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рН	<i>ᢎ</i> ᠈ᢌ	8.70	€.73	8.77	8.42	8.43	853	४.५७	8.42	8.39	8.47	٠ ٤.35	8.76	8.69	8.52	8.64	
Salinity (ppt)	26.25			18.28	28,19	J& . S1	28.21	28.21	27.17	28.2	28.23		27.69				
D.O. mg/L	11.73	11.93	12-05	12.08	11.85	ルン・ハ	12.24	12.31	12.52	12.60	12.58	12.55	12-16	12.37	12.50	12.54	
Notes/Comments							× .										
*Sample ID is combined harb																1	
Add "R" for replicate, add "FE	B" for field I	blank, "EB	" for equip	ment blani	k.												

Field Blank@ 0900

	`	CPVE	Data	Collect	ion Lo	g			\ k	Meter Ca	libration		DO Calibi	ated at 1	.00% sat	
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Temp C	8.2	8.1	8.0	7.9	6.0	8.0	8,0	o. P	8.4	8.0	7.9	7,9				
рН	8.44	8.43	8.45	8.35				8.45	8.62	8,60	8.60	8.57	,			
Salinity (ppt)	28.38	28.40	28.47	28.52	28.56	28.59	28.60	78-6	27,95	28.16		28.38				
D.O. mg/L	12.03	12.30	12.45	12.52	15.08	15-18	12.26	12.29	12.69	1777	12.72	12.71				
Notes/Comments															Α	
*Sample ID is combined har Add "R" for replicate, add "I					k.											



Service Request No:K2204750

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

Laboratory Results for: Ambient WQ-Wrangell

Dear Jeff,

Enclosed are the results of the sample(s) submitted to our laboratory May 04, 2022 For your reference, these analyses have been assigned our service request number **K2204750**.

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,

Awaldblum-

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) Service Request: K2204750

Project: Ambient WQ-Wrangell Date Received: 05/04/2022

Sample Matrix: Ocean Water

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:

Nine ocean water samples were received for analysis at ALS Environmental on 05/04/2022. 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.

pproved by Awallhour

Date 05/11/2022



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: WR01		Lab	ID: K2204	750-002		
Analyte	Results	Flag	MDL	MRL	Units	Method
Ammonia as Nitrogen	0.036		0.003	0.010	mg/L	350.1
Copper, Dissolved	0.19		0.02	0.10	ug/L	200.8
Nickel, Dissolved	0.28		0.03	0.20	ug/L	200.8
Copper	0.22		0.02	0.10	ug/L	200.8
Nickel	0.34		0.03	0.20	ug/L	200.8
Zinc	0.21	J	0.20	0.50	ug/L	200.8
CLIENT ID: WR02		Lab	ID: K2204	1750-003		
Analyte	Results	Flag	MDL	MRL	Units	Method
Ammonia as Nitrogen	0.010	J	0.003	0.010	mg/L	350.1
Copper, Dissolved	0.21		0.02	0.10	ug/L	200.8
Nickel, Dissolved	0.32		0.03	0.20	ug/L	200.8
Copper	0.26		0.02	0.10	ug/L	200.8
Nickel	0.37		0.03	0.20	ug/L	200.8
Zinc	0.32	J	0.20	0.50	ug/L	200.8
CLIENT ID: WR03		Lab	ID: K2204	1750-004		
Analyte	Results	Flag	MDL	MRL	Units	Method
Ammonia as Nitrogen	0.071		0.003	0.010	mg/L	350.1
Copper, Dissolved	0.19		0.02	0.10	ug/L	200.8
Nickel, Dissolved	0.34		0.03	0.20	ug/L	200.8
Zinc, Dissolved	0.27	J	0.20	0.50	ug/L	200.8
Copper	0.37		0.02	0.10	ug/L	200.8
Nickel	0.37		0.03	0.20	ug/L	200.8
Zinc	0.57		0.20	0.50	ug/L	200.8
CLIENT ID: WR04		Lab	ID: K2204	1750-005		
Analyte	Results	Flag	MDL	MRL	Units	Method
Ammonia as Nitrogen	0.010	J	0.003	0.010	mg/L	350.1
Copper, Dissolved	0.20		0.02	0.10	ug/L	200.8
Nickel, Dissolved	0.34		0.03	0.20	ug/L	200.8
Zinc, Dissolved	0.35	J	0.20	0.50	ug/L	200.8
Copper	0.33		0.02	0.10	ug/L	200.8
Nickel	0.38		0.03	0.20	ug/L	200.8
Zinc	0.70		0.20	0.50	ug/L	200.8
CLIENT ID: WR05			ID: K2204			
Analyte	Results	Flag	MDL	MRL	Units	Method
Ammonia as Nitrogen	0.003	J	0.003	0.010	mg/L	350.1
Copper, Dissolved	0.17		0.02	0.10	ug/L	200.8
Nickel, Dissolved	0.29		0.03	0.20	ug/L	200.8
Zinc Dissolved	0.24	1	0.20	0.50	ua/l	200.8

0.20

0.50

ug/L

200.8

0.24

Zinc, Dissolved



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: WR05		Lab ID: K2204750-006								
Analyte	Results	Flag	MDL	MRL	Units	Method				
Copper	0.22		0.02	0.10	ug/L	200.8				
Nickel	0.33		0.03	0.20	ug/L	200.8				
Zinc	0.39	J	0.20	0.50	ug/L	200.8				

CLIENT ID: WR06		Lab	ID: K2204	750-007		
Analyte	Results	Flag	MDL	MRL	Units	Method
Copper, Dissolved	0.15		0.02	0.10	ug/L	200.8
Nickel, Dissolved	0.28		0.03	0.20	ug/L	200.8
Copper	0.21		0.02	0.10	ug/L	200.8
Nickel	0.33		0.03	0.20	ug/L	200.8
Zinc	0.27	J	0.20	0.50	ug/L	200.8

CLIENT ID: WR04X		Lab	ID: K2204	750-008		
Analyte	Results	Flag	MDL	MRL	Units	Method
Ammonia as Nitrogen	0.004	J	0.003	0.010	mg/L	350.1
Copper, Dissolved	0.24		0.02	0.10	ug/L	200.8
Nickel, Dissolved	0.34		0.03	0.20	ug/L	200.8
Zinc, Dissolved	0.41	J	0.20	0.50	ug/L	200.8
Copper	0.38		0.02	0.10	ug/L	200.8
Nickel	0.39		0.03	0.20	ug/L	200.8
Zinc	0.70		0.20	0.50	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) Service Request:K2204750

Project: Ambient WQ-Wrangell

SAMPLE CROSS-REFERENCE

SAMPLE #	CLIENT SAMPLE ID	<u>DATE</u>	<u>TIME</u>
K2204750-001	WRFB	5/3/2022	0900
K2204750-002	WR01	5/3/2022	0900
K2204750-003	WR02	5/3/2022	0850
K2204750-004	WR03	5/3/2022	0845
K2204750-005	WR04	5/3/2022	0940
K2204750-006	WR05	5/3/2022	0920
K2204750-007	WR06	5/3/2022	0915
K2204750-008	WR04X	5/3/2022	0940
K2204750-009	Trip Blank	5/3/2022	

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(ALS)	Environmental

CHAIN OF CUSTODY

SR#	K2204750
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1/13/22



## **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.
- F. 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**

- 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.pjlabs.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
	https://deq.nc.gov/about/divisions/water-resources/water-resources-data/water-sciences-home-page/laboratory-certification-branch/non-field-lab-	
North Carolina DEQ	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/anlayte 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
LOO 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.

