



Analytical Resources, LLC
Analytical Chemists and Consultants

24 January 2023

Shawn Hinz
Gravity Environmental LLC
32617 SE 44th St
Fall City, WA 98024

RE: Cooke NPDES (Cooke NPDES)

Please find enclosed sample receipt documentation and analytical results for samples from the project referenced above.

Sample analyses were performed according to ARI's Quality Assurance Plan and any provided project specific Quality Assurance Plan. Each analytical section of this report has been approved and reviewed by an analytical peer, the appropriate Laboratory Supervisor or qualified substitute, and a technical reviewer.

Should you have any questions or problems, please feel free to contact us at your convenience.

Associated Work Order(s)
23A0011

Associated SDG ID(s)
N/A

I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed in the enclose Narrative. ARI, an accredited laboratory, certifies that the report results for which ARI is accredited meets all the requirements of the accrediting body. A list of certified analyses, accreditations, and expiration dates is included in this report.

Release of the data contained in this hardcopy data package has been authorized by the Laboratory Manager or his/her designee, as verified by the following signature.


Analytical Resources, LLC

Kelly Bottem, Client Services Manager

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.



Chain of Custody Record & Laboratory Analysis Request

ARI Assigned Number: <u>2240411</u>		Turn-around Requested:		Page: <u>1</u> of <u>1</u>		 Analytical Resources, LLC Analytical Chemists and Consultants 4611 South 134th Place, Suite 100 Tukwila, WA 98168 206-695-6200 206-695-6201 (fax)						
ARI Client Company: <u>Gravity Marine</u>		Phone: <u>425-281-1471</u>		Date: <u>1/3/2023</u>				Ice Present? <u>Yes</u>				
Client Contact: <u>Shawn Hinz</u>				No. of Coolers: <u>1</u>				Cooler Temps: <u>4.6°C</u>				
Client Project Name: <u>Cooper Aquaculture Pacific</u>												
Client Project #:		Samplers: <u>Emma LeSueur</u>		Analysis Requested		Notes/Comments						
				<div style="display: flex; justify-content: space-around;"> TOC/ Metals grain size </div>		<div style="display: flex; justify-content: space-around;"> ← Time → </div> <div style="display: flex; justify-content: space-around;"> -1 -2 -3 -4 -5 </div>						
Sample ID	Date	Time	Matrix	No. Containers								
CB W50-	1/2/2023	see time	SED	10	X X X		11:37	11:45	11:52	11:59	12:06	sample IDs include: [-1, -2, -3 -4, -5]
CB W100-	1/2/2023	see time	SED	10	X X X		12:12	12:20	12:27	12:32	12:38	
CB N100-	1/2/2023	see time	SED	10	X X X		10:51	11:02	11:12	11:20	11:28	
CB E100-	1/2/2023	see time	SED	10	X X X		1:56	2:02	2:09	2:16	2:24	
CB S100-	1/2/2023	see time	SED	8	X X X		1:20	1:26	-	1:40	1:46	
CB Ref.-	1/2/2023	see time	SED	8	X X X		2:32	-	2:45	2:54	3:01	
Comments/Special Instructions		Relinquished by: (Signature) <u>[Signature]</u>		Received by: (Signature) <u>[Signature]</u>		Relinquished by: (Signature)		Received by: (Signature)				
		Printed Name: <u>Emma LeSueur</u>		Printed Name: <u>Jacob Walter</u>		Printed Name:		Printed Name:				
		Company: <u>Gravity Marine</u>		Company: <u>ARI, LLC</u>		Company:		Company:				
		Date & Time: <u>1/3/2023 12:24</u>		Date & Time: <u>1/6/23 1224</u>		Date & Time:		Date & Time:				

Limits of Liability: ARI will perform all requested services in accordance with appropriate methodology following ARI Standard Operating Procedures and the ARI Quality Assurance Program. This program meets standards for the industry. The total liability of ARI, its officers, agents, employees, or successors, arising out of or in connection with the requested services, shall not exceed the Invoiced amount for said services. The acceptance by the client of a proposal for services by ARI release ARI from any liability in excess thereof, notwithstanding any provision to the contrary in any contract, purchase order or co-signed agreement between ARI and the Client.

Sample Retention Policy: All samples submitted to ARI will be appropriately discarded no sooner than 90 days after receipt or 60 days after submission of hardcopy data, whichever is longer, unless alternate retention schedules have been established by work-order or contract.



Gravity Environmental LLC
32617 SE 44th St
Fall City WA, 98024

Project: Cooke NPDES
Project Number: Cooke NPDES
Project Manager: Shawn Hinz

Reported:
24-Jan-2023 13:59

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
CB-W50-1	23A0011-01	Solid	02-Jan-2023 11:37	03-Jan-2023 12:24
CB-W50-2	23A0011-02	Solid	02-Jan-2023 11:45	03-Jan-2023 12:24
CB-W50-3	23A0011-03	Solid	02-Jan-2023 11:52	03-Jan-2023 12:24
CB-W50-4	23A0011-04	Solid	02-Jan-2023 11:59	03-Jan-2023 12:24
CB-W50-5	23A0011-05	Solid	02-Jan-2023 12:06	03-Jan-2023 12:24
CB-W100-1	23A0011-06	Solid	02-Jan-2023 12:12	03-Jan-2023 12:24
CB-W100-2	23A0011-07	Solid	02-Jan-2023 12:20	03-Jan-2023 12:24
CB-W100-3	23A0011-08	Solid	02-Jan-2023 12:27	03-Jan-2023 12:24
CB-W100-4	23A0011-09	Solid	02-Jan-2023 12:32	03-Jan-2023 12:24
CB-W100-5	23A0011-10	Solid	02-Jan-2023 12:38	03-Jan-2023 12:24
CB-N100-1	23A0011-11	Solid	02-Jan-2023 10:51	03-Jan-2023 12:24
CB-N100-2	23A0011-12	Solid	02-Jan-2023 11:02	03-Jan-2023 12:24
CB-N100-3	23A0011-13	Solid	02-Jan-2023 11:12	03-Jan-2023 12:24
CB-N100-4	23A0011-14	Solid	02-Jan-2023 11:20	03-Jan-2023 12:24
CB-N100-5	23A0011-15	Solid	02-Jan-2023 11:28	03-Jan-2023 12:24
CB-E100-1	23A0011-16	Solid	02-Jan-2023 13:56	03-Jan-2023 12:24
CB-E100-2	23A0011-17	Solid	02-Jan-2023 14:02	03-Jan-2023 12:24
CB-E100-3	23A0011-18	Solid	02-Jan-2023 14:09	03-Jan-2023 12:24
CB-E100-4	23A0011-19	Solid	02-Jan-2023 14:16	03-Jan-2023 12:24
CB-E100-5	23A0011-20	Solid	02-Jan-2023 14:24	03-Jan-2023 12:24
CB-S100-1	23A0011-21	Solid	02-Jan-2023 13:20	03-Jan-2023 12:24
CB-S100-2	23A0011-22	Solid	02-Jan-2023 13:26	03-Jan-2023 12:24
CB-S100-4	23A0011-23	Solid	02-Jan-2023 13:40	03-Jan-2023 12:24
CB-S100-5	23A0011-24	Solid	02-Jan-2023 13:46	03-Jan-2023 12:24
CB-Ref.-1	23A0011-25	Solid	02-Jan-2023 14:32	03-Jan-2023 12:24
CB-Ref.-3	23A0011-26	Solid	02-Jan-2023 14:45	03-Jan-2023 12:24
CB-Ref.-4	23A0011-27	Solid	02-Jan-2023 14:54	03-Jan-2023 12:24
CB-Ref.-5	23A0011-28	Solid	02-Jan-2023 15:01	03-Jan-2023 12:24



