

**ATTACHMENT H**  
**RESULTS OF LABORATORY ANALYSIS**



**Admiralty**  
ENVIRONMENTAL

641 W. Willoughby Ave., Suite 301 Juneau, AK 99801 (907) 463-4415 (480) 247-4476 (f)

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Mr. Ken Nichols  
Nichols Engineering  
PO Box 32601  
Juneau, AK 99803

November 22, 2016

**JNU International Airport Stormwater Sampling**

Date of Collection: November 10, 2016  
Sampling Location: Juneau, Alaska

**Summary**

Six samples from the Juneau International Airport were received at Admiralty Environmental, Juneau, AK on November 10, 2016.

Samples were analyzed for Biochemical Oxygen Demand, pH, and Chemical Oxygen Demand. Samples were forwarded to Microbac Laboratories, Merrillville, IN for analysis of Ammonia. 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,

David Wetzel  
Admiralty Environmental



641 W. Willoughby Ave., Suite 301 Juneau, AK 99801  
(907) 463 - 4415 Fax (480) 247 - 4476

www.admiraltyenvironmental.com

## Juneau International Airport

### Stormwater Sampling

November 10, 2016

Juneau, AK

### Analytical Report

Admiralty Environmental EPA ID AK 00976

AE 16431

Sample Location	Site 3	Site 16	Site 6	Site 7	Site 8	Site 10
Date & Time Sampled	11/10/2016; 12:50	11/10/2016; 13:00	11/10/2016; 13:10	11/10/2016; 13:18	11/10/2016; 13:20	11/10/2016; 13:25
BOD (mg/L)	3.2	< 4.0	2.7	< 2.0	< 2.0	< 4.0
COD (mg/L)	30	150	18	17	19	19
pH	7.04	7.58	7.18	6.93	6.92	6.93

#### Quality Control:

Analysis	MB	LCS	LCS Duplicate	RPD	Date/Time Commenced	Holding time met
BOD	< 2	103.5%	92.2%	11.5%	11/11/2016; 08:35	yes
COD	< 4	103.6%	102.8%	0.8%	11/11/2016; 11:44	yes
pH	---	---	---	---	11/10/2016; 14:40	yes

#### Case Narrative:

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

#### Analysis Description:

Analysis	Method	MDL	PQL	Unit
BOD	EPA 405.1	0.5	2.0	mg/L
COD	SM 5220D	4.0	15.0	mg/L
pH	EPA 150.1	0.10	0.1	pH units

#### Key:

BOD	Biochemical Oxygen Demand
COD	Chemical Oxygen Demand
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  
President, Admiralty Environmental  
[dwetzel@admiraltyenv.com](mailto:dwetzel@admiraltyenv.com)



November 22, 2016

Admiralty Environmental, LLC  
641 W. Willoughby Ave, Suite 301  
Juneau, AK 99801-

Work Order No.: 16K1236

Re: Juneau International Airport/AE 16431

Dear David Wetzel:

Microbac Laboratories, Inc. - Chicagoland Division received 6 sample(s) on 11/17/2016 9:30:00AM for the analyses presented in the following report as Work Order 16K1236.

The enclosed results were obtained from and are applicable to the sample(s) as received at the laboratory. All sample results are reported on an "as received" basis unless otherwise noted.

All data included in this report have been reviewed and meet the applicable project specific and certification specific requirements, unless otherwise noted. A qualifications page is included in this report and lists the programs under which Microbac maintains certification.

This report has been paginated in its entirety and shall not be reproduced except in full, without the written approval of Microbac Laboratories.

We appreciate the opportunity to service your analytical needs. If you have any questions, please contact your project manager. For any feedback, please contact Robert Crookston, Managing Director, at [robert.crookston@microbac.com](mailto:robert.crookston@microbac.com).

Sincerely,  
Microbac Laboratories, Inc.

A handwritten signature in black ink that reads "Carey Gadzala". The signature is fluid and cursive, with the first name "Carey" and last name "Gadzala" clearly distinguishable.

Carey Gadzala  
Project Manager

[Microbac Laboratories, Inc.](http://www.microbac.com)

250 West 84<sup>th</sup> Drive | Merrillville, IN 46410 | 800.536.8379 p | 219.769.8378 p | 219.769.1664 f | [www.microbac.com](http://www.microbac.com)



**WORK ORDER SAMPLE SUMMARY****Date:** *Tuesday, November 22, 2016*

**Client:** Admiralty Environmental, LLC  
**Project:** Juneau International Airport/AE 16431  
**Lab Order:** 16K1236

Lab Sample ID	Client Sample ID	Tag Number	Collection Date	Date Received
16K1236-01	3	AE 16431	11/10/2016 12:50	11/17/2016 9:30:00AM
16K1236-02	16	AE 16431	11/10/2016 13:00	11/17/2016 9:30:00AM
16K1236-03	6	AE 16431	11/10/2016 13:10	11/17/2016 9:30:00AM
16K1236-04	7	AE 16431	11/10/2016 13:18	11/17/2016 9:30:00AM
16K1236-05	8	AE 16431	11/10/2016 13:20	11/17/2016 9:30:00AM
16K1236-06	10	AE 16431	11/10/2016 13:25	11/17/2016 9:30:00AM

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250 West 84<sup>th</sup> Drive | Merrillville, IN 46410 | 800.536.8379 p | 219.769.8378 p | 219.769.1664 f | [www.microbac.com](http://www.microbac.com)

## Analytical Results

**Date:** Tuesday, November 22, 2016

<b>Client:</b>	Admiralty Environmental, LLC	<b>Work Order/ID:</b>	16K1236-01
<b>Client Project:</b>	Juneau International Airport/AE 16431	<b>Sampled:</b>	11/10/2016 12:50
<b>Client Sample ID:</b>	3	<b>Received:</b>	11/17/2016 9:30
<b>Sample Description:</b>	AE 16431		
<b>Matrix:</b>	Aqueous		

Analyses	Certs	AT	Result	RL	Qual	Units	DF	Analyzed
Method: EPA 350.1 Rev 2.0 Prep Method: Aqueous Ammonia Distillation Analyst: GRIEFF Prep Date/Time: 11/21/2016 12:00								
<b>Nitrogen, Ammonia as N</b>								
Nitrogen, Ammonia (As N)	di	A	2.3	0.10		mg/L	1	11/21/2016 13:37

## Analytical Results

Date: Tuesday, November 22, 2016

<b>Client:</b>	Admiralty Environmental, LLC		
<b>Client Project:</b>	Juneau International Airport/AE 16431		
<b>Client Sample ID:</b>	16	<b>Work Order/ID:</b>	16K1236-02
<b>Sample Description:</b>	AE 16431	<b>Sampled:</b>	11/10/2016 13:00
<b>Matrix:</b>	Aqueous	<b>Received:</b>	11/17/2016 9:30

Analyses	Certs	AT	Result	RL	Qual	Units	DF	Analyzed
Method: EPA 350.1 Rev 2.0 Prep Method: Aqueous Ammonia Distillation Analyst: GRIEFF Prep Date/Time: 11/22/2016 08:15								
<b>Nitrogen, Ammonia as N</b>								
Nitrogen, Ammonia (As N)	di	A	0.18	0.10		mg/L	1	11/22/2016 12:04

## Analytical Results

Date: Tuesday, November 22, 2016

<b>Client:</b>	Admiralty Environmental, LLC	<b>Work Order/ID:</b>	16K1236-03
<b>Client Project:</b>	Juneau International Airport/AE 16431	<b>Sampled:</b>	11/10/2016 13:10
<b>Client Sample ID:</b>	6	<b>Received:</b>	11/17/2016 9:30
<b>Sample Description:</b>	AE 16431		
<b>Matrix:</b>	Aqueous		

Analyses	Certs	AT	Result	RL	Qual	Units	DF	Analyzed
Method: EPA 350.1 Rev 2.0 Prep Method: Aqueous Ammonia Distillation Analyst: GRIEFF Prep Date/Time: 11/22/2016 08:15								
<b>Nitrogen, Ammonia as N</b>								
Nitrogen, Ammonia (As N)	di	A	ND	0.10		mg/L	1	11/22/2016 12:06



## Analytical Results

Date: Tuesday, November 22, 2016

**Client:** Admiralty Environmental, LLC  
**Client Project:** Juneau International Airport/AE 16431  
**Client Sample ID:** 7  
**Sample Description:** AE 16431  
**Matrix:** Aqueous

**Work Order/ID:** 16K1236-04  
**Sampled:** 11/10/2016 13:18  
**Received:** 11/17/2016 9:30

Analyses	Certs	AT	Result	RL	Qual	Units	DF	Analyzed
Method: EPA 350.1 Rev 2.0 Analyst: GRIEFF								
Prep Method: Aqueous Ammonia Distillation Prep Date/Time: 11/22/2016 08:15								
Nitrogen, Ammonia as N								
Nitrogen, Ammonia (As N)	di	A	ND	0.10		mg/L	1	11/22/2016 12:07

Microbac Laboratories, Inc.

