



Admiralty
ENVIRONMENTAL

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

Paul Berry
Gustavus Disposal and Recycling Center
PO Box 1
Gustavus, AK 99826

May 1, 2022

Gustavus Disposal and Recycling Center Compliance Sampling

Date of Collection: April 18, 2022
Sampling Location: Gustavus, Alaska

Summary

One sample from the Gustavus Disposal and Recycling Center was received at Admiralty Environmental, Juneau, AK on April 19, 2022

The sample was analyzed for COD and conductivity. The bottles for total metals, mercury and hardness were forwarded to Microbac Laboratories, Merrillville, IN for analysis. 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, cooler receipt form

Kind Regards,

Diana Cote
Admiralty Environmental



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

www.admiraltyenvironmental.com

Gustavus Disposal and Recycling Center

ADEC Compliance

April 18, 2022

Gustavus, AK

Analytical Report

Admiralty Environmental EPA ID AK 00976

AE 28697

Sample Location	MW 3
Date & Time Sampled	4/18/2022; 10:19
COD (mg/L)	< 15
Conductivity (µs/cm)	462

Quality Control:

Analysis	MB	LCS	LCS Duplicate	RPD	Date/Time Commenced	Holding Time Met
EC	--	---	---	---	4/22/2022; 14:00	Yes
COD	<15	101.4%	101.2%	0.2%	4/22/2022; 13:55	Yes

Analysis Description:

Analysis	Method	MDL	PQL	Unit
EC	S.2510B	1.3	5.0	µs/cm
COD	SM 5220D	4.0	15	mg/L

Case Narrative:

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

Key:

µs/cm	Microsiemens Per Centimeter
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
TSS	Total Suspended Solids

David Wetzel
CTO, Admiralty Environmental
dwetzel@admiraltyenv.com



Microbac Laboratories, Inc. - Chicagoland

CERTIFICATE OF ANALYSIS

22D1349

Project Description

Gustavus Disposal and Recycling Center/AE 28697

For:

David Wetzel

Admiralty Environmental, LLC

641 W Willoughby AVE STE 301

Juneau, AK 99801

Carey Gadzala

Project Manager

Tuesday, April 26, 2022

Please find enclosed the analytical results for the samples you submitted to Microbac Laboratories. Review and compilation of your report was completed by Microbac Laboratories, Inc. - Chicagoland. If you have any questions, comments, or require further assistance regarding this report, please contact your service representative listed above.

I certify that all test results meet all of the requirements of the accrediting authority listed within this report. Analytical results are reported on a 'as received' basis unless specified otherwise. Analytical results for solids with units ending in (dry) are reported on a dry weight basis. A statement of uncertainty for each analysis is available upon request. This laboratory report shall not be reproduced, except in full, without the written approval of Microbac Laboratories. The reported results are related only to the samples analyzed as received.

Microbac Laboratories, Inc.

250 West 84th Drive | Merrillville, IN 46410 | 219.769.8378 p | www.microbac.com



Microbac Laboratories, Inc. - Chicagoland

CERTIFICATE OF ANALYSIS

22D1349

Admiralty Environmental, LLC

David Wetzel
641 W Willoughby AVE STE 301
Juneau, AK 99801

Project Name: Gustavus Disposal and Recycling

Center/AE 28697
Project / PO Number: N/A
Received: 04/21/2022
Reported: 04/26/2022

Sample Summary Report

<u>Sample Name</u>	<u>Laboratory ID</u>	<u>Client Matrix</u>	<u>Sample Type</u>	<u>Sample Begin</u>	<u>Sample Taken</u>	<u>Lab Received</u>
MW3	22D1349-01	Aqueous			04/18/22 10:19	04/21/22 14:00



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CERTIFICATE OF ANALYSIS

22D1349

Analytical Testing Parameters

Client Sample ID:	MW3	Collection Date:	04/18/2022 10:19
Sample Matrix:	Aqueous		
Lab Sample ID:	22D1349-01		

