acid (PFTTeA)	ND		0.20	0.036	ug/Kg		11/30/21 18:38	12/03/21 21:40	1
Perfluorobutanesulfonic acid (PFBS)	ND		0.20	0.037	ug/Kg		11/30/21 18:38	12/03/21 21:40	1
Perfluorohexanesulfonic acid (PFHxS)	ND		0.20	0.028	ug/Kg		11/30/21 18:38	12/03/21 21:40	1
Perfluorooctanesulfonic acid (PFOS)	ND		0.20	0.042	ug/Kg		11/30/21 18:38	12/03/21 21:40	1
NEtFOSAA	ND		0.20	0.047	ug/Kg		11/30/21 18:38	12/03/21 21:40	1
NMeFOSAA	ND		0.20	0.023	ug/Kg		11/30/21 18:38	12/03/21 21:40	1
HFPO-DA (GenX)	ND		0.20	0.040	ug/Kg		11/30/21 18:38	12/03/21 21:40	1
9Cl-PF3ONS	ND		0.20	0.034	ug/Kg		11/30/21 18:38	12/03/21 21:40	1
11Cl-PF3OUdS	ND		0.20	0.030	ug/Kg		11/30/21 18:38	12/03/21 21:40	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	ND		0.20	0.038	ug/Kg		11/30/21 18:38	12/03/21 21:40	1

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C2 PFHxA	74		50 - 150	11/30/21 18:38	12/03/21 21:40	1
13C4 PFHpA	74		50 - 150	11/30/21 18:38	12/03/21 21:40	1
13C4 PFOA	91		50 - 150	11/30/21 18:38	12/03/21 21:40	1
13C5 PFNA	80		50 - 150	11/30/21 18:38	12/03/21 21:40	1
13C2 PFDA	86		50 - 150	11/30/21 18:38	12/03/21 21:40	1
13C2 PFUnA	82		50 - 150	11/30/21 18:38	12/03/21 21:40	1
13C2 PFDoA	93		50 - 150	11/30/21 18:38	12/03/21 21:40	1
13C2 PFTTeDA	99		50 - 150	11/30/21 18:38	12/03/21 21:40	1
13C3 PFBS	54		50 - 150	11/30/21 18:38	12/03/21 21:40	1
18O2 PFHxS	50		50 - 150	11/30/21 18:38	12/03/21 21:40	1
13C4 PFOS	49	*5-	50 - 150	11/30/21 18:38	12/03/21 21:40	1
d3-NMeFOSAA	59		50 - 150	11/30/21 18:38	12/03/21 21:40	1
d5-NEtFOSAA	77		50 - 150	11/30/21 18:38	12/03/21 21:40	1
13C3 HFPO-DA	79		50 - 150	11/30/21 18:38	12/03/21 21:40	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	11.4		0.1	0.1	%			11/29/21 14:40	1
Percent Solids	88.6		0.1	0.1	%			11/29/21 14:40	1
Prep Complete	1.0				NONE			11/24/21 11:22	1

Client Sample Results

Client: Shannon & Wilson, Inc
 Project/Site: Kodiak DOT&PF PFAS (107471)

Job ID: 320-82156-1

Client Sample ID: ADQ-ISM2-102

Lab Sample ID: 320-82156-9

Date Collected: 11/16/21 15:51

Matrix: Solid

Date Received: 11/23/21 16:45

Percent Solids: 88.2

Method: 8260C SIM - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND	H	5.2	1.2	ug/Kg	☼	11/24/21 13:57	12/01/21 11:16	1
1,1,2-Trichloroethane	ND	H	5.2	1.7	ug/Kg	☼	11/24/21 13:57	12/01/21 11:16	1
1,2-Dichloroethane	ND	H	5.2	0.87	ug/Kg	☼	11/24/21 13:57	12/01/21 11:16	1
Bromomethane	ND	H	10	3.4	ug/Kg	☼	11/24/21 13:57	12/01/21 11:16	1
Chlorodibromomethane	ND	H	5.2	0.82	ug/Kg	☼	11/24/21 13:57	12/01/21 11:16	1
Chloroform	ND	*+ H	10	4.1	ug/Kg	☼	11/24/21 13:57	12/01/21 11:16	1
Dichlorobromomethane	ND	H	5.2	0.67	ug/Kg	☼	11/24/21 13:57	12/01/21 11:16	1
Ethylene Dibromide	ND	H	5.2	0.83	ug/Kg	☼	11/24/21 13:57	12/01/21 11:16	1
Trichloroethene	ND	H	5.2	1.0	ug/Kg	☼	11/24/21 13:57	12/01/21 11:16	1
Vinyl chloride	ND	H	5.2	1.3	ug/Kg	☼	11/24/21 13:57	12/01/21 11:16	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	83		69 - 129	11/24/21 13:57	12/01/21 11:16	1
Dibromofluoromethane (Surr)	118		72 - 132	11/24/21 13:57	12/01/21 11:16	1
1,2-Dichloroethane-d4 (Surr)	120		72 - 132	11/24/21 13:57	12/01/21 11:16	1
Toluene-d8 (Surr)	111		78 - 138	11/24/21 13:57	12/01/21 11:16	1

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND	H	100	12	ug/Kg	☼	11/24/21 13:57	12/06/21 02:36	1
1,1,1-Trichloroethane	ND	H	100	7.6	ug/Kg	☼	11/24/21 13:57	12/06/21 02:36	1
1,1-Dichloroethane	ND	H	100	5.6	ug/Kg	☼	11/24/21 13:57	12/06/21 02:36	1
1,1-Dichloroethene	ND	H	100	9.7	ug/Kg	☼	11/24/21 13:57	12/06/21 02:36	1
1,1-Dichloropropene	ND	H	100	8.9	ug/Kg	☼	11/24/21 13:57	12/06/21 02:36	1
1,2,3-Trichlorobenzene	ND	H	100	13	ug/Kg	☼	11/24/21 13:57	12/06/21 02:36	1
1,2,3-Trichloropropane	ND	H	100	9.7	ug/Kg	☼	11/24/21 13:57	12/06/21 02:36	1
1,2,4-Trichlorobenzene	ND	H	100	7.0	ug/Kg	☼	11/24/21 13:57	12/06/21 02:36	1
1,2,4-Trimethylbenzene	ND	H	100	7.2	ug/Kg	☼	11/24/21 13:57	12/06/21 02:36	1
1,2-Dibromo-3-Chloropropane	ND	H	210	13	ug/Kg	☼	11/24/21 13:57	12/06/21 02:36	1
1,2-Dichlorobenzene	ND	H	100	4.5	ug/Kg	☼	11/24/21 13:57	12/06/21 02:36	1
1,2-Dichloropropane	ND	H	100	9.7	ug/Kg	☼	11/24/21 13:57	12/06/21 02:36	1
1,3,5-Trimethylbenzene	ND	H	100	7.2	ug/Kg	☼	11/24/21 13:57	12/06/21 02:36	1
1,3-Dichlorobenzene	ND	H	100	6.8	ug/Kg	☼	11/24/21 13:57	12/06/21 02:36	1
1,3-Dichloropropane	ND	H	100	4.7	ug/Kg	☼	11/24/21 13:57	12/06/21 02:36	1
1,4-Dichlorobenzene	ND	H	100	4.5	ug/Kg	☼	11/24/21 13:57	12/06/21 02:36	1
2,2-Dichloropropane	ND	H	100	8.9	ug/Kg	☼	11/24/21 13:57	12/06/21 02:36	1
2-Butanone (MEK)	ND	H	210	54	ug/Kg	☼	11/24/21 13:57	12/06/21 02:36	1
2-Chlorotoluene	ND	H	100	7.4	ug/Kg	☼	11/24/21 13:57	12/06/21 02:36	1
2-Hexanone	ND	H	210	11	ug/Kg	☼	11/24/21 13:57	12/06/21 02:36	1
4-Chlorotoluene	ND	H	100	5.8	ug/Kg	☼	11/24/21 13:57	12/06/21 02:36	1
4-Methyl-2-pentanone (MIBK)	ND	H	210	6.4	ug/Kg	☼	11/24/21 13:57	12/06/21 02:36	1
p-Isopropyltoluene	ND	H	100	3.3	ug/Kg	☼	11/24/21 13:57	12/06/21 02:36	1
Acetone	ND	H	1000	100	ug/Kg	☼	11/24/21 13:57	12/06/21 02:36	1
Benzene	ND	H	100	6.8	ug/Kg	☼	11/24/21 13:57	12/06/21 02:36	1
Bromoform	ND	H	100	23	ug/Kg	☼	11/24/21 13:57	12/06/21 02:36	1
Bromobenzene	ND	H	100	12	ug/Kg	☼	11/24/21 13:57	12/06/21 02:36	1
Carbon disulfide	ND	H	210	7.2	ug/Kg	☼	11/24/21 13:57	12/06/21 02:36	1
Carbon tetrachloride	ND	H	100	7.2	ug/Kg	☼	11/24/21 13:57	12/06/21 02:36	1
Chlorobenzene	ND	H	100	9.1	ug/Kg	☼	11/24/21 13:57	12/06/21 02:36	1
Chlorobromomethane	ND	H	100	15	ug/Kg	☼	11/24/21 13:57	12/06/21 02:36	1

Eurofins TestAmerica, Sacramento

Client Sample Results

Client: Shannon & Wilson, Inc
Project/Site: Kodiak DOT&PF PFAS (107471)

Job ID: 320-82156-1

Client Sample ID: ADQ-ISM2-102

Lab Sample ID: 320-82156-9

Date Collected: 11/16/21 15:51

Matrix: Solid

Date Received: 11/23/21 16:45

Percent Solids: 88.2

Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloroethane	ND	H	100	14	ug/Kg	✱	11/24/21 13:57	12/06/21 02:36	1
Chloromethane	ND	H	100	5.2	ug/Kg	✱	11/24/21 13:57	12/06/21 02:36	1
cis-1,2-Dichloroethene	ND	H	100	17	ug/Kg	✱	11/24/21 13:57	12/06/21 02:36	1
cis-1,3-Dichloropropene	ND	H	100	8.5	ug/Kg	✱	11/24/21 13:57	12/06/21 02:36	1
Dibromomethane	ND	H	100	13	ug/Kg	✱	11/24/21 13:57	12/06/21 02:36	1
Dichlorodifluoromethane	ND	H	100	19	ug/Kg	✱	11/24/21 13:57	12/06/21 02:36	1
Ethylbenzene	ND	H	100	14	ug/Kg	✱	11/24/21 13:57	12/06/21 02:36	1
Hexachlorobutadiene	ND	H	100	11	ug/Kg	✱	11/24/21 13:57	12/06/21 02:36	1
Isopropylbenzene	ND	H	100	7.2	ug/Kg	✱	11/24/21 13:57	12/06/21 02:36	1
Methyl tert-butyl ether	ND	H	210	7.4	ug/Kg	✱	11/24/21 13:57	12/06/21 02:36	1
Methylene Chloride	ND	H	100	11	ug/Kg	✱	11/24/21 13:57	12/06/21 02:36	1
m-Xylene & p-Xylene	17	J H	100	10	ug/Kg	✱	11/24/21 13:57	12/06/21 02:36	1
Naphthalene	ND	H	100	3.7	ug/Kg	✱	11/24/21 13:57	12/06/21 02:36	1
n-Butylbenzene	ND	H	100	6.4	ug/Kg	✱	11/24/21 13:57	12/06/21 02:36	1
N-Propylbenzene	ND	H	100	9.7	ug/Kg	✱	11/24/21 13:57	12/06/21 02:36	1
o-Xylene	ND	H	100	11	ug/Kg	✱	11/24/21 13:57	12/06/21 02:36	1
sec-Butylbenzene	ND	H	100	5.0	ug/Kg	✱	11/24/21 13:57	12/06/21 02:36	1
Styrene	ND	H	100	2.3	ug/Kg	✱	11/24/21 13:57	12/06/21 02:36	1
tert-Butylbenzene	ND	H	100	8.5	ug/Kg	✱	11/24/21 13:57	12/06/21 02:36	1
Tetrachloroethene	ND	H	100	8.7	ug/Kg	✱	11/24/21 13:57	12/06/21 02:36	1
Toluene	19	J H	100	9.3	ug/Kg	✱	11/24/21 13:57	12/06/21 02:36	1
trans-1,2-Dichloroethene	ND	H	100	13	ug/Kg	✱	11/24/21 13:57	12/06/21 02:36	1
trans-1,3-Dichloropropene	ND	H	100	5.8	ug/Kg	✱	11/24/21 13:57	12/06/21 02:36	1
Trichlorofluoromethane	ND	H	100	25	ug/Kg	✱	11/24/21 13:57	12/06/21 02:36	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	123		52 - 126	11/24/21 13:57	12/06/21 02:36	1
4-Bromofluorobenzene (Surr)	123		67 - 135	11/24/21 13:57	12/06/21 02:36	1
Dibromofluoromethane (Surr)	117		61 - 123	11/24/21 13:57	12/06/21 02:36	1
Toluene-d8 (Surr)	128		65 - 131	11/24/21 13:57	12/06/21 02:36	1

Method: AK101 - Alaska - Gasoline Range Organics (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
C6-C10 AK	2.7	J	10	2.1	mg/Kg	✱	11/24/21 13:57	12/07/21 14:31	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	109		60 - 120	11/24/21 13:57	12/07/21 14:31	1
Trifluorotoluene (Surr)	103		60 - 120	11/24/21 13:57	12/07/21 14:31	1

Method: 8011 - EDB, DBCP, and 1,2,3-TCP (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ethylene Dibromide	ND	H	0.25	0.038	ug/Kg		12/03/21 13:35	12/04/21 12:52	1
1,2,3-Trichloropropane	ND	H	0.25	0.14	ug/Kg		12/03/21 13:35	12/04/21 12:52	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dibromopropane	116		55 - 130	12/03/21 13:35	12/04/21 12:52	1

Method: AK102 - DRO

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
DRO (nC10-<nC25)	5.4	B	2.0	0.49	mg/Kg		11/30/21 11:46	12/13/21 23:32	1

Eurofins TestAmerica, Sacramento

Client Sample Results

Client: Shannon & Wilson, Inc
 Project/Site: Kodiak DOT&PF PFAS (107471)

Job ID: 320-82156-1

Client Sample ID: ADQ-ISM2-102

Lab Sample ID: 320-82156-9

Date Collected: 11/16/21 15:51

Matrix: Solid

Date Received: 11/23/21 16:45

Percent Solids: 88.2

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
<i>o</i> -Terphenyl (Surr)	53	S1-	60 - 120	11/30/21 11:46	12/13/21 23:32	1
<i>n</i> -Triacontane-d62	65		60 - 120	11/30/21 11:46	12/13/21 23:32	1

Method: EPA 537(Mod) - PFAS for QSM 5.3, Table B-15

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorohexanoic acid (PFHxA)	ND		0.19	0.030	ug/Kg		11/30/21 18:38	12/03/21 21:50	1
Perfluoroheptanoic acid (PFHpA)	ND		0.19	0.036	ug/Kg		11/30/21 18:38	12/03/21 21:50	1
Perfluorooctanoic acid (PFOA)	ND		0.19	0.051	ug/Kg		11/30/21 18:38	12/03/21 21:50	1
Perfluorononanoic acid (PFNA)	ND		0.19	0.021	ug/Kg		11/30/21 18:38	12/03/21 21:50	1
Perfluorodecanoic acid (PFDA)	ND		0.19	0.046	ug/Kg		11/30/21 18:38	12/03/21 21:50	1
Perfluoroundecanoic acid (PFUnA)	ND		0.19	0.040	ug/Kg		11/30/21 18:38	12/03/21 21:50	1
Perfluorododecanoic acid (PFDoA)	ND		0.19	0.029	ug/Kg		11/30/21 18:38	12/03/21 21:50	1
Perfluorotridecanoic acid (PFTTrDA)	ND		0.19	0.020	ug/Kg		11/30/21 18:38	12/03/21 21:50	1
Perfluorotetradecanoic acid (PFTTeA)	ND		0.19	0.035	ug/Kg		11/30/21 18:38	12/03/21 21:50	1
Perfluorobutanesulfonic acid (PFBS)	ND		0.19	0.036	ug/Kg		11/30/21 18:38	12/03/21 21:50	1
Perfluorohexanesulfonic acid (PFHxS)	ND		0.19	0.028	ug/Kg		11/30/21 18:38	12/03/21 21:50	1
Perfluorooctanesulfonic acid (PFOS)	ND		0.19	0.041	ug/Kg		11/30/21 18:38	12/03/21 21:50	1
NEtFOSAA	ND		0.19	0.046	ug/Kg		11/30/21 18:38	12/03/21 21:50	1
NMeFOSAA	ND		0.19	0.022	ug/Kg		11/30/21 18:38	12/03/21 21:50	1
HFPO-DA (GenX)	ND		0.19	0.039	ug/Kg		11/30/21 18:38	12/03/21 21:50	1
9Cl-PF3ONS	ND		0.19	0.033	ug/Kg		11/30/21 18:38	12/03/21 21:50	1
11Cl-PF3OUdS	ND		0.19	0.030	ug/Kg		11/30/21 18:38	12/03/21 21:50	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	ND		0.19	0.037	ug/Kg		11/30/21 18:38	12/03/21 21:50	1

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C2 PFHxA	82		50 - 150	11/30/21 18:38	12/03/21 21:50	1
13C4 PFHpA	83		50 - 150	11/30/21 18:38	12/03/21 21:50	1
13C4 PFOA	96		50 - 150	11/30/21 18:38	12/03/21 21:50	1
13C5 PFNA	87		50 - 150	11/30/21 18:38	12/03/21 21:50	1
13C2 PFDA	89		50 - 150	11/30/21 18:38	12/03/21 21:50	1
13C2 PFUnA	91		50 - 150	11/30/21 18:38	12/03/21 21:50	1
13C2 PFDoA	96		50 - 150	11/30/21 18:38	12/03/21 21:50	1
13C2 PFTTeDA	98		50 - 150	11/30/21 18:38	12/03/21 21:50	1
13C3 PFBS	61		50 - 150	11/30/21 18:38	12/03/21 21:50	1
18O2 PFHxS	60		50 - 150	11/30/21 18:38	12/03/21 21:50	1
13C4 PFOS	59		50 - 150	11/30/21 18:38	12/03/21 21:50	1
d3-NMeFOSAA	73		50 - 150	11/30/21 18:38	12/03/21 21:50	1
d5-NEtFOSAA	78		50 - 150	11/30/21 18:38	12/03/21 21:50	1
13C3 HFPO-DA	83		50 - 150	11/30/21 18:38	12/03/21 21:50	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	11.8		0.1	0.1	%			11/29/21 14:40	1
Percent Solids	88.2		0.1	0.1	%			11/29/21 14:40	1
Prep Complete	1.0				NONE			11/24/21 11:22	1

Client Sample Results

Client: Shannon & Wilson, Inc
 Project/Site: Kodiak DOT&PF PFAS (107471)

Job ID: 320-82156-1

Client Sample ID: ADQ-ISM2-202

Lab Sample ID: 320-82156-10

Date Collected: 11/16/21 16:50

Matrix: Solid

Date Received: 11/23/21 16:45

Percent Solids: 91.0

Method: 8260C SIM - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND	H	4.1	0.92	ug/Kg	☼	11/24/21 13:57	12/01/21 11:40	1
1,1,2-Trichloroethane	ND	H	4.1	1.4	ug/Kg	☼	11/24/21 13:57	12/01/21 11:40	1
1,2-Dichloroethane	ND	H	4.1	0.69	ug/Kg	☼	11/24/21 13:57	12/01/21 11:40	1
Bromomethane	ND	H	8.2	2.7	ug/Kg	☼	11/24/21 13:57	12/01/21 11:40	1
Chlorodibromomethane	ND	H	4.1	0.65	ug/Kg	☼	11/24/21 13:57	12/01/21 11:40	1
Chloroform	ND	*+ H	8.2	3.3	ug/Kg	☼	11/24/21 13:57	12/01/21 11:40	1
Dichlorobromomethane	ND	H	4.1	0.54	ug/Kg	☼	11/24/21 13:57	12/01/21 11:40	1
Ethylene Dibromide	ND	H	4.1	0.66	ug/Kg	☼	11/24/21 13:57	12/01/21 11:40	1
Trichloroethene	ND	H	4.1	0.81	ug/Kg	☼	11/24/21 13:57	12/01/21 11:40	1
Vinyl chloride	ND	H	4.1	1.0	ug/Kg	☼	11/24/21 13:57	12/01/21 11:40	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	85		69 - 129	11/24/21 13:57	12/01/21 11:40	1
Dibromofluoromethane (Surr)	119		72 - 132	11/24/21 13:57	12/01/21 11:40	1
1,2-Dichloroethane-d4 (Surr)	122		72 - 132	11/24/21 13:57	12/01/21 11:40	1
Toluene-d8 (Surr)	108		78 - 138	11/24/21 13:57	12/01/21 11:40	1

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND	H	82	9.7	ug/Kg	☼	11/24/21 13:57	12/06/21 02:59	1
1,1,1-Trichloroethane	ND	H	82	6.1	ug/Kg	☼	11/24/21 13:57	12/06/21 02:59	1
1,1-Dichloroethane	ND	H	82	4.4	ug/Kg	☼	11/24/21 13:57	12/06/21 02:59	1
1,1-Dichloroethene	ND	H	82	7.7	ug/Kg	☼	11/24/21 13:57	12/06/21 02:59	1
1,1-Dichloropropene	ND	H	82	7.1	ug/Kg	☼	11/24/21 13:57	12/06/21 02:59	1
1,2,3-Trichlorobenzene	ND	H	82	10	ug/Kg	☼	11/24/21 13:57	12/06/21 02:59	1
1,2,3-Trichloropropane	ND	H	82	7.7	ug/Kg	☼	11/24/21 13:57	12/06/21 02:59	1
1,2,4-Trichlorobenzene	ND	H	82	5.6	ug/Kg	☼	11/24/21 13:57	12/06/21 02:59	1
1,2,4-Trimethylbenzene	ND	H	82	5.8	ug/Kg	☼	11/24/21 13:57	12/06/21 02:59	1
1,2-Dibromo-3-Chloropropane	ND	H	160	10	ug/Kg	☼	11/24/21 13:57	12/06/21 02:59	1
1,2-Dichlorobenzene	ND	H	82	3.6	ug/Kg	☼	11/24/21 13:57	12/06/21 02:59	1
1,2-Dichloropropane	ND	H	82	7.7	ug/Kg	☼	11/24/21 13:57	12/06/21 02:59	1
1,3,5-Trimethylbenzene	ND	H	82	5.8	ug/Kg	☼	11/24/21 13:57	12/06/21 02:59	1
1,3-Dichlorobenzene	ND	H	82	5.4	ug/Kg	☼	11/24/21 13:57	12/06/21 02:59	1
1,3-Dichloropropane	ND	H	82	3.8	ug/Kg	☼	11/24/21 13:57	12/06/21 02:59	1
1,4-Dichlorobenzene	ND	H	82	3.6	ug/Kg	☼	11/24/21 13:57	12/06/21 02:59	1
2,2-Dichloropropane	ND	H	82	7.1	ug/Kg	☼	11/24/21 13:57	12/06/21 02:59	1
2-Butanone (MEK)	ND	H	160	43	ug/Kg	☼	11/24/21 13:57	12/06/21 02:59	1
2-Chlorotoluene	ND	H	82	5.9	ug/Kg	☼	11/24/21 13:57	12/06/21 02:59	1
2-Hexanone	ND	H	160	8.6	ug/Kg	☼	11/24/21 13:57	12/06/21 02:59	1
4-Chlorotoluene	ND	H	82	4.6	ug/Kg	☼	11/24/21 13:57	12/06/21 02:59	1
4-Methyl-2-pentanone (MIBK)	ND	H	160	5.1	ug/Kg	☼	11/24/21 13:57	12/06/21 02:59	1
p-Isopropyltoluene	ND	H	82	2.6	ug/Kg	☼	11/24/21 13:57	12/06/21 02:59	1
Acetone	ND	H	820	82	ug/Kg	☼	11/24/21 13:57	12/06/21 02:59	1
Benzene	ND	H	82	5.4	ug/Kg	☼	11/24/21 13:57	12/06/21 02:59	1
Bromoform	ND	H	82	18	ug/Kg	☼	11/24/21 13:57	12/06/21 02:59	1
Bromobenzene	ND	H	82	9.2	ug/Kg	☼	11/24/21 13:57	12/06/21 02:59	1
Carbon disulfide	ND	H	160	5.8	ug/Kg	☼	11/24/21 13:57	12/06/21 02:59	1
Carbon tetrachloride	ND	H	82	5.8	ug/Kg	☼	11/24/21 13:57	12/06/21 02:59	1
Chlorobenzene	ND	H	82	7.2	ug/Kg	☼	11/24/21 13:57	12/06/21 02:59	1
Chlorobromomethane	ND	H	82	12	ug/Kg	☼	11/24/21 13:57	12/06/21 02:59	1

Eurofins TestAmerica, Sacramento

Client Sample Results

Client: Shannon & Wilson, Inc
Project/Site: Kodiak DOT&PF PFAS (107471)

Job ID: 320-82156-1

Client Sample ID: ADQ-ISM2-202

Lab Sample ID: 320-82156-10

Date Collected: 11/16/21 16:50

Matrix: Solid

Date Received: 11/23/21 16:45

Percent Solids: 91.0

Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloroethane	ND	H	82	11	ug/Kg	✱	11/24/21 13:57	12/06/21 02:59	1
Chloromethane	ND	H	82	4.1	ug/Kg	✱	11/24/21 13:57	12/06/21 02:59	1
cis-1,2-Dichloroethene	ND	H	82	13	ug/Kg	✱	11/24/21 13:57	12/06/21 02:59	1
cis-1,3-Dichloropropene	ND	H	82	6.7	ug/Kg	✱	11/24/21 13:57	12/06/21 02:59	1
Dibromomethane	ND	H	82	11	ug/Kg	✱	11/24/21 13:57	12/06/21 02:59	1
Dichlorodifluoromethane	ND	H	82	15	ug/Kg	✱	11/24/21 13:57	12/06/21 02:59	1
Ethylbenzene	ND	H	82	11	ug/Kg	✱	11/24/21 13:57	12/06/21 02:59	1
Hexachlorobutadiene	ND	H	82	8.4	ug/Kg	✱	11/24/21 13:57	12/06/21 02:59	1
Isopropylbenzene	ND	H	82	5.8	ug/Kg	✱	11/24/21 13:57	12/06/21 02:59	1
Methyl tert-butyl ether	ND	H	160	5.9	ug/Kg	✱	11/24/21 13:57	12/06/21 02:59	1
Methylene Chloride	ND	H	82	8.9	ug/Kg	✱	11/24/21 13:57	12/06/21 02:59	1
m-Xylene & p-Xylene	ND	H	82	8.2	ug/Kg	✱	11/24/21 13:57	12/06/21 02:59	1
Naphthalene	ND	H	82	3.0	ug/Kg	✱	11/24/21 13:57	12/06/21 02:59	1
n-Butylbenzene	ND	H	82	5.1	ug/Kg	✱	11/24/21 13:57	12/06/21 02:59	1
N-Propylbenzene	ND	H	82	7.7	ug/Kg	✱	11/24/21 13:57	12/06/21 02:59	1
o-Xylene	ND	H	82	8.6	ug/Kg	✱	11/24/21 13:57	12/06/21 02:59	1
sec-Butylbenzene	ND	H	82	3.9	ug/Kg	✱	11/24/21 13:57	12/06/21 02:59	1
Styrene	ND	H	82	1.8	ug/Kg	✱	11/24/21 13:57	12/06/21 02:59	1
tert-Butylbenzene	ND	H	82	6.7	ug/Kg	✱	11/24/21 13:57	12/06/21 02:59	1
Tetrachloroethene	ND	H	82	6.9	ug/Kg	✱	11/24/21 13:57	12/06/21 02:59	1
Toluene	ND	H	82	7.4	ug/Kg	✱	11/24/21 13:57	12/06/21 02:59	1
trans-1,2-Dichloroethene	ND	H	82	10	ug/Kg	✱	11/24/21 13:57	12/06/21 02:59	1
trans-1,3-Dichloropropene	ND	H	82	4.6	ug/Kg	✱	11/24/21 13:57	12/06/21 02:59	1
Trichlorofluoromethane	ND	H	82	20	ug/Kg	✱	11/24/21 13:57	12/06/21 02:59	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	130	S1+	52 - 126	11/24/21 13:57	12/06/21 02:59	1
4-Bromofluorobenzene (Surr)	129		67 - 135	11/24/21 13:57	12/06/21 02:59	1
Dibromofluoromethane (Surr)	120		61 - 123	11/24/21 13:57	12/06/21 02:59	1
Toluene-d8 (Surr)	129		65 - 131	11/24/21 13:57	12/06/21 02:59	1

Method: AK101 - Alaska - Gasoline Range Organics (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
C6-C10 AK	ND		8.2	1.6	mg/Kg	✱	11/24/21 13:57	12/06/21 02:59	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	129	S1+	60 - 120	11/24/21 13:57	12/06/21 02:59	1
Trifluorotoluene (Surr)	98		60 - 120	11/24/21 13:57	12/06/21 02:59	1

Method: 8011 - EDB, DBCP, and 1,2,3-TCP (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ethylene Dibromide	ND	H	0.25	0.038	ug/Kg		12/03/21 13:35	12/07/21 09:42	1
1,2,3-Trichloropropane	ND	H	0.25	0.14	ug/Kg		12/03/21 13:35	12/07/21 09:42	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dibromopropane	97		55 - 130	12/03/21 13:35	12/07/21 09:42	1

Method: AK102 - DRO

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
DRO (nC10-<nC25)	3.4	B	2.0	0.49	mg/Kg		11/30/21 11:46	12/14/21 00:58	1

Eurofins TestAmerica, Sacramento

Client Sample Results

Client: Shannon & Wilson, Inc
 Project/Site: Kodiak DOT&PF PFAS (107471)

Job ID: 320-82156-1

Client Sample ID: ADQ-ISM2-202

Lab Sample ID: 320-82156-10

Date Collected: 11/16/21 16:50

Matrix: Solid

Date Received: 11/23/21 16:45

Percent Solids: 91.0

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
<i>o</i> -Terphenyl (Surr)	61		60 - 120	11/30/21 11:46	12/14/21 00:58	1
<i>n</i> -Triacontane-d62	67		60 - 120	11/30/21 11:46	12/14/21 00:58	1

Method: EPA 537(Mod) - PFAS for QSM 5.3, Table B-15

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorohexanoic acid (PFHxA)	ND		0.19	0.029	ug/Kg		11/30/21 18:38	12/03/21 22:00	1
Perfluoroheptanoic acid (PFHpA)	ND		0.19	0.035	ug/Kg		11/30/21 18:38	12/03/21 22:00	1
Perfluorooctanoic acid (PFOA)	ND		0.19	0.049	ug/Kg		11/30/21 18:38	12/03/21 22:00	1
Perfluorononanoic acid (PFNA)	ND		0.19	0.020	ug/Kg		11/30/21 18:38	12/03/21 22:00	1
Perfluorodecanoic acid (PFDA)	ND		0.19	0.045	ug/Kg		11/30/21 18:38	12/03/21 22:00	1
Perfluoroundecanoic acid (PFUnA)	ND		0.19	0.039	ug/Kg		11/30/21 18:38	12/03/21 22:00	1
Perfluorododecanoic acid (PFDoA)	ND		0.19	0.028	ug/Kg		11/30/21 18:38	12/03/21 22:00	1
Perfluorotridecanoic acid (PFTTrDA)	ND		0.19	0.020	ug/Kg		11/30/21 18:38	12/03/21 22:00	1
Perfluorotetradecanoic acid (PFTTeA)	ND		0.19	0.034	ug/Kg		11/30/21 18:38	12/03/21 22:00	1
Perfluorobutanesulfonic acid (PFBS)	ND		0.19	0.035	ug/Kg		11/30/21 18:38	12/03/21 22:00	1
Perfluorohexanesulfonic acid (PFHxS)	ND		0.19	0.027	ug/Kg		11/30/21 18:38	12/03/21 22:00	1
Perfluorooctanesulfonic acid (PFOS)	ND		0.19	0.040	ug/Kg		11/30/21 18:38	12/03/21 22:00	1
NEtFOSAA	ND		0.19	0.045	ug/Kg		11/30/21 18:38	12/03/21 22:00	1
NMeFOSAA	ND		0.19	0.021	ug/Kg		11/30/21 18:38	12/03/21 22:00	1
HFPO-DA (GenX)	ND		0.19	0.038	ug/Kg		11/30/21 18:38	12/03/21 22:00	1
9CI-PF3ONS	ND		0.19	0.033	ug/Kg		11/30/21 18:38	12/03/21 22:00	1
11CI-PF3OUdS	ND		0.19	0.029	ug/Kg		11/30/21 18:38	12/03/21 22:00	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	ND		0.19	0.036	ug/Kg		11/30/21 18:38	12/03/21 22:00	1

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C2 PFHxA	100		50 - 150	11/30/21 18:38	12/03/21 22:00	1
13C4 PFHpA	97		50 - 150	11/30/21 18:38	12/03/21 22:00	1
13C4 PFOA	112		50 - 150	11/30/21 18:38	12/03/21 22:00	1
13C5 PFNA	99		50 - 150	11/30/21 18:38	12/03/21 22:00	1
13C2 PFDA	102		50 - 150	11/30/21 18:38	12/03/21 22:00	1
13C2 PFUnA	104		50 - 150	11/30/21 18:38	12/03/21 22:00	1
13C2 PFDoA	112		50 - 150	11/30/21 18:38	12/03/21 22:00	1
13C2 PFTTeDA	129		50 - 150	11/30/21 18:38	12/03/21 22:00	1
13C3 PFBS	67		50 - 150	11/30/21 18:38	12/03/21 22:00	1
18O2 PFHxS	64		50 - 150	11/30/21 18:38	12/03/21 22:00	1
13C4 PFOS	63		50 - 150	11/30/21 18:38	12/03/21 22:00	1
d3-NMeFOSAA	83		50 - 150	11/30/21 18:38	12/03/21 22:00	1
d5-NEtFOSAA	93		50 - 150	11/30/21 18:38	12/03/21 22:00	1
13C3 HFPO-DA	101		50 - 150	11/30/21 18:38	12/03/21 22:00	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	9.0		0.1	0.1	%			11/29/21 14:40	1
Percent Solids	91.0		0.1	0.1	%			11/29/21 14:40	1
Prep Complete	1.0				NONE			11/24/21 11:22	1

Client Sample Results

Client: Shannon & Wilson, Inc
Project/Site: Kodiak DOT&PF PFAS (107471)

Job ID: 320-82156-1

Client Sample ID: ADQ-ISM2-03

Lab Sample ID: 320-82156-11

Date Collected: 11/17/21 14:10

Matrix: Solid

Date Received: 11/23/21 16:45

Percent Solids: 91.9

Method: 8260C SIM - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		3.4	0.76	ug/Kg	✱	11/24/21 13:57	12/01/21 12:04	1
1,1,2-Trichloroethane	ND		3.4	1.1	ug/Kg	✱	11/24/21 13:57	12/01/21 12:04	1
1,2-Dichloroethane	ND		3.4	0.57	ug/Kg	✱	11/24/21 13:57	12/01/21 12:04	1
Bromomethane	ND		6.7	2.2	ug/Kg	✱	11/24/21 13:57	12/01/21 12:04	1
Chlorodibromomethane	ND		3.4	0.54	ug/Kg	✱	11/24/21 13:57	12/01/21 12:04	1
Chloroform	ND	+	6.7	2.7	ug/Kg	✱	11/24/21 13:57	12/01/21 12:04	1
Dichlorobromomethane	ND		3.4	0.44	ug/Kg	✱	11/24/21 13:57	12/01/21 12:04	1
Ethylene Dibromide	ND		3.4	0.54	ug/Kg	✱	11/24/21 13:57	12/01/21 12:04	1
Trichloroethene	ND		3.4	0.67	ug/Kg	✱	11/24/21 13:57	12/01/21 12:04	1
Vinyl chloride	ND		3.4	0.85	ug/Kg	✱	11/24/21 13:57	12/01/21 12:04	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	84		69 - 129				11/24/21 13:57	12/01/21 12:04	1
Dibromofluoromethane (Surr)	115		72 - 132				11/24/21 13:57	12/01/21 12:04	1
1,2-Dichloroethane-d4 (Surr)	121		72 - 132				11/24/21 13:57	12/01/21 12:04	1
Toluene-d8 (Surr)	110		78 - 138				11/24/21 13:57	12/01/21 12:04	1

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND	H	67	8.0	ug/Kg	✱	11/24/21 13:57	12/06/21 03:22	1
1,1,1-Trichloroethane	ND	H	67	5.0	ug/Kg	✱	11/24/21 13:57	12/06/21 03:22	1
1,1-Dichloroethane	ND	H	67	3.6	ug/Kg	✱	11/24/21 13:57	12/06/21 03:22	1
1,1-Dichloroethene	ND	H	67	6.3	ug/Kg	✱	11/24/21 13:57	12/06/21 03:22	1
1,1-Dichloropropene	ND	H	67	5.8	ug/Kg	✱	11/24/21 13:57	12/06/21 03:22	1
1,2,3-Trichlorobenzene	ND	H	67	8.4	ug/Kg	✱	11/24/21 13:57	12/06/21 03:22	1
1,2,3-Trichloropropane	ND	H	67	6.3	ug/Kg	✱	11/24/21 13:57	12/06/21 03:22	1
1,2,4-Trichlorobenzene	ND	H	67	4.6	ug/Kg	✱	11/24/21 13:57	12/06/21 03:22	1
1,2,4-Trimethylbenzene	ND	H	67	4.7	ug/Kg	✱	11/24/21 13:57	12/06/21 03:22	1
1,2-Dibromo-3-Chloropropane	ND	H	130	8.5	ug/Kg	✱	11/24/21 13:57	12/06/21 03:22	1
1,2-Dichlorobenzene	ND	H	67	3.0	ug/Kg	✱	11/24/21 13:57	12/06/21 03:22	1
1,2-Dichloropropane	ND	H	67	6.3	ug/Kg	✱	11/24/21 13:57	12/06/21 03:22	1
1,3,5-Trimethylbenzene	ND	H	67	4.7	ug/Kg	✱	11/24/21 13:57	12/06/21 03:22	1
1,3-Dichlorobenzene	ND	H	67	4.5	ug/Kg	✱	11/24/21 13:57	12/06/21 03:22	1
1,3-Dichloropropane	ND	H	67	3.1	ug/Kg	✱	11/24/21 13:57	12/06/21 03:22	1
1,4-Dichlorobenzene	ND	H	67	3.0	ug/Kg	✱	11/24/21 13:57	12/06/21 03:22	1
2,2-Dichloropropane	ND	H	67	5.8	ug/Kg	✱	11/24/21 13:57	12/06/21 03:22	1
2-Butanone (MEK)	ND	H	130	35	ug/Kg	✱	11/24/21 13:57	12/06/21 03:22	1
2-Chlorotoluene	ND	H	67	4.9	ug/Kg	✱	11/24/21 13:57	12/06/21 03:22	1
2-Hexanone	ND	H	130	7.0	ug/Kg	✱	11/24/21 13:57	12/06/21 03:22	1
4-Chlorotoluene	ND	H	67	3.8	ug/Kg	✱	11/24/21 13:57	12/06/21 03:22	1
4-Methyl-2-pentanone (MIBK)	ND	H	130	4.2	ug/Kg	✱	11/24/21 13:57	12/06/21 03:22	1
p-Isopropyltoluene	ND	H	67	2.2	ug/Kg	✱	11/24/21 13:57	12/06/21 03:22	1
Acetone	ND	H	670	67	ug/Kg	✱	11/24/21 13:57	12/06/21 03:22	1
Benzene	4.7	J H	67	4.5	ug/Kg	✱	11/24/21 13:57	12/06/21 03:22	1
Bromoform	ND	H	67	15	ug/Kg	✱	11/24/21 13:57	12/06/21 03:22	1
Bromobenzene	ND	H	67	7.6	ug/Kg	✱	11/24/21 13:57	12/06/21 03:22	1
Carbon disulfide	ND	H	130	4.7	ug/Kg	✱	11/24/21 13:57	12/06/21 03:22	1
Carbon tetrachloride	ND	H	67	4.7	ug/Kg	✱	11/24/21 13:57	12/06/21 03:22	1
Chlorobenzene	ND	H	67	5.9	ug/Kg	✱	11/24/21 13:57	12/06/21 03:22	1
Chlorobromomethane	ND	H	67	9.9	ug/Kg	✱	11/24/21 13:57	12/06/21 03:22	1

Eurofins TestAmerica, Sacramento

Client Sample Results

Client: Shannon & Wilson, Inc
Project/Site: Kodiak DOT&PF PFAS (107471)

Job ID: 320-82156-1

Client Sample ID: ADQ-ISM2-03

Lab Sample ID: 320-82156-11

Date Collected: 11/17/21 14:10

Matrix: Solid

Date Received: 11/23/21 16:45

Percent Solids: 91.9

Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloroethane	ND	H	67	8.9	ug/Kg	✳	11/24/21 13:57	12/06/21 03:22	1
Chloromethane	ND	H	67	3.4	ug/Kg	✳	11/24/21 13:57	12/06/21 03:22	1
cis-1,2-Dichloroethene	ND	H	67	11	ug/Kg	✳	11/24/21 13:57	12/06/21 03:22	1
cis-1,3-Dichloropropene	ND	H	67	5.5	ug/Kg	✳	11/24/21 13:57	12/06/21 03:22	1
Dibromomethane	ND	H	67	8.8	ug/Kg	✳	11/24/21 13:57	12/06/21 03:22	1
Dichlorodifluoromethane	ND	H	67	13	ug/Kg	✳	11/24/21 13:57	12/06/21 03:22	1
Ethylbenzene	ND	H	67	8.9	ug/Kg	✳	11/24/21 13:57	12/06/21 03:22	1
Hexachlorobutadiene	ND	H	67	6.9	ug/Kg	✳	11/24/21 13:57	12/06/21 03:22	1
Isopropylbenzene	ND	H	67	4.7	ug/Kg	✳	11/24/21 13:57	12/06/21 03:22	1
Methyl tert-butyl ether	ND	H	130	4.9	ug/Kg	✳	11/24/21 13:57	12/06/21 03:22	1
Methylene Chloride	ND	H	67	7.3	ug/Kg	✳	11/24/21 13:57	12/06/21 03:22	1
m-Xylene & p-Xylene	ND	H	67	6.7	ug/Kg	✳	11/24/21 13:57	12/06/21 03:22	1
Naphthalene	ND	H	67	2.4	ug/Kg	✳	11/24/21 13:57	12/06/21 03:22	1
n-Butylbenzene	ND	H	67	4.2	ug/Kg	✳	11/24/21 13:57	12/06/21 03:22	1
N-Propylbenzene	ND	H	67	6.3	ug/Kg	✳	11/24/21 13:57	12/06/21 03:22	1
o-Xylene	ND	H	67	7.0	ug/Kg	✳	11/24/21 13:57	12/06/21 03:22	1
sec-Butylbenzene	ND	H	67	3.2	ug/Kg	✳	11/24/21 13:57	12/06/21 03:22	1
Styrene	ND	H	67	1.5	ug/Kg	✳	11/24/21 13:57	12/06/21 03:22	1
tert-Butylbenzene	ND	H	67	5.5	ug/Kg	✳	11/24/21 13:57	12/06/21 03:22	1
Tetrachloroethene	ND	H	67	5.7	ug/Kg	✳	11/24/21 13:57	12/06/21 03:22	1
Toluene	7.4	J H	67	6.1	ug/Kg	✳	11/24/21 13:57	12/06/21 03:22	1
trans-1,2-Dichloroethene	ND	H	67	8.4	ug/Kg	✳	11/24/21 13:57	12/06/21 03:22	1
trans-1,3-Dichloropropene	ND	H	67	3.8	ug/Kg	✳	11/24/21 13:57	12/06/21 03:22	1
Trichlorofluoromethane	ND	H	67	16	ug/Kg	✳	11/24/21 13:57	12/06/21 03:22	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	120		52 - 126	11/24/21 13:57	12/06/21 03:22	1
4-Bromofluorobenzene (Surr)	119		67 - 135	11/24/21 13:57	12/06/21 03:22	1
Dibromofluoromethane (Surr)	113		61 - 123	11/24/21 13:57	12/06/21 03:22	1
Toluene-d8 (Surr)	124		65 - 131	11/24/21 13:57	12/06/21 03:22	1

