

CPVEC Data Collection Log

15°C Meter Calibration DO Calibrated at 100% sat
 Stadar pH 7.0 pH 4.0 pH 10.0 Yes No
 Value 7.0 — —
 Calibrated
 Accept if value +/- 0.1 units of 7.0 standard temp corrected.

Page/Pages	1	2
Harbor	PETERSBURG	
Date (mm/dd/yy)	5-2-22	
Weather (C, PC, LR, HR)	PC	
Air Temp C		
Check w/Harbor Master (Y/N)		
Implement Boat Safety (Y/N)		
Samplers	SCD	GD

Clear, Partly Cloudy, Light Rain, Heavy Rain

Sample ID*	PE01				PE02				PE03				PE04			
Time	0815				0820				0845				0900			
Latitude	N 56° 49. ^{816'} 696'				N 56° 48. 956'				N 56° 48. 673'				N 56° 48. 596'			
Longitude	W 132° 55. ^{637'} 825'				W 132° 57. 622'				W 132° 58. 206'				W 132° 58. 425'			
Water Depth (ft)	76 155'				21.5'				25'				23.6'			
Photographs (No)																
Fecal (Y/N)	Y				Y				Y				Y			
Depth (m)	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
Temp C	6.5	6.2	6.2	6.1	6.4	6.5	6.5	6.5	6.7	6.7	6.7	6.7	6.7	6.7	6.6	6.6
pH	8.04	8.04	8.05	8.22	8.06	8.07	8.06	8.06	8.00	8.01	8.02	8.01	8.09	8.08	8.06	8.15
Salinity (ppt)	29.64	29.71	29.88	30.00	29.02	29.26	29.53	29.81	29.97	30.08	30.12	30.12	29.55	29.95	30.09	30.09
D.O. mg/L	10.13	16.13	10.10	10.06	10.20	10.23	10.24	10.24	9.93	10.12	10.27	10.30	10.14	10.23	10.25	10.25
Notes/Comments																

*Sample ID is combined harbor (JH or SK), Site (01-24), Date (mm/dd).
 Add "R" for replicate, add "FB" for field blank, "EB" for equipment blank.

PEFB @ 0800

CPVEC Data Collection Log

Page/Pages	2	2
Harbor	PETERSBURG	
Date (mm/dd/yy)	5-2-22	
Weather (C, PC, LR, HR)	PC	
Air Temp C		
Check w/Harbor Master (Y/N)		
Implement Boat Safety (Y/N)		
Samplers	JCD	GAP

Clear, Partly Cloudy, Light Rain, Heavy Rain

	Meter Calibration	DO Calibrated at 100% sat
Standard Value	pH 7.0 pH 4.0 pH 10.0	Yes No
Calibrated	SEE PAGE 1	
Accept if value +/- 0.1 units of 7.0 standard temp corrected.		

Sample ID*	PE06				PE06X											
Time	0915				0915											
Latitude	N 56° 40.049'				N 56° 40.049'											
Longitude	W 132° 59.092'				W 132° 59.092'											
Water Depth (ft)	22.4'				22.4'											
Photographs (No)																
Fecal (Y/N)	Y															
Depth (m)	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
Temp C	6.8	6.7	6.6	6.6	6.8	6.7	6.7	6.6								
pH	8.04	8.04	8.06	8.12	8.07	8.07	8.05	7.99								
Salinity (ppt)	29.65	29.82	30.08	30.10	29.65	29.99	30.07	30.12								
D.O. mg/L	10.26	10.37	10.37	10.38	10.47	10.47	10.46	10.45								
Notes/Comments																

*Sample ID is combined harbor (JH or SK), Site (01-24), Date (mm/dd).
 Add "R" for replicate, add "FB" for field blank, "EB" for equipment blank.



May 09, 2022

Service Request No:K2204666

Jeff Davis
Aquatic Restoration and Research Institute
22290 S. C. Street
P.O. Box 923
Talkeetna, AK 99676

Laboratory Results for: Ambient WQ-Petersburg

Dear Jeff,

Enclosed are the results of the sample(s) submitted to our laboratory May 03, 2022
For your reference, these analyses have been assigned our service request number **K2204666**.

Analyses were performed according to our laboratory's NELAP-approved quality assurance program. The test results meet requirements of the current NELAP standards, where applicable, and except as noted in the laboratory case narrative provided. For a specific list of NELAP-accredited analytes, refer to the certifications section at www.alsglobal.com. All results are intended to be considered in their entirety, and ALS Group USA Corp. dba ALS Environmental (ALS) is not responsible for use of less than the complete report. Results apply only to the items submitted to the laboratory for analysis and individual items (samples) analyzed, as listed in the report.

Please contact me if you have any questions. My extension is 3364. You may also contact me via email at howard.holmes@alsglobal.com.

Respectfully submitted,

ALS Group USA, Corp. dba ALS Environmental

Howard Holmes
Project Manager

ADDRESS 1317 S. 13th Avenue, Kelso, WA 98626
PHONE +1 360 577 7222 | FAX +1 360 636 1068
ALS Group USA, Corp.
dba ALS Environmental



Narrative Documents

ALS Environmental—Kelso Laboratory
1317 South 13th Avenue, Kelso, WA 98626
Phone (360) 577-7222 Fax (360) 425-9096
www.alsglobal.com



Client: Aquatic Restoration and Research Institute (ARRI)
Project: Ambient WQ-Petersburg
Sample Matrix: Ocean Water

Service Request: K2204666
Date Received: 05/03/2022

CASE NARRATIVE

All analyses were performed consistent with the quality assurance program of ALS Environmental. This report contains analytical results for samples for the Tier II level requested by the client.

Sample Receipt:

Eight ocean water samples were received for analysis at ALS Environmental on 05/03/2022. Any discrepancies upon initial sample inspection are annotated on the sample receipt and preservation form included within this report. The samples were stored at minimum in accordance with the analytical method requirements.

Metals:

No significant anomalies were noted with this analysis.

General Chemistry:

No significant anomalies were noted with this analysis.

Approved by 

Date 05/09/2022



SAMPLE DETECTION SUMMARY

This form includes only detections above the reporting levels. For a full listing of sample results, continue to the Sample Results section of this Report.

CLIENT ID: PE01 Lab ID: K2204666-001

Analyte	Results	Flag	MDL	MRL	Units	Method
Ammonia as Nitrogen	0.032		0.003	0.010	mg/L	350.1
Copper, Dissolved	0.23		0.02	0.10	ug/L	200.8
Nickel, Dissolved	0.36		0.03	0.20	ug/L	200.8
Zinc, Dissolved	0.26	J	0.20	0.50	ug/L	200.8
Copper	0.24		0.02	0.10	ug/L	200.8
Nickel	0.36		0.03	0.20	ug/L	200.8
Zinc	0.36	J	0.20	0.50	ug/L	200.8

CLIENT ID: PE02 Lab ID: K2204666-002

Analyte	Results	Flag	MDL	MRL	Units	Method
Ammonia as Nitrogen	0.034		0.003	0.010	mg/L	350.1
Copper, Dissolved	0.24		0.02	0.10	ug/L	200.8
Nickel, Dissolved	0.31		0.03	0.20	ug/L	200.8
Zinc, Dissolved	0.30	J	0.20	0.50	ug/L	200.8
Copper	0.25		0.02	0.10	ug/L	200.8
Nickel	0.39		0.03	0.20	ug/L	200.8
Zinc	0.34	J	0.20	0.50	ug/L	200.8

CLIENT ID: PE03 Lab ID: K2204666-003

Analyte	Results	Flag	MDL	MRL	Units	Method
Ammonia as Nitrogen	0.041		0.003	0.010	mg/L	350.1
Copper, Dissolved	0.22		0.02	0.10	ug/L	200.8
Nickel, Dissolved	0.33		0.03	0.20	ug/L	200.8
Zinc, Dissolved	0.25	J	0.20	0.50	ug/L	200.8
Copper	0.26		0.02	0.10	ug/L	200.8
Nickel	0.36		0.03	0.20	ug/L	200.8
Zinc	0.39	J	0.20	0.50	ug/L	200.8

CLIENT ID: PE04 Lab ID: K2204666-004

Analyte	Results	Flag	MDL	MRL	Units	Method
Ammonia as Nitrogen	0.038		0.003	0.010	mg/L	350.1
Copper, Dissolved	0.53		0.02	0.10	ug/L	200.8
Nickel, Dissolved	0.37		0.03	0.20	ug/L	200.8
Zinc, Dissolved	0.68		0.20	0.50	ug/L	200.8
Copper	0.24		0.02	0.10	ug/L	200.8
Nickel	0.39		0.03	0.20	ug/L	200.8
Zinc	0.31	J	0.20	0.50	ug/L	200.8

CLIENT ID: PE06 Lab ID: K2204666-005

Analyte	Results	Flag	MDL	MRL	Units	Method
Ammonia as Nitrogen	0.043		0.003	0.010	mg/L	350.1
Copper, Dissolved	0.22		0.02	0.10	ug/L	200.8



SAMPLE DETECTION SUMMARY

This form includes only detections above the reporting levels. For a full listing of sample results, continue to the Sample Results section of this Report.