Inorganics Total	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
SM 2340 B-2011								
Hardness Calcium/Magnesium (As CaCO3)	240	33	mg/L	10		04/22/22 0819	04/25/22 1653	KMD
Metals Total by CVAA	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
SW-846 7470/EPA 245.1, Rv. 3 (1994)								
Mercury	<0.20	0.20	ppb	1		04/22/22 1007	04/25/22 1501	JNH
Metals Total by ICPMS	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
EPA 200.8, Rv. 5.4 (1994)								
Arsenic	1.3	1.0	ppb	1		04/22/22 0819	04/22/22 1545	KMD
Barium	31	1.0	ppb	1		04/22/22 0819	04/25/22 1657	KMD
Cadmium	<1.0	1.0	ppb	1		04/22/22 0819	04/22/22 1545	KMD
Chromium	1.2	1.0	ppb	1		04/22/22 0819	04/22/22 1545	KMD
Copper	<1.0	1.0	ppb	1		04/22/22 0819	04/25/22 1657	KMD
Lead	<1.0	1.0	ppb	1		04/22/22 0819	04/22/22 1545	KMD
Manganese	2.2	1.0	ppb	1		04/22/22 0819	04/26/22 1252	KMD
Nickel	<1.0	1.0	ppb	1		04/22/22 0819	04/22/22 1545	KMD
Selenium	<1.0	1.0	ppb	1		04/22/22 0819	04/22/22 1545	KMD
Zinc	6.3	2.0	ppb	1		04/22/22 0819	04/22/22 1545	KMD



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CERTIFICATE OF ANALYSIS

22D1349

Batch Log Summary

Method	Batch	Laboratory ID	Client / Source ID
SM 2340 B-2011	B194734	B194734-BLK1	
EPA 200.8, Rv. 5.4 (1994)		B194734-BLK1	
SM 2340 B-2011		B194734-BS1	
EPA 200.8, Rv. 5.4 (1994)		B194734-BS1	
SM 2340 B-2011		B194734-MS1	22D1337-01
EPA 200.8, Rv. 5.4 (1994)		B194734-MS1	22D1337-01
SM 2340 B-2011		B194734-MSD1	22D1337-01
EPA 200.8, Rv. 5.4 (1994)		B194734-MSD1	22D1337-01
		22D1349-01	MW3
SM 2340 B-2011		22D1349-01RE1	MW3
EPA 200.8, Rv. 5.4 (1994)		22D1349-01RE2	MW3
		22D1349-01RE1	MW3

Method	Batch	Laboratory ID	Client / Source ID
EPA 245.1, Rv. 3 (1994)	B194747	B194747-BLK1	
		B194747-BS1	
		B194747-MS1	22D1334-01
		B194747-MSD1	22D1334-01
		22D1349-01	MW3

Batch Quality Control Summary: Microbac Laboratories, Inc. - Chicagoland

Inorganics Total	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B194734 - 200.8_PR - SM 2340 B-2011										
Blank (B194734-BLK1)				Prepared & Analyzed: 04/22/2022						
Calcium	<0.50	0.50	mg/L							
Magnesium	<0.50	0.50	mg/L							
LCS (B194734-BS1)				Prepared & Analyzed: 04/22/2022						
Calcium	1.98	0.50	mg/L	2.0		99.1	80-120			
Magnesium	2.02	0.50	mg/L	2.0		101	80-120			
Matrix Spike (B194734-MS1)				Source: 22D1337-01 Prepared & Analyzed: 04/22/2022						
Calcium	53.1	0.50	mg/L	2.0	50.4	132	75-125			S
Magnesium	15.2	0.50	mg/L	2.0	13.0	110	75-125			
Matrix Spike Dup (B194734-MSD1)				Source: 22D1337-01 Prepared & Analyzed: 04/22/2022						
Calcium	52.0	0.50	mg/L	2.0	50.4	79.5	75-125	2.01	20	
Magnesium	15.0	0.50	mg/L	2.0	13.0	97.4	75-125	1.63	20	
Metals Total by CVAA	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B194747 - HGPREP_W - EPA 245.1, Rv. 3 (1994)										



