

CPVEC Data Collection Log

Page/Pages	7	4
Harbor	Anker/Wood	
Date (mm/dd/yy)	05/09/22	
Weather (C, PC, LR, HR)	Clear, Partly Cloudy, Light Rain, Heavy Rain	
Air Temp C		
Check w/Harbor Master (Y/N)	Y	
Implement Boat Safety (Y/N)	Y	
Samplers	gad	sed

Meter Calibration	DO Calibrated at 100% sat	
Standard Value	pH 7.0	pH 4.0
Calibrated	pH 10.0	Yes No
	6.85	
	yes @ 7.0 Y	
Accept if value +/- 0.1 units of 7.0 standard temp corrected.		

Sample ID*	AU02				AU01				AUFB JUL3				AUTO JUL10			
Time	0950				1005				1145				1155			
Latitude	58.22.86 N				58.23.01 N				58.16.59 N				58.16.63 N			
Longitude	134.41.21 W				134.39.17 W				134.22.15 W				134.23.24 W			
Water Depth (ft)	60'				85'				124'				53'			
Photographs (No)	Y															
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	8.9	8.0	6.8	6.4	8.8	8.4	8.1	7.0	9.6	7.8	6.8	6.1	8.3	7.3	7.2	6.6
pH	8.43	8.46	8.49	8.44	8.58	8.56	8.54	8.56	8.42	8.37	8.42	8.45	8.40	8.27	8.22	8.36
Salinity (ppt)	26.55	27.99	29.26	29.62	27.28	27.90	28.59	29.23	23.27	25.50	28.22	28.16	22.50	25.77	26.47	27.95
D.O. mg/L	14.81	14.81	14.67	14.23	13.53	13.56	13.97	14.57	12.57	12.69	13.63	14.05	12.54	12.27	12.34	13.20
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.

AUFB @ 0945

CPVEC Data Collection Log										Meter Calibration			DO Calibrated at 100% sat											
Page/Pages	2		2		Clear, Partly Cloudy, Light Rain, Heavy Rain										Stadard	pH 7.0	pH 4.0	pH 10.0	Yes	No				
Harbor	Juneau														Value	See page 1								
Date (mm/dd/yy)															Calibrated									
Weather (C, PC, LR, HR)															Accept if value +/- 0.1 units of 7.0 standard temp corrected.									
Air Temp C																								
Check w/Harbor Master (Y/N)																								
Implement Boat Safety (Y/N)																								
Samplers	JCD		GD																					
Sample ID*	JU09				JU08				JU07				JU06											
Time	1205				1220				1230				1235											
Latitude	58.17.09 N				58.17.39 N				58.17.53 N				58.17.59 N											
Longitude	134.23.94 W				134.24.09 W				134.23.80 W				134.24.41 W											
Water Depth (ft)	100'				115'				92'				100'											
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	7.7	6.6	6.5	6.1	7.8	7.2	6.8	6.2	7.4	7.1	7.1	6.6	7.8	7.1	6.5	5.8								
pH	8.27	8.28	8.28	8.56	8.26	8.24	8.42	8.37	8.28	8.22	8.55	8.49	8.22	8.20	8.22	8.35								
Salinity (ppt)	23.81	25.52	27.50	27.99	23.79	25.20	27.20	28.50	21.31	26.80	27.90	28.66	23.87	26.40	27.77	28.76								
D.O. mg/L	12.62	12.70	12.65	12.35	12.64	12.53	12.29	12.11	12.17	11.95	12.84	13.20	12.00	12.01	12.23	12.36								
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.																								

CPVEC Data Collection Log

Meter Calibration

DO Calibrated at 100% sat

Standard pH 7.0 pH 4.0 pH 10.0 Yes No

Value

Calibrated

Accept if value +/- 0.1 units of 7.0 standard temp corrected.

See page 1

Page/Pages	3	4
Harbor	JWheeh	
Date (mm/dd/yy)		
Weather (C, PC, LR, HR)		
Air Temp C		
Check w/Harbor Master (Y/N)		
Implement Boat Safety (Y/N)		
Samplers		

Clear, Partly Cloudy, Light Rain, Heavy Rain

Sample ID*	JU05				JU02				JU11				JU12			
Time	1245				1255				1310				1325			
Latitude	58.17.72 N				58.17.84 N				58.17.99 N				58.18.46 N			
Longitude	134.24.27 W				134.24.43 W				134.25.78 W				134.26.31 W			
Water Depth (ft)	102'				100'				71'				17'			
Photographs (No)	Y								Y				Y			
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	7.9	7.3	7.0	6.8	7.2	6.8	6.6	6.2	7.8	7.3	6.6	6.3	8.4	7.6	7.7	5.9
pH	8.20	8.21	8.23	8.45	8.19	8.16	8.26	8.48	8.15	8.13	8.15	8.17	7.95	7.98	8.13	8.11
Salinity (ppt)	25.40	26.25	26.90	27.26	24.99	27.05	27.99	28.50	22.40	24.70	27.45	28.40	25.16	25.85	27.94	29.20
D.O. mg/L	12.63	12.53	12.58	12.62	12.29	12.14	12.50	12.85	11.57	11.57	11.80	12.10	11.28	11.17	11.81	12.07
Notes/Comments													12.17			

*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.

CPVEC Data Collection Log

Meter Calibration

DO Calibrated at 100% sat

Standard Value	pH 7.0	pH 4.0	pH 10.0	Yes	No
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Calibrated

Accept if value +/- 0.1 units of 7.0 standard temp corrected.

Page/Pages	4	4
Harbor	Juneau	
Date (mm/dd/yy)		
Weather (C, PC, LR, HR)	Clear, Partly Cloudy, Light Rain, Heavy Rain	
Air Temp C		
Check w/Harbor Master (Y/N)		
Implement Boat Safety (Y/N)		
Samplers		

Sample ID*	JU12X															
Time																
Latitude																
Longitude																
Water Depth (ft)																
Photographs (No)																
Fecal (Y/N)																
Depth (m)	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
Temp C	8.8	7.8	6.8	6.0												
pH	8.25	8.26	8.35	8.43												
Salinity (ppt)	25.20	25.55	27.55	29.20												
D.O. mg/L	11.70	11.38	11.99	12.20												
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 18, 2022

Service Request No:K2205026

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

Laboratory Results for: Ambient WQ- Auk/Juneau

Dear Jeff,

Enclosed are the results of the sample(s) submitted to our laboratory May 10, 2022
For your reference, these analyses have been assigned our service request number **K2205026**.

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

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ALS Group USA, Corp.
dba ALS Environmental



Narrative Documents

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1317 South 13th Avenue, Kelso, WA 98626
Phone (360) 577-7222 Fax (360) 425-9096
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Client: Aquatic Restoration and Research Institute (ARRI)
Project: Ambient WQ- Auk/Juneau
Sample Matrix: Ocean Water

Service Request: K2205026
Date Received: 05/10/2022

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:

Fifteen ocean water samples were received for analysis at ALS Environmental on 05/10/2022. 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 05/18/2022



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: AUFB	Lab ID: K2205026-001
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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
Copper, Dissolved	0.25		0.02	0.10	ug/L	200.8
Nickel, Dissolved	0.04	J	0.03	0.20	ug/L	200.8
Zinc, Dissolved	2.48		0.20	0.50	ug/L	200.8
Copper	0.10	J	0.02	0.10	ug/L	200.8
Zinc	2.01		0.20	0.50	ug/L	200.8

CLIENT ID: AUO2	Lab ID: K2205026-002
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Analyte	Results	Flag	MDL	MRL	Units	Method
Ammonia as Nitrogen	0.026		0.003	0.010	mg/L	350.1
Copper, Dissolved	0.51		0.02	0.10	ug/L	200.8
Nickel, Dissolved	0.43		0.03	0.20	ug/L	200.8
Zinc, Dissolved	0.95		0.20	0.50	ug/L	200.8
Copper	0.45		0.02	0.10	ug/L	200.8
Nickel	0.44		0.03	0.20	ug/L	200.8
Zinc	0.87		0.20	0.50	ug/L	200.8

CLIENT ID: AU01	Lab ID: K2205026-003
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Analyte	Results	Flag	MDL	MRL	Units	Method
Ammonia as Nitrogen	0.010	J	0.003	0.010	mg/L	350.1
Copper, Dissolved	0.37		0.02	0.10	ug/L	200.8
Nickel, Dissolved	0.43		0.03	0.20	ug/L	200.8
Zinc, Dissolved	0.40	J	0.20	0.50	ug/L	200.8
Copper	0.36		0.02	0.10	ug/L	200.8
Nickel	0.44		0.03	0.20	ug/L	200.8
Zinc	0.52		0.20	0.50	ug/L	200.8

CLIENT ID: JU13	Lab ID: K2205026-004
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Analyte	Results	Flag	MDL	MRL	Units	Method
Ammonia as Nitrogen	0.008	J	0.003	0.010	mg/L	350.1
Copper, Dissolved	0.54		0.02	0.10	ug/L	200.8
Nickel, Dissolved	0.54		0.03	0.20	ug/L	200.8
Zinc, Dissolved	0.56		0.20	0.50	ug/L	200.8
Copper	0.56		0.02	0.10	ug/L	200.8
Nickel	0.60		0.03	0.20	ug/L	200.8
Zinc	0.56		0.20	0.50	ug/L	200.8

CLIENT ID: JU10	Lab ID: K2205026-005
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Analyte	Results	Flag	MDL	MRL	Units	Method
Ammonia as Nitrogen	0.012		0.003	0.010	mg/L	350.1
Copper, Dissolved	0.49		0.02	0.10	ug/L	200.8
Nickel, Dissolved	0.53		0.03	0.20	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: JU10 Lab ID: K2205026-005