CLIENT ID: PE06	Lab ID: K2204666-005
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Analyte	Results	Flag	MDL	MRL	Units	Method
Nickel, Dissolved	0.36		0.03	0.20	ug/L	200.8
Zinc, Dissolved	0.23	J	0.20	0.50	ug/L	200.8
Copper	0.24		0.02	0.10	ug/L	200.8
Nickel	0.37		0.03	0.20	ug/L	200.8
Zinc	0.29	J	0.20	0.50	ug/L	200.8

CLIENT ID: PE06X	Lab ID: K2204666-006
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Analyte	Results	Flag	MDL	MRL	Units	Method
Ammonia as Nitrogen	0.045		0.003	0.010	mg/L	350.1
Copper, Dissolved	0.22		0.02	0.10	ug/L	200.8
Nickel, Dissolved	0.37		0.03	0.20	ug/L	200.8
Zinc, Dissolved	0.25	J	0.20	0.50	ug/L	200.8
Copper	0.21		0.02	0.10	ug/L	200.8
Nickel	0.38		0.03	0.20	ug/L	200.8
Zinc	0.26	J	0.20	0.50	ug/L	200.8

CLIENT ID: PEFB	Lab ID: K2204666-007
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Analyte	Results	Flag	MDL	MRL	Units	Method
Ammonia as Nitrogen	0.007	J	0.003	0.010	mg/L	350.1

CLIENT ID: Trip Blank	Lab ID: K2204666-008
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Analyte	Results	Flag	MDL	MRL	Units	Method
Copper	0.03	J	0.02	0.10	ug/L	200.8



Sample Receipt Information

ALS Environmental—Kelso Laboratory
1317 South 13th Avenue, Kelso, WA 98626
Phone (360) 577-7222 Fax (360) 425-9096
www.alsglobal.com

Client: Aquatic Restoration and Research Institute (ARRI)
Project: Ambient WQ-Petersburg

Service Request:K2204666

SAMPLE CROSS-REFERENCE

<u>SAMPLE #</u>	<u>CLIENT SAMPLE ID</u>	<u>DATE</u>	<u>TIME</u>
K2204666-001	PE01	5/2/2022	
K2204666-002	PE02	5/2/2022	
K2204666-003	PE03	5/2/2022	
K2204666-004	PE04	5/2/2022	
K2204666-005	PE06	5/2/2022	
K2204666-006	PE06X	5/2/2022	
K2204666-007	PEFB	5/2/2022	
K2204666-008	Trip Blank	5/2/2022	

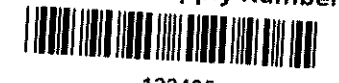
CHAIN OF CUSTODY


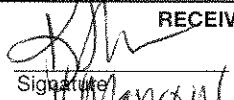
1317 South 13th Ave., Kelso, WA 98626 | +1 360 577 7222 | +1 800 695 7222 | +1 360 636 1068 (fax)

PAGE 1 OF 1 COC#

SR# 17204666

PROJECT INFORMATION					NUMBER OF CONTAINERS	Semi-volatile Organics by GC/MS 625 <input type="checkbox"/> 8270 <input type="checkbox"/> 8270LL <input type="checkbox"/> SIM PAH <input type="checkbox"/>	Volatile Organics 624 <input type="checkbox"/> 8260 <input type="checkbox"/>	Hydrocarbons (*see below) Gas <input type="checkbox"/> Diesel <input type="checkbox"/> Oil <input type="checkbox"/>	Oil & Grease/TRPH 1664 HEM <input type="checkbox"/> 1664 SGT <input type="checkbox"/>	PCBs	Aroclors	Pesticides/Herbicides 608 <input type="checkbox"/> 8081 <input type="checkbox"/>	Chlorophenolics Tri <input type="checkbox"/> 8141 <input type="checkbox"/>	Metals, Total or Dissolved (See List below) 8151 <input type="checkbox"/>	Cyanide <input type="checkbox"/>	Hex-Chrom <input type="checkbox"/>	(circle) pH, Cond., Cl, SO ₄ , PO ₄ , F, NO ₂ , NO ₃ , BOD, TSS, TDS, Turb.	DOC, NH ₃ -N, COD, TKN, TOC, TOX 9020 <input type="checkbox"/> AOX 1650 <input type="checkbox"/>	Alkalinity <input type="checkbox"/> CO ₃ <input type="checkbox"/> HCO ₃ <input type="checkbox"/>	Dioxins/Furans 1613 <input type="checkbox"/> 8290 <input type="checkbox"/>	Dissolved Gases RSK 175 <input type="checkbox"/> Methane <input type="checkbox"/> CO ₂ <input type="checkbox"/>	Ethane <input type="checkbox"/> Ethene <input type="checkbox"/>	REMARKS		
SAMPLE I.D.	DATE	TIME	LAB I.D.	MATRIX																					
PE01																									
PE02																									
PE03																									
PE04																									
PE06																									
PE06X																									
PE FB																									
Trip Blank																									

REPORT REQUIREMENTS <input checked="" type="checkbox"/> I. Routine Report: Method Blank, Surrogate, as required <input type="checkbox"/> II. Report Dup., MS, MSD as required <input type="checkbox"/> III. CLP Like Summary (no raw data) <input type="checkbox"/> IV. Data Validation Report <input checked="" type="checkbox"/> V. EDD	INVOICE INFORMATION P.O. # _____ Bill To: _____ _____	Circle which metals are to be analyzed: Total Metals: Al As Sb Ba Be B Ca Cd Co Cr <u>Cu</u> Fe Pb Mg Mn Mo <u>Ni</u> K Ag Na Se Sr Tl Sn V <u>Zn</u> Hg Dissolved Metals: Al As Sb Ba Be B Ca Cd Co Cr <u>Cu</u> Fe Pb Mg Mn Mo <u>Ni</u> K Ag Na Se Sr Tl Sn V <u>Zn</u> Hg
	TURNAROUND REQUIREMENTS <input type="checkbox"/> 24 hr. <input type="checkbox"/> 48 hr. <input type="checkbox"/> 5 day <input type="checkbox"/> Standard (15 working days) <input type="checkbox"/> Provide FAX Results Requested Report Date _____	*INDICATE STATE HYDROCARBON PROCEDURE: AK CA WI NORTHWEST OTHER: _____ (CIRCLE ONE) SPECIAL INSTRUCTIONS/COMMENTS: <div style="text-align: right;"> Container Supply Number  123435 </div> <input type="checkbox"/> Sample Shipment contains USDA regulated soil samples (check box if applicable)

RELINQUISHED BY:  Signature _____ Date/Time <u>5-2-22</u> Printed Name _____ Firm _____	RECEIVED BY: <u>Alaska Air</u> Signature _____ Date/Time _____ Printed Name _____ Firm _____	RELINQUISHED BY: Signature _____ Date/Time _____ Printed Name _____ Firm _____	RECEIVED BY:  Signature _____ Date/Time <u>5/3/22</u> Printed Name <u>Morrow</u> Firm <u>ALS</u>
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PM HH

Cooler Receipt and Preservation Form

Client Arce Service Request K22 04666666
Received: 5/3/22 Opened: 5/3/22 By: [Signature] Unloaded: 5/3/22 By: [Signature]

- 1. Samples were received via? USPS Fed Ex UPS DHL PDX Courier Hand Delivered
- 2. Samples were received in: (circle) Cooler Box Envelope Other NA
- 3. Were custody seals on coolers? NA Y N If yes, how many and where? _____
If present, were custody seals intact? Y N If present, were they signed and dated? Y N

Temp Blank	Sample Temp	IR Gun	Cooler #/COC ID / NA	Out of temp indicate with "X"	PM Notified if out of temp	Tracking Number NA	Filed
5.0		IR01				027-9262-4814	

- 4. Was a Temperature Blank present in cooler? NA Y N If yes, notate the temperature in the appropriate column above:
If no, take the temperature of a representative sample bottle contained within the cooler; notate in the column "Sample Temp":
- 5. Were samples received within the method specified temperature ranges? NA Y N
If no, were they received on ice and same day as collected? If not, notate the cooler # below and notify the PM. NA Y N

If applicable, tissue samples were received: Frozen Partially Thawed Thawed

- 6. Packing material: Inserts Baggies Bubble Wrap Gel Packs Wet Ice Dry Ice Sleeves _____
- 7. Were custody papers properly filled out (ink, signed, etc.)? NA Y N
- 8. Were samples received in good condition (unbroken) NA Y N
- 9. Were all sample labels complete (ie, analysis, preservation, etc.)? NA Y N
- 10. Did all sample labels and tags agree with custody papers? NA Y N
- 11. Were appropriate bottles/containers and volumes received for the tests indicated? NA Y N
- 12. Were the pH-preserved bottles (see SMO GEN SOP) received at the appropriate pH? Indicate in the table below NA Y N
- 13. Were VOA vials received without headspace? Indicate in the table below. NA Y N
- 14. Was C12/Res negative? NA Y N
- 15. Were 100ml sterile microbiology bottles filled exactly to the 100ml mark? NA Y N Under filled Overfilled

Sample ID on Bottle	Sample ID on COC	Identified by:

Sample ID	Bottle Count	Bottle Type	Head-space	Broke	pH	Reagent	Volume added	Reagent Lot Number	Initials	Time

Notes, Discrepancies, Resolutions: The km No Date or Time Sampled on COC



Miscellaneous Forms

ALS Environmental—Kelso Laboratory
1317 South 13th Avenue, Kelso, WA 98626
Phone (360) 577-7222 Fax (360) 425-9096
www.alsglobal.com

Inorganic Data Qualifiers

- * The result is an outlier. See case narrative.
- # The control limit criteria is not applicable.
- B The analyte was found in the associated method blank at a level that is significant relative to the sample result as defined by the DOD or NELAC standards.
- E The result is an estimate amount because the value exceeded the instrument calibration range.
- J The result is an estimated value.
- U The analyte was analyzed for, but was not detected ("Non-detect") at or above the MRL/MDL.
DOD-QSM 4.2 definition : Analyte was not detected and is reported as less than the LOD or as defined by the project. The detection limit is adjusted for dilution.
- i The MRL/MDL or LOQ/LOD is elevated due to a matrix interference.
- X See case narrative.
- Q See case narrative. One or more quality control criteria was outside the limits.
- H The holding time for this test is immediately following sample collection. The samples were analyzed as soon as possible after receipt by the laboratory.