250 West 84<sup>th</sup> Drive | Merrillville, IN 46410 | 800.536.8379 p | 219.769.8378 p | 219.769.1664 f | www.microbac.com

## Analytical Results

**Date:** Tuesday, November 22, 2016

<b>Client:</b>	Admiralty Environmental, LLC		
<b>Client Project:</b>	Juneau International Airport/AE 16431		
<b>Client Sample ID:</b>	8	<b>Work Order/ID:</b>	16K1236-05
<b>Sample Description:</b>	AE 16431	<b>Sampled:</b>	11/10/2016 13:20
<b>Matrix:</b>	Aqueous	<b>Received:</b>	11/17/2016 9:30

Analyses	Certs	AT	Result	RL	Qual	Units	DF	Analyzed
Method: EPA 350.1 Rev 2.0 Prep Method: Aqueous Ammonia Distillation Analyst: GRIEFF Prep Date/Time: 11/22/2016 08:15								
<b>Nitrogen, Ammonia as N</b>								
Nitrogen, Ammonia (As N)	di	A	0.10	0.10		mg/L	1	11/22/2016 12:09

## Analytical Results

**Date:** Tuesday, November 22, 2016

<b>Client:</b>	Admiralty Environmental, LLC		
<b>Client Project:</b>	Juneau International Airport/AE 16431		
<b>Client Sample ID:</b>	10	<b>Work Order/ID:</b>	16K1236-06
<b>Sample Description:</b>	AE 16431	<b>Sampled:</b>	11/10/2016 13:25
<b>Matrix:</b>	Aqueous	<b>Received:</b>	11/17/2016 9:30

Analyses	Certs	AT	Result	RL	Qual	Units	DF	Analyzed
Method: EPA 350.1 Rev 2.0 Prep Method: Aqueous Ammonia Distillation Analyst: GRIEFF Prep Date/Time: 11/22/2016 08:15								
<b>Nitrogen, Ammonia as N</b>								
Nitrogen, Ammonia (As N)	di	A	ND	0.10		mg/L	1	11/22/2016 12:11

**FLAGS, FOOTNOTES AND ABBREVIATIONS (as needed)**

B = Detected in the associated method Blank at a concentration above the routine RL  
 b- = Detected in the associated method Blank at a concentration greater than 2.2 times the MDL  
 b\* = Detected in the associated method Blank at a concentration greater than half the RL  
 CFU = Colony forming units  
 D = Dilution performed on sample  
 DF = Dilution Factor  
 g = Gram  
 E = Value above quantitation range  
 H = Analyte was prepared and/or analyzed outside of the analytical method holding time  
 I = Matrix Interference  
 J = Analyte concentration detected between RL and MDL (Metals / Organics)  
 LOD = Limit of Detection  
 LOQ = Limit of Quantitation  
 m3 = Meters cubed  
 MDL = Method Detection Limit  
 mg/Kg = Milligrams per Kilogram (ppm)  
 mg/L = Milligrams per Liter (ppm)  
 NA = Not Analyzed  
 ND = Not Detected at the Reporting Limit (or the Method Detection Limit, if used)  
 NR = Not Recovered  
 R = RPD outside accepted recovery limits  
 RL = Reporting Limit  
 S = Spike recovery outside recovery limits  
 Surr = Surrogate  
 U = Undetected  
 > = Greater than  
 < = Less than  
 % = Percent  
 \* = Result exceeds project specific limits

**ANALYTE TYPES: (AT)**

A,B = Target Analyte  
 I = Internal Standard  
 M = Summation Analyte  
 S = Surrogate  
 T = Tentatively Identified Compound (TIC, concentration estimated)

**QC SAMPLE IDENTIFICATIONS**

BLK = Method Blank	ICSA = Interference Check Standard "A"
DUP = Method Duplicate	ICSAB = Interference Check Standard "AB"
BS = Method Blank Spike	BSD = Method Blank Spike Duplicate
MS = Matrix Spike	MSD = Matrix Spike Duplicate
ICB = Initial Calibration Blank	ICV = Initial Calibration Verification
CCB = Continuing Calibration Blank	CCV = Continuing Calibration Verification
CRL = Client Required Reporting Limit	OPR = Ongoing Precision and Recovery Standard
PDS = Post Digestion Spike	SD = Serial Dilution
QCS = Quality Control Standard	

**CERTIFICATIONS (Certs)**

*Below is a list of certifications maintained by the Microbac Merrillville Laboratory. All data included in this report has been reviewed for and meets all project specific and quality control requirements of the applicable accreditation, unless otherwise noted. Complete lists of individual analytes pursuant to each certification below are available upon request.*

- <sup>d</sup> Illinois EPA drinking water, wastewater and solid waste analysis (#200064)
- <sup>i</sup> Kansas Dept Health & Env. NELAP (#E-10397)



## Analytical QC Summary

**Client:** Admiralty Environmental, LLC **Wet Chemistry - Quality Control**  
**Work Order:** 16K1236  
**Project:** Juneau International Airport/AE 16431  
**Batch:** B094806 **Prep:** Aqueous Ammonia Distillation

### Nitrogen, Ammonia as N

**Sample ID:** Blank (B094806-BLK1) **Method:** EPA 350.1 Rev 2.0 **Prepped:** 11/21/2016 08:45  
**Source:** **Analyzed:** 11/21/2016 13:03  

Analyte	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Qual
Nitrogen, Ammonia (As N)	ND	0.10	mg/L							

**Sample ID:** LCS (B094806-BS1) **Method:** EPA 350.1 Rev 2.0 **Prepped:** 11/21/2016 08:45  
**Source:** **Analyzed:** 11/21/2016 13:05  

Analyte	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Qual
Nitrogen, Ammonia (As N)	4.10	0.10	mg/L	4.000		102	90-110			

**Sample ID:** Matrix Spike (B094806-MS1) **Method:** EPA 350.1 Rev 2.0 **Prepped:** 11/21/2016 08:45  
**Source:** 16K1172-02 **Analyzed:** 11/21/2016 13:09  

Analyte	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Qual
Nitrogen, Ammonia (As N)	3.93	0.10	mg/L	4.000	0.239	92.2	90-110			

**Sample ID:** Matrix Spike (B094806-MS2) **Method:** EPA 350.1 Rev 2.0 **Prepped:** 11/21/2016 08:45  
**Source:** 16K1177-05 **Analyzed:** 11/21/2016 13:22  

Analyte	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Qual
Nitrogen, Ammonia (As N)	3.91	0.10	mg/L	4.000	0.166	93.5	90-110			

**Sample ID:** Matrix Spike Dup (B094806-MSD1) **Method:** EPA 350.1 Rev 2.0 **Prepped:** 11/21/2016 08:45  
**Source:** 16K1172-02 **Analyzed:** 11/21/2016 13:11  

Analyte	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Qual
Nitrogen, Ammonia (As N)	4.01	0.10	mg/L	4.000	0.239	94.3	90-110	2.15	20	

**Sample ID:** Matrix Spike Dup (B094806-MSD2) **Method:** EPA 350.1 Rev 2.0 **Prepped:** 11/21/2016 08:45  
**Source:** 16K1177-05 **Analyzed:** 11/21/2016 13:24  

Analyte	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Qual
Nitrogen, Ammonia (As N)	3.80	0.10	mg/L	4.000	0.166	90.8	90-110	2.86	20	

**Batch:** B094858 **Prep:** Aqueous Ammonia Distillation

### Nitrogen, Ammonia as N

**Sample ID:** Blank (B094858-BLK1) **Method:** EPA 350.1 Rev 2.0 **Prepped:** 11/22/2016 08:15  
**Source:** **Analyzed:** 11/22/2016 11:59  

Analyte	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Qual
Nitrogen, Ammonia (As N)	ND	0.10	mg/L							

**Sample ID:** LCS (B094858-BS1) **Method:** EPA 350.1 Rev 2.0 **Prepped:** 11/22/2016 08:15  
**Source:** **Analyzed:** 11/22/2016 12:01  

Analyte	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Qual
Nitrogen, Ammonia (As N)	4.18	0.10	mg/L	4.000		105	90-110			

## Analytical QC Summary

**Client:** Admiralty Environmental, LLC **Wet Chemistry - Quality Control**

**Work Order:** 16K1236

**Project:** Juneau International Airport/AE 16431

**Batch:** B094858 **Prep:** Aqueous Ammonia Distillation

**Sample ID:** Matrix Spike (B094858-MS1) **Method:** EPA 350.1 Rev 2.0 **Prepped:** 11/22/2016 08:15

**Source:** 16K1245-05 **Analyzed:** 11/22/2016 12:15

Analyte	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Qual
Nitrogen, Ammonia (As N)	3.81	0.10	mg/L	4.000	0.0795	93.3	90-110			

**Sample ID:** Matrix Spike (B094858-MS2) **Method:** EPA 350.1 Rev 2.0 **Prepped:** 11/22/2016 08:15

**Source:** 16K1253-02 **Analyzed:** 11/22/2016 12:31

Analyte	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Qual
Nitrogen, Ammonia (As N)	4.22	0.10	mg/L	4.000	0.291	98.2	90-110			