Gravity Environmental LLC
32617 SE 44th St
Fall City WA, 98024

Project: Cooke NPDES
Project Number: Cooke NPDES
Project Manager: Shawn Hinz

Reported:
24-Jan-2023 13:59

Work Order Case Narrative

Total Metals - EPA Method 6020B

The sample(s) were digested and analyzed within the recommended holding times.

Initial and continuing calibrations were within method requirements.

The method blank(s) were clean at the reporting limits.

The blank spike (BS/LCS) percent recoveries were within control limits.

The matrix spike (MS) percent recoveries and the duplicate (DUP) relative percent difference (RPD) were within advisory control limits.

Wet Chemistry

The sample(s) were prepared and analyzed within the recommended holding times.

Initial and continuing calibrations were within method requirements.

The method blank(s) were clean at the reporting limits.

The blank spike (BS/LCS) percent recoveries were within control limits.

The matrix spike (MS) percent recoveries and the duplicate (DUP) relative percent difference (RPD) were within advisory control limits with the exception of analytes flagged on the associated forms.



Analytical Resources, LLC
Analytical Chemists and Consultants

Cooler Receipt Form

ARI Client: Gravity Marine
COC No(s): NA

Project Name: Coore Aquaculture Pacific
Delivered by: Fed-Ex UPS Courier Hand Delivered Other: _____

Assigned ARI Job No: 23A0411

Tracking No: NA

Preliminary Examination Phase:

Were intact, properly signed and dated custody seals attached to the outside of the cooler? YES NO

Were custody papers included with the cooler? YES NO

Were custody papers properly filled out (ink, signed, etc.) YES NO

Temperature of Cooler(s) (°C) (recommended 2.0-6.0 °C for chemistry)

Time 1224

4.6

If cooler temperature is out of compliance fill out form 00070F

Temp Gun ID#: J0009708

Cooler Accepted by: JS Date: 01/03/22 Time: 1224

Complete custody forms and attach all shipping documents

Log-In Phase:

Was a temperature blank included in the cooler? YES NO

What kind of packing material was used? ... Bubble Wrap Wet Ice Gel Packs Baggies Foam Block Paper Other: _____

Was sufficient ice used (if appropriate)? NA YES NO

How were bottles sealed in plastic bags? Individually Grouped Not

Did all bottles arrive in good condition (unbroken)? YES NO

Were all bottle labels complete and legible? YES NO

Did the number of containers listed on COC match with the number of containers received? YES NO

Did all bottle labels and tags agree with custody papers? YES NO

Were all bottles used correct for the requested analyses? YES NO

Do any of the analyses (bottles) require preservation? (attach preservation sheet, excluding VOCs) ... NA YES NO

Were all VOC vials free of air bubbles? NA YES NO

Was sufficient amount of sample sent in each bottle? YES NO

Date VOC Trip Blank was made at ARI: NA

Were the sample(s) split by ARI? NA YES Date/Time: _____ Equipment: _____ Split by: _____

Samples Logged by: JS Date: 01/03/22 Time: 1300 Labels checked by: JS

**** Notify Project Manager of discrepancies or concerns ****

Sample ID on Bottle	Sample ID on COC	Sample ID on Bottle	Sample ID on COC

Additional Notes, Discrepancies, & Resolutions:

By: _____

Date: _____



Am Test Inc.
13600 NE 126TH PL
Suite C
Kirkland, WA 98034
(425) 885-1664

**Professional
Analytical
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Jan 23 2023
Analytical Resources LLC
4611 S 134th PI
Suite 100
Tukwila, WA 98168
Attention: KELLY BOTTEM

Dear KELLY BOTTEM:

Enclosed please find the analytical data for your project.

The following is a cross correlation of client and laboratory identifications for your convenience.

CLIENT ID	MATRIX	AMTEST ID	TEST
23A0011-01	Soil	23-A000099	Sieve Analysis, CONV
23A0011-02	Soil	23-A000100	Sieve Analysis, CONV
23A0011-03	Soil	23-A000101	Sieve Analysis, CONV
23A0011-04	Soil	23-A000102	Sieve Analysis, CONV
23A0011-05	Soil	23-A000103	Sieve Analysis, CONV
23A0011-06	Soil	23-A000104	Sieve Analysis, CONV
23A0011-07	Soil	23-A000105	Sieve Analysis, CONV
23A0011-08	Soil	23-A000106	Sieve Analysis, CONV
23A0011-09	Soil	23-A000107	Sieve Analysis, CONV
23A0011-10	Soil	23-A000108	Sieve Analysis, CONV
23A0011-11	Soil	23-A000109	Sieve Analysis, CONV
23A0011-12	Soil	23-A000110	Sieve Analysis, CONV
23A0011-13	Soil	23-A000111	Sieve Analysis, CONV
23A0011-14	Soil	23-A000112	Sieve Analysis, CONV
23A0011-15	Soil	23-A000113	Sieve Analysis, CONV
23A0011-16	Soil	23-A000114	Sieve Analysis, CONV
23A0011-17	Soil	23-A000115	Sieve Analysis, CONV
23A0011-18	Soil	23-A000116	Sieve Analysis, CONV
23A0011-19	Soil	23-A000117	Sieve Analysis, CONV
23A0011-20	Soil	23-A000118	Sieve Analysis, CONV
23A0011-21	Soil	23-A000119	Sieve Analysis, CONV
23A0011-22	Soil	23-A000120	Sieve Analysis, CONV
23A0011-23	Soil	23-A000121	Sieve Analysis, CONV
23A0011-24	Soil	23-A000122	Sieve Analysis, CONV
23A0011-25	Soil	23-A000123	Sieve Analysis, CONV
23A0011-26	Soil	23-A000124	Sieve Analysis, CONV
23A0011-27	Soil	23-A000125	Sieve Analysis, CONV
23A0011-28	Soil	23-A000126	Sieve Analysis, CONV

Your samples were received on Wednesday, January 4, 2023. At the time of receipt, the samples were logged in and properly maintained prior to the subsequent analysis.

The analytical procedures used at AmTest are well documented and are typically derived from the protocols of the EPA, USDA, FDA or the Army Corps of Engineers.

Following the analytical data you will find the Quality Control (QC) results.