Metals Data Qualifiers

- # The control limit criteria is not applicable.
- J The result is an estimated value.
- E The percent difference for the serial dilution was greater than 10%, indicating a possible matrix interference in the sample.
- M The duplicate injection precision was not met.
- N The Matrix Spike sample recovery is not within control limits. See case narrative.
- S The reported value was determined by the Method of Standard Additions (MSA).
- U The analyte was analyzed for, but was not detected ("Non-detect") at or above the MRL/MDL.
DOD-QSM 4.2 definition : Analyte was not detected and is reported as less than the LOD or as defined by the project. The detection limit is adjusted for dilution.
- W The post-digestion spike for furnace AA analysis is out of control limits, while sample absorbance is less than 50% of spike absorbance.
 - i The MRL/MDL or LOQ/LOD is elevated due to a matrix interference.
- X See case narrative.
- + The correlation coefficient for the MSA is less than 0.995.
- Q See case narrative. One or more quality control criteria was outside the limits.

Organic Data Qualifiers

- * The result is an outlier. See case narrative.
- # The control limit criteria is not applicable. See case narrative.
- A A tentatively identified compound, a suspected aldol-condensation product.
- B The analyte was found in the associated method blank at a level that is significant relative to the sample result as defined by the DOD or NELAC standards.
- C The analyte was qualitatively confirmed using GC/MS techniques, pattern recognition, or by comparing to historical data.
- D The reported result is from a dilution.
- E The result is an estimated value.
- J The result is an estimated value.
- N The result is presumptive. The analyte was tentatively identified, but a confirmation analysis was not performed.
- P The GC or HPLC confirmation criteria was exceeded. The relative percent difference is greater than 40% between the two analytical results.
- U The analyte was analyzed for, but was not detected ("Non-detect") at or above the MRL/MDL.
DOD-QSM 4.2 definition : Analyte was not detected and is reported as less than the LOD or as defined by the project. The detection limit is adjusted for dilution.
- i The MRL/MDL or LOQ/LOD is elevated due to a chromatographic interference.
- X See case narrative.
- Q See case narrative. One or more quality control criteria was outside the limits.

Additional Petroleum Hydrocarbon Specific Qualifiers

- F The chromatographic fingerprint of the sample matches the elution pattern of the calibration standard.
- L The chromatographic fingerprint of the sample resembles a petroleum product, but the elution pattern indicates the presence of a greater amount of lighter molecular weight constituents than the calibration standard.
- H The chromatographic fingerprint of the sample resembles a petroleum product, but the elution pattern indicates the presence of a greater amount of heavier molecular weight constituents than the calibration standard.
- O The chromatographic fingerprint of the sample resembles an oil, but does not match the calibration standard.
- Y The chromatographic fingerprint of the sample resembles a petroleum product eluting in approximately the correct carbon range, but the elution pattern does not match the calibration standard.
- Z The chromatographic fingerprint does not resemble a petroleum product.

**ALS Group USA Corp. dba ALS Environmental (ALS) - Kelso
State Certifications, Accreditations, and Licenses**

Agency	Web Site	Number
Alaska DEH	http://dec.alaska.gov/eh/lab/cs/csapproval.htm	UST-040
Arizona DHS	http://www.azdhs.gov/lab/license/env.htm	AZ0339
Arkansas - DEQ	http://www.adeq.state.ar.us/techsvs/labcert.htm	88-0637
California DHS (ELAP)	http://www.cdph.ca.gov/certlic/labs/Pages/ELAP.aspx	2795
DOD ELAP	http://www.denix.osd.mil/edqw/Accreditation/AccreditedLabs.cfm	L16-58-R4
Florida DOH	http://www.doh.state.fl.us/lab/EnvLabCert/WaterCert.htm	E87412
Hawaii DOH	http://health.hawaii.gov/	-
ISO 17025	http://www.pjllabs.com/	L16-57
Louisiana DEQ	http://www.deq.louisiana.gov/page/la-lab-accreditation	03016
Maine DHS	http://www.maine.gov/dhhs/	WA01276
Minnesota DOH	http://www.health.state.mn.us/accreditation	053-999-457
Nevada DEP	http://ndep.nv.gov/bsdw/labservice.htm	WA01276
New Jersey DEP	http://www.nj.gov/dep/enforcement/oqa.html	WA005
New York - DOH	https://www.wadsworth.org/regulatory/elap	12060
North Carolina DEQ	https://deq.nc.gov/about/divisions/water-resources/water-resources-data/water-sciences-home-page/laboratory-certification-branch/non-field-lab-certification	605
Oklahoma DEQ	http://www.deq.state.ok.us/CSDnew/labcert.htm	9801
Oregon – DEQ (NELAP)	http://public.health.oregon.gov/LaboratoryServices/EnvironmentalLaboratoryAccreditation/Pages/index.aspx	WA100010
South Carolina DHEC	http://www.scdhec.gov/environment/EnvironmentalLabCertification/	61002
Texas CEQ	http://www.tceq.texas.gov/field/qa/env_lab_accreditation.html	T104704427
Washington DOE	http://www.ecy.wa.gov/programs/eap/labs/lab-accreditation.html	C544
Wyoming (EPA Region 8)	https://www.epa.gov/region8-waterops/epa-region-8-certified-drinking-water	-
Kelso Laboratory Website	www.alsglobal.com	NA

Analyses were performed according to our laboratory's NELAP-approved quality assurance program. A complete listing of specific NELAP-certified analytes, can be found in the certification section at www.ALSGlobal.com or at the accreditation bodies web site.

Please refer to the certification and/or accreditation body's web site if samples are submitted for compliance purposes. The states highlighted above, require the analysis be listed on the state certification if used for compliance purposes and if the method/analyte is offered by that state.

Acronyms

ASTM	American Society for Testing and Materials
A2LA	American Association for Laboratory Accreditation
CARB	California Air Resources Board
CAS Number	Chemical Abstract Service registry Number
CFC	Chlorofluorocarbon
CFU	Colony-Forming Unit
DEC	Department of Environmental Conservation
DEQ	Department of Environmental Quality
DHS	Department of Health Services
DOE	Department of Ecology
DOH	Department of Health
EPA	U. S. Environmental Protection Agency
ELAP	Environmental Laboratory Accreditation Program
GC	Gas Chromatography
GC/MS	Gas Chromatography/Mass Spectrometry
LOD	Limit of Detection
LOQ	Limit of Quantitation
LUFT	Leaking Underground Fuel Tank
M	Modified
MCL	Maximum Contaminant Level is the highest permissible concentration of a substance allowed in drinking water as established by the USEPA.
MDL	Method Detection Limit
MPN	Most Probable Number
MRL	Method Reporting Limit
NA	Not Applicable
NC	Not Calculated
NCASI	National Council of the Paper Industry for Air and Stream Improvement
ND	Not Detected
NIOSH	National Institute for Occupational Safety and Health
PQL	Practical Quantitation Limit
RCRA	Resource Conservation and Recovery Act
SIM	Selected Ion Monitoring
TPH	Total Petroleum Hydrocarbons
tr	Trace level is the concentration of an analyte that is less than the PQL but greater than or equal to the MDL.

ALS Group USA, Corp.
dba ALS Environmental

Analyst Summary report

Client: Aquatic Restoration and Research Institute (ARRI)
Project: Ambient WQ-Petersburg/

Service Request: K2204666

Sample Name: PE01
Lab Code: K2204666-001
Sample Matrix: Ocean Water

Date Collected: 05/2/22
Date Received: 05/3/22

Analysis Method
200.8
350.1

Extracted/Digested By
SSOLAHEY
ESCHLOSS

Analyzed By
EMCALLISTER
ESCHLOSS

Sample Name: PE02
Lab Code: K2204666-002
Sample Matrix: Ocean Water

Date Collected: 05/2/22
Date Received: 05/3/22

Analysis Method
200.8
350.1

Extracted/Digested By
SSOLAHEY
ESCHLOSS

Analyzed By
EMCALLISTER
ESCHLOSS

Sample Name: PE03
Lab Code: K2204666-003
Sample Matrix: Ocean Water

Date Collected: 05/2/22
Date Received: 05/3/22

Analysis Method
200.8
350.1

Extracted/Digested By
SSOLAHEY
ESCHLOSS

Analyzed By
EMCALLISTER
ESCHLOSS

Sample Name: PE04
Lab Code: K2204666-004
Sample Matrix: Ocean Water

Date Collected: 05/2/22
Date Received: 05/3/22

Analysis Method
200.8
350.1

Extracted/Digested By
SSOLAHEY
ESCHLOSS

Analyzed By
EMCALLISTER
ESCHLOSS

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Analyst Summary report

Client: Aquatic Restoration and Research Institute (ARRI)
Project: Ambient WQ-Petersburg/

Service Request: K2204666

Sample Name: PE06
Lab Code: K2204666-005
Sample Matrix: Ocean Water

Date Collected: 05/2/22
Date Received: 05/3/22

Analysis Method
200.8
350.1

Extracted/Digested By
SSOLADEY
ESCHLOSS

Analyzed By
EMCALLISTER
ESCHLOSS

Sample Name: PE06X
Lab Code: K2204666-006
Sample Matrix: Ocean Water

Date Collected: 05/2/22
Date Received: 05/3/22

Analysis Method
200.8
350.1

Extracted/Digested By
SSOLADEY
ESCHLOSS

Analyzed By
EMCALLISTER
ESCHLOSS

Sample Name: PEFB
Lab Code: K2204666-007
Sample Matrix: Ocean Water

Date Collected: 05/2/22
Date Received: 05/3/22

Analysis Method
200.8
350.1

Extracted/Digested By
SSOLADEY
ESCHLOSS

Analyzed By
EMCALLISTER
ESCHLOSS

Sample Name: Trip Blank
Lab Code: K2204666-008
Sample Matrix: Ocean Water

Date Collected: 05/2/22
Date Received: 05/3/22

Analysis Method
200.8

Extracted/Digested By
SSOLADEY

Analyzed By
EMCALLISTER



Sample Results

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Metals

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Analytical Report

Client: Aquatic Restoration and Research Institute (ARRI)
Project: Ambient WQ-Petersburg
Sample Matrix: Ocean Water
Sample Name: PE01
Lab Code: K2204666-001