**Sample ID:** Matrix Spike Dup (B094858-MSD1) **Method:** EPA 350.1 Rev 2.0 **Prepped:** 11/22/2016 08:15

**Source:** 16K1245-05 **Analyzed:** 11/22/2016 12:21

Analyte	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Qual
Nitrogen, Ammonia (As N)	3.93	0.10	mg/L	4.000	0.0795	96.3	90-110	3.12	20	

**Sample ID:** Matrix Spike Dup (B094858-MSD2) **Method:** EPA 350.1 Rev 2.0 **Prepped:** 11/22/2016 08:15

**Source:** 16K1253-02 **Analyzed:** 11/22/2016 12:33

Analyte	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Qual
Nitrogen, Ammonia (As N)	4.15	0.10	mg/L	4.000	0.291	96.5	90-110	1.62	20	

**PREPARATION BENCH SHEET****B094806****Microbac Laboratories, Inc. - Chicagoland****Printed: 11/22/2016 4:55:47PM****Matrix: Aqueous****Prepared Using: Aqueous Ammonia Distillation**

Lab Number	Analysis	Prepared	Initial mL	Final mL	Sur 1 uL	Sur 2 uL	Spike 1 ID	Spike 2 ID	Spike 1 uL	Spike 2 uL	Source ID
16K1236-01	NH4 350.1	11/21/2016 12:00:00PM	50.00	50.00							
B094806-BLK1	NH4 350.1	11/21/2016 8:45:00AM	50.00	50.00							
B094806-BS1	NH4 350.1	11/21/2016 8:45:00AM	50.00	50.00			0069979		200		
B094806-MS1	NH4 350.1	11/21/2016 8:45:00AM	50.00	50.00			0069979		200		16K1172-02
B094806-MS2	NH4 350.1	11/21/2016 8:45:00AM	50.00	50.00			0069979		200		16K1177-05
B094806-MSD1	NH4 350.1	11/21/2016 8:45:00AM	50.00	50.00			0069979		200		16K1172-02
B094806-MSD2	NH4 350.1	11/21/2016 8:45:00AM	50.00	50.00			0069979		200		16K1177-05

Microbac Laboratories, Inc.

250 West 84<sup>th</sup> Drive | Merrillville, IN 46410 | 800.536.8379 p | 219.769.8378 p | 219.769.1664 f | [www.microbac.com](http://www.microbac.com)

**PREPARATION BENCH SHEET****B094858****Microbac Laboratories, Inc. - Chicagoland****Printed: 11/22/2016 4:55:47PM****Matrix: Aqueous****Prepared Using: Aqueous Ammonia Distillation**

Lab Number	Analysis	Prepared	Initial mL	Final mL	Sur 1 uL	Sur 2 uL	Spike 1 ID	Spike 2 ID	Spike 1 uL	Spike 2 uL	Source ID
16K1236-04	NH4 350.1	11/22/2016 8:15:00AM	50.00	50.00							
16K1236-03	NH4 350.1	11/22/2016 8:15:00AM	50.00	50.00							
16K1236-05	NH4 350.1	11/22/2016 8:15:00AM	50.00	50.00							
16K1236-06	NH4 350.1	11/22/2016 8:15:00AM	50.00	50.00							
16K1236-02	NH4 350.1	11/22/2016 8:15:00AM	50.00	50.00							
B094858-BLK1	NH4 350.1	11/22/2016 8:15:00AM	50.00	50.00							
B094858-BS1	NH4 350.1	11/22/2016 8:15:00AM	50.00	50.00			0069979		200		
B094858-MS1	NH4 350.1	11/22/2016 8:15:00AM	50.00	50.00			0069979		200		16K1245-05
B094858-MS2	NH4 350.1	11/22/2016 8:15:00AM	50.00	50.00			0069979		200		16K1253-02
B094858-MSD1	NH4 350.1	11/22/2016 8:15:00AM	50.00	50.00			0069979		200		16K1245-05
B094858-MSD2	NH4 350.1	11/22/2016 8:15:00AM	50.00	50.00			0069979		200		16K1253-02









**Admiralty Environmental**  
641 W. Willoughby Ave., Suite 301  
Juneau, AK 99801  
(907) 463-4415 fax (480) 247-4476

**CHAIN OF CUSTODY/TRANSMITTAL RECORD**  
PAGE 1 OF 1

**Juneau International Airport**

**PROJECT: Stormwater Sampling**

**TO:** Ken Nichols, Nichols Engineering  
**PHONE#:** 907-586-0463 / call 208-216-6039  
**IS:** PO Box 32601, Juneau AK 99803  
**SAMPLED BY:** Ken Nichols

ken.nichols@jnuairport.com / ken@nichols-eng.com

ohn.coleman@jnuairport.com

AE ~~16244~~  
16431

16K1236

**Field Results**

pH Temp

DATE	TIME	SITE DESCRIPTION / IDENTIFIER	MATRIX	# OF BOTTLES
11/10/16	1250	3	H2O	1
11/10/16	1300	16	H2O	1
11/10/16	1310	6	H2O	1
11/10/16	1318	7	H2O	1
11/10/16	1320	8	H2O	1
11/10/16	1325	10	H2O	1

-01  
-02  
-03  
-04  
-05  
-06

<b>RELINQUISHED BY:</b> Signature: <i>Ken Nichols</i> Printed Name: Ken Nichols DATE: 11/10/16 TIME: 13:45	<b>RECEIVED BY:</b> Signature: <i>Hope O'Neill</i> Printed Name: Hope O'Neill DATE: 11/10/16 TIME: 1345	<b>RELINQUISHED BY:</b> Signature: <i>Hope O'Neill</i> Printed Name: Hope O'Neill DATE: 11/16/16 TIME: 0804	<b>RECEIVED BY:</b> Signature: <i>Nicole Renee</i> Printed Name: Nicole Renee DATE: 11/17/16 TIME: 0930	<b>Section to be Completed by Receiving Laboratory</b> Temp/Loc: 6.0 Thermo ID#: 123 Condition of Custody Seals: <input checked="" type="checkbox"/> Initialed By: <i>HD</i> Shipped Via: <i>Fedex</i>
--	---	---	---	---

Fedex 01

-0.7  
-0.5  
-0.7°C





# Admiralty Environmental Cooler Receipt Form

Client: **Admiralty Environmental, LLC**  
Project: **Juneau International Airport**

AE# AE 16431

Date Opened: **11/10/2016** Opened by: **H. O'Neill**

## A. External Cooler Conditions

### • Local Sampling Event

1. Project ID: **Nichols engineering, seasonal sampling**

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

Small Temp. Blank **n/a** (temp in Celsius)  
Large Temp. Blank: **6.00** (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: **6**

Number of Bottles Received: **12**

Packing type: **Cooler**

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**

Problems encountered: **no**

Was the project manager called? **no**

COMMENTS:

Signature: \_\_\_\_\_

Date and time: 11/10/16, 1345





## COOLER INSPECTION

Client Name: Admiralty Environmental, LLC

Work Order Number: 16K1236

Checklist completed by: 11/17/2016 11:11:00AM | Nicole Rainwater

Carrier Name: FedEx

Date: Tuesday, November 22, 2016

Date/Time Received: 11/17/2016 09:30

Received by: Nicole Rainwater

Reviewed by: 11/17/2016 | CAG

Cooler ID: Default Cooler

Container/Temp Blank Temperature: -0.7° C

After-Hour Arrival?	Yes	<input type="checkbox"/>	No	<input checked="" type="checkbox"/>	
Shipping container/cooler in good condition?	Yes	<input checked="" type="checkbox"/>	No	<input type="checkbox"/>	Not Present <input type="checkbox"/>
Custody seals intact on shipping container/cooler?	Yes	<input checked="" type="checkbox"/>	No	<input type="checkbox"/>	Not Present <input type="checkbox"/>
Custody seals intact on sample containers?	Yes	<input type="checkbox"/>	No	<input type="checkbox"/>	Not Present <input checked="" type="checkbox"/>
COC present?	Yes	<input checked="" type="checkbox"/>	No	<input type="checkbox"/>	
COC included sufficient client identification?	Yes	<input checked="" type="checkbox"/>	No	<input type="checkbox"/>	
COC included sufficient sample collector information?	Yes	<input checked="" type="checkbox"/>	No	<input type="checkbox"/>	
COC included a sample description?	Yes	<input checked="" type="checkbox"/>	No	<input type="checkbox"/>	
COC agrees with sample labels?	Yes	<input checked="" type="checkbox"/>	No	<input type="checkbox"/>	
COC identified the appropriate matrix?	Yes	<input checked="" type="checkbox"/>	No	<input type="checkbox"/>	
COC included date of collection?	Yes	<input checked="" type="checkbox"/>	No	<input type="checkbox"/>	
COC included time of collection?	Yes	<input checked="" type="checkbox"/>	No	<input type="checkbox"/>	
COC identified the appropriate number of containers?	Yes	<input checked="" type="checkbox"/>	No	<input type="checkbox"/>	
Samples in proper container/bottle?	Yes	<input checked="" type="checkbox"/>	No	<input type="checkbox"/>	
Sample containers intact?	Yes	<input checked="" type="checkbox"/>	No	<input type="checkbox"/>	
Sufficient sample volume for indicated test?	Yes	<input checked="" type="checkbox"/>	No	<input type="checkbox"/>	
All samples received within holding time?	Yes	<input checked="" type="checkbox"/>	No	<input type="checkbox"/>	
If the samples are preserved, are the preservatives identified?	Yes	<input checked="" type="checkbox"/>	No	<input type="checkbox"/>	