Microbac Laboratories, Inc. - Chicagoland

CERTIFICATE OF ANALYSIS

22D1349

Metals Total by CVAA	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B194747 - HGPREP_W - EPA 245.1, Rv. 3 (1994)										
Blank (B194747-BLK1) Prepared: 04/22/2022 Analyzed: 04/25/2022										
Mercury	<0.20	0.20	ppb							
LCS (B194747-BS1) Prepared: 04/22/2022 Analyzed: 04/25/2022										
Mercury	1.84	0.20	ppb	2.0		91.8	85-115			
Matrix Spike (B194747-MS1) Source: 22D1334-01 Prepared: 04/22/2022 Analyzed: 04/25/2022										
Mercury	1.57	0.20	ppb	2.0	ND	78.4	70-130			
Matrix Spike Dup (B194747-MSD1) Source: 22D1334-01 Prepared: 04/22/2022 Analyzed: 04/25/2022										
Mercury	1.58	0.20	ppb	2.0	ND	78.8	70-130	0.445	20	
<hr/>										
Metals Total by ICPMS	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B194734 - 200.8_PR - EPA 200.8, Rv. 5.4 (1994)										
Blank (B194734-BLK1) Prepared & Analyzed: 04/22/2022										
Arsenic	<1.0	1.0	ppb							
Barium	<1.0	1.0	ppb							
Cadmium	<0.50	0.50	ppb							
Chromium	<1.0	1.0	ppb							
Copper	<1.0	1.0	ppb							
Lead	<1.0	1.0	ppb							
Manganese	<1.0	1.0	ppb							
Nickel	<1.0	1.0	ppb							
Selenium	<1.0	1.0	ppb							
Zinc	<2.0	2.0	ppb							
LCS (B194734-BS1) Prepared & Analyzed: 04/22/2022										
Arsenic	174	1.0	ppb	200		86.9	85-115			
Barium	214	1.0	ppb	220		97.1	85-115			
Cadmium	19.2	0.50	ppb	20		96.1	85-115			
Chromium	189	1.0	ppb	200		94.3	85-115			
Copper	19.9	1.0	ppb	20		99.4	85-115			
Lead	199	1.0	ppb	200		99.7	85-115			
Manganese	20.0	1.0	ppb	20		100	85-115			
Nickel	202	1.0	ppb	200		101	85-115			
Selenium	176	1.0	ppb	200		88.1	85-115			
Zinc	196	2.0	ppb	200		98.1	85-115			
Matrix Spike (B194734-MS1) Source: 22D1337-01 Prepared & Analyzed: 04/22/2022										
Arsenic	199	1.0	ppb	200	1.90	98.6	70-130			
Barium	355	1.0	ppb	220	113	110	70-130			
Cadmium	18.7	0.50	ppb	20	ND	93.6	70-130			
Chromium	215	1.0	ppb	200	6.54	104	70-130			
Copper	179	1.0	ppb	20	161	90.6	70-130			
Lead	177	1.0	ppb	200	2.35	87.2	70-130			
Manganese	31.1	1.0	ppb	20	14.9	81.4	70-130			
Nickel	216	1.0	ppb	200	4.83	105	70-130			
Selenium	200	1.0	ppb	200	ND	99.8	70-130			



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CERTIFICATE OF ANALYSIS

22D1349

Table with columns: Metals Total by ICPMS, Result, RL, Units, Spike Level, Source Result, %REC, %REC Limits, RPD, RPD Limit, Notes. Includes Matrix Spike (B194734-MS1) and Matrix Spike Dup (B194734-MSD1) data.

Definitions

- DF: Dilution Factor representing the amount the sample was diluted during analysis and may not represent preparation factors.
M2: Matrix spike recovery is outside of acceptance limits, biased low.
mg/L: Milligrams per Liter
ppb: Parts per Billion
RL: Reporting Limit
RPD: Relative Percent Difference
S: Spike recovery outside of acceptance limits.

Cooler Receipt Log

Cooler ID: Default Cooler Temp: 2.9°C

Cooler Inspection Checklist

Checklist table with 4 columns: Question, Yes/No, Question, Yes/No. Includes items like 'Ice Present or not required?', 'Shipping containers sealed or not required?', etc.



Microbac Laboratories, Inc. - Chicagoland

CERTIFICATE OF ANALYSIS

22D1349

Report Comments

*The data and information on this, and other accompanying documents, represents only the sample(s) analyzed. This report is incomplete unless all pages indicated in the footnote are present and an authorized signature is included. **The services were provided under and subject to Microbac's standard terms and conditions which can be located and reviewed at <https://www.microbac.com/standard-terms-conditions>.***

Reviewed and Approved By:

A handwritten signature in black ink that reads "Carey Gadzala".