Analyst Summary report

Service Request: K2204750

Client: Aquatic Restoration and Research Institute (ARRI)

**Project:** Ambient WQ-Wrangell/

Sample Name: WRFB Date Collected: 05/3/22

**Lab Code:** K2204750-001 **Date Received:** 05/4/22

Sample Matrix: Ocean Water

Analysis Method Extracted/Digested By Analyzed By

200.8 SSOLADEY EMCALLISTER
350.1 ESCHLOSS ESCHLOSS

Sample Name: WR01 Date Collected: 05/3/22

**Lab Code:** K2204750-002 **Date Received:** 05/4/22

Sample Matrix: Ocean Water

Date Received: 05/4/2.

Analysis Method Extracted/Digested By Analyzed By

200.8 SSOLADEY EMCALLISTER 350.1 ESCHLOSS ESCHLOSS

Sample Name: WR02 Date Collected: 05/3/22

**Lab Code:** K2204750-003 **Date Received:** 05/4/22

Sample Matrix: Ocean Water

Analysis Method Extracted/Digested By Analyzed By

200.8 SSOLADEY EMCALLISTER 350.1 ESCHLOSS ESCHLOSS

Sample Name: WR03 Date Collected: 05/3/22

**Lab Code:** K2204750-004 **Date Received:** 05/4/22

Sample Matrix: Ocean Water

Analysis Method Extracted/Digested By Analyzed By

200.8 SSOLADEY EMCALLISTER
350.1 ESCHLOSS ESCHLOSS

Analyst Summary report

Client: Aquatic Restoration and Research Institute (ARRI)

**Project:** Ambient WQ-Wrangell/

Sample Name: WR04 Date Collected: 05/3/22

Lab Code: K2204750-005 Date Received: 05/4/22 Sample Matrix: Ocean Water

-

Analysis Method Extracted/Digested By Analyzed By

200.8 SSOLADEY EMCALLISTER
350.1 ESCHLOSS ESCHLOSS

Sample Name: WR05 Date Collected: 05/3/22

**Lab Code:** K2204750-006 **Date Received:** 05/4/22

Sample Matrix: Ocean Water

Analysis Method Extracted/Digested By Analyzed By

200.8 SSOLADEY EMCALLISTER 350.1 ESCHLOSS ESCHLOSS

Sample Name: WR06 Date Collected: 05/3/22

**Lab Code:** K2204750-007 **Date Received:** 05/4/22

Sample Matrix: Ocean Water

Analysis Method Extracted/Digested By Analyzed By

200.8 SSOLADEY EMCALLISTER 350.1 ESCHLOSS ESCHLOSS

Sample Name: WR04X Date Collected: 05/3/22

**Lab Code:** K2204750-008 **Date Received:** 05/4/22

Sample Matrix: Ocean Water

Analysis Method Extracted/Digested By Analyzed By

200.8 SSOLADEY EMCALLISTER 350.1 ESCHLOSS ESCHLOSS

Service Request: K2204750

Analyst Summary report

Client: Aquatic Restoration and Research Institute (ARRI) Service Request: K2204750

**Project:** Ambient WQ-Wrangell/

 Sample Name:
 Trip Blank
 Date Collected: 05/3/22

 Lab Code:
 K2204750-009
 Date Received: 05/4/22

Sample Matrix: Ocean Water

Analysis Method Extracted/Digested By Analyzed By

200.8 SSOLADEY EMCALLISTER



# Sample Results

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## Metals

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

Analytical Report

**Client:** Aquatic Restoration and Research Institute (ARRI)

**Service Request:** K2204750 **Date Collected:** 05/03/22 09:00 **Project:** Ambient WQ-Wrangell

**Date Received:** 05/04/22 12:45 **Sample Matrix:** Ocean Water

**Sample Name:** WRFB Basis: NA

Lab Code: K2204750-001

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

Analytical Report

**Client:** Aquatic Restoration and Research Institute (ARRI)

**Service Request:** K2204750 **Date Collected:** 05/03/22 09:00 **Project:** Ambient WQ-Wrangell

**Date Received:** 05/04/22 12:45 **Sample Matrix:** Ocean Water

**Sample Name:** WRFB Basis: NA

Lab Code: K2204750-001

#### **Total Metals**

	Analysis							Date	
Analyte Name	Method	Result	Units	MRL	$\mathbf{MDL}$	Dil.	Date Analyzed	Extracted	Q
Copper	200.8	ND U	ug/L	0.10	0.02	1	05/11/22 11:06	05/09/22	
Nickel	200.8	ND U	ug/L	0.20	0.03	1	05/11/22 11:06	05/09/22	
Zinc	200.8	ND U	ug/L	0.50	0.20	1	05/11/22 11:06	05/09/22	

Analytical Report

**Client:** Aquatic Restoration and Research Institute (ARRI)

**Service Request:** K2204750 **Date Collected:** 05/03/22 09:00 **Project:** Ambient WQ-Wrangell

**Date Received:** 05/04/22 12:45 **Sample Matrix:** Ocean Water

**Sample Name:** WR01 Basis: NA

Lab Code: K2204750-002

	Analysis							Date	
Analyte Name	Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Extracted	Q
Copper	200.8	0.19	ug/L	0.10	0.02	1	05/11/22 11:24	05/09/22	
Nickel	200.8	0.28	ug/L	0.20	0.03	1	05/11/22 11:24	05/09/22	
Zinc	200.8	ND U	ug/L	0.50	0.20	1	05/11/22 11:24	05/09/22	

Analytical Report

**Client:** Aquatic Restoration and Research Institute (ARRI)

**Service Request:** K2204750 **Date Collected:** 05/03/22 09:00 **Project:** Ambient WQ-Wrangell

**Date Received:** 05/04/22 12:45 **Sample Matrix:** Ocean Water

**Sample Name:** WR01 Basis: NA

Lab Code: K2204750-002

#### **Total Metals**

	Analysis							Date	
Analyte Name	Method	Result	Units	MRL	$\mathbf{MDL}$	Dil.	Date Analyzed	Extracted	Q
Copper	200.8	0.22	ug/L	0.10	0.02	1	05/11/22 11:08	05/09/22	
Nickel	200.8	0.34	ug/L	0.20	0.03	1	05/11/22 11:08	05/09/22	
Zinc	200.8	0.21 J	ug/L	0.50	0.20	1	05/11/22 11:08	05/09/22	

Analytical Report

**Client:** Aquatic Restoration and Research Institute (ARRI)

**Service Request:** K2204750 **Date Collected:** 05/03/22 08:50 **Project:** Ambient WQ-Wrangell

**Date Received:** 05/04/22 12:45 **Sample Matrix:** Ocean Water

**Sample Name:** WR02 Basis: NA

Lab Code: K2204750-003

	Analysis							Date	
Analyte Name	Method	Result	Units	MRL	$\mathbf{MDL}$	Dil.	Date Analyzed	Extracted	Q
Copper	200.8	0.21	ug/L	0.10	0.02	1	05/11/22 11:25	05/09/22	
Nickel	200.8	0.32	ug/L	0.20	0.03	1	05/11/22 11:25	05/09/22	
Zinc	200.8	ND U	ug/L	0.50	0.20	1	05/11/22 11:25	05/09/22	