If No, adjusted by? \_\_\_\_\_

COC included the requested analyses?	Yes	<input checked="" type="checkbox"/>	No	<input type="checkbox"/>	
COC signed when relinquished and received?	Yes	<input checked="" type="checkbox"/>	No	<input type="checkbox"/>	
Samples received on ice?	Yes	<input checked="" type="checkbox"/>	No	<input type="checkbox"/>	
Samples properly preserved?	Yes	<input checked="" type="checkbox"/>	No	<input type="checkbox"/>	
Voa vials for aqueous samples have zero headspace?	Yes	<input type="checkbox"/>	No	<input type="checkbox"/>	No VOA vials submitted <input checked="" type="checkbox"/>

Cooler Comments: \_\_\_\_\_

ANY "NO" EVALUATION (excluding After-Hour Receipt) REQUIRES CLIENT NOTIFICATION.

Sample ID	Client Sample ID	Comments
16K1236-01	3	
16K1236-02	16	
16K1236-03	6	
16K1236-04	7	
16K1236-05	8	
16K1236-06	10	

Microbac Laboratories, Inc.

250 West 84<sup>th</sup> Drive | Merrillville, IN 46410 | 800.536.8379 p | 219.769.8378 p | 219.769.1664 f | www.microbac.com





641 W. Willoughby Ave., Suite 301 Juneau, AK 99801 (907) 463-4415 (480) 247-4476 (f)

---

Mr. Ken Nichols  
Nichols Engineering  
PO Box 32601  
Juneau, AK 99803

December 29, 2016

**JNU International Airport Stormwater Sampling**

Date of Collection: December 18, 2016  
Sampling Location: Juneau, Alaska

**Summary**

Eight storm water samples from the Juneau International Airport were received at Admiralty Environmental, Juneau, AK on December 19, 2016.

Samples were analyzed for Biochemical Oxygen Demand, pH, Ammonia and Chemical Oxygen Demand. 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,

A handwritten signature in dark ink, appearing to read "David Wetzel", is written over a light blue horizontal line.

David Wetzel  
Admiralty Environmental



641 W. Willoughby Ave., Suite 301 Juneau, AK 99801  
(907) 463 - 4415 Fax (480) 247 - 4476

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## Juneau International Airport

### Stormwater Sampling

December 18, 2016

Juneau, AK

### Analytical Report - Page 1

Admiralty Environmental EPA ID AK 00976

AE 16628

Sample Location	10	9	8	7
Date & Time Sampled	12/18/2016; 09:10	12/18/2016; 09:20	12/18/2016; 09:25	12/18/2016; 09:30
BOD (mg/L)	12	8.2	26	51
COD (mg/L)	340	32	78	110
Ammonia (mg/L)	6.2	<0.5	11	19
pH	7.17	6.69	7.61	7.75

#### Quality Control:

Analysis	MB	LCS	LCS Duplicate	RPD	Date/Time Commenced	Holding time met
BOD	< 2	102.5%	101.0%	1.5	12/19/2016; 09:35	yes
COD	< 4	103.4%	102.8%	0.6	12/19/2016; 11:20	yes
NH3	<0.5	106.0%	104.0%	1.9	12/19/2016; 14:05	yes
pH	---	---	---	---	12/19/2016; 14:55	yes

#### Analysis Description:

Analysis	Method	MDL	PQL	Unit
BOD	EPA 405.1	0.5	2.0	mg/L
COD	SM 5220D	4.0	15.0	mg/L
pH	EPA 150.1	0.10	0.1	pH units
NH3	Hach 10205	0.10	0.5	mg/L

#### Case Narrative:

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

#### Key:

BOD	Biochemical Oxygen Demand
COD	Chemical Oxygen Demand
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  
President, Admiralty Environmental  
[dwetzel@admiraltyenv.com](mailto:dwetzel@admiraltyenv.com)



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## Juneau International Airport

### Stormwater Sampling

December 18, 2016

Juneau, AK

### Analytical Report - Page 2

Admiralty Environmental EPA ID AK 00976

AE 16628

Sample Location	6	16	11	3
Date & Time Sampled	12/18/2016; 09:35	12/18/2016; 09:55	12/18/2016; 10:10	12/18/2016; 10:25
BOD (mg/L)	3.2	<2.0	2.4	21
COD (mg/L)	32	400	54	69
Ammonia (mg/L)	<0.5	0.51	0.94	7.0
pH	7.20	7.53	7.05	7.01

#### Quality Control:

Analysis	MB	LCS	LCS Duplicate	RPD	Date/Time Commenced	Holding time met
BOD	< 2	102.5%	101.0%	1.5	12/19/2016; 09:35	yes
COD	< 4	103.4%	102.8%	0.6	12/19/2016; 11:20	yes
NH3	<0.5	106.0%	104.0%	1.9	12/19/2016; 14:05	yes
pH	---	---	---	---	12/19/2016; 14:55	yes

#### Analysis Description:

Analysis	Method	MDL	PQL	Unit
BOD	EPA 405.1	0.5	2.0	mg/L
COD	SM 5220D	4.0	15.0	mg/L
pH	EPA 150.1	0.10	0.1	pH units
NH3	Hach 10205	0.10	0.5	mg/L

#### Case Narrative:

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

#### Key:

BOD	Biochemical Oxygen Demand
COD	Chemical Oxygen Demand
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  
President, Admiralty Environmental  
[dwetzel@admiraltyenv.com](mailto:dwetzel@admiraltyenv.com)





**Admiralty Environmental**  
641 W. Willoughby Ave., Suite 301  
Juneau, AK 99801  
(907) 463-4415 fax (480) 247-4476

CHAIN OF CUSTODY/TRANSMITTAL RECORD  
PAGE 1 OF 1

CLIENT: **Juneau International Airport**

PROJECT: **Stormwater Sampling**

REPORT TO: **Ken Nichols, Nichols Engineering, LLC**

PHONE#: **907-586-0453 / cell 208-215-6039**

ADDRESS: **PO Box 32601, Juneau AK 99803**

SAMPLED BY: **Ken Nichols**

EMAIL: **ken.nichols@jnuairport.com / ken@nichols-eng.com**

Bill to: **john.coleman@jnuairport.com**

AE 16628

			MATRIX	# OF BOTTLES	pH, BOD	COD	NH3													Field Results			
DATE	TIME	SITE DESCRIPTION / IDENTIFIER																		pH	Temp		
12/18/16	0910	10	H20	2	1	1	1																
	0920	9																					
	0925	8																					
	0930	7																					
	0935	6																					
	0955	16																					
	1010	11																					
	1025	3																					

RELINQUISHED BY:

RECEIVED BY:

RELINQUISHED BY:

RECEIVED BY:

Signature  
*Ken Nichols*

Signature  
*Th*

Signature

Signature

Printed Name  
*Ken Nichols*

Printed Name  
*Bowie He*

Printed Name

Printed Name

DATE  
*12/19/16*

DATE  
*12/19/16*

DATE

DATE

TIME  
*0843*

TIME  
*8:43*

TIME

TIME

Section to Be Completed by Receiving Laboratory

Temp/Loc:

Thermo ID#:

Condition of Custody Seals:

Initialed By:

Shipped Via:

*4.5*  
*IR Gun #3*  
*✓*  
*Bill*





# Admiralty Environmental Cooler Receipt Form

Client: **Admiralty Environmental, LLC**  
Project: **Juneau International Airport**

AE# AE 16628

Date Opened: **12/19/2016** Opened by: **B. He**

## A. External Cooler Conditions

### • Local Sampling Event

1. Project ID: **Stormwater Sampling**

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

Small Temp. Blank **4.50** (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: **8**  
Number of Bottles Received: **16**

Packing type: **Cooler**

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**

Problems encountered: **no**

Was the project manager called? **no**

COMMENTS:

Signature: \_\_\_\_\_

Date and time: **12/19/16 843**





**Admiralty**  
ENVIRONMENTAL

641 W. Willoughby Ave., Suite 301 Juneau, AK 99801 (907) 463-4415 (480) 247-4476 (f)

---

Mr. Ken Nichols  
Nichols Engineering  
PO Box 32601  
Juneau, AK 99803

February 3, 2017

**JNU International Airport Stormwater Sampling**

Date of Collection: January 24, 2017  
Sampling Location: Juneau, Alaska

**Summary**

Eight samples from Sites 2, 6, 7, 8, 9, 10, 11, and 16 of the Juneau International Airport were received at Admiralty Environmental, Juneau, AK on January 24, 2017.