Carey Gadzala
Project Manager
carey.gadzala@microbac.com
04/26/2022 16:13



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

CT NAME:
Gustavus Disposal and Recycling Center

ADEC Compliance

TO: Paul Berry
 dumpmaster@gustavus-ak.gov
 PHONE#: (907) 697-2118

SS: PO Box 1
 Gustavus AK 99826
 SAMPLED BY:
 Paul Berry

# OF BOTTLES	TR Metals (As, Ba, Cd, Cr, Cu, Pb, Mn, Ni, Se, Zn), Mercury, and Hardness	COB	CONDUCTIVITY
1	4.10	42.0	

AE

28697

NTS:
 MW6 did not have enough water in it to sample. Empty bottles returned - no analysis for MW6.
 Sampling assistance by Ian Barrier

22D1349

DATE	TIME	SITE DESCRIPTION / IDENTIFIER	MATRIX
2022-04-18	10:19 AM	MW 3	H ₂ O
			H ₂ O

FIELD RESULTS			
pH	Temp	D.O.	
7.44	4.10	-01	

RELINQUISHED BY:	RECEIVED BY:	RELINQUISHED BY:	RECEIVED BY:
Signature: Paul Berry	Signature: Emily Hoyt	Signature: Emily Hoyt	Signature: [Blank]
Printed Name: Paul Berry	Printed Name: Emily Hoyt	Printed Name: Emily Hoyt	Printed Name: [Blank]
Date: 2022-04-19	Date: 4/19/22	Date: 4/20/22	Date: 4/21/22
Time: 9:15 AM	Time: 11031	Time: 0925	Time: 1400

Section to Be Completed by Receiving Laboratory		
Temp °C:	4.13	27
Thermo ID#:	Lab 17	10-2
Condition of Custody Seals:	✓	29°C
Initialed By:	ETH	IRBY
Shipped Via:	AK SP	✓
		NR
		Dedox

COB bottle rec'd frozen. Split sample from conductivity, bottle used for COB analysis.
 preserved upon receipt
 0.11ml
 AEW 11005
 H2SO4

OT



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: Gustavus Disposal and Recycling Center					ADEC Compliance					AE 28697							
REPORT TO: Paul Berry dumpmaster@gustavus-ak.gov		PHONE#: (907) 697-2118			# OF BOTTLES	TR Metals (As, Ba, Cd, Cr, Cu, Pb, Mn, Ni, Se, Zn), Mercury, and Hardness	COD	conductivity									
ADDRESS: PO Box 1 Gustavus AK 99826		SAMPLED BY: Paul Berry															
COMMENTS: MW6 did not have enough water in it to sample. Empty bottles returned - no analysis for MW6. Sampling assistance by Ian Barrier										FIELD RESULTS							
DATE	TIME	SITE DESCRIPTION / IDENTIFIER			MATRIX							pH	Temp	D.O.			
2022-04-18	10:19 AM	MW 3			H ₂ O	3	1	1	1			7.44	4.10				
					H ₂ O	3	1	1	1								
RELINQUISHED BY:		RECEIVED BY:			RELINQUISHED BY:		RECEIVED BY:			Section to Be Completed by Receiving Laboratory							
Signature Paul Berry		Signature Emily Hart			Signature		Signature										
Printed Name Paul Berry		Printed Name Emily Hart			Printed Name		Printed Name										
Date 2022-04-19		Date 4/19/22			Date		Date										
Time 9:15 AM		Time 11:31			Time		Time			Temp °C: 4.13							
										Thermo ID#: Lab 7							
										Condition of Custody Seals: <input checked="" type="checkbox"/>							
										Initialed By: EH							
										Shipped Via: AK SP							

COD bottle rec'd frozen. Split sample from conductivity bottle used for COD analysis.
 preserved upon receipt

0.1ml
 AEW 11005
 H2SO4
 4/19/22



Admiralty Environmental Cooler Receipt Form

Lab: Admiralty Environmental, LLC
Client: Gustavus Disposal and Recycling Center

AE# AE 28697

Date Opened: 4/19/2022 Opened by: E. Hoyt

A. External Cooler Conditions

• Local Sampling Event

1. Project ID: n/a

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

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

• Air-Transported Sampling Event

1. Project ID: Groundwater Well

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

3. Airbill attached? yes Airbill #: 4735090

4. Custody Seals? yes

5. Seals intact? yes

Temp. Blank: 4.13 (temp in Celsius)

COMMENTS:

B. Sample Conditions

Number of Samples Received: 1 Packing type: cooler

Number of Bottles Received: 3

1. Samples in proper bags? yes

2. Bottles intact? yes

3. Sufficient sample volume? yes

4. Labels agree with COC? yes

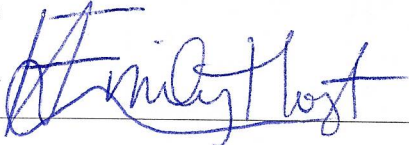
5. Samples delivered within holding time? yes

6. Sample preservation checked? yes, <2

Problems encountered: yes, see note on COC

Was the project manager called? no

COMMENTS:

Signature: 

Date and time: 4/19/22: 1631