Service Request: K2204666
Date Collected: 05/02/22
Date Received: 05/03/22 10:40
Basis: NA

Dissolved Metals

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Copper	200.8	0.23	ug/L	0.10	0.02	1	05/09/22 10:42	05/05/22	
Nickel	200.8	0.36	ug/L	0.20	0.03	1	05/09/22 10:42	05/05/22	
Zinc	200.8	0.26 J	ug/L	0.50	0.20	1	05/09/22 10:42	05/05/22	

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Analytical Report

Client: Aquatic Restoration and Research Institute (ARRI)
Project: Ambient WQ-Petersburg
Sample Matrix: Ocean Water
Sample Name: PE01
Lab Code: K2204666-001

Service Request: K2204666
Date Collected: 05/02/22
Date Received: 05/03/22 10:40
Basis: NA

Total Metals

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Copper	200.8	0.24	ug/L	0.10	0.02	1	05/09/22 10:29	05/05/22	
Nickel	200.8	0.36	ug/L	0.20	0.03	1	05/09/22 10:29	05/05/22	
Zinc	200.8	0.36 J	ug/L	0.50	0.20	1	05/09/22 10:29	05/05/22	

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Analytical Report

Client: Aquatic Restoration and Research Institute (ARRI)
Project: Ambient WQ-Petersburg
Sample Matrix: Ocean Water
Sample Name: PE02
Lab Code: K2204666-002

Service Request: K2204666
Date Collected: 05/02/22
Date Received: 05/03/22 10:40

Basis: NA

Dissolved Metals

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Copper	200.8	0.24	ug/L	0.10	0.02	1	05/09/22 10:43	05/05/22	
Nickel	200.8	0.31	ug/L	0.20	0.03	1	05/09/22 10:43	05/05/22	
Zinc	200.8	0.30 J	ug/L	0.50	0.20	1	05/09/22 10:43	05/05/22	

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Analytical Report

Client: Aquatic Restoration and Research Institute (ARRI)
Project: Ambient WQ-Petersburg
Sample Matrix: Ocean Water
Sample Name: PE02
Lab Code: K2204666-002

Service Request: K2204666
Date Collected: 05/02/22
Date Received: 05/03/22 10:40
Basis: NA

Total Metals

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Copper	200.8	0.25	ug/L	0.10	0.02	1	05/09/22 10:30	05/05/22	
Nickel	200.8	0.39	ug/L	0.20	0.03	1	05/09/22 10:30	05/05/22	
Zinc	200.8	0.34 J	ug/L	0.50	0.20	1	05/09/22 10:30	05/05/22	

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Analytical Report

Client: Aquatic Restoration and Research Institute (ARRI)
Project: Ambient WQ-Petersburg
Sample Matrix: Ocean Water
Sample Name: PE03
Lab Code: K2204666-003

Service Request: K2204666
Date Collected: 05/02/22
Date Received: 05/03/22 10:40
Basis: NA

Dissolved Metals

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Copper	200.8	0.22	ug/L	0.10	0.02	1	05/09/22 10:56	05/05/22	
Nickel	200.8	0.33	ug/L	0.20	0.03	1	05/09/22 10:56	05/05/22	
Zinc	200.8	0.25 J	ug/L	0.50	0.20	1	05/09/22 10:56	05/05/22	

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Analytical Report

Client: Aquatic Restoration and Research Institute (ARRI)
Project: Ambient WQ-Petersburg
Sample Matrix: Ocean Water
Sample Name: PE03
Lab Code: K2204666-003

Service Request: K2204666
Date Collected: 05/02/22
Date Received: 05/03/22 10:40
Basis: NA

Total Metals

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Copper	200.8	0.26	ug/L	0.10	0.02	1	05/09/22 10:31	05/05/22	
Nickel	200.8	0.36	ug/L	0.20	0.03	1	05/09/22 10:31	05/05/22	
Zinc	200.8	0.39 J	ug/L	0.50	0.20	1	05/09/22 10:31	05/05/22	

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Analytical Report

Client: Aquatic Restoration and Research Institute (ARRI)
Project: Ambient WQ-Petersburg
Sample Matrix: Ocean Water
Sample Name: PE04
Lab Code: K2204666-004

Service Request: K2204666
Date Collected: 05/02/22
Date Received: 05/03/22 10:40
Basis: NA

Dissolved Metals

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Copper	200.8	0.53	ug/L	0.10	0.02	1	05/09/22 10:57	05/05/22	
Nickel	200.8	0.37	ug/L	0.20	0.03	1	05/09/22 10:57	05/05/22	
Zinc	200.8	0.68	ug/L	0.50	0.20	1	05/09/22 10:57	05/05/22	

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Analytical Report

Client: Aquatic Restoration and Research Institute (ARRI)
Project: Ambient WQ-Petersburg
Sample Matrix: Ocean Water
Sample Name: PE04
Lab Code: K2204666-004

Service Request: K2204666
Date Collected: 05/02/22
Date Received: 05/03/22 10:40
Basis: NA

Total Metals

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Copper	200.8	0.24	ug/L	0.10	0.02	1	05/09/22 10:32	05/05/22	
Nickel	200.8	0.39	ug/L	0.20	0.03	1	05/09/22 10:32	05/05/22	
Zinc	200.8	0.31 J	ug/L	0.50	0.20	1	05/09/22 10:32	05/05/22	

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Analytical Report

Client: Aquatic Restoration and Research Institute (ARRI)
Project: Ambient WQ-Petersburg
Sample Matrix: Ocean Water
Sample Name: PE06
Lab Code: K2204666-005

Service Request: K2204666
Date Collected: 05/02/22
Date Received: 05/03/22 10:40

Basis: NA

Dissolved Metals

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Copper	200.8	0.22	ug/L	0.10	0.02	1	05/09/22 10:59	05/05/22	
Nickel	200.8	0.36	ug/L	0.20	0.03	1	05/09/22 10:59	05/05/22	
Zinc	200.8	0.23 J	ug/L	0.50	0.20	1	05/09/22 10:59	05/05/22	

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Analytical Report

Client: Aquatic Restoration and Research Institute (ARRI)
Project: Ambient WQ-Petersburg
Sample Matrix: Ocean Water
Sample Name: PE06
Lab Code: K2204666-005

Service Request: K2204666
Date Collected: 05/02/22
Date Received: 05/03/22 10:40
Basis: NA

Total Metals

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Copper	200.8	0.24	ug/L	0.10	0.02	1	05/09/22 10:34	05/05/22	
Nickel	200.8	0.37	ug/L	0.20	0.03	1	05/09/22 10:34	05/05/22	
Zinc	200.8	0.29 J	ug/L	0.50	0.20	1	05/09/22 10:34	05/05/22	

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Analytical Report

Client: Aquatic Restoration and Research Institute (ARRI)
Project: Ambient WQ-Petersburg
Sample Matrix: Ocean Water
Sample Name: PE06X
Lab Code: K2204666-006

Service Request: K2204666
Date Collected: 05/02/22
Date Received: 05/03/22 10:40

Basis: NA

Dissolved Metals

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Copper	200.8	0.22	ug/L	0.10	0.02	1	05/09/22 11:00	05/05/22	
Nickel	200.8	0.37	ug/L	0.20	0.03	1	05/09/22 11:00	05/05/22	
Zinc	200.8	0.25 J	ug/L	0.50	0.20	1	05/09/22 11:00	05/05/22	

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Analytical Report

Client: Aquatic Restoration and Research Institute (ARRI)
Project: Ambient WQ-Petersburg
Sample Matrix: Ocean Water
Sample Name: PE06X
Lab Code: K2204666-006

Service Request: K2204666
Date Collected: 05/02/22
Date Received: 05/03/22 10:40
Basis: NA

Total Metals

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Copper	200.8	0.21	ug/L	0.10	0.02	1	05/09/22 10:35	05/05/22	
Nickel	200.8	0.38	ug/L	0.20	0.03	1	05/09/22 10:35	05/05/22	
Zinc	200.8	0.26 J	ug/L	0.50	0.20	1	05/09/22 10:35	05/05/22	

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Analytical Report

Client: Aquatic Restoration and Research Institute (ARRI)
Project: Ambient WQ-Petersburg
Sample Matrix: Ocean Water
Sample Name: PEFB
Lab Code: K2204666-007

Service Request: K2204666
Date Collected: 05/02/22
Date Received: 05/03/22 10:40
Basis: NA

Dissolved Metals

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Copper	200.8	ND U	ug/L	0.10	0.02	1	05/09/22 11:01	05/05/22	
Nickel	200.8	ND U	ug/L	0.20	0.03	1	05/09/22 11:01	05/05/22	
Zinc	200.8	ND U	ug/L	0.50	0.20	1	05/09/22 11:01	05/05/22	

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Analytical Report

Client: Aquatic Restoration and Research Institute (ARRI)
Project: Ambient WQ-Petersburg
Sample Matrix: Ocean Water
Sample Name: PEFB
Lab Code: K2204666-007

Service Request: K2204666
Date Collected: 05/02/22
Date Received: 05/03/22 10:40
Basis: NA