Analytical Report

**Client:** Aquatic Restoration and Research Institute (ARRI)

Project: Ambient WQ-Wrangell Date Collected: 05/03/22 08:50

Sample Matrix: Ocean Water Date Received: 05/04/22 12:45

Sample Name: WR02 Basis: NA

**Lab Code:** K2204750-003

#### **Total Metals**

	Analysis							Date	
Analyte Name	Method	Result	Units	MRL	$\mathbf{MDL}$	Dil.	Date Analyzed	Extracted	Q
Copper	200.8	0.26	ug/L	0.10	0.02	1	05/11/22 11:09	05/09/22	
Nickel	200.8	0.37	ug/L	0.20	0.03	1	05/11/22 11:09	05/09/22	
Zinc	200.8	0.32 J	ug/L	0.50	0.20	1	05/11/22 11:09	05/09/22	

**Service Request:** K2204750

Analytical Report

**Client:** Aquatic Restoration and Research Institute (ARRI)

**Service Request:** K2204750 **Date Collected:** 05/03/22 08:45 **Project:** Ambient WQ-Wrangell

**Date Received:** 05/04/22 12:45 **Sample Matrix:** Ocean Water

**Sample Name:** WR03 Basis: NA

Lab Code: K2204750-004

	Analysis							Date	
Analyte Name	Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Extracted	Q
Copper	200.8	0.19	ug/L	0.10	0.02	1	05/11/22 11:26	05/09/22	
Nickel	200.8	0.34	ug/L	0.20	0.03	1	05/11/22 11:26	05/09/22	
Zinc	200.8	0.27 J	ug/L	0.50	0.20	1	05/11/22 11:26	05/09/22	

Analytical Report

**Client:** Aquatic Restoration and Research Institute (ARRI)

Project: Ambient WQ-Wrangell Date Collected: 05/03/22 08:45

Sample Matrix: Ocean Water Date Received: 05/04/22 12:45

Sample Name: WR03 Basis: NA

**Lab Code:** K2204750-004

#### **Total Metals**

	Analysis							Date	
Analyte Name	Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Extracted	Q
Copper	200.8	0.37	ug/L	0.10	0.02	1	05/11/22 11:11	05/09/22	
Nickel	200.8	0.37	ug/L	0.20	0.03	1	05/11/22 11:11	05/09/22	
Zinc	200.8	0.57	ug/L	0.50	0.20	1	05/11/22 11:11	05/09/22	

**Service Request:** K2204750

Analytical Report

**Client:** Aquatic Restoration and Research Institute (ARRI)

**Service Request:** K2204750 **Date Collected:** 05/03/22 09:40 **Project:** Ambient WQ-Wrangell

**Date Received:** 05/04/22 12:45 **Sample Matrix:** Ocean Water

**Sample Name:** WR04 Basis: NA

Lab Code: K2204750-005

	Analysis							Date	
Analyte Name	Method	Result	Units	MRL	$\mathbf{MDL}$	Dil.	Date Analyzed	Extracted	Q
Copper	200.8	0.20	ug/L	0.10	0.02	1	05/11/22 11:28	05/09/22	
Nickel	200.8	0.34	ug/L	0.20	0.03	1	05/11/22 11:28	05/09/22	
Zinc	200.8	0.35 J	ug/L	0.50	0.20	1	05/11/22 11:28	05/09/22	

Analytical Report

**Client:** Aquatic Restoration and Research Institute (ARRI)

**Service Request:** K2204750 **Date Collected:** 05/03/22 09:40 Ambient WQ-Wrangell

**Date Received:** 05/04/22 12:45 **Sample Matrix:** Ocean Water

**Sample Name:** WR04 Basis: NA

Lab Code: K2204750-005

**Project:** 

#### **Total Metals**

	Analysis							Date	
Analyte Name	Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Extracted	Q
Copper	200.8	0.33	ug/L	0.10	0.02	1	05/11/22 11:15	05/09/22	
Nickel	200.8	0.38	ug/L	0.20	0.03	1	05/11/22 11:15	05/09/22	
Zinc	200.8	0.70	ug/L	0.50	0.20	1	05/11/22 11:15	05/09/22	

Analytical Report

**Client:** Aquatic Restoration and Research Institute (ARRI)

**Service Request:** K2204750 **Date Collected:** 05/03/22 09:20 **Project:** Ambient WQ-Wrangell

**Date Received:** 05/04/22 12:45 **Sample Matrix:** Ocean Water

**Sample Name: WR05** Basis: NA

Lab Code: K2204750-006

	Analysis							Date	
Analyte Name	Method	Result	Units	MRL	$\mathbf{MDL}$	Dil.	Date Analyzed	Extracted	Q
Copper	200.8	0.17	ug/L	0.10	0.02	1	05/11/22 11:32	05/09/22	
Nickel	200.8	0.29	ug/L	0.20	0.03	1	05/11/22 11:32	05/09/22	
Zinc	200.8	0.24 J	ug/L	0.50	0.20	1	05/11/22 11:32	05/09/22	

Analytical Report

**Client:** Aquatic Restoration and Research Institute (ARRI)

**Service Request:** K2204750 **Date Collected:** 05/03/22 09:20 **Project:** Ambient WQ-Wrangell

**Date Received:** 05/04/22 12:45 **Sample Matrix:** Ocean Water

**Sample Name: WR05** Basis: NA

Lab Code: K2204750-006

#### **Total Metals**

	Analysis							Date	
Analyte Name	Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Extracted	Q
Copper	200.8	0.22	ug/L	0.10	0.02	1	05/11/22 11:16	05/09/22	
Nickel	200.8	0.33	ug/L	0.20	0.03	1	05/11/22 11:16	05/09/22	
Zinc	200.8	0.39 J	ug/L	0.50	0.20	1	05/11/22 11:16	05/09/22	

Analytical Report

**Client:** Aquatic Restoration and Research Institute (ARRI)

**Service Request:** K2204750 **Date Collected:** 05/03/22 09:15 **Project:** Ambient WQ-Wrangell

**Date Received:** 05/04/22 12:45 **Sample Matrix:** Ocean Water

**Sample Name:** WR06 Basis: NA

Lab Code: K2204750-007

	Analysis							Date	
Analyte Name	Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Extracted	Q
Copper	200.8	0.15	ug/L	0.10	0.02	1	05/11/22 11:33	05/09/22	
Nickel	200.8	0.28	ug/L	0.20	0.03	1	05/11/22 11:33	05/09/22	
Zinc	200.8	ND U	ug/L	0.50	0.20	1	05/11/22 11:33	05/09/22	