Am Test Inc.
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Jan 23 2023
Analytical Resources LLC
continued . . .

Please note that the detection limits that are listed in the body of the report refer to the Practical Quantitation Limits (PQL's), as opposed to the Method Detection Limits (MDL's).

If you should have any questions pertaining to the data package, please feel free to contact me.

Sincerely,

A handwritten signature in blue ink, appearing to read "Aaron W. Young".

Aaron W. Young
Vice President

WO Number: 23A0011

BACT = Bacteriological
CONV = Conventional
TC=Total Coliforms

MET = Metals
ORG = Organics

NUT=Nutrients
DEM=Demand

MIN=Minerals
APC=Aerobic Plate Count

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ANALYSIS REPORT

Analytical Resources LLC
4611 S 134th PI
Tukwila, WA 98168
Attention: KELLY BOTTEM
All results reported on a dry weight basis.

Date Received: 01/04/23
Date Reported: 1/23/23

AMTEST Identification Number 23-A000099
Client Identification 23A0011-01
Sampling Date 01/02/23, 11:37

Conventionals

PARAMETER	RESULT	UNITS	Q	D.L.	METHOD	ANALYST	DATE
Total Solids	77.3	%		0.1	SM 2540G	SF	01/16/23

Particle Size by Sieve Only

Sieve Number	Sieve Size	% Retained	% Passed	METHOD	ANALYST	DATE
# 4	4.75 mm	0.20	99.8	PSEP 1986 P.9	SF	01/17/23
# 5	4.0 mm	< 0.1	99.8	PSEP 1986 P.9	SF	01/17/23
# 10	2.0 mm	0.20	99.6	PSEP 1986 P.9	SF	01/17/23
# 18	1.0 mm	0.70	98.9	PSEP 1986 P.9	SF	01/17/23
# 35	0.5 mm	18.4	80.5	PSEP 1986 P.9	SF	01/17/23
# 60	0.250 mm	69.2	11.3	PSEP 1986 P.9	SF	01/17/23
# 120	0.125 mm	10.0	1.30	PSEP 1986 P.9	SF	01/17/23
# 230	0.063 mm	0.90	0.40	PSEP 1986 P.9	SF	01/17/23

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ANALYSIS REPORT

Analytical Resources LLC
4611 S 134th PI
Tukwila, WA 98168
Attention: KELLY BOTTEM
All results reported on a dry weight basis.

Date Received: 01/04/23
Date Reported: 1/23/23

AMTEST Identification Number 23-A000099
Client Identification 23A0011-01
Sampling Date 01/02/23, 11:37

Conventionals

PARAMETER	RESULT	UNITS	Q	D.L.	METHOD	ANALYST	DATE
Total Solids	77.3	%		0.1	SM 2540G	SF	01/16/23

Particle Size by Sieve Only

Sieve Number	Sieve Size	% Retained	% Passed	METHOD	ANALYST	DATE
# 4	4.75 mm	0.20	99.8	PSEP 1986 P.9	SF	01/17/23
# 5	4.0 mm	< 0.1	99.8	PSEP 1986 P.9	SF	01/17/23
# 10	2.0 mm	0.20	99.6	PSEP 1986 P.9	SF	01/17/23
# 18	1.0 mm	0.70	98.9	PSEP 1986 P.9	SF	01/17/23
# 35	0.5 mm	18.4	80.5	PSEP 1986 P.9	SF	01/17/23
# 60	0.250 mm	69.2	11.3	PSEP 1986 P.9	SF	01/17/23
# 120	0.125 mm	10.0	1.30	PSEP 1986 P.9	SF	01/17/23
# 230	0.063 mm	0.90	0.40	PSEP 1986 P.9	SF	01/17/23

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ANALYSIS REPORT

Analytical Resources LLC
4611 S 134th PI
Tukwila, WA 98168
Attention: KELLY BOTTEM
All results reported on a dry weight basis.

Date Received: 01/04/23
Date Reported: 1/23/23

AMTEST Identification Number 23-A000100
Client Identification 23A0011-02
Sampling Date 01/02/23, 11:45

Conventionals

PARAMETER	RESULT	UNITS	Q	D.L.	METHOD	ANALYST	DATE
Total Solids	77.6	%		0.1	SM 2540G	SF	01/16/23

Particle Size by Sieve Only

Sieve Number	Sieve Size	% Retained	% Passed	METHOD	ANALYST	DATE
# 4	4.75 mm	0.10	99.9	PSEP 1986 P.9	SF	01/17/23
# 5	4.0 mm	< 0.1	99.9	PSEP 1986 P.9	SF	01/17/23
# 10	2.0 mm	0.10	99.8	PSEP 1986 P.9	SF	01/17/23
# 18	1.0 mm	0.40	99.4	PSEP 1986 P.9	SF	01/17/23
# 35	0.5 mm	10.4	89.0	PSEP 1986 P.9	SF	01/17/23
# 60	0.250 mm	78.0	11.0	PSEP 1986 P.9	SF	01/17/23
# 120	0.125 mm	9.20	1.80	PSEP 1986 P.9	SF	01/17/23
# 230	0.063 mm	0.90	0.90	PSEP 1986 P.9	SF	01/17/23

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ANALYSIS REPORT

Analytical Resources LLC
4611 S 134th PI
Tukwila, WA 98168
Attention: KELLY BOTTEM
All results reported on a dry weight basis.

Date Received: 01/04/23
Date Reported: 1/23/23

AMTEST Identification Number 23-A000101
Client Identification 23A0011-03
Sampling Date 01/02/23, 11:52

Conventionals

PARAMETER	RESULT	UNITS	Q	D.L.	METHOD	ANALYST	DATE
Total Solids	77.6	%		0.1	SM 2540G	SF	01/16/23

Particle Size by Sieve Only

Sieve Number	Sieve Size	% Retained	% Passed	METHOD	ANALYST	DATE
# 4	4.75 mm	0.30	99.7	PSEP 1986 P.9	SF	01/17/23
# 5	4.0 mm	0.10	99.6	PSEP 1986 P.9	SF	01/17/23
# 10	2.0 mm	0.10	99.5	PSEP 1986 P.9	SF	01/17/23
# 18	1.0 mm	0.40	99.1	PSEP 1986 P.9	SF	01/17/23
# 35	0.5 mm	8.10	91.0	PSEP 1986 P.9	SF	01/17/23
# 60	0.250 mm	82.1	8.90	PSEP 1986 P.9	SF	01/17/23
# 120	0.125 mm	5.20	3.70	PSEP 1986 P.9	SF	01/17/23
# 230	0.063 mm	1.10	2.60	PSEP 1986 P.9	SF	01/17/23

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ANALYSIS REPORT

Analytical Resources LLC
4611 S 134th PI
Tukwila, WA 98168
Attention: KELLY BOTTEM
All results reported on a dry weight basis.