Total Metals

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Copper	200.8	ND U	ug/L	0.10	0.02	1	05/09/22 10:36	05/05/22	
Nickel	200.8	ND U	ug/L	0.20	0.03	1	05/09/22 10:36	05/05/22	
Zinc	200.8	ND U	ug/L	0.51	0.20	1	05/09/22 10:36	05/05/22	

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Analytical Report

Client: Aquatic Restoration and Research Institute (ARRI)
Project: Ambient WQ-Petersburg
Sample Matrix: Ocean Water
Sample Name: Trip Blank
Lab Code: K2204666-008

Service Request: K2204666
Date Collected: 05/02/22
Date Received: 05/03/22 10:40
Basis: NA

Total Metals

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Copper	200.8	0.03 J	ug/L	0.10	0.02	1	05/09/22 10:40	05/05/22	
Nickel	200.8	ND U	ug/L	0.20	0.03	1	05/09/22 10:40	05/05/22	
Zinc	200.8	ND U	ug/L	0.50	0.20	1	05/09/22 10:40	05/05/22	



General Chemistry

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Analytical Report

Client: Aquatic Restoration and Research Institute (ARRI)
Project: Ambient WQ-Petersburg
Sample Matrix: Ocean Water
Sample Name: PE01
Lab Code: K2204666-001

Service Request: K2204666
Date Collected: 05/02/22
Date Received: 05/03/22 10:40
Basis: NA

General Chemistry Parameters

<u>Analyte Name</u>	<u>Analysis Method</u>	<u>Result</u>	<u>Units</u>	<u>MRL</u>	<u>MDL</u>	<u>Dil.</u>	<u>Date Analyzed</u>	<u>Date Extracted</u>	<u>Q</u>
Ammonia as Nitrogen	350.1	0.032	mg/L	0.010	0.003	1	05/09/22 14:20	05/09/22	

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Analytical Report

Client: Aquatic Restoration and Research Institute (ARRI)
Project: Ambient WQ-Petersburg
Sample Matrix: Ocean Water
Sample Name: PE02
Lab Code: K2204666-002

Service Request: K2204666
Date Collected: 05/02/22
Date Received: 05/03/22 10:40
Basis: NA

General Chemistry Parameters

<u>Analyte Name</u>	<u>Analysis Method</u>	<u>Result</u>	<u>Units</u>	<u>MRL</u>	<u>MDL</u>	<u>Dil.</u>	<u>Date Analyzed</u>	<u>Date Extracted</u>	<u>Q</u>
Ammonia as Nitrogen	350.1	0.034	mg/L	0.010	0.003	1	05/09/22 14:20	05/09/22	

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Analytical Report

Client: Aquatic Restoration and Research Institute (ARRI)
Project: Ambient WQ-Petersburg
Sample Matrix: Ocean Water
Sample Name: PE03
Lab Code: K2204666-003

Service Request: K2204666
Date Collected: 05/02/22
Date Received: 05/03/22 10:40
Basis: NA

General Chemistry Parameters

<u>Analyte Name</u>	<u>Analysis Method</u>	<u>Result</u>	<u>Units</u>	<u>MRL</u>	<u>MDL</u>	<u>Dil.</u>	<u>Date Analyzed</u>	<u>Date Extracted</u>	<u>Q</u>
Ammonia as Nitrogen	350.1	0.041	mg/L	0.010	0.003	1	05/09/22 14:20	05/09/22	

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Analytical Report

Client: Aquatic Restoration and Research Institute (ARRI)
Project: Ambient WQ-Petersburg
Sample Matrix: Ocean Water
Sample Name: PE04
Lab Code: K2204666-004

Service Request: K2204666
Date Collected: 05/02/22
Date Received: 05/03/22 10:40
Basis: NA

General Chemistry Parameters

<u>Analyte Name</u>	<u>Analysis Method</u>	<u>Result</u>	<u>Units</u>	<u>MRL</u>	<u>MDL</u>	<u>Dil.</u>	<u>Date Analyzed</u>	<u>Date Extracted</u>	<u>Q</u>
Ammonia as Nitrogen	350.1	0.038	mg/L	0.010	0.003	1	05/09/22 14:20	05/09/22	

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Analytical Report

Client: Aquatic Restoration and Research Institute (ARRI)
Project: Ambient WQ-Petersburg
Sample Matrix: Ocean Water
Sample Name: PE06
Lab Code: K2204666-005

Service Request: K2204666
Date Collected: 05/02/22
Date Received: 05/03/22 10:40
Basis: NA

General Chemistry Parameters

<u>Analyte Name</u>	<u>Analysis Method</u>	<u>Result</u>	<u>Units</u>	<u>MRL</u>	<u>MDL</u>	<u>Dil.</u>	<u>Date Analyzed</u>	<u>Date Extracted</u>	<u>Q</u>
Ammonia as Nitrogen	350.1	0.043	mg/L	0.010	0.003	1	05/09/22 14:20	05/09/22	

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Analytical Report

Client: Aquatic Restoration and Research Institute (ARRI)
Project: Ambient WQ-Petersburg
Sample Matrix: Ocean Water
Sample Name: PE06X
Lab Code: K2204666-006

Service Request: K2204666
Date Collected: 05/02/22
Date Received: 05/03/22 10:40
Basis: NA

General Chemistry Parameters

<u>Analyte Name</u>	<u>Analysis Method</u>	<u>Result</u>	<u>Units</u>	<u>MRL</u>	<u>MDL</u>	<u>Dil.</u>	<u>Date Analyzed</u>	<u>Date Extracted</u>	<u>Q</u>
Ammonia as Nitrogen	350.1	0.045	mg/L	0.010	0.003	1	05/09/22 14:20	05/09/22	

ALS Group USA, Corp.
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Analytical Report

Client: Aquatic Restoration and Research Institute (ARRI)
Project: Ambient WQ-Petersburg
Sample Matrix: Ocean Water
Sample Name: PEFB
Lab Code: K2204666-007

Service Request: K2204666
Date Collected: 05/02/22
Date Received: 05/03/22 10:40
Basis: NA

General Chemistry Parameters

<u>Analyte Name</u>	<u>Analysis Method</u>	<u>Result</u>	<u>Units</u>	<u>MRL</u>	<u>MDL</u>	<u>Dil.</u>	<u>Date Analyzed</u>	<u>Date Extracted</u>	<u>Q</u>
Ammonia as Nitrogen	350.1	0.007 J	mg/L	0.010	0.003	1	05/09/22 14:20	05/09/22	



QC Summary Forms

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Analytical Report

Client: Aquatic Restoration and Research Institute (ARRI)
Project: Ambient WQ-Petersburg
Sample Matrix: Ocean Water
Sample Name: Method Blank
Lab Code: KQ2207126-01

Service Request: K2204666
Date Collected: NA
Date Received: NA
Basis: NA

Total Metals

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Copper	200.8	0.02 J	ug/L	0.10	0.02	1	05/09/22 10:25	05/05/22	
Nickel	200.8	ND U	ug/L	0.20	0.03	1	05/09/22 10:25	05/05/22	
Zinc	200.8	ND U	ug/L	0.50	0.20	1	05/09/22 10:25	05/05/22	

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QA/QC Report

Client: Aquatic Restoration and Research Institute (ARRI)
Project: Ambient WQ-Petersburg
Sample Matrix: Ocean Water

Service Request: K2204666
Date Analyzed: 05/09/22

Duplicate Lab Control Sample Summary
Total Metals

Units:ug/L
Basis:NA

Lab Control Sample
KQ2207126-02

Duplicate Lab Control Sample
KQ2207126-03

Analyte Name	Analytical Method	Result	Spike Amount	% Rec	Result	Spike Amount	% Rec	% Rec Limits	RPD	RPD Limit
Copper	200.8	1.86	2.00	93	1.81	2.00	91	63-128	3	20
Nickel	200.8	1.99	2.00	100	1.90	2.00	95	88-112	5	20
Zinc	200.8	1.92	2.00	96	1.79	2.00	90	79-133	7	20



General Chemistry

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Analytical Report

Client: Aquatic Restoration and Research Institute (ARRI)
Project: Ambient WQ-Petersburg
Sample Matrix: Ocean Water
Sample Name: Method Blank
Lab Code: K2204666-MB

Service Request: K2204666
Date Collected: NA
Date Received: NA
Basis: NA

General Chemistry Parameters

<u>Analyte Name</u>	<u>Analysis Method</u>	<u>Result</u>	<u>Units</u>	<u>MRL</u>	<u>MDL</u>	<u>Dil.</u>	<u>Date Analyzed</u>	<u>Date Extracted</u>	<u>Q</u>
Ammonia as Nitrogen	350.1	ND U	mg/L	0.010	0.003	1	05/09/22 14:20	05/09/22	

Client: Aquatic Restoration and Research Institute (ARRI)
Project: Ambient WQ-Petersburg
Sample Matrix: Ocean Water

Service Request: K2204666
Date Collected: 05/02/22
Date Received: 05/03/22
Date Analyzed: 05/9/22
Date Extracted: 05/9/22

Duplicate Matrix Spike Summary
Ammonia as Nitrogen

Sample Name: PE01
Lab Code: K2204666-001
Analysis Method: 350.1
Prep Method: None

Units: mg/L
Basis: NA

Analyte Name	Sample Result	Result	Matrix Spike K2204666-001MS		Duplicate Matrix Spike K2204666-001DMS		% Rec Limits	RPD	RPD Limit	
			Spike Amount	% Rec	Result	Spike Amount				% Rec
Ammonia as Nitrogen	0.032	0.245	0.200	107	0.242	0.200	105	90-110	1	20

Results flagged with an asterisk (*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

Matrix Spike and Matrix Spike Duplicate Data is presented for information purposes only. The matrix may or may not be relevant to samples reported in this report. The laboratory evaluates system performance based on the LCS and LCSD control limits.