Analyte	Results	Flag	MDL	MRL	Units	Method
Zinc, Dissolved	0.42	J	0.20	0.50	ug/L	200.8
Copper	0.56		0.02	0.10	ug/L	200.8
Nickel	0.57		0.03	0.20	ug/L	200.8
Zinc	0.54		0.20	0.50	ug/L	200.8

CLIENT ID: JU09 Lab ID: K2205026-006

Analyte	Results	Flag	MDL	MRL	Units	Method
Ammonia as Nitrogen	0.016		0.003	0.010	mg/L	350.1
Copper, Dissolved	0.45		0.02	0.10	ug/L	200.8
Nickel, Dissolved	0.53		0.03	0.20	ug/L	200.8
Zinc, Dissolved	0.65		0.20	0.50	ug/L	200.8
Copper	0.48		0.02	0.10	ug/L	200.8
Nickel	0.55		0.03	0.20	ug/L	200.8
Zinc	0.74		0.20	0.50	ug/L	200.8

CLIENT ID: JU08 Lab ID: K2205026-007

Analyte	Results	Flag	MDL	MRL	Units	Method
Ammonia as Nitrogen	0.018		0.003	0.010	mg/L	350.1
Copper, Dissolved	0.44		0.02	0.10	ug/L	200.8
Nickel, Dissolved	0.52		0.03	0.20	ug/L	200.8
Zinc, Dissolved	0.70		0.20	0.50	ug/L	200.8
Copper	0.48		0.02	0.10	ug/L	200.8
Nickel	0.54		0.03	0.20	ug/L	200.8
Zinc	0.80		0.20	0.50	ug/L	200.8

CLIENT ID: JU07 Lab ID: K2205026-008

Analyte	Results	Flag	MDL	MRL	Units	Method
Ammonia as Nitrogen	0.031		0.003	0.010	mg/L	350.1
Copper, Dissolved	0.50		0.02	0.10	ug/L	200.8
Nickel, Dissolved	0.54		0.03	0.20	ug/L	200.8
Zinc, Dissolved	1.06		0.20	0.50	ug/L	200.8
Copper	0.52		0.02	0.10	ug/L	200.8
Nickel	0.57		0.03	0.20	ug/L	200.8
Zinc	1.11		0.20	0.50	ug/L	200.8

CLIENT ID: JU06 Lab ID: K2205026-009

Analyte	Results	Flag	MDL	MRL	Units	Method
Ammonia as Nitrogen	0.017		0.003	0.010	mg/L	350.1
Copper, Dissolved	0.42		0.02	0.10	ug/L	200.8
Nickel, Dissolved	0.53		0.03	0.20	ug/L	200.8
Zinc, Dissolved	0.72		0.20	0.50	ug/L	200.8
Copper	0.46		0.02	0.10	ug/L	200.8



SAMPLE DETECTION SUMMARY

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CLIENT ID: JU06	Lab ID: K2205026-009
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Analyte	Results	Flag	MDL	MRL	Units	Method
Nickel	0.55		0.03	0.20	ug/L	200.8
Zinc	0.87		0.20	0.50	ug/L	200.8

CLIENT ID: JU05	Lab ID: K2205026-010
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Analyte	Results	Flag	MDL	MRL	Units	Method
Ammonia as Nitrogen	0.017		0.003	0.010	mg/L	350.1
Copper, Dissolved	0.42		0.02	0.10	ug/L	200.8
Nickel, Dissolved	0.51		0.03	0.20	ug/L	200.8
Zinc, Dissolved	0.65		0.20	0.50	ug/L	200.8
Copper	0.68		0.02	0.10	ug/L	200.8
Nickel	0.53		0.03	0.20	ug/L	200.8
Zinc	0.83		0.20	0.50	ug/L	200.8

CLIENT ID: JU02	Lab ID: K2205026-011
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Analyte	Results	Flag	MDL	MRL	Units	Method
Ammonia as Nitrogen	0.021		0.003	0.010	mg/L	350.1
Copper, Dissolved	0.52		0.02	0.10	ug/L	200.8
Nickel, Dissolved	0.53		0.03	0.20	ug/L	200.8
Zinc, Dissolved	0.71		0.20	0.50	ug/L	200.8
Copper	0.49		0.02	0.10	ug/L	200.8
Nickel	0.54		0.03	0.20	ug/L	200.8
Zinc	0.75		0.20	0.50	ug/L	200.8

CLIENT ID: JU11	Lab ID: K2205026-012
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Analyte	Results	Flag	MDL	MRL	Units	Method
Ammonia as Nitrogen	0.027		0.003	0.010	mg/L	350.1
Copper, Dissolved	0.46		0.02	0.10	ug/L	200.8
Nickel, Dissolved	0.57		0.03	0.20	ug/L	200.8
Zinc, Dissolved	0.64		0.20	0.50	ug/L	200.8
Copper	0.49		0.02	0.10	ug/L	200.8
Nickel	0.59		0.03	0.20	ug/L	200.8
Zinc	0.69		0.20	0.50	ug/L	200.8

CLIENT ID: JU12	Lab ID: K2205026-013
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Analyte	Results	Flag	MDL	MRL	Units	Method
Ammonia as Nitrogen	0.037		0.003	0.010	mg/L	350.1
Copper, Dissolved	0.85		0.02	0.10	ug/L	200.8
Nickel, Dissolved	0.54		0.03	0.20	ug/L	200.8
Zinc, Dissolved	2.75		0.20	0.50	ug/L	200.8
Copper	0.92		0.02	0.10	ug/L	200.8
Nickel	0.56		0.03	0.20	ug/L	200.8
Zinc	2.50		0.20	0.50	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: JU12X		Lab ID: K2205026-015				
Analyte	Results	Flag	MDL	MRL	Units	Method
Ammonia as Nitrogen	0.057		0.003	0.010	mg/L	350.1
Copper, Dissolved	0.92		0.02	0.10	ug/L	200.8
Nickel, Dissolved	0.55		0.03	0.20	ug/L	200.8
Zinc, Dissolved	3.11		0.20	0.50	ug/L	200.8
Copper	0.77		0.02	0.10	ug/L	200.8
Nickel	0.55		0.03	0.20	ug/L	200.8
Zinc	2.17		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)
Project: Ambient WQ- Auk/Juneau

Service Request:K2205026

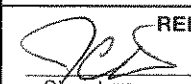
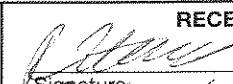
SAMPLE CROSS-REFERENCE

<u>SAMPLE #</u>	<u>CLIENT SAMPLE ID</u>	<u>DATE</u>	<u>TIME</u>
K2205026-001	AUFB	5/9/2022	0945
K2205026-002	AUO2	5/9/2022	0950
K2205026-003	AU01	5/9/2022	1005
K2205026-004	JU13	5/9/2022	1145
K2205026-005	JU10	5/9/2022	1155
K2205026-006	JU09	5/9/2022	1205
K2205026-007	JU08	5/9/2022	1220
K2205026-008	JU07	5/9/2022	1230
K2205026-009	JU06	5/9/2022	1235
K2205026-010	JU05	5/9/2022	1245
K2205026-011	JU02	5/9/2022	1255
K2205026-012	JU11	5/9/2022	1310
K2205026-013	JU12	5/9/2022	1325
K2205026-014	Trip Blank	5/9/2022	
K2205026-015	JU12X	5/9/2022	1325

PROJECT NAME <u>Ambient WQ - Auk/Juneau</u>	
PROJECT NUMBER	
PROJECT MANAGER <u>Jeff Davis</u>	
COMPANY NAME <u>ARRI</u>	
ADDRESS <u>PO Box 923</u>	
CITY/STATE/ZIP <u>Talkeetna, AK 99676</u>	
E-MAIL ADDRESS <u>arri@arrialaska.org</u>	
PHONE # <u>907 315 4631</u> FAX #	
SAMPLER'S SIGNATURE 	

SAMPLE I.D.	DATE	TIME	LAB I.D.	MATRIX	NUMBER OF CONTAINERS	Semivolatile Organics by GC/MS 625 <input type="checkbox"/> 8270 <input type="checkbox"/> 8270LL <input type="checkbox"/> SIM PAH <input type="checkbox"/>	Volatiles 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"/>	Atocloris <input type="checkbox"/>	Pesticides/Herbicides 608 <input type="checkbox"/> 8081 <input type="checkbox"/>	Congeners <input type="checkbox"/>	Chlorophenolics Tri <input type="checkbox"/> 8141 <input type="checkbox"/>	8151 <input type="checkbox"/>	Metals, Total or Dissolved (See List below) PCP <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, ISS, TDS, Turb, (circle) NH ₃ -N, COD, TKN, TOC, DOC, NO ₂ -NO ₃ , F-Phos	TOX 9020 <input type="checkbox"/> AOX 1650 <input type="checkbox"/> 506 <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"/>	HCO ₃ <input type="checkbox"/>	Dissolved Gases RSK 175 <input type="checkbox"/> Methane <input type="checkbox"/> Ethane <input type="checkbox"/> Ethene <input type="checkbox"/>	REMARKS		
AUFB	5/9/22	0945	MW	3											X												
AU02		0950													X												
AU01		1005													X												
Ju13		1145													X												
Ju10		1155													X												
Ju09		1205													X												
Ju08		1220													X												
Ju07		1230													X												
Ju06		1235													X												
Ju05		1245													X												