Date Received: 01/04/23
Date Reported: 1/23/23

AMTEST Identification Number 23-A000102
Client Identification 23A0011-04
Sampling Date 01/02/23, 11:59

Conventionals

PARAMETER	RESULT	UNITS	Q	D.L.	METHOD	ANALYST	DATE
Total Solids	75.0	%		0.1	SM 2540G	SF	01/16/23

Particle Size by Sieve Only

Sieve Number	Sieve Size	% Retained	% Passed	METHOD	ANALYST	DATE
# 4	4.75 mm	0.20	99.8	PSEP 1986 P.9	SF	01/18/23
# 5	4.0 mm	0.10	99.7	PSEP 1986 P.9	SF	01/18/23
# 10	2.0 mm	0.20	99.5	PSEP 1986 P.9	SF	01/18/23
# 18	1.0 mm	0.40	99.1	PSEP 1986 P.9	SF	01/18/23
# 35	0.5 mm	6.20	92.9	PSEP 1986 P.9	SF	01/18/23
# 60	0.250 mm	81.4	11.5	PSEP 1986 P.9	SF	01/18/23
# 120	0.125 mm	7.40	4.10	PSEP 1986 P.9	SF	01/18/23
# 230	0.063 mm	1.20	2.90	PSEP 1986 P.9	SF	01/18/23

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Attention: KELLY BOTTEM
All results reported on a dry weight basis.

Date Received: 01/04/23
Date Reported: 1/23/23

AMTEST Identification Number 23-A000103
Client Identification 23A0011-05
Sampling Date 01/02/23, 12:06

Conventionals

PARAMETER	RESULT	UNITS	Q	D.L.	METHOD	ANALYST	DATE
Total Solids	78.3	%		0.1	SM 2540G	SF	01/16/23

Particle Size by Sieve Only

Sieve Number	Sieve Size	% Retained	% Passed	METHOD	ANALYST	DATE
# 4	4.75 mm	0.20	99.8	PSEP 1986 P.9	SF	01/18/23
# 5	4.0 mm	0.10	99.7	PSEP 1986 P.9	SF	01/18/23
# 10	2.0 mm	0.30	99.4	PSEP 1986 P.9	SF	01/18/23
# 18	1.0 mm	0.60	98.8	PSEP 1986 P.9	SF	01/18/23
# 35	0.5 mm	8.10	90.7	PSEP 1986 P.9	SF	01/18/23
# 60	0.250 mm	74.4	16.3	PSEP 1986 P.9	SF	01/18/23
# 120	0.125 mm	13.3	3.00	PSEP 1986 P.9	SF	01/18/23
# 230	0.063 mm	1.10	1.90	PSEP 1986 P.9	SF	01/18/23

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Attention: KELLY BOTTEM
All results reported on a dry weight basis.

Date Received: 01/04/23
Date Reported: 1/23/23

AMTEST Identification Number 23-A000104
Client Identification 23A0011-06
Sampling Date 01/02/23, 12:12

Conventionals

PARAMETER	RESULT	UNITS	Q	D.L.	METHOD	ANALYST	DATE
Total Solids	78.4	%		0.1	SM 2540G	SF	01/16/23

Particle Size by Sieve Only

Sieve Number	Sieve Size	% Retained	% Passed	METHOD	ANALYST	DATE
# 4	4.75 mm	0.10	99.9	PSEP 1986 P.9	SF	01/18/23
# 5	4.0 mm	0.10	99.8	PSEP 1986 P.9	SF	01/18/23
# 10	2.0 mm	0.10	99.7	PSEP 1986 P.9	SF	01/18/23
# 18	1.0 mm	0.60	99.1	PSEP 1986 P.9	SF	01/18/23
# 35	0.5 mm	5.30	93.8	PSEP 1986 P.9	SF	01/18/23
# 60	0.250 mm	80.9	12.9	PSEP 1986 P.9	SF	01/18/23
# 120	0.125 mm	8.00	4.90	PSEP 1986 P.9	SF	01/18/23
# 230	0.063 mm	1.50	3.40	PSEP 1986 P.9	SF	01/18/23

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ANALYSIS REPORT

Analytical Resources LLC
4611 S 134th PI
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Attention: KELLY BOTTEM
All results reported on a dry weight basis.

Date Received: 01/04/23
Date Reported: 1/23/23

AMTEST Identification Number 23-A000105
Client Identification 23A0011-07
Sampling Date 01/02/23, 12:20

Conventionals

PARAMETER	RESULT	UNITS	Q	D.L.	METHOD	ANALYST	DATE
Total Solids	75.6	%		0.1	SM 2540G	SF	01/16/23

Particle Size by Sieve Only

Sieve Number	Sieve Size	% Retained	% Passed	METHOD	ANALYST	DATE
# 4	4.75 mm	0.20	99.8	PSEP 1986 P.9	SF	01/18/23
# 5	4.0 mm	0.10	99.7	PSEP 1986 P.9	SF	01/18/23
# 10	2.0 mm	0.30	99.4	PSEP 1986 P.9	SF	01/18/23
# 18	1.0 mm	0.30	99.1	PSEP 1986 P.9	SF	01/18/23
# 35	0.5 mm	3.90	95.2	PSEP 1986 P.9	SF	01/18/23
# 60	0.250 mm	74.6	20.6	PSEP 1986 P.9	SF	01/18/23
# 120	0.125 mm	12.8	7.80	PSEP 1986 P.9	SF	01/18/23
# 230	0.063 mm	1.70	6.10	PSEP 1986 P.9	SF	01/18/23

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All results reported on a dry weight basis.

Date Received: 01/04/23
Date Reported: 1/23/23

AMTEST Identification Number 23-A000106
Client Identification 23A0011-08
Sampling Date 01/02/23, 12:27

Conventionals

PARAMETER	RESULT	UNITS	Q	D.L.	METHOD	ANALYST	DATE
Total Solids	75.5	%		0.1	SM 2540G	SF	01/16/23

Particle Size by Sieve Only

Sieve Number	Sieve Size	% Retained	% Passed	METHOD	ANALYST	DATE
# 4	4.75 mm	0.20	99.8	PSEP 1986 P.9	SF	01/18/23
# 5	4.0 mm	< 0.1	99.8	PSEP 1986 P.9	SF	01/18/23
# 10	2.0 mm	0.30	99.5	PSEP 1986 P.9	SF	01/18/23
# 18	1.0 mm	0.60	98.9	PSEP 1986 P.9	SF	01/18/23
# 35	0.5 mm	5.30	93.6	PSEP 1986 P.9	SF	01/18/23
# 60	0.250 mm	68.7	24.9	PSEP 1986 P.9	SF	01/18/23
# 120	0.125 mm	19.6	5.30	PSEP 1986 P.9	SF	01/18/23
# 230	0.063 mm	1.40	3.90	PSEP 1986 P.9	SF	01/18/23

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Date Received: 01/04/23
Date Reported: 1/23/23

AMTEST Identification Number 23-A000107
Client Identification 23A0011-09
Sampling Date 01/02/23, 12:32