Samples were analyzed for Biochemical Oxygen Demand, pH, Ammonia and Chemical Oxygen Demand. 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,

David Wetzel  
Admiralty Environmental



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## Juneau International Airport

### Stormwater Sampling

January 24, 2017

Juneau, AK

### Analytical Report - Page 1

Admiralty Environmental EPA ID AK 00976

AE 16784

Sample Location	Site 10	Site 8	Site 7	Site 6
Date & Time Sampled	1/24/2017; 08:45	1/24/2017; 09:00	1/24/2017; 09:03	1/24/2017; 09:05
BOD (mg/L)	15	11	8.1	3.3
COD (mg/L)	46	38	26	<15
Ammonia (mg/L)	31	25	20	3.4
pH	7.91	7.74	7.71	7.44

#### Quality Control:

Analysis	MB	LCS	LCS Duplicate	RPD	Date/Time Commenced	Holding time met
BOD	< 2	106.8%	80.8%	27.7%	1/25/2017; 09:30	yes
COD	< 4	100.0%	96.0%	4.1%	1/31/2017; 10:30	yes
NH3	<0.5	103.0%	101.0%	2.0%	1/27/2017; 11:11	yes
pH	—	—	—	—	1/24/2017; 16:10	yes

#### Analysis Description:

Analysis	Method	MDL	PQL	Unit
BOD	EPA 405.1	0.5	2.0	mg/L
COD	SM 5220D	4.0	15.0	mg/L
pH	EPA 150.1	0.10	0.1	pH units
NH3	Hach 10205	0.10	0.5	mg/L

#### Case Narrative:

The BOD RPD percent recovery was above QC acceptance criteria. All other sample analysis QA/QC parameters were met for this event.

#### Key:

BOD	Biochemical Oxygen Demand
COD	Chemical Oxygen Demand
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  
President, Admiralty Environmental  
[dwetzel@admiraltyenv.com](mailto:dwetzel@admiraltyenv.com)



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## Juneau International Airport

### Stormwater Sampling

January 24, 2017

Juneau, AK

### Analytical Report - Page 2

Admiralty Environmental EPA ID AK 00976

AE 16784

Sample Location	Site 9	Site 2	Site 16	Site 11
Date & Time Sampled	1/24/2017; 09:10	1/24/2017; 09:25	1/24/2017; 14:45	1/24/2017; 15:00
BOD (mg/L)	5.7	15	34	33
COD (mg/L)	26*	160	280	68*
Ammonia (mg/L)	8.0	9.2	4.4	1.8
pH	7.36	7.48	7.43	5.99

#### Quality Control:

Analysis	MB	LCS	LCS Duplicate	RPD	Date/Time Commenced	Holding time met
BOD	< 2	106.8%	80.8%	27.7%	1/25/2017; 09:30	yes
COD	< 4	92.6%	91.2%	1.5%	1/27/2017; 10:41	yes
*COD	< 4	100.0%	96.0%	4.1%	1/31/2017; 10:30	yes
NH3	<0.5	103.0%	101.0%	2.0%	1/27/2017; 11:11	yes
pH	—	—	—	—	1/24/2017; 16:10	yes

#### Analysis Description:

Analysis	Method	MDL	PQL	Unit
BOD	EPA 405.1	0.5	2.0	mg/L
COD	SM 5220D	4.0	15.0	mg/L
pH	EPA 150.1	0.10	0.1	pH units
NH3	Hach 10205	0.10	0.5	mg/L

#### Case Narrative:

The BOD RPD percent recovery was above QC acceptance criteria. All other sample analysis QA/QC parameters were met for this event.

#### Key:

BOD	Biochemical Oxygen Demand
COD	Chemical Oxygen Demand
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  
President, Admiralty Environmental  
[dwetzel@admiraltyenv.com](mailto:dwetzel@admiraltyenv.com)



CLIENT: **Juneau International Airport**

## PROJECT: Stormwater Sampling

REPORT TO:	Ken Nichols, Nichols Engineering
------------	----------------------------------

PHONE#:	907-586-0453 / cell 208-215-6039
---------	-------------------------------------

ADDRESS: PO Box 32601, Juneau AK  
99803

**SAMPLED BY: Ken Nichols**

EMAIL: [ken.nichols@jnuairport.com](mailto:ken.nichols@jnuairport.com) / [ken@nichols-eng.com](mailto:ken@nichols-eng.com)


Bill to: **john.coleman@jnuairport.com**

AE 16784

## Field Results

pH

Temp

DATE	TIME	SITE DESCRIPTION /IDENTIFIER	MATRIX
1/24/17	0845	10	H2O
1/24/17	0900	8	
1/24/17	0903	7	
1/24/17	0905	6	
1/24/17	0910	9	
1/24/17	0925	2	
1/25/17	1445	16	
1/25/17	1500	11	

# OF BOTTLES

pH, BOD

COD, NH<sub>3</sub>

10

RECEIVED BY:

Signature

Printed Name

DATE \_\_\_\_\_

TIME

RELINQUISHED BY:

Signature

Printed Name \_\_\_\_\_

DATE \_\_\_\_\_

TIME

RECEIVED BY:

Signature \_\_\_\_\_

Printed Name

DATE \_\_\_\_\_

TIME

RELINQUISHED BY:

Signature \_\_\_\_\_

Printed Name

DATE \_\_\_\_\_

TIME

Section to Be Completed by Receiving Laboratory

Temp/Loc:

Thermo ID#:

Condition of  
Custody Seals:

Initialed By:

Shipped Via:





# Admiralty Environmental Cooler Receipt Form

Client: **Admiralty Environmental, LLC**  
Project: **Juneau International Airport**

AE# AE 16784

Date Opened: **1/24/2017** Opened by: **A. Whitehead**

## A. External Cooler Conditions

### • Local Sampling Event

1. Project ID: **Stormwater Sampling**

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

Small Temp. Blank **2.47** (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: **8**  
Number of Bottles Received: **16**

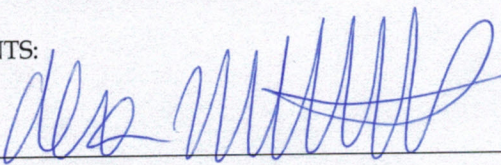
Packing type: **Cooler**

- 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**

Problems encountered: **no**

Was the project manager called? **no**

COMMENTS:

Signature: 

Date and time: **1/24/17; 15:43**





**Admiralty**  
ENVIRONMENTAL

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---

Mr. Ken Nichols  
Nichols Engineering  
PO Box 32601  
Juneau, AK 99803

March 2, 2017

**JNU International Airport Stormwater Sampling**

Date of Collection: February 15, 2017  
Sampling Location: Juneau, Alaska

**Summary**

Seven samples from sites 3, 6, 8, 9, 10, 11, and 16 of the Juneau International Airport were received at Admiralty Environmental, Juneau, AK on February 15, 2017.

Samples were analyzed for Biochemical Oxygen Demand, pH, Ammonia and Chemical Oxygen Demand. 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,

David Wetzel  
Admiralty Environmental



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(907) 463 - 4415 Fax (480) 247 - 4476

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## Juneau International Airport

### Stormwater Sampling

February 15, 2017

Juneau, AK

### Analytical Report

Admiralty Environmental EPA ID AK 00976

AE 16874

Sample Location	Site 3	Site 6	Site 8	Site 9
Date & Time Sampled	2/15/2017; 10:05	2/15/2017; 09:35	2/15/2017; 09:20	2/15/2017; 09:30
BOD (mg/L)	< 2.0	< 2.0	< 2.0	< 2.0
COD (mg/L)	17	< 15	< 15	19
Ammonia (mg/L)	9.2	1.9	6.4	<0.5
pH	7.82	7.39	7.19	7.03

#### Quality Control:

Analysis	MB	LCS	LCS Duplicate	RPD	Date/Time Commenced	Holding time met
BOD	< 2	89.6%	87.1%	2.8	2/17/2017; 08:15	yes
COD	< 4	112.0%	100.0%	11.3	2/17/2017; 12:25	yes
NH3	<0.5	104.0%	101.0%	2.9	2/27/2017; 11:55	yes
pH	---	---	---	---	2/15/2017; 14:30	yes

#### Analysis Description:

Analysis	Method	MDL	PQL	Unit
BOD	EPA 405.1	0.5	2.0	mg/L
COD	SM 5220D	4.0	15.0	mg/L
pH	EPA 150.1	0.10	0.1	pH units
NH3	Hach 10205	0.10	0.5	mg/L

#### Case Narrative:

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

#### Key:

BOD	Biochemical Oxygen Demand
COD	Chemical Oxygen Demand
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  
President, Admiralty Environmental  
[dwetzel@admiraltyenv.com](mailto:dwetzel@admiraltyenv.com)



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## Juneau International Airport

### Stormwater Sampling

February 15, 2017

Juneau, AK

### Analytical Report

Admiralty Environmental EPA ID AK 00976

AE 16874

Sample Location	Site 10	Site 11	Site 16
Date & Time Sampled	2/15/2017; 09:25	2/15/2017; 09:55	2/15/2017; 09:45
BOD (mg/L)	< 2.0	< 2.0	11
COD (mg/L)	22	< 15	48
Ammonia (mg/L)	4.3	<0.5	3.2
pH	6.98	6.83	7.46

#### Quality Control:

Analysis	MB	LCS	LCS Duplicate	RPD	Date/Time Commenced	Holding time met
BOD	< 2	89.6%	87.1%	2.8	2/17/2017; 08:15	yes
COD	< 4	112.0%	100.0%	11.3	2/17/2017; 12:25	yes
NH3	<0.5	104.0%	101.0%	2.9	2/27/2017; 11:55	yes
pH	---	---	---	---	2/15/2017; 14:30	yes

#### Analysis Description:

Analysis	Method	MDL	PQL	Unit
BOD	EPA 405.1	0.5	2.0	mg/L
COD	SM 5220D	4.0	15.0	mg/L
pH	EPA 150.1	0.10	0.1	pH units
NH3	Hach 10205	0.10	0.5	mg/L

#### Case Narrative:

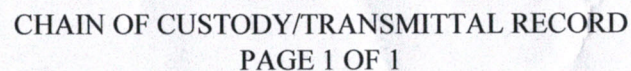
All sample analysis QA/QC parameters were met for this event.