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 <u>V</u> Zn 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 <u>V</u> Zn Hg *INDICATE STATE HYDROCARBON PROCEDURE: AK CA WI NORTHWEST OTHER: _____ (CIRCLE ONE)
	TURNAROUND REQUIREMENTS _____ 24 hr. _____ 48 hr. _____ 5 day _____ Standard (15 working days) _____ Provide FAX Results Requested Report Date _____	SPECIAL INSTRUCTIONS/COMMENTS: <input type="checkbox"/> Sample Shipment contains USDA regulated soil samples (check box if applicable)

RELINQUISHED BY:  Signature _____ Date/Time <u>5-9-22</u> Printed Name _____ Firm _____	RECEIVED BY: <u>To Alaska Air</u> Signature _____ Date/Time _____ Printed Name _____ Firm _____	RELINQUISHED BY: Signature _____ Date/Time _____ Printed Name _____ Firm _____	RECEIVED BY:  Signature _____ Date/Time <u>5/10/22 1215</u> Printed Name <u>ARRI</u> Firm _____
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PM HH

Cooler Receipt and Preservation Form

Client: ARRT Service Request K22 050260
Received: 5/10/22 Opened: 5/10/22 By: RH Unloaded: 5/10/22 By: RH

Samples were received via? USPS Fed Ex UPS DHL PDX Courier Hand Delivered
Samples were received in: (circle) Cooler Box Envelope Other NA
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
—	12.7	TR02	—	—	—	—	
1.8	—	TR	—	—	—	—	

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":
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

applicable, tissue samples were received: Frozen Partially Thawed Thawed
Packing material: Inserts Baggies Bubble Wrap Gel Packs Wet Ice Dry Ice Sleeves

Were custody papers properly filled out (ink, signed, etc.)? NA Y N
 Were samples received in good condition (unbroken) NA Y N
 Were all sample labels complete (ie, analysis, preservation, etc.)? NA Y N
 1. Did all sample labels and tags agree with custody papers? NA Y N
 1. Were appropriate bottles/containers and volumes received for the tests indicated? NA Y N
 2. Were the pH-preserved bottles (see SMO GEN SOP) received at the appropriate pH? Indicate in the table below NA Y N
 3. Were VOA vials received without headspace? Indicate in the table below. NA Y N
 4. Was C12/Res negative? NA Y N
 5. 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: Temp irrelevant due to nature of testing received 2/3 AWFBS sample. Received 1/3 AVOI sample. 1/13/22 received 5U12X not on COC containers.



Miscellaneous Forms

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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.
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Analyst Summary report

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

Service Request: K2205026

Sample Name: AUFB
Lab Code: K2205026-001
Sample Matrix: Ocean Water

Date Collected: 05/9/22
Date Received: 05/10/22

Analysis Method	Extracted/Digested By	Analyzed By
200.8	SSOLADEY	JCHAN
350.1	ESCHLOSS	ESCHLOSS

Sample Name: AUO2
Lab Code: K2205026-002
Sample Matrix: Ocean Water

Date Collected: 05/9/22
Date Received: 05/10/22

Analysis Method	Extracted/Digested By	Analyzed By
200.8	SSOLADEY	JCHAN
350.1	ESCHLOSS	ESCHLOSS

Sample Name: AU01
Lab Code: K2205026-003
Sample Matrix: Ocean Water

Date Collected: 05/9/22
Date Received: 05/10/22

Analysis Method	Extracted/Digested By	Analyzed By
200.8	SSOLADEY	JCHAN
350.1	ESCHLOSS	ESCHLOSS

Sample Name: JU13
Lab Code: K2205026-004
Sample Matrix: Ocean Water

Date Collected: 05/9/22
Date Received: 05/10/22

Analysis Method	Extracted/Digested By	Analyzed By
200.8	SSOLADEY	JCHAN
350.1	ESCHLOSS	ESCHLOSS

ALS Group USA, Corp.
dba ALS Environmental

Analyst Summary report

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

Service Request: K2205026

Sample Name: JU10
Lab Code: K2205026-005
Sample Matrix: Ocean Water

Date Collected: 05/9/22
Date Received: 05/10/22

Analysis Method
200.8
350.1

Extracted/Digested By
SSOLADEY
ESCHLOSS

Analyzed By
JCHAN
ESCHLOSS

Sample Name: JU09
Lab Code: K2205026-006
Sample Matrix: Ocean Water

Date Collected: 05/9/22
Date Received: 05/10/22

Analysis Method
200.8
350.1

Extracted/Digested By
SSOLADEY
ESCHLOSS

Analyzed By
JCHAN
ESCHLOSS

Sample Name: JU08
Lab Code: K2205026-007
Sample Matrix: Ocean Water

Date Collected: 05/9/22
Date Received: 05/10/22

Analysis Method
200.8
350.1

Extracted/Digested By
SSOLADEY
ESCHLOSS

Analyzed By
JCHAN
ESCHLOSS

Sample Name: JU07
Lab Code: K2205026-008
Sample Matrix: Ocean Water

Date Collected: 05/9/22
Date Received: 05/10/22

Analysis Method
200.8
350.1

Extracted/Digested By
SSOLADEY
ESCHLOSS

Analyzed By
JCHAN
ESCHLOSS

ALS Group USA, Corp.
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Analyst Summary report

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

Service Request: K2205026

Sample Name: JU06
Lab Code: K2205026-009
Sample Matrix: Ocean Water

Date Collected: 05/9/22
Date Received: 05/10/22

Analysis Method
200.8
350.1

Extracted/Digested By
SSOLAHEY
ESCHLOSS

Analyzed By
JCHAN
ESCHLOSS

Sample Name: JU05
Lab Code: K2205026-010
Sample Matrix: Ocean Water

Date Collected: 05/9/22
Date Received: 05/10/22

Analysis Method
200.8
350.1

Extracted/Digested By
SSOLAHEY
ESCHLOSS

Analyzed By
JCHAN
ESCHLOSS

Sample Name: JU02
Lab Code: K2205026-011
Sample Matrix: Ocean Water

Date Collected: 05/9/22
Date Received: 05/10/22

Analysis Method
200.8
350.1

Extracted/Digested By
SSOLAHEY
ESCHLOSS

Analyzed By
JCHAN
ESCHLOSS

Sample Name: JU11
Lab Code: K2205026-012
Sample Matrix: Ocean Water

Date Collected: 05/9/22
Date Received: 05/10/22

Analysis Method
200.8
350.1

Extracted/Digested By
SSOLAHEY
ESCHLOSS

Analyzed By
JCHAN
ESCHLOSS

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Analyst Summary report

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

Service Request: K2205026

Sample Name: JU12
Lab Code: K2205026-013
Sample Matrix: Ocean Water

Date Collected: 05/9/22
Date Received: 05/10/22

Analysis Method
200.8
350.1

Extracted/Digested By
SSOLADEY
ESCHLOSS

Analyzed By
JCHAN
ESCHLOSS

Sample Name: Trip Blank
Lab Code: K2205026-014
Sample Matrix: Ocean Water

Date Collected: 05/9/22
Date Received: 05/10/22

Analysis Method
200.8

Extracted/Digested By
SSOLADEY

Analyzed By
JCHAN

Sample Name: JU12X
Lab Code: K2205026-015
Sample Matrix: Ocean Water

Date Collected: 05/9/22
Date Received: 05/10/22

Analysis Method
200.8
350.1

Extracted/Digested By
SSOLADEY
ESCHLOSS

Analyzed By
JCHAN
ESCHLOSS



Sample Results

ALS Environmental—Kelso Laboratory
1317 South 13th Avenue, Kelso, WA 98626
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www.alsglobal.com



Metals

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

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Analytical Report

Client: Aquatic Restoration and Research Institute (ARRI)
Project: Ambient WQ- Auk/Juneau
Sample Matrix: Ocean Water
Sample Name: AUFB
Lab Code: K2205026-001

Service Request: K2205026
Date Collected: 05/09/22 09:45
Date Received: 05/10/22 12:15
Basis: NA

Dissolved 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	05/18/22 10:42	05/16/22	
Nickel	200.8	0.04 J	ug/L	0.20	0.03	1	05/18/22 10:42	05/16/22	
Zinc	200.8	2.48	ug/L	0.50	0.20	1	05/18/22 10:42	05/16/22	

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Analytical Report

Client: Aquatic Restoration and Research Institute (ARRI)
Project: Ambient WQ- Auk/Juneau
Sample Matrix: Ocean Water
Sample Name: AUFB
Lab Code: K2205026-001

Service Request: K2205026
Date Collected: 05/09/22 09:45
Date Received: 05/10/22 12:15

Basis: NA

Total Metals

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Copper	200.8	0.10 J	ug/L	0.10	0.02	1	05/18/22 10:00	05/16/22	
Nickel	200.8	ND U	ug/L	0.20	0.03	1	05/18/22 10:00	05/16/22	
Zinc	200.8	2.01	ug/L	0.50	0.20	1	05/18/22 10:00	05/16/22	

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Analytical Report

Client: Aquatic Restoration and Research Institute (ARRI)
Project: Ambient WQ- Auk/Juneau
Sample Matrix: Ocean Water
Sample Name: AUO2
Lab Code: K2205026-002

Service Request: K2205026
Date Collected: 05/09/22 09:50
Date Received: 05/10/22 12:15
Basis: NA

Dissolved Metals

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Copper	200.8	0.51	ug/L	0.10	0.02	1	05/18/22 10:43	05/16/22	
Nickel	200.8	0.43	ug/L	0.20	0.03	1	05/18/22 10:43	05/16/22	
Zinc	200.8	0.95	ug/L	0.50	0.20	1	05/18/22 10:43	05/16/22	

ALS Group USA, Corp.
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Analytical Report