Conventionals

PARAMETER	RESULT	UNITS	Q	D.L.	METHOD	ANALYST	DATE
Total Solids	78.9	%		0.1	SM 2540G	SF	01/16/23

Particle Size by Sieve Only

Sieve Number	Sieve Size	% Retained	% Passed	METHOD	ANALYST	DATE
# 4	4.75 mm	0.10	99.9	PSEP 1986 P.9	SF	01/18/23
# 5	4.0 mm	0.10	99.8	PSEP 1986 P.9	SF	01/18/23
# 10	2.0 mm	0.20	99.6	PSEP 1986 P.9	SF	01/18/23
# 18	1.0 mm	0.50	99.1	PSEP 1986 P.9	SF	01/18/23
# 35	0.5 mm	4.90	94.2	PSEP 1986 P.9	SF	01/18/23
# 60	0.250 mm	81.5	12.7	PSEP 1986 P.9	SF	01/18/23
# 120	0.125 mm	8.50	4.20	PSEP 1986 P.9	SF	01/18/23
# 230	0.063 mm	1.20	3.00	PSEP 1986 P.9	SF	01/18/23

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Date Received: 01/04/23
Date Reported: 1/23/23

AMTEST Identification Number 23-A000108
Client Identification 23A0011-10
Sampling Date 01/02/23, 12:38

Conventionals

PARAMETER	RESULT	UNITS	Q	D.L.	METHOD	ANALYST	DATE
Total Solids	74.8	%		0.1	SM 2540G	SF	01/16/23

Particle Size by Sieve Only

Sieve Number	Sieve Size	% Retained	% Passed	METHOD	ANALYST	DATE
# 4	4.75 mm	0.60	99.4	PSEP 1986 P.9	SF	01/18/23
# 5	4.0 mm	0.10	99.3	PSEP 1986 P.9	SF	01/18/23
# 10	2.0 mm	0.30	99.0	PSEP 1986 P.9	SF	01/18/23
# 18	1.0 mm	0.70	98.3	PSEP 1986 P.9	SF	01/18/23
# 35	0.5 mm	5.00	93.3	PSEP 1986 P.9	SF	01/18/23
# 60	0.250 mm	78.0	15.3	PSEP 1986 P.9	SF	01/18/23
# 120	0.125 mm	9.60	5.70	PSEP 1986 P.9	SF	01/18/23
# 230	0.063 mm	1.20	4.50	PSEP 1986 P.9	SF	01/18/23

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Attention: KELLY BOTTEM
All results reported on a dry weight basis.

Date Received: 01/04/23
Date Reported: 1/23/23

AMTEST Identification Number 23-A000109
Client Identification 23A0011-11
Sampling Date 01/02/23, 10:51

Conventionals

PARAMETER	RESULT	UNITS	Q	D.L.	METHOD	ANALYST	DATE
Total Solids	76.5	%		0.1	SM 2540G	SF	01/16/23

Particle Size by Sieve Only

Sieve Number	Sieve Size	% Retained	% Passed	METHOD	ANALYST	DATE
# 4	4.75 mm	0.10	99.9	PSEP 1986 P.9	SF	01/18/23
# 5	4.0 mm	< 0.1	99.9	PSEP 1986 P.9	SF	01/18/23
# 10	2.0 mm	0.10	99.8	PSEP 1986 P.9	SF	01/18/23
# 18	1.0 mm	0.70	99.1	PSEP 1986 P.9	SF	01/18/23
# 35	0.5 mm	10.6	88.5	PSEP 1986 P.9	SF	01/18/23
# 60	0.250 mm	68.9	19.6	PSEP 1986 P.9	SF	01/18/23
# 120	0.125 mm	13.2	6.40	PSEP 1986 P.9	SF	01/18/23
# 230	0.063 mm	0.90	5.50	PSEP 1986 P.9	SF	01/18/23

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Attention: KELLY BOTTEM
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Date Received: 01/04/23
Date Reported: 1/23/23

AMTEST Identification Number 23-A000110
Client Identification 23A0011-12
Sampling Date 01/02/23, 11:02

Conventionals

PARAMETER	RESULT	UNITS	Q	D.L.	METHOD	ANALYST	DATE
Total Solids	77.8	%		0.1	SM 2540G	SF	01/16/23

Particle Size by Sieve Only

Sieve Number	Sieve Size	% Retained	% Passed	METHOD	ANALYST	DATE
# 4	4.75 mm	0.20	99.8	PSEP 1986 P.9	SF	01/18/23
# 5	4.0 mm	0.20	99.6	PSEP 1986 P.9	SF	01/18/23
# 10	2.0 mm	0.10	99.5	PSEP 1986 P.9	SF	01/18/23
# 18	1.0 mm	0.80	98.7	PSEP 1986 P.9	SF	01/18/23
# 35	0.5 mm	6.30	92.4	PSEP 1986 P.9	SF	01/18/23
# 60	0.250 mm	80.7	11.7	PSEP 1986 P.9	SF	01/18/23
# 120	0.125 mm	5.90	5.80	PSEP 1986 P.9	SF	01/18/23
# 230	0.063 mm	0.90	4.90	PSEP 1986 P.9	SF	01/18/23

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Date Received: 01/04/23
Date Reported: 1/23/23

AMTEST Identification Number 23-A000111
Client Identification 23A0011-13
Sampling Date 01/02/23, 11:12

Conventionals

PARAMETER	RESULT	UNITS	Q	D.L.	METHOD	ANALYST	DATE
Total Solids	77.8	%		0.1	SM 2540G	SF	01/16/23

Particle Size by Sieve Only

Sieve Number	Sieve Size	% Retained	% Passed	METHOD	ANALYST	DATE
# 4	4.75 mm	0.10	99.9	PSEP 1986 P.9	SF	01/20/23
# 5	4.0 mm	0.10	99.8	PSEP 1986 P.9	SF	01/20/23
# 10	2.0 mm	0.10	99.7	PSEP 1986 P.9	SF	01/20/23
# 18	1.0 mm	0.50	99.2	PSEP 1986 P.9	SF	01/20/23
# 35	0.5 mm	5.00	94.2	PSEP 1986 P.9	SF	01/20/23
# 60	0.250 mm	79.7	14.5	PSEP 1986 P.9	SF	01/20/23
# 120	0.125 mm	9.10	5.40	PSEP 1986 P.9	SF	01/20/23
# 230	0.063 mm	0.70	4.70	PSEP 1986 P.9	SF	01/20/23

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Date Received: 01/04/23
Date Reported: 1/23/23

AMTEST Identification Number 23-A000112
Client Identification 23A0011-14
Sampling Date 01/02/23, 11:20