#### Key:

BOD	Biochemical Oxygen Demand
COD	Chemical Oxygen Demand
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  
President, Admiralty Environmental  
[dwetzel@admiraltyenv.com](mailto:dwetzel@admiraltyenv.com)









# Admiralty Environmental Cooler Receipt Form

Client: **Admiralty Environmental, LLC**  
Project: **Juneau International Airport**

AE# AE 16874

Date Opened: **2/15/2017** Opened by: **B He**

## A. External Cooler Conditions

### • Local Sampling Event

1. Project ID: **Stormwater Sampling**

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

Small Temp. Blank **5.40** (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: **7** Packing type: **Cooler**

Number of Bottles Received: **14**

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

2. Bottles intact? **yes**

3. Sufficient sample volume? **yes**

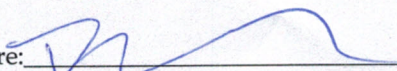
4. Labels agree with COC? **yes**

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

Problems encountered: **No**

Was the project manager called? **No**

COMMENTS:

Signature: 

Date and time: **2/15/17 1047**





641 W. Willoughby Ave., Suite 301 Juneau, AK 99801 (907) 463-4415 (480) 247-4476 (f)

---

Mr. Ken Nichols  
Nichols Engineering  
PO Box 32601  
Juneau, AK 99803

March 31, 2017

**JNU International Airport Stormwater Sampling**

Date of Collection: March 20 – 21, 2017  
Sampling Location: Juneau, Alaska

**Summary**

Seven samples from the Juneau International Airport were received at Admiralty Environmental, Juneau, AK on March 21, 2017.

Samples were analyzed for Biochemical Oxygen Demand, pH, Ammonia and Chemical Oxygen Demand. 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,

A handwritten signature in dark ink, appearing to read "David Wetzel", is written over a light blue horizontal line.

David Wetzel  
Admiralty Environmental





641 W. Willoughby Ave., Suite 301 Juneau, AK 99801 (907) 463 - 4415 Fax (480) 247 - 4476

[www.admiraltyenvironmental.com](http://www.admiraltyenvironmental.com)

## Juneau International Airport

### Stormwater Sampling

March 20, 2017

Juneau, AK

## Analytical Report

Admiralty Environmental EPA ID AK 00976

AE 17007

Sample Location	10	9	8	7	6	11	3
Date & Time Sampled	03/20/2017; 15:30	03/20/2017; 15:35	03/20/2017; 15:40	03/20/2017; 15:45	03/20/2017; 15:50	03/20/2017; 16:05	03/21/2017; 07:55
BOD (mg/L)	110	13	120	170	83	26	7.3
COD (mg/L)	280	130	320	330	200	300	87
Ammonia (mg/L)	140	33	120	200	94	40	10
pH	8.66	8.51	8.95	8.68	8.75	8.30	6.52

#### Quality Control:

Analysis	MB	LCS	LCS Duplicate	RPD	Date/Time Commenced	Holding time met
BOD	< 2	79.8%	79.0%	1.0	03/22/2017; 08:15	yes
COD	< 4	104.0%	103.0%	1.0	03/27/2017; 09:48	yes
NH3 (3,11,9)	<0.5	100.0%	99.6%	0.4	03/24/2017; 15:27	yes
NH3 (10,8,7,6)	<0.5	103.0%	103.0%	0.0	03/24/2017; 16:22	yes
pH	---	---	---	---	03/21/2017; 14:45	yes

#### Case Narrative:

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

#### Analysis Description:

Analysis	Method	MDL	PQL	Unit
BOD	EPA 405.1	0.5	2.0	mg/L
COD	SM 5220D	4.0	15.0	mg/L
NH3	Hach 10205	0.10	0.5	mg/L
pH	EPA 150.1	0.10	0.1	pH units

#### Key:

BOD	Biochemical Oxygen Demand	ND	Not Detected
COD	Chemical Oxygen Demand	PQL	Practical Quantitation Limit
LCS	Laboratory Control Standard	RPD	Relative Percent Difference
MB	Method Blank	NH3	Ammonia as N
MDL	Method Detection Limit	mg/L	Milligrams Per Liter

David Wetzel  
President, Admiralty Environmental  
[dwetzel@admiraltyenv.com](mailto:dwetzel@admiraltyenv.com)









# Admiralty Environmental Cooler Receipt Form

Client: **Admiralty Environmental, LLC**  
Project: **Juneau International Airport**

AE# AE 17007

Date Opened: **3/21/2017** Opened by: **BH**

## A. External Cooler Conditions

### • Local Sampling Event

1. Project ID: **Stormwater Sampling**

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

Small Temp. Blank **3.32** (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: **7** Packing type: **Cooler**

Number of Bottles Received: **14**

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

2. Bottles intact? **Yes**

3. Sufficient sample volume? **Yes**

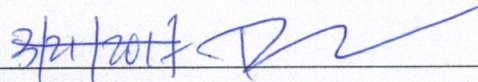
4. Labels agree with COC? **Yes**

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

Problems encountered: **No**

Was the project manager called? **No**

COMMENTS:

Signature: **3/21/2017**   
**BH**

Date and time: **3/21/2017 1155**



**Admiralty**  
ENVIRONMENTAL

641 W. Willoughby Ave., Suite 301 Juneau, AK 99801 (907) 463-4415 (480) 247-4476 (f)

---

Mr. Ken Nichols  
Nichols Engineering  
PO Box 32601  
Juneau, AK 99803

April 18, 2017

**JNU International Airport Stormwater Sampling**

Date of Collection: April 5, 2017  
Sampling Location: Juneau, Alaska

**Summary**

Six samples from Site 6, Site 8, Site 9, Site 10, Site 11, and Site 16 of the Juneau International Airport were received at Admiralty Environmental, Juneau, AK on April 5, 2017.

Samples were analyzed for Biochemical Oxygen Demand, pH, Ammonia and Chemical Oxygen Demand. 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,

David Wetzel  
Admiralty Environmental



## Juneau International Airport Stormwater Sampling

April 5, 2017

Juneau, AK

## Analytical Report

Admiralty Environmental EPA ID AK 00976

AE 17076

Sample Location	Site 6	Site 8	Site 9	Site 10	Site 11	Site 16
Date & Time Sampled	4/5/2017; 11:55	4/5/2017; 12:00	4/5/2017; 12:05	4/5/2017; 12:10	4/5/2017; 12:30	4/5/2017; 12:20
BOD (mg/L)	140	< 2.0	< 2.0	< 2.0	7.4	12
COD (mg/L)	240	14	12	150	23	83
Ammonia (mg/L)	12	9.9	1.8	26	1.1	11
pH	7.21	7.53	7.52	7.11	7.28	8.52

### Quality Control:

Analysis	MB	LCS	LCS Duplicate	RPD	Date/Time Commenced	Holding time met
BOD	< 2	85.1%	84.8%	0.4	4/6/2017; 08:40	yes
COD	< 4	102.0%	101.8%	0.2	4/10/2017; 11:07	yes
NH3	<0.5	105.0%	102.0%	2.9	4/10/2017; 13:11	yes
pH	---	---	---	---	4/5/2017; 15:22	yes

### Case Narrative:

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

### Analysis Description:

Analysis	Method	MDL	PQL	Unit
BOD	EPA 405.1	0.5	2.0	mg/L
COD	SM 5220D	4.0	15.0	mg/L
NH3	Hach 10205	0.10	0.5	mg/L
pH	EPA 150.1	0.10	0.1	pH units

### Key:

BOD	Biochemical Oxygen Demand	ND	Not Detected
COD	Chemical Oxygen Demand	PQL	Practical Quantitation Limit
LCS	Laboratory Control Standard	RPD	Relative Percent Difference
MB	Method Blank	NH3	Ammonia as N
MDL	Method Detection Limit	mg/L	Milligrams Per Liter