Analytical Report

**Client:** Aquatic Restoration and Research Institute (ARRI)

**Service Request:** K2204750 **Date Collected:** 05/03/22 09:15 **Project:** Ambient WQ-Wrangell

**Date Received:** 05/04/22 12:45 **Sample Matrix:** Ocean Water

**Sample Name:** WR06 Basis: NA

Lab Code: K2204750-007

#### **Total Metals**

	Analysis							Date	
Analyte Name	Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Extracted	Q
Copper	200.8	0.21	ug/L	0.10	0.02	1	05/11/22 11:18	05/09/22	
Nickel	200.8	0.33	ug/L	0.20	0.03	1	05/11/22 11:18	05/09/22	
Zinc	200.8	0.27 J	ug/L	0.50	0.20	1	05/11/22 11:18	05/09/22	

Analytical Report

**Client:** Aquatic Restoration and Research Institute (ARRI)

**Service Request:** K2204750 **Date Collected:** 05/03/22 09:40 **Project:** Ambient WQ-Wrangell

**Date Received:** 05/04/22 12:45 **Sample Matrix:** Ocean Water

**Sample Name:** WR04X Basis: NA

Lab Code: K2204750-008

	Analysis							Date	
Analyte Name	Method	Result	Units	MRL	$\mathbf{MDL}$	Dil.	Date Analyzed	Extracted	Q
Copper	200.8	0.24	ug/L	0.10	0.02	1	05/11/22 11:35	05/09/22	
Nickel	200.8	0.34	ug/L	0.20	0.03	1	05/11/22 11:35	05/09/22	
Zinc	200.8	0.41 J	ug/L	0.50	0.20	1	05/11/22 11:35	05/09/22	

Analytical Report

**Client:** Aquatic Restoration and Research Institute (ARRI)

Project: Ambient WQ-Wrangell Date Collected: 05/03/22 09:40

Sample Matrix: Ocean Water Date Received: 05/04/22 12:45

Sample Name: WR04X Basis: NA

**Lab Code:** K2204750-008

#### **Total Metals**

	Analysis							Date	
Analyte Name	Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Extracted	Q
Copper	200.8	0.38	ug/L	0.10	0.02	1	05/11/22 11:19	05/09/22	
Nickel	200.8	0.39	ug/L	0.20	0.03	1	05/11/22 11:19	05/09/22	
Zinc	200.8	0.70	ug/L	0.50	0.20	1	05/11/22 11:19	05/09/22	

**Service Request:** K2204750

Analytical Report

**Client:** Aquatic Restoration and Research Institute (ARRI)

**Service Request:** K2204750 **Date Collected:** 05/03/22 **Project:** Ambient WQ-Wrangell

**Date Received:** 05/04/22 12:45 **Sample Matrix:** Ocean Water

**Sample Name:** Basis: NA Trip Blank

Lab Code: K2204750-009

#### **Total Metals**

	Analysis							Date	
Analyte Name	Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Extracted	Q
Copper	200.8	ND U	ug/L	0.10	0.02	1	05/11/22 11:21	05/09/22	
Nickel	200.8	ND U	ug/L	0.20	0.03	1	05/11/22 11:21	05/09/22	
Zinc	200.8	ND U	ug/L	0.50	0.20	1	05/11/22 11:21	05/09/22	



# **General Chemistry**

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

Analytical Report

**Client:** Aquatic Restoration and Research Institute (ARRI)

**Service Request:** K2204750 **Date Collected:** 05/03/22 09:00 Ambient WQ-Wrangell

**Date Received:** 05/04/22 12:45 Sample Matrix: Ocean Water

WRFB Basis: NA **Sample Name:** 

Lab Code: K2204750-001

**Project:** 

	Analysis							Date	
Analyte Name	Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Extracted	Q
Ammonia as Nitrogen	350.1	ND U	mg/L	0.010	0.003	1	05/10/22 13:02	05/10/22	

Analytical Report

**Client:** Aquatic Restoration and Research Institute (ARRI)

**Service Request:** K2204750 **Date Collected:** 05/03/22 09:00 **Project:** Ambient WQ-Wrangell

**Date Received:** 05/04/22 12:45 Sample Matrix: Ocean Water

WR01 Basis: NA **Sample Name:** 

Lab Code: K2204750-002

	Analysis							Date	
Analyte Name	Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Extracted	Q
Ammonia as Nitrogen	350.1	0.036	mg/L	0.010	0.003	1	05/10/22 13:02	05/10/22	

Analytical Report

**Client:** Aquatic Restoration and Research Institute (ARRI)

**Service Request:** K2204750 **Date Collected:** 05/03/22 08:50 Ambient WQ-Wrangell

**Date Received:** 05/04/22 12:45 **Sample Matrix:** Ocean Water

WR02 **Sample Name:** Basis: NA

Lab Code: K2204750-003

**Project:** 

	Analysis							Date	
Analyte Name	Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Extracted	Q
Ammonia as Nitrogen	350.1	0.010 J	mg/L	0.010	0.003	1	05/10/22 13:02	05/10/22	

Analytical Report

**Client:** Aquatic Restoration and Research Institute (ARRI)

**Service Request:** K2204750 **Date Collected:** 05/03/22 08:45 Ambient WQ-Wrangell

**Date Received:** 05/04/22 12:45 Sample Matrix: Ocean Water

WR03 Basis: NA **Sample Name:** 

Lab Code: K2204750-004

**Project:** 

	Analysis							Date	
Analyte Name	Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Extracted	Q
Ammonia as Nitrogen	350.1	0.071	mg/L	0.010	0.003	1	05/10/22 13:02	05/10/22	

Analytical Report

**Client:** Aquatic Restoration and Research Institute (ARRI)

**Service Request:** K2204750 **Date Collected:** 05/03/22 09:40 Ambient WQ-Wrangell

**Date Received:** 05/04/22 12:45 **Sample Matrix:** Ocean Water

WR04 Basis: NA **Sample Name:** 

Lab Code: K2204750-005

**Project:** 

	Analysis							Date	
Analyte Name	Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Extracted	Q
Ammonia as Nitrogen	350.1	0.010 J	mg/L	0.010	0.003	1	05/10/22 13:02	05/10/22	

Analytical Report

**Client:** Aquatic Restoration and Research Institute (ARRI)

**Service Request:** K2204750 **Date Collected:** 05/03/22 09:20 Ambient WQ-Wrangell

**Date Received:** 05/04/22 12:45 **Sample Matrix:** Ocean Water

WR05 Basis: NA **Sample Name:** 

Lab Code: K2204750-006

**Project:** 

	Analysis							Date	
Analyte Name	Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Extracted	Q
Ammonia as Nitrogen	350.1	0.003 J	mg/L	0.010	0.003	1	05/10/22 13:02	05/10/22	

Analytical Report

**Client:** Aquatic Restoration and Research Institute (ARRI)

**Service Request:** K2204750 **Date Collected:** 05/03/22 09:15 Ambient WQ-Wrangell

**Date Received:** 05/04/22 12:45 Sample Matrix: Ocean Water

WR06 Basis: NA **Sample Name:** 

Lab Code: K2204750-007

**Project:** 

	Analysis							Date	
Analyte Name	Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Extracted	Q
Ammonia as Nitrogen	350.1	ND U	mg/L	0.010	0.003	1	05/10/22 13:02	05/10/22	

Analytical Report

**Client:** Aquatic Restoration and Research Institute (ARRI)

**Service Request:** K2204750 **Date Collected:** 05/03/22 09:40 Ambient WQ-Wrangell

**Date Received:** 05/04/22 12:45 **Sample Matrix:** Ocean Water

WR04X Basis: NA **Sample Name:** 

Lab Code: K2204750-008

**Project:** 

	Analysis							Date	
Analyte Name	Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Extracted	Q
Ammonia as Nitrogen	350.1	0.004 J	mg/L	0.010	0.003	1	05/10/22 13:02	05/10/22	