Conventionals

PARAMETER	RESULT	UNITS	Q	D.L.	METHOD	ANALYST	DATE
Total Solids	74.4	%		0.1	SM 2540G	SF	01/16/23

Particle Size by Sieve Only

Sieve Number	Sieve Size	% Retained	% Passed	METHOD	ANALYST	DATE
# 4	4.75 mm	2.40	97.6	PSEP 1986 P.9	SF	01/20/23
# 5	4.0 mm	< 0.1	97.6	PSEP 1986 P.9	SF	01/20/23
# 10	2.0 mm	0.10	97.5	PSEP 1986 P.9	SF	01/20/23
# 18	1.0 mm	0.80	96.7	PSEP 1986 P.9	SF	01/20/23
# 35	0.5 mm	6.40	90.3	PSEP 1986 P.9	SF	01/20/23
# 60	0.250 mm	68.0	22.3	PSEP 1986 P.9	SF	01/20/23
# 120	0.125 mm	15.8	6.50	PSEP 1986 P.9	SF	01/20/23
# 230	0.063 mm	0.80	5.70	PSEP 1986 P.9	SF	01/20/23

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Date Received: 01/04/23
Date Reported: 1/23/23

AMTEST Identification Number 23-A000113
Client Identification 23A0011-15
Sampling Date 01/02/23, 11:28

Conventionals

PARAMETER	RESULT	UNITS	Q	D.L.	METHOD	ANALYST	DATE
Total Solids	75.1	%		0.1	SM 2540G	SF	01/16/23

Particle Size by Sieve Only

Sieve Number	Sieve Size	% Retained	% Passed	METHOD	ANALYST	DATE
# 4	4.75 mm	0.10	99.9	PSEP 1986 P.9	SF	01/20/23
# 5	4.0 mm	0.10	99.8	PSEP 1986 P.9	SF	01/20/23
# 10	2.0 mm	0.10	99.7	PSEP 1986 P.9	SF	01/20/23
# 18	1.0 mm	0.90	98.8	PSEP 1986 P.9	SF	01/20/23
# 35	0.5 mm	7.80	91.0	PSEP 1986 P.9	SF	01/20/23
# 60	0.250 mm	84.4	6.60	PSEP 1986 P.9	SF	01/20/23
# 120	0.125 mm	5.90	0.70	PSEP 1986 P.9	SF	01/20/23
# 230	0.063 mm	0.70	0.00	PSEP 1986 P.9	SF	01/20/23

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Attention: KELLY BOTTEM
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Date Received: 01/04/23
Date Reported: 1/23/23

AMTEST Identification Number 23-A000114
Client Identification 23A0011-16
Sampling Date 01/02/23, 13:56

Conventionals

PARAMETER	RESULT	UNITS	Q	D.L.	METHOD	ANALYST	DATE
Total Solids	75.2	%		0.1	SM 2540G	SF	01/16/23

Particle Size by Sieve Only

Sieve Number	Sieve Size	% Retained	% Passed	METHOD	ANALYST	DATE
# 4	4.75 mm	0.20	99.8	PSEP 1986 P.9	SF	01/20/23
# 5	4.0 mm	0.30	99.5	PSEP 1986 P.9	SF	01/20/23
# 10	2.0 mm	1.70	97.8	PSEP 1986 P.9	SF	01/20/23
# 18	1.0 mm	3.40	94.4	PSEP 1986 P.9	SF	01/20/23
# 35	0.5 mm	11.5	82.9	PSEP 1986 P.9	SF	01/20/23
# 60	0.250 mm	69.6	13.3	PSEP 1986 P.9	SF	01/20/23
# 120	0.125 mm	7.20	6.10	PSEP 1986 P.9	SF	01/20/23
# 230	0.063 mm	0.60	5.50	PSEP 1986 P.9	SF	01/20/23

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Attention: KELLY BOTTEM
All results reported on a dry weight basis.

Date Received: 01/04/23
Date Reported: 1/23/23

AMTEST Identification Number 23-A000115
Client Identification 23A0011-17
Sampling Date 01/02/23, 14:02

Conventionals

PARAMETER	RESULT	UNITS	Q	D.L.	METHOD	ANALYST	DATE
Total Solids	77.5	%		0.1	SM 2540G	SF	01/16/23

Particle Size by Sieve Only

Sieve Number	Sieve Size	% Retained	% Passed	METHOD	ANALYST	DATE
# 4	4.75 mm	2.70	97.3	PSEP 1986 P.9	SF	01/20/23
# 5	4.0 mm	0.10	97.2	PSEP 1986 P.9	SF	01/20/23
# 10	2.0 mm	0.60	96.6	PSEP 1986 P.9	SF	01/20/23
# 18	1.0 mm	2.00	94.6	PSEP 1986 P.9	SF	01/20/23
# 35	0.5 mm	9.90	84.7	PSEP 1986 P.9	SF	01/20/23
# 60	0.250 mm	70.7	14.0	PSEP 1986 P.9	SF	01/20/23
# 120	0.125 mm	7.60	6.40	PSEP 1986 P.9	SF	01/20/23
# 230	0.063 mm	0.60	5.80	PSEP 1986 P.9	SF	01/20/23

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All results reported on a dry weight basis.

Date Received: 01/04/23
Date Reported: 1/23/23

AMTEST Identification Number 23-A000116
Client Identification 23A0011-18
Sampling Date 01/02/23, 14:09

Conventionals

PARAMETER	RESULT	UNITS	Q	D.L.	METHOD	ANALYST	DATE
Total Solids	76.9	%		0.1	SM 2540G	SF	01/16/23

Particle Size by Sieve Only

Sieve Number	Sieve Size	% Retained	% Passed	METHOD	ANALYST	DATE
# 4	4.75 mm	0.70	99.3	PSEP 1986 P.9	SF	01/20/23
# 5	4.0 mm	0.10	99.2	PSEP 1986 P.9	SF	01/20/23
# 10	2.0 mm	0.80	98.4	PSEP 1986 P.9	SF	01/20/23
# 18	1.0 mm	2.70	95.7	PSEP 1986 P.9	SF	01/20/23
# 35	0.5 mm	13.9	81.8	PSEP 1986 P.9	SF	01/20/23
# 60	0.250 mm	71.5	10.3	PSEP 1986 P.9	SF	01/20/23
# 120	0.125 mm	5.30	5.00	PSEP 1986 P.9	SF	01/20/23
# 230	0.063 mm	0.70	4.30	PSEP 1986 P.9	SF	01/20/23

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Attention: KELLY BOTTEM
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Date Received: 01/04/23
Date Reported: 1/23/23

AMTEST Identification Number 23-A000117
Client Identification 23A0011-19
Sampling Date 01/02/23, 14:16

Conventionals

PARAMETER	RESULT	UNITS	Q	D.L.	METHOD	ANALYST	DATE
Total Solids	75.8	%		0.1	SM 2540G	SF	01/16/23

Particle Size by Sieve Only

Sieve Number	Sieve Size	% Retained	% Passed	METHOD	ANALYST	DATE
# 4	4.75 mm	0.30	99.7	PSEP 1986 P.9	SF	01/20/23
# 5	4.0 mm	0.10	99.6	PSEP 1986 P.9	SF	01/20/23
# 10	2.0 mm	1.00	98.6	PSEP 1986 P.9	SF	01/20/23
# 18	1.0 mm	3.40	95.2	PSEP 1986 P.9	SF	01/20/23
# 35	0.5 mm	14.2	81.0	PSEP 1986 P.9	SF	01/20/23
# 60	0.250 mm	70.0	11.0	PSEP 1986 P.9	SF	01/20/23
# 120	0.125 mm	4.90	6.10	PSEP 1986 P.9	SF	01/20/23
# 230	0.063 mm	0.60	5.50	PSEP 1986 P.9	SF	01/20/23

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Attention: KELLY BOTTEM
All results reported on a dry weight basis.