ALS Group USA, Corp.

dba ALS Environmental

QA/QC Report

Client: Aquatic Restoration and Research Institute (ARRI)
Project: Ambient WQ-Petersburg
Sample Matrix: Ocean Water

Service Request: K2204666
Date Collected: 05/02/22
Date Received: 05/03/22
Date Analyzed: 05/09/22

Replicate Sample Summary
General Chemistry Parameters

Sample Name: PE01
Lab Code: K2204666-001

Units: mg/L
Basis: NA

<u>Analyte Name</u>	<u>Analysis Method</u>	<u>MRL</u>	<u>MDL</u>	<u>Sample Result</u>	<u>Duplicate Sample K2204666-001DUP Result</u>	<u>Average</u>	<u>RPD</u>	<u>RPD Limit</u>
Ammonia as Nitrogen	350.1	0.010	0.003	0.032	0.031	0.0316	3	20

Results flagged with an asterisk (*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client: Aquatic Restoration and Research Institute (ARRI)
Project: Ambient WQ-Petersburg
Sample Matrix: Ocean Water

Service Request: K2204666
Date Analyzed: 05/09/22
Date Extracted: 05/09/22

Lab Control Sample Summary
Ammonia as Nitrogen

Analysis Method: 350.1
Prep Method: None

Units: mg/L
Basis: NA
Analysis Lot: 763462

Sample Name	Lab Code	Result	Spike Amount	% Rec	% Rec Limits
Lab Control Sample	K2204666-LCS	0.301	0.300	100	90-110



Admiralty
ENVIRONMENTAL

641 W. Willoughby Ave., Suite 301 Juneau, AK 99801 (907) 463-4415

Jeff Davis
PO Box 923
Talkeetna, AK 99676

May 12, 2022

Aquatic Restoration & Research Institute – Petersburg

Date of Collection: May 2, 2022
Sampling Location: Petersburg, Alaska

Summary

Five samples from the Aquatic Restoration & Research Institute were received at Admiralty Environmental, Juneau, AK on May 2, 2022.

Two of the samples were received past holding time and were analyzed for fecal coliform and enterococci bacteria upon laboratory receipt. All other samples were received within holding time. All other laboratory acceptance criteria were met for all samples.

A complete report of the final lab results is enclosed. The official laboratory report follows this letter, and includes the analytical results, case narrative, chain of custody form, and cooler receipt form.

Kind Regards,

Diana Cote
Admiralty Environmental



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 (907) 463 - 4415
 www.admiraltyenvironmental.com

Aquatic Restoration and Research Institute

Petersburg, AK

May 2, 2022

Petersburg, AK

Analytical Report

Admiralty Environmental EPA ID AK 00976

AE 28808

Sample Location	Date & Time Sampled	Fecal Coliform (FC/100mL)	Enterococci (MPN/100mL)
PE 01	5/2/2022; 08:15	5.0	10
PE 02	5/2/2022; 08:20	< 2.0	< 10
PE 03	5/2/2022; 0845	2.0	< 10
PE 04	5/2/2022; 09:00	< 2.0	< 10
PE 06	5/2/2022; 09:15	2.0	< 10

Quality Control:

Analysis	MB	LCS	LCS Duplicate	RPD	Date/Time Commenced	Holding Time Met
FC	<2.0	---	---	---	5/2/2022; 16:44	yes/No
Enterococci	---	---	---	---	5/2/2022; 16:43	yes/No

Analysis Description:

Analysis	Method	MDL	PQL	Unit
FC	SM 9222D	1.0	2.0	FC/100ml
Enterococci	ASTM D6503-99	1.0	10	MPN/100mg/L

Case Narrative:

The parameters of fecal coliform and enterococci were received past holding times for sites PE01 and PE02 only, and were analyzed upon laboratory receipt. All other sample analysis QA/QC parameters were met for this event.

Key:

FC	Fecal Coliform
Enterococci	Enterococci
LCS	Laboratory Control Standard
MB	Method Blank
MDL	Method Detection Limit
mg/L	Milligrams Per Liter
ND	Not Detected
PQL	Practical Quantitation Limit
RPD	Relative Percent Difference

David Wetzel
 CTO, Admiralty Environmental
 dwetzel@admiraltyenv.com



Admiralty Environmental
 641 W. Willoughby Ave, Suite 301
 Juneau, AK 99801
 (907) 463-4415

CHAIN OF CUSTODY/TRANSMITTAL RECORD
 PAGE 1 of 1

PROJECT NAME:					Aquatic Restoration and Research Institute Project: Petersburg										AE 28908						
REPORT TO:		Jeff Davis arri@arrialaska.org		PHONE#:																	
ADDRESS:		PO Box 923 Talkeetna, AK 99676		SAMPLED BY:																	
COMMENTS:												FIELD RESULTS									
DATE	TIME	SITE DESCRIPTION / IDENTIFIER			MATRIX	# OF BOTTLES	Fecal Coliform	Enterococci MPN											pH	Temp	D.O.
5-2	0815	PEO1			H ₂ O	1	1	1													
	0820	PEO2			H ₂ O	1	1	1													
	0845	PEO3			H ₂ O	1	1	1													
	0900	PEO4			H ₂ O	1	1	1													
	0915	PEO6			H ₂ O	1	1	1													
RELINQUISHED BY:		RECEIVED BY:		RELINQUISHED BY:		RECEIVED BY:		Section to Be Completed by Receiving Laboratory													
Signature		Signature		Signature		Signature															
Printed Name		Printed Name		Printed Name		Printed Name															
Date		Date		Date		Date															
Time		Time		Time		Time															
		To Alaska Air				Kyle Horkey		Temp °C: 5.08													
						5/2/22		Thermo ID#: CAS# 7													
						1625		Condition of Custody Seals: <input checked="" type="checkbox"/>													
								Initialed By: KH													
								Shipped Via: Air Cargo													

↑
 Sample not relinquished
 Properly

* Sample received out of hold;
 Proceeded w/ analysis per client.
 -KH
 5/2/22



Admiralty Environmental Cooler Receipt Form

Lab: Admiralty Environmental, LLC
Client: ARRI

AE# AE 28808

Date Opened: 5/2/2022 Opened by: K. Hopkins

A. External Cooler Conditions

• Local Sampling Event

1. Project ID: n/a

2. COC Attached? n/a Properly Completed? n/a Signed by AE employee? n/a

Small Temp. Blank: n/a (temp in Celsius)

Large Temp. Blank: n/a (temp in Celsius)

• Air-Transported Sampling Event

1. Project ID: Petersburg

2. COC Attached? yes Properly Completed? yes Signed by AE employee? yes

3. Airbill attached? yes Airbill #: 027PSG92625363

4. Custody Seals? yes

5. Seals intact? yes

Temp. Blank: 5.88 (temp in Celsius)

COMMENTS:

B. Sample Conditions

Number of Samples Received: 5 Packing type: cooler

Number of Bottles Received: 5

1. Samples in proper bags? yes

2. Bottles intact? yes

3. Sufficient sample volume? yes

4. Labels agree with COC? yes

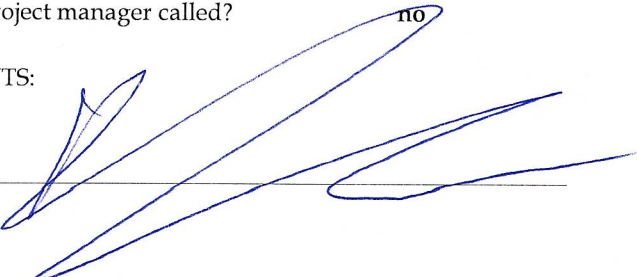
5. Samples delivered within holding time? yes; except PE 01 and 02

6. Sample preservation checked? n/a

Problems encountered: no

Was the project manager called? no

COMMENTS:

Signature: 

Date and time: 5/2/22, 1625



Admiralty
ENVIRONMENTAL

641 W. Willoughby Ave., Suite 301 Juneau, AK 99801 (907) 463-4415

Jeff Davis
PO Box 923
Talkeetna, AK 99676

May 19, 2022

Aquatic Restoration & Research Institute – Petersburg

Date of Collection: May 9, 2022
Sampling Location: Petersburg, Alaska

Summary

Five samples from the Aquatic Restoration & Research Institute were received at Admiralty Environmental, Juneau, AK on May 9, 2022.

The samples were analyzed for fecal coliform and enterococci bacteria. All laboratory acceptance criteria were met for all samples.

A complete report of the final lab results is enclosed. The official laboratory report follows this letter, and includes the analytical results, case narrative, chain of custody form, and cooler receipt form.

Kind Regards,

Diana Cote
Admiralty Environmental



Aquatic Restoration and Research Institute

Petersburg

May 9, 2022

Petersburg, AK

Analytical Report

Admiralty Environmental EPA ID AK 00976

AE 28873

Sample Location	Date & Time Sampled	Fecal Coliform (FC/100mL)	Enterococci (MPN/100mL)
PE 01	5/9/2022; 10:07	< 2.0	< 10
PE 02	5/9/2022; 10:12	< 2.0	10
PE 03	5/9/2022; 10:16	< 2.0	< 10
PE 04	5/9/2022; 10:19	< 2.0	< 10
PE 06	5/9/2022; 10:23	< 2.0	< 10

Quality Control:

Analysis	MB	LCS	LCS Duplicate	RPD	Date/Time Commenced	Holding Time Met
FC	<2.0	---	---	---	5/9/2022; 16:50	Yes
Enteroc	---	---	---	---	5/9/2022; 16:40	Yes

Analysis Description:

Analysis	Method	MDL	PQL	Unit
FC	SM 9222D	1.0	2.0	FC/100ml
Enteroc	ASTM D6503-99	1.0	10	MPN/100mg/L

Case Narrative:

All sample analysis QA/QC parameters were met for this event.