David Wetzel  
President, Admiralty Environmental  
[dwetzel@admiraltyenv.com](mailto:dwetzel@admiraltyenv.com)



**CLIENT:**

## Juneau International Airport

## PROJECT: Stormwater Sampling

REPORT TO:

**Ken Nichols, Nichols Engineering**

**PHONE#:**

907-586-0453 /  
cell 208-215-6039

**ADDRESS:**

PO Box 32601, Juneau AK  
99803

**SAMPLED BY: Ken Nichols**

EMAIL: [ken.nichols@jnuairport.com](mailto:ken.nichols@jnuairport.com) / [ken@nichols-eng.com](mailto:ken@nichols-eng.com)

Bill to: **john.coleman@jnuairport.com**

AE 1707

Field Data										Field Results				
DATE	TIME	SITE DESCRIPTION /IDENTIFIER	MATRIX	# OF BO	pH, BOD	NH3					pH	Temp		
4/5/17	1155	6	H2O	2	1	1								
4/5/17	1200	8	H2O	2	1	1								
4/5/17	1205	9	H2O	2	1	1								
4/5/17	1210	10	H2O	2	1	1								
4/5/17	1220	16	H2O	2	1	1								
4/5/17	1230	11	H2O	2	1	1								
RELINQUISHED BY:				RECEIVED BY:				Section to Be Completed by Receiving Laboratory						
Signature				Signature				Temp/Loc: 0.86 Thermo ID#: 823 Condition of Custody Seals: <input checked="" type="checkbox"/> Initialed By: <input checked="" type="checkbox"/> Shipped Via: <input checked="" type="checkbox"/>						
Printed Name				Printed Name										
DATE				DATE										
TIME				TIME										
Ken Nichols				Hope O'Neill										
4/5/17				4/5/17										
1438				1438										





# Admiralty Environmental Cooler Receipt Form

Client: **Admiralty Environmental, LLC**  
Project: **Juneau International Airport**

AE# AE 17076

Date Opened: **4/5/2017** Opened by: **H. O'Neill**

## A. External Cooler Conditions

### • Local Sampling Event

1. Project ID: **Stormwater Sampling**

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

Small Temp. Blank **n/a** (temp in Celsius)  
Large Temp. Blank: **0.86** (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: **6** Packing type: **Cooler**

Number of Bottles Received: **12**

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**

Problems encountered: **No**

Was the project manager called? **No**

COMMENTS:

Signature: 

Date and time: **4/5/17, 1428**





**Admiralty**  
ENVIRONMENTAL

641 W. Willoughby Ave., Suite 301 Juneau, AK 99801 (907) 463-4415 (480) 247-4476 (f)

---

Paul Lingley III  
1873 Shell Simmons Dr.  
Suite 200  
Juneau, AK 99801

March 22, 2018

**JNU International Airport Stormwater Sampling**

Date of Collection: March 12, 2018  
Sampling Location: Juneau, Alaska

**Summary**

Eight samples from the Juneau International Airport Stormwater were received at Admiralty Environmental, Juneau, AK on March 12, 2018.

The samples were analyzed for Biochemical Oxygen Demand, pH, Ammonia and Chemical Oxygen Demand. 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,

David Wetzel  
Admiralty Environmental





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www.admiraltyenvironmental.com

**Juneau International Airport****Stormwater Sampling**

March 12, 2018

Juneau, AK

**Analytical Report**

Admiralty Environmental EPA ID AK 00976

AE 19473

Sample Location	Upper Duck Creek - 2/#3	Terminal Area Discharge #6	Taxiway E-F Infield W. #7	Taxiway E-F Infield E. #8	NE Development Area Outlet #9	Taxiway G Culvert #10	Jordan Ck. Culvert Outlet #11	Pond Discharge to River #16
Date & Time Sampled	3/12/18; 10:05	3/12/18; 10:37	3/12/18; 10:50	3/12/18; 10:46	3/12/18; 10:31	3/12/18; 10:27	3/12/18; 10:36	3/12/18; 10:56
BOD (mg/L)	<2.0	310	35	64	4.2	25	110	83
COD (mg/L)	17	460	81	120	21	52	160	230
Ammonia (mg/L)	<0.5	10	28	49	0.58	15	2.9	6.2
pH	6.99	7.81	8.16	8.37	7.46	8.11	7.15	7.97

**Quality Control:**

Analysis	MB	LCS	LCS Duplicate	RPD	Date/Time Commenced	Holding time met
BOD	< 2	115.4%	114.4%	0.9	3/13/18; 08:30	yes
COD	< 4	103.4%	103.0%	0.4	3/16/18; 09:55	yes
NH3	<0.5	92.9%	93.3%	0.4	3/16/18; 10:40	yes
pH	---	---	---	---	3/12/18; 13:15	yes

**Case Narrative:**

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

**Analysis Description:**

Analysis	Method	MDL	PQL	Unit
BOD	EPA 405.1	0.5	2.0	mg/L
COD	SM 5220D	4.0	15	mg/L
NH3	Hach 10205	0.10	0.5	mg/L
pH	EPA 150.1	0.10	0.1	pH units

**Key:**

BOD	Biochemical Oxygen Demand	ND	Not Detected
COD	Chemical Oxygen Demand	PQL	Practical Quantitation Limit
LCS	Laboratory Control Standard	RPD	Relative Percent Difference
MB	Method Blank	NH3	Ammonia as N
MDL	Method Detection Limit	mg/L	Milligrams Per Liter

David Wetzel  
President, Admiralty Environmental  
dwetzel@admiraltyenv.com





# Admiralty Environmental Cooler Receipt Form

Client: Admiralty Environmental, LLC  
Project: JNU International Airport

AE# AE 19473

Date Opened: 3/12/2018 Opened by: H. O'Neill

## A. External Cooler Conditions

### • Local Sampling Event

1. Project ID: Stormwater Sampling

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

Small Temp. Blank 3.00 (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: 8

Number of Bottles Received: 16

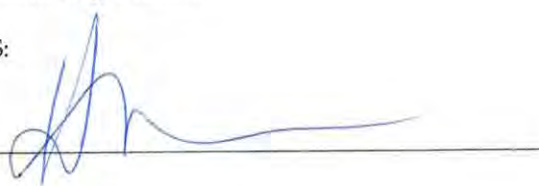
Packing type: Cooler

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

Problems encountered: no

Was the project manager called? no

COMMENTS:

Signature: 

Date and time: 3/12/18, 1154





**Admiralty**  
ENVIRONMENTAL

641 W. Willoughby Ave., Suite 301 Juneau, AK 99801 (907) 463-4415 (480) 247-4476 (f)

---

Paul Lingley III  
1873 Shell Simmons Dr.  
Suite 200  
Juneau, AK 99801

December 6, 2018

**JNU International Airport Stormwater Sampling**

Date of Collection: November 26, 2018  
Sampling Location: Juneau, Alaska

**Summary**

Seven samples from the Juneau International Airport were received at Admiralty Environmental, Juneau, AK on November 26, 2018.

Samples were analyzed for biochemical oxygen demand, chemical oxygen demand, ammonia and pH. 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,

David Wetzel  
Admiralty Environmental



641 W. Willoughby Ave., Suite 301 Juneau, AK 99801 (907) 463 - 4415 Fax (480) 247 - 4476

www.admiraltyenvironmental.com

## Juneau International Airport

Stormwater Sampling

November 26, 2018

Juneau, AK

### Analytical Report

Admiralty Environmental EPA ID AK 00976

AE 21465

Sample Location	Pond Discharge to River #16	Jordan Creek Culvert Outlet #11	Taxiway & Culvert #10	NE Development Area Outlet #9	Taxiway E-F in field East #8	Terminal Area Discharge #6	Upper Duck Creek-2 #3
Date & Time Sampled	11/26/2018; 12:01	11/26/2018; 12:16	11/26/2018; 11:37	11/26/2018; 11:33	11/26/2018; 12:21	11/26/2018; 12:26	11/26/2018; 11:38
BOD (mg/L)	9.3	8.2	5.2	<2.0	<2.0	360	15
COD (mg/L)	120	23	42	<15	17	600	42
Ammonia (mg/L)	1.0	<0.5	0.61	<0.5	0.86	6.3	9.9
pH	7.70	7.20	7.63	7.38	7.48	7.40	7.55

#### Quality Control:

Analysis	MB	LCS	LCS Duplicate	RPD	Date/Time Commenced	Holding time met
BOD	< 2	106.3%	109.1%	2.6%	11/28/2018; 08:25	Yes
COD	< 4	99.4%	100.0%	0.6%	11/30/2018; 12:15	Yes
NH3	<0.5	106.0%	106.0%	0.0%	11/30/2018; 15:05	Yes
pH	---	---	---	---	11/26/2018; 13:45	No

#### Case Narrative:

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

#### Analysis Description:

Analysis	Method	MDL	PQL	Unit
BOD	EPA 405.1	0.5	2.0	mg/L
COD	SM 5220D	4.0	15.0	mg/L
NH3	Hach 10205	0.10	0.5	mg/L
pH	EPA 150.1	0.10	0.1	pH units