Client: Aquatic Restoration and Research Institute (ARRI)
Project: Ambient WQ- Auk/Juneau
Sample Matrix: Ocean Water
Sample Name: AUO2
Lab Code: K2205026-002

Service Request: K2205026
Date Collected: 05/09/22 09:50
Date Received: 05/10/22 12:15

Basis: NA

Total Metals

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Copper	200.8	0.45	ug/L	0.10	0.02	1	05/18/22 10:01	05/16/22	
Nickel	200.8	0.44	ug/L	0.20	0.03	1	05/18/22 10:01	05/16/22	
Zinc	200.8	0.87	ug/L	0.50	0.20	1	05/18/22 10:01	05/16/22	

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Analytical Report

Client: Aquatic Restoration and Research Institute (ARRI)
Project: Ambient WQ- Auk/Juneau
Sample Matrix: Ocean Water
Sample Name: AU01
Lab Code: K2205026-003

Service Request: K2205026
Date Collected: 05/09/22 10:05
Date Received: 05/10/22 12:15
Basis: NA

Dissolved Metals

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Copper	200.8	0.37	ug/L	0.10	0.02	1	05/18/22 10:44	05/16/22	
Nickel	200.8	0.43	ug/L	0.20	0.03	1	05/18/22 10:44	05/16/22	
Zinc	200.8	0.40 J	ug/L	0.50	0.20	1	05/18/22 10:44	05/16/22	

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client: Aquatic Restoration and Research Institute (ARRI)
Project: Ambient WQ- Auk/Juneau
Sample Matrix: Ocean Water
Sample Name: AU01
Lab Code: K2205026-003

Service Request: K2205026
Date Collected: 05/09/22 10:05
Date Received: 05/10/22 12:15
Basis: NA

Total Metals

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Copper	200.8	0.36	ug/L	0.10	0.02	1	05/18/22 10:02	05/16/22	
Nickel	200.8	0.44	ug/L	0.20	0.03	1	05/18/22 10:02	05/16/22	
Zinc	200.8	0.52	ug/L	0.50	0.20	1	05/18/22 10:02	05/16/22	

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client: Aquatic Restoration and Research Institute (ARRI)
Project: Ambient WQ- Auk/Juneau
Sample Matrix: Ocean Water
Sample Name: JU13
Lab Code: K2205026-004

Service Request: K2205026
Date Collected: 05/09/22 11:45
Date Received: 05/10/22 12:15
Basis: NA

Dissolved Metals

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Copper	200.8	0.54	ug/L	0.10	0.02	1	05/18/22 10:46	05/16/22	
Nickel	200.8	0.54	ug/L	0.20	0.03	1	05/18/22 10:46	05/16/22	
Zinc	200.8	0.56	ug/L	0.50	0.20	1	05/18/22 10:46	05/16/22	

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client: Aquatic Restoration and Research Institute (ARRI)
Project: Ambient WQ- Auk/Juneau
Sample Matrix: Ocean Water
Sample Name: JU13
Lab Code: K2205026-004

Service Request: K2205026
Date Collected: 05/09/22 11:45
Date Received: 05/10/22 12:15
Basis: NA

Total Metals

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Copper	200.8	0.56	ug/L	0.10	0.02	1	05/18/22 10:03	05/16/22	
Nickel	200.8	0.60	ug/L	0.20	0.03	1	05/18/22 10:03	05/16/22	
Zinc	200.8	0.56	ug/L	0.50	0.20	1	05/18/22 10:03	05/16/22	

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client: Aquatic Restoration and Research Institute (ARRI)
Project: Ambient WQ- Auk/Juneau
Sample Matrix: Ocean Water
Sample Name: JU10
Lab Code: K2205026-005

Service Request: K2205026
Date Collected: 05/09/22 11:55
Date Received: 05/10/22 12:15

Basis: NA

Dissolved Metals

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Copper	200.8	0.49	ug/L	0.10	0.02	1	05/18/22 10:47	05/16/22	
Nickel	200.8	0.53	ug/L	0.20	0.03	1	05/18/22 10:47	05/16/22	
Zinc	200.8	0.42 J	ug/L	0.50	0.20	1	05/18/22 10:47	05/16/22	

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client: Aquatic Restoration and Research Institute (ARRI)
Project: Ambient WQ- Auk/Juneau
Sample Matrix: Ocean Water
Sample Name: JU10
Lab Code: K2205026-005

Service Request: K2205026
Date Collected: 05/09/22 11:55
Date Received: 05/10/22 12:15

Basis: NA

Total Metals

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Copper	200.8	0.56	ug/L	0.10	0.02	1	05/18/22 10:04	05/16/22	
Nickel	200.8	0.57	ug/L	0.20	0.03	1	05/18/22 10:04	05/16/22	
Zinc	200.8	0.54	ug/L	0.50	0.20	1	05/18/22 10:04	05/16/22	

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client: Aquatic Restoration and Research Institute (ARRI)
Project: Ambient WQ- Auk/Juneau
Sample Matrix: Ocean Water
Sample Name: JU09
Lab Code: K2205026-006

Service Request: K2205026
Date Collected: 05/09/22 12:05
Date Received: 05/10/22 12:15

Basis: NA

Dissolved Metals

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Copper	200.8	0.45	ug/L	0.10	0.02	1	05/18/22 10:48	05/16/22	
Nickel	200.8	0.53	ug/L	0.20	0.03	1	05/18/22 10:48	05/16/22	
Zinc	200.8	0.65	ug/L	0.50	0.20	1	05/18/22 10:48	05/16/22	

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Analytical Report

Client: Aquatic Restoration and Research Institute (ARRI)
Project: Ambient WQ- Auk/Juneau
Sample Matrix: Ocean Water
Sample Name: JU09
Lab Code: K2205026-006

Service Request: K2205026
Date Collected: 05/09/22 12:05
Date Received: 05/10/22 12:15
Basis: NA

Total Metals

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Copper	200.8	0.48	ug/L	0.10	0.02	1	05/18/22 10:05	05/16/22	
Nickel	200.8	0.55	ug/L	0.20	0.03	1	05/18/22 10:05	05/16/22	
Zinc	200.8	0.74	ug/L	0.50	0.20	1	05/18/22 10:05	05/16/22	

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client: Aquatic Restoration and Research Institute (ARRI)
Project: Ambient WQ- Auk/Juneau
Sample Matrix: Ocean Water
Sample Name: JU08
Lab Code: K2205026-007

Service Request: K2205026
Date Collected: 05/09/22 12:20
Date Received: 05/10/22 12:15
Basis: NA

Dissolved Metals

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Copper	200.8	0.44	ug/L	0.10	0.02	1	05/18/22 10:49	05/16/22	
Nickel	200.8	0.52	ug/L	0.20	0.03	1	05/18/22 10:49	05/16/22	
Zinc	200.8	0.70	ug/L	0.50	0.20	1	05/18/22 10:49	05/16/22	

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Analytical Report

Client: Aquatic Restoration and Research Institute (ARRI)
Project: Ambient WQ- Auk/Juneau
Sample Matrix: Ocean Water
Sample Name: JU08
Lab Code: K2205026-007

Service Request: K2205026
Date Collected: 05/09/22 12:20
Date Received: 05/10/22 12:15
Basis: NA

Total Metals

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Copper	200.8	0.48	ug/L	0.10	0.02	1	05/18/22 10:07	05/16/22	
Nickel	200.8	0.54	ug/L	0.20	0.03	1	05/18/22 10:07	05/16/22	
Zinc	200.8	0.80	ug/L	0.50	0.20	1	05/18/22 10:07	05/16/22	

ALS Group USA, Corp.
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Analytical Report

Client: Aquatic Restoration and Research Institute (ARRI)
Project: Ambient WQ- Auk/Juneau
Sample Matrix: Ocean Water
Sample Name: JU07
Lab Code: K2205026-008

Service Request: K2205026
Date Collected: 05/09/22 12:30
Date Received: 05/10/22 12:15
Basis: NA

Dissolved Metals

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Copper	200.8	0.50	ug/L	0.10	0.02	1	05/18/22 10:52	05/16/22	
Nickel	200.8	0.54	ug/L	0.20	0.03	1	05/18/22 10:52	05/16/22	
Zinc	200.8	1.06	ug/L	0.50	0.20	1	05/18/22 10:52	05/16/22	

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Analytical Report

Client: Aquatic Restoration and Research Institute (ARRI)
Project: Ambient WQ- Auk/Juneau
Sample Matrix: Ocean Water
Sample Name: JU07
Lab Code: K2205026-008

Service Request: K2205026
Date Collected: 05/09/22 12:30
Date Received: 05/10/22 12:15
Basis: NA

Total Metals

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Copper	200.8	0.52	ug/L	0.10	0.02	1	05/18/22 10:10	05/16/22	
Nickel	200.8	0.57	ug/L	0.20	0.03	1	05/18/22 10:10	05/16/22	
Zinc	200.8	1.11	ug/L	0.50	0.20	1	05/18/22 10:10	05/16/22	

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Analytical Report

Client: Aquatic Restoration and Research Institute (ARRI)
Project: Ambient WQ- Auk/Juneau
Sample Matrix: Ocean Water
Sample Name: JU06
Lab Code: K2205026-009

Service Request: K2205026
Date Collected: 05/09/22 12:35
Date Received: 05/10/22 12:15
Basis: NA

Dissolved Metals

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Copper	200.8	0.42	ug/L	0.10	0.02	1	05/18/22 10:54	05/16/22	
Nickel	200.8	0.53	ug/L	0.20	0.03	1	05/18/22 10:54	05/16/22	
Zinc	200.8	0.72	ug/L	0.50	0.20	1	05/18/22 10:54	05/16/22	