# **QC Summary Forms**

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



## Metals

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

Analytical Report

**Client:** Aquatic Restoration and Research Institute (ARRI) **Service Request:** K2204750

> Date Collected: NA Ambient WQ-Wrangell

**Project:** Date Received: NA **Sample Matrix:** Ocean Water

**Sample Name:** Method Blank Basis: NA

Lab Code: KQ2207138-01

#### **Total Metals**

	Analysis							Date	
Analyte Name	Method	Result	Units	MRL	$\mathbf{MDL}$	Dil.	Date Analyzed	Extracted	Q
Copper	200.8	ND U	ug/L	0.10	0.02	1	05/11/22 10:58	05/09/22	
Nickel	200.8	ND U	ug/L	0.20	0.03	1	05/11/22 10:58	05/09/22	
Zinc	200.8	ND U	ug/L	0.50	0.20	1	05/11/22 10:58	05/09/22	

QA/QC Report

Client: Aquatic Restoration and Research Institute (ARRI)

**Project:** Ambient WQ-Wrangell

Sample Matrix: Ocean Water

Service Request: K2204750 Date Analyzed: 05/11/22

Duplicate Lab Control Sample Summary Total Metals

> Units:ug/L Basis:NA

**Lab Control Sample** 

**Duplicate Lab Control Sample** 

KQ2207138-02

KQ2207138-03

	Analytical		Spike			Spike		% Rec		RPD
Analyte Name	Method	Result	Amount	% Rec	Result	Amount	% Rec	Limits	RPD	Limit
Copper	200.8	1.92	2.00	96	1.92	2.00	96	63-128	<1	20
Nickel	200.8	1.95	2.00	97	1.96	2.00	98	88-112	<1	20
Zinc	200.8	1.99	2.00	99	1.98	2.00	99	79-133	<1	20



# **General Chemistry**

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

Analytical Report

Client: Aquatic Restoration and Research Institute (ARRI) Service Request: K2204750

Project:Ambient WQ-WrangellDate Collected:NASample Matrix:Ocean WaterDate Received:NA

Sample Name: Method Blank Basis: NA

**Lab Code:** K2204750-MB1

	Analysis							Date	
Analyte Name	Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Extracted	Q
Ammonia as Nitrogen	350.1	ND U	mg/L	0.010	0.003	1	05/10/22 13:02	05/10/22	

Analytical Report

**Client:** Aquatic Restoration and Research Institute (ARRI)

**Service Request:** K2204750

Basis: NA

**Project:** Ambient WQ-Wrangell Date Collected: NA Date Received: NA

Sample Matrix: Ocean Water

Method Blank **Sample Name:** Lab Code:

K2204750-MB2

	Analysis							Date	
Analyte Name	Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Extracted	Q
Ammonia as Nitrogen	350.1	ND U	mg/L	0.010	0.003	1	05/10/22 13:02	05/10/22	

QA/QC Report

Client: Aquatic Restoration and Research Institute (ARRI)

**Service Request: Date Collected:** 

K2204750

**Project: Sample Matrix:** 

Ambient WQ-Wrangell

05/03/22

Ocean Water

**Date Received:** 

05/04/22

Date Analyzed:

05/10/22

**Date Extracted:** 

05/10/22

**Duplicate Matrix Spike Summary** 

Ammonia as Nitrogen

WR05 Sample Name:

**Units:** 

mg/L

Lab Code:

**Prep Method:** 

K2204750-006

**Basis:** 

NA

**Analysis Method:** 

350.1 Method

**Matrix Spike** 

**Duplicate Matrix Spike** 

K2204750-006MS

K2204750-006DMS

	Sample		Spike			Spike		% Rec		RPD
Analyte Name	Result	Result	Amount	% Rec	Result	Amount	% Rec	Limits	RPD	Limit
Ammonia as Nitrogen	0.003 J	0.210	0.200	103	0.212	0.200	104	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) Service Request: K2204750

**Project** Ambient WQ-Wrangell **Date Collected:** 05/03/22

Ocean Water Sample Matrix: **Date Received:** 05/04/22

**Date Analyzed:** 05/10/22

**Replicate Sample Summary General Chemistry Parameters** 

Sample Name: **WR05** Units: mg/L

Lab Code: K2204750-006 Basis: NA

> **Duplicate Sample**

K2204750-Sample **006DUP** 

Analysis Method Result RPD Limit Analyte Name **MRL MDL** Result **RPD** Average Ammonia as Nitrogen 350.1 0.010 0.003 0.003 J 0.006 J 0.00450 62#

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.

QA/QC Report

Client: Aquatic Restoration and Research Institute (ARRI)

Service Request:

K2204750

Project:

Ambient WQ-Wrangell

**Date Analyzed: Date Extracted:** 

05/10/22 05/10/22

Sample Matrix: Ocean Water

**Lab Control Sample Summary** 

Ammonia as Nitrogen

Analysis Method:

350.1

innoma as i vieroge.

**Units:** 

mg/L

Prep Method: M

Method

**Basis:** 

NA

**Analysis Lot:** 

763618

			Spike		% Rec
Sample Name	Lab Code	Result	Amount	% Rec	Limits
Lab Control Sample	K2204750-LCS1	0.299	0.300	100	90-110

QA/QC Report

Client: Aquatic Restoration and Research Institute (ARRI)

**Service Request:** 

K2204750

Project:

Ambient WQ-Wrangell

**Date Analyzed:** 

05/10/22

**Sample Matrix:** 

Ocean Water

**Date Extracted:** 

05/10/22

**Lab Control Sample Summary** 

Ammonia as Nitrogen

**Analysis Method:** 350.1

mg/L

Prep Method:

Method

Units: Basis:

NA

**Analysis Lot:** 

763618

			Spike		% Rec
Sample Name	Lab Code	Result	Amount	% Rec	Limits
Lab Control Sample	K2204750-LCS2	0.293	0.300	98	90-110



Jeff Davis PO Box 923 Talkeetna, AK 99676

May 12, 2022

#### <u>Aquatic Restoration & Research Institute – WRANGELL</u>

Date of Collection: May 3, 2022 Sampling Location: Wrangell, Alaska

#### Summary

Six samples from the Aquatic Restoration & Research Institute were received at Admiralty Environmental, Juneau, AK on May 3, 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

Deria Coto



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

www.admiraltyenvironmental.com

#### **Aquatic Restoration and Research Institute**

Wrangell

**Analytical Report** 

May 3, 2022 Wrangell, AK

Admiralty Environmental EPA ID AK 00976

AE 28832

Sample Location	Date & Time Sampled	Fecal Coliform (FC/100mL)	Enterococci (MPN/100mL)
WR 03	5/3/2022; 08:45	2	< 10
WR 02	5/3/2022; 08:50	2	< 10
WR 01	5/3/2022; 09:00	7	< 10
WR 06	5/3/2022; 09:15	< 2	< 10
WR 05	5/3/2022; 09:20	< 2	< 10
WR 04	5/3/2022; 09:40	2	< 10