Key:

FC	Fecal Coliform
Enteroc	Enterococci
LCS	Laboratory Control Standard
MB	Method Blank
MDL	Method Detection Limit
mg/L	Milligrams Per Liter
ND	Not Detected
PQL	Practical Quantitation Limit
RPD	Relative Percent Difference

David Wetzel
 CTO, Admiralty Environmental
 dwetzel@admiraltyenv.com



Admiralty Environmental
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 (907) 463-4415

CHAIN OF CUSTODY/TRANSMITTAL RECORD
 PAGE 1 of 1

PROJECT NAME:				Aquatic Restoration and Research Institute Project: Petersburg										AE 28873						
REPORT TO:		Jeff Davis arri@arrialaska.org		PHONE#:																
ADDRESS:		PO Box 923 Talkeetna, AK 99676		SAMPLED BY:																
COMMENTS:																				
																		FIELD RESULTS		
DATE	TIME	SITE DESCRIPTION /IDENTIFIER		MATRIX	# OF BOTTLES	Fecal Coliform	Enterococci MPN											pH	Temp	D.O.
5/9/2022	10:07	PE01		H ₂ O	1	1	1													
	10:12	PE02		H ₂ O	1	1	1													
	10:16	PE03		H ₂ O	1	1	1													
	10:19	PE04		H ₂ O	1	1	1													
	10:23	PE06		H ₂ O	1	1	1													
RELINQUISHED BY:		RECEIVED BY:		RELINQUISHED BY:		RECEIVED BY:		Section to Be Completed by Receiving Laboratory												
Signature		Signature		Signature		Signature		Temp °C: <u>5.5</u> Thermo ID#: <u>Lab#7</u> Condition of Custody Seals: <input checked="" type="checkbox"/> Initialed By: <u>LL</u> Shipped Via: <u>Alaska Airlines</u>												
Printed Name		Printed Name		Printed Name		Printed Name														
Date		Date		Date		Date														
Time		Time		Time		Time														
10:45am		10:20																		

16



Admiralty Environmental Cooler Receipt Form

Lab: Admiralty Environmental, LLC
Client: ARRI

AE# AE 28873

Date Opened: 5/9/2022 Opened by: Luke Larson

A. External Cooler Conditions

• Local Sampling Event

1. Project ID: n/a

2. COC Attached? n/a Properly Completed? n/a Signed by AE employee? n/a

Small Temp. Blank n/a (temp in Celsius)
Large Temp. Blank: n/a (temp in Celsius)

• Air-Transported Sampling Event

1. Project ID: Petersburg

2. COC Attached? yes Properly Completed? yes Signed by AE employee? yes

3. Airbill attached? no Airbill #: n/a

4. Custody Seals? yes

5. Seals intact? yes

Temp. Blank: yes (temp in Celsius)

COMMENTS:

B. Sample Conditions

Number of Samples Received: 5 Packing type: cooler

Number of Bottles Received: 5

1. Samples in proper bags? yes

2. Bottles intact? yes

3. Sufficient sample volume? yes

4. Labels agree with COC? yes

5. Samples delivered within holding time? yes

6. Sample preservation checked? n/a

Problems encountered: no

Was the project manager called? no

COMMENTS:

Signature: *Luke Larson*

Date and time: 5/9/22 16:20



Admiralty
ENVIRONMENTAL

641 W. Willoughby Ave., Suite 301 Juneau, AK 99801 (907) 463-4415

Jeff Davis
PO Box 923
Talkeetna, AK 99676

May 26, 2022

Aquatic Restoration & Research Institute – Petersburg

Date of Collection: May 16, 2022
Sampling Location: Petersburg, Alaska

Summary

Five samples from the Aquatic Restoration & Research Institute were received at Admiralty Environmental, Juneau, AK on May 16, 2022.

The samples were analyzed for fecal coliform and enterococci bacteria. All laboratory acceptance criteria were met for all samples.

A complete report of the final lab results is enclosed. The official laboratory report follows this letter, and includes the analytical results, case narrative, chain of custody form, and cooler receipt form.

Kind Regards,

Diana Cote
Admiralty Environmental



Aquatic Restoration and Research Institute

Petersburg

May 16, 2022

Petersburg, AK

Analytical Report

Admiralty Environmental EPA ID AK 00976

AE 28969

Sample Location	Date & Time Sampled	Fecal Coliform (FC/100mL)	Enterococci (MPN/100mL)
PE 01	5/16/2022; 09:29	8	10
PE 02	5/16/2022; 09:35	8	< 10
PE 03	5/16/2022; 09:39	3	< 10
PE 04	5/16/2022; 09:43	2	< 10
PE 06	5/16/2022; 09:49	5	20

Quality Control:

Analysis	MB	LCS	LCS Duplicate	RPD	Date/Time Commenced	Holding Time Met
FC	<2.0	---	---	---	5/16/2022; 17:05	Yes
Enteroc	---	---	---	---	5/6/2022; 16:42	Yes

Analysis Description:

Analysis	Method	MDL	PQL	Unit
FC	SM 9222D	1.0	2.0	FC/100ml
Enteroc	ASTM D6503-99	1.0	10	MPN/100mg/L

Case Narrative:

All sample analysis QA/QC parameters were met for this event.

Key:

FC	Fecal Coliform
Enteroc	Enterococci
LCS	Laboratory Control Standard
MB	Method Blank
MDL	Method Detection Limit
mg/L	Milligrams Per Liter
ND	Not Detected
PQL	Practical Quantitation Limit
RPD	Relative Percent Difference

David Wetzel
 CTO, Admiralty Environmental
 dwetzel@admiraltyenv.com



Admiralty Environmental
 641 W. Willoughby Ave, Suite 301
 Juneau, AK 99801
 (907) 463-4415

CHAIN OF CUSTODY/TRANSMITTAL RECORD
 PAGE 1 of 1

PROJECT NAME:				Aquatic Restoration and Research Institute										Project: Petersburg			AE 28969					
REPORT TO:		Jeff Davis arri@arrialaska.org		PHONE#:																		
ADDRESS:		PO Box 923 Talkeetna, AK 99676		SAMPLED BY:																		
COMMENTS:																						
																		FIELD RESULTS				
DATE	TIME	SITE DESCRIPTION /IDENTIFIER		MATRIX	# OF BOTTLES	Fecal Coliform	Enterococci MPN											pH	Temp	D.O.		
5/16/22	9:29a	PEO1		H ₂ O	1	1	1															
	9:35	PEO2		H ₂ O	1	1	1															
	9:39	PEO3		H ₂ O	1	1	1															
	9:43	PEO4		H ₂ O	1	1	1															
	9:49	PEO6		H ₂ O	1	1	1															
RELINQUISHED BY:		RECEIVED BY:		RELINQUISHED BY:		RECEIVED BY:		Section to Be Completed by Receiving Laboratory														
Signature <i>[Signature]</i>		Signature To ALASKA AIR		Signature		Signature <i>[Signature]</i>																
Printed Name Kelly Baker		Printed Name		Printed Name		Printed Name Emily Hoyt																
Date 5/16/22		Date		Date		Date 5/16/22																
Time 10:15a		Time		Time		Time 1535																
								Temp °C: 7.00 Thermo ID#: LABH 7 Condition of Custody Seals: <input checked="" type="checkbox"/> Initialed By: EH Shipped Via: Air cargo														



Admiralty Environmental Cooler Receipt Form

Lab: Admiralty Environmental, LLC
Client: ARRI

AE# AE 28969

Date Opened: 5/16/2022 Opened by: E. Hoyt

A. External Cooler Conditions

• Local Sampling Event

1. Project ID: n/a

2. COC Attached? n/a Properly Completed? n/a Signed by AE employee? n/a

Small Temp. Blank n/a (temp in Celsius)

Large Temp. Blank: n/a (temp in Celsius)

• Air-Transported Sampling Event

1. Project ID: PETERSBURG

2. COC Attached? yes Properly Completed? yes Signed by AE employee? yes

3. Airbill attached? yes Airbill #: 027PSG73590926

4. Custody Seals? yes

5. Seals intact? yes

Temp. Blank: 7.00 (temp in Celsius)

COMMENTS:

B. Sample Conditions

Number of Samples Received: 5 Packing type: cooler

Number of Bottles Received: 5

1. Samples in proper bags? yes

2. Bottles intact? yes

3. Sufficient sample volume? yes

4. Labels agree with COC? yes


5. Samples delivered within holding time? yes

6. Sample preservation checked? n/a

Problems encountered: no

Was the project manager called? no

COMMENTS:

Signature: 

Date and time: 5/16/22, 1535



Admiralty
ENVIRONMENTAL

641 W. Willoughby Ave., Suite 301 Juneau, AK 99801 (907) 463-4415

Jeff Davis
PO Box 923
Talkeetna, AK 99676

June 3, 2022

Aquatic Restoration & Research Institute – Petersburg

Date of Collection: May 23, 2022
Sampling Location: Petersburg, Alaska

Summary

Five samples from the Aquatic Restoration & Research Institute were received at Admiralty Environmental, Juneau, AK on May 23, 2022.

The samples were analyzed for fecal coliform and enterococci bacteria. All laboratory acceptance criteria were met for all samples.

A complete report of the final lab results is enclosed. The official laboratory report follows this letter, and includes the analytical results, case narrative, chain of custody form, and cooler receipt form.