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Analytical Report

Client: Aquatic Restoration and Research Institute (ARRI)
Project: Ambient WQ- Auk/Juneau
Sample Matrix: Ocean Water
Sample Name: JU06
Lab Code: K2205026-009

Service Request: K2205026
Date Collected: 05/09/22 12:35
Date Received: 05/10/22 12:15
Basis: NA

Total Metals

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Copper	200.8	0.46	ug/L	0.10	0.02	1	05/18/22 10:11	05/16/22	
Nickel	200.8	0.55	ug/L	0.20	0.03	1	05/18/22 10:11	05/16/22	
Zinc	200.8	0.87	ug/L	0.50	0.20	1	05/18/22 10:11	05/16/22	

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Analytical Report

Client: Aquatic Restoration and Research Institute (ARRI)
Project: Ambient WQ- Auk/Juneau
Sample Matrix: Ocean Water
Sample Name: JU05
Lab Code: K2205026-010

Service Request: K2205026
Date Collected: 05/09/22 12:45
Date Received: 05/10/22 12:15
Basis: NA

Dissolved Metals

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Copper	200.8	0.42	ug/L	0.10	0.02	1	05/18/22 10:55	05/16/22	
Nickel	200.8	0.51	ug/L	0.20	0.03	1	05/18/22 10:55	05/16/22	
Zinc	200.8	0.65	ug/L	0.50	0.20	1	05/18/22 10:55	05/16/22	

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Analytical Report

Client: Aquatic Restoration and Research Institute (ARRI)
Project: Ambient WQ- Auk/Juneau
Sample Matrix: Ocean Water
Sample Name: JU05
Lab Code: K2205026-010

Service Request: K2205026
Date Collected: 05/09/22 12:45
Date Received: 05/10/22 12:15

Basis: NA

Total Metals

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Copper	200.8	0.68	ug/L	0.10	0.02	1	05/18/22 10:12	05/16/22	
Nickel	200.8	0.53	ug/L	0.20	0.03	1	05/18/22 10:12	05/16/22	
Zinc	200.8	0.83	ug/L	0.50	0.20	1	05/18/22 10:12	05/16/22	

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Analytical Report

Client: Aquatic Restoration and Research Institute (ARRI)
Project: Ambient WQ- Auk/Juneau
Sample Matrix: Ocean Water
Sample Name: JU02
Lab Code: K2205026-011

Service Request: K2205026
Date Collected: 05/09/22 12:55
Date Received: 05/10/22 12:15

Basis: NA

Dissolved Metals

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Copper	200.8	0.52	ug/L	0.10	0.02	1	05/18/22 10:56	05/16/22	
Nickel	200.8	0.53	ug/L	0.20	0.03	1	05/18/22 10:56	05/16/22	
Zinc	200.8	0.71	ug/L	0.50	0.20	1	05/18/22 10:56	05/16/22	

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Analytical Report

Client: Aquatic Restoration and Research Institute (ARRI)
Project: Ambient WQ- Auk/Juneau
Sample Matrix: Ocean Water
Sample Name: JU02
Lab Code: K2205026-011

Service Request: K2205026
Date Collected: 05/09/22 12:55
Date Received: 05/10/22 12:15
Basis: NA

Total Metals

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Copper	200.8	0.49	ug/L	0.10	0.02	1	05/18/22 10:13	05/16/22	
Nickel	200.8	0.54	ug/L	0.20	0.03	1	05/18/22 10:13	05/16/22	
Zinc	200.8	0.75	ug/L	0.50	0.20	1	05/18/22 10:13	05/16/22	

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Analytical Report

Client: Aquatic Restoration and Research Institute (ARRI)
Project: Ambient WQ- Auk/Juneau
Sample Matrix: Ocean Water
Sample Name: JU11
Lab Code: K2205026-012

Service Request: K2205026
Date Collected: 05/09/22 13:10
Date Received: 05/10/22 12:15

Basis: NA

Dissolved Metals

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Copper	200.8	0.46	ug/L	0.10	0.02	1	05/18/22 10:57	05/16/22	
Nickel	200.8	0.57	ug/L	0.20	0.03	1	05/18/22 10:57	05/16/22	
Zinc	200.8	0.64	ug/L	0.50	0.20	1	05/18/22 10:57	05/16/22	

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Analytical Report

Client: Aquatic Restoration and Research Institute (ARRI)
Project: Ambient WQ- Auk/Juneau
Sample Matrix: Ocean Water
Sample Name: JU11
Lab Code: K2205026-012

Service Request: K2205026
Date Collected: 05/09/22 13:10
Date Received: 05/10/22 12:15

Basis: NA

Total Metals

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Copper	200.8	0.49	ug/L	0.10	0.02	1	05/18/22 10:15	05/16/22	
Nickel	200.8	0.59	ug/L	0.20	0.03	1	05/18/22 10:15	05/16/22	
Zinc	200.8	0.69	ug/L	0.50	0.20	1	05/18/22 10:15	05/16/22	

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Analytical Report

Client: Aquatic Restoration and Research Institute (ARRI)
Project: Ambient WQ- Auk/Juneau
Sample Matrix: Ocean Water
Sample Name: JU12
Lab Code: K2205026-013

Service Request: K2205026
Date Collected: 05/09/22 13:25
Date Received: 05/10/22 12:15

Basis: NA

Dissolved Metals

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Copper	200.8	0.85	ug/L	0.10	0.02	1	05/18/22 10:58	05/16/22	
Nickel	200.8	0.54	ug/L	0.20	0.03	1	05/18/22 10:58	05/16/22	
Zinc	200.8	2.75	ug/L	0.50	0.20	1	05/18/22 10:58	05/16/22	

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Analytical Report

Client: Aquatic Restoration and Research Institute (ARRI)
Project: Ambient WQ- Auk/Juneau
Sample Matrix: Ocean Water
Sample Name: JU12
Lab Code: K2205026-013

Service Request: K2205026
Date Collected: 05/09/22 13:25
Date Received: 05/10/22 12:15
Basis: NA

Total Metals

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Copper	200.8	0.92	ug/L	0.10	0.02	1	05/18/22 10:16	05/16/22	
Nickel	200.8	0.56	ug/L	0.20	0.03	1	05/18/22 10:16	05/16/22	
Zinc	200.8	2.50	ug/L	0.50	0.20	1	05/18/22 10:16	05/16/22	

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Analytical Report

Client: Aquatic Restoration and Research Institute (ARRI)
Project: Ambient WQ- Auk/Juneau
Sample Matrix: Ocean Water
Sample Name: Trip Blank
Lab Code: K2205026-014

Service Request: K2205026
Date Collected: 05/09/22
Date Received: 05/10/22 12:15

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	05/18/22 10:17	05/16/22	
Nickel	200.8	ND U	ug/L	0.20	0.03	1	05/18/22 10:17	05/16/22	
Zinc	200.8	ND U	ug/L	0.50	0.20	1	05/18/22 10:17	05/16/22	

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Analytical Report

Client: Aquatic Restoration and Research Institute (ARRI)
Project: Ambient WQ- Auk/Juneau
Sample Matrix: Ocean Water
Sample Name: JU12X
Lab Code: K2205026-015

Service Request: K2205026
Date Collected: 05/09/22 13:25
Date Received: 05/10/22 12:15

Basis: NA

Dissolved Metals

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Copper	200.8	0.92	ug/L	0.10	0.02	1	05/18/22 10:59	05/16/22	
Nickel	200.8	0.55	ug/L	0.20	0.03	1	05/18/22 10:59	05/16/22	
Zinc	200.8	3.11	ug/L	0.50	0.20	1	05/18/22 10:59	05/16/22	

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Analytical Report

Client: Aquatic Restoration and Research Institute (ARRI)
Project: Ambient WQ- Auk/Juneau
Sample Matrix: Ocean Water
Sample Name: JU12X
Lab Code: K2205026-015

Service Request: K2205026
Date Collected: 05/09/22 13:25
Date Received: 05/10/22 12:15
Basis: NA

Total Metals

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Copper	200.8	0.77	ug/L	0.10	0.02	1	05/18/22 10:18	05/16/22	
Nickel	200.8	0.55	ug/L	0.20	0.03	1	05/18/22 10:18	05/16/22	
Zinc	200.8	2.17	ug/L	0.50	0.20	1	05/18/22 10:18	05/16/22	



General Chemistry

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Analytical Report

Client: Aquatic Restoration and Research Institute (ARRI)
Project: Ambient WQ- Auk/Juneau
Sample Matrix: Ocean Water
Sample Name: AUFB
Lab Code: K2205026-001

Service Request: K2205026
Date Collected: 05/09/22 09:45
Date Received: 05/10/22 12:15
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	05/13/22 15:22	05/13/22	

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Analytical Report

Client: Aquatic Restoration and Research Institute (ARRI)
Project: Ambient WQ- Auk/Juneau
Sample Matrix: Ocean Water
Sample Name: AUO2
Lab Code: K2205026-002

Service Request: K2205026
Date Collected: 05/09/22 09:50
Date Received: 05/10/22 12:15
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	0.026	mg/L	0.010	0.003	1	05/13/22 15:22	05/13/22	

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Analytical Report

Client: Aquatic Restoration and Research Institute (ARRI)
Project: Ambient WQ- Auk/Juneau
Sample Matrix: Ocean Water
Sample Name: AU01
Lab Code: K2205026-003

Service Request: K2205026
Date Collected: 05/09/22 10:05
Date Received: 05/10/22 12:15
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	0.010 J	mg/L	0.010	0.003	1	05/13/22 15:22	05/13/22	