Date Received: 01/04/23
Date Reported: 1/23/23

AMTEST Identification Number 23-A000118
Client Identification 23A0011-20
Sampling Date 01/02/23, 14:24

Conventionals

PARAMETER	RESULT	UNITS	Q	D.L.	METHOD	ANALYST	DATE
Total Solids	75.8	%		0.1	SM 2540G	SF	01/16/23

Particle Size by Sieve Only

Sieve Number	Sieve Size	% Retained	% Passed	METHOD	ANALYST	DATE
# 4	4.75 mm	0.10	99.9	PSEP 1986 P.9	SF	01/20/23
# 5	4.0 mm	0.10	99.8	PSEP 1986 P.9	SF	01/20/23
# 10	2.0 mm	0.30	99.5	PSEP 1986 P.9	SF	01/20/23
# 18	1.0 mm	1.90	97.6	PSEP 1986 P.9	SF	01/20/23
# 35	0.5 mm	16.9	80.7	PSEP 1986 P.9	SF	01/20/23
# 60	0.250 mm	68.2	12.5	PSEP 1986 P.9	SF	01/20/23
# 120	0.125 mm	9.20	3.30	PSEP 1986 P.9	SF	01/20/23
# 230	0.063 mm	0.60	2.70	PSEP 1986 P.9	SF	01/20/23

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Attention: KELLY BOTTEM
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Date Received: 01/04/23
Date Reported: 1/23/23

AMTEST Identification Number 23-A000119
Client Identification 23A0011-21
Sampling Date 01/02/23, 13:20

Conventionals

PARAMETER	RESULT	UNITS	Q	D.L.	METHOD	ANALYST	DATE
Total Solids	74.2	%		0.1	SM 2540G	SF	01/16/23

Particle Size by Sieve Only

Sieve Number	Sieve Size	% Retained	% Passed	METHOD	ANALYST	DATE
# 4	4.75 mm	3.00	97.0	PSEP 1986 P.9	SF	01/20/23
# 5	4.0 mm	0.20	96.8	PSEP 1986 P.9	SF	01/20/23
# 10	2.0 mm	2.10	94.7	PSEP 1986 P.9	SF	01/20/23
# 18	1.0 mm	10.1	84.6	PSEP 1986 P.9	SF	01/20/23
# 35	0.5 mm	24.0	60.6	PSEP 1986 P.9	SF	01/20/23
# 60	0.250 mm	53.3	7.30	PSEP 1986 P.9	SF	01/20/23
# 120	0.125 mm	3.90	3.40	PSEP 1986 P.9	SF	01/20/23
# 230	0.063 mm	0.70	2.70	PSEP 1986 P.9	SF	01/20/23

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Attention: KELLY BOTTEM
All results reported on a dry weight basis.

Date Received: 01/04/23
Date Reported: 1/23/23

AMTEST Identification Number 23-A000120
Client Identification 23A0011-22
Sampling Date 01/02/23, 13:26

Conventionals

PARAMETER	RESULT	UNITS	Q	D.L.	METHOD	ANALYST	DATE
Total Solids	74.9	%		0.1	SM 2540G	SF	01/16/23

Particle Size by Sieve Only

Sieve Number	Sieve Size	% Retained	% Passed	METHOD	ANALYST	DATE
# 4	4.75 mm	1.40	98.6	PSEP 1986 P.9	SF	01/20/23
# 5	4.0 mm	0.20	98.4	PSEP 1986 P.9	SF	01/20/23
# 10	2.0 mm	2.60	95.8	PSEP 1986 P.9	SF	01/20/23
# 18	1.0 mm	9.40	86.4	PSEP 1986 P.9	SF	01/20/23
# 35	0.5 mm	22.5	63.9	PSEP 1986 P.9	SF	01/20/23
# 60	0.250 mm	56.4	7.50	PSEP 1986 P.9	SF	01/20/23
# 120	0.125 mm	6.20	1.30	PSEP 1986 P.9	SF	01/20/23
# 230	0.063 mm	0.70	0.60	PSEP 1986 P.9	SF	01/20/23

Am Test Inc.
13600 NE 126TH PL
Suite C
Kirkland, WA 98034
(425) 885-1664
www.amtestlab.com



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ANALYSIS REPORT

Analytical Resources LLC
4611 S 134th PI
Tukwila, WA 98168
Attention: KELLY BOTTEM
All results reported on a dry weight basis.

Date Received: 01/04/23
Date Reported: 1/23/23

AMTEST Identification Number 23-A000121
Client Identification 23A0011-23
Sampling Date 01/02/23, 13:40

Conventionals

PARAMETER	RESULT	UNITS	Q	D.L.	METHOD	ANALYST	DATE
Total Solids	75.8	%		0.1	SM 2540G	SF	01/16/23

Particle Size by Sieve Only

Sieve Number	Sieve Size	% Retained	% Passed	METHOD	ANALYST	DATE
# 4	4.75 mm	0.90	99.1	PSEP 1986 P.9	SF	01/20/23
# 5	4.0 mm	0.20	98.9	PSEP 1986 P.9	SF	01/20/23
# 10	2.0 mm	1.90	97.0	PSEP 1986 P.9	SF	01/20/23
# 18	1.0 mm	7.80	89.2	PSEP 1986 P.9	SF	01/20/23
# 35	0.5 mm	19.0	70.2	PSEP 1986 P.9	SF	01/20/23
# 60	0.250 mm	56.0	14.2	PSEP 1986 P.9	SF	01/20/23
# 120	0.125 mm	8.20	6.00	PSEP 1986 P.9	SF	01/20/23
# 230	0.063 mm	0.80	5.20	PSEP 1986 P.9	SF	01/20/23

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ANALYSIS REPORT

Analytical Resources LLC
4611 S 134th PI
Tukwila, WA 98168
Attention: KELLY BOTTEM
All results reported on a dry weight basis.