Method: AK101 - Alaska - Gasoline Range Organics (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
C6-C10 AK	ND		6.7	1.3	mg/Kg	✳	11/24/21 13:57	12/06/21 03:22	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	119		60 - 120	11/24/21 13:57	12/06/21 03:22	1
Trifluorotoluene (Surr)	83		60 - 120	11/24/21 13:57	12/06/21 03:22	1

Method: 8011 - EDB, DBCP, and 1,2,3-TCP (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ethylene Dibromide	ND	H	0.25	0.038	ug/Kg		12/03/21 13:35	12/04/21 14:05	1
1,2,3-Trichloropropane	ND	H	0.25	0.14	ug/Kg		12/03/21 13:35	12/04/21 14:05	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dibromopropane	123		55 - 130	12/03/21 13:35	12/04/21 14:05	1

Method: AK102 - DRO

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
DRO (nC10-<nC25)	5.1	B	2.0	0.49	mg/Kg		11/30/21 11:46	12/14/21 01:27	1

Eurofins TestAmerica, Sacramento

Client Sample Results

Client: Shannon & Wilson, Inc
Project/Site: Kodiak DOT&PF PFAS (107471)

Job ID: 320-82156-1

Client Sample ID: ADQ-ISM2-03

Lab Sample ID: 320-82156-11

Date Collected: 11/17/21 14:10

Matrix: Solid

Date Received: 11/23/21 16:45

Percent Solids: 91.9

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
<i>o</i> -Terphenyl (Surr)	57	S1-	60 - 120	11/30/21 11:46	12/14/21 01:27	1
<i>n</i> -Triacontane-d62	73		60 - 120	11/30/21 11:46	12/14/21 01:27	1

Method: EPA 537(Mod) - PFAS for QSM 5.3, Table B-15

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorohexanoic acid (PFHxA)	ND		0.20	0.031	ug/Kg		11/30/21 18:38	12/03/21 22:11	1
Perfluoroheptanoic acid (PFHpA)	ND		0.20	0.038	ug/Kg		11/30/21 18:38	12/03/21 22:11	1
Perfluorooctanoic acid (PFOA)	ND		0.20	0.053	ug/Kg		11/30/21 18:38	12/03/21 22:11	1
Perfluorononanoic acid (PFNA)	ND		0.20	0.022	ug/Kg		11/30/21 18:38	12/03/21 22:11	1
Perfluorodecanoic acid (PFDA)	ND		0.20	0.048	ug/Kg		11/30/21 18:38	12/03/21 22:11	1
Perfluoroundecanoic acid (PFUnA)	ND		0.20	0.042	ug/Kg		11/30/21 18:38	12/03/21 22:11	1
Perfluorododecanoic acid (PFDoA)	ND		0.20	0.030	ug/Kg		11/30/21 18:38	12/03/21 22:11	1
Perfluorotridecanoic acid (PFTrDA)	ND		0.20	0.021	ug/Kg		11/30/21 18:38	12/03/21 22:11	1
Perfluorotetradecanoic acid (PFTeA)	ND		0.20	0.037	ug/Kg		11/30/21 18:38	12/03/21 22:11	1
Perfluorobutanesulfonic acid (PFBS)	ND		0.20	0.038	ug/Kg		11/30/21 18:38	12/03/21 22:11	1
Perfluorohexanesulfonic acid (PFHxS)	ND		0.20	0.029	ug/Kg		11/30/21 18:38	12/03/21 22:11	1
Perfluorooctanesulfonic acid (PFOS)	ND		0.20	0.043	ug/Kg		11/30/21 18:38	12/03/21 22:11	1
NEtFOSAA	ND		0.20	0.048	ug/Kg		11/30/21 18:38	12/03/21 22:11	1
NMeFOSAA	ND		0.20	0.023	ug/Kg		11/30/21 18:38	12/03/21 22:11	1
HFPO-DA (GenX)	ND		0.20	0.041	ug/Kg		11/30/21 18:38	12/03/21 22:11	1
9Cl-PF3ONS	ND		0.20	0.035	ug/Kg		11/30/21 18:38	12/03/21 22:11	1
11Cl-PF3OUdS	ND		0.20	0.031	ug/Kg		11/30/21 18:38	12/03/21 22:11	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	ND		0.20	0.039	ug/Kg		11/30/21 18:38	12/03/21 22:11	1

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C2 PFHxA	86		50 - 150	11/30/21 18:38	12/03/21 22:11	1
13C4 PFHpA	88		50 - 150	11/30/21 18:38	12/03/21 22:11	1
13C4 PFOA	97		50 - 150	11/30/21 18:38	12/03/21 22:11	1
13C5 PFNA	88		50 - 150	11/30/21 18:38	12/03/21 22:11	1
13C2 PFDA	88		50 - 150	11/30/21 18:38	12/03/21 22:11	1
13C2 PFUnA	99		50 - 150	11/30/21 18:38	12/03/21 22:11	1
13C2 PFDoA	92		50 - 150	11/30/21 18:38	12/03/21 22:11	1
13C2 PFTeDA	112		50 - 150	11/30/21 18:38	12/03/21 22:11	1
13C3 PFBS	66		50 - 150	11/30/21 18:38	12/03/21 22:11	1
18O2 PFHxS	60		50 - 150	11/30/21 18:38	12/03/21 22:11	1
13C4 PFOS	62		50 - 150	11/30/21 18:38	12/03/21 22:11	1
d3-NMeFOSAA	72		50 - 150	11/30/21 18:38	12/03/21 22:11	1
d5-NEtFOSAA	80		50 - 150	11/30/21 18:38	12/03/21 22:11	1
13C3 HFPO-DA	82		50 - 150	11/30/21 18:38	12/03/21 22:11	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	8.1		0.1	0.1	%			11/29/21 14:40	1
Percent Solids	91.9		0.1	0.1	%			11/29/21 14:40	1
Prep Complete	1.0				NONE			11/24/21 11:22	1

Client Sample Results

Client: Shannon & Wilson, Inc
 Project/Site: Kodiak DOT&PF PFAS (107471)

Job ID: 320-82156-1

Client Sample ID: ADQ-ISM2-04

Lab Sample ID: 320-82156-12

Date Collected: 11/17/21 15:15

Matrix: Solid

Date Received: 11/23/21 16:45

Percent Solids: 91.3

Method: 8260C SIM - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		3.8	0.85	ug/Kg	☼	11/24/21 13:57	12/01/21 12:27	1
1,1,2-Trichloroethane	ND		3.8	1.3	ug/Kg	☼	11/24/21 13:57	12/01/21 12:27	1
1,2-Dichloroethane	ND		3.8	0.64	ug/Kg	☼	11/24/21 13:57	12/01/21 12:27	1
Bromomethane	ND		7.6	2.5	ug/Kg	☼	11/24/21 13:57	12/01/21 12:27	1
Chlorodibromomethane	ND		3.8	0.61	ug/Kg	☼	11/24/21 13:57	12/01/21 12:27	1
Chloroform	ND	+	7.6	3.0	ug/Kg	☼	11/24/21 13:57	12/01/21 12:27	1
Dichlorobromomethane	ND		3.8	0.50	ug/Kg	☼	11/24/21 13:57	12/01/21 12:27	1
Ethylene Dibromide	ND		3.8	0.61	ug/Kg	☼	11/24/21 13:57	12/01/21 12:27	1
Trichloroethene	ND		3.8	0.75	ug/Kg	☼	11/24/21 13:57	12/01/21 12:27	1
Vinyl chloride	ND		3.8	0.96	ug/Kg	☼	11/24/21 13:57	12/01/21 12:27	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	83		69 - 129	11/24/21 13:57	12/01/21 12:27	1
Dibromofluoromethane (Surr)	111		72 - 132	11/24/21 13:57	12/01/21 12:27	1
1,2-Dichloroethane-d4 (Surr)	118		72 - 132	11/24/21 13:57	12/01/21 12:27	1
Toluene-d8 (Surr)	111		78 - 138	11/24/21 13:57	12/01/21 12:27	1

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND	H	76	9.0	ug/Kg	☼	11/24/21 13:57	12/06/21 04:55	1
1,1,1-Trichloroethane	ND	H	76	5.6	ug/Kg	☼	11/24/21 13:57	12/06/21 04:55	1
1,1-Dichloroethane	ND	H	76	4.1	ug/Kg	☼	11/24/21 13:57	12/06/21 04:55	1
1,1-Dichloroethene	ND	H	76	7.1	ug/Kg	☼	11/24/21 13:57	12/06/21 04:55	1
1,1-Dichloropropene	ND	H	76	6.5	ug/Kg	☼	11/24/21 13:57	12/06/21 04:55	1
1,2,3-Trichlorobenzene	ND	H	76	9.4	ug/Kg	☼	11/24/21 13:57	12/06/21 04:55	1
1,2,3-Trichloropropane	ND	H	76	7.1	ug/Kg	☼	11/24/21 13:57	12/06/21 04:55	1
1,2,4-Trichlorobenzene	ND	H	76	5.2	ug/Kg	☼	11/24/21 13:57	12/06/21 04:55	1
1,2,4-Trimethylbenzene	ND	H	76	5.3	ug/Kg	☼	11/24/21 13:57	12/06/21 04:55	1
1,2-Dibromo-3-Chloropropane	ND	H	150	9.6	ug/Kg	☼	11/24/21 13:57	12/06/21 04:55	1
1,2-Dichlorobenzene	ND	H	76	3.3	ug/Kg	☼	11/24/21 13:57	12/06/21 04:55	1
1,2-Dichloropropane	ND	H	76	7.1	ug/Kg	☼	11/24/21 13:57	12/06/21 04:55	1
1,3,5-Trimethylbenzene	ND	H	76	5.3	ug/Kg	☼	11/24/21 13:57	12/06/21 04:55	1
1,3-Dichlorobenzene	ND	H	76	5.0	ug/Kg	☼	11/24/21 13:57	12/06/21 04:55	1
1,3-Dichloropropane	ND	H	76	3.5	ug/Kg	☼	11/24/21 13:57	12/06/21 04:55	1
1,4-Dichlorobenzene	ND	H	76	3.3	ug/Kg	☼	11/24/21 13:57	12/06/21 04:55	1
2,2-Dichloropropane	ND	H	76	6.5	ug/Kg	☼	11/24/21 13:57	12/06/21 04:55	1
2-Butanone (MEK)	ND	H	150	40	ug/Kg	☼	11/24/21 13:57	12/06/21 04:55	1
2-Chlorotoluene	ND	H	76	5.5	ug/Kg	☼	11/24/21 13:57	12/06/21 04:55	1
2-Hexanone	ND	H	150	7.9	ug/Kg	☼	11/24/21 13:57	12/06/21 04:55	1
4-Chlorotoluene	ND	H	76	4.3	ug/Kg	☼	11/24/21 13:57	12/06/21 04:55	1
4-Methyl-2-pentanone (MIBK)	ND	H	150	4.7	ug/Kg	☼	11/24/21 13:57	12/06/21 04:55	1
p-Isopropyltoluene	ND	H	76	2.4	ug/Kg	☼	11/24/21 13:57	12/06/21 04:55	1
Acetone	ND	H	760	76	ug/Kg	☼	11/24/21 13:57	12/06/21 04:55	1
Benzene	ND	H	76	5.0	ug/Kg	☼	11/24/21 13:57	12/06/21 04:55	1
Bromoform	ND	H	76	17	ug/Kg	☼	11/24/21 13:57	12/06/21 04:55	1
Bromobenzene	ND	H	76	8.5	ug/Kg	☼	11/24/21 13:57	12/06/21 04:55	1
Carbon disulfide	ND	H	150	5.3	ug/Kg	☼	11/24/21 13:57	12/06/21 04:55	1
Carbon tetrachloride	ND	H	76	5.3	ug/Kg	☼	11/24/21 13:57	12/06/21 04:55	1
Chlorobenzene	ND	H	76	6.7	ug/Kg	☼	11/24/21 13:57	12/06/21 04:55	1
Chlorobromomethane	ND	H	76	11	ug/Kg	☼	11/24/21 13:57	12/06/21 04:55	1

Eurofins TestAmerica, Sacramento

Client Sample Results

Client: Shannon & Wilson, Inc
Project/Site: Kodiak DOT&PF PFAS (107471)

Job ID: 320-82156-1

Client Sample ID: ADQ-ISM2-04

Lab Sample ID: 320-82156-12

Date Collected: 11/17/21 15:15

Matrix: Solid

Date Received: 11/23/21 16:45

Percent Solids: 91.3

Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloroethane	ND	H	76	10	ug/Kg	✱	11/24/21 13:57	12/06/21 04:55	1
Chloromethane	ND	H	76	3.8	ug/Kg	✱	11/24/21 13:57	12/06/21 04:55	1
cis-1,2-Dichloroethene	ND	H	76	12	ug/Kg	✱	11/24/21 13:57	12/06/21 04:55	1
cis-1,3-Dichloropropene	ND	H	76	6.2	ug/Kg	✱	11/24/21 13:57	12/06/21 04:55	1
Dibromomethane	ND	H	76	9.9	ug/Kg	✱	11/24/21 13:57	12/06/21 04:55	1
Dichlorodifluoromethane	ND	H	76	14	ug/Kg	✱	11/24/21 13:57	12/06/21 04:55	1
Ethylbenzene	ND	H	76	10	ug/Kg	✱	11/24/21 13:57	12/06/21 04:55	1
Hexachlorobutadiene	ND	H	76	7.8	ug/Kg	✱	11/24/21 13:57	12/06/21 04:55	1
Isopropylbenzene	ND	H	76	5.3	ug/Kg	✱	11/24/21 13:57	12/06/21 04:55	1
Methyl tert-butyl ether	ND	H	150	5.5	ug/Kg	✱	11/24/21 13:57	12/06/21 04:55	1
Methylene Chloride	ND	H	76	8.2	ug/Kg	✱	11/24/21 13:57	12/06/21 04:55	1
m-Xylene & p-Xylene	ND	H	76	7.6	ug/Kg	✱	11/24/21 13:57	12/06/21 04:55	1
N-Propylbenzene	ND	H	76	7.1	ug/Kg	✱	11/24/21 13:57	12/06/21 04:55	1
o-Xylene	ND	H	76	7.9	ug/Kg	✱	11/24/21 13:57	12/06/21 04:55	1
sec-Butylbenzene	ND	H	76	3.6	ug/Kg	✱	11/24/21 13:57	12/06/21 04:55	1
Styrene	ND	H	76	1.7	ug/Kg	✱	11/24/21 13:57	12/06/21 04:55	1
tert-Butylbenzene	ND	H	76	6.2	ug/Kg	✱	11/24/21 13:57	12/06/21 04:55	1
Tetrachloroethene	ND	H	76	6.4	ug/Kg	✱	11/24/21 13:57	12/06/21 04:55	1
trans-1,2-Dichloroethene	ND	H	76	9.4	ug/Kg	✱	11/24/21 13:57	12/06/21 04:55	1
trans-1,3-Dichloropropene	ND	H	76	4.3	ug/Kg	✱	11/24/21 13:57	12/06/21 04:55	1
Trichlorofluoromethane	ND	H	76	18	ug/Kg	✱	11/24/21 13:57	12/06/21 04:55	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	140	S1+	52 - 126	11/24/21 13:57	12/06/21 04:55	1
4-Bromofluorobenzene (Surr)	141	S1+	67 - 135	11/24/21 13:57	12/06/21 04:55	1
Dibromofluoromethane (Surr)	79		61 - 123	11/24/21 13:57	12/06/21 04:55	1
Toluene-d8 (Surr)	144	S1+	65 - 131	11/24/21 13:57	12/06/21 04:55	1

Method: 8260C - Volatile Organic Compounds by GC/MS - RA

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Naphthalene	ND	H	76	2.7	ug/Kg	✱	11/24/21 13:57	12/07/21 14:55	1
n-Butylbenzene	ND	H	76	4.7	ug/Kg	✱	11/24/21 13:57	12/07/21 14:55	1
Toluene	7.2	J H	76	6.8	ug/Kg	✱	11/24/21 13:57	12/07/21 14:55	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	109		52 - 126	11/24/21 13:57	12/07/21 14:55	1
4-Bromofluorobenzene (Surr)	108		67 - 135	11/24/21 13:57	12/07/21 14:55	1
Dibromofluoromethane (Surr)	101		61 - 123	11/24/21 13:57	12/07/21 14:55	1
Toluene-d8 (Surr)	111		65 - 131	11/24/21 13:57	12/07/21 14:55	1

Method: AK101 - Alaska - Gasoline Range Organics (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
C6-C10 AK	ND		7.6	1.5	mg/Kg	✱	11/24/21 13:57	12/07/21 14:55	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	108		60 - 120	11/24/21 13:57	12/07/21 14:55	1
Trifluorotoluene (Surr)	91		60 - 120	11/24/21 13:57	12/07/21 14:55	1

Method: 8011 - EDB, DBCP, and 1,2,3-TCP (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ethylene Dibromide	ND	H	0.25	0.038	ug/Kg		12/03/21 13:35	12/04/21 14:30	1

Eurofins TestAmerica, Sacramento

Client Sample Results

Client: Shannon & Wilson, Inc
 Project/Site: Kodiak DOT&PF PFAS (107471)

Job ID: 320-82156-1

Client Sample ID: ADQ-ISM2-04

Lab Sample ID: 320-82156-12

Date Collected: 11/17/21 15:15

Matrix: Solid

Date Received: 11/23/21 16:45

Percent Solids: 91.3

Method: 8011 - EDB, DBCP, and 1,2,3-TCP (GC) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,3-Trichloropropane	ND	H	0.25	0.14	ug/Kg		12/03/21 13:35	12/04/21 14:30	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dibromopropane	113		55 - 130				12/03/21 13:35	12/04/21 14:30	1

Method: AK102 - DRO

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
DRO (nC10-<nC25)	6.5	B	1.9	0.49	mg/Kg		11/30/21 11:46	12/14/21 01:56	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
<i>o</i> -Terphenyl (Surr)	70		60 - 120				11/30/21 11:46	12/14/21 01:56	1
<i>n</i> -Triacontane-d62	69		60 - 120				11/30/21 11:46	12/14/21 01:56	1

Method: EPA 537(Mod) - PFAS for QSM 5.3, Table B-15

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorohexanoic acid (PFHxA)	ND		0.19	0.030	ug/Kg		11/30/21 18:38	12/03/21 22:21	1
Perfluoroheptanoic acid (PFHpA)	ND		0.19	0.037	ug/Kg		11/30/21 18:38	12/03/21 22:21	1
Perfluorooctanoic acid (PFOA)	ND		0.19	0.051	ug/Kg		11/30/21 18:38	12/03/21 22:21	1
Perfluorononanoic acid (PFNA)	ND		0.19	0.021	ug/Kg		11/30/21 18:38	12/03/21 22:21	1
Perfluorodecanoic acid (PFDA)	ND		0.19	0.046	ug/Kg		11/30/21 18:38	12/03/21 22:21	1
Perfluoroundecanoic acid (PFUnA)	ND		0.19	0.040	ug/Kg		11/30/21 18:38	12/03/21 22:21	1
Perfluorododecanoic acid (PFDoA)	ND		0.19	0.029	ug/Kg		11/30/21 18:38	12/03/21 22:21	1
Perfluorotridecanoic acid (PFTTrDA)	ND		0.19	0.020	ug/Kg		11/30/21 18:38	12/03/21 22:21	1
Perfluorotetradecanoic acid (PFTeA)	ND		0.19	0.036	ug/Kg		11/30/21 18:38	12/03/21 22:21	1
Perfluorobutanesulfonic acid (PFBS)	ND		0.19	0.037	ug/Kg		11/30/21 18:38	12/03/21 22:21	1
Perfluorohexanesulfonic acid (PFHxS)	ND		0.19	0.028	ug/Kg		11/30/21 18:38	12/03/21 22:21	1
Perfluorooctanesulfonic acid (PFOS)	ND		0.19	0.041	ug/Kg		11/30/21 18:38	12/03/21 22:21	1
NEtFOSAA	ND		0.19	0.046	ug/Kg		11/30/21 18:38	12/03/21 22:21	1
NMeFOSAA	ND		0.19	0.022	ug/Kg		11/30/21 18:38	12/03/21 22:21	1
HFPO-DA (GenX)	ND		0.19	0.039	ug/Kg		11/30/21 18:38	12/03/21 22:21	1
9Cl-PF3ONS	ND		0.19	0.034	ug/Kg		11/30/21 18:38	12/03/21 22:21	1
11Cl-PF3OUdS	ND		0.19	0.030	ug/Kg		11/30/21 18:38	12/03/21 22:21	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	ND		0.19	0.038	ug/Kg		11/30/21 18:38	12/03/21 22:21	1

Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
13C2 PFHxA	92		50 - 150				11/30/21 18:38	12/03/21 22:21	1
13C4 PFHpA	89		50 - 150				11/30/21 18:38	12/03/21 22:21	1
13C4 PFOA	96		50 - 150				11/30/21 18:38	12/03/21 22:21	1
13C5 PFNA	94		50 - 150				11/30/21 18:38	12/03/21 22:21	1
13C2 PFDA	88		50 - 150				11/30/21 18:38	12/03/21 22:21	1
13C2 PFUnA	96		50 - 150				11/30/21 18:38	12/03/21 22:21	1
13C2 PFDoA	108		50 - 150				11/30/21 18:38	12/03/21 22:21	1
13C2 PFTeA	116		50 - 150				11/30/21 18:38	12/03/21 22:21	1
13C3 PFBS	68		50 - 150				11/30/21 18:38	12/03/21 22:21	1
18O2 PFHxS	68		50 - 150				11/30/21 18:38	12/03/21 22:21	1
13C4 PFOS	60		50 - 150				11/30/21 18:38	12/03/21 22:21	1
d3-NMeFOSAA	77		50 - 150				11/30/21 18:38	12/03/21 22:21	1
d5-NEtFOSAA	84		50 - 150				11/30/21 18:38	12/03/21 22:21	1
13C3 HFPO-DA	88		50 - 150				11/30/21 18:38	12/03/21 22:21	1

Eurofins TestAmerica, Sacramento

Client Sample Results

Client: Shannon & Wilson, Inc
 Project/Site: Kodiak DOT&PF PFAS (107471)

Job ID: 320-82156-1

Client Sample ID: ADQ-ISM2-04

Lab Sample ID: 320-82156-12

Date Collected: 11/17/21 15:15

Matrix: Solid

Date Received: 11/23/21 16:45

Percent Solids: 91.3

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	8.7		0.1	0.1	%			11/29/21 14:40	1
Percent Solids	91.3		0.1	0.1	%			11/29/21 14:40	1
Prep Complete	1.0				NONE			11/24/21 11:22	1

Client Sample ID: ADQ-ISM2-05

Lab Sample ID: 320-82156-13

Date Collected: 11/18/21 11:45

Matrix: Solid

Date Received: 11/23/21 16:45

Percent Solids: 88.9

Method: 8260C SIM - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,2,2-Tetrachloroethane	ND		4.3	0.97	ug/Kg	☼	11/24/21 13:57	12/01/21 12:51	1
1,1,2-Trichloroethane	ND		4.3	1.4	ug/Kg	☼	11/24/21 13:57	12/01/21 12:51	1
1,2-Dichloroethane	ND		4.3	0.73	ug/Kg	☼	11/24/21 13:57	12/01/21 12:51	1
Bromomethane	ND		8.7	2.8	ug/Kg	☼	11/24/21 13:57	12/01/21 12:51	1
Chlorodibromomethane	ND		4.3	0.69	ug/Kg	☼	11/24/21 13:57	12/01/21 12:51	1
Chloroform	ND	+	8.7	3.5	ug/Kg	☼	11/24/21 13:57	12/01/21 12:51	1
Dichlorobromomethane	ND		4.3	0.57	ug/Kg	☼	11/24/21 13:57	12/01/21 12:51	1
Ethylene Dibromide	ND		4.3	0.70	ug/Kg	☼	11/24/21 13:57	12/01/21 12:51	1
Trichloroethene	ND		4.3	0.86	ug/Kg	☼	11/24/21 13:57	12/01/21 12:51	1
Vinyl chloride	ND		4.3	1.1	ug/Kg	☼	11/24/21 13:57	12/01/21 12:51	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	82		69 - 129				11/24/21 13:57	12/01/21 12:51	1
Dibromofluoromethane (Surr)	120		72 - 132				11/24/21 13:57	12/01/21 12:51	1
1,2-Dichloroethane-d4 (Surr)	120		72 - 132				11/24/21 13:57	12/01/21 12:51	1
Toluene-d8 (Surr)	108		78 - 138				11/24/21 13:57	12/01/21 12:51	1

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND	H	87	10	ug/Kg	☼	11/24/21 13:57	12/06/21 05:18	1
1,1,1-Trichloroethane	ND	H	87	6.4	ug/Kg	☼	11/24/21 13:57	12/06/21 05:18	1
1,1-Dichloroethane	ND	H	87	4.7	ug/Kg	☼	11/24/21 13:57	12/06/21 05:18	1
1,1-Dichloroethene	ND	H	87	8.1	ug/Kg	☼	11/24/21 13:57	12/06/21 05:18	1
1,1-Dichloropropene	ND	H	87	7.5	ug/Kg	☼	11/24/21 13:57	12/06/21 05:18	1
1,2,3-Trichlorobenzene	ND	H	87	11	ug/Kg	☼	11/24/21 13:57	12/06/21 05:18	1
1,2,3-Trichloropropane	ND	H	87	8.1	ug/Kg	☼	11/24/21 13:57	12/06/21 05:18	1
1,2,4-Trichlorobenzene	ND	H	87	5.9	ug/Kg	☼	11/24/21 13:57	12/06/21 05:18	1
1,2,4-Trimethylbenzene	ND	H	87	6.1	ug/Kg	☼	11/24/21 13:57	12/06/21 05:18	1
1,2-Dibromo-3-Chloropropane	ND	H	170	11	ug/Kg	☼	11/24/21 13:57	12/06/21 05:18	1
1,2-Dichlorobenzene	ND	H	87	3.8	ug/Kg	☼	11/24/21 13:57	12/06/21 05:18	1
1,2-Dichloropropane	ND	H	87	8.1	ug/Kg	☼	11/24/21 13:57	12/06/21 05:18	1
1,3,5-Trimethylbenzene	ND	H	87	6.1	ug/Kg	☼	11/24/21 13:57	12/06/21 05:18	1
1,3-Dichlorobenzene	ND	H	87	5.7	ug/Kg	☼	11/24/21 13:57	12/06/21 05:18	1
1,3-Dichloropropane	ND	H	87	4.0	ug/Kg	☼	11/24/21 13:57	12/06/21 05:18	1
1,4-Dichlorobenzene	ND	H	87	3.8	ug/Kg	☼	11/24/21 13:57	12/06/21 05:18	1
2,2-Dichloropropane	ND	H	87	7.5	ug/Kg	☼	11/24/21 13:57	12/06/21 05:18	1
2-Butanone (MEK)	ND	H	170	45	ug/Kg	☼	11/24/21 13:57	12/06/21 05:18	1
2-Chlorotoluene	ND	H	87	6.2	ug/Kg	☼	11/24/21 13:57	12/06/21 05:18	1
2-Hexanone	ND	H	170	9.0	ug/Kg	☼	11/24/21 13:57	12/06/21 05:18	1
4-Chlorotoluene	ND	H	87	4.9	ug/Kg	☼	11/24/21 13:57	12/06/21 05:18	1

Eurofins TestAmerica, Sacramento

Client Sample Results

Client: Shannon & Wilson, Inc
 Project/Site: Kodiak DOT&PF PFAS (107471)

Job ID: 320-82156-1

Client Sample ID: ADQ-ISM2-05

Lab Sample ID: 320-82156-13

Date Collected: 11/18/21 11:45

Matrix: Solid

Date Received: 11/23/21 16:45

Percent Solids: 88.9

Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
4-Methyl-2-pentanone (MIBK)	ND	H	170	5.4	ug/Kg	☼	11/24/21 13:57	12/06/21 05:18	1
p-Isopropyltoluene	ND	H	87	2.8	ug/Kg	☼	11/24/21 13:57	12/06/21 05:18	1
Acetone	ND	H	870	87	ug/Kg	☼	11/24/21 13:57	12/06/21 05:18	1
Benzene	ND	H	87	5.7	ug/Kg	☼	11/24/21 13:57	12/06/21 05:18	1
Bromoform	ND	H	87	19	ug/Kg	☼	11/24/21 13:57	12/06/21 05:18	1
Bromobenzene	ND	H	87	9.7	ug/Kg	☼	11/24/21 13:57	12/06/21 05:18	1
Carbon disulfide	ND	H	170	6.1	ug/Kg	☼	11/24/21 13:57	12/06/21 05:18	1
Carbon tetrachloride	ND	H	87	6.1	ug/Kg	☼	11/24/21 13:57	12/06/21 05:18	1
Chlorobenzene	ND	H	87	7.6	ug/Kg	☼	11/24/21 13:57	12/06/21 05:18	1
Chlorobromomethane	ND	H	87	13	ug/Kg	☼	11/24/21 13:57	12/06/21 05:18	1
Chloroethane	ND	H	87	11	ug/Kg	☼	11/24/21 13:57	12/06/21 05:18	1
Chloromethane	ND	H	87	4.3	ug/Kg	☼	11/24/21 13:57	12/06/21 05:18	1
cis-1,2-Dichloroethene	ND	H	87	14	ug/Kg	☼	11/24/21 13:57	12/06/21 05:18	1
cis-1,3-Dichloropropene	ND	H	87	7.1	ug/Kg	☼	11/24/21 13:57	12/06/21 05:18	1
Dibromomethane	ND	H	87	11	ug/Kg	☼	11/24/21 13:57	12/06/21 05:18	1
Dichlorodifluoromethane	ND	H	87	16	ug/Kg	☼	11/24/21 13:57	12/06/21 05:18	1
Ethylbenzene	ND	H	87	11	ug/Kg	☼	11/24/21 13:57	12/06/21 05:18	1
Hexachlorobutadiene	ND	H	87	8.8	ug/Kg	☼	11/24/21 13:57	12/06/21 05:18	1
Isopropylbenzene	ND	H	87	6.1	ug/Kg	☼	11/24/21 13:57	12/06/21 05:18	1
Methyl tert-butyl ether	ND	H	170	6.2	ug/Kg	☼	11/24/21 13:57	12/06/21 05:18	1
Methylene Chloride	ND	H	87	9.4	ug/Kg	☼	11/24/21 13:57	12/06/21 05:18	1
m-Xylene & p-Xylene	ND	H	87	8.7	ug/Kg	☼	11/24/21 13:57	12/06/21 05:18	1
Naphthalene	ND	H	87	3.1	ug/Kg	☼	11/24/21 13:57	12/06/21 05:18	1
n-Butylbenzene	ND	H	87	5.4	ug/Kg	☼	11/24/21 13:57	12/06/21 05:18	1
N-Propylbenzene	ND	H	87	8.1	ug/Kg	☼	11/24/21 13:57	12/06/21 05:18	1
o-Xylene	ND	H	87	9.0	ug/Kg	☼	11/24/21 13:57	12/06/21 05:18	1
sec-Butylbenzene	ND	H	87	4.2	ug/Kg	☼	11/24/21 13:57	12/06/21 05:18	1
Styrene	ND	H	87	1.9	ug/Kg	☼	11/24/21 13:57	12/06/21 05:18	1
tert-Butylbenzene	ND	H	87	7.1	ug/Kg	☼	11/24/21 13:57	12/06/21 05:18	1
Tetrachloroethene	ND	H	87	7.3	ug/Kg	☼	11/24/21 13:57	12/06/21 05:18	1
Toluene	7.9	J H	87	7.8	ug/Kg	☼	11/24/21 13:57	12/06/21 05:18	1
trans-1,2-Dichloroethene	ND	H	87	11	ug/Kg	☼	11/24/21 13:57	12/06/21 05:18	1
trans-1,3-Dichloropropene	ND	H	87	4.9	ug/Kg	☼	11/24/21 13:57	12/06/21 05:18	1
Trichlorofluoromethane	ND	H	87	21	ug/Kg	☼	11/24/21 13:57	12/06/21 05:18	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	103		52 - 126	11/24/21 13:57	12/06/21 05:18	1
4-Bromofluorobenzene (Surr)	108		67 - 135	11/24/21 13:57	12/06/21 05:18	1
Dibromofluoromethane (Surr)	99		61 - 123	11/24/21 13:57	12/06/21 05:18	1
Toluene-d8 (Surr)	107		65 - 131	11/24/21 13:57	12/06/21 05:18	1

Method: AK101 - Alaska - Gasoline Range Organics (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
C6-C10 AK	ND		8.7	1.7	mg/Kg	☼	11/24/21 13:57	12/06/21 05:18	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	108		60 - 120	11/24/21 13:57	12/06/21 05:18	1
Trifluorotoluene (Surr)	77		60 - 120	11/24/21 13:57	12/06/21 05:18	1

Eurofins TestAmerica, Sacramento

Client Sample Results

Client: Shannon & Wilson, Inc
 Project/Site: Kodiak DOT&PF PFAS (107471)

Job ID: 320-82156-1

Client Sample ID: ADQ-ISM2-05

Lab Sample ID: 320-82156-13

Date Collected: 11/18/21 11:45

Matrix: Solid

Date Received: 11/23/21 16:45

Percent Solids: 88.9

Method: 8011 - EDB, DBCP, and 1,2,3-TCP (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ethylene Dibromide	ND	H	0.25	0.038	ug/Kg		12/03/21 13:35	12/04/21 14:54	1
1,2,3-Trichloropropane	ND	H	0.25	0.14	ug/Kg		12/03/21 13:35	12/04/21 14:54	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dibromopropane	109		55 - 130				12/03/21 13:35	12/04/21 14:54	1

Method: AK102 - DRO

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
DRO (nC10-<nC25)	5.8	B	2.0	0.49	mg/Kg		11/30/21 11:46	12/14/21 02:24	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
<i>o</i> -Terphenyl (Surr)	76		60 - 120				11/30/21 11:46	12/14/21 02:24	1
<i>n</i> -Triacontane-d62	75		60 - 120				11/30/21 11:46	12/14/21 02:24	1

Method: EPA 537(Mod) - PFAS for QSM 5.3, Table B-15

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorohexanoic acid (PFHxA)	ND		0.20	0.030	ug/Kg		11/30/21 18:38	12/03/21 22:52	1
Perfluoroheptanoic acid (PFHpA)	ND		0.20	0.037	ug/Kg		11/30/21 18:38	12/03/21 22:52	1
Perfluorooctanoic acid (PFOA)	ND		0.20	0.052	ug/Kg		11/30/21 18:38	12/03/21 22:52	1
Perfluorononanoic acid (PFNA)	ND		0.20	0.022	ug/Kg		11/30/21 18:38	12/03/21 22:52	1
Perfluorodecanoic acid (PFDA)	ND		0.20	0.047	ug/Kg		11/30/21 18:38	12/03/21 22:52	1
Perfluoroundecanoic acid (PFUnA)	ND		0.20	0.041	ug/Kg		11/30/21 18:38	12/03/21 22:52	1
Perfluorododecanoic acid (PFDoA)	ND		0.20	0.029	ug/Kg		11/30/21 18:38	12/03/21 22:52	1
Perfluorotridecanoic acid (PFTTrDA)	ND		0.20	0.021	ug/Kg		11/30/21 18:38	12/03/21 22:52	1
Perfluorotetradecanoic acid (PFTeA)	ND		0.20	0.036	ug/Kg		11/30/21 18:38	12/03/21 22:52	1
Perfluorobutanesulfonic acid (PFBS)	ND		0.20	0.037	ug/Kg		11/30/21 18:38	12/03/21 22:52	1
Perfluorohexanesulfonic acid (PFHxS)	ND		0.20	0.028	ug/Kg		11/30/21 18:38	12/03/21 22:52	1
Perfluorooctanesulfonic acid (PFOS)	ND		0.20	0.042	ug/Kg		11/30/21 18:38	12/03/21 22:52	1
NEtFOSAA	ND		0.20	0.047	ug/Kg		11/30/21 18:38	12/03/21 22:52	1
NMeFOSAA	ND		0.20	0.023	ug/Kg		11/30/21 18:38	12/03/21 22:52	1
HFPO-DA (GenX)	ND		0.20	0.040	ug/Kg		11/30/21 18:38	12/03/21 22:52	1
9Cl-PF3ONS	ND		0.20	0.034	ug/Kg		11/30/21 18:38	12/03/21 22:52	1
11Cl-PF3OUdS	ND		0.20	0.030	ug/Kg		11/30/21 18:38	12/03/21 22:52	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	ND		0.20	0.038	ug/Kg		11/30/21 18:38	12/03/21 22:52	1

Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
13C2 PFHxA	84		50 - 150				11/30/21 18:38	12/03/21 22:52	1
13C4 PFHpA	86		50 - 150				11/30/21 18:38	12/03/21 22:52	1
13C4 PFOA	94		50 - 150				11/30/21 18:38	12/03/21 22:52	1
13C5 PFNA	90		50 - 150				11/30/21 18:38	12/03/21 22:52	1
13C2 PFDA	88		50 - 150				11/30/21 18:38	12/03/21 22:52	1
13C2 PFUnA	91		50 - 150				11/30/21 18:38	12/03/21 22:52	1
13C2 PFDoA	93		50 - 150				11/30/21 18:38	12/03/21 22:52	1
13C2 PFTeDA	101		50 - 150				11/30/21 18:38	12/03/21 22:52	1
13C3 PFBS	71		50 - 150				11/30/21 18:38	12/03/21 22:52	1
18O2 PFHxS	67		50 - 150				11/30/21 18:38	12/03/21 22:52	1
13C4 PFOS	65		50 - 150				11/30/21 18:38	12/03/21 22:52	1
d3-NMeFOSAA	76		50 - 150				11/30/21 18:38	12/03/21 22:52	1
d5-NEtFOSAA	85		50 - 150				11/30/21 18:38	12/03/21 22:52	1
13C3 HFPO-DA	81		50 - 150				11/30/21 18:38	12/03/21 22:52	1

Eurofins TestAmerica, Sacramento

Client Sample Results

Client: Shannon & Wilson, Inc
 Project/Site: Kodiak DOT&PF PFAS (107471)

Job ID: 320-82156-1

Client Sample ID: ADQ-ISM2-05

Lab Sample ID: 320-82156-13

Date Collected: 11/18/21 11:45

Matrix: Solid

Date Received: 11/23/21 16:45

Percent Solids: 88.9

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	11.1		0.1	0.1	%			11/29/21 14:40	1
Percent Solids	88.9		0.1	0.1	%			11/29/21 14:40	1
Prep Complete	1.0				NONE			11/24/21 11:22	1

Client Sample ID: Trip Blank 2

Lab Sample ID: 320-82156-14

Date Collected: 11/14/21 08:00

Matrix: Solid

Date Received: 11/23/21 16:45

Method: 8260C SIM - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,2,2-Tetrachloroethane	ND	H	2.5	0.56	ug/Kg		11/24/21 13:57	12/01/21 13:15	1
1,1,2-Trichloroethane	ND	H	2.5	0.83	ug/Kg		11/24/21 13:57	12/01/21 13:15	1
1,2-Dichloroethane	ND	H	2.5	0.42	ug/Kg		11/24/21 13:57	12/01/21 13:15	1
Bromomethane	ND	H	5.0	1.6	ug/Kg		11/24/21 13:57	12/01/21 13:15	1
Chlorodibromomethane	ND	H	2.5	0.40	ug/Kg		11/24/21 13:57	12/01/21 13:15	1
Chloroform	ND	H **	5.0	2.0	ug/Kg		11/24/21 13:57	12/01/21 13:15	1
Dichlorobromomethane	ND	H	2.5	0.33	ug/Kg		11/24/21 13:57	12/01/21 13:15	1
Ethylene Dibromide	ND	H	2.5	0.40	ug/Kg		11/24/21 13:57	12/01/21 13:15	1
Trichloroethene	ND	H	2.5	0.49	ug/Kg		11/24/21 13:57	12/01/21 13:15	1
Vinyl chloride	ND	H	2.5	0.63	ug/Kg		11/24/21 13:57	12/01/21 13:15	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	85		69 - 129				11/24/21 13:57	12/01/21 13:15	1
Dibromofluoromethane (Surr)	119		72 - 132				11/24/21 13:57	12/01/21 13:15	1
1,2-Dichloroethane-d4 (Surr)	126		72 - 132				11/24/21 13:57	12/01/21 13:15	1
Toluene-d8 (Surr)	109		78 - 138				11/24/21 13:57	12/01/21 13:15	1

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND	H	50	5.9	ug/Kg		11/24/21 13:57	12/05/21 21:35	1
1,1,1-Trichloroethane	ND	H	50	3.7	ug/Kg		11/24/21 13:57	12/05/21 21:35	1
1,1-Dichloroethane	ND	H	50	2.7	ug/Kg		11/24/21 13:57	12/05/21 21:35	1
1,1-Dichloroethene	ND	H	50	4.7	ug/Kg		11/24/21 13:57	12/05/21 21:35	1
1,1-Dichloropropene	ND	H	50	4.3	ug/Kg		11/24/21 13:57	12/05/21 21:35	1
1,2,3-Trichlorobenzene	ND	H	50	6.2	ug/Kg		11/24/21 13:57	12/05/21 21:35	1
1,2,3-Trichloropropane	ND	H	50	4.7	ug/Kg		11/24/21 13:57	12/05/21 21:35	1
1,2,4-Trichlorobenzene	ND	H	50	3.4	ug/Kg		11/24/21 13:57	12/05/21 21:35	1
1,2,4-Trimethylbenzene	ND	H	50	3.5	ug/Kg		11/24/21 13:57	12/05/21 21:35	1
1,2-Dibromo-3-Chloropropane	ND	H	100	6.3	ug/Kg		11/24/21 13:57	12/05/21 21:35	1
1,2-Dichlorobenzene	ND	H	50	2.2	ug/Kg		11/24/21 13:57	12/05/21 21:35	1
1,2-Dichloropropane	ND	H	50	4.7	ug/Kg		11/24/21 13:57	12/05/21 21:35	1
1,3,5-Trimethylbenzene	ND	H	50	3.5	ug/Kg		11/24/21 13:57	12/05/21 21:35	1
1,3-Dichlorobenzene	ND	H	50	3.3	ug/Kg		11/24/21 13:57	12/05/21 21:35	1
1,3-Dichloropropane	ND	H	50	2.3	ug/Kg		11/24/21 13:57	12/05/21 21:35	1
1,4-Dichlorobenzene	ND	H	50	2.2	ug/Kg		11/24/21 13:57	12/05/21 21:35	1
2,2-Dichloropropane	ND	H	50	4.3	ug/Kg		11/24/21 13:57	12/05/21 21:35	1
2-Butanone (MEK)	ND	H	100	26	ug/Kg		11/24/21 13:57	12/05/21 21:35	1
2-Chlorotoluene	ND	H	50	3.6	ug/Kg		11/24/21 13:57	12/05/21 21:35	1
2-Hexanone	ND	H	100	5.2	ug/Kg		11/24/21 13:57	12/05/21 21:35	1
4-Chlorotoluene	ND	H	50	2.8	ug/Kg		11/24/21 13:57	12/05/21 21:35	1