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Analytical Report

Client: Aquatic Restoration and Research Institute (ARRI)
Project: Ambient WQ- Auk/Juneau
Sample Matrix: Ocean Water
Sample Name: JU13
Lab Code: K2205026-004

Service Request: K2205026
Date Collected: 05/09/22 11:45
Date Received: 05/10/22 12:15
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	0.008 J	mg/L	0.010	0.003	1	05/13/22 15:22	05/13/22	

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Analytical Report

Client: Aquatic Restoration and Research Institute (ARRI)
Project: Ambient WQ- Auk/Juneau
Sample Matrix: Ocean Water
Sample Name: JU10
Lab Code: K2205026-005

Service Request: K2205026
Date Collected: 05/09/22 11:55
Date Received: 05/10/22 12:15
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	0.012	mg/L	0.010	0.003	1	05/13/22 15:22	05/13/22	

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Analytical Report

Client: Aquatic Restoration and Research Institute (ARRI)
Project: Ambient WQ- Auk/Juneau
Sample Matrix: Ocean Water
Sample Name: JU09
Lab Code: K2205026-006

Service Request: K2205026
Date Collected: 05/09/22 12:05
Date Received: 05/10/22 12:15
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	0.016	mg/L	0.010	0.003	1	05/13/22 15:22	05/13/22	

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Analytical Report

Client: Aquatic Restoration and Research Institute (ARRI)
Project: Ambient WQ- Auk/Juneau
Sample Matrix: Ocean Water
Sample Name: JU08
Lab Code: K2205026-007

Service Request: K2205026
Date Collected: 05/09/22 12:20
Date Received: 05/10/22 12:15
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	0.018	mg/L	0.010	0.003	1	05/13/22 15:22	05/13/22	

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Analytical Report

Client: Aquatic Restoration and Research Institute (ARRI)
Project: Ambient WQ- Auk/Juneau
Sample Matrix: Ocean Water
Sample Name: JU07
Lab Code: K2205026-008

Service Request: K2205026
Date Collected: 05/09/22 12:30
Date Received: 05/10/22 12:15
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	0.031	mg/L	0.010	0.003	1	05/13/22 15:22	05/13/22	

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Analytical Report

Client: Aquatic Restoration and Research Institute (ARRI)
Project: Ambient WQ- Auk/Juneau
Sample Matrix: Ocean Water
Sample Name: JU06
Lab Code: K2205026-009

Service Request: K2205026
Date Collected: 05/09/22 12:35
Date Received: 05/10/22 12:15
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	0.017	mg/L	0.010	0.003	1	05/13/22 15:22	05/13/22	

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Analytical Report

Client: Aquatic Restoration and Research Institute (ARRI)
Project: Ambient WQ- Auk/Juneau
Sample Matrix: Ocean Water
Sample Name: JU05
Lab Code: K2205026-010

Service Request: K2205026
Date Collected: 05/09/22 12:45
Date Received: 05/10/22 12:15
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	0.017	mg/L	0.010	0.003	1	05/13/22 15:22	05/13/22	

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Analytical Report

Client: Aquatic Restoration and Research Institute (ARRI)
Project: Ambient WQ- Auk/Juneau
Sample Matrix: Ocean Water
Sample Name: JU02
Lab Code: K2205026-011

Service Request: K2205026
Date Collected: 05/09/22 12:55
Date Received: 05/10/22 12:15
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	0.021	mg/L	0.010	0.003	1	05/13/22 15:22	05/13/22	

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dba ALS Environmental

Analytical Report

Client: Aquatic Restoration and Research Institute (ARRI)
Project: Ambient WQ- Auk/Juneau
Sample Matrix: Ocean Water
Sample Name: JU11
Lab Code: K2205026-012

Service Request: K2205026
Date Collected: 05/09/22 13:10
Date Received: 05/10/22 12:15
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	0.027	mg/L	0.010	0.003	1	05/13/22 15:22	05/13/22	

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client: Aquatic Restoration and Research Institute (ARRI)
Project: Ambient WQ- Auk/Juneau
Sample Matrix: Ocean Water
Sample Name: JU12
Lab Code: K2205026-013

Service Request: K2205026
Date Collected: 05/09/22 13:25
Date Received: 05/10/22 12:15
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	0.037	mg/L	0.010	0.003	1	05/13/22 15:22	05/13/22	

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client: Aquatic Restoration and Research Institute (ARRI)
Project: Ambient WQ- Auk/Juneau
Sample Matrix: Ocean Water
Sample Name: JU12X
Lab Code: K2205026-015

Service Request: K2205026
Date Collected: 05/09/22 13:25
Date Received: 05/10/22 12:15
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	0.057	mg/L	0.010	0.003	1	05/13/22 15:22	05/13/22	



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

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client: Aquatic Restoration and Research Institute (ARRI)
Project: Ambient WQ- Auk/Juneau
Sample Matrix: Ocean Water
Sample Name: Method Blank
Lab Code: KQ2207670-01

Service Request: K2205026
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	ND U	ug/L	0.10	0.02	1	05/18/22 09:56	05/16/22	
Nickel	200.8	ND U	ug/L	0.20	0.03	1	05/18/22 09:56	05/16/22	
Zinc	200.8	ND U	ug/L	0.50	0.20	1	05/18/22 09:56	05/16/22	

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client: Aquatic Restoration and Research Institute (ARRI)
Project: Ambient WQ- Auk/Juneau
Sample Matrix: Ocean Water
Sample Name: Method Blank
Lab Code: KQ2207763-01

Service Request: K2205026
Date Collected: NA
Date Received: NA
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	05/18/22 10:39	05/16/22	
Nickel	200.8	ND U	ug/L	0.20	0.03	1	05/18/22 10:39	05/16/22	
Zinc	200.8	ND U	ug/L	0.50	0.20	1	05/18/22 10:39	05/16/22	

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

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

Service Request: K2205026
Date Analyzed: 05/18/22

Duplicate Lab Control Sample Summary
Total Metals

Units:ug/L
Basis:NA

Lab Control Sample
KQ2207670-02

Duplicate Lab Control Sample
KQ2207670-03

Analyte Name	Analytical Method	Result	Spike Amount	% Rec	Result	Spike Amount	% Rec	% Rec Limits	RPD	RPD Limit
Copper	200.8	1.91	2.00	96	1.87	2.00	94	63-128	2	20
Nickel	200.8	2.03	2.00	102	2.02	2.00	101	88-112	<1	20
Zinc	200.8	1.92	2.00	96	1.94	2.00	97	79-133	1	20

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

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

Service Request: K2205026
Date Analyzed: 05/18/22

Duplicate Lab Control Sample Summary
Dissolved Metals

Units:ug/L
Basis:NA

Lab Control Sample
KQ2207763-02

Duplicate Lab Control Sample
KQ2207763-03

Analyte Name	Analytical Method	Result	Spike Amount	% Rec	Result	Spike Amount	% Rec	% Rec Limits	RPD	RPD Limit
Copper	200.8	1.87	2.00	93	1.86	2.00	93	63-128	<1	20
Nickel	200.8	2.03	2.00	102	1.97	2.00	99	88-112	3	20
Zinc	200.8	1.88	2.00	94	1.90	2.00	95	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

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client: Aquatic Restoration and Research Institute (ARRI)
Project: Ambient WQ- Auk/Juneau
Sample Matrix: Ocean Water
Sample Name: Method Blank
Lab Code: K2205026-MB

Service Request: K2205026
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	05/13/22 15:22	05/13/22	

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

Service Request: K2205026
Date Collected: 05/09/22
Date Received: 05/10/22
Date Analyzed: 05/13/22
Date Extracted: 05/13/22

Duplicate Matrix Spike Summary
Ammonia as Nitrogen

Sample Name: AUO2
Lab Code: K2205026-002
Analysis Method: 350.1
Prep Method: Method

Units: mg/L
Basis: NA

Analyte Name	Sample Result	Result	Matrix Spike K2205026-002MS		Duplicate Matrix Spike K2205026-002DMS		% Rec Limits	RPD	RPD Limit	
			Spike Amount	% Rec	Result	Spike Amount				% Rec
Ammonia as Nitrogen	0.026	0.217	0.200	96	0.220	0.200	97	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- Auk/Juneau
Sample Matrix: Ocean Water

Service Request: K2205026
Date Collected: 05/09/22
Date Received: 05/10/22
Date Analyzed: 05/13/22

Replicate Sample Summary
General Chemistry Parameters

Sample Name: AUO2 Units: mg/L
Lab Code: K2205026-002 Basis: NA

Table with 9 columns: Analyte Name, Analysis Method, MRL, MDL, Sample Result, Duplicate Sample K2205026-002DUP Result, Average, RPD, RPD Limit. Row 1: Ammonia as Nitrogen, 350.1, 0.010, 0.003, 0.026, 0.009 J, 0.0173, 99 #, 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- Auk/Juneau
Sample Matrix: Ocean Water

Service Request: K2205026
Date Analyzed: 05/13/22
Date Extracted: 05/13/22

Lab Control Sample Summary
Ammonia as Nitrogen

Analysis Method: 350.1
Prep Method: Method

Units: mg/L
Basis: NA
Analysis Lot: 764134

Sample Name	Lab Code	Result	Spike Amount	% Rec	% Rec Limits
Lab Control Sample	K2205026-LCS	0.299	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 19, 2022