#### Key:

BOD	Biochemical Oxygen Demand	ND	Not Detected
COD	Chemical Oxygen Demand	PQL	Practical Quantitation Limit
LCS	Laboratory Control Standard	RPD	Relative Percent Difference
MB	Method Blank	NH3	Ammonia as N
MDL	Method Detection Limit	mg/L	Milligrams Per Liter

David Wetzel  
President, Admiralty Environmental  
dwetzel@admiraltyenv.com



**Admiralty Environmental**  
641 W. Willoughby Ave., Suite 301  
Juneau, AK 99801  
(907) 463-4415 fax (480) 247-4476

CHAIN OF CUSTODY/TRANSMITTAL RECORD  
PAGE 1 OF 1

CLIENT: Juneau International Airport

**Stormwater Sampling**

AE 21465

REPORT TO: Paul Lingley III

PHONE#: 907-209-0555

ADDRESS: 1873 Shell Simmons Drive, Suite 200,  
Juneau AK 99801

SAMPLED BY:

*Paul Lingley III*

EMAIL: paul.lingleyiii@jnuairport.com

Bill to: john.coleman@jnuairport.com

				# OF BOTTLES	pH, BOD	COD, NH3											FIELD RESULTS			
DATE	TIME	SITE DESCRIPTION / IDENTIFIER	MATRIX														pH	Temp		
11-26-18	12:01	Pond Discharge to River / #16	H <sub>2</sub> O	2	1	1														
11-26-18	12:16	Jordan Creek Culvert Outlet / #11	H <sub>2</sub> O	2	1	1														
11-26-18	11:37	Taxiway G Culvert / #10	H <sub>2</sub> O	2	1	1														
11-26-18	11:33	NE Development Area Outlet / #9	H <sub>2</sub> O	2	1	1														
11-26-18	12:21	Taxiway E-F infield East / #8	H <sub>2</sub> O	2	1	1														
11-26-18	12:26	Terminal Area Discharge / #6	H <sub>2</sub> O	2	1	1														
11-26-18	11:38	Upper Duck Creek - 2 / #3	H <sub>2</sub> O	2	1	1														
			H <sub>2</sub> O	2	1	1														

RELINQUISHED BY:

Signature *Paul Lingley III*

Printed Name

*Paul Lingley III*

Date

11-26-18

Time

1:02

RECEIVED BY:

Signature *Kellie M Warner*

Printed Name

*Kellie M Warner*

Date

11/26/18

Time

1302

RELINQUISHED BY:

Signature

Printed Name

Date

Time

RECEIVED BY:

Signature

Printed Name

Date

Time

Section to Be Completed by Receiving Laboratory

Temp/Loc:

445

Lab #

✓

Condition of

Custody Seals:

Initials By:

Shipped Via:





# Admiralty Environmental Cooler Receipt Form

Client: **Admiralty Environmental, LLC**  
Project: **Juneau International Airport**

AE# AE 21465

Date Opened: **11/26/2018** Opened by: **K. Warren**

## A. External Cooler Conditions

### • Local Sampling Event

1. Project ID: **Stormwater Sampling**

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

Small Temp. Blank **4.45** (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: **7** Packing type: **Cooler**

Number of Bottles Received: **14**

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? **No - pH analyzed upon lab receipt**

Problems encountered: **No**

Was the project manager called? **No**

COMMENTS:

Signature: 

Date and time: 11/26/18, 1302



641 W. Willoughby Ave., Suite 301 Juneau, AK 99801 (907) 463-4415 (480) 247-4476 (f)

---

Paul Lingley III  
1873 Shell Simmons Dr.  
Suite 200  
Juneau, AK 99801

February 7, 2020

JNU International Airport Stormwater Sampling

Date of Collection: January 28, 2020  
Sampling Location: Juneau, Alaska

**Summary**

Seven samples from the Juneau International Airport were received at Admiralty Environmental, Juneau, AK on January 28, 2020.

The samples were analyzed for biochemical oxygen demand, chemical oxygen demand, ammonia and pH. 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,

A handwritten signature in blue ink that reads "Diana Cote". The signature is fluid and cursive, with a long horizontal stroke extending from the end of the name.

Diana Cote  
Admiralty Environmental



**Admiralty Environmental**  
641 W. Willoughby Ave., Suite 301  
Juneau, AK 99801  
(907) 463-4415 fax (480) 247-4476

CHAIN OF CUSTODY/TRANSMITTAL RECORD  
PAGE 1 OF 1

CLIENT: Juneau International Airport

REPORT TO: Paul Lingley III PHONE#: 907-209-0555

ADDRESS: 1873 Shell Simmons Drive, Suite 200,  
Juneau AK 99801

EMAIL: paul.lingleyIII@jnuairport.com

Bill to: john.coleman@jnuairport.com

Stormwater Sampling

DATE	TIME	SITE DESCRIPTION /IDENTIFIER	MATRIX	# OF BOTTLES	pH	BOD	COD, NH3	Temp
1-28-20	11:28	Upper Duck CR - 2 / #3	H <sub>2</sub> O	2	1	1		
1-28-20	11:41	Jordan CR Culvert Outlet / #11	H <sub>2</sub> O	2	1	1		
1-28-20	12:01	Taxiway G Culvert / #10	H <sub>2</sub> O	2	1	1		
1-28-20	12:05	NE Development area outlet / #9	H <sub>2</sub> O	2	1	1		
1-28-20	12:10	Taxiway E-F Infield East / #8	H <sub>2</sub> O	2	1	1		
1-28-20	12:11	Taxiway E-F Infield West / #7	H <sub>2</sub> O	2	1	1		
1-28-20	12:16	Terminal area Discharge / #6	H <sub>2</sub> O	2	1	1		

FIELD RESULTS

pH Temp

AE 24205

RELINQUISHED BY: RECEIVED BY:

Signature

Signature

Printed Name

Printed Name

Date

Date

Time

Time

RECEIVED BY:

Signature

Printed Name

Date

Time

Section to Be Completed by Receiving Laboratory

Temp/Loc:

Thermo ID#:

Condition of

Custody Seals:

Initiated By:

Shipped Via:

0.94

1910#

✓

AF

✓





# Admiralty Environmental Cooler Receipt Form

Client: **Admiralty Environmental, LLC**  
Project: **Juneau International Airport**

AE# AE 24265

Date Opened: **1/28/2020** Opened by: **A. Franks**

## A. External Cooler Conditions

### • Local Sampling Event

1. Project ID: **WW**

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

Small Temp. Blank **0.94** (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: **7**

Packing type: **Cooler**

Number of Bottles Received: **14**

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 yes**

Problems encountered: **no**

Was the project manager called? **no**

COMMENTS:

Signature: *Alexander*

Date and time: 1/28/20 13:52



641 W. Willoughby Ave., Suite 301 Juneau, AK 99801 (907) 463 - 4415 Fax (480) 247 - 4476  
www.admiraltyenvironmental.com

## Juneau International Airport

Permit AKR05CD55 Compliance

January 28, 2020

Juneau, AK

## Analytical Report

Admiralty Environmental EPA ID AK 00976

AE 24265

Sample Location	Site #3	Site #11	Site #10	Site #9	Site #8	Site #7	Site #6
Date & Time Sampled	1/28/20; 11:28	1/28/20; 11:41	1/28/20; 12:01	1/28/20; 12:05	1/28/20; 12:10	1/28/20; 12:11	1/28/20; 12:16
BOD (mg/L)	32	41	17	3.7	48	26	960
COD (mg/L)	61	74	43	19	90	50	1300
Ammonia (mg/L)	0.91	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
pH (S.U.)	6.72	6.99	7.37	7.27	7.61	7.45	7.12

### Quality Control:

Analysis	MB	LCS	LCS Duplicate	RPD	Date/Time Commenced	Holding time met
BOD	<2.0	76.0%	76.8%	1.0	1/30/20; 08:37	Yes
COD	<4.0	104.4%	103.6%	0.8	1/31/20; 12:16	Yes
NH3	<0.5	102.0%	99.3%	2.7	1/31/20; 12:57	Yes
pH	---	---	---	---	1/28/20; 13:00	No

### Case Narrative:

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

### Analysis Description:

Analysis	Method	MDL	PQL	Unit
BOD	EPA 405.1	2.0	2.0	mg/L
COD	SM 5220D	4.0	15.0	mg/L
NH3	Hach 10205	0.10	0.5	mg/L
pH	EPA 150.1	0.10	0.1	pH units

### Key:

BOD	Biochemical Oxygen Demand	ND	Not Detected
COD	Chemical Oxygen Demand	PQL	Practical Quantitation Limit
LCS	Laboratory Control Standard	RPD	Relative Percent Difference
MB	Method Blank	NH3	Ammonia as N
MDL	Method Detection Limit	mg/L	Milligrams Per Liter

*David Wetzel*

David Wetzel  
President, Admiralty Environmental  
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