Eurofins TestAmerica, Sacramento

Client Sample Results

Client: Shannon & Wilson, Inc
 Project/Site: Kodiak DOT&PF PFAS (107471)

Job ID: 320-82156-1

Client Sample ID: Trip Blank 2

Lab Sample ID: 320-82156-14

Date Collected: 11/14/21 08:00

Matrix: Solid

Date Received: 11/23/21 16:45

Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
4-Methyl-2-pentanone (MIBK)	ND	H	100	3.1	ug/Kg		11/24/21 13:57	12/05/21 21:35	1
p-Isopropyltoluene	ND	H	50	1.6	ug/Kg		11/24/21 13:57	12/05/21 21:35	1
Acetone	ND	H	500	50	ug/Kg		11/24/21 13:57	12/05/21 21:35	1
Benzene	ND	H	50	3.3	ug/Kg		11/24/21 13:57	12/05/21 21:35	1
Bromoform	ND	H	50	11	ug/Kg		11/24/21 13:57	12/05/21 21:35	1
Bromobenzene	ND	H	50	5.6	ug/Kg		11/24/21 13:57	12/05/21 21:35	1
Carbon disulfide	ND	H	100	3.5	ug/Kg		11/24/21 13:57	12/05/21 21:35	1
Carbon tetrachloride	ND	H	50	3.5	ug/Kg		11/24/21 13:57	12/05/21 21:35	1
Chlorobenzene	ND	H	50	4.4	ug/Kg		11/24/21 13:57	12/05/21 21:35	1
Chlorobromomethane	ND	H	50	7.3	ug/Kg		11/24/21 13:57	12/05/21 21:35	1
Chloroethane	ND	H	50	6.6	ug/Kg		11/24/21 13:57	12/05/21 21:35	1
Chloromethane	ND	H	50	2.5	ug/Kg		11/24/21 13:57	12/05/21 21:35	1
cis-1,2-Dichloroethene	ND	H	50	8.2	ug/Kg		11/24/21 13:57	12/05/21 21:35	1
cis-1,3-Dichloropropene	ND	H	50	4.1	ug/Kg		11/24/21 13:57	12/05/21 21:35	1
Dibromomethane	ND	H	50	6.5	ug/Kg		11/24/21 13:57	12/05/21 21:35	1
Dichlorodifluoromethane	ND	H	50	9.4	ug/Kg		11/24/21 13:57	12/05/21 21:35	1
Ethylbenzene	ND	H	50	6.6	ug/Kg		11/24/21 13:57	12/05/21 21:35	1
Hexachlorobutadiene	ND	H	50	5.1	ug/Kg		11/24/21 13:57	12/05/21 21:35	1
Isopropylbenzene	ND	H	50	3.5	ug/Kg		11/24/21 13:57	12/05/21 21:35	1
Methyl tert-butyl ether	ND	H	100	3.6	ug/Kg		11/24/21 13:57	12/05/21 21:35	1
Methylene Chloride	ND	H	50	5.4	ug/Kg		11/24/21 13:57	12/05/21 21:35	1
m-Xylene & p-Xylene	ND	H	50	5.0	ug/Kg		11/24/21 13:57	12/05/21 21:35	1
Naphthalene	ND	H	50	1.8	ug/Kg		11/24/21 13:57	12/05/21 21:35	1
n-Butylbenzene	ND	H	50	3.1	ug/Kg		11/24/21 13:57	12/05/21 21:35	1
N-Propylbenzene	ND	H	50	4.7	ug/Kg		11/24/21 13:57	12/05/21 21:35	1
o-Xylene	ND	H	50	5.2	ug/Kg		11/24/21 13:57	12/05/21 21:35	1
sec-Butylbenzene	ND	H	50	2.4	ug/Kg		11/24/21 13:57	12/05/21 21:35	1
Styrene	ND	H	50	1.1	ug/Kg		11/24/21 13:57	12/05/21 21:35	1
tert-Butylbenzene	ND	H	50	4.1	ug/Kg		11/24/21 13:57	12/05/21 21:35	1
Tetrachloroethene	ND	H	50	4.2	ug/Kg		11/24/21 13:57	12/05/21 21:35	1
Toluene	ND	H	50	4.5	ug/Kg		11/24/21 13:57	12/05/21 21:35	1
trans-1,2-Dichloroethene	ND	H	50	6.2	ug/Kg		11/24/21 13:57	12/05/21 21:35	1
trans-1,3-Dichloropropene	ND	H	50	2.8	ug/Kg		11/24/21 13:57	12/05/21 21:35	1
Trichlorofluoromethane	ND	H	50	12	ug/Kg		11/24/21 13:57	12/05/21 21:35	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	102		52 - 126	11/24/21 13:57	12/05/21 21:35	1
4-Bromofluorobenzene (Surr)	104		67 - 135	11/24/21 13:57	12/05/21 21:35	1
Dibromofluoromethane (Surr)	99		61 - 123	11/24/21 13:57	12/05/21 21:35	1
Toluene-d8 (Surr)	106		65 - 131	11/24/21 13:57	12/05/21 21:35	1

Method: AK101 - Alaska - Gasoline Range Organics (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
C6-C10 AK	ND		5.0	1.0	mg/Kg		11/24/21 13:57	12/05/21 21:35	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	104		60 - 120	11/24/21 13:57	12/05/21 21:35	1
Trifluorotoluene (Surr)	86		60 - 120	11/24/21 13:57	12/05/21 21:35	1

Eurofins TestAmerica, Sacramento

Client Sample Results

Client: Shannon & Wilson, Inc
 Project/Site: Kodiak DOT&PF PFAS (107471)

Job ID: 320-82156-1

Client Sample ID: Trip Blank 2

Date Collected: 11/14/21 08:00

Date Received: 11/23/21 16:45

Lab Sample ID: 320-82156-14

Matrix: Solid

Method: 8011 - EDB, DBCP, and 1,2,3-TCP (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ethylene Dibromide	ND	H	0.25	0.038	ug/Kg		12/03/21 13:35	12/04/21 15:19	1
1,2,3-Trichloropropane	ND	H	0.25	0.14	ug/Kg		12/03/21 13:35	12/04/21 15:19	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dibromopropane	114		55 - 130				12/03/21 13:35	12/04/21 15:19	1

Client Sample ID: Trip Blank 3

Date Collected: 11/15/21 08:00

Date Received: 11/23/21 16:45

Lab Sample ID: 320-82156-15

Matrix: Solid

Method: 8260C SIM - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND	H	2.5	0.56	ug/Kg		11/24/21 13:57	12/01/21 13:39	1
1,1,2-Trichloroethane	ND	H	2.5	0.83	ug/Kg		11/24/21 13:57	12/01/21 13:39	1
1,2-Dichloroethane	ND	H	2.5	0.42	ug/Kg		11/24/21 13:57	12/01/21 13:39	1
Bromomethane	ND	H	5.0	1.6	ug/Kg		11/24/21 13:57	12/01/21 13:39	1
Chlorodibromomethane	ND	H	2.5	0.40	ug/Kg		11/24/21 13:57	12/01/21 13:39	1
Chloroform	ND	H *	5.0	2.0	ug/Kg		11/24/21 13:57	12/01/21 13:39	1
Dichlorobromomethane	ND	H	2.5	0.33	ug/Kg		11/24/21 13:57	12/01/21 13:39	1
Ethylene Dibromide	ND	H	2.5	0.40	ug/Kg		11/24/21 13:57	12/01/21 13:39	1
Trichloroethene	ND	H	2.5	0.49	ug/Kg		11/24/21 13:57	12/01/21 13:39	1
Vinyl chloride	ND	H	2.5	0.63	ug/Kg		11/24/21 13:57	12/01/21 13:39	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	83		69 - 129				11/24/21 13:57	12/01/21 13:39	1
Dibromofluoromethane (Surr)	120		72 - 132				11/24/21 13:57	12/01/21 13:39	1
1,2-Dichloroethane-d4 (Surr)	123		72 - 132				11/24/21 13:57	12/01/21 13:39	1
Toluene-d8 (Surr)	110		78 - 138				11/24/21 13:57	12/01/21 13:39	1

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND	H	50	5.9	ug/Kg		11/24/21 13:57	12/05/21 21:59	1
1,1,1-Trichloroethane	ND	H	50	3.7	ug/Kg		11/24/21 13:57	12/05/21 21:59	1
1,1-Dichloroethane	ND	H	50	2.7	ug/Kg		11/24/21 13:57	12/05/21 21:59	1
1,1-Dichloroethene	ND	H	50	4.7	ug/Kg		11/24/21 13:57	12/05/21 21:59	1
1,1-Dichloropropene	ND	H	50	4.3	ug/Kg		11/24/21 13:57	12/05/21 21:59	1
1,2,3-Trichlorobenzene	ND	H	50	6.2	ug/Kg		11/24/21 13:57	12/05/21 21:59	1
1,2,3-Trichloropropane	ND	H	50	4.7	ug/Kg		11/24/21 13:57	12/05/21 21:59	1
1,2,4-Trichlorobenzene	ND	H	50	3.4	ug/Kg		11/24/21 13:57	12/05/21 21:59	1
1,2,4-Trimethylbenzene	ND	H	50	3.5	ug/Kg		11/24/21 13:57	12/05/21 21:59	1
1,2-Dibromo-3-Chloropropane	ND	H	100	6.3	ug/Kg		11/24/21 13:57	12/05/21 21:59	1
1,2-Dichlorobenzene	ND	H	50	2.2	ug/Kg		11/24/21 13:57	12/05/21 21:59	1
1,2-Dichloropropane	ND	H	50	4.7	ug/Kg		11/24/21 13:57	12/05/21 21:59	1
1,3,5-Trimethylbenzene	ND	H	50	3.5	ug/Kg		11/24/21 13:57	12/05/21 21:59	1
1,3-Dichlorobenzene	ND	H	50	3.3	ug/Kg		11/24/21 13:57	12/05/21 21:59	1
1,3-Dichloropropane	ND	H	50	2.3	ug/Kg		11/24/21 13:57	12/05/21 21:59	1
1,4-Dichlorobenzene	ND	H	50	2.2	ug/Kg		11/24/21 13:57	12/05/21 21:59	1
2,2-Dichloropropane	ND	H	50	4.3	ug/Kg		11/24/21 13:57	12/05/21 21:59	1
2-Butanone (MEK)	ND	H	100	26	ug/Kg		11/24/21 13:57	12/05/21 21:59	1
2-Chlorotoluene	ND	H	50	3.6	ug/Kg		11/24/21 13:57	12/05/21 21:59	1
2-Hexanone	ND	H	100	5.2	ug/Kg		11/24/21 13:57	12/05/21 21:59	1

Eurofins TestAmerica, Sacramento

Client Sample Results

Client: Shannon & Wilson, Inc
 Project/Site: Kodiak DOT&PF PFAS (107471)

Job ID: 320-82156-1

Client Sample ID: Trip Blank 3

Lab Sample ID: 320-82156-15

Date Collected: 11/15/21 08:00

Matrix: Solid

Date Received: 11/23/21 16:45

Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
4-Chlorotoluene	ND	H	50	2.8	ug/Kg		11/24/21 13:57	12/05/21 21:59	1
4-Methyl-2-pentanone (MIBK)	ND	H	100	3.1	ug/Kg		11/24/21 13:57	12/05/21 21:59	1
p-Isopropyltoluene	ND	H	50	1.6	ug/Kg		11/24/21 13:57	12/05/21 21:59	1
Acetone	ND	H	500	50	ug/Kg		11/24/21 13:57	12/05/21 21:59	1
Benzene	ND	H	50	3.3	ug/Kg		11/24/21 13:57	12/05/21 21:59	1
Bromoform	ND	H	50	11	ug/Kg		11/24/21 13:57	12/05/21 21:59	1
Bromobenzene	ND	H	50	5.6	ug/Kg		11/24/21 13:57	12/05/21 21:59	1
Carbon disulfide	ND	H	100	3.5	ug/Kg		11/24/21 13:57	12/05/21 21:59	1
Carbon tetrachloride	ND	H	50	3.5	ug/Kg		11/24/21 13:57	12/05/21 21:59	1
Chlorobenzene	ND	H	50	4.4	ug/Kg		11/24/21 13:57	12/05/21 21:59	1
Chlorobromomethane	ND	H	50	7.3	ug/Kg		11/24/21 13:57	12/05/21 21:59	1
Chloroethane	ND	H	50	6.6	ug/Kg		11/24/21 13:57	12/05/21 21:59	1
Chloromethane	ND	H	50	2.5	ug/Kg		11/24/21 13:57	12/05/21 21:59	1
cis-1,2-Dichloroethene	ND	H	50	8.2	ug/Kg		11/24/21 13:57	12/05/21 21:59	1
cis-1,3-Dichloropropene	ND	H	50	4.1	ug/Kg		11/24/21 13:57	12/05/21 21:59	1
Dibromomethane	ND	H	50	6.5	ug/Kg		11/24/21 13:57	12/05/21 21:59	1
Dichlorodifluoromethane	ND	H	50	9.4	ug/Kg		11/24/21 13:57	12/05/21 21:59	1
Ethylbenzene	ND	H	50	6.6	ug/Kg		11/24/21 13:57	12/05/21 21:59	1
Hexachlorobutadiene	ND	H	50	5.1	ug/Kg		11/24/21 13:57	12/05/21 21:59	1
Isopropylbenzene	ND	H	50	3.5	ug/Kg		11/24/21 13:57	12/05/21 21:59	1
Methyl tert-butyl ether	ND	H	100	3.6	ug/Kg		11/24/21 13:57	12/05/21 21:59	1
Methylene Chloride	ND	H	50	5.4	ug/Kg		11/24/21 13:57	12/05/21 21:59	1
m-Xylene & p-Xylene	ND	H	50	5.0	ug/Kg		11/24/21 13:57	12/05/21 21:59	1
Naphthalene	ND	H	50	1.8	ug/Kg		11/24/21 13:57	12/05/21 21:59	1
n-Butylbenzene	ND	H	50	3.1	ug/Kg		11/24/21 13:57	12/05/21 21:59	1
N-Propylbenzene	ND	H	50	4.7	ug/Kg		11/24/21 13:57	12/05/21 21:59	1
o-Xylene	ND	H	50	5.2	ug/Kg		11/24/21 13:57	12/05/21 21:59	1
sec-Butylbenzene	ND	H	50	2.4	ug/Kg		11/24/21 13:57	12/05/21 21:59	1
Styrene	ND	H	50	1.1	ug/Kg		11/24/21 13:57	12/05/21 21:59	1
tert-Butylbenzene	ND	H	50	4.1	ug/Kg		11/24/21 13:57	12/05/21 21:59	1
Tetrachloroethene	ND	H	50	4.2	ug/Kg		11/24/21 13:57	12/05/21 21:59	1
Toluene	ND	H	50	4.5	ug/Kg		11/24/21 13:57	12/05/21 21:59	1
trans-1,2-Dichloroethene	ND	H	50	6.2	ug/Kg		11/24/21 13:57	12/05/21 21:59	1
trans-1,3-Dichloropropene	ND	H	50	2.8	ug/Kg		11/24/21 13:57	12/05/21 21:59	1
Trichlorofluoromethane	ND	H	50	12	ug/Kg		11/24/21 13:57	12/05/21 21:59	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	102		52 - 126	11/24/21 13:57	12/05/21 21:59	1
4-Bromofluorobenzene (Surr)	100		67 - 135	11/24/21 13:57	12/05/21 21:59	1
Dibromofluoromethane (Surr)	97		61 - 123	11/24/21 13:57	12/05/21 21:59	1
Toluene-d8 (Surr)	106		65 - 131	11/24/21 13:57	12/05/21 21:59	1

Method: AK101 - Alaska - Gasoline Range Organics (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
C6-C10 AK	ND		5.0	1.0	mg/Kg		11/24/21 13:57	12/05/21 21:59	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	100		60 - 120	11/24/21 13:57	12/05/21 21:59	1
Trifluorotoluene (Surr)	85		60 - 120	11/24/21 13:57	12/05/21 21:59	1

Eurofins TestAmerica, Sacramento

Client Sample Results

Client: Shannon & Wilson, Inc
 Project/Site: Kodiak DOT&PF PFAS (107471)

Job ID: 320-82156-1

Client Sample ID: Trip Blank 3

Lab Sample ID: 320-82156-15

Date Collected: 11/15/21 08:00

Matrix: Solid

Date Received: 11/23/21 16:45

Method: 8011 - EDB, DBCP, and 1,2,3-TCP (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ethylene Dibromide	ND	H	0.25	0.038	ug/Kg		12/03/21 13:35	12/04/21 15:43	1
1,2,3-Trichloropropane	ND	H	0.25	0.14	ug/Kg		12/03/21 13:35	12/04/21 15:43	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dibromopropane	114		55 - 130				12/03/21 13:35	12/04/21 15:43	1

Client Sample ID: Trip Blank 4

Lab Sample ID: 320-82156-16

Date Collected: 11/16/21 08:00

Matrix: Solid

Date Received: 11/23/21 16:45

Method: 8260C SIM - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND	H	2.5	0.56	ug/Kg		11/24/21 13:57	12/01/21 14:03	1
1,1,2-Trichloroethane	ND	H	2.5	0.83	ug/Kg		11/24/21 13:57	12/01/21 14:03	1
1,2-Dichloroethane	ND	H	2.5	0.42	ug/Kg		11/24/21 13:57	12/01/21 14:03	1
Bromomethane	ND	H	5.0	1.6	ug/Kg		11/24/21 13:57	12/01/21 14:03	1
Chlorodibromomethane	ND	H	2.5	0.40	ug/Kg		11/24/21 13:57	12/01/21 14:03	1
Chloroform	ND	H *	5.0	2.0	ug/Kg		11/24/21 13:57	12/01/21 14:03	1
Dichlorobromomethane	ND	H	2.5	0.33	ug/Kg		11/24/21 13:57	12/01/21 14:03	1
Ethylene Dibromide	ND	H	2.5	0.40	ug/Kg		11/24/21 13:57	12/01/21 14:03	1
Trichloroethene	ND	H	2.5	0.49	ug/Kg		11/24/21 13:57	12/01/21 14:03	1
Vinyl chloride	ND	H	2.5	0.63	ug/Kg		11/24/21 13:57	12/01/21 14:03	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	83		69 - 129				11/24/21 13:57	12/01/21 14:03	1
Dibromofluoromethane (Surr)	122		72 - 132				11/24/21 13:57	12/01/21 14:03	1
1,2-Dichloroethane-d4 (Surr)	128		72 - 132				11/24/21 13:57	12/01/21 14:03	1
Toluene-d8 (Surr)	108		78 - 138				11/24/21 13:57	12/01/21 14:03	1

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND	H	50	5.9	ug/Kg		11/24/21 13:57	12/05/21 22:22	1
1,1,1-Trichloroethane	ND	H	50	3.7	ug/Kg		11/24/21 13:57	12/05/21 22:22	1
1,1-Dichloroethane	ND	H	50	2.7	ug/Kg		11/24/21 13:57	12/05/21 22:22	1
1,1-Dichloroethene	ND	H	50	4.7	ug/Kg		11/24/21 13:57	12/05/21 22:22	1
1,1-Dichloropropene	ND	H	50	4.3	ug/Kg		11/24/21 13:57	12/05/21 22:22	1
1,2,3-Trichlorobenzene	ND	H	50	6.2	ug/Kg		11/24/21 13:57	12/05/21 22:22	1
1,2,3-Trichloropropane	ND	H	50	4.7	ug/Kg		11/24/21 13:57	12/05/21 22:22	1
1,2,4-Trichlorobenzene	ND	H	50	3.4	ug/Kg		11/24/21 13:57	12/05/21 22:22	1
1,2,4-Trimethylbenzene	ND	H	50	3.5	ug/Kg		11/24/21 13:57	12/05/21 22:22	1
1,2-Dibromo-3-Chloropropane	ND	H	100	6.3	ug/Kg		11/24/21 13:57	12/05/21 22:22	1
1,2-Dichlorobenzene	ND	H	50	2.2	ug/Kg		11/24/21 13:57	12/05/21 22:22	1
1,2-Dichloropropane	ND	H	50	4.7	ug/Kg		11/24/21 13:57	12/05/21 22:22	1
1,3,5-Trimethylbenzene	ND	H	50	3.5	ug/Kg		11/24/21 13:57	12/05/21 22:22	1
1,3-Dichlorobenzene	ND	H	50	3.3	ug/Kg		11/24/21 13:57	12/05/21 22:22	1
1,3-Dichloropropane	ND	H	50	2.3	ug/Kg		11/24/21 13:57	12/05/21 22:22	1
1,4-Dichlorobenzene	ND	H	50	2.2	ug/Kg		11/24/21 13:57	12/05/21 22:22	1
2,2-Dichloropropane	ND	H	50	4.3	ug/Kg		11/24/21 13:57	12/05/21 22:22	1
2-Butanone (MEK)	ND	H	100	26	ug/Kg		11/24/21 13:57	12/05/21 22:22	1
2-Chlorotoluene	ND	H	50	3.6	ug/Kg		11/24/21 13:57	12/05/21 22:22	1
2-Hexanone	ND	H	100	5.2	ug/Kg		11/24/21 13:57	12/05/21 22:22	1

Eurofins TestAmerica, Sacramento

Client Sample Results

Client: Shannon & Wilson, Inc
 Project/Site: Kodiak DOT&PF PFAS (107471)

Job ID: 320-82156-1

Client Sample ID: Trip Blank 4

Lab Sample ID: 320-82156-16

Date Collected: 11/16/21 08:00

Matrix: Solid

Date Received: 11/23/21 16:45

Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
4-Chlorotoluene	ND	H	50	2.8	ug/Kg		11/24/21 13:57	12/05/21 22:22	1
4-Methyl-2-pentanone (MIBK)	ND	H	100	3.1	ug/Kg		11/24/21 13:57	12/05/21 22:22	1
p-Isopropyltoluene	ND	H	50	1.6	ug/Kg		11/24/21 13:57	12/05/21 22:22	1
Acetone	ND	H	500	50	ug/Kg		11/24/21 13:57	12/05/21 22:22	1
Benzene	ND	H	50	3.3	ug/Kg		11/24/21 13:57	12/05/21 22:22	1
Bromoform	ND	H	50	11	ug/Kg		11/24/21 13:57	12/05/21 22:22	1
Bromobenzene	ND	H	50	5.6	ug/Kg		11/24/21 13:57	12/05/21 22:22	1
Carbon disulfide	ND	H	100	3.5	ug/Kg		11/24/21 13:57	12/05/21 22:22	1
Carbon tetrachloride	ND	H	50	3.5	ug/Kg		11/24/21 13:57	12/05/21 22:22	1
Chlorobenzene	ND	H	50	4.4	ug/Kg		11/24/21 13:57	12/05/21 22:22	1
Chlorobromomethane	ND	H	50	7.3	ug/Kg		11/24/21 13:57	12/05/21 22:22	1
Chloroethane	ND	H	50	6.6	ug/Kg		11/24/21 13:57	12/05/21 22:22	1
Chloromethane	ND	H	50	2.5	ug/Kg		11/24/21 13:57	12/05/21 22:22	1
cis-1,2-Dichloroethene	ND	H	50	8.2	ug/Kg		11/24/21 13:57	12/05/21 22:22	1
cis-1,3-Dichloropropene	ND	H	50	4.1	ug/Kg		11/24/21 13:57	12/05/21 22:22	1
Dibromomethane	ND	H	50	6.5	ug/Kg		11/24/21 13:57	12/05/21 22:22	1
Dichlorodifluoromethane	ND	H	50	9.4	ug/Kg		11/24/21 13:57	12/05/21 22:22	1
Ethylbenzene	ND	H	50	6.6	ug/Kg		11/24/21 13:57	12/05/21 22:22	1
Hexachlorobutadiene	ND	H	50	5.1	ug/Kg		11/24/21 13:57	12/05/21 22:22	1
Isopropylbenzene	ND	H	50	3.5	ug/Kg		11/24/21 13:57	12/05/21 22:22	1
Methyl tert-butyl ether	ND	H	100	3.6	ug/Kg		11/24/21 13:57	12/05/21 22:22	1
Methylene Chloride	ND	H	50	5.4	ug/Kg		11/24/21 13:57	12/05/21 22:22	1
m-Xylene & p-Xylene	ND	H	50	5.0	ug/Kg		11/24/21 13:57	12/05/21 22:22	1
Naphthalene	ND	H	50	1.8	ug/Kg		11/24/21 13:57	12/05/21 22:22	1
n-Butylbenzene	ND	H	50	3.1	ug/Kg		11/24/21 13:57	12/05/21 22:22	1
N-Propylbenzene	ND	H	50	4.7	ug/Kg		11/24/21 13:57	12/05/21 22:22	1
o-Xylene	ND	H	50	5.2	ug/Kg		11/24/21 13:57	12/05/21 22:22	1
sec-Butylbenzene	ND	H	50	2.4	ug/Kg		11/24/21 13:57	12/05/21 22:22	1
Styrene	ND	H	50	1.1	ug/Kg		11/24/21 13:57	12/05/21 22:22	1
tert-Butylbenzene	ND	H	50	4.1	ug/Kg		11/24/21 13:57	12/05/21 22:22	1
Tetrachloroethene	ND	H	50	4.2	ug/Kg		11/24/21 13:57	12/05/21 22:22	1
Toluene	ND	H	50	4.5	ug/Kg		11/24/21 13:57	12/05/21 22:22	1
trans-1,2-Dichloroethene	ND	H	50	6.2	ug/Kg		11/24/21 13:57	12/05/21 22:22	1
trans-1,3-Dichloropropene	ND	H	50	2.8	ug/Kg		11/24/21 13:57	12/05/21 22:22	1
Trichlorofluoromethane	ND	H	50	12	ug/Kg		11/24/21 13:57	12/05/21 22:22	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	104		52 - 126	11/24/21 13:57	12/05/21 22:22	1
4-Bromofluorobenzene (Surr)	104		67 - 135	11/24/21 13:57	12/05/21 22:22	1
Dibromofluoromethane (Surr)	99		61 - 123	11/24/21 13:57	12/05/21 22:22	1
Toluene-d8 (Surr)	107		65 - 131	11/24/21 13:57	12/05/21 22:22	1

Method: AK101 - Alaska - Gasoline Range Organics (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
C6-C10 AK	ND		5.0	1.0	mg/Kg		11/24/21 13:57	12/05/21 22:22	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	104		60 - 120	11/24/21 13:57	12/05/21 22:22	1
Trifluorotoluene (Surr)	84		60 - 120	11/24/21 13:57	12/05/21 22:22	1

Eurofins TestAmerica, Sacramento

Client Sample Results

Client: Shannon & Wilson, Inc
 Project/Site: Kodiak DOT&PF PFAS (107471)

Job ID: 320-82156-1

Client Sample ID: Trip Blank 4

Lab Sample ID: 320-82156-16

Date Collected: 11/16/21 08:00

Matrix: Solid

Date Received: 11/23/21 16:45

Method: 8011 - EDB, DBCP, and 1,2,3-TCP (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ethylene Dibromide	ND	H	0.25	0.038	ug/Kg		12/03/21 13:35	12/04/21 16:07	1
1,2,3-Trichloropropane	ND	H	0.25	0.14	ug/Kg		12/03/21 13:35	12/04/21 16:07	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dibromopropane	111		55 - 130				12/03/21 13:35	12/04/21 16:07	1

Client Sample ID: Trip Blank 5

Lab Sample ID: 320-82156-17

Date Collected: 11/17/21 08:00

Matrix: Solid

Date Received: 11/23/21 16:45

Method: 8260C SIM - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		2.5	0.56	ug/Kg		11/24/21 13:57	12/01/21 14:26	1
1,1,2-Trichloroethane	ND		2.5	0.83	ug/Kg		11/24/21 13:57	12/01/21 14:26	1
1,2-Dichloroethane	ND		2.5	0.42	ug/Kg		11/24/21 13:57	12/01/21 14:26	1
Bromomethane	ND		5.0	1.6	ug/Kg		11/24/21 13:57	12/01/21 14:26	1
Chlorodibromomethane	ND		2.5	0.40	ug/Kg		11/24/21 13:57	12/01/21 14:26	1
Chloroform	ND	+	5.0	2.0	ug/Kg		11/24/21 13:57	12/01/21 14:26	1
Dichlorobromomethane	ND		2.5	0.33	ug/Kg		11/24/21 13:57	12/01/21 14:26	1
Ethylene Dibromide	ND		2.5	0.40	ug/Kg		11/24/21 13:57	12/01/21 14:26	1
Trichloroethene	ND		2.5	0.49	ug/Kg		11/24/21 13:57	12/01/21 14:26	1
Vinyl chloride	ND		2.5	0.63	ug/Kg		11/24/21 13:57	12/01/21 14:26	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	82		69 - 129				11/24/21 13:57	12/01/21 14:26	1
Dibromofluoromethane (Surr)	117		72 - 132				11/24/21 13:57	12/01/21 14:26	1
1,2-Dichloroethane-d4 (Surr)	122		72 - 132				11/24/21 13:57	12/01/21 14:26	1
Toluene-d8 (Surr)	106		78 - 138				11/24/21 13:57	12/01/21 14:26	1

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND	H	50	5.9	ug/Kg		11/24/21 13:57	12/05/21 22:45	1
1,1,1-Trichloroethane	ND	H	50	3.7	ug/Kg		11/24/21 13:57	12/05/21 22:45	1
1,1-Dichloroethane	ND	H	50	2.7	ug/Kg		11/24/21 13:57	12/05/21 22:45	1
1,1-Dichloroethene	ND	H	50	4.7	ug/Kg		11/24/21 13:57	12/05/21 22:45	1
1,1-Dichloropropene	ND	H	50	4.3	ug/Kg		11/24/21 13:57	12/05/21 22:45	1
1,2,3-Trichlorobenzene	ND	H	50	6.2	ug/Kg		11/24/21 13:57	12/05/21 22:45	1
1,2,3-Trichloropropane	ND	H	50	4.7	ug/Kg		11/24/21 13:57	12/05/21 22:45	1
1,2,4-Trichlorobenzene	ND	H	50	3.4	ug/Kg		11/24/21 13:57	12/05/21 22:45	1
1,2,4-Trimethylbenzene	ND	H	50	3.5	ug/Kg		11/24/21 13:57	12/05/21 22:45	1
1,2-Dibromo-3-Chloropropane	ND	H	100	6.3	ug/Kg		11/24/21 13:57	12/05/21 22:45	1
1,2-Dichlorobenzene	ND	H	50	2.2	ug/Kg		11/24/21 13:57	12/05/21 22:45	1
1,2-Dichloropropane	ND	H	50	4.7	ug/Kg		11/24/21 13:57	12/05/21 22:45	1
1,3,5-Trimethylbenzene	ND	H	50	3.5	ug/Kg		11/24/21 13:57	12/05/21 22:45	1
1,3-Dichlorobenzene	ND	H	50	3.3	ug/Kg		11/24/21 13:57	12/05/21 22:45	1
1,3-Dichloropropane	ND	H	50	2.3	ug/Kg		11/24/21 13:57	12/05/21 22:45	1
1,4-Dichlorobenzene	ND	H	50	2.2	ug/Kg		11/24/21 13:57	12/05/21 22:45	1
2,2-Dichloropropane	ND	H	50	4.3	ug/Kg		11/24/21 13:57	12/05/21 22:45	1
2-Butanone (MEK)	ND	H	100	26	ug/Kg		11/24/21 13:57	12/05/21 22:45	1
2-Chlorotoluene	ND	H	50	3.6	ug/Kg		11/24/21 13:57	12/05/21 22:45	1
2-Hexanone	ND	H	100	5.2	ug/Kg		11/24/21 13:57	12/05/21 22:45	1

Eurofins TestAmerica, Sacramento

Client Sample Results

Client: Shannon & Wilson, Inc
 Project/Site: Kodiak DOT&PF PFAS (107471)

Job ID: 320-82156-1

Client Sample ID: Trip Blank 5

Lab Sample ID: 320-82156-17

Date Collected: 11/17/21 08:00

Matrix: Solid

Date Received: 11/23/21 16:45

Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
4-Chlorotoluene	ND	H	50	2.8	ug/Kg		11/24/21 13:57	12/05/21 22:45	1
4-Methyl-2-pentanone (MIBK)	ND	H	100	3.1	ug/Kg		11/24/21 13:57	12/05/21 22:45	1
p-Isopropyltoluene	ND	H	50	1.6	ug/Kg		11/24/21 13:57	12/05/21 22:45	1
Acetone	ND	H	500	50	ug/Kg		11/24/21 13:57	12/05/21 22:45	1
Benzene	ND	H	50	3.3	ug/Kg		11/24/21 13:57	12/05/21 22:45	1
Bromoform	ND	H	50	11	ug/Kg		11/24/21 13:57	12/05/21 22:45	1
Bromobenzene	ND	H	50	5.6	ug/Kg		11/24/21 13:57	12/05/21 22:45	1
Carbon disulfide	ND	H	100	3.5	ug/Kg		11/24/21 13:57	12/05/21 22:45	1
Carbon tetrachloride	ND	H	50	3.5	ug/Kg		11/24/21 13:57	12/05/21 22:45	1
Chlorobenzene	ND	H	50	4.4	ug/Kg		11/24/21 13:57	12/05/21 22:45	1
Chlorobromomethane	ND	H	50	7.3	ug/Kg		11/24/21 13:57	12/05/21 22:45	1
Chloroethane	ND	H	50	6.6	ug/Kg		11/24/21 13:57	12/05/21 22:45	1
Chloromethane	ND	H	50	2.5	ug/Kg		11/24/21 13:57	12/05/21 22:45	1
cis-1,2-Dichloroethene	ND	H	50	8.2	ug/Kg		11/24/21 13:57	12/05/21 22:45	1
cis-1,3-Dichloropropene	ND	H	50	4.1	ug/Kg		11/24/21 13:57	12/05/21 22:45	1
Dibromomethane	ND	H	50	6.5	ug/Kg		11/24/21 13:57	12/05/21 22:45	1
Dichlorodifluoromethane	ND	H	50	9.4	ug/Kg		11/24/21 13:57	12/05/21 22:45	1
Ethylbenzene	ND	H	50	6.6	ug/Kg		11/24/21 13:57	12/05/21 22:45	1
Hexachlorobutadiene	ND	H	50	5.1	ug/Kg		11/24/21 13:57	12/05/21 22:45	1
Isopropylbenzene	ND	H	50	3.5	ug/Kg		11/24/21 13:57	12/05/21 22:45	1
Methyl tert-butyl ether	ND	H	100	3.6	ug/Kg		11/24/21 13:57	12/05/21 22:45	1
Methylene Chloride	ND	H	50	5.4	ug/Kg		11/24/21 13:57	12/05/21 22:45	1
m-Xylene & p-Xylene	ND	H	50	5.0	ug/Kg		11/24/21 13:57	12/05/21 22:45	1
Naphthalene	ND	H	50	1.8	ug/Kg		11/24/21 13:57	12/05/21 22:45	1
n-Butylbenzene	ND	H	50	3.1	ug/Kg		11/24/21 13:57	12/05/21 22:45	1
N-Propylbenzene	ND	H	50	4.7	ug/Kg		11/24/21 13:57	12/05/21 22:45	1
o-Xylene	ND	H	50	5.2	ug/Kg		11/24/21 13:57	12/05/21 22:45	1
sec-Butylbenzene	ND	H	50	2.4	ug/Kg		11/24/21 13:57	12/05/21 22:45	1
Styrene	ND	H	50	1.1	ug/Kg		11/24/21 13:57	12/05/21 22:45	1
tert-Butylbenzene	ND	H	50	4.1	ug/Kg		11/24/21 13:57	12/05/21 22:45	1
Tetrachloroethene	ND	H	50	4.2	ug/Kg		11/24/21 13:57	12/05/21 22:45	1
Toluene	ND	H	50	4.5	ug/Kg		11/24/21 13:57	12/05/21 22:45	1
trans-1,2-Dichloroethene	ND	H	50	6.2	ug/Kg		11/24/21 13:57	12/05/21 22:45	1
trans-1,3-Dichloropropene	ND	H	50	2.8	ug/Kg		11/24/21 13:57	12/05/21 22:45	1
Trichlorofluoromethane	ND	H	50	12	ug/Kg		11/24/21 13:57	12/05/21 22:45	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	103		52 - 126	11/24/21 13:57	12/05/21 22:45	1
4-Bromofluorobenzene (Surr)	102		67 - 135	11/24/21 13:57	12/05/21 22:45	1
Dibromofluoromethane (Surr)	97		61 - 123	11/24/21 13:57	12/05/21 22:45	1
Toluene-d8 (Surr)	107		65 - 131	11/24/21 13:57	12/05/21 22:45	1

Method: AK101 - Alaska - Gasoline Range Organics (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
C6-C10 AK	ND		5.0	1.0	mg/Kg		11/24/21 13:57	12/05/21 22:45	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	102		60 - 120	11/24/21 13:57	12/05/21 22:45	1
Trifluorotoluene (Surr)	84		60 - 120	11/24/21 13:57	12/05/21 22:45	1

Eurofins TestAmerica, Sacramento

Client Sample Results

Client: Shannon & Wilson, Inc
 Project/Site: Kodiak DOT&PF PFAS (107471)

Job ID: 320-82156-1

Client Sample ID: Trip Blank 5

Lab Sample ID: 320-82156-17

Date Collected: 11/17/21 08:00

Matrix: Solid

Date Received: 11/23/21 16:45

Method: 8011 - EDB, DBCP, and 1,2,3-TCP (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ethylene Dibromide	ND	H	0.25	0.038	ug/Kg		12/03/21 13:35	12/04/21 16:31	1
1,2,3-Trichloropropane	ND	H	0.25	0.14	ug/Kg		12/03/21 13:35	12/04/21 16:31	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dibromopropane	114		55 - 130				12/03/21 13:35	12/04/21 16:31	1

Client Sample ID: ADQ-ISM1-EB1

Lab Sample ID: 320-82156-18

Date Collected: 11/15/21 17:00

Matrix: Water

Date Received: 11/23/21 16:45

Method: EPA 537(Mod) - PFAS for QSM 5.3, Table B-15

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorohexanoic acid (PFHxA)	ND		2.6	0.74	ng/L		11/24/21 12:30	11/27/21 23:53	1
Perfluoroheptanoic acid (PFHpA)	ND		2.6	0.32	ng/L		11/24/21 12:30	11/27/21 23:53	1
Perfluorooctanoic acid (PFOA)	ND		2.6	1.1	ng/L		11/24/21 12:30	11/27/21 23:53	1
Perfluorononanoic acid (PFNA)	ND		2.6	0.35	ng/L		11/24/21 12:30	11/27/21 23:53	1
Perfluorodecanoic acid (PFDA)	ND		2.6	0.40	ng/L		11/24/21 12:30	11/27/21 23:53	1
Perfluoroundecanoic acid (PFUnA)	ND		2.6	1.4	ng/L		11/24/21 12:30	11/27/21 23:53	1
Perfluorododecanoic acid (PFDoA)	ND		2.6	0.70	ng/L		11/24/21 12:30	11/27/21 23:53	1
Perfluorotridecanoic acid (PFTrDA)	ND		2.6	1.7	ng/L		11/24/21 12:30	11/27/21 23:53	1
Perfluorotetradecanoic acid (PFTeA)	ND		2.6	0.93	ng/L		11/24/21 12:30	11/27/21 23:53	1
Perfluorobutanesulfonic acid (PFBS)	ND		2.6	0.26	ng/L		11/24/21 12:30	11/27/21 23:53	1
Perfluorohexanesulfonic acid (PFHxS)	ND		2.6	0.73	ng/L		11/24/21 12:30	11/27/21 23:53	1
Perfluorooctanesulfonic acid (PFOS)	ND		2.6	0.69	ng/L		11/24/21 12:30	11/27/21 23:53	1
NEtFOSAA	ND		6.4	1.7	ng/L		11/24/21 12:30	11/27/21 23:53	1
NMeFOSAA	ND		6.4	1.5	ng/L		11/24/21 12:30	11/27/21 23:53	1
HFPO-DA (GenX)	ND		5.1	1.9	ng/L		11/24/21 12:30	11/27/21 23:53	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	ND		2.6	0.51	ng/L		11/24/21 12:30	11/27/21 23:53	1
9Cl-PF3ONS	ND		2.6	0.31	ng/L		11/24/21 12:30	11/27/21 23:53	1
11Cl-PF3OUdS	ND		2.6	0.41	ng/L		11/24/21 12:30	11/27/21 23:53	1
Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
13C2 PFHxA	85		50 - 150				11/24/21 12:30	11/27/21 23:53	1
13C4 PFHpA	92		50 - 150				11/24/21 12:30	11/27/21 23:53	1
13C4 PFOA	95		50 - 150				11/24/21 12:30	11/27/21 23:53	1
13C5 PFNA	94		50 - 150				11/24/21 12:30	11/27/21 23:53	1
13C2 PFDA	87		50 - 150				11/24/21 12:30	11/27/21 23:53	1
13C2 PFUnA	94		50 - 150				11/24/21 12:30	11/27/21 23:53	1
13C2 PFDoA	93		50 - 150				11/24/21 12:30	11/27/21 23:53	1
13C2 PFTeDA	100		50 - 150				11/24/21 12:30	11/27/21 23:53	1
13C3 PFBS	104		50 - 150				11/24/21 12:30	11/27/21 23:53	1
18O2 PFHxS	87		50 - 150				11/24/21 12:30	11/27/21 23:53	1
13C4 PFOS	98		50 - 150				11/24/21 12:30	11/27/21 23:53	1
d5-NEtFOSAA	97		50 - 150				11/24/21 12:30	11/27/21 23:53	1
d3-NMeFOSAA	97		50 - 150				11/24/21 12:30	11/27/21 23:53	1
13C3 HFPO-DA	80		50 - 150				11/24/21 12:30	11/27/21 23:53	1

Eurofins TestAmerica, Sacramento

Client Sample Results

Client: Shannon & Wilson, Inc
Project/Site: Kodiak DOT&PF PFAS (107471)