Kind Regards,

Diana Cote
Admiralty Environmental



Aquatic Restoration and Research Institute

Petersburg

May 23, 2022

Petersburg, AK

Analytical Report

Admiralty Environmental EPA ID AK 00976

AE 29093

Sample Location	Date & Time Sampled	Fecal Coliform (FC/100mL)	Enterococci (MPN/100mL)
PE01	5/23/2022; 09:38	2.0	<10
PE02	5/23/2022; 09:42	3.0	<10
PE03	5/23/2022; 09:46	<2.0	<10
PE04	5/23/2022; 09:49	3.0	<10
PE06	5/23/2022; 09:53	<2.0	<10

Quality Control:

Analysis	MB	LCS	LCS Duplicate	RPD	Date/Time Commenced	Holding Time Met
FC	<2.0	---	---	---	5/23/2022; 15:58	Yes
Enterococci	---	---	---	---	5/23/2022; 15:54	Yes

Analysis Description:

Analysis	Method	MDL	PQL	Unit
FC	SM 9222D	1.0	2.0	FC/100ml
Enterococci	ASTM D6503-99	1.0	10	MPN/100mg/L

Case Narrative:

All sample analysis QA/QC parameters were met for this event.

Key:

FC	Fecal Coliform
Enterococci	Enterococci
LCS	Laboratory Control Standard
MB	Method Blank
MDL	Method Detection Limit
mg/L	Milligrams Per Liter
ND	Not Detected
PQL	Practical Quantitation Limit
RPD	Relative Percent Difference

David Wetzel
 CTO, Admiralty Environmental
 dwetzel@admiraltyenv.com



Admiralty Environmental
 641 W. Willoughby Ave, Suite 301
 Juneau, AK 99801
 (907) 463-4415

CHAIN OF CUSTODY/TRANSMITTAL RECORD
 PAGE 1 of 1

PROJECT NAME:				Aquatic Restoration and Research Institute Project: Petersburg										AE 29093							
REPORT TO:		Jeff Davis arri@arrialaska.org		PHONE#:																	
ADDRESS:		PO Box 923 Talkeetna, AK 99676		SAMPLED BY:																	
COMMENTS:																					
														FIELD RESULTS							
DATE	TIME	SITE DESCRIPTION /IDENTIFIER		MATRIX	# OF BOTTLES	Fecal Coliform	Enterococci MPN										pH	Temp	D.O.		
5/23/22	9:38	PE01		H ₂ O	1	1	1														
	9:42	PE02		H ₂ O	1	1	1														
	9:46	PE03		H ₂ O	1	1	1														
	9:49	PE04		H ₂ O	1	1	1														
	9:53	PE06		H ₂ O	1	1	1														
RELINQUISHED BY:		RECEIVED BY:		RELINQUISHED BY:		RECEIVED BY:		Section to be completed by receiving laboratory.													
Signature		Signature		Signature		Signature															
Printed Name		Printed Name		Printed Name		Printed Name															
Date		Date		Date		Date															
Time		Time		Time		Time															
Kelly Bakos		ALASKA AIR CARGO HOMONUELL						Temp °C:		5.14											
								Thermo ID#:		LWS #7											
								Condition of Custody Seals		✓											
								Initialed By:		KTB											
								Shipped Via:		AK Air											



Admiralty Environmental Cooler Receipt Form

Lab: Admiralty Environmental, LLC
Client: ARRI

AE# AE 29093

Date Opened: 5/23/2022 Opened by: H. O'Neill

A. External Cooler Conditions

• Local Sampling Event

1. Project ID: n/a

2. COC Attached? n/a Properly Completed? n/a Signed by AE employee? n/a

Small Temp. Blank n/a (temp in Celsius)

Large Temp. Blank: n/a (temp in Celsius)

• Air-Transported Sampling Event

1. Project ID: Petersburg

2. COC Attached? yes Properly Completed? yes Signed by AE employee? yes

3. Airbill attached? yes Airbill #: 027-73591361

4. Custody Seals? yes

5. Seals intact? yes

Temp. Blank: 5.14 (temp in Celsius)

COMMENTS:

B. Sample Conditions

Number of Samples Received: 5 Packing type: cooler

Number of Bottles Received: 5

1. Samples in proper bags? yes

2. Bottles intact? yes

3. Sufficient sample volume? yes

4. Labels agree with COC? yes


5. Samples delivered within holding time? yes

6. Sample preservation checked? n/a

Problems encountered: no

Was the project manager called? no

COMMENTS:

Signature: 

Date and time: 5/23/22, 15:20



Admiralty
ENVIRONMENTAL

641 W. Willoughby Ave., Suite 301 Juneau, AK 99801 (907) 463-4415

Jeff Davis
PO Box 923
Talkeetna, AK 99676

June 8, 2022

Aquatic Restoration & Research Institute – Petersburg

Date of Collection: May 31, 2022
Sampling Location: Petersburg, Alaska

Summary

Five samples from the Aquatic Restoration & Research Institute were received at Admiralty Environmental, Juneau, AK on May 31, 2022.

The samples were analyzed for fecal coliform and enterococci bacteria. All laboratory acceptance criteria were met for all samples.

A complete report of the final lab results is enclosed. The official laboratory report follows this letter, and includes the analytical results, case narrative, chain of custody form, and cooler receipt form.

Kind Regards,

Diana Cote
Admiralty Environmental



641 W. Willoughby Ave., Suite 301 Juneau, AK 99801
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 www.admiraltyenvironmental.com

Aquatic Restoration and Research Institute

Petersburg

May 31, 2022

Petersburg, AK

Analytical Report

Admiralty Environmental EPA ID AK 00976

AE 29155

Sample Location	Date & Time Sampled	Fecal Coliform (FC/100mL)	Enterococci (MPN/100mL)
PE01	5/31/2022; 09:19	<2.0	<10
PE02	5/31/2022; 09:23	8	<10
PE03	5/31/2022; 09:26	2.0	<10
PE04	5/31/2022; 09:29	2.0	<10
PE06	5/31/2022; 09:33	2.0	<10

Quality Control:

Analysis	MB	LCS	LCS Duplicate	RPD	Date/Time Commenced	Holding Time Met
FC	<2.0	---	---	---	5/31/2022; 17:08	Yes
Enterococci	---	---	---	---	5/31/2022; 16:42	Yes

Analysis Description:

Analysis	Method	MDL	PQL	Unit
FC	SM 9222D	1.0	2.0	FC/100ml
Enterococci	ASTM D6503-99	1.0	10	MPN/100mg/L

Case Narrative:

All sample analysis QA/QC parameters were met for this event.

Key:

FC	Fecal Coliform
Enterococci	Enterococci
LCS	Laboratory Control Standard
MB	Method Blank
MDL	Method Detection Limit
mg/L	Milligrams Per Liter
ND	Not Detected
PQL	Practical Quantitation Limit
RPD	Relative Percent Difference

David Wetzel
 CTO, Admiralty Environmental
 dwetzel@admiraltyenv.com



Admiralty Environmental
 641 W. Willoughby Ave, Suite 301
 Juneau, AK 99801
 (907) 463-4415

CHAIN OF CUSTODY/TRANSMITTAL RECORD
 PAGE 1 of 1

PROJECT NAME: Aquatic Restoration and Research Institute					Project: Petersburg					AE 29155							
REPORT TO: Jeff Davis arri@arrialaska.org			PHONE#:		# OF BOTTLES	Fecal Coliform	Enterococci	MPN									
ADDRESS: PO Box 923 Talkeetna, AK 99676			SAMPLED BY:														
COMMENTS:																	
DATE	TIME	SITE DESCRIPTION /IDENTIFIER	MATRIX										FIELD RESULTS				
													pH	Temp	D.O.		
5/21/22	9/19	PE01	H ₂ O	1	1	1											
	9/23	PE02	H ₂ O	1	1	1											
	9/26	PE03	H ₂ O	1	1	1											
	9/29	PE04	H ₂ O	1	1	1											
	9/30	PE06	H ₂ O	1	1	1											
RELINQUISHED BY:		RECEIVED BY:		RELINQUISHED BY:		RECEIVED BY:		Section to be completed by Receiving Laboratory									
Signature 		Signature 		Signature		Signature		Temp °C: 8.42 _____ Thermo ID#: 106 #7 _____ Condition of Custody Seals: <input checked="" type="checkbox"/> _____ Initialed By: _____ Shipped Via: AIR AIR _____									
Printed Name Kelly Bakus		Printed Name To Arri		Printed Name		Printed Name											
Date 5/31/22		Date 5/31/22		Date		Date											
Time 10:00am		Time 1630		Time		Time											



Admiralty Environmental Cooler Receipt Form

Lab: Admiralty Environmental, LLC
Client: ARRI

AE# AE 29155

Date Opened: 5/31/2022 Opened by: H. O'Neill

A. External Cooler Conditions

• Local Sampling Event

1. Project ID: n/a

2. COC Attached? n/a Properly Completed? n/a Signed by AE employee? n/a

Small Temp. Blank: n/a (temp in Celsius)

Large Temp. Blank: n/a (temp in Celsius)

• Air-Transported Sampling Event

1. Project ID: Petersburg

2. COC Attached? yes Properly Completed? yes Signed by AE employee? yes

3. Airbill attached? no Airbill #: n/a

4. Custody Seals? yes

5. Seals intact? yes

Temp. Blank: 8.42 (temp in Celsius)

COMMENTS:

B. Sample Conditions

Number of Samples Received: 5 Packing type: cooler

Number of Bottles Received: 5

1. Samples in proper bags? yes

2. Bottles intact? yes

3. Sufficient sample volume? yes

4. Labels agree with COC? yes

5. Samples delivered within holding time? yes

6. Sample preservation checked? n/a

Problems encountered: no

Was the project manager called? no

COMMENTS:

Signature: 

Date and time: 5/31/22 16:30