#### **Quality Control:**

Analysis	МВ	LCS	LCS Duplicate	RPD	Date/Time Commenced	Holding Time Met
FC	<2.0				5/3/2022; 16:30	Yes
Entero					5/3/2022; 16:10	Yes

#### **Analysis Description:**

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

#### Key:

FC	Fecal Coliform
Entero	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

#### Case Narrative:

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

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 N	IAME:	Aquatic Restoration	and Pasaar	ch Instit	uto	Ь	ro	ioct:	\A.		200	ااد					
REPORT TO	D:	Jeff Davis arri@arrialaska.org	PHONE#:		ute			,ect.							AE Z	2883	32
ADDRESS:		PO Box 923 Talkeetna, AK 99676	SAMPLED BY:	7													
COMMENTS	S:	3			BOTTLES	Coliform	Enterococci MPN										
DATE	TIME	SITE DESCRIPTION /IDENTIFII	ER	MATRIX	# OF BC	Fecal C	Enteroc							рН	FIELD F	D.O.	
5/3/202	8:45	WRO3		H ₂ O	1	1											
5/3/2020		WRO2		H ₂ O	1	1	1										
, ,	9:00	WROI		H ₂ O	1	1	1										
5/3/22	9:15	WRO6		H ₂ O	1	1	1										
5/3/22	9:20	WROS		H ₂ O	1	1	1										1
5/3/22	9:40	WROY		H2O	1	1	1										
RELINQUISHED	BY:	RECEIVED BY:	RELINQUISHED BY:		RECE	_	BY:										
Signature	>	Signature To Alaska AN	Signature		Signa	ture	10	11	15	Section	to Be	Comple	_	eceiving La	aboratory		
Printed Name	7	Printed Name	Printed Name		Printe			b.			mp °C			75			
Date		Date	Date		Riley Clocker  Date 5/3/22			Co	ermo nditio stody			6#7					
Time		Time	Time		Time	54	3				tialed ipped	· .		tesp			



## Admiralty Environmental Cooler Receipt Form

Lab:

Admiralty Environmental, LLC

Client:

**Aquatic Restoration and Research Institute** 

AE# AE 28832

Date Opened:

5/3/2022 Opened by: R. Crocker

#### A. External Cooler Conditions

• Local Sampling Event

1. Project ID:

Wrangell

2. COC Attached? yes

Properly Completed?

yes

Signed by AE employee?

Small Temp. Blank

5.75 (temp in Celsius)

Large Temp. Blank:

n/a

(temp in Celsius)

• Air-Transported Sampling Event

1. Project ID:

n/a

2. COC Attached?

Properly Completed?

n/a

Airbill #:

n/a

Signed by AE employee?

n/a

3. Airbill attached? n/a 4. Custody Seals?

n/a n/a

5. Seals intact?

Temp. Blank: n/a

(temp in Celsius)

COMMENTS:

#### B. Sample Conditions

Number of Samples Received:

Packing type:

cooler

Number of Bottles Received: 1. Samples in proper bags?

yes

2. Bottles intact?

3. Sufficient sample volume?

yes yes

4. Labels agree with COC?

yes

5. Samples delivered within holding time?

yes

6. Sample preservation checked?

n/a

Problems encountered:

Was the project manager called?

no

COMMENTS:

Date and time: 5/3/22; 1543



Jeff Davis PO Box 923 Talkeetna, AK 99676

May 20, 2022

#### Aquatic Restoration & Research Institute - Wrangell

Date of Collection: May 11, 2022 Sampling Location: Wrangel, Alaska

#### Summary

Six samples from the Aquatic Restoration & Research Institute were received at Admiralty Environmental, Juneau, AK on May 11, 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

Deria Coto



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

www.admiraltyenvironmental.com

#### **Aquatic Restoration and Research Institute**

Wrangell

**Analytical Report** 

May 11, 2022

Admiralty Environmental EPA ID AK 00976

Wrangell, AK

AE 28884

Sample Location	Date & Time Sampled	Fecal Coliform (FC/100mL)	Enterococci (MPN/100mL)
WRG 01	5/11/2022; 08:45	< 2.0	< 10
WRG 02	5/11/2022; 08:41	< 2.0	< 10
WRG 03	5/11/2022; 08:35	< 2.0	< 10
WRG 04	5/11/2022; 09:05	< 2.0	2.0
WRG 05	5/11/2022; 09:00	< 2.0	< 10
WRG 06	5/11/2022; 08:52	< 2.0	< 10

#### **Quality Control:**

addinty contra	•					
Analysis	МВ	LCS	LCS Duplicate	RPD	Holding Time Met	
FC	<2.0				5/11/2022; 15:30	Yes
Entero					5/11/2022: 15:29	Yes

#### **Analysis Description:**

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

#### Key:

FC	Fecal Coliform
Entero	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

#### Case Narrative:

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

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 N	PROJECT NAME: Aquatic Restoration and Research Institu															
REPORT TO	) <b>:</b>	Jeff Davis arri@arrialaska.org	PHONE#:											AE Z	3887	<i>\</i> -
ADDRESS:		PO Box 923 Talkeetna, AK 99676	SAMPLED BY: JOHN A: YEAG WANGELL, AX	e Q												
COMMENTS:						Fecal Coliform	Enterococci MPN					ļ		FIELD R	ESULTS	
DATE	ŢIME	SITE DESCRIPTION /IDENTIF	IER	MATRIX	# OF B	Fecal C	Entero						рН	Temp	D.O.	
5/11/22	6845	WRG 01	H₂O	1	1	1										
	0841	WEG OZ		H₂O	1	1	1									
	0835	WRG 03		H ₂ O	1	1	1							_		
	0905	WRG 04		H ₂ O	1	1	1									
	0900	WRG 05		H ₂ O	1	1	1									
	0852			H2O	1	1	1									
RELINQUISHED	BY:	RECEIVED BY:	RELINQUISHED BY:		RECE	IVED	BY:								Comment on the Comment of the Commen	
Signature  Printed Name	~	Signature What	Signature  Printed Name		Signa Printe		me		Sign	Temp	Call For G Accounty	eted b	y Receiving L 5.69	aboratory at		
Date	Yeasm	Bavid Wetzel	Finited Name	. Pfi						Them		La	47			
Date S-ll	27	Date 5/11/22	Date	Date						Custo	tion of dy Seal:	<b>;</b>	Der			
Time 094	5	Time /455	Time	Time			ime			initiak Shipp	-					



## Admiralty Environmental Cooler Receipt Form

Lab: Admiralty Environmental, LLC Client: ARRI AE# AE 28884 Date Opened: 5/11/2022 Opened by: D. Wetzel A. External Cooler Conditions • Local Sampling Event 1. Project ID: 2. COC Attached? n/a Properly Completed? Signed by AE employee? n/a 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: Wrangell 2. COC Attached? yes Properly Completed? Signed by AE employee? Airbill #: 3. Airbill attached? yes 027-7498-9972 4. Custody Seals? yes 5. Seals intact? yes Temp. Blank: 5.69 (temp in Celsius) COMMENTS: **B.** Sample Conditions Number of Samples Received: Packing type: cooler Number of Bottles Received: 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: Was the project manager called? no

COMMENTS:

Date and time: 5/11/22 1455



Jeff Davis PO Box 923 Talkeetna, AK 99676

May 31, 2022

#### Aquatic Restoration & Research Institute - Wrangell

Date of Collection: May 19, 2022 Sampling Location: Wrangell, Alaska

#### Summary

Six samples from the Aquatic Restoration & Research Institute were received at Admiralty Environmental, Juneau, AK on May 19, 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

Deria Coto



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www.admiraltyenvironmental.com

### **Aquatic Restoration and Research Institute**

Wrangell

**Analytical Report** 

May 19, 2022 Wrangell, AK

Admiralty Environmental EPA ID AK 00976

AE 29005

Sample Location	Date & Time Sampled	Fecal Coliform (FC/100mL)	Enterococci (MPN/100mL)
WRG 03	5/19/2022; 08:15	< 2.0	< 10
WRG 02	5/19/2022; 08:25	< 2.0	< 10
WRG 01	5/19/2022; 08:30	< 2.0	< 10
WRG 06	5/19/2022; 08:36	< 2.0	< 10
WRG 05	5/19/2022; 08:45	3	< 10
WRG 04	5/19/2022; 08:55	2	< 10

#### **Quality Control:**

addinty contra	•					
Analysis	МВ	LCS	LCS Duplicate	RPD	Date/Time Commenced	Holding Time Met
FC	<2.0				5/19/2022; 15:44	Yes
Entero					5/19/2022: 15:35	Yes

#### **Analysis Description:**

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

#### Key:

,.	
FC	Fecal Coliform
Entero	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

#### Case Narrative:

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

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:	ROJECT NAME: Aquatic Restoration and Rese			h Institute Project: Wrangell											
REPORT TO:	Jeff Davis arri@arrialaska.org	PHONE#:										,	4E Z 9	1005	,
· ·	PO Box 923 Talkeetna, AK 99676	SAMPLED BY: John A. Yeggen 909-470-400	-	į											·
COMMENTS:				BOTTLES	Fecal Coliform	Enterococci MPN							FIELD R	ESULTS	
DATE TIME	SITE DESCRIPTION /IDENTIFI	ER	MATRIX	# OF B	Fecal (	Entero						рН	Temp	D.O.	
5/19/22 08/5	WR6 03			1	1	1					_				
1 0825	WR6 02		H ₂ O	1	1	1									
	wre 01		H₂O	1	1	1									
0836			H ₂ O	1	1	1									ļ — —
0845			H₂O	1	1	1						<u> </u>			
0855	WR6 04		H2O	1	1	1									
RELINQUISHED BY:	RECEIVED BY:	RELINQUISHED BY:		RECE		BY:				areas area	200	by Receiving	51.53678		
Signature	Signlature  Au  Printed Name  ( )	Signature Printed Name		Signa		me		5	Tem			5.39			
John A. Yeager	Barro Netze					<del></del>				mo ID#: dition of	, 1	w=#7			
Date 5/19/22	Date 5/19(22	Date			Custody Seals				als	m					
Time 0915	Time 1429	Time		line	ime 🏥 Initialed By:							<del> </del>			



COMMENTS:

Signature:

## Admiralty Environmental Cooler Receipt Form

Admiralty Environmental, LLC Lab: AE# AE 29005 Client: ARRI 5/19/2022 Opened by: D. Wetzel Date Opened: A. External Cooler Conditions Local Sampling Event 1. Project ID: Signed by AE employee? Properly Completed? n/a 2. COC Attached? n/a (temp in Celsius) Small Temp. Blank n/a (temp in Celsius) Large Temp. Blank: n/a Air-Transported Sampling Event Wrangell 1. Project ID: Signed by AE employee? yes Properly Completed? yes 2. COC Attached? yes 027 WRG 7499 0510 Airbill#: 3. Airbill attached? yes 4. Custody Seals? 5. Seals intact? yes (temp in Celsius) 5.39 Temp. Blank: COMMENTS: B. Sample Conditions cooler Packing type: 6 Number of Samples Received: 6 Number of Bottles Received: 1. Samples in proper bags? yes yes 2. Bottles intact? 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: Was the project manager called? no

5/19/22 1429

Date and time:___



Jeff Davis PO Box 923 Talkeetna, AK 99676

June 6, 2022

#### Aquatic Restoration & Research Institute - Wrangell

Date of Collection: May 25, 2022 Sampling Location: Wrangell, Alaska

#### Summary

Six samples from the Aquatic Restoration & Research Institute were received at Admiralty Environmental, Juneau, AK on May 25, 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

Deara Cote



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

www.admiraltyenvironmental.com

#### **Aquatic Restoration and Research Institute**

Wrangell

**Analytical Report** 

May 25, 2022 Wrangell, AK

Admiralty Environmental EPA ID AK 00976

AE 29123

Sample Location	Date & Time Sampled	Fecal Coliform (FC/100mL)	Enterococci (MPN/100mL)
WRG 03	5/25/2022; 08:08	<2.0	<10
WRG 02	5/25/2022; 08:15	5.0	<10
WRG 01	5/25/2022; 08:20	3.0	<10
WRG 06	5/25/2022; 08:25	<2.0	<10
WRG 05	5/25/2022; 08:32	<2.0	<10
WRG 04	5/25/2022; 08:38	<2.0	<10

#### **Quality Control:**

Analysis	МВ	LCS	LCS Duplicate	RPD	Date/Time Commenced	Holding Time Met
FC	<2.0				5/25/2022; 16:00	Yes
Entero					5/25/2022; 15:58	Yes