Aquatic Restoration & Research Institute – Juneau

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

Summary

Ten 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

Juneau

May 9, 2022

Juneau, AK

Analytical Report

Admiralty Environmental EPA ID AK 00976

AE 28871

Sample Location	Date & Time Sampled	Fecal Coliform (FC/100mL)	Enterococci (MPN/100mL)
AU 02	5/9/2022; 09:50	< 2.0	< 10
AU 01	5/9/2022; 10:05	< 2.0	< 10
JU 13	5/9/2022; 11:45	< 2.0	< 10
JU 10	5/9/2022; 11:55	< 2.0	< 10
JU 09	5/9/2022; 12:05	< 2.0	< 10
JU 08	5/9/2022; 12:20	< 2.0	< 10
JU 07	5/9/2022; 12:30	< 2.0	< 10
JU 06	5/9/2022; 12:35	< 2.0	< 10
JU 02	5/9/2022; 12:55	< 2.0	< 10
JU 11	5/9/2022; 13:10	< 2.0	< 10
JU 12	5/9/2022; 13:25	< 2.0	< 10

Quality Control:

Analysis	MB	LCS	LCS Duplicate	RPD	Date/Time Commenced	Holding Time Met
FC	<2.0	---	---	---	5/9/2022; 16:15	Yes
Entero	---	---	---	---	5/9/2022; 16:10	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

Case Narrative:

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

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

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 28873																																																																																																																																
REPORT TO: Jeff Davis arri@arrialaska.org			PHONE#:		<table border="1" style="width:100%; height: 100%; border-collapse: collapse;"> <tr> <th># OF BOTTLES</th> <th>Fecal Coliform</th> <th>Enterococci MPN</th> <th></th><th></th><th></th><th></th><th></th><th></th><th></th><th></th><th></th><th></th><th></th><th></th><th></th><th></th><th></th><th></th><th></th><th></th> </tr> <tr> <td>1</td><td>1</td><td>1</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td> </tr> <tr> <td>1</td><td>1</td><td>1</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td> </tr> <tr> <td>1</td><td>1</td><td>1</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td> </tr> <tr> <td>1</td><td>1</td><td>1</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td> </tr> <tr> <td>1</td><td>1</td><td>1</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td> </tr> </table>													# OF BOTTLES	Fecal Coliform	Enterococci MPN																			1	1	1																			1	1	1																			1	1	1																			1	1	1																			1	1	1																		
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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 20, 2022

Aquatic Restoration & Research Institute – Juneau

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

Summary

Eleven 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



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

Aquatic Restoration and Research Institute

Juneau

May 11, 2022

Juneau, AK

Analytical Report

Admiralty Environmental EPA ID AK 00976

AE 28897

Sample Location	Date & Time Sampled	Fecal Coliform (FC/100mL)	Enterococci (MPN/100mL)
AU 01	5/11/2022; 09:35	< 2.0	< 10
AU 02	5/11/2022; 09:45	< 2.0	< 10
JU 13	5/11/2022; 11:15	< 2.0	< 10
JU 10	5/11/2022; 11:20	< 2.0	< 10
JU 09	5/11/2022; 11:25	< 2.0	< 10
JU 08	5/11/2022; 11:28	< 2.0	< 10
JU 07	5/11/2022; 11:31	< 2.0	< 10
JU 06	5/11/2022; 11:34	< 2.0	< 10
JU 02	5/11/2022; 11:37	< 2.0	< 10
JU 11	5/11/2022; 11:40	< 2.0	< 10
JU 12	5/11/2022; 11:44	< 2.0	< 10

Quality Control:

Analysis	MB	LCS	LCS Duplicate	RPD	Date/Time Commenced	Holding Time Met
FC	<2.0	---	---	---	5/11/2022; 11:40	Yes
Entero	---	---	---	---	5/11/2022; 14:26	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

Case Narrative:

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

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

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: Juneau				AE 28897								
REPORT TO: Jeff Davis arri@arriataska.org		PHONE#: 907 315 4631		# OF BOTTLES	Fecal Coliform	Enterococci MPN										
ADDRESS: PO Box 923 Talkeetna, AK 99676		SAMPLED BY: JCD, GAD														
COMMENTS:										FIELD RESULTS						
DATE	TIME	SITE DESCRIPTION / IDENTIFIER	MATRIX	# OF BOTTLES	Fecal Coliform	Enterococci MPN					pH	Temp	D.O.			
5/11/22	0935	AU01	H ₂ O	1	1	1										
	0945	AU02	H ₂ O	1	1	1										
	1115	JU13	H ₂ O	1	1	1										
	1120	JU10	H ₂ O	1	1	1										
	1125	JU09	H ₂ O	1	1	1										
	1128	JU08	H ₂ O	1	1	1										
	1131	JU07	H ₂ O	1	1	1										
	1134	JU06	H ₂ O	1	1	1										
	1137	JU02	H ₂ O	1	1	1										
	1140	JU11	H ₂ O	1	1	1										
	1144	JU12	H ₂ O	1	1	1										
			H ₂ O	1	1	1										
			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: 5.65								
Printed Name		Printed Name		Printed Name		Printed Name		Thermo ID#: Lab #7								
Date		Date		Date		Date		Condition of Custody Seals: ✓								
Time		Time		Time		Time		Initialed By: HD								
12:15		12:15						Shipped Via: —								

11 bottles received



Admiralty Environmental Cooler Receipt Form

Lab: Admiralty Environmental, LLC
Client: ARRI

AE# AE 28897

Date Opened: 5/11/2022 Opened by: H. Oneill

A. External Cooler Conditions

• Local Sampling Event

1. Project ID: Juneau

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

Small Temp. Blank 5.65 (temp in Celsius)
Large Temp. Blank: n/a (temp in Celsius)

• Air-Transported Sampling Event

1. Project ID: n/a

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

3. Airbill attached? n/a Airbill #: n/a

4. Custody Seals? n/a

5. Seals intact? n/a

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

COMMENTS:

B. Sample Conditions

Number of Samples Received: 11 Packing type: cooler

Number of Bottles Received: 11

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: _____

5/11/22; 1215



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 – Juneau

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

Summary

Eleven 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

Juneau
 May 23, 2022
 Juneau, AK

Analytical Report

Admiralty Environmental EPA ID AK 00976
 AE 29092

Sample Location	Date & Time Sampled	Fecal Coliform (FC/100mL)	Enterococci (MPN/100mL)
JNU 12	5/23/2022; 09:23	15	<10
JNU 11	5/23/2022; 09:26	3.0	<10
JNU 2	5/23/2022; 09:43	<2.0	<10
JNU 6	5/23/2022; 09:50	<2.0	<10
JNU 7	5/23/2022; 09:57	3.0	<10
JNU 8	5/23/2022; 10:04	2.0	<10
JNU 9	5/23/2022; 10:07	<2.0	10
JNU 10	5/23/2022; 10:15	<2.0	<10
AB 1	5/23/2022; 12:05	<2.0	<10
AB 2	5/23/2022; 11:48	<2.0	<10
JNU 13	5/23/2022; 10:20	<2.0	<10

Quality Control:

Analysis	MB	LCS	LCS Duplicate	RPD	Date/Time Commenced	Holding Time Met
FC	<2.0	---	---	---	5/23/2022; 15:27	Yes
Entero	---	---	---	---	5/23/2022; 15:38	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

Case Narrative:

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

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

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: Juneau				AE 29092									
REPORT TO: Jeff Davis arri@arrialaska.org		PHONE#: 907 321 8997		# OF BOTTLES	Fecal Coliform	Enterococci	MPN										
ADDRESS: PO Box 923 Talkeetna, AK 99676		SAMPLED BY: Sue Walker															
COMMENTS:																	
FIELD RESULTS																	
DATE	TIME	SITE DESCRIPTION /IDENTIFIER	MATRIX									pH	Temp	D.O.			
5/23	9:23	JN12	H ₂ O	1	1	1											
5/23	9:26	JN11	H ₂ O	1	1	1											
5/23	9:43	JN12	H ₂ O	1	1	1											
5/23	9:50	JN16	H ₂ O	1	1	1											
5/23	9:57	JN17 correct time 9:57 AM	H ₂ O	1	1	1											
5/23	9:57	JN18 correct time 10:04 AM	H ₂ O	1	1	1											
5/23	10:07	JN19 10:07 AM	H ₂ O	1	1	1											
5/23	10:15	JN10	H ₂ O	1	1	1											
5/23	12:05	AB 1	H ₂ O	1	1	1											
5/23	11:48	AB 2	H ₂ O	1	1	1											
5/23	10:20	JN14 13	H ₂ O	1	1	1											
RELINQUISHED BY: Signature: <i>[Signature]</i>		RECEIVED BY: Signature: <i>[Signature]</i>		RELINQUISHED BY: Signature: _____		RECEIVED BY: Signature: _____		Section to Be Completed by Receiving Laboratory									
Printed Name: Susan H. Walker		Printed Name: Kyle Hopkins		Printed Name: _____		Printed Name: _____		Temp °C: 4.65									
Date: 5/23/2022		Date: 5/23/22		Date: _____		Date: _____		Thermo ID#: 60847									
Time: 13:22		Time: 1322		Time: _____		Time: _____		Condition of Custody Seals: <input checked="" type="checkbox"/>									
								Initialed By: KH									
								Shipped Via: _____									



Admiralty Environmental Cooler Receipt Form

Lab: Admiralty Environmental, LLC
Client: ARRI

AE# AE 29092

Date Opened: 5/23/2022 Opened by: K. Hopkins

A. External Cooler Conditions

• Local Sampling Event

1. Project ID: Juneau

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

Small Temp. Blank: **4.65** (temp in Celsius)
Large Temp. Blank: **n/a** (temp in Celsius)