Job ID: 320-82156-1

Client Sample ID: ADQ-ISM2-EB1

Lab Sample ID: 320-82156-19

Date Collected: 11/16/21 17:20

Matrix: Water

Date Received: 11/23/21 16:45

Method: EPA 537(Mod) - PFAS for QSM 5.3, Table B-15

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorohexanoic acid (PFHxA)	ND		2.8	0.80	ng/L		11/24/21 12:30	11/28/21 00:03	1
Perfluoroheptanoic acid (PFHpA)	ND		2.8	0.35	ng/L		11/24/21 12:30	11/28/21 00:03	1
Perfluorooctanoic acid (PFOA)	ND		2.8	1.2	ng/L		11/24/21 12:30	11/28/21 00:03	1
Perfluorononanoic acid (PFNA)	ND		2.8	0.37	ng/L		11/24/21 12:30	11/28/21 00:03	1
Perfluorodecanoic acid (PFDA)	ND		2.8	0.43	ng/L		11/24/21 12:30	11/28/21 00:03	1
Perfluoroundecanoic acid (PFUnA)	ND		2.8	1.5	ng/L		11/24/21 12:30	11/28/21 00:03	1
Perfluorododecanoic acid (PFDoA)	ND		2.8	0.76	ng/L		11/24/21 12:30	11/28/21 00:03	1
Perfluorotridecanoic acid (PFTTrDA)	ND		2.8	1.8	ng/L		11/24/21 12:30	11/28/21 00:03	1
Perfluorotetradecanoic acid (PFTTeA)	ND		2.8	1.0	ng/L		11/24/21 12:30	11/28/21 00:03	1
Perfluorobutanesulfonic acid (PFBS)	ND		2.8	0.28	ng/L		11/24/21 12:30	11/28/21 00:03	1
Perfluorohexanesulfonic acid (PFHxS)	ND		2.8	0.79	ng/L		11/24/21 12:30	11/28/21 00:03	1
Perfluorooctanesulfonic acid (PFOS)	ND		2.8	0.75	ng/L		11/24/21 12:30	11/28/21 00:03	1
NEtFOSAA	ND		6.9	1.8	ng/L		11/24/21 12:30	11/28/21 00:03	1
NMeFOSAA	ND		6.9	1.7	ng/L		11/24/21 12:30	11/28/21 00:03	1
HFPO-DA (GenX)	ND		5.5	2.1	ng/L		11/24/21 12:30	11/28/21 00:03	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	ND		2.8	0.55	ng/L		11/24/21 12:30	11/28/21 00:03	1
9Cl-PF3ONS	ND		2.8	0.33	ng/L		11/24/21 12:30	11/28/21 00:03	1
11Cl-PF3OUdS	ND		2.8	0.44	ng/L		11/24/21 12:30	11/28/21 00:03	1
Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
13C2 PFHxA	96		50 - 150				11/24/21 12:30	11/28/21 00:03	1
13C4 PFHpA	94		50 - 150				11/24/21 12:30	11/28/21 00:03	1
13C4 PFOA	100		50 - 150				11/24/21 12:30	11/28/21 00:03	1
13C5 PFNA	97		50 - 150				11/24/21 12:30	11/28/21 00:03	1
13C2 PFDA	89		50 - 150				11/24/21 12:30	11/28/21 00:03	1
13C2 PFUnA	97		50 - 150				11/24/21 12:30	11/28/21 00:03	1
13C2 PFDoA	99		50 - 150				11/24/21 12:30	11/28/21 00:03	1
13C2 PFTTeDA	106		50 - 150				11/24/21 12:30	11/28/21 00:03	1
13C3 PFBS	105		50 - 150				11/24/21 12:30	11/28/21 00:03	1
18O2 PFHxS	94		50 - 150				11/24/21 12:30	11/28/21 00:03	1
13C4 PFOS	101		50 - 150				11/24/21 12:30	11/28/21 00:03	1
d5-NEtFOSAA	105		50 - 150				11/24/21 12:30	11/28/21 00:03	1
d3-NMeFOSAA	103		50 - 150				11/24/21 12:30	11/28/21 00:03	1
13C3 HFPO-DA	88		50 - 150				11/24/21 12:30	11/28/21 00:03	1

Client Sample ID: ADQ-ISM2-EB2

Lab Sample ID: 320-82156-20

Date Collected: 11/17/21 15:50

Matrix: Water

Date Received: 11/23/21 16:45

Method: EPA 537(Mod) - PFAS for QSM 5.3, Table B-15

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorohexanoic acid (PFHxA)	ND		2.7	0.78	ng/L		11/24/21 12:30	11/28/21 00:34	1
Perfluoroheptanoic acid (PFHpA)	ND		2.7	0.34	ng/L		11/24/21 12:30	11/28/21 00:34	1
Perfluorooctanoic acid (PFOA)	ND		2.7	1.1	ng/L		11/24/21 12:30	11/28/21 00:34	1
Perfluorononanoic acid (PFNA)	ND		2.7	0.36	ng/L		11/24/21 12:30	11/28/21 00:34	1
Perfluorodecanoic acid (PFDA)	ND		2.7	0.42	ng/L		11/24/21 12:30	11/28/21 00:34	1
Perfluoroundecanoic acid (PFUnA)	ND		2.7	1.5	ng/L		11/24/21 12:30	11/28/21 00:34	1
Perfluorododecanoic acid (PFDoA)	ND		2.7	0.74	ng/L		11/24/21 12:30	11/28/21 00:34	1
Perfluorotridecanoic acid (PFTTrDA)	ND		2.7	1.8	ng/L		11/24/21 12:30	11/28/21 00:34	1
Perfluorotetradecanoic acid (PFTTeA)	ND		2.7	0.99	ng/L		11/24/21 12:30	11/28/21 00:34	1

Eurofins TestAmerica, Sacramento

Client Sample Results

Client: Shannon & Wilson, Inc
 Project/Site: Kodiak DOT&PF PFAS (107471)

Job ID: 320-82156-1

Client Sample ID: ADQ-ISM2-EB2

Lab Sample ID: 320-82156-20

Date Collected: 11/17/21 15:50

Matrix: Water

Date Received: 11/23/21 16:45

Method: EPA 537(Mod) - PFAS for QSM 5.3, Table B-15 (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanesulfonic acid (PFBS)	ND		2.7	0.27	ng/L		11/24/21 12:30	11/28/21 00:34	1
Perfluorohexanesulfonic acid (PFHxS)	ND		2.7	0.77	ng/L		11/24/21 12:30	11/28/21 00:34	1
Perfluorooctanesulfonic acid (PFOS)	ND		2.7	0.73	ng/L		11/24/21 12:30	11/28/21 00:34	1
NEtFOSAA	ND		6.7	1.8	ng/L		11/24/21 12:30	11/28/21 00:34	1
NMeFOSAA	ND		6.7	1.6	ng/L		11/24/21 12:30	11/28/21 00:34	1
HFPO-DA (GenX)	ND		5.4	2.0	ng/L		11/24/21 12:30	11/28/21 00:34	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	ND		2.7	0.54	ng/L		11/24/21 12:30	11/28/21 00:34	1
9CI-PF3ONS	ND		2.7	0.32	ng/L		11/24/21 12:30	11/28/21 00:34	1
11CI-PF3OUdS	ND		2.7	0.43	ng/L		11/24/21 12:30	11/28/21 00:34	1
Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
13C2 PFHxA	87		50 - 150				11/24/21 12:30	11/28/21 00:34	1
13C4 PFHpA	90		50 - 150				11/24/21 12:30	11/28/21 00:34	1
13C4 PFOA	95		50 - 150				11/24/21 12:30	11/28/21 00:34	1
13C5 PFNA	94		50 - 150				11/24/21 12:30	11/28/21 00:34	1
13C2 PFDA	85		50 - 150				11/24/21 12:30	11/28/21 00:34	1
13C2 PFUnA	91		50 - 150				11/24/21 12:30	11/28/21 00:34	1
13C2 PFDoA	83		50 - 150				11/24/21 12:30	11/28/21 00:34	1
13C2 PFTeDA	93		50 - 150				11/24/21 12:30	11/28/21 00:34	1
13C3 PFBS	99		50 - 150				11/24/21 12:30	11/28/21 00:34	1
18O2 PFHxS	86		50 - 150				11/24/21 12:30	11/28/21 00:34	1
13C4 PFOS	93		50 - 150				11/24/21 12:30	11/28/21 00:34	1
d5-NEtFOSAA	100		50 - 150				11/24/21 12:30	11/28/21 00:34	1
d3-NMeFOSAA	90		50 - 150				11/24/21 12:30	11/28/21 00:34	1
13C3 HFPO-DA	77		50 - 150				11/24/21 12:30	11/28/21 00:34	1

Client Sample ID: ADQ-ISM2-EB3

Lab Sample ID: 320-82156-21

Date Collected: 11/18/21 12:15

Matrix: Water

Date Received: 11/23/21 16:45

Method: EPA 537(Mod) - PFAS for QSM 5.3, Table B-15

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorohexanoic acid (PFHxA)	ND		3.4	1.0	ng/L		11/24/21 12:30	11/28/21 00:45	1
Perfluoroheptanoic acid (PFHpA)	ND		3.4	0.43	ng/L		11/24/21 12:30	11/28/21 00:45	1
Perfluorooctanoic acid (PFOA)	ND		3.4	1.5	ng/L		11/24/21 12:30	11/28/21 00:45	1
Perfluorononanoic acid (PFNA)	ND		3.4	0.46	ng/L		11/24/21 12:30	11/28/21 00:45	1
Perfluorodecanoic acid (PFDA)	ND		3.4	0.53	ng/L		11/24/21 12:30	11/28/21 00:45	1
Perfluoroundecanoic acid (PFUnA)	ND		3.4	1.9	ng/L		11/24/21 12:30	11/28/21 00:45	1
Perfluorododecanoic acid (PFDoA)	ND		3.4	0.95	ng/L		11/24/21 12:30	11/28/21 00:45	1
Perfluorotridecanoic acid (PFTTrDA)	ND		3.4	2.2	ng/L		11/24/21 12:30	11/28/21 00:45	1
Perfluorotetradecanoic acid (PFTeA)	ND		3.4	1.3	ng/L		11/24/21 12:30	11/28/21 00:45	1
Perfluorobutanesulfonic acid (PFBS)	ND		3.4	0.34	ng/L		11/24/21 12:30	11/28/21 00:45	1
Perfluorohexanesulfonic acid (PFHxS)	ND		3.4	0.98	ng/L		11/24/21 12:30	11/28/21 00:45	1
Perfluorooctanesulfonic acid (PFOS)	ND		3.4	0.93	ng/L		11/24/21 12:30	11/28/21 00:45	1
NEtFOSAA	ND		8.6	2.2	ng/L		11/24/21 12:30	11/28/21 00:45	1
NMeFOSAA	ND		8.6	2.1	ng/L		11/24/21 12:30	11/28/21 00:45	1
HFPO-DA (GenX)	ND		6.9	2.6	ng/L		11/24/21 12:30	11/28/21 00:45	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	ND		3.4	0.69	ng/L		11/24/21 12:30	11/28/21 00:45	1
9CI-PF3ONS	ND		3.4	0.41	ng/L		11/24/21 12:30	11/28/21 00:45	1

Eurofins TestAmerica, Sacramento

Client Sample Results

Client: Shannon & Wilson, Inc
 Project/Site: Kodiak DOT&PF PFAS (107471)

Job ID: 320-82156-1

Client Sample ID: ADQ-ISM2-EB3

Lab Sample ID: 320-82156-21

Date Collected: 11/18/21 12:15

Matrix: Water

Date Received: 11/23/21 16:45

Method: EPA 537(Mod) - PFAS for QSM 5.3, Table B-15 (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
11CI-PF3OUdS	ND		3.4	0.55	ng/L		11/24/21 12:30	11/28/21 00:45	1
<i>Isotope Dilution</i>	<i>%Recovery</i>	<i>Qualifier</i>	<i>Limits</i>				<i>Prepared</i>	<i>Analyzed</i>	<i>Dil Fac</i>
13C2 PFHxA	80		50 - 150				11/24/21 12:30	11/28/21 00:45	1
13C4 PFHpA	80		50 - 150				11/24/21 12:30	11/28/21 00:45	1
13C4 PFOA	91		50 - 150				11/24/21 12:30	11/28/21 00:45	1
13C5 PFNA	86		50 - 150				11/24/21 12:30	11/28/21 00:45	1
13C2 PFDA	83		50 - 150				11/24/21 12:30	11/28/21 00:45	1
13C2 PFUnA	81		50 - 150				11/24/21 12:30	11/28/21 00:45	1
13C2 PFDoA	82		50 - 150				11/24/21 12:30	11/28/21 00:45	1
13C2 PFTeDA	95		50 - 150				11/24/21 12:30	11/28/21 00:45	1
13C3 PFBS	93		50 - 150				11/24/21 12:30	11/28/21 00:45	1
18O2 PFHxS	77		50 - 150				11/24/21 12:30	11/28/21 00:45	1
13C4 PFOS	80		50 - 150				11/24/21 12:30	11/28/21 00:45	1
d5-NEtFOSAA	92		50 - 150				11/24/21 12:30	11/28/21 00:45	1
d3-NMeFOSAA	89		50 - 150				11/24/21 12:30	11/28/21 00:45	1
13C3 HFPO-DA	76		50 - 150				11/24/21 12:30	11/28/21 00:45	1

Surrogate Summary

Client: Shannon & Wilson, Inc
 Project/Site: Kodiak DOT&PF PFAS (107471)

Job ID: 320-82156-1

Method: 8260C - Volatile Organic Compounds by GC/MS

Matrix: Solid

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)			
		DCA (52-126)	BFB (67-135)	DBFM (61-123)	TOL (65-131)
320-82156-1	ADQ-ISM1-01	101	102	96	105
320-82156-2	ADQ-ISM1-101	101	97	96	103
320-82156-3	ADQ-ISM1-201	95	96	93	101
320-82156-4	ADQ-ISM1-02	117	114	113	120
320-82156-5	ADQ-ISM1-03	123	122	115	125
320-82156-6	ADQ-ISM1-04	91	92	88	95
320-82156-7	ADQ-ISM2-01	129 S1+	129	122	130
320-82156-8	ADQ-ISM2-02	129 S1+	129	123	137 S1+
320-82156-9	ADQ-ISM2-102	123	123	117	128
320-82156-10	ADQ-ISM2-202	130 S1+	129	120	129
320-82156-11	ADQ-ISM2-03	120	119	113	124
320-82156-12	ADQ-ISM2-04	140 S1+	141 S1+	79	144 S1+
320-82156-12 - RA	ADQ-ISM2-04	109	108	101	111
320-82156-13	ADQ-ISM2-05	103	108	99	107
320-82156-14	Trip Blank 2	102	104	99	106
320-82156-15	Trip Blank 3	102	100	97	106
320-82156-16	Trip Blank 4	104	104	99	107
320-82156-17	Trip Blank 5	103	102	97	107
LCS 320-545695/2-A	Lab Control Sample	104	109	107	111
LCS 320-545695/3-A	Lab Control Sample Dup	97	104	100	108
MB 320-545695/1-A	Method Blank	98	100	97	105

Surrogate Legend

- DCA = 1,2-Dichloroethane-d4 (Surr)
- BFB = 4-Bromofluorobenzene (Surr)
- DBFM = Dibromofluoromethane (Surr)
- TOL = Toluene-d8 (Surr)

Method: 8260C SIM - Volatile Organic Compounds (GC/MS)

Matrix: Solid

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)			
		BFB (69-129)	DBFM (72-132)	DCA (72-132)	TOL (78-138)
320-82156-1	ADQ-ISM1-01	83	121	117	106
320-82156-2	ADQ-ISM1-101	81	120	115	103
320-82156-3	ADQ-ISM1-201	83	118	116	108
320-82156-4	ADQ-ISM1-02	85	119	119	107
320-82156-5	ADQ-ISM1-03	82	116	116	107
320-82156-6	ADQ-ISM1-04	83	116	117	109
320-82156-7	ADQ-ISM2-01	80	117	118	108
320-82156-8	ADQ-ISM2-02	84	119	120	112
320-82156-9	ADQ-ISM2-102	83	118	120	111
320-82156-10	ADQ-ISM2-202	85	119	122	108
320-82156-11	ADQ-ISM2-03	84	115	121	110
320-82156-12	ADQ-ISM2-04	83	111	118	111
320-82156-13	ADQ-ISM2-05	82	120	120	108
320-82156-14	Trip Blank 2	85	119	126	109
320-82156-15	Trip Blank 3	83	120	123	110
320-82156-16	Trip Blank 4	83	122	128	108

Eurofins TestAmerica, Sacramento

Surrogate Summary

Client: Shannon & Wilson, Inc
 Project/Site: Kodiak DOT&PF PFAS (107471)

Job ID: 320-82156-1

Method: 8260C SIM - Volatile Organic Compounds (GC/MS) (Continued)

Matrix: Solid

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)			
		BFB (69-129)	DBFM (72-132)	DCA (72-132)	TOL (78-138)
320-82156-17	Trip Blank 5	82	117	122	106
LCS 320-545695/23-A	Lab Control Sample	86	130	124	107
LCSD 320-545695/24-A	Lab Control Sample Dup	88	129	125	108
MB 320-545695/1-A	Method Blank	84	136 S1+	135 S1+	106

Surrogate Legend

BFB = 4-Bromofluorobenzene (Surr)

DBFM = Dibromofluoromethane (Surr)

DCA = 1,2-Dichloroethane-d4 (Surr)

TOL = Toluene-d8 (Surr)

Method: AK101 - Alaska - Gasoline Range Organics (GC/MS)

Matrix: Solid

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)	
		BFB (60-120)	TFT (60-120)
320-82156-1	ADQ-ISM1-01	102	73
320-82156-2	ADQ-ISM1-101	97	63
320-82156-3	ADQ-ISM1-201	96	90
320-82156-4	ADQ-ISM1-02	114	73
320-82156-5	ADQ-ISM1-03	122 S1+	153 S1+
320-82156-6	ADQ-ISM1-04	92	65
320-82156-7	ADQ-ISM2-01	129 S1+	81
320-82156-8	ADQ-ISM2-02	129 S1+	75
320-82156-9	ADQ-ISM2-102	109	103
320-82156-10	ADQ-ISM2-202	129 S1+	98
320-82156-11	ADQ-ISM2-03	119	83
320-82156-12	ADQ-ISM2-04	108	91
320-82156-13	ADQ-ISM2-05	108	77
320-82156-14	Trip Blank 2	104	86
320-82156-15	Trip Blank 3	100	85
320-82156-16	Trip Blank 4	104	84
320-82156-17	Trip Blank 5	102	84
LCS 320-545695/4-A	Lab Control Sample	105	110
LCSD 320-545695/5-A	Lab Control Sample Dup	105	107
MB 320-545695/1-A	Method Blank	100	119

Surrogate Legend

BFB = 4-Bromofluorobenzene (Surr)

TFT = Trifluorotoluene (Surr)

Method: 8011 - EDB, DBCP, and 1,2,3-TCP (GC)

Matrix: Solid

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)
		12DBP1 (55-130)
320-82156-1	ADQ-ISM1-01	122
320-82156-2	ADQ-ISM1-101	121
320-82156-3	ADQ-ISM1-201	97
320-82156-4	ADQ-ISM1-02	100

Eurofins TestAmerica, Sacramento

Surrogate Summary

Client: Shannon & Wilson, Inc
 Project/Site: Kodiak DOT&PF PFAS (107471)

Job ID: 320-82156-1

Method: 8011 - EDB, DBCP, and 1,2,3-TCP (GC) (Continued)

Matrix: Solid

Prep Type: Total/NA

Percent Surrogate Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	12DBP1 (55-130)
320-82156-5	ADQ-ISM1-03	96
320-82156-6	ADQ-ISM1-04	96
320-82156-7	ADQ-ISM2-01	112
320-82156-8	ADQ-ISM2-02	102
320-82156-9	ADQ-ISM2-102	116
320-82156-10	ADQ-ISM2-202	97
320-82156-11	ADQ-ISM2-03	123
320-82156-12	ADQ-ISM2-04	113
320-82156-13	ADQ-ISM2-05	109
320-82156-14	Trip Blank 2	114
320-82156-15	Trip Blank 3	114
320-82156-16	Trip Blank 4	111
320-82156-17	Trip Blank 5	114
LCS 280-559548/2-A	Lab Control Sample	96
LCSD 280-559548/3-A	Lab Control Sample Dup	105
MB 280-559548/1-A	Method Blank	91

Surrogate Legend

12DBP = 1,2-Dibromopropane

Method: AK102 - DRO

Matrix: Solid

Prep Type: Total/NA

Percent Surrogate Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	OTPH (60-120)	NTC (60-120)
320-82156-1	ADQ-ISM1-01	130 S1+	279 S1+
320-82156-1 MS	ADQ-ISM1-01	142 S1+	227 S1+
320-82156-1 MSD	ADQ-ISM1-01	139 S1+	272 S1+
320-82156-2	ADQ-ISM1-101	91	137 S1+
320-82156-3	ADQ-ISM1-201	140 S1+	313 S1+
320-82156-4	ADQ-ISM1-02	136 S1+	218 S1+
320-82156-5	ADQ-ISM1-03	76	102
320-82156-6	ADQ-ISM1-04	76	59 S1-
320-82156-7	ADQ-ISM2-01	68	74
320-82156-8	ADQ-ISM2-02	67	60
320-82156-9	ADQ-ISM2-102	53 S1-	65
320-82156-10	ADQ-ISM2-202	61	67
320-82156-11	ADQ-ISM2-03	57 S1-	73
320-82156-12	ADQ-ISM2-04	70	69
320-82156-13	ADQ-ISM2-05	76	75
LCS 320-546878/2-A	Lab Control Sample	71	74
LCSD 320-546878/3-A	Lab Control Sample Dup	72	81
MB 320-546878/1-A	Method Blank	68	67

Surrogate Legend

OTPH = o-Terphenyl (Surr)

NTC = n-Triacontane-d62

Isotope Dilution Summary

Client: Shannon & Wilson, Inc
 Project/Site: Kodiak DOT&PF PFAS (107471)

Job ID: 320-82156-1

Method: EPA 537(Mod) - PFAS for QSM 5.3, Table B-15

Matrix: Solid

Prep Type: Total/NA

Percent Isotope Dilution Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	PFHxA (50-150)	C4PFHA (50-150)	PFOA (50-150)	PFNA (50-150)	PFDA (50-150)	PFUnA (50-150)	PFDaA (50-150)	PFTDA (50-150)
320-82156-1	ADQ-ISM1-01	84	79	91	75	91	93	86	88
320-82156-1 MS	ADQ-ISM1-01	72	74	91	73	82	81	79	83
320-82156-1 MSD	ADQ-ISM1-01	88	73	102	84	93	93	95	100
320-82156-2	ADQ-ISM1-101	86	86	106	86	95	92	89	109
320-82156-3	ADQ-ISM1-201	69	64	92	71	79	81	81	88
320-82156-4	ADQ-ISM1-02	91	79	101	92	96	101	101	101
320-82156-5	ADQ-ISM1-03	81	76	91	75	85	83	76	83
320-82156-6	ADQ-ISM1-04	81	69	93	63	76	74	62	81
320-82156-7	ADQ-ISM2-01	77	76	92	77	83	90	97	104
320-82156-8	ADQ-ISM2-02	74	74	91	80	86	82	93	99
320-82156-9	ADQ-ISM2-102	82	83	96	87	89	91	96	98
320-82156-10	ADQ-ISM2-202	100	97	112	99	102	104	112	129
320-82156-11	ADQ-ISM2-03	86	88	97	88	88	99	92	112
320-82156-12	ADQ-ISM2-04	92	89	96	94	88	96	108	116
320-82156-13	ADQ-ISM2-05	84	86	94	90	88	91	93	101
LCS 320-547064/2-A	Lab Control Sample	111	97	118	112	105	109	107	117
MB 320-547064/1-A	Method Blank	81	74	90	78	84	82	79	83

Percent Isotope Dilution Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	C3PFBS (50-150)	PFHxS (50-150)	PFOS (50-150)	d3NMFOS (50-150)	d5NEFOS (50-150)	HFPODA (50-150)
320-82156-1	ADQ-ISM1-01	86	79	68	77	85	71
320-82156-1 MS	ADQ-ISM1-01	78	84	75	64	83	81
320-82156-1 MSD	ADQ-ISM1-01	95	98	93	91	93	75
320-82156-2	ADQ-ISM1-101	103	105	88	85	103	90
320-82156-3	ADQ-ISM1-201	72	80	82	66	75	82
320-82156-4	ADQ-ISM1-02	90	90	99	82	104	95
320-82156-5	ADQ-ISM1-03	69	62	57	70	80	80
320-82156-6	ADQ-ISM1-04	85	76	67	62	61	79
320-82156-7	ADQ-ISM2-01	54	59	60	69	76	77
320-82156-8	ADQ-ISM2-02	54	50	49 *5-	59	77	79
320-82156-9	ADQ-ISM2-102	61	60	59	73	78	83
320-82156-10	ADQ-ISM2-202	67	64	63	83	93	101
320-82156-11	ADQ-ISM2-03	66	60	62	72	80	82
320-82156-12	ADQ-ISM2-04	68	68	60	77	84	88
320-82156-13	ADQ-ISM2-05	71	67	65	76	85	81
LCS 320-547064/2-A	Lab Control Sample	128	115	107	89	105	98
MB 320-547064/1-A	Method Blank	84	77	80	68	77	74

Surrogate Legend

- PFHxA = 13C2 PFHxA
- C4PFHA = 13C4 PFHpA
- PFOA = 13C4 PFOA
- PFNA = 13C5 PFNA
- PFDA = 13C2 PFDA
- PFUnA = 13C2 PFUnA
- PFDaA = 13C2 PFDaA
- PFTDA = 13C2 PFTeDA
- C3PFBS = 13C3 PFBS
- PFHxS = 18O2 PFHxS
- PFOS = 13C4 PFOS

Isotope Dilution Summary

Client: Shannon & Wilson, Inc
 Project/Site: Kodiak DOT&PF PFAS (107471)
 d3NMFOS = d3-NMeFOSAA
 d5NEFOS = d5-NEtFOSAA
 HFPODA = 13C3 HFPO-DA

Job ID: 320-82156-1

Method: EPA 537(Mod) - PFAS for QSM 5.3, Table B-15

Matrix: Water

Prep Type: Total/NA

Percent Isotope Dilution Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	PFHxA (50-150)	C4PFHA (50-150)	PFOA (50-150)	PFNA (50-150)	PFDA (50-150)	PFUnA (50-150)	PFDaA (50-150)	PFTDA (50-150)
320-82156-18	ADQ-ISM1-EB1	85	92	95	94	87	94	93	100
320-82156-19	ADQ-ISM2-EB1	96	94	100	97	89	97	99	106
320-82156-20	ADQ-ISM2-EB2	87	90	95	94	85	91	83	93
320-82156-21	ADQ-ISM2-EB3	80	80	91	86	83	81	82	95
LCS 320-545627/2-A	Lab Control Sample	90	95	97	96	87	103	95	90
MB 320-545627/1-A	Method Blank	106	103	100	102	95	106	105	100

Percent Isotope Dilution Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	C3PFBS (50-150)	PFHxS (50-150)	PFOS (50-150)	d5NEFOS (50-150)	d3NMFOS (50-150)	HFPODA (50-150)
320-82156-18	ADQ-ISM1-EB1	104	87	98	97	97	80
320-82156-19	ADQ-ISM2-EB1	105	94	101	105	103	88
320-82156-20	ADQ-ISM2-EB2	99	86	93	100	90	77
320-82156-21	ADQ-ISM2-EB3	93	77	80	92	89	76
LCS 320-545627/2-A	Lab Control Sample	102	92	100	110	110	86
MB 320-545627/1-A	Method Blank	116	92	99	112	118	87

Surrogate Legend

- PFHxA = 13C2 PFHxA
- C4PFHA = 13C4 PFHpA
- PFOA = 13C4 PFOA
- PFNA = 13C5 PFNA
- PFDA = 13C2 PFDA
- PFUnA = 13C2 PFUnA
- PFDaA = 13C2 PFDaA
- PFTDA = 13C2 PFTeDA
- C3PFBS = 13C3 PFBS
- PFHxS = 18O2 PFHxS
- PFOS = 13C4 PFOS
- d5NEFOS = d5-NEtFOSAA
- d3NMFOS = d3-NMeFOSAA
- HFPODA = 13C3 HFPO-DA

QC Sample Results

Client: Shannon & Wilson, Inc
 Project/Site: Kodiak DOT&PF PFAS (107471)

Job ID: 320-82156-1

Method: 8260C - Volatile Organic Compounds by GC/MS

Lab Sample ID: MB 320-545695/1-A
Matrix: Solid
Analysis Batch: 548328

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 545695

Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
1,1,1,2-Tetrachloroethane	ND		50	5.9	ug/Kg		11/24/21 13:57	12/05/21 21:12	1
1,1,1-Trichloroethane	ND		50	3.7	ug/Kg		11/24/21 13:57	12/05/21 21:12	1
1,1-Dichloroethane	ND		50	2.7	ug/Kg		11/24/21 13:57	12/05/21 21:12	1
1,1-Dichloroethene	ND		50	4.7	ug/Kg		11/24/21 13:57	12/05/21 21:12	1
1,1-Dichloropropene	ND		50	4.3	ug/Kg		11/24/21 13:57	12/05/21 21:12	1
1,2,3-Trichlorobenzene	ND		50	6.2	ug/Kg		11/24/21 13:57	12/05/21 21:12	1
1,2,3-Trichloropropane	ND		50	4.7	ug/Kg		11/24/21 13:57	12/05/21 21:12	1
1,2,4-Trichlorobenzene	ND		50	3.4	ug/Kg		11/24/21 13:57	12/05/21 21:12	1
1,2,4-Trimethylbenzene	ND		50	3.5	ug/Kg		11/24/21 13:57	12/05/21 21:12	1
1,2-Dibromo-3-Chloropropane	ND		100	6.3	ug/Kg		11/24/21 13:57	12/05/21 21:12	1
1,2-Dichlorobenzene	ND		50	2.2	ug/Kg		11/24/21 13:57	12/05/21 21:12	1
1,2-Dichloropropane	ND		50	4.7	ug/Kg		11/24/21 13:57	12/05/21 21:12	1
1,3,5-Trimethylbenzene	ND		50	3.5	ug/Kg		11/24/21 13:57	12/05/21 21:12	1
1,3-Dichlorobenzene	ND		50	3.3	ug/Kg		11/24/21 13:57	12/05/21 21:12	1
1,3-Dichloropropane	ND		50	2.3	ug/Kg		11/24/21 13:57	12/05/21 21:12	1
1,4-Dichlorobenzene	ND		50	2.2	ug/Kg		11/24/21 13:57	12/05/21 21:12	1
2,2-Dichloropropane	ND		50	4.3	ug/Kg		11/24/21 13:57	12/05/21 21:12	1
2-Butanone (MEK)	ND		100	26	ug/Kg		11/24/21 13:57	12/05/21 21:12	1
2-Chlorotoluene	ND		50	3.6	ug/Kg		11/24/21 13:57	12/05/21 21:12	1
2-Hexanone	ND		100	5.2	ug/Kg		11/24/21 13:57	12/05/21 21:12	1
4-Chlorotoluene	ND		50	2.8	ug/Kg		11/24/21 13:57	12/05/21 21:12	1
4-Methyl-2-pentanone (MIBK)	ND		100	3.1	ug/Kg		11/24/21 13:57	12/05/21 21:12	1
p-Isopropyltoluene	ND		50	1.6	ug/Kg		11/24/21 13:57	12/05/21 21:12	1
Acetone	ND		500	50	ug/Kg		11/24/21 13:57	12/05/21 21:12	1
Benzene	ND		50	3.3	ug/Kg		11/24/21 13:57	12/05/21 21:12	1
Bromoform	ND		50	11	ug/Kg		11/24/21 13:57	12/05/21 21:12	1
Bromobenzene	ND		50	5.6	ug/Kg		11/24/21 13:57	12/05/21 21:12	1
Carbon disulfide	ND		100	3.5	ug/Kg		11/24/21 13:57	12/05/21 21:12	1
Carbon tetrachloride	ND		50	3.5	ug/Kg		11/24/21 13:57	12/05/21 21:12	1
Chlorobenzene	ND		50	4.4	ug/Kg		11/24/21 13:57	12/05/21 21:12	1
Chlorobromomethane	ND		50	7.3	ug/Kg		11/24/21 13:57	12/05/21 21:12	1
Chloroethane	ND		50	6.6	ug/Kg		11/24/21 13:57	12/05/21 21:12	1
Chloromethane	ND		50	2.5	ug/Kg		11/24/21 13:57	12/05/21 21:12	1
cis-1,2-Dichloroethene	ND		50	8.2	ug/Kg		11/24/21 13:57	12/05/21 21:12	1
cis-1,3-Dichloropropene	ND		50	4.1	ug/Kg		11/24/21 13:57	12/05/21 21:12	1
Dibromomethane	ND		50	6.5	ug/Kg		11/24/21 13:57	12/05/21 21:12	1
Dichlorodifluoromethane	ND		50	9.4	ug/Kg		11/24/21 13:57	12/05/21 21:12	1
Ethylbenzene	ND		50	6.6	ug/Kg		11/24/21 13:57	12/05/21 21:12	1
Hexachlorobutadiene	ND		50	5.1	ug/Kg		11/24/21 13:57	12/05/21 21:12	1
Isopropylbenzene	ND		50	3.5	ug/Kg		11/24/21 13:57	12/05/21 21:12	1
Methyl tert-butyl ether	ND		100	3.6	ug/Kg		11/24/21 13:57	12/05/21 21:12	1
Methylene Chloride	ND		50	5.4	ug/Kg		11/24/21 13:57	12/05/21 21:12	1
m-Xylene & p-Xylene	ND		50	5.0	ug/Kg		11/24/21 13:57	12/05/21 21:12	1
Naphthalene	ND		50	1.8	ug/Kg		11/24/21 13:57	12/05/21 21:12	1
n-Butylbenzene	ND		50	3.1	ug/Kg		11/24/21 13:57	12/05/21 21:12	1
N-Propylbenzene	ND		50	4.7	ug/Kg		11/24/21 13:57	12/05/21 21:12	1
o-Xylene	ND		50	5.2	ug/Kg		11/24/21 13:57	12/05/21 21:12	1
sec-Butylbenzene	ND		50	2.4	ug/Kg		11/24/21 13:57	12/05/21 21:12	1

Eurofins TestAmerica, Sacramento

QC Sample Results

Client: Shannon & Wilson, Inc
 Project/Site: Kodiak DOT&PF PFAS (107471)

Job ID: 320-82156-1

Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: MB 320-545695/1-A
Matrix: Solid
Analysis Batch: 548328

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 545695

Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Styrene	ND		50	1.1	ug/Kg		11/24/21 13:57	12/05/21 21:12	1
tert-Butylbenzene	ND		50	4.1	ug/Kg		11/24/21 13:57	12/05/21 21:12	1
Tetrachloroethene	ND		50	4.2	ug/Kg		11/24/21 13:57	12/05/21 21:12	1
Toluene	ND		50	4.5	ug/Kg		11/24/21 13:57	12/05/21 21:12	1
trans-1,2-Dichloroethene	ND		50	6.2	ug/Kg		11/24/21 13:57	12/05/21 21:12	1
trans-1,3-Dichloropropene	ND		50	2.8	ug/Kg		11/24/21 13:57	12/05/21 21:12	1
Trichlorofluoromethane	ND		50	12	ug/Kg		11/24/21 13:57	12/05/21 21:12	1

Surrogate	MB	MB	Limits	Prepared	Analyzed	Dil Fac
	%Recovery	Qualifier				
1,2-Dichloroethane-d4 (Surr)	98		52 - 126	11/24/21 13:57	12/05/21 21:12	1
4-Bromofluorobenzene (Surr)	100		67 - 135	11/24/21 13:57	12/05/21 21:12	1
Dibromofluoromethane (Surr)	97		61 - 123	11/24/21 13:57	12/05/21 21:12	1
Toluene-d8 (Surr)	105		65 - 131	11/24/21 13:57	12/05/21 21:12	1

Lab Sample ID: LCS 320-545695/2-A
Matrix: Solid
Analysis Batch: 548328

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 545695

Analyte	Spike Added	LCS	LCS	Unit	D	%Rec	Limits
		Result	Qualifier				
1,1,1,2-Tetrachloroethane	1000	1010		ug/Kg		101	72 - 120
1,1,1-Trichloroethane	1000	948		ug/Kg		95	67 - 120
1,1-Dichloroethane	1000	995		ug/Kg		99	70 - 120
1,1-Dichloroethene	1000	951		ug/Kg		95	59 - 120
1,1-Dichloropropene	1000	981		ug/Kg		98	71 - 126
1,2,3-Trichlorobenzene	1000	1150		ug/Kg		115	35 - 169
1,2,3-Trichloropropane	1000	983		ug/Kg		98	62 - 120
1,2,4-Trichlorobenzene	1000	1160		ug/Kg		116	53 - 141
1,2,4-Trimethylbenzene	1000	1010		ug/Kg		101	78 - 120
1,2-Dibromo-3-Chloropropane	1000	884		ug/Kg		88	46 - 120
1,2-Dichlorobenzene	1000	1020		ug/Kg		102	74 - 120
1,2-Dichloropropane	1000	1030		ug/Kg		103	77 - 120
1,3,5-Trimethylbenzene	1000	1020		ug/Kg		102	80 - 121
1,3-Dichlorobenzene	1000	1040		ug/Kg		104	78 - 120
1,3-Dichloropropane	1000	1030		ug/Kg		103	76 - 120
1,4-Dichlorobenzene	1000	1020		ug/Kg		102	75 - 120
2,2-Dichloropropane	1000	797		ug/Kg		80	50 - 120
2-Butanone (MEK)	2500	2800		ug/Kg		112	41 - 121
2-Chlorotoluene	1000	1020		ug/Kg		102	77 - 122
2-Hexanone	2500	2880		ug/Kg		115	49 - 120
4-Chlorotoluene	1000	1010		ug/Kg		101	79 - 124
4-Methyl-2-pentanone (MIBK)	2500	2870		ug/Kg		115	56 - 120
p-Isopropyltoluene	1000	1000		ug/Kg		100	80 - 122
Acetone	2500	2070		ug/Kg		83	17 - 154
Benzene	1000	1020		ug/Kg		102	76 - 120
Bromoform	1000	1010		ug/Kg		101	59 - 120
Bromobenzene	1000	1010		ug/Kg		101	77 - 120
Carbon disulfide	1000	902		ug/Kg		90	42 - 120
Carbon tetrachloride	1000	935		ug/Kg		93	61 - 125

Eurofins TestAmerica, Sacramento

QC Sample Results

Client: Shannon & Wilson, Inc
 Project/Site: Kodiak DOT&PF PFAS (107471)

Job ID: 320-82156-1

Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: LCS 320-545695/2-A
Matrix: Solid
Analysis Batch: 548328

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 545695

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Chlorobenzene	1000	1040		ug/Kg		104	78 - 120
Chlorobromomethane	1000	1040		ug/Kg		104	71 - 120
Chloroethane	1000	698		ug/Kg		70	11 - 120
Chloromethane	1000	919		ug/Kg		92	45 - 120
cis-1,2-Dichloroethene	1000	1010		ug/Kg		101	73 - 120
cis-1,3-Dichloropropene	1000	1060		ug/Kg		106	74 - 124
Dibromomethane	1000	991		ug/Kg		99	70 - 120
Dichlorodifluoromethane	1000	806		ug/Kg		81	11 - 120
Ethylbenzene	1000	988		ug/Kg		99	80 - 122
Hexachlorobutadiene	1000	1110		ug/Kg		111	61 - 136
Isopropylbenzene	1000	992		ug/Kg		99	80 - 122
Methyl tert-butyl ether	1000	1030		ug/Kg		103	51 - 120
Methylene Chloride	1000	1020		ug/Kg		102	62 - 120
m-Xylene & p-Xylene	1000	996		ug/Kg		100	80 - 123
Naphthalene	1000	975		ug/Kg		97	50 - 138
n-Butylbenzene	1000	1030		ug/Kg		103	76 - 127
N-Propylbenzene	1000	1010		ug/Kg		101	80 - 121
o-Xylene	1000	1020		ug/Kg		102	80 - 120
sec-Butylbenzene	1000	997		ug/Kg		100	80 - 121
Styrene	1000	1010		ug/Kg		101	79 - 120
tert-Butylbenzene	1000	989		ug/Kg		99	80 - 122
Tetrachloroethene	1000	1010		ug/Kg		101	78 - 121
Toluene	1000	1020		ug/Kg		102	78 - 125
trans-1,2-Dichloroethene	1000	998		ug/Kg		100	67 - 120
trans-1,3-Dichloropropene	1000	1010		ug/Kg		101	70 - 127
Trichlorofluoromethane	1000	824		ug/Kg		82	12 - 144

Surrogate	LCS %Recovery	LCS Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	104		52 - 126
4-Bromofluorobenzene (Surr)	109		67 - 135
Dibromofluoromethane (Surr)	107		61 - 123
Toluene-d8 (Surr)	111		65 - 131

Lab Sample ID: LCSD 320-545695/3-A
Matrix: Solid
Analysis Batch: 548328

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 545695

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
1,1,1,2-Tetrachloroethane	1000	964		ug/Kg		96	72 - 120	4	25
1,1,1-Trichloroethane	1000	930		ug/Kg		93	67 - 120	2	30
1,1-Dichloroethane	1000	948		ug/Kg		95	70 - 120	5	26
1,1-Dichloroethene	1000	929		ug/Kg		93	59 - 120	2	30
1,1-Dichloropropene	1000	955		ug/Kg		96	71 - 126	3	27
1,2,3-Trichlorobenzene	1000	1040		ug/Kg		104	35 - 169	10	65
1,2,3-Trichloropropane	1000	930		ug/Kg		93	62 - 120	6	30
1,2,4-Trichlorobenzene	1000	1060		ug/Kg		106	53 - 141	9	42
1,2,4-Trimethylbenzene	1000	949		ug/Kg		95	78 - 120	7	25
1,2-Dibromo-3-Chloropropane	1000	839		ug/Kg		84	46 - 120	5	46

Eurofins TestAmerica, Sacramento

QC Sample Results

Client: Shannon & Wilson, Inc
 Project/Site: Kodiak DOT&PF PFAS (107471)

Job ID: 320-82156-1

Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: LCSD 320-545695/3-A
Matrix: Solid
Analysis Batch: 548328