#### **Analysis Description:**

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

#### Key:

FC	Fecal Coliform
Entero	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

#### Case Narrative:

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

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

Aquatic Restoration and Research Institute  REPORT TO:  Jeff Davis arri@arrialaska.org  ADDRESS:  PO Box 923 Talkeetna, AK 99676  John A. Yeary 207-470-4001  Substitute  Project: Wrangell  AE 29123  AE 29123  AE 29123  AE 29123  FIELD RESULTS  PH Temp D.O.  FIELD RESULTS  PH Temp D.O.  1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	PROJECT	NAME:		()			_			_								
ADDRESS: PO Box 923 Talkeetna, AK 99676  DATE TIME SITE DESCRIPTION //DENTIFIER  MATRIX 5 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0			Aquatic Restoration	on and Research	n Instit	ute	P	roj	ect:	W	ran	gel						
Talkeetna, AK 99676   Town A. 1	REPORT T	O:		PHONE#:												AE	10/19	12
DATE   TIME   SITE DESCRIPTION /IDENTIFIER   MATRIX   DESCRIPTION /IDENTIFIER   D.O.	ADDRESS:	R		SAMPLED BY: John A. Yeagy 207-470-400	·-											2	. ]   L	- 0
1	COMMENT	S:		100	/	SOTTLES	Coliform	ococci MPN								EIEI D E	DECI TE	
1		15.123.00	SITE DESCRIPTION /IDENTIF	IER	MATRIX		Fecal	Enterd							рН			
1	5/25/22	0803	WRG 03		H ₂ O										<del>- 11-11-19</del>			
0820   WR 6 0   H ₂ 0 1 1 1 1					H ₂ O	1	1	1		t		4	$\Box$					
DR S   WRG 0 6		0820		AND THE TRACE	H ₂ O	1	1	1		$\top$					-50			
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RELINQUISHED BY:  RECEIVED BY:  Signature  Signature  Signature  Printed Name  Printed Name  Printed Name  Printed Name  Date  Date  Date  Time  Time  RECEIVED BY:  RECEIVED BY:  RECEIVED BY:  RECEIVED BY:  Section to Be Completed by Receiving Laboratory  Temp °C:  Thermo ID#:  Condition of  Custody Seals  Initialed By:			WRG 05		H ₂ O	1	1	1										
RECEIVED BY:  RECEIVED BY:  Signature  Signature  Signature  Signature  Signature  Signature  Signature  Signature  Signature  Section to Be Completed by Receiving Laboratory  Temp °C:  Thermo ID#:  Condition of Custody Seals  Time  Time  Time  Time  Initialed By:	1	8280	WRG 04		H2O	1	1	1					H	+				
Signature  Frinted Name  Printed Name  Printed Name  Date  Date  Date  Date  Date  Date  Time  Time  Time  Signature  Section to Be Completed by Receiving Laboratory  Temp °C:  Thermo ID#:  Condition of  Custody Seals  Initialed By:				RELINQUISHED BY:		RECEI	VED	BY:		$\dashv$								
Time Time Initialed By:	Signature Whyh	m	Signature	Signature		Signat	ure			Sec	ction to	Be Co	mpleted	by Rece	eiving La	boratory		
Time Time Initialed By:	Printed Name	tescen	Home O NULL	Printed Name		Printed							r	4.7	10 #7			
Time Time Time Initialed By: Initialed By: Shipped Via: AV CANAA	5-25-	22	5/19/22	Date		Date					Cond	ition o	f	/				
	092	0	1445	Time		Time								AV 1	1_0V0	n ()		



# Admiralty Admiralty Environmental Cooler Receipt Form

Lab: Client:	Admiralt ARRI	y Environ	mental, LLC		AE	AE# AE 29123			
Date Opened	: 5/25/202	2 Opened by	y: A. Torrance	e					
A. External Coo	ler Condit	ons							
• Local Sampling E	Event								
1. Project ID:	n/a								
2. COC Attached?	n/a	Properly C	ompleted?	n/a	Signed by	AE employee?	n/a		
	•			Small Temp. I Large Temp. I		n/a n/a	(temp in Celsius) (temp in Celsius)		
<ul> <li>Air-Transported S</li> </ul>	Sampling Eve	ent				Out Windshield	( 1		
1. Project ID:	Wrangell								
2. COC Attached? 3. Airbill attached? 4. Custody Seals? 5. Seals intact?		Properly Co	ompleted? n/a	yes	Signed by	AE employee?	yes		
COMMENTS:				Temp. Blank:	4.20		(temp in Celsius)		
B. Sample Condi	tions								
Number of Samples Number of Bottles R Samples in proper Bottles intact? Sufficient sample Labels agree with	Received: r bags? volume?	yes yes yes yes	6	Packing type:		cooler			
. Samples delivered . Sample preservati Problems encountere	on checked?	ing time?	yes n/a						
Vas the project man	ager called?		no						
COMMENTS:	1					-100	122.11.110		
ignature:					Date and ti	me: $5/25$	127;1445		



Jeff Davis PO Box 923 Talkeetna, AK 99676

June 13, 2022

#### Aquatic Restoration & Research Institute - Wrangell

Date of Collection: June 1, 2022 Sampling Location: Wrangell, Alaska

#### Summary

Six samples from the Aquatic Restoration & Research Institute were received at Admiralty Environmental, Juneau, AK on June 1, 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

Deara Cote



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www.admiraltyenvironmental.com

#### **Aquatic Restoration and Research Institute**

Wrangell

**Analytical Report** 

June 1, 2022 Wrangell, AK

Admiralty Environmental EPA ID AK 00976

AE 29201

Sample Location	Date & Time Sampled	Fecal Coliform (FC/100mL)	Enterococci (MPN/100mL)
WRG 03	6/1/2022; 08:33	2.0	<10
WRG 02	6/1/2022; 08:40	<2.0	<10
WRG 01	6/1/2022; 08:43	13	<10
WRG 06	6/1/2022; 08:49	<2.0	<10
WRG 05	6/1/2022; 08:54	2.0	<10
WRG 04	6/1/2022; 08:58	<2.0	<10

#### **Quality Control:**

Analysis	МВ	LCS	LCS Duplicate	RPD	Date/Time Commenced	Holding Time Met
FC	<2.0				6/1/2022; 16:00	Yes
Entero					6/1/2022; 15:20	Yes

#### **Analysis Description:**

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

#### Key:

,.						
FC	Fecal Coliform					
Entero	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					

#### Case Narrative:

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

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

	LHVINO	NUMENTAL											Т				
PROJECT NAME:  Aquatic Restoration a			n and Research	and Research Institute			Project: Wrangell										
REPORT TO: Jeff Davis P arri@arrialaska.org			PHONE#:										AE 29201				
		SAMPLED BY: John A. Yeas		2													
COMMENTS	): -				BOTTLES	Coliform	Enterococci MPN			-				EIGI D B	ESULTS		
1					_	일	õ							FIELD	ESULIS		
DATE	TIME	SITE DESCRIPTION /IDENTIF	FIER	MATRIX	# OF	Fecal	Ente			<u> </u>	_		рН	Temp	D.O.		
6/1/22	0833	WRG 03		H ₂ O	1	1	1			1	_						
. , , , –	6810	WRG 02		H ₂ O	1	1	1	_ _		11							
	0843	WRG 01		H ₂ O	1	1	<del>  -</del>	$\perp$			_			<u> </u>		<u> </u>	
	0849			H₂O	1	1	1			$\downarrow \downarrow$	_				<u> </u>		
	0854	WRG 06		H ₂ O	1	1		_		$\perp$				<u> </u>		· .	
	6858	WRG-04		H2O	1	1			Ц					<u></u>	<u></u>		
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Signature		Signature	Signature		Signa	ture			S. S			an section is	117	ayar ka Salaka Ingay 1999 Malaini	and the second seco	,	
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Time 073	20	Time USS Time							aled By	- /	WAIR		<del></del>				
\(\alphi\lambda_{\ell} -	,	1 14570		Shipped Via:					hhea A	a- <i>}</i>							



## Admiralty Environmental Cooler Receipt Form

Admiralty Environmental, LLC Lab: AE# AE 29201 ARRI Client: 6/1/2022 Opened by: H.O'Neil Date Opened: A. External Cooler Conditions Local Sampling Event 1. Project ID: Signed by AE employee? Properly Completed? n/a 2. COC Attached? n/a (temp in Celsius) Small Temp. Blank n/a (temp in Celsius) Large Temp. Blank: n/a Air-Transported Sampling Event Wrangell 1. Project ID: Signed by AE employee? Properly Completed? yes 2. COC Attached? yes Airbill #: 3. Airbill attached? no 4. Custody Seals? 5. Seals intact? yes (temp in Celsius) 7.17 Temp. Blank: COMMENTS: B. Sample Conditions cooler Packing type: 6 Number of Samples Received: 6 Number of Bottles Received: 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: Was the project manager called? no

COMMENTS:

Signature:

Date and time: <u>U/1/22:1</u>455