• Air-Transported Sampling Event

1. Project ID: n/a

2. COC Attached? **n/a** Properly Completed? **n/a** Signed by AE employee? **n/a**
3. Airbill attached? **n/a** Airbill #: **n/a**
4. Custody Seals? **n/a**
5. Seals intact? **n/a**

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

COMMENTS:

B. Sample Conditions

Number of Samples Received: **11** Packing type: **cooler**
Number of Bottles Received: **11**

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; 1322



Admiralty
ENVIRONMENTAL

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

Jeff Davis
PO Box 923
Talkeetna, AK 99676

June 16, 2022

Aquatic Restoration & Research Institute – Juneau

Date of Collection: June 6, 2022
Sampling Location: Juneau, Alaska

Summary

Eleven samples from the Aquatic Restoration & Research Institute were received at Admiralty Environmental, Juneau, AK on June 6, 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

Juneau
 June 6, 2022
 Juneau, AK

Analytical Report

Admiralty Environmental EPA ID AK 00976
 AE 29225

Sample Location	Date & Time Sampled	Fecal Coliform (FC/100mL)	Enterococci (MPN/100mL)
AB 1	6/6/2022; 09:36	3.0	10
AB 2	6/6/2022; 09:22	12	<10
JN13	6/6/2022; 11:28	2.0	<10
JN10	6/6/2022; 11:37	2.0	<10
JN9	6/6/2022; 11:40	<2.0	<10
JN8	6/6/2022; 11:42	2.0	<10
JN7	6/6/2022; 11:45	<2.0	<10
JN6	6/6/2022; 11:51	<2.0	10
JN5	6/6/2022; 11:54	8.0	20
JN11	6/6/2022; 12:04	12	<10
JN12	6/6/2022; 12:10	8.0	<10

Quality Control:

Analysis	MB	LCS	LCS Duplicate	RPD	Date/Time Commenced	Holding Time Met
FC	<2.0	---	---	---	6/6/2022; 14:56	Yes
Entero	---	---	---	---	6/6/2022; 15:00	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

Case Narrative:

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

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

David Wetzel
 CTO, Admiralty Environmental
 dwetzel@admiraltyenv.com



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

PROJECT NAME: Aquatic Restoration and Research

Project: Juneau

AE 29225

REPORT TO: Jeff Davis
 arri@arrialaska.org
 PHONE#: 907 521 8991

ADDRESS: PO Box 923
 Talkeetna, AK 99676
 SAMPLED BY: Susan Walker

COMMENTS:

DATE	TIME	SITE DESCRIPTION / IDENTIFIER	MATRIX	# OF BOTTLES	Fecal Coliform			Enterococci MPN			FIELD RESULTS				
												pH	Temp	D.O.	
6/6/2022	9:36	ABZ	H ₂ O	1	1	1									
	9:22	ABZ	H ₂ O	1	1	1									
	11:28	JN10 JN13	H ₂ O	1	1	1									
	11:37	JN13 JN10	H ₂ O	1	1	1									
	11:40	JN9	H ₂ O	1	1	1									
	11:42	JN8	H ₂ O	1	1	1									
	11:45	JN7	H ₂ O	1	1	1									
	11:51	JN6	H ₂ O	1	1	1									
	11:54	JN5	H ₂ O	1	1	1									
	12:04	JN11	H ₂ O	1	1	1									
	12:10	JN12	H ₂ O	1	1	1									

RELINQUISHED BY: Signature: *[Signature]* Printed Name: Susan Walker Date: 6/6/2022 Time: 13:20

RECEIVED BY: Signature: *[Signature]* Printed Name: H. MONTGOMERY Date: 6/6/22 Time: 1320

Section to Be Completed by Receiving Laboratory

Temp °C: 8.93

Thermo ID#: Lab #7

Condition of Custody Seals:

Initialed By: *[Signature]*

Shipped Via: _____



Admiralty Environmental Cooler Receipt Form

Lab: Admiralty Environmental, LLC
Client: ARRI

AE# AE 29225

Date Opened: 6/6/2022 Opened by: H. O'Neill

A. External Cooler Conditions

• Local Sampling Event

1. Project ID: Juneau

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

Small Temp. Blank **8.93** (temp in Celsius)
Large Temp. Blank: **n/a** (temp in Celsius)

• Air-Transported Sampling Event

1. Project ID: n/a

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

3. Airbill attached? **n/a** Airbill #: **n/a**

4. Custody Seals? **n/a**

5. Seals intact? **n/a**

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

COMMENTS:

B. Sample Conditions

Number of Samples Received: **10** Packing type: **cooler**

Number of Bottles Received: **10**

1. Samples in proper bags? **yes**

2. Bottles intact? **yes**

3. Sufficient sample volume? **yes**

4. Labels agree with COC? **yes**

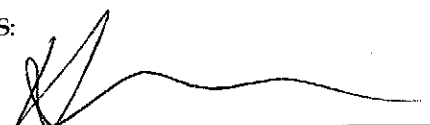
5. Samples delivered within holding time? **yes**

6. Sample preservation checked? **n/a**

Problems encountered: **no**

Was the project manager called? **no**

COMMENTS:

Signature: 

Date and time: 6/6/22, 1320



Admiralty
ENVIRONMENTAL

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

Jeff Davis
PO Box 923
Talkeetna, AK 99676

June 16, 2022

Aquatic Restoration & Research Institute – Juneau

Date of Collection: June 7, 2022
Sampling Location: Juneau, Alaska

Summary

Eleven samples from the Aquatic Restoration & Research Institute were received at Admiralty Environmental, Juneau, AK on June 7, 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

Juneau
 June 7, 2022
 Juneau, AK

Analytical Report

Admiralty Environmental EPA ID AK 00976
 AE 29241

Sample Location	Date & Time Sampled	Fecal Coliform (FC/100mL)	Enterococci (MPN/100mL)
AB 2	6/7/2022; 08:20	2.0	< 10
AB 1	6/7/2022; 08:30	2.0	10
JN 13	6/7/2022; 10:05	< 2	< 10
JN 10	6/7/2022; 09:58	2.0	< 10
JN 9	6/7/2022; 10:10	3.0	< 10
JN 8	6/7/2022; 10:13	2.0	10
JN 7	6/7/2022; 10:17	< 2	< 10
JN 6	6/7/2022; 10:23	2.0	< 10
JN 5	6/7/2022; 10:28	< 2	< 10
JN 11	6/7/2022; 10:32	2.0	< 10
JN 12	6/7/2022; 11:40	2.0	< 10

Quality Control:

Analysis	MB	LCS	LCS Duplicate	RPD	Date/Time Commenced	Holding Time Met
FC	<2.0	---	---	---	6/7/2022; 13:55	Yes
Entero	---	---	---	---	6/7/2022; 14:05	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

Case Narrative:

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

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

David Wetzel
 CTO, Admiralty Environmental
 dwetzel@admiraltyenv.com



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

PROJECT NAME: Aquatic Restoration and Research Institute				Project: Juneau				AE 29241								
REPORT TO: Jeff Davis arri@arrialaska.org		PHONE#: 907 321 8991														
ADDRESS: PO Box 923 Talkeetna, AK 99676		SAMPLED BY: Susan Walker														
COMMENTS:				# OF BOTTLES		Fecal Coliform		Enterococci MPN		FIELD RESULTS						
DATE	TIME	SITE DESCRIPTION / IDENTIFIER	MATRIX							pH	Temp	D.O.				
6/7/22	8:20	AB2	H ₂ O							1	1	1				
	8:30	AB2	H ₂ O							1	1	1				
	10:05	JN13	H ₂ O							1	1	1				
	9:58	JN H ^{RC} JN10	H ₂ O							1	1	1				
	10:10	JN9	H ₂ O							1	1	1				
	10:13	JN8	H ₂ O							1	1	1				
	10:17	JN7	H ₂ O							1	1	1				
	10:23	JN6	H ₂ O							1	1	1				
	10:28	JN5	H ₂ O	1	1	1										
	10:32	JN11 Harms Hbr	H ₂ O	1	1	1										
	11:40	JN12 Harms Hbr	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: <i>[Signature]</i>		Signature:		Signature:						Temp °C: 9.80				
Printed Name: Susan H Walker		Printed Name: Riley Crocker		Printed Name:		Printed Name:						Thermo ID#: Lab #7				
Date: 6/7/2022		Date: 6/7/22		Date:		Date:						Condition of Custody Seals: -				
Time: 12:12 pm		Time: 1212		Time:		Time:						Initialed By: RC				
								Shipped Via: -								



Admiralty Environmental Cooler Receipt Form

Lab: Admiralty Environmental, LLC
Client: ARRI Juneau

AE# AE 29241

Date Opened: 6/7/2022 Opened by: R. Crocker

A. External Cooler Conditions

• Local Sampling Event

1. Project ID: ARRI Juneau

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

Small Temp. Blank 9.80 (temp in Celsius)
Large Temp. Blank: n/a (temp in Celsius)

• Air-Transported Sampling Event

1. Project ID: n/a

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

3. Airbill attached? n/a Airbill #: n/a

4. Custody Seals? **yes**

5. Seals intact? **yes**

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

COMMENTS:

B. Sample Conditions

Number of Samples Received: 11 Packing type: cooler

Number of Bottles Received: 11

1. Samples in proper bags? **yes**

2. Bottles intact? **yes**

3. Sufficient sample volume? **yes**

4. Labels agree with COC? **yes**

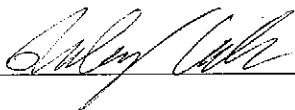
5. Samples delivered within holding time? **yes**

6. Sample preservation checked? **n/a**

Problems encountered: **no**

Was the project manager called? **no**

COMMENTS:

Signature: 

Date and time: 6/7/22; 1212