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 545695

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
1,2-Dichlorobenzene	1000	958		ug/Kg		96	74 - 120	7	25
1,2-Dichloropropane	1000	969		ug/Kg		97	77 - 120	6	25
1,3,5-Trimethylbenzene	1000	966		ug/Kg		97	80 - 121	5	25
1,3-Dichlorobenzene	1000	961		ug/Kg		96	78 - 120	8	25
1,3-Dichloropropane	1000	998		ug/Kg		100	76 - 120	3	25
1,4-Dichlorobenzene	1000	942		ug/Kg		94	75 - 120	8	25
2,2-Dichloropropane	1000	752		ug/Kg		75	50 - 120	6	35
2-Butanone (MEK)	2500	2510		ug/Kg		100	41 - 121	11	47
2-Chlorotoluene	1000	952		ug/Kg		95	77 - 122	7	25
2-Hexanone	2500	2660		ug/Kg		106	49 - 120	8	39
4-Chlorotoluene	1000	958		ug/Kg		96	79 - 124	6	25
4-Methyl-2-pentanone (MIBK)	2500	2640		ug/Kg		106	56 - 120	8	33
p-Isopropyltoluene	1000	954		ug/Kg		95	80 - 122	5	25
Acetone	2500	1900		ug/Kg		76	17 - 154	9	77
Benzene	1000	969		ug/Kg		97	76 - 120	5	25
Bromoform	1000	970		ug/Kg		97	59 - 120	4	25
Bromobenzene	1000	928		ug/Kg		93	77 - 120	8	25
Carbon disulfide	1000	889		ug/Kg		89	42 - 120	1	44
Carbon tetrachloride	1000	924		ug/Kg		92	61 - 125	1	34
Chlorobenzene	1000	987		ug/Kg		99	78 - 120	5	25
Chlorobromomethane	1000	973		ug/Kg		97	71 - 120	7	25
Chloroethane	1000	654		ug/Kg		65	11 - 120	7	91
Chloromethane	1000	893		ug/Kg		89	45 - 120	3	43
cis-1,2-Dichloroethene	1000	961		ug/Kg		96	73 - 120	5	25
cis-1,3-Dichloropropene	1000	982		ug/Kg		98	74 - 124	8	26
Dibromomethane	1000	945		ug/Kg		94	70 - 120	5	26
Dichlorodifluoromethane	1000	784		ug/Kg		78	11 - 120	3	75
Ethylbenzene	1000	957		ug/Kg		96	80 - 122	3	25
Hexachlorobutadiene	1000	1040		ug/Kg		104	61 - 136	6	35
Isopropylbenzene	1000	969		ug/Kg		97	80 - 122	2	25
Methyl tert-butyl ether	1000	966		ug/Kg		97	51 - 120	7	48
Methylene Chloride	1000	950		ug/Kg		95	62 - 120	7	28
m-Xylene & p-Xylene	1000	969		ug/Kg		97	80 - 123	3	25
Naphthalene	1000	896		ug/Kg		90	50 - 138	8	48
n-Butylbenzene	1000	986		ug/Kg		99	76 - 127	5	28
N-Propylbenzene	1000	960		ug/Kg		96	80 - 121	5	25
o-Xylene	1000	980		ug/Kg		98	80 - 120	4	25
sec-Butylbenzene	1000	951		ug/Kg		95	80 - 121	5	25
Styrene	1000	967		ug/Kg		97	79 - 120	4	25
tert-Butylbenzene	1000	944		ug/Kg		94	80 - 122	5	25
Tetrachloroethene	1000	984		ug/Kg		98	78 - 121	3	25
Toluene	1000	979		ug/Kg		98	78 - 125	4	25
trans-1,2-Dichloroethene	1000	956		ug/Kg		96	67 - 120	4	25
trans-1,3-Dichloropropene	1000	974		ug/Kg		97	70 - 127	4	31
Trichlorofluoromethane	1000	793		ug/Kg		79	12 - 144	4	107

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	97		52 - 126

Eurofins TestAmerica, Sacramento

QC Sample Results

Client: Shannon & Wilson, Inc
 Project/Site: Kodiak DOT&PF PFAS (107471)

Job ID: 320-82156-1

Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: LCSD 320-545695/3-A
Matrix: Solid
Analysis Batch: 548328

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 545695

Surrogate	LCSD LCSD		Limits
	%Recovery	Qualifier	
4-Bromofluorobenzene (Surr)	104		67 - 135
Dibromofluoromethane (Surr)	100		61 - 123
Toluene-d8 (Surr)	108		65 - 131

Method: 8260C SIM - Volatile Organic Compounds (GC/MS)

Lab Sample ID: MB 320-545695/1-A
Matrix: Solid
Analysis Batch: 547089

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 545695

Analyte	MB MB		RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
1,1,1,2-Tetrachloroethane	ND		2.5	0.56	ug/Kg		11/24/21 13:57	12/01/21 07:41	1
1,1,2-Trichloroethane	ND		2.5	0.83	ug/Kg		11/24/21 13:57	12/01/21 07:41	1
1,2-Dichloroethane	ND		2.5	0.42	ug/Kg		11/24/21 13:57	12/01/21 07:41	1
Bromomethane	ND		5.0	1.6	ug/Kg		11/24/21 13:57	12/01/21 07:41	1
Chlorodibromomethane	ND		2.5	0.40	ug/Kg		11/24/21 13:57	12/01/21 07:41	1
Chloroform	ND		5.0	2.0	ug/Kg		11/24/21 13:57	12/01/21 07:41	1
Dichlorobromomethane	ND		2.5	0.33	ug/Kg		11/24/21 13:57	12/01/21 07:41	1
Ethylene Dibromide	ND		2.5	0.40	ug/Kg		11/24/21 13:57	12/01/21 07:41	1
Trichloroethene	ND		2.5	0.49	ug/Kg		11/24/21 13:57	12/01/21 07:41	1
Vinyl chloride	ND		2.5	0.63	ug/Kg		11/24/21 13:57	12/01/21 07:41	1

Surrogate	MB MB		Limits	Prepared	Analyzed	Dil Fac
	%Recovery	Qualifier				
4-Bromofluorobenzene (Surr)	84		69 - 129	11/24/21 13:57	12/01/21 07:41	1
Dibromofluoromethane (Surr)	136	S1+	72 - 132	11/24/21 13:57	12/01/21 07:41	1
1,2-Dichloroethane-d4 (Surr)	135	S1+	72 - 132	11/24/21 13:57	12/01/21 07:41	1
Toluene-d8 (Surr)	106		78 - 138	11/24/21 13:57	12/01/21 07:41	1

Lab Sample ID: LCS 320-545695/23-A
Matrix: Solid
Analysis Batch: 547089

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 545695

Analyte	Spike Added	LCS LCS		Unit	D	%Rec	Limits
		Result	Qualifier				
1,1,1,2-Tetrachloroethane	100	111		ug/Kg		111	70 - 124
1,1,2-Trichloroethane	100	115		ug/Kg		115	78 - 121
1,2-Dichloroethane	100	123		ug/Kg		123	73 - 128
Bromomethane	100	124		ug/Kg		124	53 - 143
Chlorodibromomethane	100	107		ug/Kg		107	74 - 126
Chloroform	100	126	*+	ug/Kg		126	78 - 123
Dichlorobromomethane	100	120		ug/Kg		120	75 - 127
Ethylene Dibromide	100	104		ug/Kg		104	78 - 122
Trichloroethene	100	112		ug/Kg		112	77 - 123
Vinyl chloride	100	129		ug/Kg		129	56 - 135

Surrogate	LCS LCS		Limits
	%Recovery	Qualifier	
4-Bromofluorobenzene (Surr)	86		69 - 129
Dibromofluoromethane (Surr)	130		72 - 132
1,2-Dichloroethane-d4 (Surr)	124		72 - 132

Eurofins TestAmerica, Sacramento

QC Sample Results

Client: Shannon & Wilson, Inc
 Project/Site: Kodiak DOT&PF PFAS (107471)

Job ID: 320-82156-1

Method: 8260C SIM - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 320-545695/23-A
Matrix: Solid
Analysis Batch: 547089

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 545695

Surrogate	LCS LCS		Limits
	%Recovery	Qualifier	
Toluene-d8 (Surr)	107		78 - 138

Lab Sample ID: LCSD 320-545695/24-A
Matrix: Solid
Analysis Batch: 547089

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 545695

Analyte	Spike Added	LCSD LCSD		Unit	D	%Rec	%Rec.		RPD	Limit
		Result	Qualifier				Limits	RPD		
1,1,2,2-Tetrachloroethane	100	115		ug/Kg		115	70 - 124	4	20	
1,1,2-Trichloroethane	100	114		ug/Kg		114	78 - 121	1	20	
1,2-Dichloroethane	100	125		ug/Kg		125	73 - 128	2	20	
Bromomethane	100	118		ug/Kg		118	53 - 143	5	20	
Chlorodibromomethane	100	108		ug/Kg		108	74 - 126	1	20	
Chloroform	100	125	*+	ug/Kg		125	78 - 123	1	20	
Dichlorobromomethane	100	120		ug/Kg		120	75 - 127	1	20	
Ethylene Dibromide	100	106		ug/Kg		106	78 - 122	2	20	
Trichloroethene	100	111		ug/Kg		111	77 - 123	1	20	
Vinyl chloride	100	125		ug/Kg		125	56 - 135	3	20	

Surrogate	LCSD LCSD		Limits
	%Recovery	Qualifier	
4-Bromofluorobenzene (Surr)	88		69 - 129
Dibromofluoromethane (Surr)	129		72 - 132
1,2-Dichloroethane-d4 (Surr)	125		72 - 132
Toluene-d8 (Surr)	108		78 - 138

Method: AK101 - Alaska - Gasoline Range Organics (GC/MS)

Lab Sample ID: MB 320-545695/1-A
Matrix: Solid
Analysis Batch: 548330

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 545695

Analyte	MB MB		RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
C6-C10 AK	ND		5.0	1.0	mg/Kg		11/24/21 13:57	12/05/21 21:12	1

Surrogate	MB MB		Limits	Prepared	Analyzed	Dil Fac
	%Recovery	Qualifier				
4-Bromofluorobenzene (Surr)	100		60 - 120	11/24/21 13:57	12/05/21 21:12	1
Trifluorotoluene (Surr)	119		60 - 120	11/24/21 13:57	12/05/21 21:12	1

Lab Sample ID: LCS 320-545695/4-A
Matrix: Solid
Analysis Batch: 548330

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 545695

Analyte	Spike Added	LCS LCS		Unit	D	%Rec	%Rec.	
		Result	Qualifier				Limits	RPD
C6-C10 AK	50.0	57.8		mg/Kg		116	60 - 120	

Surrogate	LCS LCS		Limits
	%Recovery	Qualifier	
4-Bromofluorobenzene (Surr)	105		60 - 120
Trifluorotoluene (Surr)	110		60 - 120

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QC Sample Results

Client: Shannon & Wilson, Inc
 Project/Site: Kodiak DOT&PF PFAS (107471)

Job ID: 320-82156-1

Method: AK101 - Alaska - Gasoline Range Organics (GC/MS) (Continued)

Lab Sample ID: LCSD 320-545695/5-A

Matrix: Solid

Analysis Batch: 548330

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 545695

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
C6-C10 AK	50.0	57.3		mg/Kg		115	60 - 120	1	20
Surrogate									
	%Recovery	Qualifier	Limits						
4-Bromofluorobenzene (Surr)	105		60 - 120						
Trifluorotoluene (Surr)	107		60 - 120						

Method: 8011 - EDB, DBCP, and 1,2,3-TCP (GC)

Lab Sample ID: MB 280-559548/1-A

Matrix: Solid

Analysis Batch: 559580

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 559548

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ethylene Dibromide	ND		0.10	0.015	ug/Kg		12/03/21 13:35	12/04/21 08:23	1
1,2,3-Trichloropropane	ND		0.10	0.054	ug/Kg		12/03/21 13:35	12/04/21 08:23	1
Surrogate									
	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dibromopropane	91		55 - 130				12/03/21 13:35	12/04/21 08:23	1

Lab Sample ID: LCS 280-559548/2-A

Matrix: Solid

Analysis Batch: 559580

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 559548

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Ethylene Dibromide	0.875	0.662		ug/Kg		76	70 - 130
1,2,3-Trichloropropane	0.878	0.741		ug/Kg		84	70 - 130
Surrogate							
	%Recovery	Qualifier	Limits				
1,2-Dibromopropane	96		55 - 130				

Lab Sample ID: LCSD 280-559548/3-A

Matrix: Solid

Analysis Batch: 559580

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 559548

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Ethylene Dibromide	0.875	0.719		ug/Kg		82	70 - 130	8	10
1,2,3-Trichloropropane	0.878	0.813		ug/Kg		93	70 - 130	9	10
Surrogate									
	%Recovery	Qualifier	Limits						
1,2-Dibromopropane	105		55 - 130						

QC Sample Results

Client: Shannon & Wilson, Inc
 Project/Site: Kodiak DOT&PF PFAS (107471)

Job ID: 320-82156-1

Method: AK102 - DRO

Lab Sample ID: MB 320-546878/1-A
Matrix: Solid
Analysis Batch: 550444

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 546878

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
DRO (nC10-<nC25)	0.600	J	2.0	0.50	mg/Kg		11/30/21 11:46	12/13/21 17:17	1
Surrogate	MB %Recovery	MB Qualifier	Limits				Prepared	Analyzed	Dil Fac
<i>o</i> -Terphenyl (Surr)	68		60 - 120				11/30/21 11:46	12/13/21 17:17	1
<i>n</i> -Triacontane-d62	67		60 - 120				11/30/21 11:46	12/13/21 17:17	1

Lab Sample ID: LCS 320-546878/2-A
Matrix: Solid
Analysis Batch: 550444

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 546878

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits	
DRO (nC10-<nC25)	10.0	8.87		mg/Kg		89	75 - 125	
Surrogate	LCS %Recovery	LCS Qualifier	Limits					
<i>o</i> -Terphenyl (Surr)	71		60 - 120					
<i>n</i> -Triacontane-d62	74		60 - 120					

Lab Sample ID: LCSD 320-546878/3-A
Matrix: Solid
Analysis Batch: 550444

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 546878

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	Limits	RPD	RPD Limit
DRO (nC10-<nC25)	10.0	9.16		mg/Kg		92	75 - 125	3	20
Surrogate	LCSD %Recovery	LCSD Qualifier	Limits						
<i>o</i> -Terphenyl (Surr)	72		60 - 120						
<i>n</i> -Triacontane-d62	81		60 - 120						

Lab Sample ID: 320-82156-1 MS
Matrix: Solid
Analysis Batch: 550444

Client Sample ID: ADQ-ISM1-01
Prep Type: Total/NA
Prep Batch: 546878

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	Limits	
DRO (nC10-<nC25)	350	H B	9.82	385	4	mg/Kg		371	60 - 140	
Surrogate	MS %Recovery	MS Qualifier	Limits							
<i>o</i> -Terphenyl (Surr)	142	S1+	60 - 120							
<i>n</i> -Triacontane-d62	227	S1+	60 - 120							

Lab Sample ID: 320-82156-1 MSD
Matrix: Solid
Analysis Batch: 550444

Client Sample ID: ADQ-ISM1-01
Prep Type: Total/NA
Prep Batch: 546878

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	Limits	RPD	RPD Limit
DRO (nC10-<nC25)	350	H B	9.69	388	4	mg/Kg		406	60 - 140	1	50

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QC Sample Results

Client: Shannon & Wilson, Inc
 Project/Site: Kodiak DOT&PF PFAS (107471)

Job ID: 320-82156-1

Method: AK102 - DRO (Continued)

Lab Sample ID: 320-82156-1 MSD
Matrix: Solid
Analysis Batch: 550444

Client Sample ID: ADQ-ISM1-01
Prep Type: Total/NA
Prep Batch: 546878

Surrogate	MSD MSD		Limits
	%Recovery	Qualifier	
<i>o</i> -Terphenyl (Surr)	139	S1+	60 - 120
<i>n</i> -Triacontane-d62	272	S1+	60 - 120

Method: EPA 537(Mod) - PFAS for QSM 5.3, Table B-15

Lab Sample ID: MB 320-545627/1-A
Matrix: Water
Analysis Batch: 546209

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 545627

Analyte	MB MB		RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Perfluorohexanoic acid (PFHxA)	ND		2.0	0.58	ng/L		11/24/21 12:30	11/27/21 20:24	1
Perfluoroheptanoic acid (PFHpA)	ND		2.0	0.25	ng/L		11/24/21 12:30	11/27/21 20:24	1
Perfluorooctanoic acid (PFOA)	ND		2.0	0.85	ng/L		11/24/21 12:30	11/27/21 20:24	1
Perfluorononanoic acid (PFNA)	ND		2.0	0.27	ng/L		11/24/21 12:30	11/27/21 20:24	1
Perfluorodecanoic acid (PFDA)	ND		2.0	0.31	ng/L		11/24/21 12:30	11/27/21 20:24	1
Perfluoroundecanoic acid (PFUnA)	ND		2.0	1.1	ng/L		11/24/21 12:30	11/27/21 20:24	1
Perfluorododecanoic acid (PFDoA)	ND		2.0	0.55	ng/L		11/24/21 12:30	11/27/21 20:24	1
Perfluorotridecanoic acid (PFTrDA)	ND		2.0	1.3	ng/L		11/24/21 12:30	11/27/21 20:24	1
Perfluorotetradecanoic acid (PFTeA)	ND		2.0	0.73	ng/L		11/24/21 12:30	11/27/21 20:24	1
Perfluorobutanesulfonic acid (PFBS)	ND		2.0	0.20	ng/L		11/24/21 12:30	11/27/21 20:24	1
Perfluorohexanesulfonic acid (PFHxS)	ND		2.0	0.57	ng/L		11/24/21 12:30	11/27/21 20:24	1
Perfluorooctanesulfonic acid (PFOS)	ND		2.0	0.54	ng/L		11/24/21 12:30	11/27/21 20:24	1
NEtFOSAA	ND		5.0	1.3	ng/L		11/24/21 12:30	11/27/21 20:24	1
NMeFOSAA	ND		5.0	1.2	ng/L		11/24/21 12:30	11/27/21 20:24	1
HFPO-DA (GenX)	ND		4.0	1.5	ng/L		11/24/21 12:30	11/27/21 20:24	1
9Cl-PF3ONS	ND		2.0	0.24	ng/L		11/24/21 12:30	11/27/21 20:24	1
11Cl-PF3OUdS	ND		2.0	0.32	ng/L		11/24/21 12:30	11/27/21 20:24	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	ND		2.0	0.40	ng/L		11/24/21 12:30	11/27/21 20:24	1

Isotope Dilution	MB MB		Limits	Prepared	Analyzed	Dil Fac
	%Recovery	Qualifier				
13C2 PFHxA	106		50 - 150	11/24/21 12:30	11/27/21 20:24	1
13C4 PFHpA	103		50 - 150	11/24/21 12:30	11/27/21 20:24	1
13C4 PFOA	100		50 - 150	11/24/21 12:30	11/27/21 20:24	1
13C5 PFNA	102		50 - 150	11/24/21 12:30	11/27/21 20:24	1
13C2 PFDA	95		50 - 150	11/24/21 12:30	11/27/21 20:24	1
13C2 PFUnA	106		50 - 150	11/24/21 12:30	11/27/21 20:24	1
13C2 PFDoA	105		50 - 150	11/24/21 12:30	11/27/21 20:24	1
13C2 PFTeDA	100		50 - 150	11/24/21 12:30	11/27/21 20:24	1
13C3 PFBS	116		50 - 150	11/24/21 12:30	11/27/21 20:24	1
18O2 PFHxS	92		50 - 150	11/24/21 12:30	11/27/21 20:24	1
13C4 PFOS	99		50 - 150	11/24/21 12:30	11/27/21 20:24	1
d5-NEtFOSAA	112		50 - 150	11/24/21 12:30	11/27/21 20:24	1
d3-NMeFOSAA	118		50 - 150	11/24/21 12:30	11/27/21 20:24	1
13C3 HFPO-DA	87		50 - 150	11/24/21 12:30	11/27/21 20:24	1

QC Sample Results

Client: Shannon & Wilson, Inc
 Project/Site: Kodiak DOT&PF PFAS (107471)

Job ID: 320-82156-1

Method: EPA 537(Mod) - PFAS for QSM 5.3, Table B-15 (Continued)

Lab Sample ID: LCS 320-545627/2-A
Matrix: Water
Analysis Batch: 546209

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 545627
%Rec.

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
Perfluorohexanoic acid (PFHxA)	40.0	41.8		ng/L		104	72 - 129
Perfluoroheptanoic acid (PFHpA)	40.0	41.3		ng/L		103	72 - 130
Perfluorooctanoic acid (PFOA)	40.0	41.5		ng/L		104	71 - 133
Perfluorononanoic acid (PFNA)	40.0	42.0		ng/L		105	69 - 130
Perfluorodecanoic acid (PFDA)	40.0	40.6		ng/L		101	71 - 129
Perfluoroundecanoic acid (PFUnA)	40.0	36.9		ng/L		92	69 - 133
Perfluorododecanoic acid (PFDoA)	40.0	39.2		ng/L		98	72 - 134
Perfluorotridecanoic acid (PFTrDA)	40.0	41.7		ng/L		104	65 - 144
Perfluorotetradecanoic acid (PFTeA)	40.0	40.8		ng/L		102	71 - 132
Perfluorobutanesulfonic acid (PFBS)	35.4	31.6		ng/L		89	72 - 130
Perfluorohexanesulfonic acid (PFHxS)	36.4	36.5		ng/L		100	68 - 131
Perfluorooctanesulfonic acid (PFOS)	37.1	34.3		ng/L		92	65 - 140
NEtFOSAA	40.0	37.8		ng/L		95	61 - 135
NMeFOSAA	40.0	37.7		ng/L		94	65 - 136
HFPO-DA (GenX)	40.0	43.9		ng/L		110	72 - 132
9Cl-PF3ONS	37.3	33.5		ng/L		90	77 - 137
11Cl-PF3OUdS	37.7	34.6		ng/L		92	76 - 136
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	37.7	37.3		ng/L		99	81 - 141

Isotope Dilution	LCS %Recovery	LCS Qualifier	Limits
13C2 PFHxA	90		50 - 150
13C4 PFHpA	95		50 - 150
13C4 PFOA	97		50 - 150
13C5 PFNA	96		50 - 150
13C2 PFDA	87		50 - 150
13C2 PFUnA	103		50 - 150
13C2 PFDoA	95		50 - 150
13C2 PFTeDA	90		50 - 150
13C3 PFBS	102		50 - 150
18O2 PFHxS	92		50 - 150
13C4 PFOS	100		50 - 150
d5-NEtFOSAA	110		50 - 150
d3-NMeFOSAA	110		50 - 150
13C3 HFPO-DA	86		50 - 150

Lab Sample ID: MB 320-547064/1-A
Matrix: Solid
Analysis Batch: 548024

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 547064

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorohexanoic acid (PFHxA)	ND		0.20	0.031	ug/Kg		11/30/21 18:38	12/03/21 20:48	1
Perfluoroheptanoic acid (PFHpA)	ND		0.20	0.038	ug/Kg		11/30/21 18:38	12/03/21 20:48	1
Perfluorooctanoic acid (PFOA)	ND		0.20	0.053	ug/Kg		11/30/21 18:38	12/03/21 20:48	1

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QC Sample Results

Client: Shannon & Wilson, Inc
 Project/Site: Kodiak DOT&PF PFAS (107471)

Job ID: 320-82156-1

Method: EPA 537(Mod) - PFAS for QSM 5.3, Table B-15 (Continued)

Lab Sample ID: MB 320-547064/1-A
Matrix: Solid
Analysis Batch: 548024

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 547064

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorononanoic acid (PFNA)	ND		0.20	0.022	ug/Kg		11/30/21 18:38	12/03/21 20:48	1
Perfluorodecanoic acid (PFDA)	ND		0.20	0.048	ug/Kg		11/30/21 18:38	12/03/21 20:48	1
Perfluoroundecanoic acid (PFUnA)	ND		0.20	0.042	ug/Kg		11/30/21 18:38	12/03/21 20:48	1
Perfluorododecanoic acid (PFDoA)	ND		0.20	0.030	ug/Kg		11/30/21 18:38	12/03/21 20:48	1
Perfluorotridecanoic acid (PFTrDA)	ND		0.20	0.021	ug/Kg		11/30/21 18:38	12/03/21 20:48	1
Perfluorotetradecanoic acid (PFTeA)	ND		0.20	0.037	ug/Kg		11/30/21 18:38	12/03/21 20:48	1
Perfluorobutanesulfonic acid (PFBS)	ND		0.20	0.038	ug/Kg		11/30/21 18:38	12/03/21 20:48	1
Perfluorohexanesulfonic acid (PFHxS)	ND		0.20	0.029	ug/Kg		11/30/21 18:38	12/03/21 20:48	1
Perfluorooctanesulfonic acid (PFOS)	ND		0.20	0.043	ug/Kg		11/30/21 18:38	12/03/21 20:48	1
NEtFOSAA	ND		0.20	0.048	ug/Kg		11/30/21 18:38	12/03/21 20:48	1
NMeFOSAA	ND		0.20	0.023	ug/Kg		11/30/21 18:38	12/03/21 20:48	1
HFPO-DA (GenX)	ND		0.20	0.041	ug/Kg		11/30/21 18:38	12/03/21 20:48	1
9Cl-PF3ONS	ND		0.20	0.035	ug/Kg		11/30/21 18:38	12/03/21 20:48	1
11Cl-PF3OUdS	ND		0.20	0.031	ug/Kg		11/30/21 18:38	12/03/21 20:48	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	ND		0.20	0.039	ug/Kg		11/30/21 18:38	12/03/21 20:48	1

Isotope Dilution	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C2 PFHxA	81		50 - 150	11/30/21 18:38	12/03/21 20:48	1
13C4 PFHpA	74		50 - 150	11/30/21 18:38	12/03/21 20:48	1
13C4 PFOA	90		50 - 150	11/30/21 18:38	12/03/21 20:48	1
13C5 PFNA	78		50 - 150	11/30/21 18:38	12/03/21 20:48	1
13C2 PFDA	84		50 - 150	11/30/21 18:38	12/03/21 20:48	1
13C2 PFUnA	82		50 - 150	11/30/21 18:38	12/03/21 20:48	1
13C2 PFDoA	79		50 - 150	11/30/21 18:38	12/03/21 20:48	1
13C2 PFTeDA	83		50 - 150	11/30/21 18:38	12/03/21 20:48	1
13C3 PFBS	84		50 - 150	11/30/21 18:38	12/03/21 20:48	1
18O2 PFHxS	77		50 - 150	11/30/21 18:38	12/03/21 20:48	1
13C4 PFOS	80		50 - 150	11/30/21 18:38	12/03/21 20:48	1
d5-NEtFOSAA	77		50 - 150	11/30/21 18:38	12/03/21 20:48	1
d3-NMeFOSAA	68		50 - 150	11/30/21 18:38	12/03/21 20:48	1
13C3 HFPO-DA	74		50 - 150	11/30/21 18:38	12/03/21 20:48	1

Lab Sample ID: LCS 320-547064/2-A
Matrix: Solid
Analysis Batch: 548024

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 547064

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
Perfluorohexanoic acid (PFHxA)	2.00	1.82		ug/Kg		91	70 - 132
Perfluoroheptanoic acid (PFHpA)	2.00	1.97		ug/Kg		98	71 - 131
Perfluorooctanoic acid (PFOA)	2.00	1.78		ug/Kg		89	69 - 133
Perfluorononanoic acid (PFNA)	2.00	1.92		ug/Kg		96	72 - 129
Perfluorodecanoic acid (PFDA)	2.00	2.00		ug/Kg		100	69 - 133
Perfluoroundecanoic acid (PFUnA)	2.00	1.87		ug/Kg		93	64 - 136
Perfluorododecanoic acid (PFDoA)	2.00	2.02		ug/Kg		101	69 - 135
Perfluorotridecanoic acid (PFTrDA)	2.00	2.18		ug/Kg		109	66 - 139

Eurofins TestAmerica, Sacramento

QC Sample Results

Client: Shannon & Wilson, Inc
 Project/Site: Kodiak DOT&PF PFAS (107471)

Job ID: 320-82156-1

Method: EPA 537(Mod) - PFAS for QSM 5.3, Table B-15 (Continued)

Lab Sample ID: LCS 320-547064/2-A
Matrix: Solid
Analysis Batch: 548024

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 547064

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Perfluorotetradecanoic acid (PFTeA)	2.00	1.91		ug/Kg		95	69 - 133
Perfluorobutanesulfonic acid (PFBS)	1.77	1.44		ug/Kg		81	72 - 128
Perfluorohexanesulfonic acid (PFHxS)	1.82	1.67		ug/Kg		92	67 - 130
Perfluorooctanesulfonic acid (PFOS)	1.86	1.81		ug/Kg		98	68 - 136
NEtFOSAA	2.00	1.79		ug/Kg		90	61 - 139
NMeFOSAA	2.00	2.17		ug/Kg		108	63 - 144
HFPO-DA (GenX)	2.00	2.26		ug/Kg		113	77 - 137
9CI-PF3ONS	1.86	1.82		ug/Kg		98	75 - 135
11CI-PF3OUdS	1.88	1.97		ug/Kg		105	76 - 136
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	1.88	1.87		ug/Kg		100	79 - 139

Isotope Dilution	LCS %Recovery	LCS Qualifier	Limits
13C2 PFHxA	111		50 - 150
13C4 PFHpA	97		50 - 150
13C4 PFOA	118		50 - 150
13C5 PFNA	112		50 - 150
13C2 PFDA	105		50 - 150
13C2 PFUnA	109		50 - 150
13C2 PFDoA	107		50 - 150
13C2 PFTeDA	117		50 - 150
13C3 PFBS	128		50 - 150
18O2 PFHxS	115		50 - 150
13C4 PFOS	107		50 - 150
d5-NEtFOSAA	105		50 - 150
d3-NMeFOSAA	89		50 - 150
13C3 HFPO-DA	98		50 - 150

Lab Sample ID: 320-82156-1 MS
Matrix: Solid
Analysis Batch: 548024

Client Sample ID: ADQ-ISM1-01
Prep Type: Total/NA
Prep Batch: 547064

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Perfluorohexanoic acid (PFHxA)	ND	H	1.87	1.71		ug/Kg		92	70 - 132
Perfluoroheptanoic acid (PFHpA)	ND	H	1.87	1.82		ug/Kg		98	71 - 131
Perfluorooctanoic acid (PFOA)	ND	H	1.87	1.65		ug/Kg		88	69 - 133
Perfluorononanoic acid (PFNA)	ND	H	1.87	1.79		ug/Kg		96	72 - 129
Perfluorodecanoic acid (PFDA)	ND	H	1.87	1.69		ug/Kg		90	69 - 133
Perfluoroundecanoic acid (PFUnA)	ND	H	1.87	1.62		ug/Kg		87	64 - 136
Perfluorododecanoic acid (PFDoA)	ND	H	1.87	1.85		ug/Kg		99	69 - 135
Perfluorotridecanoic acid (PFTrDA)	ND	H	1.87	2.09		ug/Kg		112	66 - 139
Perfluorotetradecanoic acid (PFTeA)	ND	H	1.87	1.69		ug/Kg		90	69 - 133

Eurofins TestAmerica, Sacramento

QC Sample Results

Client: Shannon & Wilson, Inc
 Project/Site: Kodiak DOT&PF PFAS (107471)

Job ID: 320-82156-1

Method: EPA 537(Mod) - PFAS for QSM 5.3, Table B-15 (Continued)

Lab Sample ID: 320-82156-1 MS
Matrix: Solid
Analysis Batch: 548024

Client Sample ID: ADQ-ISM1-01
Prep Type: Total/NA
Prep Batch: 547064

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Perfluorobutanesulfonic acid (PFBS)	ND	H	1.65	1.27		ug/Kg		77	72 - 128
Perfluorohexanesulfonic acid (PFHxS)	ND	H	1.70	1.41		ug/Kg		83	67 - 130
Perfluorooctanesulfonic acid (PFOS)	ND	H F1	1.73	2.39	F1	ug/Kg		138	68 - 136
NEtFOSAA	ND	H	1.87	1.71		ug/Kg		92	61 - 139
NMeFOSAA	ND	H	1.87	2.31		ug/Kg		124	63 - 144
HFPO-DA (GenX)	ND	H	1.87	2.03		ug/Kg		109	77 - 137
9Cl-PF3ONS	ND	H	1.74	1.70		ug/Kg		98	75 - 135
11Cl-PF3OUdS	ND	H	1.76	2.06		ug/Kg		117	76 - 136
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	ND	H	1.76	1.75		ug/Kg		100	79 - 139

Isotope Dilution	MS %Recovery	MS Qualifier	Limits
13C2 PFHxA	72		50 - 150
13C4 PFHpA	74		50 - 150
13C4 PFOA	91		50 - 150
13C5 PFNA	73		50 - 150
13C2 PFDA	82		50 - 150
13C2 PFUnA	81		50 - 150
13C2 PFDoA	79		50 - 150
13C2 PFTeDA	83		50 - 150
13C3 PFBS	78		50 - 150
18O2 PFHxS	84		50 - 150
13C4 PFOS	75		50 - 150
d5-NEtFOSAA	83		50 - 150
d3-NMeFOSAA	64		50 - 150
13C3 HFPO-DA	81		50 - 150

Lab Sample ID: 320-82156-1 MSD
Matrix: Solid
Analysis Batch: 548024

Client Sample ID: ADQ-ISM1-01
Prep Type: Total/NA
Prep Batch: 547064

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Perfluorohexanoic acid (PFHxA)	ND	H	1.91	1.75		ug/Kg		91	70 - 132	2	30
Perfluoroheptanoic acid (PFHpA)	ND	H	1.91	1.96		ug/Kg		103	71 - 131	7	30
Perfluorooctanoic acid (PFOA)	ND	H	1.91	1.69		ug/Kg		89	69 - 133	3	30
Perfluorononanoic acid (PFNA)	ND	H	1.91	1.87		ug/Kg		98	72 - 129	4	30
Perfluorodecanoic acid (PFDA)	ND	H	1.91	1.82		ug/Kg		95	69 - 133	8	30
Perfluoroundecanoic acid (PFUnA)	ND	H	1.91	1.71		ug/Kg		89	64 - 136	6	30
Perfluorododecanoic acid (PFDoA)	ND	H	1.91	1.61		ug/Kg		84	69 - 135	14	30
Perfluorotridecanoic acid (PFTTrDA)	ND	H	1.91	2.08		ug/Kg		109	66 - 139	1	30
Perfluorotetradecanoic acid (PFTTeA)	ND	H	1.91	1.89		ug/Kg		99	69 - 133	11	30
Perfluorobutanesulfonic acid (PFBS)	ND	H	1.69	1.51		ug/Kg		89	72 - 128	17	30

Eurofins TestAmerica, Sacramento

QC Sample Results

Client: Shannon & Wilson, Inc
 Project/Site: Kodiak DOT&PF PFAS (107471)

Job ID: 320-82156-1

Method: EPA 537(Mod) - PFAS for QSM 5.3, Table B-15 (Continued)

Lab Sample ID: 320-82156-1 MSD

Matrix: Solid

Analysis Batch: 548024

Client Sample ID: ADQ-ISM1-01

Prep Type: Total/NA

Prep Batch: 547064

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Perfluorohexanesulfonic acid (PFHxS)	ND	H	1.74	1.66		ug/Kg		96	67 - 130	17	30
Perfluorooctanesulfonic acid (PFOS)	ND	H F1	1.77	2.34		ug/Kg		132	68 - 136	2	30
NEtFOSAA	ND	H	1.91	2.12		ug/Kg		111	61 - 139	22	30
NMeFOSAA	ND	H	1.91	1.92		ug/Kg		100	63 - 144	18	30
HFPO-DA (GenX)	ND	H	1.91	1.80		ug/Kg		94	77 - 137	12	30
9Cl-PF3ONS	ND	H	1.78	1.66		ug/Kg		93	75 - 135	2	30
11Cl-PF3OUdS	ND	H	1.80	1.96		ug/Kg		109	76 - 136	5	30
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	ND	H	1.80	1.64		ug/Kg		91	79 - 139	6	30

Isotope Dilution	MSD		Limits
	%Recovery	Qualifier	
13C2 PFHxA	88		50 - 150
13C4 PFHpA	73		50 - 150
13C4 PFOA	102		50 - 150
13C5 PFNA	84		50 - 150
13C2 PFDA	93		50 - 150
13C2 PFUnA	93		50 - 150
13C2 PFDoA	95		50 - 150
13C2 PFTeDA	100		50 - 150
13C3 PFBS	95		50 - 150
18O2 PFHxS	98		50 - 150
13C4 PFOS	93		50 - 150
d5-NEtFOSAA	93		50 - 150
d3-NMeFOSAA	91		50 - 150
13C3 HFPO-DA	75		50 - 150

QC Association Summary

Client: Shannon & Wilson, Inc
 Project/Site: Kodiak DOT&PF PFAS (107471)

Job ID: 320-82156-1

GC/MS VOA

ISM Prep Batch: 545690

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-82156-1	ADQ-ISM1-01	Total/NA	Solid	Increment, Prep	
320-82156-2	ADQ-ISM1-101	Total/NA	Solid	Increment, Prep	
320-82156-3	ADQ-ISM1-201	Total/NA	Solid	Increment, Prep	
320-82156-4	ADQ-ISM1-02	Total/NA	Solid	Increment, Prep	
320-82156-5	ADQ-ISM1-03	Total/NA	Solid	Increment, Prep	
320-82156-6	ADQ-ISM1-04	Total/NA	Solid	Increment, Prep	
320-82156-7	ADQ-ISM2-01	Total/NA	Solid	Increment, Prep	
320-82156-8	ADQ-ISM2-02	Total/NA	Solid	Increment, Prep	
320-82156-9	ADQ-ISM2-102	Total/NA	Solid	Increment, Prep	
320-82156-10	ADQ-ISM2-202	Total/NA	Solid	Increment, Prep	
320-82156-11	ADQ-ISM2-03	Total/NA	Solid	Increment, Prep	
320-82156-12 - RA	ADQ-ISM2-04	Total/NA	Solid	Increment, Prep	
320-82156-12	ADQ-ISM2-04	Total/NA	Solid	Increment, Prep	
320-82156-13	ADQ-ISM2-05	Total/NA	Solid	Increment, Prep	

Prep Batch: 545695

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-82156-1	ADQ-ISM1-01	Total/NA	Solid	5035	545690
320-82156-2	ADQ-ISM1-101	Total/NA	Solid	5035	545690
320-82156-3	ADQ-ISM1-201	Total/NA	Solid	5035	545690
320-82156-4	ADQ-ISM1-02	Total/NA	Solid	5035	545690
320-82156-5	ADQ-ISM1-03	Total/NA	Solid	5035	545690
320-82156-6	ADQ-ISM1-04	Total/NA	Solid	5035	545690
320-82156-7	ADQ-ISM2-01	Total/NA	Solid	5035	545690
320-82156-8	ADQ-ISM2-02	Total/NA	Solid	5035	545690
320-82156-9	ADQ-ISM2-102	Total/NA	Solid	5035	545690
320-82156-10	ADQ-ISM2-202	Total/NA	Solid	5035	545690
320-82156-11	ADQ-ISM2-03	Total/NA	Solid	5035	545690
320-82156-12	ADQ-ISM2-04	Total/NA	Solid	5035	545690
320-82156-12 - RA	ADQ-ISM2-04	Total/NA	Solid	5035	545690
320-82156-13	ADQ-ISM2-05	Total/NA	Solid	5035	545690
320-82156-14	Trip Blank 2	Total/NA	Solid	5035	
320-82156-15	Trip Blank 3	Total/NA	Solid	5035	
320-82156-16	Trip Blank 4	Total/NA	Solid	5035	
320-82156-17	Trip Blank 5	Total/NA	Solid	5035	
MB 320-545695/1-A	Method Blank	Total/NA	Solid	5035	
LCS 320-545695/23-A	Lab Control Sample	Total/NA	Solid	5035	
LCS 320-545695/2-A	Lab Control Sample	Total/NA	Solid	5035	
LCS 320-545695/4-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 320-545695/24-A	Lab Control Sample Dup	Total/NA	Solid	5035	
LCSD 320-545695/3-A	Lab Control Sample Dup	Total/NA	Solid	5035	
LCSD 320-545695/5-A	Lab Control Sample Dup	Total/NA	Solid	5035	

Analysis Batch: 547089

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-82156-1	ADQ-ISM1-01	Total/NA	Solid	8260C SIM	545695
320-82156-2	ADQ-ISM1-101	Total/NA	Solid	8260C SIM	545695
320-82156-3	ADQ-ISM1-201	Total/NA	Solid	8260C SIM	545695
320-82156-4	ADQ-ISM1-02	Total/NA	Solid	8260C SIM	545695
320-82156-5	ADQ-ISM1-03	Total/NA	Solid	8260C SIM	545695
320-82156-6	ADQ-ISM1-04	Total/NA	Solid	8260C SIM	545695

Eurofins TestAmerica, Sacramento

QC Association Summary

Client: Shannon & Wilson, Inc
 Project/Site: Kodiak DOT&PF PFAS (107471)

Job ID: 320-82156-1

GC/MS VOA (Continued)

Analysis Batch: 547089 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-82156-7	ADQ-ISM2-01	Total/NA	Solid	8260C SIM	545695
320-82156-8	ADQ-ISM2-02	Total/NA	Solid	8260C SIM	545695
320-82156-9	ADQ-ISM2-102	Total/NA	Solid	8260C SIM	545695
320-82156-10	ADQ-ISM2-202	Total/NA	Solid	8260C SIM	545695
320-82156-11	ADQ-ISM2-03	Total/NA	Solid	8260C SIM	545695
320-82156-12	ADQ-ISM2-04	Total/NA	Solid	8260C SIM	545695
320-82156-13	ADQ-ISM2-05	Total/NA	Solid	8260C SIM	545695
320-82156-14	Trip Blank 2	Total/NA	Solid	8260C SIM	545695
320-82156-15	Trip Blank 3	Total/NA	Solid	8260C SIM	545695
320-82156-16	Trip Blank 4	Total/NA	Solid	8260C SIM	545695
320-82156-17	Trip Blank 5	Total/NA	Solid	8260C SIM	545695
MB 320-545695/1-A	Method Blank	Total/NA	Solid	8260C SIM	545695
LCS 320-545695/23-A	Lab Control Sample	Total/NA	Solid	8260C SIM	545695
LCSD 320-545695/24-A	Lab Control Sample Dup	Total/NA	Solid	8260C SIM	545695

Analysis Batch: 548328

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-82156-1	ADQ-ISM1-01	Total/NA	Solid	8260C	545695
320-82156-2	ADQ-ISM1-101	Total/NA	Solid	8260C	545695
320-82156-3	ADQ-ISM1-201	Total/NA	Solid	8260C	545695
320-82156-4	ADQ-ISM1-02	Total/NA	Solid	8260C	545695
320-82156-5	ADQ-ISM1-03	Total/NA	Solid	8260C	545695
320-82156-6	ADQ-ISM1-04	Total/NA	Solid	8260C	545695
320-82156-7	ADQ-ISM2-01	Total/NA	Solid	8260C	545695
320-82156-8	ADQ-ISM2-02	Total/NA	Solid	8260C	545695
320-82156-9	ADQ-ISM2-102	Total/NA	Solid	8260C	545695
320-82156-10	ADQ-ISM2-202	Total/NA	Solid	8260C	545695
320-82156-11	ADQ-ISM2-03	Total/NA	Solid	8260C	545695
320-82156-12	ADQ-ISM2-04	Total/NA	Solid	8260C	545695
320-82156-13	ADQ-ISM2-05	Total/NA	Solid	8260C	545695
320-82156-14	Trip Blank 2	Total/NA	Solid	8260C	545695
320-82156-15	Trip Blank 3	Total/NA	Solid	8260C	545695
320-82156-16	Trip Blank 4	Total/NA	Solid	8260C	545695
320-82156-17	Trip Blank 5	Total/NA	Solid	8260C	545695
MB 320-545695/1-A	Method Blank	Total/NA	Solid	8260C	545695
LCS 320-545695/2-A	Lab Control Sample	Total/NA	Solid	8260C	545695
LCSD 320-545695/3-A	Lab Control Sample Dup	Total/NA	Solid	8260C	545695

Analysis Batch: 548330

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-82156-1	ADQ-ISM1-01	Total/NA	Solid	AK101	545695
320-82156-2	ADQ-ISM1-101	Total/NA	Solid	AK101	545695
320-82156-3	ADQ-ISM1-201	Total/NA	Solid	AK101	545695
320-82156-4	ADQ-ISM1-02	Total/NA	Solid	AK101	545695
320-82156-5	ADQ-ISM1-03	Total/NA	Solid	AK101	545695
320-82156-6	ADQ-ISM1-04	Total/NA	Solid	AK101	545695
320-82156-7	ADQ-ISM2-01	Total/NA	Solid	AK101	545695
320-82156-8	ADQ-ISM2-02	Total/NA	Solid	AK101	545695
320-82156-10	ADQ-ISM2-202	Total/NA	Solid	AK101	545695
320-82156-11	ADQ-ISM2-03	Total/NA	Solid	AK101	545695
320-82156-13	ADQ-ISM2-05	Total/NA	Solid	AK101	545695

Eurofins TestAmerica, Sacramento

QC Association Summary

Client: Shannon & Wilson, Inc
 Project/Site: Kodiak DOT&PF PFAS (107471)

Job ID: 320-82156-1

GC/MS VOA (Continued)

Analysis Batch: 548330 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-82156-14	Trip Blank 2	Total/NA	Solid	AK101	545695
320-82156-15	Trip Blank 3	Total/NA	Solid	AK101	545695
320-82156-16	Trip Blank 4	Total/NA	Solid	AK101	545695
320-82156-17	Trip Blank 5	Total/NA	Solid	AK101	545695
MB 320-545695/1-A	Method Blank	Total/NA	Solid	AK101	545695
LCS 320-545695/4-A	Lab Control Sample	Total/NA	Solid	AK101	545695
LCSD 320-545695/5-A	Lab Control Sample Dup	Total/NA	Solid	AK101	545695

Analysis Batch: 548753

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-82156-9	ADQ-ISM2-102	Total/NA	Solid	AK101	545695
320-82156-12	ADQ-ISM2-04	Total/NA	Solid	AK101	545695

Analysis Batch: 548756

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-82156-12 - RA	ADQ-ISM2-04	Total/NA	Solid	8260C	545695

GC Semi VOA

ISM Prep Batch: 545596

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-82156-1	ADQ-ISM1-01	Total/NA	Solid	Increment, prep	
320-82156-2	ADQ-ISM1-101	Total/NA	Solid	Increment, prep	
320-82156-3	ADQ-ISM1-201	Total/NA	Solid	Increment, prep	
320-82156-4	ADQ-ISM1-02	Total/NA	Solid	Increment, prep	
320-82156-5	ADQ-ISM1-03	Total/NA	Solid	Increment, prep	
320-82156-6	ADQ-ISM1-04	Total/NA	Solid	Increment, prep	
320-82156-7	ADQ-ISM2-01	Total/NA	Solid	Increment, prep	
320-82156-8	ADQ-ISM2-02	Total/NA	Solid	Increment, prep	
320-82156-9	ADQ-ISM2-102	Total/NA	Solid	Increment, prep	
320-82156-10	ADQ-ISM2-202	Total/NA	Solid	Increment, prep	
320-82156-11	ADQ-ISM2-03	Total/NA	Solid	Increment, prep	
320-82156-12	ADQ-ISM2-04	Total/NA	Solid	Increment, prep	
320-82156-13	ADQ-ISM2-05	Total/NA	Solid	Increment, prep	
320-82156-1 MS	ADQ-ISM1-01	Total/NA	Solid	Increment, prep	
320-82156-1 MSD	ADQ-ISM1-01	Total/NA	Solid	Increment, prep	

Prep Batch: 546878

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-82156-1	ADQ-ISM1-01	Total/NA	Solid	AK102	545596
320-82156-2	ADQ-ISM1-101	Total/NA	Solid	AK102	545596
320-82156-3	ADQ-ISM1-201	Total/NA	Solid	AK102	545596
320-82156-4	ADQ-ISM1-02	Total/NA	Solid	AK102	545596
320-82156-5	ADQ-ISM1-03	Total/NA	Solid	AK102	545596
320-82156-6	ADQ-ISM1-04	Total/NA	Solid	AK102	545596
320-82156-7	ADQ-ISM2-01	Total/NA	Solid	AK102	545596
320-82156-8	ADQ-ISM2-02	Total/NA	Solid	AK102	545596
320-82156-9	ADQ-ISM2-102	Total/NA	Solid	AK102	545596
320-82156-10	ADQ-ISM2-202	Total/NA	Solid	AK102	545596
320-82156-11	ADQ-ISM2-03	Total/NA	Solid	AK102	545596
320-82156-12	ADQ-ISM2-04	Total/NA	Solid	AK102	545596

Eurofins TestAmerica, Sacramento

QC Association Summary

Client: Shannon & Wilson, Inc
 Project/Site: Kodiak DOT&PF PFAS (107471)

Job ID: 320-82156-1

GC Semi VOA (Continued)

Prep Batch: 546878 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-82156-13	ADQ-ISM2-05	Total/NA	Solid	AK102	545596
MB 320-546878/1-A	Method Blank	Total/NA	Solid	AK102	
LCS 320-546878/2-A	Lab Control Sample	Total/NA	Solid	AK102	
LCSD 320-546878/3-A	Lab Control Sample Dup	Total/NA	Solid	AK102	
320-82156-1 MS	ADQ-ISM1-01	Total/NA	Solid	AK102	545596
320-82156-1 MSD	ADQ-ISM1-01	Total/NA	Solid	AK102	545596

Analysis Batch: 550444

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-82156-1	ADQ-ISM1-01	Total/NA	Solid	AK102	546878
320-82156-2	ADQ-ISM1-101	Total/NA	Solid	AK102	546878
320-82156-3	ADQ-ISM1-201	Total/NA	Solid	AK102	546878
320-82156-4	ADQ-ISM1-02	Total/NA	Solid	AK102	546878
320-82156-5	ADQ-ISM1-03	Total/NA	Solid	AK102	546878
320-82156-6	ADQ-ISM1-04	Total/NA	Solid	AK102	546878
320-82156-7	ADQ-ISM2-01	Total/NA	Solid	AK102	546878
320-82156-8	ADQ-ISM2-02	Total/NA	Solid	AK102	546878
320-82156-9	ADQ-ISM2-102	Total/NA	Solid	AK102	546878
320-82156-10	ADQ-ISM2-202	Total/NA	Solid	AK102	546878
320-82156-11	ADQ-ISM2-03	Total/NA	Solid	AK102	546878
320-82156-12	ADQ-ISM2-04	Total/NA	Solid	AK102	546878
320-82156-13	ADQ-ISM2-05	Total/NA	Solid	AK102	546878
MB 320-546878/1-A	Method Blank	Total/NA	Solid	AK102	546878
LCS 320-546878/2-A	Lab Control Sample	Total/NA	Solid	AK102	546878
LCSD 320-546878/3-A	Lab Control Sample Dup	Total/NA	Solid	AK102	546878
320-82156-1 MS	ADQ-ISM1-01	Total/NA	Solid	AK102	546878
320-82156-1 MSD	ADQ-ISM1-01	Total/NA	Solid	AK102	546878

Prep Batch: 559548

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-82156-1	ADQ-ISM1-01	Total/NA	Solid	8011	
320-82156-2	ADQ-ISM1-101	Total/NA	Solid	8011	
320-82156-3	ADQ-ISM1-201	Total/NA	Solid	8011	
320-82156-4	ADQ-ISM1-02	Total/NA	Solid	8011	
320-82156-5	ADQ-ISM1-03	Total/NA	Solid	8011	
320-82156-6	ADQ-ISM1-04	Total/NA	Solid	8011	
320-82156-7	ADQ-ISM2-01	Total/NA	Solid	8011	
320-82156-8	ADQ-ISM2-02	Total/NA	Solid	8011	
320-82156-9	ADQ-ISM2-102	Total/NA	Solid	8011	
320-82156-10	ADQ-ISM2-202	Total/NA	Solid	8011	
320-82156-11	ADQ-ISM2-03	Total/NA	Solid	8011	
320-82156-12	ADQ-ISM2-04	Total/NA	Solid	8011	
320-82156-13	ADQ-ISM2-05	Total/NA	Solid	8011	
320-82156-14	Trip Blank 2	Total/NA	Solid	8011	
320-82156-15	Trip Blank 3	Total/NA	Solid	8011	
320-82156-16	Trip Blank 4	Total/NA	Solid	8011	
320-82156-17	Trip Blank 5	Total/NA	Solid	8011	
MB 280-559548/1-A	Method Blank	Total/NA	Solid	8011	
LCS 280-559548/2-A	Lab Control Sample	Total/NA	Solid	8011	
LCSD 280-559548/3-A	Lab Control Sample Dup	Total/NA	Solid	8011	

QC Association Summary

Client: Shannon & Wilson, Inc
 Project/Site: Kodiak DOT&PF PFAS (107471)

Job ID: 320-82156-1

GC Semi VOA

Analysis Batch: 559580

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-82156-1	ADQ-ISM1-01	Total/NA	Solid	8011	559548
320-82156-2	ADQ-ISM1-101	Total/NA	Solid	8011	559548
320-82156-3	ADQ-ISM1-201	Total/NA	Solid	8011	559548
320-82156-4	ADQ-ISM1-02	Total/NA	Solid	8011	559548
320-82156-5	ADQ-ISM1-03	Total/NA	Solid	8011	559548
320-82156-6	ADQ-ISM1-04	Total/NA	Solid	8011	559548
320-82156-7	ADQ-ISM2-01	Total/NA	Solid	8011	559548
320-82156-8	ADQ-ISM2-02	Total/NA	Solid	8011	559548
320-82156-9	ADQ-ISM2-102	Total/NA	Solid	8011	559548
320-82156-11	ADQ-ISM2-03	Total/NA	Solid	8011	559548
320-82156-12	ADQ-ISM2-04	Total/NA	Solid	8011	559548
320-82156-13	ADQ-ISM2-05	Total/NA	Solid	8011	559548
320-82156-14	Trip Blank 2	Total/NA	Solid	8011	559548
320-82156-15	Trip Blank 3	Total/NA	Solid	8011	559548
320-82156-16	Trip Blank 4	Total/NA	Solid	8011	559548
320-82156-17	Trip Blank 5	Total/NA	Solid	8011	559548
MB 280-559548/1-A	Method Blank	Total/NA	Solid	8011	559548
LCS 280-559548/2-A	Lab Control Sample	Total/NA	Solid	8011	559548
LCSD 280-559548/3-A	Lab Control Sample Dup	Total/NA	Solid	8011	559548

Analysis Batch: 559736

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-82156-10	ADQ-ISM2-202	Total/NA	Solid	8011	559548

LCMS

ISM Prep Batch: 545596

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-82156-1	ADQ-ISM1-01	Total/NA	Solid	Increment, prep	
320-82156-2	ADQ-ISM1-101	Total/NA	Solid	Increment, prep	
320-82156-3	ADQ-ISM1-201	Total/NA	Solid	Increment, prep	
320-82156-4	ADQ-ISM1-02	Total/NA	Solid	Increment, prep	
320-82156-5	ADQ-ISM1-03	Total/NA	Solid	Increment, prep	
320-82156-6	ADQ-ISM1-04	Total/NA	Solid	Increment, prep	
320-82156-7	ADQ-ISM2-01	Total/NA	Solid	Increment, prep	
320-82156-8	ADQ-ISM2-02	Total/NA	Solid	Increment, prep	
320-82156-9	ADQ-ISM2-102	Total/NA	Solid	Increment, prep	
320-82156-10	ADQ-ISM2-202	Total/NA	Solid	Increment, prep	
320-82156-11	ADQ-ISM2-03	Total/NA	Solid	Increment, prep	
320-82156-12	ADQ-ISM2-04	Total/NA	Solid	Increment, prep	
320-82156-13	ADQ-ISM2-05	Total/NA	Solid	Increment, prep	
320-82156-1 MS	ADQ-ISM1-01	Total/NA	Solid	Increment, prep	
320-82156-1 MSD	ADQ-ISM1-01	Total/NA	Solid	Increment, prep	

Prep Batch: 545627

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-82156-18	ADQ-ISM1-EB1	Total/NA	Water	3535	
320-82156-19	ADQ-ISM2-EB1	Total/NA	Water	3535	
320-82156-20	ADQ-ISM2-EB2	Total/NA	Water	3535	
320-82156-21	ADQ-ISM2-EB3	Total/NA	Water	3535	
MB 320-545627/1-A	Method Blank	Total/NA	Water	3535	

Eurofins TestAmerica, Sacramento

QC Association Summary

Client: Shannon & Wilson, Inc
 Project/Site: Kodiak DOT&PF PFAS (107471)

Job ID: 320-82156-1

LCMS (Continued)

Prep Batch: 545627 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCS 320-545627/2-A	Lab Control Sample	Total/NA	Water	3535	

Analysis Batch: 546209

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-82156-18	ADQ-ISM1-EB1	Total/NA	Water	EPA 537(Mod)	545627
320-82156-19	ADQ-ISM2-EB1	Total/NA	Water	EPA 537(Mod)	545627
320-82156-20	ADQ-ISM2-EB2	Total/NA	Water	EPA 537(Mod)	545627
320-82156-21	ADQ-ISM2-EB3	Total/NA	Water	EPA 537(Mod)	545627
MB 320-545627/1-A	Method Blank	Total/NA	Water	EPA 537(Mod)	545627
LCS 320-545627/2-A	Lab Control Sample	Total/NA	Water	EPA 537(Mod)	545627

Prep Batch: 547064

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-82156-1	ADQ-ISM1-01	Total/NA	Solid	SHAKE	545596
320-82156-2	ADQ-ISM1-101	Total/NA	Solid	SHAKE	545596
320-82156-3	ADQ-ISM1-201	Total/NA	Solid	SHAKE	545596
320-82156-4	ADQ-ISM1-02	Total/NA	Solid	SHAKE	545596
320-82156-5	ADQ-ISM1-03	Total/NA	Solid	SHAKE	545596
320-82156-6	ADQ-ISM1-04	Total/NA	Solid	SHAKE	545596
320-82156-7	ADQ-ISM2-01	Total/NA	Solid	SHAKE	545596
320-82156-8	ADQ-ISM2-02	Total/NA	Solid	SHAKE	545596
320-82156-9	ADQ-ISM2-102	Total/NA	Solid	SHAKE	545596
320-82156-10	ADQ-ISM2-202	Total/NA	Solid	SHAKE	545596
320-82156-11	ADQ-ISM2-03	Total/NA	Solid	SHAKE	545596
320-82156-12	ADQ-ISM2-04	Total/NA	Solid	SHAKE	545596
320-82156-13	ADQ-ISM2-05	Total/NA	Solid	SHAKE	545596
MB 320-547064/1-A	Method Blank	Total/NA	Solid	SHAKE	
LCS 320-547064/2-A	Lab Control Sample	Total/NA	Solid	SHAKE	
320-82156-1 MS	ADQ-ISM1-01	Total/NA	Solid	SHAKE	545596
320-82156-1 MSD	ADQ-ISM1-01	Total/NA	Solid	SHAKE	545596

Analysis Batch: 548024

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-82156-1	ADQ-ISM1-01	Total/NA	Solid	EPA 537(Mod)	547064
320-82156-2	ADQ-ISM1-101	Total/NA	Solid	EPA 537(Mod)	547064
320-82156-3	ADQ-ISM1-201	Total/NA	Solid	EPA 537(Mod)	547064
320-82156-4	ADQ-ISM1-02	Total/NA	Solid	EPA 537(Mod)	547064
320-82156-5	ADQ-ISM1-03	Total/NA	Solid	EPA 537(Mod)	547064
320-82156-6	ADQ-ISM1-04	Total/NA	Solid	EPA 537(Mod)	547064
320-82156-7	ADQ-ISM2-01	Total/NA	Solid	EPA 537(Mod)	547064
320-82156-8	ADQ-ISM2-02	Total/NA	Solid	EPA 537(Mod)	547064
320-82156-9	ADQ-ISM2-102	Total/NA	Solid	EPA 537(Mod)	547064
320-82156-10	ADQ-ISM2-202	Total/NA	Solid	EPA 537(Mod)	547064
320-82156-11	ADQ-ISM2-03	Total/NA	Solid	EPA 537(Mod)	547064
320-82156-12	ADQ-ISM2-04	Total/NA	Solid	EPA 537(Mod)	547064
320-82156-13	ADQ-ISM2-05	Total/NA	Solid	EPA 537(Mod)	547064
MB 320-547064/1-A	Method Blank	Total/NA	Solid	EPA 537(Mod)	547064
LCS 320-547064/2-A	Lab Control Sample	Total/NA	Solid	EPA 537(Mod)	547064
320-82156-1 MS	ADQ-ISM1-01	Total/NA	Solid	EPA 537(Mod)	547064
320-82156-1 MSD	ADQ-ISM1-01	Total/NA	Solid	EPA 537(Mod)	547064

Eurofins TestAmerica, Sacramento

QC Association Summary

Client: Shannon & Wilson, Inc
 Project/Site: Kodiak DOT&PF PFAS (107471)

Job ID: 320-82156-1

General Chemistry

ISM Prep Batch: 545579

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-82156-1	ADQ-ISM1-01	Total/NA	Solid	Increment, prep	
320-82156-2	ADQ-ISM1-101	Total/NA	Solid	Increment, prep	
320-82156-3	ADQ-ISM1-201	Total/NA	Solid	Increment, prep	
320-82156-4	ADQ-ISM1-02	Total/NA	Solid	Increment, prep	
320-82156-5	ADQ-ISM1-03	Total/NA	Solid	Increment, prep	
320-82156-6	ADQ-ISM1-04	Total/NA	Solid	Increment, prep	
320-82156-7	ADQ-ISM2-01	Total/NA	Solid	Increment, prep	
320-82156-8	ADQ-ISM2-02	Total/NA	Solid	Increment, prep	
320-82156-9	ADQ-ISM2-102	Total/NA	Solid	Increment, prep	
320-82156-10	ADQ-ISM2-202	Total/NA	Solid	Increment, prep	
320-82156-11	ADQ-ISM2-03	Total/NA	Solid	Increment, prep	
320-82156-12	ADQ-ISM2-04	Total/NA	Solid	Increment, prep	
320-82156-13	ADQ-ISM2-05	Total/NA	Solid	Increment, prep	

Analysis Batch: 545582

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-82156-1	ADQ-ISM1-01	Total/NA	Solid	Increment,Prep	
320-82156-2	ADQ-ISM1-101	Total/NA	Solid	Increment,Prep	
320-82156-3	ADQ-ISM1-201	Total/NA	Solid	Increment,Prep	
320-82156-4	ADQ-ISM1-02	Total/NA	Solid	Increment,Prep	
320-82156-5	ADQ-ISM1-03	Total/NA	Solid	Increment,Prep	
320-82156-6	ADQ-ISM1-04	Total/NA	Solid	Increment,Prep	
320-82156-7	ADQ-ISM2-01	Total/NA	Solid	Increment,Prep	
320-82156-8	ADQ-ISM2-02	Total/NA	Solid	Increment,Prep	
320-82156-9	ADQ-ISM2-102	Total/NA	Solid	Increment,Prep	
320-82156-10	ADQ-ISM2-202	Total/NA	Solid	Increment,Prep	
320-82156-11	ADQ-ISM2-03	Total/NA	Solid	Increment,Prep	
320-82156-12	ADQ-ISM2-04	Total/NA	Solid	Increment,Prep	
320-82156-13	ADQ-ISM2-05	Total/NA	Solid	Increment,Prep	
320-82156-1 MS	ADQ-ISM1-01	Total/NA	Solid	Increment,Prep	
320-82156-1 MSD	ADQ-ISM1-01	Total/NA	Solid	Increment,Prep	

Analysis Batch: 546537

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-82156-1	ADQ-ISM1-01	Total/NA	Solid	D 2216	545579
320-82156-2	ADQ-ISM1-101	Total/NA	Solid	D 2216	545579
320-82156-3	ADQ-ISM1-201	Total/NA	Solid	D 2216	545579
320-82156-4	ADQ-ISM1-02	Total/NA	Solid	D 2216	545579
320-82156-5	ADQ-ISM1-03	Total/NA	Solid	D 2216	545579
320-82156-6	ADQ-ISM1-04	Total/NA	Solid	D 2216	545579
320-82156-7	ADQ-ISM2-01	Total/NA	Solid	D 2216	545579
320-82156-8	ADQ-ISM2-02	Total/NA	Solid	D 2216	545579
320-82156-9	ADQ-ISM2-102	Total/NA	Solid	D 2216	545579
320-82156-10	ADQ-ISM2-202	Total/NA	Solid	D 2216	545579
320-82156-11	ADQ-ISM2-03	Total/NA	Solid	D 2216	545579
320-82156-12	ADQ-ISM2-04	Total/NA	Solid	D 2216	545579
320-82156-13	ADQ-ISM2-05	Total/NA	Solid	D 2216	545579

Lab Chronicle

Client: Shannon & Wilson, Inc
 Project/Site: Kodiak DOT&PF PFAS (107471)

Job ID: 320-82156-1

Client Sample ID: ADQ-ISM1-01

Lab Sample ID: 320-82156-1

Date Collected: 11/14/21 14:30

Matrix: Solid

Date Received: 11/23/21 16:45

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	8011			3.95 g	35 mL	559548	12/03/21 13:35	KSA	TAL DEN
Total/NA	Analysis	8011		1			559580	12/04/21 09:36	KSA	TAL DEN
Total/NA	ISM Prep	Increment, prep					545596	11/24/21 11:36	M1A	TAL SAC
Total/NA	Prep	AK102			30.74 g	5 mL	546878	11/30/21 11:46	NGK	TAL SAC
Total/NA	Analysis	AK102		50			550444	12/13/21 18:44	K1D	TAL SAC
Total/NA	ISM Prep	Increment, prep					545596	11/24/21 11:37	M1A	TAL SAC
Total/NA	Prep	SHAKE			5.12 g	10.0 mL	547064	11/30/21 18:38	AM	TAL SAC
Total/NA	Analysis	EPA 537(Mod)		5			548024	12/03/21 23:13	D1R	TAL SAC
Total/NA	ISM Prep	Increment, prep					545579	11/24/21 11:21	M1A	TAL SAC
Total/NA	Analysis	D 2216		1			546537	11/29/21 14:40	JCB	TAL SAC
Total/NA	Analysis	Increment,Prep		1			545582	11/24/21 11:22	M1A	TAL SAC

Client Sample ID: ADQ-ISM1-01

Lab Sample ID: 320-82156-1

Date Collected: 11/14/21 14:30

Matrix: Solid

Date Received: 11/23/21 16:45

Percent Solids: 92.4

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	ISM Prep	Increment, Prep					545690	11/24/21 13:45	CLF	TAL SAC
Total/NA	Prep	5035			139.799 g	150 mL	545695	11/24/21 13:57	CLF	TAL SAC
Total/NA	Analysis	8260C		1	1 mL	50 mL	548328	12/05/21 23:08	EMJ	TAL SAC
Total/NA	ISM Prep	Increment, Prep					545690	11/24/21 13:45	CLF	TAL SAC
Total/NA	Prep	5035			139.799 g	150 mL	545695	11/24/21 13:57	CLF	TAL SAC
Total/NA	Analysis	8260C SIM		1	1 mL	50 mL	547089	12/01/21 08:05	AP1	TAL SAC
Total/NA	ISM Prep	Increment, Prep					545690	11/24/21 13:45	CLF	TAL SAC
Total/NA	Prep	5035			139.799 g	150 mL	545695	11/24/21 13:57	CLF	TAL SAC
Total/NA	Analysis	AK101		1	1 mL	50 mL	548330	12/05/21 23:08	EMJ	TAL SAC

Client Sample ID: ADQ-ISM1-101

Lab Sample ID: 320-82156-2

Date Collected: 11/15/21 10:05

Matrix: Solid

Date Received: 11/23/21 16:45

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	8011			3.95 g	35 mL	559548	12/03/21 13:35	KSA	TAL DEN
Total/NA	Analysis	8011		1			559580	12/04/21 10:00	KSA	TAL DEN
Total/NA	ISM Prep	Increment, prep					545596	11/24/21 11:36	M1A	TAL SAC
Total/NA	Prep	AK102			30.72 g	5 mL	546878	11/30/21 11:46	NGK	TAL SAC
Total/NA	Analysis	AK102		20			550444	12/13/21 20:11	K1D	TAL SAC
Total/NA	ISM Prep	Increment, prep					545596	11/24/21 11:37	M1A	TAL SAC
Total/NA	Prep	SHAKE			5.09 g	10.0 mL	547064	11/30/21 18:38	AM	TAL SAC
Total/NA	Analysis	EPA 537(Mod)		5			548024	12/03/21 23:45	D1R	TAL SAC
Total/NA	ISM Prep	Increment, prep					545579	11/24/21 11:21	M1A	TAL SAC
Total/NA	Analysis	D 2216		1			546537	11/29/21 14:40	JCB	TAL SAC
Total/NA	Analysis	Increment,Prep		1			545582	11/24/21 11:22	M1A	TAL SAC

Lab Chronicle

Client: Shannon & Wilson, Inc
 Project/Site: Kodiak DOT&PF PFAS (107471)

Job ID: 320-82156-1

Client Sample ID: ADQ-ISM1-101

Lab Sample ID: 320-82156-2

Date Collected: 11/15/21 10:05

Matrix: Solid

Date Received: 11/23/21 16:45

Percent Solids: 90.3

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	ISM Prep	Increment, Prep					545690	11/24/21 13:45	CLF	TAL SAC
Total/NA	Prep	5035			214.79 g	150 mL	545695	11/24/21 13:57	CLF	TAL SAC
Total/NA	Analysis	8260C		1	1 mL	50 mL	548328	12/05/21 23:31	EMJ	TAL SAC
Total/NA	ISM Prep	Increment, Prep					545690	11/24/21 13:45	CLF	TAL SAC
Total/NA	Prep	5035			214.79 g	150 mL	545695	11/24/21 13:57	CLF	TAL SAC
Total/NA	Analysis	8260C SIM		1	1 mL	50 mL	547089	12/01/21 08:29	AP1	TAL SAC
Total/NA	ISM Prep	Increment, Prep					545690	11/24/21 13:45	CLF	TAL SAC
Total/NA	Prep	5035			214.79 g	150 mL	545695	11/24/21 13:57	CLF	TAL SAC
Total/NA	Analysis	AK101		1	1 mL	50 mL	548330	12/05/21 23:31	EMJ	TAL SAC

Client Sample ID: ADQ-ISM1-201

Lab Sample ID: 320-82156-3

Date Collected: 11/15/21 11:10

Matrix: Solid

Date Received: 11/23/21 16:45

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	8011			3.95 g	35 mL	559548	12/03/21 13:35	KSA	TAL DEN
Total/NA	Analysis	8011		1			559580	12/04/21 10:25	KSA	TAL DEN
Total/NA	ISM Prep	Increment, prep					545596	11/24/21 11:36	M1A	TAL SAC
Total/NA	Prep	AK102			30.52 g	5 mL	546878	11/30/21 11:46	NGK	TAL SAC
Total/NA	Analysis	AK102		50			550444	12/13/21 20:39	K1D	TAL SAC
Total/NA	ISM Prep	Increment, prep					545596	11/24/21 11:37	M1A	TAL SAC
Total/NA	Prep	SHAKE			5.22 g	10.0 mL	547064	11/30/21 18:38	AM	TAL SAC
Total/NA	Analysis	EPA 537(Mod)		5			548024	12/03/21 23:55	D1R	TAL SAC
Total/NA	ISM Prep	Increment, prep					545579	11/24/21 11:21	M1A	TAL SAC
Total/NA	Analysis	D 2216		1			546537	11/29/21 14:40	JCB	TAL SAC
Total/NA	Analysis	Increment,Prep		1			545582	11/24/21 11:22	M1A	TAL SAC

Client Sample ID: ADQ-ISM1-201

Lab Sample ID: 320-82156-3

Date Collected: 11/15/21 11:10

Matrix: Solid

Date Received: 11/23/21 16:45

Percent Solids: 94.9

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	ISM Prep	Increment, Prep					545690	11/24/21 13:45	CLF	TAL SAC
Total/NA	Prep	5035			107.425 g	150 mL	545695	11/24/21 13:57	CLF	TAL SAC
Total/NA	Analysis	8260C		1	1 mL	50 mL	548328	12/05/21 23:54	EMJ	TAL SAC
Total/NA	ISM Prep	Increment, Prep					545690	11/24/21 13:45	CLF	TAL SAC
Total/NA	Prep	5035			107.425 g	150 mL	545695	11/24/21 13:57	CLF	TAL SAC
Total/NA	Analysis	8260C SIM		1	1 mL	50 mL	547089	12/01/21 08:53	AP1	TAL SAC
Total/NA	ISM Prep	Increment, Prep					545690	11/24/21 13:45	CLF	TAL SAC
Total/NA	Prep	5035			107.425 g	150 mL	545695	11/24/21 13:57	CLF	TAL SAC
Total/NA	Analysis	AK101		1	1 mL	50 mL	548330	12/05/21 23:54	EMJ	TAL SAC

Lab Chronicle

Client: Shannon & Wilson, Inc
 Project/Site: Kodiak DOT&PF PFAS (107471)

Job ID: 320-82156-1

Client Sample ID: ADQ-ISM1-02

Lab Sample ID: 320-82156-4

Date Collected: 11/14/21 16:00

Matrix: Solid

Date Received: 11/23/21 16:45

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	8011			3.95 g	35 mL	559548	12/03/21 13:35	KSA	TAL DEN
Total/NA	Analysis	8011		1			559580	12/04/21 10:49	KSA	TAL DEN
Total/NA	ISM Prep	Increment, prep					545596	11/24/21 11:36	M1A	TAL SAC
Total/NA	Prep	AK102			30.53 g	5 mL	546878	11/30/21 11:46	NGK	TAL SAC
Total/NA	Analysis	AK102		50			550444	12/13/21 21:08	K1D	TAL SAC
Total/NA	ISM Prep	Increment, prep					545596	11/24/21 11:37	M1A	TAL SAC
Total/NA	Prep	SHAKE			5.23 g	10.0 mL	547064	11/30/21 18:38	AM	TAL SAC
Total/NA	Analysis	EPA 537(Mod)		10			548024	12/03/21 23:03	D1R	TAL SAC
Total/NA	ISM Prep	Increment, prep					545579	11/24/21 11:21	M1A	TAL SAC
Total/NA	Analysis	D 2216		1			546537	11/29/21 14:40	JCB	TAL SAC
Total/NA	Analysis	Increment,Prep		1			545582	11/24/21 11:22	M1A	TAL SAC

Client Sample ID: ADQ-ISM1-02

Lab Sample ID: 320-82156-4

Date Collected: 11/14/21 16:00

Matrix: Solid

Date Received: 11/23/21 16:45

Percent Solids: 93.3

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	ISM Prep	Increment, Prep					545690	11/24/21 13:45	CLF	TAL SAC
Total/NA	Prep	5035			172.069 g	150 mL	545695	11/24/21 13:57	CLF	TAL SAC
Total/NA	Analysis	8260C		1	1 mL	50 mL	548328	12/06/21 00:17	EMJ	TAL SAC
Total/NA	ISM Prep	Increment, Prep					545690	11/24/21 13:45	CLF	TAL SAC
Total/NA	Prep	5035			172.069 g	150 mL	545695	11/24/21 13:57	CLF	TAL SAC
Total/NA	Analysis	8260C SIM		1	1 mL	50 mL	547089	12/01/21 09:17	AP1	TAL SAC
Total/NA	ISM Prep	Increment, Prep					545690	11/24/21 13:45	CLF	TAL SAC
Total/NA	Prep	5035			172.069 g	150 mL	545695	11/24/21 13:57	CLF	TAL SAC
Total/NA	Analysis	AK101		1	1 mL	50 mL	548330	12/06/21 00:17	EMJ	TAL SAC

Client Sample ID: ADQ-ISM1-03

Lab Sample ID: 320-82156-5

Date Collected: 11/15/21 15:10

Matrix: Solid

Date Received: 11/23/21 16:45

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	8011			3.95 g	35 mL	559548	12/03/21 13:35	KSA	TAL DEN
Total/NA	Analysis	8011		1			559580	12/04/21 11:13	KSA	TAL DEN
Total/NA	ISM Prep	Increment, prep					545596	11/24/21 11:36	M1A	TAL SAC
Total/NA	Prep	AK102			30.67 g	5 mL	546878	11/30/21 11:46	NGK	TAL SAC
Total/NA	Analysis	AK102		10			550444	12/13/21 21:37	K1D	TAL SAC
Total/NA	ISM Prep	Increment, prep					545596	11/24/21 11:37	M1A	TAL SAC
Total/NA	Prep	SHAKE			5.30 g	10.0 mL	547064	11/30/21 18:38	AM	TAL SAC
Total/NA	Analysis	EPA 537(Mod)		1			548024	12/03/21 21:08	D1R	TAL SAC
Total/NA	ISM Prep	Increment, prep					545579	11/24/21 11:21	M1A	TAL SAC
Total/NA	Analysis	D 2216		1			546537	11/29/21 14:40	JCB	TAL SAC
Total/NA	Analysis	Increment,Prep		1			545582	11/24/21 11:22	M1A	TAL SAC

Lab Chronicle

Client: Shannon & Wilson, Inc
 Project/Site: Kodiak DOT&PF PFAS (107471)

Job ID: 320-82156-1

Client Sample ID: ADQ-ISM1-03

Lab Sample ID: 320-82156-5

Date Collected: 11/15/21 15:10

Matrix: Solid

Date Received: 11/23/21 16:45

Percent Solids: 89.7

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	ISM Prep	Increment, Prep					545690	11/24/21 13:45	CLF	TAL SAC
Total/NA	Prep	5035			106.089 g	150 mL	545695	11/24/21 13:57	CLF	TAL SAC
Total/NA	Analysis	8260C		1	1 mL	50 mL	548328	12/06/21 00:40	EMJ	TAL SAC
Total/NA	ISM Prep	Increment, Prep					545690	11/24/21 13:45	CLF	TAL SAC
Total/NA	Prep	5035			106.089 g	150 mL	545695	11/24/21 13:57	CLF	TAL SAC
Total/NA	Analysis	8260C SIM		1	1 mL	50 mL	547089	12/01/21 09:40	AP1	TAL SAC
Total/NA	ISM Prep	Increment, Prep					545690	11/24/21 13:45	CLF	TAL SAC
Total/NA	Prep	5035			106.089 g	150 mL	545695	11/24/21 13:57	CLF	TAL SAC
Total/NA	Analysis	AK101		1	1 mL	50 mL	548330	12/06/21 00:40	EMJ	TAL SAC

Client Sample ID: ADQ-ISM1-04

Lab Sample ID: 320-82156-6

Date Collected: 11/15/21 16:15

Matrix: Solid

Date Received: 11/23/21 16:45

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	8011			3.95 g	35 mL	559548	12/03/21 13:35	KSA	TAL DEN
Total/NA	Analysis	8011		1			559580	12/04/21 11:38	KSA	TAL DEN
Total/NA	ISM Prep	Increment, prep					545596	11/24/21 11:36	M1A	TAL SAC
Total/NA	Prep	AK102			30.10 g	5 mL	546878	11/30/21 11:46	NGK	TAL SAC
Total/NA	Analysis	AK102		10			550444	12/13/21 22:06	K1D	TAL SAC
Total/NA	ISM Prep	Increment, prep					545596	11/24/21 11:37	M1A	TAL SAC
Total/NA	Prep	SHAKE			5.02 g	10.0 mL	547064	11/30/21 18:38	AM	TAL SAC
Total/NA	Analysis	EPA 537(Mod)		1			548024	12/03/21 21:19	D1R	TAL SAC
Total/NA	ISM Prep	Increment, prep					545579	11/24/21 11:21	M1A	TAL SAC
Total/NA	Analysis	D 2216		1			546537	11/29/21 14:40	JCB	TAL SAC
Total/NA	Analysis	Increment,Prep		1			545582	11/24/21 11:22	M1A	TAL SAC

Client Sample ID: ADQ-ISM1-04

Lab Sample ID: 320-82156-6

Date Collected: 11/15/21 16:15

Matrix: Solid

Date Received: 11/23/21 16:45

Percent Solids: 92.6

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	ISM Prep	Increment, Prep					545690	11/24/21 13:45	CLF	TAL SAC
Total/NA	Prep	5035			157.386 g	150 mL	545695	11/24/21 13:57	CLF	TAL SAC
Total/NA	Analysis	8260C		1	1 mL	50 mL	548328	12/06/21 01:03	EMJ	TAL SAC
Total/NA	ISM Prep	Increment, Prep					545690	11/24/21 13:45	CLF	TAL SAC
Total/NA	Prep	5035			157.386 g	150 mL	545695	11/24/21 13:57	CLF	TAL SAC
Total/NA	Analysis	8260C SIM		1	1 mL	50 mL	547089	12/01/21 10:04	AP1	TAL SAC
Total/NA	ISM Prep	Increment, Prep					545690	11/24/21 13:45	CLF	TAL SAC
Total/NA	Prep	5035			157.386 g	150 mL	545695	11/24/21 13:57	CLF	TAL SAC
Total/NA	Analysis	AK101		1	1 mL	50 mL	548330	12/06/21 01:03	EMJ	TAL SAC

Lab Chronicle

Client: Shannon & Wilson, Inc
 Project/Site: Kodiak DOT&PF PFAS (107471)

Job ID: 320-82156-1

Client Sample ID: ADQ-ISM2-01

Lab Sample ID: 320-82156-7

Date Collected: 11/17/21 10:40

Matrix: Solid

Date Received: 11/23/21 16:45

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	8011			3.95 g	35 mL	559548	12/03/21 13:35	KSA	TAL DEN
Total/NA	Analysis	8011		1			559580	12/04/21 12:03	KSA	TAL DEN
Total/NA	ISM Prep	Increment, prep					545596	11/24/21 11:36	M1A	TAL SAC
Total/NA	Prep	AK102			30.34 g	5 mL	546878	11/30/21 11:46	NGK	TAL SAC
Total/NA	Analysis	AK102		5			550444	12/13/21 22:34	K1D	TAL SAC
Total/NA	ISM Prep	Increment, prep					545596	11/24/21 11:37	M1A	TAL SAC
Total/NA	Prep	SHAKE			5.06 g	10.0 mL	547064	11/30/21 18:38	AM	TAL SAC
Total/NA	Analysis	EPA 537(Mod)		1			548024	12/03/21 21:29	D1R	TAL SAC
Total/NA	ISM Prep	Increment, prep					545579	11/24/21 11:21	M1A	TAL SAC
Total/NA	Analysis	D 2216		1			546537	11/29/21 14:40	JCB	TAL SAC
Total/NA	Analysis	Increment,Prep		1			545582	11/24/21 11:22	M1A	TAL SAC

Client Sample ID: ADQ-ISM2-01

Lab Sample ID: 320-82156-7

Date Collected: 11/17/21 10:40

Matrix: Solid

Date Received: 11/23/21 16:45

Percent Solids: 90.4

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	ISM Prep	Increment, Prep					545690	11/24/21 13:45	CLF	TAL SAC
Total/NA	Prep	5035			94.738 g	150 mL	545695	11/24/21 13:57	CLF	TAL SAC
Total/NA	Analysis	8260C		1	1 mL	50 mL	548328	12/06/21 01:50	EMJ	TAL SAC
Total/NA	ISM Prep	Increment, Prep					545690	11/24/21 13:45	CLF	TAL SAC
Total/NA	Prep	5035			94.738 g	150 mL	545695	11/24/21 13:57	CLF	TAL SAC
Total/NA	Analysis	8260C SIM		1	1 mL	50 mL	547089	12/01/21 10:28	AP1	TAL SAC
Total/NA	ISM Prep	Increment, Prep					545690	11/24/21 13:45	CLF	TAL SAC
Total/NA	Prep	5035			94.738 g	150 mL	545695	11/24/21 13:57	CLF	TAL SAC
Total/NA	Analysis	AK101		1	1 mL	50 mL	548330	12/06/21 01:50	EMJ	TAL SAC

Client Sample ID: ADQ-ISM2-02

Lab Sample ID: 320-82156-8

Date Collected: 11/16/21 14:50

Matrix: Solid

Date Received: 11/23/21 16:45

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	8011			3.95 g	35 mL	559548	12/03/21 13:35	KSA	TAL DEN
Total/NA	Analysis	8011		1			559580	12/04/21 12:27	KSA	TAL DEN
Total/NA	ISM Prep	Increment, prep					545596	11/24/21 11:36	M1A	TAL SAC
Total/NA	Prep	AK102			30.57 g	3 mL	546878	11/30/21 11:46	NGK	TAL SAC
Total/NA	Analysis	AK102		1			550444	12/13/21 23:03	K1D	TAL SAC
Total/NA	ISM Prep	Increment, prep					545596	11/24/21 11:37	M1A	TAL SAC
Total/NA	Prep	SHAKE			5.11 g	10.0 mL	547064	11/30/21 18:38	AM	TAL SAC
Total/NA	Analysis	EPA 537(Mod)		1			548024	12/03/21 21:40	D1R	TAL SAC
Total/NA	ISM Prep	Increment, prep					545579	11/24/21 11:21	M1A	TAL SAC
Total/NA	Analysis	D 2216		1			546537	11/29/21 14:40	JCB	TAL SAC
Total/NA	Analysis	Increment,Prep		1			545582	11/24/21 11:22	M1A	TAL SAC

Lab Chronicle

Client: Shannon & Wilson, Inc
 Project/Site: Kodiak DOT&PF PFAS (107471)

Job ID: 320-82156-1

Client Sample ID: ADQ-ISM2-02

Lab Sample ID: 320-82156-8

Date Collected: 11/16/21 14:50

Matrix: Solid

Date Received: 11/23/21 16:45

Percent Solids: 88.6

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	ISM Prep	Increment, Prep					545690	11/24/21 13:45	CLF	TAL SAC
Total/NA	Prep	5035			96.032 g	150 mL	545695	11/24/21 13:57	CLF	TAL SAC
Total/NA	Analysis	8260C		1	1 mL	50 mL	548328	12/06/21 02:13	EMJ	TAL SAC
Total/NA	ISM Prep	Increment, Prep					545690	11/24/21 13:45	CLF	TAL SAC
Total/NA	Prep	5035			96.032 g	150 mL	545695	11/24/21 13:57	CLF	TAL SAC
Total/NA	Analysis	8260C SIM		1	1 mL	50 mL	547089	12/01/21 10:52	AP1	TAL SAC
Total/NA	ISM Prep	Increment, Prep					545690	11/24/21 13:45	CLF	TAL SAC
Total/NA	Prep	5035			96.032 g	150 mL	545695	11/24/21 13:57	CLF	TAL SAC
Total/NA	Analysis	AK101		1	1 mL	50 mL	548330	12/06/21 02:13	EMJ	TAL SAC

Client Sample ID: ADQ-ISM2-102

Lab Sample ID: 320-82156-9

Date Collected: 11/16/21 15:51

Matrix: Solid

Date Received: 11/23/21 16:45

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	8011			3.95 g	35 mL	559548	12/03/21 13:35	KSA	TAL DEN
Total/NA	Analysis	8011		1			559580	12/04/21 12:52	KSA	TAL DEN
Total/NA	ISM Prep	Increment, prep					545596	11/24/21 11:36	M1A	TAL SAC
Total/NA	Prep	AK102			30.40 g	3 mL	546878	11/30/21 11:46	NGK	TAL SAC
Total/NA	Analysis	AK102		1			550444	12/13/21 23:32	K1D	TAL SAC
Total/NA	ISM Prep	Increment, prep					545596	11/24/21 11:37	M1A	TAL SAC
Total/NA	Prep	SHAKE			5.23 g	10.0 mL	547064	11/30/21 18:38	AM	TAL SAC
Total/NA	Analysis	EPA 537(Mod)		1			548024	12/03/21 21:50	D1R	TAL SAC
Total/NA	ISM Prep	Increment, prep					545579	11/24/21 11:21	M1A	TAL SAC
Total/NA	Analysis	D 2216		1			546537	11/29/21 14:40	JCB	TAL SAC
Total/NA	Analysis	Increment,Prep		1			545582	11/24/21 11:22	M1A	TAL SAC

Client Sample ID: ADQ-ISM2-102

Lab Sample ID: 320-82156-9

Date Collected: 11/16/21 15:51

Matrix: Solid

Date Received: 11/23/21 16:45

Percent Solids: 88.2

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	ISM Prep	Increment, Prep					545690	11/24/21 13:45	CLF	TAL SAC
Total/NA	Prep	5035			88.161 g	150 mL	545695	11/24/21 13:57	CLF	TAL SAC
Total/NA	Analysis	8260C		1	1 mL	50 mL	548328	12/06/21 02:36	EMJ	TAL SAC
Total/NA	ISM Prep	Increment, Prep					545690	11/24/21 13:45	CLF	TAL SAC
Total/NA	Prep	5035			88.161 g	150 mL	545695	11/24/21 13:57	CLF	TAL SAC
Total/NA	Analysis	8260C SIM		1	1 mL	50 mL	547089	12/01/21 11:16	AP1	TAL SAC
Total/NA	ISM Prep	Increment, Prep					545690	11/24/21 13:45	CLF	TAL SAC
Total/NA	Prep	5035			88.161 g	150 mL	545695	11/24/21 13:57	CLF	TAL SAC
Total/NA	Analysis	AK101		1	1 mL	50 mL	548753	12/07/21 14:31	AP1	TAL SAC

Lab Chronicle

Client: Shannon & Wilson, Inc
 Project/Site: Kodiak DOT&PF PFAS (107471)

Job ID: 320-82156-1

Client Sample ID: ADQ-ISM2-202

Lab Sample ID: 320-82156-10

Date Collected: 11/16/21 16:50

Matrix: Solid

Date Received: 11/23/21 16:45

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	8011			3.95 g	35 mL	559548	12/03/21 13:35	KSA	TAL DEN
Total/NA	Analysis	8011		1			559736	12/07/21 09:42	KSA	TAL DEN
Total/NA	ISM Prep	Increment, prep					545596	11/24/21 11:36	M1A	TAL SAC
Total/NA	Prep	AK102			30.64 g	3 mL	546878	11/30/21 11:46	NGK	TAL SAC
Total/NA	Analysis	AK102		1			550444	12/14/21 00:58	K1D	TAL SAC
Total/NA	ISM Prep	Increment, prep					545596	11/24/21 11:37	M1A	TAL SAC
Total/NA	Prep	SHAKE			5.37 g	10.0 mL	547064	11/30/21 18:38	AM	TAL SAC
Total/NA	Analysis	EPA 537(Mod)		1			548024	12/03/21 22:00	D1R	TAL SAC
Total/NA	ISM Prep	Increment, prep					545579	11/24/21 11:21	M1A	TAL SAC
Total/NA	Analysis	D 2216		1			546537	11/29/21 14:40	JCB	TAL SAC
Total/NA	Analysis	Increment,Prep		1			545582	11/24/21 11:22	M1A	TAL SAC

Client Sample ID: ADQ-ISM2-202

Lab Sample ID: 320-82156-10

Date Collected: 11/16/21 16:50

Matrix: Solid

Date Received: 11/23/21 16:45

Percent Solids: 91.0

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	ISM Prep	Increment, Prep					545690	11/24/21 13:45	CLF	TAL SAC
Total/NA	Prep	5035			106.718 g	150 mL	545695	11/24/21 13:57	CLF	TAL SAC
Total/NA	Analysis	8260C		1	1 mL	50 mL	548328	12/06/21 02:59	EMJ	TAL SAC
Total/NA	ISM Prep	Increment, Prep					545690	11/24/21 13:45	CLF	TAL SAC
Total/NA	Prep	5035			106.718 g	150 mL	545695	11/24/21 13:57	CLF	TAL SAC
Total/NA	Analysis	8260C SIM		1	1 mL	50 mL	547089	12/01/21 11:40	AP1	TAL SAC
Total/NA	ISM Prep	Increment, Prep					545690	11/24/21 13:45	CLF	TAL SAC
Total/NA	Prep	5035			106.718 g	150 mL	545695	11/24/21 13:57	CLF	TAL SAC
Total/NA	Analysis	AK101		1	1 mL	50 mL	548330	12/06/21 02:59	EMJ	TAL SAC

Client Sample ID: ADQ-ISM2-03

Lab Sample ID: 320-82156-11

Date Collected: 11/17/21 14:10

Matrix: Solid

Date Received: 11/23/21 16:45

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	8011			3.95 g	35 mL	559548	12/03/21 13:35	KSA	TAL DEN
Total/NA	Analysis	8011		1			559580	12/04/21 14:05	KSA	TAL DEN
Total/NA	ISM Prep	Increment, prep					545596	11/24/21 11:36	M1A	TAL SAC
Total/NA	Prep	AK102			30.52 g	3 mL	546878	11/30/21 11:46	NGK	TAL SAC
Total/NA	Analysis	AK102		1			550444	12/14/21 01:27	K1D	TAL SAC
Total/NA	ISM Prep	Increment, prep					545596	11/24/21 11:37	M1A	TAL SAC
Total/NA	Prep	SHAKE			5.02 g	10.0 mL	547064	11/30/21 18:38	AM	TAL SAC
Total/NA	Analysis	EPA 537(Mod)		1			548024	12/03/21 22:11	D1R	TAL SAC
Total/NA	ISM Prep	Increment, prep					545579	11/24/21 11:21	M1A	TAL SAC
Total/NA	Analysis	D 2216		1			546537	11/29/21 14:40	JCB	TAL SAC
Total/NA	Analysis	Increment,Prep		1			545582	11/24/21 11:22	M1A	TAL SAC

Lab Chronicle

Client: Shannon & Wilson, Inc
 Project/Site: Kodiak DOT&PF PFAS (107471)

Job ID: 320-82156-1

Client Sample ID: ADQ-ISM2-03

Lab Sample ID: 320-82156-11

Date Collected: 11/17/21 14:10

Matrix: Solid

Date Received: 11/23/21 16:45

Percent Solids: 91.9

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	ISM Prep	Increment, Prep					545690	11/24/21 13:45	CLF	TAL SAC
Total/NA	Prep	5035			129.316 g	150 mL	545695	11/24/21 13:57	CLF	TAL SAC
Total/NA	Analysis	8260C		1	1 mL	50 mL	548328	12/06/21 03:22	EMJ	TAL SAC
Total/NA	ISM Prep	Increment, Prep					545690	11/24/21 13:45	CLF	TAL SAC
Total/NA	Prep	5035			129.316 g	150 mL	545695	11/24/21 13:57	CLF	TAL SAC
Total/NA	Analysis	8260C SIM		1	1 mL	50 mL	547089	12/01/21 12:04	AP1	TAL SAC
Total/NA	ISM Prep	Increment, Prep					545690	11/24/21 13:45	CLF	TAL SAC
Total/NA	Prep	5035			129.316 g	150 mL	545695	11/24/21 13:57	CLF	TAL SAC
Total/NA	Analysis	AK101		1	1 mL	50 mL	548330	12/06/21 03:22	EMJ	TAL SAC

Client Sample ID: ADQ-ISM2-04

Lab Sample ID: 320-82156-12

Date Collected: 11/17/21 15:15

Matrix: Solid

Date Received: 11/23/21 16:45

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	8011			3.95 g	35 mL	559548	12/03/21 13:35	KSA	TAL DEN
Total/NA	Analysis	8011		1			559580	12/04/21 14:30	KSA	TAL DEN
Total/NA	ISM Prep	Increment, prep					545596	11/24/21 11:36	M1A	TAL SAC
Total/NA	Prep	AK102			30.80 g	3 mL	546878	11/30/21 11:46	NGK	TAL SAC
Total/NA	Analysis	AK102		1			550444	12/14/21 01:56	K1D	TAL SAC
Total/NA	ISM Prep	Increment, prep					545596	11/24/21 11:37	M1A	TAL SAC
Total/NA	Prep	SHAKE			5.19 g	10.0 mL	547064	11/30/21 18:38	AM	TAL SAC
Total/NA	Analysis	EPA 537(Mod)		1			548024	12/03/21 22:21	D1R	TAL SAC
Total/NA	ISM Prep	Increment, prep					545579	11/24/21 11:21	M1A	TAL SAC
Total/NA	Analysis	D 2216		1			546537	11/29/21 14:40	JCB	TAL SAC
Total/NA	Analysis	Increment,Prep		1			545582	11/24/21 11:22	M1A	TAL SAC

Client Sample ID: ADQ-ISM2-04

Lab Sample ID: 320-82156-12

Date Collected: 11/17/21 15:15

Matrix: Solid

Date Received: 11/23/21 16:45

Percent Solids: 91.3

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	ISM Prep	Increment, Prep					545690	11/24/21 13:45	CLF	TAL SAC
Total/NA	Prep	5035			115.369 g	150 mL	545695	11/24/21 13:57	CLF	TAL SAC
Total/NA	Analysis	8260C		1	1 mL	50 mL	548328	12/06/21 04:55	EMJ	TAL SAC
Total/NA	ISM Prep	Increment, Prep	RA				545690	11/24/21 13:45	CLF	TAL SAC
Total/NA	Prep	5035	RA		115.369 g	150 mL	545695	11/24/21 13:57	CLF	TAL SAC
Total/NA	Analysis	8260C	RA	1	1 mL	50 mL	548756	12/07/21 14:55	AP1	TAL SAC
Total/NA	ISM Prep	Increment, Prep					545690	11/24/21 13:45	CLF	TAL SAC
Total/NA	Prep	5035			115.369 g	150 mL	545695	11/24/21 13:57	CLF	TAL SAC
Total/NA	Analysis	8260C SIM		1	1 mL	50 mL	547089	12/01/21 12:27	AP1	TAL SAC
Total/NA	ISM Prep	Increment, Prep					545690	11/24/21 13:45	CLF	TAL SAC
Total/NA	Prep	5035			115.369 g	150 mL	545695	11/24/21 13:57	CLF	TAL SAC
Total/NA	Analysis	AK101		1	1 mL	50 mL	548753	12/07/21 14:55	AP1	TAL SAC

Lab Chronicle

Client: Shannon & Wilson, Inc
 Project/Site: Kodiak DOT&PF PFAS (107471)

Job ID: 320-82156-1

Client Sample ID: ADQ-ISM2-05

Lab Sample ID: 320-82156-13

Date Collected: 11/18/21 11:45

Matrix: Solid

Date Received: 11/23/21 16:45

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	8011			3.95 g	35 mL	559548	12/03/21 13:35	KSA	TAL DEN
Total/NA	Analysis	8011		1			559580	12/04/21 14:54	KSA	TAL DEN
Total/NA	ISM Prep	Increment, prep					545596	11/24/21 11:36	M1A	TAL SAC
Total/NA	Prep	AK102			30.68 g	3 mL	546878	11/30/21 11:46	NGK	TAL SAC
Total/NA	Analysis	AK102		1			550444	12/14/21 02:24	K1D	TAL SAC
Total/NA	ISM Prep	Increment, prep					545596	11/24/21 11:37	M1A	TAL SAC
Total/NA	Prep	SHAKE			5.11 g	10.0 mL	547064	11/30/21 18:38	AM	TAL SAC
Total/NA	Analysis	EPA 537(Mod)		1			548024	12/03/21 22:52	D1R	TAL SAC
Total/NA	ISM Prep	Increment, prep					545579	11/24/21 11:21	M1A	TAL SAC
Total/NA	Analysis	D 2216		1			546537	11/29/21 14:40	JCB	TAL SAC
Total/NA	Analysis	Increment,Prep		1			545582	11/24/21 11:22	M1A	TAL SAC

Client Sample ID: ADQ-ISM2-05

Lab Sample ID: 320-82156-13

Date Collected: 11/18/21 11:45

Matrix: Solid

Date Received: 11/23/21 16:45

Percent Solids: 88.9

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	ISM Prep	Increment, Prep					545690	11/24/21 13:45	CLF	TAL SAC
Total/NA	Prep	5035			104.864 g	150 mL	545695	11/24/21 13:57	CLF	TAL SAC
Total/NA	Analysis	8260C		1	1 mL	50 mL	548328	12/06/21 05:18	EMJ	TAL SAC
Total/NA	ISM Prep	Increment, Prep					545690	11/24/21 13:45	CLF	TAL SAC
Total/NA	Prep	5035			104.864 g	150 mL	545695	11/24/21 13:57	CLF	TAL SAC
Total/NA	Analysis	8260C SIM		1	1 mL	50 mL	547089	12/01/21 12:51	AP1	TAL SAC
Total/NA	ISM Prep	Increment, Prep					545690	11/24/21 13:45	CLF	TAL SAC
Total/NA	Prep	5035			104.864 g	150 mL	545695	11/24/21 13:57	CLF	TAL SAC
Total/NA	Analysis	AK101		1	1 mL	50 mL	548330	12/06/21 05:18	EMJ	TAL SAC

Client Sample ID: Trip Blank 2

Lab Sample ID: 320-82156-14

Date Collected: 11/14/21 08:00

Matrix: Solid

Date Received: 11/23/21 16:45

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			25 g	25 mL	545695	11/24/21 13:57	CLF	TAL SAC
Total/NA	Analysis	8260C		1	1 mL	50 mL	548328	12/05/21 21:35	EMJ	TAL SAC
Total/NA	Prep	5035			25 g	25 mL	545695	11/24/21 13:57	CLF	TAL SAC
Total/NA	Analysis	8260C SIM		1	1 mL	50 mL	547089	12/01/21 13:15	AP1	TAL SAC
Total/NA	Prep	5035			25 g	25 mL	545695	11/24/21 13:57	CLF	TAL SAC
Total/NA	Analysis	AK101		1	1 mL	50 mL	548330	12/05/21 21:35	EMJ	TAL SAC
Total/NA	Prep	8011			3.95 g	35 mL	559548	12/03/21 13:35	KSA	TAL DEN
Total/NA	Analysis	8011		1			559580	12/04/21 15:19	KSA	TAL DEN

Lab Chronicle

Client: Shannon & Wilson, Inc
 Project/Site: Kodiak DOT&PF PFAS (107471)

Job ID: 320-82156-1

Client Sample ID: Trip Blank 3

Lab Sample ID: 320-82156-15

Date Collected: 11/15/21 08:00

Matrix: Solid

Date Received: 11/23/21 16:45

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			25 g	25 mL	545695	11/24/21 13:57	CLF	TAL SAC
Total/NA	Analysis	8260C		1	1 mL	50 mL	548328	12/05/21 21:59	EMJ	TAL SAC
Total/NA	Prep	5035			25 g	25 mL	545695	11/24/21 13:57	CLF	TAL SAC
Total/NA	Analysis	8260C SIM		1	1 mL	50 mL	547089	12/01/21 13:39	AP1	TAL SAC
Total/NA	Prep	5035			25 g	25 mL	545695	11/24/21 13:57	CLF	TAL SAC
Total/NA	Analysis	AK101		1	1 mL	50 mL	548330	12/05/21 21:59	EMJ	TAL SAC
Total/NA	Prep	8011			3.95 g	35 mL	559548	12/03/21 13:35	KSA	TAL DEN
Total/NA	Analysis	8011		1			559580	12/04/21 15:43	KSA	TAL DEN

Client Sample ID: Trip Blank 4

Lab Sample ID: 320-82156-16

Date Collected: 11/16/21 08:00

Matrix: Solid

Date Received: 11/23/21 16:45

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			25 g	25 mL	545695	11/24/21 13:57	CLF	TAL SAC
Total/NA	Analysis	8260C		1	1 mL	50 mL	548328	12/05/21 22:22	EMJ	TAL SAC
Total/NA	Prep	5035			25 g	25 mL	545695	11/24/21 13:57	CLF	TAL SAC
Total/NA	Analysis	8260C SIM		1	1 mL	50 mL	547089	12/01/21 14:03	AP1	TAL SAC
Total/NA	Prep	5035			25 g	25 mL	545695	11/24/21 13:57	CLF	TAL SAC
Total/NA	Analysis	AK101		1	1 mL	50 mL	548330	12/05/21 22:22	EMJ	TAL SAC
Total/NA	Prep	8011			3.95 g	35 mL	559548	12/03/21 13:35	KSA	TAL DEN
Total/NA	Analysis	8011		1			559580	12/04/21 16:07	KSA	TAL DEN

Client Sample ID: Trip Blank 5

Lab Sample ID: 320-82156-17

Date Collected: 11/17/21 08:00

Matrix: Solid

Date Received: 11/23/21 16:45

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			25 g	25 mL	545695	11/24/21 13:57	CLF	TAL SAC
Total/NA	Analysis	8260C		1	1 mL	50 mL	548328	12/05/21 22:45	EMJ	TAL SAC
Total/NA	Prep	5035			25 g	25 mL	545695	11/24/21 13:57	CLF	TAL SAC
Total/NA	Analysis	8260C SIM		1	1 mL	50 mL	547089	12/01/21 14:26	AP1	TAL SAC
Total/NA	Prep	5035			25 g	25 mL	545695	11/24/21 13:57	CLF	TAL SAC
Total/NA	Analysis	AK101		1	1 mL	50 mL	548330	12/05/21 22:45	EMJ	TAL SAC
Total/NA	Prep	8011			3.95 g	35 mL	559548	12/03/21 13:35	KSA	TAL DEN
Total/NA	Analysis	8011		1			559580	12/04/21 16:31	KSA	TAL DEN

Client Sample ID: ADQ-ISM1-EB1

Lab Sample ID: 320-82156-18

Date Collected: 11/15/21 17:00

Matrix: Water

Date Received: 11/23/21 16:45

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3535			195.2 mL	10.0 mL	545627	11/24/21 12:30	KJW	TAL SAC
Total/NA	Analysis	EPA 537(Mod)		1			546209	11/27/21 23:53	S1M	TAL SAC

Eurofins TestAmerica, Sacramento

Lab Chronicle

Client: Shannon & Wilson, Inc
Project/Site: Kodiak DOT&PF PFAS (107471)

Job ID: 320-82156-1

Client Sample ID: ADQ-ISM2-EB1

Lab Sample ID: 320-82156-19

Date Collected: 11/16/21 17:20

Matrix: Water

Date Received: 11/23/21 16:45

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3535			181 mL	10.0 mL	545627	11/24/21 12:30	KJW	TAL SAC
Total/NA	Analysis	EPA 537(Mod)		1			546209	11/28/21 00:03	S1M	TAL SAC

Client Sample ID: ADQ-ISM2-EB2

Lab Sample ID: 320-82156-20

Date Collected: 11/17/21 15:50

Matrix: Water

Date Received: 11/23/21 16:45

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3535			185.2 mL	10.0 mL	545627	11/24/21 12:30	KJW	TAL SAC
Total/NA	Analysis	EPA 537(Mod)		1			546209	11/28/21 00:34	S1M	TAL SAC

Client Sample ID: ADQ-ISM2-EB3

Lab Sample ID: 320-82156-21

Date Collected: 11/18/21 12:15

Matrix: Water

Date Received: 11/23/21 16:45

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3535			145.4 mL	10.0 mL	545627	11/24/21 12:30	KJW	TAL SAC
Total/NA	Analysis	EPA 537(Mod)		1			546209	11/28/21 00:45	S1M	TAL SAC

Laboratory References:

TAL DEN = Eurofins TestAmerica, Denver, 4955 Yarrow Street, Arvada, CO 80002, TEL (303)736-0100

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

Accreditation/Certification Summary

Client: Shannon & Wilson, Inc
Project/Site: Kodiak DOT&PF PFAS (107471)

Job ID: 320-82156-1

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
8260C	5035	Solid	1,1-Dichloropropene
8260C	5035	Solid	1,2-Dibromo-3-Chloropropane
8260C	5035	Solid	1,3-Dichloropropane
8260C	5035	Solid	2,2-Dichloropropane
8260C	5035	Solid	2-Chlorotoluene
8260C	5035	Solid	4-Chlorotoluene
8260C	5035	Solid	Chlorobromomethane
8260C	5035	Solid	p-Isopropyltoluene
D 2216		Solid	Percent Moisture
D 2216		Solid	Percent Solids
Increment, Prep		Solid	Prep Complete

Laboratory: Eurofins TestAmerica, Denver

The accreditations/certifications listed below are applicable to this report.

Authority	Program	Identification Number	Expiration Date
Alaska (UST)	State	18-001	02-28-22

Method Summary

Client: Shannon & Wilson, Inc
Project/Site: Kodiak DOT&PF PFAS (107471)

Job ID: 320-82156-1

Method	Method Description	Protocol	Laboratory
8260C	Volatile Organic Compounds by GC/MS	SW846	TAL SAC
8260C SIM	Volatile Organic Compounds (GC/MS)	SW846	TAL SAC
AK101	Alaska - Gasoline Range Organics (GC/MS)	ADEC	TAL SAC
8011	EDB, DBCP, and 1,2,3-TCP (GC)	SW846	TAL DEN
AK102	DRO	ADEC	TAL SAC
EPA 537(Mod)	PFAS for QSM 5.3, Table B-15	EPA	TAL SAC
D 2216	Percent Moisture	ASTM	TAL SAC
Increment,Prep	ISM - Custom ISM procedure	EPA	TAL SAC
3535	Solid-Phase Extraction (SPE)	SW846	TAL SAC
5035	Closed System Purge and Trap	SW846	TAL SAC
8011	Microextraction	SW846	TAL DEN
AK102	Alaska Extraction (Diesel Range Organic Compounds)	ADEC	TAL SAC
Increment, prep	ISM - As-received, 2 D slabcake subsample	EPA	TAL SAC
Increment, prep	ISM - Dry, Disaggregate, Sieve, 2 D Slabcake Subsample	EPA	TAL SAC
Increment, Prep	ISM - VOA - Medium Bottle	EPA	TAL SAC
SHAKE	Shake Extraction with Ultrasonic Bath Extraction	SW846	TAL SAC

Protocol References:

ADEC = Alaska Department of Environmental Conservation

ASTM = ASTM International

EPA = US Environmental Protection Agency

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

TAL DEN = Eurofins TestAmerica, Denver, 4955 Yarrow Street, Arvada, CO 80002, TEL (303)736-0100

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

Sample Summary

Client: Shannon & Wilson, Inc
Project/Site: Kodiak DOT&PF PFAS (107471)

Job ID: 320-82156-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
320-82156-1	ADQ-ISM1-01	Solid	11/14/21 14:30	11/23/21 16:45
320-82156-2	ADQ-ISM1-101	Solid	11/15/21 10:05	11/23/21 16:45
320-82156-3	ADQ-ISM1-201	Solid	11/15/21 11:10	11/23/21 16:45
320-82156-4	ADQ-ISM1-02	Solid	11/14/21 16:00	11/23/21 16:45
320-82156-5	ADQ-ISM1-03	Solid	11/15/21 15:10	11/23/21 16:45
320-82156-6	ADQ-ISM1-04	Solid	11/15/21 16:15	11/23/21 16:45
320-82156-7	ADQ-ISM2-01	Solid	11/17/21 10:40	11/23/21 16:45
320-82156-8	ADQ-ISM2-02	Solid	11/16/21 14:50	11/23/21 16:45
320-82156-9	ADQ-ISM2-102	Solid	11/16/21 15:51	11/23/21 16:45
320-82156-10	ADQ-ISM2-202	Solid	11/16/21 16:50	11/23/21 16:45
320-82156-11	ADQ-ISM2-03	Solid	11/17/21 14:10	11/23/21 16:45
320-82156-12	ADQ-ISM2-04	Solid	11/17/21 15:15	11/23/21 16:45
320-82156-13	ADQ-ISM2-05	Solid	11/18/21 11:45	11/23/21 16:45
320-82156-14	Trip Blank 2	Solid	11/14/21 08:00	11/23/21 16:45
320-82156-15	Trip Blank 3	Solid	11/15/21 08:00	11/23/21 16:45
320-82156-16	Trip Blank 4	Solid	11/16/21 08:00	11/23/21 16:45
320-82156-17	Trip Blank 5	Solid	11/17/21 08:00	11/23/21 16:45
320-82156-18	ADQ-ISM1-EB1	Water	11/15/21 17:00	11/23/21 16:45
320-82156-19	ADQ-ISM2-EB1	Water	11/16/21 17:20	11/23/21 16:45
320-82156-20	ADQ-ISM2-EB2	Water	11/17/21 15:50	11/23/21 16:45
320-82156-21	ADQ-ISM2-EB3	Water	11/18/21 12:15	11/23/21 16:45



CHAIN-OF-CUSTODY RECORD

Analytical Methods (include preservative if used)

Turn Around Time:

Normal Rush

Please Specify

Quote No:

J-Flags: Yes No

Sample Identity	Lab No.	Time	Date Sampled	Analytical Methods (include preservative if used)					Total Number of Containers	Remarks/Matrix Composition/Grab? Sample Containers
ADQ-ISM1-01		1430	11/14/21	X	X				7	Soil (Trip Blank 2)
ADQ-ISM1-101		1005	11/15/21	↓	↓				↓	↓
ADQ-ISM1-201		1110	11/15/21	↓	↓				↓	↓
ADQ-ISM1-02		1600	11/14/21	↓	↓				↓	↓
ADQ-ISM1-03		1510	11/15/21	↓	↓				↓	Soil (Trip Blank 3)
ADQ-ISM1-04		1615	11/15/21	↓	↓				↓	↓
ADQ-ISM2-01		1040	11/17/21	↓	↓				↓	↓
ADQ-ISM2-02		1450	11/16/21	↓	↓				↓	Soil (Trip Blank 4)
ADQ-ISM2-102		1551	↓	↓	↓				↓	↓
ADQ-ISM2-202		1650	↓	↓	↓				↓	↓



PFAS (537M)
 DRO (AK102)
 GRO (AK101)
 VOCs (8260D)

Project Information

Number: 107471-001

Name: Kodiak DOT+PF, ISM Sampling

Contact: Kristen Freiburger

Ongoing Project? Yes No

Sampler: RLW, ZJT

Sample Receipt

Total No. of Containers: _____

COC Seals/Intact? Y/N/NA _____

Received Good Cond./Cold _____

Temp: _____

Delivery Method: _____

Relinquished By: 1.

Signature: [Signature] Time: 1200

Printed Name: Rachel Willis Date: 11/19/21

Company: Shannon + Wilson, Inc

Relinquished By: 2.

Signature: _____ Time: _____

Printed Name: _____ Date: _____

Company: _____

Relinquished By: 3.

Signature: _____ Time: _____

Printed Name: _____ Date: _____

Company: _____

Notes:

- See notes column for trip blank associations
- Trip blanks w/ samples in cooler all times.
- All samples are ISM samples for soil matrix
- Water samples have limited volume

Received By: 1.

Signature: [Signature] Time: 1645

Printed Name: Jason Simmons Date: _____

Company: [Signature]

Received By: 2.

Signature: _____ Time: _____

Printed Name: _____ Date: _____

Company: _____

Received By: 3.

Signature: _____ Time: _____

Printed Name: _____ Date: _____

Company: _____

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

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12/14/2021



CHAIN-OF-CUSTODY RECORD

Analytical Methods (include preservative if used)

Turn Around Time:
 Normal Rush
 Please Specify

Quote No:

J-Flags: Yes No

PFAS (537.M)
 DRD (AK102)
 GRO (AK101)
 VOCs (8260D)
 PFAS (537.M)
 for water, no preserv.

Sample Identity	Lab No.	Time	Date Sampled	Analytical Methods							Total Number of Containers	Remarks/Matrix Composition/Grab? Sample Containers	
ADQ-ISM2-03		1410	11/17/21	X	X							7	Soil (Trip Blank 5)
ADQ-ISM2-04		1515	11/17/21	X	X							7	↓
ADQ-ISM2-05		1145	11/18/21	X	X							7	↓ ↓
Trip Blank 2		0800	11/14/21		X							1	Trip Blanks
Trip Blank 3		0800	11/15/21									1	↓
Trip Blank 4		0800	11/16/21									1	↓
Trip Blank 5		0800	11/17/21									1	↓ ↓
ADQ-ISM1-EB1		1700	11/15/21					X				2	Water
ADQ-ISM2-EB1		1720	11/16/21					X				1	Water

Project Information
 Number:
 Name: See Pg 1
 Contact:
 Ongoing Project? Yes No
 Sampler:

Sample Receipt
 Total No. of Containers:
 COC Seals/Intact? Y/N/NA
 Received Good Cond./Cold
 Temp:
 Delivery Method:

Relinquished By: 1.
 Signature: [Signature] Time: 1200
 Printed Name: Rachel Willis Date: 11/19/21
 Company: Shannon + Wilson Inc

Relinquished By: 2.
 Signature: _____ Time: _____
 Printed Name: _____ Date: _____
 Company: _____

Relinquished By: 3.
 Signature: _____ Time: _____
 Printed Name: _____ Date: _____
 Company: _____

Notes:

Received By: 1.
 Signature: [Signature] Time: 1645
 Printed Name: Jessie Simmons Date: 11/23/21
 Company: ES&SAC

Received By: 2.
 Signature: _____ Time: _____
 Printed Name: _____ Date: _____
 Company: _____

Received By: 3.
 Signature: _____ Time: _____
 Printed Name: _____ Date: _____
 Company: _____

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



CHAIN-OF-CUSTODY RECORD

Analytical Methods (include preservative if used)

Turn Around Time:
 Normal Rush
 Please Specify

Quote No: _____

J-Flags: Yes No

PFAS (537 M)
 for water matrix
 No preservative

Sample Identity	Lab No.	Time	Date Sampled	Analytical Methods (include preservative if used)					Total Number of Containers	Remarks/Matrix Composition/Grab? Sample Containers
ADQ-ISM2-EB2		1550	11/17/21	X					1	water
ADQ-ISM2-EB3		1215	11/18/21	X					1	water

Project Information

Number: _____
 Name: see PG 2
 Contact: _____
 Ongoing Project? Yes No
 Sampler: _____

Sample Receipt

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

Relinquished By: 1.

Signature: [Signature] Time: 12:00
 Printed Name: Rachel Willis Date: 11/19/21
 Company: Shannon + Wilson Inc

Relinquished By: 2.

Signature: _____ Time: _____
 Printed Name: _____ Date: _____
 Company: _____

Relinquished By: 3.

Signature: _____ Time: _____
 Printed Name: _____ Date: _____
 Company: _____

Notes:

Received By: 1.

Signature: [Signature] Time: 1645
 Printed Name: Jason Jimenez Date: 11/18/21
 Company: ESTSBC

Received By: 2.

Signature: _____ Time: _____
 Printed Name: _____ Date: _____
 Company: _____

Received By: 3.

Signature: _____ Time: _____
 Printed Name: _____ Date: _____
 Company: _____

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



Eurofins TestAmerica, Sacramento

880 Riverside Parkway
 West Sacramento, CA 95605
 Phone: 916-373-5600 Fax: 916-372-1059

Chain of Custody Record



eurofins

Client Information (Sub Contract Lab)				Sampler:		Lab PM: Alltucker, David R		Carrier Tracking No(s):		COC No: 320-250902.1			
Client Contact: Shipping/Receiving				Phone:		E-Mail: David.Alltucker@Eurofinset.com		State of Origin: Alaska		Page: Page 1 of 2			
Company: TestAmerica Laboratories, Inc.				Address: 4955 Yarrow Street,		Due Date Requested: 12/8/2021		Accreditations Required (See note): State - Alaska (UST)		Job #: 320-82156-1			
City: Arvada				State, Zip: CO, 80002		TAT Requested (days):		Analysis Requested				Preservation Codes: A - HCL M - Hexane B - NaOH N - None C - Zn Acetate O - AsNaO2 D - Nitric Acid P - Na2O4S E - NaHSO4 Q - Na2SO3 F - MeOH R - Na2S2O3 G - Amchlor S - H2SO4 H - Ascorbic Acid T - TSP Dodecahydrate I - Ice U - Acetone J - DI Water V - MCAA K - EDTA W - pH 4-5 L - EDA Z - other (specify)	
Project Name: Kodiak DOT&PF PFAS (107471)				Project #: 32018601		PO #:							
Site:				SSOW#:		WO #:		Field Filtered Sample (Yes or No)		Total Number of containers			
Sample Identification - Client ID (Lab ID)				Sample Date		Sample Time		Sample Type (C=Comp, G=grab)		Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)		Special Instructions/Note:	
ADQ-ISM1-01 (320-82156-1)				11/14/21		14:30 Alaskan		Solid		X		1	
ADQ-ISM1-101 (320-82156-2)				11/15/21		10:05 Alaskan		Solid		X		1	
ADQ-ISM1-201 (320-82156-3)				11/15/21		11:10 Alaskan		Solid		X		1	
ADQ-ISM1-02 (320-82156-4)				11/14/21		16:00 Alaskan		Solid		X		1	
ADQ-ISM1-03 (320-82156-5)				11/15/21		15:10 Alaskan		Solid		X		1	
ADQ-ISM1-04 (320-82156-6)				11/15/21		16:15 Alaskan		Solid		X		1	
ADQ-ISM2-01 (320-82156-7)				11/17/21		10:40 Alaskan		Solid		X		1	
ADQ-ISM2-02 (320-82156-8)				11/16/21		14:50 Alaskan		Solid		X		1	
ADQ-ISM2-102 (320-82156-9)				11/16/21		15:51 Alaskan		Solid		X		1	
Note: Since laboratory accreditations are subject to change, Eurofins TestAmerica places the ownership of method, analyte & accreditation compliance upon out subcontract laboratories. This sample shipment is forwarded under chain-of-custody. If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/tests/matrix being analyzed, the samples must be shipped back to the Eurofins TestAmerica laboratory or other instructions will be provided. Any changes to accreditation status should be brought to Eurofins TestAmerica attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said compliance to Eurofins TestAmerica.													
Possible Hazard Identification						Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)							
Unconfirmed						<input type="checkbox"/> Return To Client <input type="checkbox"/> Disposal By Lab <input type="checkbox"/> Archive For _____ Months							
Deliverable Requested: I, II, III, IV, Other (specify)				Primary Deliverable Rank: 2		Special Instructions/QC Requirements:							
Empty Kit Relinquished by:				Date:		Time:		Method of Shipment:					
Relinquished by:		Date/Time: 11/20/21 1630		Company: EBT		Received by:		Date/Time: 12/1/21 1055		Company: EAT/DEW			
Relinquished by:		Date/Time:		Company:		Received by:		Date/Time:		Company:			
Relinquished by:		Date/Time:		Company:		Received by:		Date/Time:		Company:			
Custody Seals Intact: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No		Custody Seal No.: 1086467				Cooler Temperature(s) °C and Other Remarks: 1.5 1R9 CF-0-1							

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Eurofins TestAmerica, Sacramento

880 Riverside Parkway
West Sacramento, CA 95605
Phone: 916-373-5600 Fax: 916-372-1059

Chain of Custody Record



Client Information (Sub Contract Lab)		Sampler:		Lab PM: Alltucker, David R		Carrier Tracking No(s):		COC No: 320-250902.2					
Client Contact: Shipping/Receiving		Phone:		E-Mail: David.Alltucker@Eurofinset.com		State of Origin: Alaska		Page: Page 2 of 2					
Company: TestAmerica Laboratories, Inc.				Accreditations Required (See note): State - Alaska (UST)				Job #: 320-82156-1					
Address: 4955 Yarrow Street,		Due Date Requested: 12/8/2021		Analysis Requested				Preservation Codes: A - HCL M - Hexane B - NaOH N - None C - Zn Acetate O - AsNaO2 D - Nitric Acid P - Na2O4S E - NaHSO4 Q - Na2SO3 F - MeOH R - Na2S2O3 G - Amchlor S - H2SO4 H - Ascorbic Acid T - TSP Dodecahydrate I - Ice U - Acetone J - DI Water V - MCAA K - EDTA W - pH 4-5 L - EDA Z - other (specify)					
City: Arvada		TAT Requested (days):											
State, Zip: CO, 80002		PO #:		Field Filtered Sample (Yes or No)		Perform MS/MSD (Yes or No)		Total Number of containers					
Phone: 303-736-0100(Tel) 303-431-7171(Fax)		WO #:											
Email:		Project #: 32018601		8011/8011_Soil_Prep (MOD) EDB, DBCP, and 1,2,3-TCP									
Project Name: Kodiak DOT&PF PFAS (107471)		SSOW#:											
Site:													
Sample Identification - Client ID (Lab ID)		Sample Date		Sample Time		Sample Type (C=comp, G=grab)		Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)		Preservation Code:		Special Instructions/Note:	
 		 		 		 		 		 		 	
ADQ-ISM2-202 (320-82156-10)		11/16/21		16:50 Alaskan		Solid		X				1	
ADQ-ISM2-03 (320-82156-11)		11/17/21		14:10 Alaskan		Solid		X				1	
ADQ-ISM2-04 (320-82156-12)		11/17/21		15:15 Alaskan		Solid		X				1	
ADQ-ISM2-05 (320-82156-13)		11/18/21		11:45 Alaskan		Solid		X				1	
Trip Blank 2 (320-82156-14)		11/14/21		08:00 Alaskan		Solid		X				1	
Trip Blank 3 (320-82156-15)		11/15/21		08:00 Alaskan		Solid		X				1	
Trip Blank 4 (320-82156-16)		11/16/21		08:00 Alaskan		Solid		X				1	
Trip Blank 5 (320-82156-17)		11/17/21		08:00 Alaskan		Solid		X				1	
Note: Since laboratory accreditations are subject to change, Eurofins TestAmerica places the ownership of method, analyte & accreditation compliance upon out subcontract laboratories. This sample shipment is forwarded under chain-of-custody. If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/tests/matrix being analyzed, the samples must be shipped back to the Eurofins TestAmerica laboratory or other instructions will be provided. Any changes to accreditation status should be brought to Eurofins TestAmerica attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said compliance to Eurofins TestAmerica.													
Possible Hazard Identification						Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)							
Unconfirmed						<input type="checkbox"/> Return To Client <input type="checkbox"/> Disposal By Lab <input type="checkbox"/> Archive For _____ Months							
Deliverable Requested: I, II, III, IV, Other (specify)				Primary Deliverable Rank: 2		Special Instructions/QC Requirements:							
Empty Kit Relinquished by:				Date:		Time:		Method of Shipment:					
Relinquished by: <i>[Signature]</i>				Date/Time: 11/26/21 1630		Company: EPT-Sea		Received by: <i>[Signature]</i>		Date/Time: 12/1/21 1055		Company: EPTA/GEN	
Relinquished by:				Date/Time:		Company:		Received by:		Date/Time:		Company:	
Relinquished by:				Date/Time:		Company:		Received by:		Date/Time:		Company:	
Custody Seals Intact: Δ Yes Δ No		Custody Seal No.:		Cooler Temperature(s) °C and Other Remarks:									

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12/14/2021



Login Sample Receipt Checklist

Client: Shannon & Wilson, Inc

Job Number: 320-82156-1

Login Number: 82156

List Source: Eurofins TestAmerica, Sacramento

List Number: 1

Creator: Oropeza, Salvador

Question	Answer	Comment
Radioactivity wasn't checked or is \leq background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	Seals/1714711/1714710/1714707/1714706
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 <math><6\text{mm}</math> (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Login Sample Receipt Checklist

Client: Shannon & Wilson, Inc

Job Number: 320-82156-1

Login Number: 82156

List Number: 2

Creator: Lee, Jerry

List Source: Eurofins TestAmerica, Denver

List Creation: 12/01/21 04:05 PM

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	
Sample custody seals, if present, are intact.	True	
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?	N/A	
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	



Laboratory Data Review Checklist

Completed By:

Rachel Willis

Title:

Environmental Scientist

Date:

12/20/2021

Consultant Firm:

Shannon & Wilson, Inc.

Laboratory Name:

Eurofins Test America

Laboratory Report Number:

320-82156-1

Laboratory Report Date:

12/14/2021

CS Site Name:

Kodiak Airport Fencing Project

ADEC File Number:

Hazard Identification Number:

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Note: Any N/A or No box checked must have an explanation in the comments box.

1. Laboratory

a. Did an ADEC CS approved laboratory receive and perform all of the submitted sample analyses?

Yes No N/A Comments:

The Eurofins Sacramento, CA laboratory has been approved by the DEC CS program for the analysis of per- and poly-fluoroalkyl substances (PFAS) by LCMSMS compliant with QSM 5.3 Table B-15.

b. If the samples were transferred to another “network” laboratory or sub-contracted to an alternate laboratory, was the laboratory performing the analyses ADEC CS approved?

Yes No N/A Comments:

2. Chain of Custody (CoC)

a. CoC information completed, signed, and dated (including released/received by)?

Yes No N/A Comments:

b. Correct analyses requested?

Yes No N/A Comments:

3. Laboratory Sample Receipt Documentation

a. Sample/cooler temperature documented and within range at receipt (0° to 6° C)?

Yes No N/A Comments:

b. Sample preservation acceptable – acidified waters, Methanol preserved VOC soil (GRO, BTEX, Volatile Chlorinated Solvents, etc.)?

Yes No N/A Comments:

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c. Sample condition documented – broken, leaking (Methanol), zero headspace (VOC vials)?

Yes No N/A Comments:

The sample receipt documentation notes the samples arrived in good condition.

d. If there were any discrepancies, were they documented? For example, incorrect sample containers/preservation, sample temperature outside of acceptable range, insufficient or missing samples, etc.?

Yes No N/A Comments:

There were no sample handling or receipt discrepancies documented by the laboratory affecting the data quality or usability, with the exception of shipping delays discussed below.

e. Data quality or usability affected?

Comments:

The data quality/usability is not affected.

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4. Case Narrative

a. Present and understandable?

Yes No N/A

Comments:

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- Method 8260C SIM: The following samples were delayed in shipping and the lab received with insufficient time to run within holding time. *ADQ-ISM1-01* (320-82156-1), *ADQ-ISM1-101* (320-82156-2), *ADQ-ISM1-201* (320-82156-3), *ADQ-ISM1-02* (320-82156-4), *ADQ-ISM1-03* (320-82156-5), *ADQ-ISM1-04* (320-82156-6), *ADQ-ISM2-02* (320-82156-8), *ADQ-ISM2-102* (320-82156-9), *ADQ-ISM2-202* (320-82156-10), *Trip Blank 2* (320-82156-14), *Trip Blank 3* (320-82156-15), and *Trip Blank 4* (320-82156-16).
- Method 8260C: The following samples were delayed in shipping and the lab received with insufficient time to run within holding time. *ADQ-ISM1-01* (320-82156-1), *ADQ-ISM1-101* (320-82156-2), *ADQ-ISM1-201* (320-82156-3), *ADQ-ISM1-02* (320-82156-4), *ADQ-ISM1-03* (320-82156-5), *ADQ-ISM1-04* (320-82156-6), *ADQ-ISM2-01* (320-82156-7), *ADQ-ISM2-02* (320-82156-8), *ADQ-ISM2-102* (320-82156-9), *ADQ-ISM2-202* (320-82156-10), *ADQ-ISM2-03* (320-82156-11), *ADQ-ISM2-04* (320-82156-12), *ADQ-ISM2-05* (320-82156-13), *Trip Blank 2* (320-82156-14), *Trip Blank 3* (320-82156-15), and *Trip Blank 4* (320-82156-16).
- Method 8011: The following samples were analyzed outside of analytical holding time due to samples received out of hold: *ADQ-ISM1-01* (320-82156-1), *ADQ-ISM1-101* (320-82156-2), *ADQ-ISM1-201* (320-82156-3), *ADQ-ISM1-02* (320-82156-4), *ADQ-ISM1-03* (320-82156-5), *ADQ-ISM1-04* (320-82156-6), *ADQ-ISM2-01* (320-82156-7), *ADQ-ISM2-02* (320-82156-8), *ADQ-ISM2-102* (320-82156-9), *ADQ-ISM2-202* (320-82156-10), *ADQ-ISM2-03* (320-82156-11), *ADQ-ISM2-04* (320-82156-12), *ADQ-ISM2-05* (320-82156-13), *Trip Blank 2* (320-82156-14), *Trip Blank 3* (320-82156-15), *Trip Blank 4* (320-82156-16) and *Trip Blank 5* (320-82156-17).
- Method Moisture: The reference method does not list a specific holding time for this procedure; therefore, the laboratory defaults to an in-house holding time of 14 days. The following samples in preparation batch 320-545579 and analytical batch 320-546537 were prepared and/or analyzed outside this time period: *ADQ-ISM1-01* (320-82156-1) and *ADQ-ISM1-02* (320-82156-4).
- Method SHAKE: The following samples were prepared outside of preparation holding time due to being logged past holding time: *ADQ-ISM1-01* (320-82156-1), *ADQ-ISM1-101* (320-82156-2), *ADQ-ISM1-201* (320-82156-3), *ADQ-ISM1-02* (320-82156-4), *ADQ-ISM1-03* (320-82156-5), *ADQ-ISM1-04* (320-82156-6), (320-82156-G-1-F MS) and (320-82156-G-1-G MSD) in preparation batch 320-545596 and 320-547064
- Method AK102: The following samples were prepared outside of preparation holding time due to the samples being received after the hold time expired: *ADQ-ISM1-01* (320-82156-1), *ADQ-ISM1-101* (320-82156-2), *ADQ-ISM1-201* (320-82156-3), *ADQ-ISM1-02* (320-82156-4), *ADQ-ISM1-03* (320-82156-5), *ADQ-ISM1-04* (320-82156-6), (320-82156-G-1-C MS) and (320-82156-G-1-D MSD). Samples are associated with method AK102_P_Solids AK102_103 solids in preparation batch 320-545596 and 320-546878.
- Method AK102 & 103: The Diesel Range Organics (DRO), C10-C25, concentration reported for the following samples is partially due to the presence of discrete peaks: *ADQ-ISM2-02* (320-82156-8) and *ADQ-ISM2-102* (320-82156-9).

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b. Discrepancies, errors, or QC failures identified by the lab?

Yes No N/A Comments:

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- Method 8260C: Surrogate 1,2-Dichloroethane-d4 (Surr), 4-Bromofluorobenzene (Surr) and Toluene-d8 (Surr) recovery for the following sample was outside the upper control limit: *ADQ-ISM2-04* (320-82156-12). This sample did not contain any target analytes associated with these surrogates.
- Method AK101: Surrogate recovery for the following samples were outside the upper control limit: *ADQ-ISM1-03* (320-82156-5), *ADQ-ISM2-01* (320-82156-7), *ADQ-ISM2-02* (320-82156-8) and *ADQ-ISM2-202* (320-82156-10). This sample did not contain any target analytes; therefore, re-analysis was not performed.
- Method EPA 537(Mod): The matrix spike (MS) recoveries for preparation batch 320-545596 and 320-547064 and analytical batch 320-548024 were outside control limits. Sample matrix interference is suspected because the associated laboratory control sample (LCS) recovery was within acceptance limits.
- Method AK102 & 103: The following samples contained a hydrocarbon pattern in the diesel range; however, the elution pattern was later than the typical diesel fuel pattern used by the laboratory for quantitative purposes: *ADQ-ISM1-01* (320-82156-1), *ADQ-ISM1-101* (320-82156-2), *ADQ-ISM1-201* (320-82156-3), *ADQ-ISM1-02* (320-82156-4), *ADQ-ISM1-03* (320-82156-5), *ADQ-ISM1-04* (320-82156-6), *ADQ-ISM2-01* (320-82156-7), *ADQ-ISM2-02* (320-82156-8), *ADQ-ISM2-102* (320-82156-9), *ADQ-ISM2-202* (320-82156-10), *ADQ-ISM2-03* (320-82156-11), *ADQ-ISM2-04* (320-82156-12) and *ADQ-ISM2-05* (320-82156-13).
- Method EPA 537(Mod): The Isotope Dilution Analyte (IDA) recovery associated with the following sample is below the method recommended limit: *ADQ-ISM2-02* (320-82156-8). Generally, data quality is not considered affected if the IDA signal-to-noise ratio is greater than 10:1, which is achieved for all IDA in the sample(s).
- Method SHAKE: The following samples were yellow after extraction/final volume: *ADQ-ISM1-01* (320-82156-1), *ADQ-ISM1-101* (320-82156-2), *ADQ-ISM1-201* (320-82156-3), *ADQ-ISM1-02* (320-82156-4), (320-82156-G-1-F MS) and (320-82156-G-1-G MSD) preparation batch 320-545596 and 320-547064.
- Method AK102 & 103: The following sample was diluted due to the abundance of non-target analytes: *ADQ-ISM2-01* (320-82156-7). Elevated reporting limits (RLs) are provided.
- Method 3535: Elevated reporting limits are provided for the following samples due to insufficient sample provided for preparation: *ADQ-ISM1-EB1* (320-82156-18), *ADQ-ISM2-EB1* (320-82156-19), *ADQ-ISM2-EB2* (320-82156-20) and *ADQ-ISM2-EB3* (320-82156-21) in preparation batch 320-545627
- Method 8011: Insufficient sample volume was available to perform a matrix spike/matrix spike duplicate (MS/MSD) associated with preparation batch 280-559548. A LCSD was run to ensure lab precision.
- Method 8011: MB, LCS, LCSD were prepared as SOP states due to the provided blank not having enough volume for all three QC. *ADQ-ISM1-01* (320-82156-1), *ADQ-ISM1-101* (320-82156-2), *ADQ-ISM1-201* (320-82156-3), *ADQ-ISM1-02* (320-82156-4), *ADQ-ISM1-03* (320-82156-5), *ADQ-ISM1-04* (320-82156-6), *ADQ-ISM2-01* (320-82156-7), *ADQ-ISM2-02* (320-

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82156-8), *ADQ-ISM2-102* (320-82156-9), *ADQ-ISM2-202* (320-82156-10), *ADQ-ISM2-03* (320-82156-11), *ADQ-ISM2-04* (320-82156-12), *ADQ-ISM2-05* (320-82156-13), *Trip Blank 2* (320-82156-14), *Trip Blank 3* (320-82156-15), *Trip Blank 4* (320-82156-16) and *Trip Blank 5* (320-82156-17).

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c. Were all corrective actions documented?

Yes No N/A

Comments:

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- Method 8260C: Internal standard (ISTD) response for TBA-d9 and/or Dioxane-d8 for the following samples in analytical batch 320-548328 was outside acceptance criteria: *ADQ-ISM1-01* (320-82156-1), *ADQ-ISM1-101* (320-82156-2), *ADQ-ISM1-201* (320-82156-3), *ADQ-ISM1-02* (320-82156-4), *ADQ-ISM1-03* (320-82156-5), *ADQ-ISM1-04* (320-82156-6), *ADQ-ISM2-01* (320-82156-7), *ADQ-ISM2-02* (320-82156-8), *ADQ-ISM2-102* (320-82156-9), *ADQ-ISM2-202* (320-82156-10), *ADQ-ISM2-03* (320-82156-11), *ADQ-ISM2-04* (320-82156-12), *ADQ-ISM2-05* (320-82156-13), *Trip Blank 2* (320-82156-14), *Trip Blank 3* (320-82156-15), *Trip Blank 4* (320-82156-16), *Trip Blank 5* (320-82156-17), (LCS 320-545695/2-A), (LCSD 320-545695/3-A) and (MB 320-545695/1-A). This ISTD does not correspond to any of the requested target compounds reported from this analytical batch; therefore, the data have been reported.
- Method 8260C: Internal standard (ISTD) response for TBA-d9 for the following sample in analytical batch 320-548756 was outside acceptance criteria: *ADQ-ISM2-04* (320-82156-12). This ISTD does not correspond to any of the requested target compounds reported from this analytical batch; therefore, the data have been reported.
- Method AK102 & 103: The following samples were diluted due to abundance of target analytes: *ADQ-ISM1-01* (320-82156-1), *ADQ-ISM1-101* (320-82156-2), *ADQ-ISM1-201* (320-82156-3), *ADQ-ISM1-02* (320-82156-4), *ADQ-ISM1-03* (320-82156-5) and *ADQ-ISM1-04* (320-82156-6). As such, surrogate recoveries are below the calibration range or are not reported, and elevated reporting limits (RLs) are provided.
- Method AK102 & 103: The following samples were diluted due to the abundance of target analytes: (320-82156-G-1-I MS) and (320-82156-G-1-J MSD). Because of this dilution, the surrogate spike and matrix spike concentration in the sample was reduced to a level where the recovery calculation does not provide useful information.
- Method AK102: Due to the matrix, the following samples could not be concentrated to the final method required volume: 3mL. They were concentrated to final volume of 5mL. The reporting limits (RLs) are elevated proportionately for method AK102_103 solid in preparation batch 320-545596 and 320-546878.
- Method 8011: The samples provided were 5 mL of methanol. This method normally uses 10g of soil as the sample volume. As TSO instructed the 5 mL of sample were spiked with the normal spikes of surrogate and then 2 mL of hexane were added to the sample vial followed by 15 mL of reagent water. This volume was then placed on the auto shaker for 2 minutes. Most of the samples had bad emulsions and were then put into the centrifuge for 5 minutes. this allowed the hexane to raise to the top of the sample. The hexane was then extracted as normal. The resulting data will be qualified. *ADQ-ISM1-01* (320-82156-1), *ADQ-ISM1-101* (320-82156-2), *ADQ-ISM1-201* (320-82156-3), *ADQ-ISM1-02* (320-82156-4), *ADQ-ISM1-03* (320-82156-5), *ADQ-ISM1-04* (320-82156-6), *ADQ-ISM2-01* (320-82156-7), *ADQ-ISM2-02* (320-82156-8), *ADQ-ISM2-102* (320-82156-9), *ADQ-ISM2-202* (320-82156-10), *ADQ-ISM2-03* (320-82156-11), *ADQ-ISM2-04* (320-82156-12), *ADQ-ISM2-05* (320-82156-13), *Trip*

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Blank 2 (320-82156-14), Trip Blank 3 (320-82156-15), Trip Blank 4 (320-82156-16) and Trip Blank 5 (320-82156-17).

- Method 3535: The following samples were received in 4 oz soil jar bottle: *ADQ-ISM1-EB1 (320-82156-18), ADQ-ISM2-EB1 (320-82156-19), ADQ-ISM2-EB2 (320-82156-20) and ADQ-ISM2-EB3 (320-82156-21)*. The samples were transferred into a new 250 mL bottle. After transferring into a new container, the samples were fortified with IDA then extracted in preparation batch 320-545627.
- Method 8260C SIM: Surrogate recovery for the following sample was outside the upper control limit: (MB 320-545695/1-A). This sample did not contain any target analytes; therefore, re-extraction and/or re-analysis was not performed.
- Method 8260C: Surrogate recovery for the following samples were outside the upper control limit: *ADQ-ISM2-01 (320-82156-7), ADQ-ISM2-02 (320-82156-8) and ADQ-ISM2-202 (320-82156-10)*. This sample did not contain any target analytes associated with the failing surrogate; therefore, re-analysis was not performed.
- Method AK102 & 103: Surrogate recovery for the following samples were outside control limits: *ADQ-ISM2-102 (320-82156-9) and ADQ-ISM2-03 (320-82156-11)*. Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.
- Method 8260C SIM: The laboratory control sample (LCS) and / or laboratory control sample duplicate (LCS D) for preparation batch 320-545695 and analytical batch 320-547089 recovered outside control limits for the following analytes: Chloroform. These analytes were biased high in the LCS and were not detected in the associated samples; therefore, the data have been reported.
- Method AK102 & 103: The method blank for preparation batch 320-546878 and analytical batch 320-550444 contained DRO (nC10-<nC25) above the method detection limit. This target analyte concentration was less than half the reporting limit (1/2RL); therefore, re-analysis of samples was not performed.
- Method EPA 537(Mod): Results for samples *ADQ-ISM1-01 (320-82156-1), ADQ-ISM1-101 (320-82156-2), ADQ-ISM1-201 (320-82156-3), ADQ-ISM1-02 (320-82156-4), (320-82156-G-1-L MS) and (320-82156-G-1-M MSD)* were reported from the analysis of a diluted extract due to effects of the sample matrix in the analysis of the undiluted extract. The dilution factor was applied to the labeled internal standard area counts and these area counts were within acceptance limits.

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d. What is the effect on data quality/usability according to the case narrative?

Comments:

Method AK102 and 103 have elevated RL for samples *ADQ-ISM1-01* (320-82156-1), *ADQ-ISM1-101* (320-82156-2), *ADQ-ISM1-201* (320-82156-3), *ADQ-ISM1-02* (320-82156-4), *ADQ-ISM1-03* (320-82156-5), *ADQ-ISM1-04* (320-82156-6), and *ADQ-ISM2-01*.

Method 3535 have elevated RLs for samples *ADQ-ISM-EB1*, *ADQ-ISM2-EB1*, *ADQ-ISM2-EB2*, and *ADQ-ISM2-EB3*.

Please see the following sections for our assessment of the data quality associated with the failures listed above.

5. Samples Results

a. Correct analyses performed/reported as requested on COC?

Yes No N/A Comments:

b. All applicable holding times met?

Yes No N/A Comments:

Select samples analyzed by Method 8011, Method 8260C-SIM, Method 8260C, Moisture, Shake, and AK102 were prepared outside of the laboratory holding time due to shipping delays. The samples were analyzed within two times the holding time, therefore results are considered estimated, flagged "JL" (detected) and "UJ" (non-detect). No data were rejected due to hold time failures.

c. All soils reported on a dry weight basis?

Yes No N/A Comments:

d. Are the reported LOQs less than the Cleanup Level or the minimum required detection level for the project?

Yes No N/A Comments:

Multiple VOC analytes had elevated reporting limits above the Cleanup Level. Analytes with elevated reporting limits above the Cleanup Level are denoted as <BOLD in the analytical table.

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e. Data quality or usability affected?

The quality of the data is affected due to hold time failures and minimum required detection level (see above). The results are considered usable with the applied qualifiers listed above.

6. QC Samples

a. Method Blank

i. One method blank reported per matrix, analysis and 20 samples?

Yes No N/A Comments:

ii. All method blank results less than limit of quantitation (LOQ) or project specified objectives?

Yes No N/A Comments:

However, DRO were detected at 0.600 J mg/kg in the method blank associated with preparatory batch 545524. This batch number is associated with each of the DRO samples reported in this work order.

iii. If above LOQ or project specified objectives, what samples are affected?

Comments:

Samples with concentrations detected within 10 times of the MB concentration are considered affected. The following samples were detected within 10 times the MB concentration: *ADQ-ISM2-02*, *ADQ-ISM2-102*, *ADQ-ISM2-202*, *ADQ-ISM2-03*, and *ADQ-ISM2-05*.

DRO were detected above 10 times the MB concentration in samples *ADQ-ISM1-01*, *ADQ-ISM1-101*, *ADQ-ISM1-201*, *ADQ-ISM1-02*, *ADQ-ISM1-03*, *ADQ-ISM1-04*, *ADQ-ISM2-01*, and *ADQ-ISM2-04*; these results are not affected by the MB detection.

iv. Do the affected sample(s) have data flags? If so, are the data flags clearly defined?

Yes No N/A Comments:

Results within 10 times the MB concentration are considered estimated, biased high, flagged with a "JH" in the analytical table.

The following results are flagged "JH" at the detected concentration.

- *ADQ-ISM2-02*
- *ADQ-ISM2-102*
- *ADQ-ISM2-202*
- *ADQ-ISM2-03*
- *ADQ-ISM2-05*

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v. Data quality or usability affected?

Comments:

The data quality is affected; see above. The data are considered usable with the applied qualifiers listed above.

b. Laboratory Control Sample/Duplicate (LCS/LCSD)

i. Organics – One LCS/LCSD reported per matrix, analysis and 20 samples? (LCS/LCSD required per AK methods, LCS required per SW846)

Yes No N/A Comments:

An LCS/LCSD was reported for Method 8260C (VOC), Method 8260C SIM (VOC-SIM), Method AK101 (GRO), Method 8011 (EDB, DBCP, and 1,2,3-TCP), and Method AK102 (DRO).

An LCS was reported for method EPA 537M (PFAS) for preparation batch 547064 (solid matrix) and 545627 (water matrix).

ii. Metals/Inorganics – one LCS and one sample duplicate reported per matrix, analysis and 20 samples?

Yes No N/A Comments:

Metals/Inorganics analyses were not requested for this work order.

iii. Accuracy – All percent recoveries (%R) reported and within method or laboratory limits and project specified objectives, if applicable? (AK Petroleum methods: AK101 60%-120%, AK102 75%-125%, AK103 60%-120%; all other analyses see the laboratory QC pages)

Yes No N/A Comments:

Percent recovery (%R) was within laboratory limits for all analytes, with exception of high recovery for chloroform in the LCS and LCSD sample in method 8260C-SIM associated with preparation batch 545695.

iv. Precision – All relative percent differences (RPD) reported and less than method or laboratory limits and project specified objectives, if applicable? RPD reported from LCS/LCSD, and or sample/sample duplicate. (AK Petroleum methods 20%; all other analyses see the laboratory QC pages)

Yes No N/A Comments:

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v. If %R or RPD is outside of acceptable limits, what samples are affected?

Comments:

No samples are affected. Chloroform was not detected the project samples. Method accuracy and, where applicable, precision was demonstrated to be within acceptable limits.

vi. Do the affected sample(s) have data flags? If so, are the data flags clearly defined?

Yes No N/A Comments:

Qualification was not required; see above.

vii. Data quality or usability affected? (Use comment box to explain.)

Comments:

The data quality and usability are not affected.

c. Matrix Spike/Matrix Spike Duplicate (MS/MSD)

Note: Leave blank if not required for project

i. Organics – One MS/MSD reported per matrix, analysis and 20 samples?

Yes No N/A Comments:

MS and MSD samples were reported for Method AK102 (DRO) associated with preparation batch 546878 and Method EPA 537M (PFAS) associated with preparation batch 547064 (soil matrix).

ii. Metals/Inorganics – one MS and one MSD reported per matrix, analysis and 20 samples?

Yes No N/A Comments:

Metals/Inorganics analyses were not requested for this work order.

iii. Accuracy – All percent recoveries (%R) reported and within method or laboratory limits and project specified objectives, if applicable?

Yes No N/A Comments:

Recoveries associated with DRO analysis in preparatory batch 546878 were above the QC limits. PFOS recovery in the MS associated with preparatory batch 547064 were above the QC limits.

iv. Precision – All relative percent differences (RPD) reported and less than method or laboratory limits and project specified objectives, if applicable? RPD reported from MS/MSD, and or sample/sample duplicate.

Yes No N/A Comments:

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v. If %R or RPD is outside of acceptable limits, what samples are affected?

Comments:

We consider samples affected by MS/MSD recovery failures if the native concentration is high relative to the spike concentration.

The parent sample for the MS/MSD recovery failures for DRO has a native DRO concentration of 350 mg/kg, greater than 10 times the spike concentration of 9.82 mg/kg and 9.69 for the MS/MSD pair, respectively. The DRO result for sample ADQ-ISM1-01 is not affected by the MS/MSD percent recovery failure.

PFOS is not detected above reporting limits in the parent sample associated with MS recovery failure for PFOS. The PFOS result for *ADQ-ISM1-01* is not considered affected.

vi. Do the affected sample(s) have data flags? If so, are the data flags clearly defined?

Yes No N/A Comments:

vii. Data quality or usability affected? (Use comment box to explain.)

Comments:

The data quality and usability are not affected.

d. Surrogates – Organics Only or Isotope Dilution Analytes (IDA) – Isotope Dilution Methods Only

i. Are surrogate/IDA recoveries reported for organic analyses – field, QC and laboratory samples?

Yes No N/A Comments:

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- ii. Accuracy – All percent recoveries (%R) reported and within method or laboratory limits and project specified objectives, if applicable? (AK Petroleum methods 50-150 %R for field samples and 60-120 %R for QC samples; all other analyses see the laboratory report pages)

Yes No N/A Comments:

Sample *ADQ-ISM1-01*, *ADQ-ISM1-201*, *ADQ-ISM1-02*, exhibited high recovery for o-terphenyl and n-triacontane-d62 (DRO surrogates).

Samples *ADQ-ISM-101* and *ADQ-ISM1-04* exhibited high recovery for n-triacontane-d62 (DRO surrogate).

Sample *ADQ-ISM1-03* exhibited high recovery for 4-bromofluorobenzene and trifluorotoluene (GRO surrogates).

Sample *ADQ-ISM2-102* exhibited low recovery for o-terphenyl (DRO surrogate).

Samples *ADQ-ISM2-01*, *ADQ-ISM2-02*, and *ADQ-ISM2-202* exhibited high recovery for 4-bromofluorobenzene (GRO surrogate).

Samples *ADQ-ISM2-01* and *ADQ-ISM2-202* exhibited high recovery for 1,2-dichloroethane-d4 (8260C surrogate).

Sample *ADQ-ISM2-02* exhibited high recovery for 1,2-dichloroethane and toluene-d8 (8260C surrogates).

Sample *ADQ-ISM2-04* exhibited high recovery for 1,2-dichloroethane-d4, 4-bromofluorobenzene, and toluene-d8 (8260C surrogate).

Sample *ADQ-ISM2-02* exhibited low IDA recovery for 13C4PFOS (PFOS surrogate).

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iii. Do the sample results with failed surrogate/IDA recoveries have data flags? If so, are the data flags clearly defined?

Yes No N/A Comments:

The DRO results for the following samples have been flagged as biased high due to a method blank detection, but as biased low for surrogate recovery failure. The overall result is considered estimated, flagged with a "J".

- DRO: *ADQ-ISM2-03* and *ADQ-ISM2-102*

The DRO result for the following samples is considered biased high, flagged with a "JH" due to the above limit surrogate recovery.

- DRO: *ADQ-ISM1-01*, *ADQ-ISM1-101*, *ADQ-ISM1-201*, *ADQ-ISM1-02*, and *ADQ-ISM2-04*

The GRO result for the following samples were non-detect and therefore not affected by the above limit surrogate recovery. No flags are required.

- GRO: *ADQ-ISM2-202*, *ADQ-ISM1-03*, *ADQ-ISM2-01*, and *ADQ-ISM2-02*.

The 8260C sample results associated with surrogate failures for *ADQ-ISM2-01*, *ADQ-ISM2-02*, *ADQ-ISM2-202*, and *ADQ-ISM2-04* were non-detect and therefore not affected by the above limit surrogate recoveries. No flags required.

The following samples and analytes are affected by the IDA recovery failure. Results are considered estimated, flagged with a "UJ" (non-detect) in the analytical data table.

- PFOS, ADONA, 9Cl-PF3ONS, 11Cl-PF3OUdS: *ADQ-ISM2-02*.

iv. Data quality or usability affected?

Comments:

The data quality is affected, as described above. The data are usable with the applied qualifiers listed above.

e. Trip Blanks

i. One trip blank reported per matrix, analysis and for each cooler containing volatile samples? (If not, enter explanation below.)

Yes No N/A Comments:

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ii. Is the cooler used to transport the trip blank and VOA samples clearly indicated on the COC?
(If not, a comment explaining why must be entered below)

Yes No N/A Comments:

iii. All results less than LOQ and project specified objectives?

Yes No N/A Comments:

iv. If above LOQ or project specified objectives, what samples are affected?

Comments:

v. Data quality or usability affected?

Comments:

The data quality/usability is not affected, as noted above.

f. Field Duplicate

i. One field duplicate submitted per matrix, analysis and 10 project samples?

Yes No N/A Comments:

The samples submitted with this work order consist of replicate ISM samples. The results of the three replicates are used to calculate a relative standard deviation (RSD) to assess the overall representativeness of the data. The formula used to calculate is given below:

$$RSD(\%) = \frac{\text{Standard Deviation}}{\text{Arithmetic Mean of Target Analyte}} \times 100$$

ii. Submitted blind to lab?

Yes No N/A Comments:

The following field duplicate and triplicate samples were submitted with this work order.

- ADQ-ISM1-01, ADQ-ISM1-101, and ADQ-ISM1-201; and
- ADQ-ISM2-02, ADQ-ISM2-102, and ADQ-ISM2-202.

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iii. Precision – All relative percent differences (RPD) less than specified project objectives?
(Recommended: 30% water, 50% soil)

$$\text{RPD (\%)} = \text{Absolute value of: } \frac{(R_1 - R_2)}{((R_1 + R_2)/2)} \times 100$$

Where R_1 = Sample Concentration
 R_2 = Field Duplicate Concentration

Yes No N/A Comments:

The RSDs were below 30%, as recommend by DEC for soil ISM samples, with the following exceptions. These results are considered estimated, flagged in the analytical tables. These results have already been flagged for hold time exceedance and no further flagging has been applied.

ADQ-ISM1-01, ADQ-ISM1-101, and ADQ-ISM1-201

- 1,2,4-trimethylbenzene
- 2-hexanone
- acetone
- benzene
- m-xylene & p-xylene
- toluene

ADQ-ISM2-02, ADQ-ISM2-102, and ADQ-ISM2-202

- m-xylene & p-xylene
- toluene

iv. Data quality or usability affected? (Use the comment box to explain why or why not.)

Comments:

The data quality is affected; see above. The data is considered usable with the applied qualifiers listed above.

g. Decontamination or Equipment Blank (If not applicable, a comment stating why must be entered below)?

Yes No N/A Comments:

Equipment rinsate samples were included for PFAS analytes (method 537mod) with this work order.

i. All results less than LOQ and project specified objectives?

Yes No N/A Comments:

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ii. If above LOQ or project specified objectives, what samples are affected?

Comments:

None, see above.

iii. Data quality or usability affected?

Comments:

The data quality/usability is not affected.

7. Other Data Flags/Qualifiers (ACOE, AFCEE, Lab Specific, etc.)

a. Defined and appropriate?

Yes No N/A

Comments:

Appendix C

Quality Assurance/Quality Control (QA/QC)

CONTENTS

- QA/QC Summary

QUALITY ASSURANCE / QUALITY CONTROL SUMMARY

This appendix summarizes Shannon & Wilson's review of analytical sample results for the Kodiak Airport Pre-Construction Fencing Upgrade. Laboratory QC procedures included evaluating surrogate recovery, performing continuing calibration checks, analyzing method blanks, and checking laboratory control samples to assess the accuracy and precision of the analytical methods. The laboratory reports, including case narratives describing laboratory QA results, are appended.

Shannon & Wilson reviewed three laboratory reports prepared by Eurofins TestAmerica Laboratories, Sacramento to evaluate compliance with project data quality objectives following the DEC's LDRC. These work orders are detailed in Exhibit C-1.

Exhibit C-1: Work Order Summary

Laboratory	Work Order	Sample Type	Included Analyses
Eurofins TestAmerica	320-82154-1	Soil	GRO (AK101), DRO (AK102), VOCs (SW8260C), PFAS (537.1M)
Eurofins TestAmerica	320-82155	Asphalt	PFAS (537.1M)
Eurofins TestAmerica	320-82156	Soil ISM	GRO (AK101), DRO (AK102), VOCs (SW8260C), PFAS (537.1M)

C.1 ANALYTICAL QUALITY ASSURANCE AND QUALITY CONTROL

QA/QC procedures assist in producing data of acceptable quality and reliability. Analytical results for laboratory QC samples were reviewed and a QA assessment of the data was conducted as the data were generated. The QA review procedures provided documentation of the accuracy and precision of the analytical data and confirmed that the analyses were sufficiently sensitive to detect analytes at levels below applicable DEC soil or groundwater cleanup levels and other regulatory limits, where such limits exist.

Shannon & Wilson conducted a QA/QC review of the laboratory reports containing data for this submittal. The laboratories apply the letter 'J' to a detection less than the reporting limit (RL) but greater than the detection limit; this "flagged" datum is considered an estimated concentration. Shannon & Wilson also applied a standardized set of flags to data brought into question during the review. Data flags applied to PFOS, PFOA, GRO, DRO, and VOC analytical results are described as follows. Additional details regarding data quality flags applied to the analytical results are described in the appended LDRCs.

C.2 SAMPLE HANDLING

Samples collected by Shannon & Wilson personnel were shipped in hard sided coolers with custody seals to the Eurofins TestAmerica Laboratory in West Sacramento, California via Alaska Air Cargo. Sample-receipt forms provided by the laboratories were reviewed and checked to verify samples were received in good condition and within the acceptable temperature range. The DEC considers samples received free of ice and at temperatures between 0 °C and 6 °C as acceptable. Samples were generally received in good condition and properly preserved, where required.

Chain-of-custody records were also reviewed to confirm the information was complete, custody was not breached, and samples were analyzed within the acceptable holding time. Chain-of-custody records were complete and correct.

Due to the remote location of Kodiak and additional flight delays, the samples were received by the laboratory five days after samples were shipped. The laboratory informed Shannon & Wilson that they may not be able to meet the 14-day hold time for some project samples due to shipping delays and the laboratory's holiday schedule. The samples analyzed outside of hold time as a result of shipping delays and laboratory schedule are described below:

- Work Order (WO) 320-82154-1: Samples analyzed by Methods 8011, 8260C, and 8260C-SIM.
- WO 320-82155-1: Percent moisture was prepared and/or analyzed outside the laboratory's default 14-day hold time.
- WO 320-82156-1: Multiple samples analyzed by Methods 8260C SIM, 8260C, 8011, percent moisture, method SHAKE, and AK102.

The associated LDRCs contain a full list of samples analyzed outside the hold time. Samples were analyzed within two times the holding time, and the results are considered estimated, biased low and flagged "JL" (detected) and "UJ" (non-detect). No data were rejected due to hold time failures.

C.3 ANALYTICAL SENSITIVITY

Reporting limits for regulated analytes were below DEC cleanup levels and other applicable regulatory limits for the samples included in these work orders, with exception of multiple VOCs in WOs 320-82154-1 and 320-82156-1. Analytes with elevated reporting limits above the Cleanup Level are denoted as <BOLD in the analytical table.

C.4 LABORATORY METHOD BLANKS

Laboratory method blanks (MBs) were analyzed in association with samples collected for this project to check for contributions to the analytical results possibly attributable to laboratory-based contamination. Field sample results are considered potentially impacted if they are included in the same preparatory batch as an MB exhibiting analyte detections and have corresponding detections for those analytes. Affected sample concentrations within five times (non-PFAS) or ten times (PFAS) of those reported in the MB are assumed to be false-positives and are flagged 'UB' at the sample concentration or RL, whichever is greater. For non-PFAS analyses, affected sample concentrations within ten times those reported in the MB are assumed to have a high analytical bias and are flagged 'JH'.

Laboratory method blank detections occurred in WOs 320-82154-1 and WO 320-82156-1 for DRO analysis. Analytical samples affected by the DRO laboratory MB detection are discussed in Section 6.a. of the respective LDRC.

C.5 TRIP AND EQUIPMENT BLANK SAMPLES

Trip blanks were submitted with the samples marked for volatile analyses to verify cross-contamination did not occur during sample handling and transport. Equipment blanks were submitted with the samples that were collected with reusable equipment for analysis of PFAS to verify that the sampling equipment employed did not introduce analyte contributions to the sample results.

As with MBs, field sample results are considered potentially impacted if the detected sample concentration for the analyte found in the blank sample is within five or ten times that of the blank concentration. Sample results within five times that of a blank concentration are considered not detected and flagged "UB" at the detected concentration or RL, whichever is greater.

- Toluene was detected an estimated concentration in the trip blank sample associated with WO 320-82154-1. The toluene results in samples *ADQ-Site35-05*, *ADQ-Site35-09*, *ADQ-Site35-10*, *ADQ-Site35-11*, *ADQ-Site35-12*, *ADQ-Site35-113*, *ADQ-Site35-14*, and *ADQ-Site35-15* were within five times the trip blank concentration and are considered not detected, reported as "UB" at the reporting limit.
- Perfluorobutanesulfonic acid (PFBS) was detected at an estimated concentration in the equipment blank sample *ADQ-AC3-03-EB1* associated with WO 320-82155. The sample collected on the same day did contain detectable concentrations of PFBS and is not affected by the equipment blank detection.

C.6 METHOD ACCURACY AND PRECISION

To evaluate the accuracy and precision of the analytical methods, the laboratory analyzed QC samples for each preparatory batch. These QC samples consist of laboratory control samples (LCS) and LCS duplicates (LCSD), matrix spike (MS) and MS duplicates (MSD) samples. Shannon & Wilson reviewed the results of the laboratory QC samples to verify that the reported accuracy and precision were within acceptable limits. The review identified several QC failures, but none of the QC failures affected the project sample results. See the associated LDRC for additional details.

C.7 SURROGATE RECOVERY

The laboratory spiked the samples analyzed for organic constituents with a known quantity of a surrogate compound or isotope dilution analyte (IDA) similar to the target analytes. The recoveries of these surrogates or isotopes are provided with the sample results in the associated laboratory reports. Shannon & Wilson reviewed the provided surrogate and isotope recovery information to verify the recoveries were within the control limits for the given method. The review identified several QC failures which affected the project sample data (see the LDRCs for details). Results affected by high recovery are flagged 'JH' while results affected by low method recovery are flagged 'JL' or 'UJ' for non-detect results. Some results are affected by multiple QC errors and have been flagged 'J' to denote conflicting biases. No data were rejected due to surrogate or IDA recovery failures.

- WO 320-82154-1:
 - The GRO result for sample *ADQ-Site35-01* was affected by surrogate recovery failure.
 - The DRO result for samples *ADQ-Site35-01*, *ADQ-Site35-02*, *ADQ-Site35-11*, *ADQ-Site35-13*, and *ADQ-Site35-07* are affected by multiple surrogate recovery failures.
 - The N-Ethyl perfluorooctane sulfonamidoacetic acid (N-EtFOSAA) result for samples *ADQ-Site35-09*, *ADQ-Site35-11*, and *ADQ-Site35-115* are affected by low IDA recovery failures.
 - The N-Methyl perfluorooctane sulfonamidoacetic acid (N-MeFOSAA) and PFBS results for sample *ADQ-Site35-11* are affected by low IDA recovery failure.
- WO 320-82155-1:
 - Multiple samples were affected by low IDA recovery for multiple PFAS analytes. See the LDRC for a list of affected samples and analytes.
- WO 320-82156-1:
 - The DRO results for samples *ADQ-ISM2-03* and *ADQ-ISM2-102* are affected by low surrogate recovery.

- The DRO results for samples *ADQ-ISM-1-01*, *ADQ-ISM-1-101*, *ADQ-ISM-1-201*, *ADQ-ISM-1-02*, and *ADQ-ISM-1-04* are affected by high surrogate recovery.
- The PFOS, 4,8-dioxa-3H-perfluorononanoic acid (ADONA), 9-chlorohexadecafluoro-3-oxanonane-1-sulfonic acid (9Cl-PF3ONS), and 11-chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS) results for sample *ADQ-ISM2-02* are affected by IDA recovery failures.

C.8 FIELD SAMPLE REPRESENTATIVENESS

The overall representativeness of the sample results included in WOs 320-82154-1 and 320-82155-1 was evaluated by analyzing the amount of agreement between the detected results for field duplicate samples. The agreement was determined by calculating the relative percent difference (RPD) between the detected results of the field duplicate pairs. Results affected by relative percent difference failures are flagged ‘J’ in the results summary table unless previously qualified for more serious QC issues. This was completed for non-ISM sample results.

C.8.1 ISM Sample Representativeness

The amount of agreement between the detected results of the replicate ISM samples was evaluated by calculating the relative standard deviation (RSD). The RSD is defined in Equation 1.

Equation 1: Relative Standard Deviation

Equation	Variable and Definition	
$RSD(\%) = \frac{SD}{\mu} \times 100$	RSD	Relative standard deviation
	SD	Standard deviation
	μ	Arithmetic mean of sample results for a target analyte

The RSD for each detected target analyte was compared to the project specific DQO of 30% maximum deviation. Results of replicate ISM samples, and the 95 percent upper confidence limits (95% UCLs) calculated from those replicate results, are considered estimated if the RSD exceeds this 30% threshold. Samples with RSD failures are typically flagged with a ‘J’ in the analytical table; however, all affected samples have flags from QC failures, described above, so additional qualification is not necessary. The following samples and analytes have RSD failures.

- 1,2,4-trimethylbenzene, 2-hexanone, acetone, benzene, m-xylene & p-xylene, and toluene in samples *ADQ-ISM1-01*, *ADQ-ISM1-101*, and *ADQ-ISM1-201* reported in WO 320-82156-1.

- m-xylene & p-xylene, and toluene in samples *ADQ-ISM2-02*, *ADQ-ISM2-102*, and *ADQ-ISM2-202* reported in WO 320-82156-1.

C.9 OTHER QUALIFIERS

The PFOS result for sample *ADQ-AC3-04* was affected by a transition mass ratio failure and subsequently quantified manually by the analyst. We consider this result an estimate and have applied the 'J' qualifier.

C.10 DATA QUALITY SUMMARY

By working in general accordance with the proposed scope of services, Shannon & Wilson considers the samples we collected for this project to be representative of site conditions at the locations and times they were obtained. Based on this QA review, no samples were rejected as unusable due to QC failures, surpassing the completeness goal of obtaining 85 percent useable data. In general, the quality of the analytical data for this project does not appear to have been compromised by analytical irregularities and is adequate for the purposes of this assessment. Results that are affected by QC anomalies are qualified with the appropriate flags in the analytical data tables.

Important Information

About Your Environmental Report

IMPORTANT INFORMATION

CONSULTING SERVICES ARE PERFORMED FOR SPECIFIC PURPOSES AND FOR SPECIFIC CLIENTS.

Consultants prepare reports to meet the specific needs of specific individuals. A report prepared for a civil engineer may not be adequate for a construction contractor or even another civil engineer. Unless indicated otherwise, your consultant prepared your report expressly for you and expressly for the purposes you indicated. No one other than you should apply this report for its intended purpose without first conferring with the consultant. No party should apply this report for any purpose other than that originally contemplated without first conferring with the consultant.

THE CONSULTANT'S REPORT IS BASED ON PROJECT-SPECIFIC FACTORS.

A geotechnical/environmental report is based on a subsurface exploration plan designed to consider a unique set of project-specific factors. Depending on the project, these may include the general nature of the structure and property involved; its size and configuration; its historical use and practice; the location of the structure on the site and its orientation; other improvements such as access roads, parking lots, and underground utilities; and the additional risk created by scope-of-service limitations imposed by the client. To help avoid costly problems, ask the consultant to evaluate how any factors that change subsequent to the date of the report may affect the recommendations. Unless your consultant indicates otherwise, your report should not be used (1) when the nature of the proposed project is changed (for example, if an office building will be erected instead of a parking garage, or if a refrigerated warehouse will be built instead of an unrefrigerated one, or chemicals are discovered on or near the site); (2) when the size, elevation, or configuration of the proposed project is altered; (3) when the location or orientation of the proposed project is modified; (4) when there is a change of ownership; or (5) for application to an adjacent site. Consultants cannot accept responsibility for problems that may occur if they are not consulted after factors that were considered in the development of the report have changed.

SUBSURFACE CONDITIONS CAN CHANGE.

Subsurface conditions may be affected as a result of natural processes or human activity. Because a geotechnical/environmental report is based on conditions that existed at the time of subsurface exploration, construction decisions should not be based on a report whose adequacy may have been affected by time. Ask the consultant to advise if additional tests are desirable before construction starts; for example, groundwater conditions commonly vary seasonally.

Construction operations at or adjacent to the site and natural events such as floods, earthquakes, or groundwater fluctuations may also affect subsurface conditions and, thus, the continuing adequacy of a geotechnical/environmental report. The consultant should be kept apprised of any such events and should be consulted to determine if additional tests are necessary.

MOST RECOMMENDATIONS ARE PROFESSIONAL JUDGMENTS.

Site exploration and testing identifies actual surface and subsurface conditions only at those points where samples are taken. The data were extrapolated by your consultant, who then applied judgment to render an opinion about overall subsurface conditions. The actual interface between materials may be far more gradual or abrupt than your report indicates. Actual conditions in areas not sampled may differ from those predicted in your report. While nothing can be done to prevent

such situations, you and your consultant can work together to help reduce their impacts. Retaining your consultant to observe subsurface construction operations can be particularly beneficial in this respect.

A REPORT'S CONCLUSIONS ARE PRELIMINARY.

The conclusions contained in your consultant's report are preliminary, because they must be based on the assumption that conditions revealed through selective exploratory sampling are indicative of actual conditions throughout a site. Actual subsurface conditions can be discerned only during earthwork; therefore, you should retain your consultant to observe actual conditions and to provide conclusions. Only the consultant who prepared the report is fully familiar with the background information needed to determine whether or not the report's recommendations based on those conclusions are valid and whether or not the contractor is abiding by applicable recommendations. The consultant who developed your report cannot assume responsibility or liability for the adequacy of the report's recommendations if another party is retained to observe construction.

THE CONSULTANT'S REPORT IS SUBJECT TO MISINTERPRETATION.

Costly problems can occur when other design professionals develop their plans based on misinterpretation of a geotechnical/environmental report. To help avoid these problems, the consultant should be retained to work with other project design professionals to explain relevant geotechnical, geological, hydrogeological, and environmental findings, and to review the adequacy of their plans and specifications relative to these issues.

BORING LOGS AND/OR MONITORING WELL DATA SHOULD NOT BE SEPARATED FROM THE REPORT.

Final boring logs developed by the consultant are based upon interpretation of field logs (assembled by site personnel), field test results, and laboratory and/or office evaluation of field samples and data. Only final boring logs and data are customarily included in geotechnical/environmental reports. These final logs should not, under any circumstances, be redrawn for inclusion in architectural or other design drawings, because drafters may commit errors or omissions in the transfer process.

To reduce the likelihood of boring log or monitoring well misinterpretation, contractors should be given ready access to the complete geotechnical engineering/environmental report prepared or authorized for their use. If access is provided only to the report prepared for you, you should advise contractors of the report's limitations, assuming that a contractor was not one of the specific persons for whom the report was prepared, and that developing construction cost estimates was not one of the specific purposes for which it was prepared. While a contractor may gain important knowledge from a report prepared for another party, the contractor should discuss the report with your consultant and perform the additional or alternative work believed necessary to obtain the data specifically appropriate for construction cost estimating purposes. Some clients hold the mistaken impression that simply disclaiming responsibility for the accuracy of subsurface information always insulates them from attendant liability. Providing the best available information to contractors helps prevent costly construction problems and the adversarial attitudes that aggravate them to a disproportionate scale.

READ RESPONSIBILITY CLAUSES CLOSELY.

Because geotechnical/environmental engineering is based extensively on judgment and opinion, it is far less exact than other design disciplines. This situation has resulted in wholly unwarranted claims being lodged against consultants. To help prevent this problem, consultants have developed a number of clauses for use in their contracts, reports, and other documents. These responsibility clauses are not exculpatory clauses designed to transfer the consultant's liabilities to other parties; rather, they are definitive clauses that identify where the consultant's responsibilities begin and end. Their use helps all parties involved recognize their individual responsibilities and take appropriate action. Some of these definitive clauses are likely to appear in your report, and you are encouraged to read them closely. Your consultant will be pleased to give full and frank answers to your questions.

The preceding paragraphs are based on information provided by the ASFE/Association of Engineering Firms Practicing in the Geosciences, Silver Spring, Maryland