Date Received: 01/04/23
Date Reported: 1/23/23

AMTEST Identification Number 23-A000122
Client Identification 23A0011-24
Sampling Date 01/02/23, 13:46

Conventionals

PARAMETER	RESULT	UNITS	Q	D.L.	METHOD	ANALYST	DATE
Total Solids	69.5	%		0.1	SM 2540G	SF	01/16/23

Particle Size by Sieve Only

Sieve Number	Sieve Size	% Retained	% Passed	METHOD	ANALYST	DATE
# 4	4.75 mm	4.50	95.5	PSEP 1986 P.9	SF	01/20/23
# 5	4.0 mm	0.20	95.3	PSEP 1986 P.9	SF	01/20/23
# 10	2.0 mm	2.10	93.2	PSEP 1986 P.9	SF	01/20/23
# 18	1.0 mm	8.10	85.1	PSEP 1986 P.9	SF	01/20/23
# 35	0.5 mm	16.6	68.5	PSEP 1986 P.9	SF	01/20/23
# 60	0.250 mm	54.5	14.0	PSEP 1986 P.9	SF	01/20/23
# 120	0.125 mm	4.20	9.80	PSEP 1986 P.9	SF	01/20/23
# 230	0.063 mm	1.40	8.40	PSEP 1986 P.9	SF	01/20/23

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ANALYSIS REPORT

Analytical Resources LLC
4611 S 134th PI
Tukwila, WA 98168
Attention: KELLY BOTTEM
All results reported on a dry weight basis.

Date Received: 01/04/23
Date Reported: 1/23/23

AMTEST Identification Number 23-A000123
Client Identification 23A0011-25
Sampling Date 01/02/23, 14:32

Conventionals

PARAMETER	RESULT	UNITS	Q	D.L.	METHOD	ANALYST	DATE
Total Solids	74.7	%		0.1	SM 2540G	SF	01/16/23

Particle Size by Sieve Only

Sieve Number	Sieve Size	% Retained	% Passed	METHOD	ANALYST	DATE
# 4	4.75 mm	3.20	96.8	PSEP 1986 P.9	SF	01/20/23
# 5	4.0 mm	0.10	96.7	PSEP 1986 P.9	SF	01/20/23
# 10	2.0 mm	0.30	96.4	PSEP 1986 P.9	SF	01/20/23
# 18	1.0 mm	1.30	95.1	PSEP 1986 P.9	SF	01/20/23
# 35	0.5 mm	7.70	87.4	PSEP 1986 P.9	SF	01/20/23
# 60	0.250 mm	72.0	15.4	PSEP 1986 P.9	SF	01/20/23
# 120	0.125 mm	10.3	5.10	PSEP 1986 P.9	SF	01/20/23
# 230	0.063 mm	2.00	3.10	PSEP 1986 P.9	SF	01/20/23

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ANALYSIS REPORT

Analytical Resources LLC
4611 S 134th PI
Tukwila, WA 98168
Attention: KELLY BOTTEM
All results reported on a dry weight basis.

Date Received: 01/04/23
Date Reported: 1/23/23

AMTEST Identification Number 23-A000124
Client Identification 23A0011-26
Sampling Date 01/02/23, 14:45

Conventionals

PARAMETER	RESULT	UNITS	Q	D.L.	METHOD	ANALYST	DATE
Total Solids	73.2	%		0.1	SM 2540G	SF	01/16/23

Particle Size by Sieve Only

Sieve Number	Sieve Size	% Retained	% Passed	METHOD	ANALYST	DATE
# 4	4.75 mm	0.20	99.8	PSEP 1986 P.9	SF	01/20/23
# 5	4.0 mm	< 0.1	99.8	PSEP 1986 P.9	SF	01/20/23
# 10	2.0 mm	0.20	99.6	PSEP 1986 P.9	SF	01/20/23
# 18	1.0 mm	1.40	98.2	PSEP 1986 P.9	SF	01/20/23
# 35	0.5 mm	8.10	90.1	PSEP 1986 P.9	SF	01/20/23
# 60	0.250 mm	71.1	19.0	PSEP 1986 P.9	SF	01/20/23
# 120	0.125 mm	15.4	3.60	PSEP 1986 P.9	SF	01/20/23
# 230	0.063 mm	1.50	2.10	PSEP 1986 P.9	SF	01/20/23

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ANALYSIS REPORT

Analytical Resources LLC
4611 S 134th PI
Tukwila, WA 98168
Attention: KELLY BOTTEM
All results reported on a dry weight basis.

Date Received: 01/04/23
Date Reported: 1/23/23

AMTEST Identification Number 23-A000125
Client Identification 23A0011-27
Sampling Date 01/02/23, 14:54

Conventionals

PARAMETER	RESULT	UNITS	Q	D.L.	METHOD	ANALYST	DATE
Total Solids	75.1	%		0.1	SM 2540G	SF	01/16/23

Particle Size by Sieve Only

Sieve Number	Sieve Size	% Retained	% Passed	METHOD	ANALYST	DATE
# 4	4.75 mm	2.00	98.0	PSEP 1986 P.9	SF	01/20/23
# 5	4.0 mm	0.30	97.7	PSEP 1986 P.9	SF	01/20/23
# 10	2.0 mm	0.80	96.9	PSEP 1986 P.9	SF	01/20/23
# 18	1.0 mm	2.30	94.6	PSEP 1986 P.9	SF	01/20/23
# 35	0.5 mm	11.8	82.8	PSEP 1986 P.9	SF	01/20/23
# 60	0.250 mm	71.5	11.3	PSEP 1986 P.9	SF	01/20/23
# 120	0.125 mm	6.80	4.50	PSEP 1986 P.9	SF	01/20/23
# 230	0.063 mm	1.60	2.90	PSEP 1986 P.9	SF	01/20/23

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ANALYSIS REPORT

Analytical Resources LLC
4611 S 134th PI
Tukwila, WA 98168
Attention: KELLY BOTTEM
All results reported on a dry weight basis.

Date Received: 01/04/23
Date Reported: 1/23/23

AMTEST Identification Number 23-A000126
Client Identification 23A0011-28
Sampling Date 01/02/23, 15:01

Conventionals

PARAMETER	RESULT	UNITS	Q	D.L.	METHOD	ANALYST	DATE
Total Solids	75.0	%		0.1	SM 2540G	SF	01/16/23

Particle Size by Sieve Only

Sieve Number	Sieve Size	% Retained	% Passed	METHOD	ANALYST	DATE
# 4	4.75 mm	0.20	99.8	PSEP 1986 P.9	SF	01/20/23
# 5	4.0 mm	< 0.1	99.8	PSEP 1986 P.9	SF	01/20/23
# 10	2.0 mm	0.10	99.7	PSEP 1986 P.9	SF	01/20/23
# 18	1.0 mm	0.50	99.2	PSEP 1986 P.9	SF	01/20/23
# 35	0.5 mm	5.60	93.6	PSEP 1986 P.9	SF	01/20/23
# 60	0.250 mm	81.0	12.6	PSEP 1986 P.9	SF	01/20/23
# 120	0.125 mm	6.10	6.50	PSEP 1986 P.9	SF	01/20/23
# 230	0.063 mm	1.40	5.10	PSEP 1986 P.9	SF	01/20/23



SUBCONTRACT ORDER
To: AmTest Laboratories
ARI Work Order: 23A0011

SENDING LABORATORY:

Analytical Resources, LLC
4611 S. 134th Place, Suite 100
Tukwila, WA 98168
Phone: (206) 695-6200
Fax: (206) 695-6202
Project Manager: Kelly Bottem
E-Mail: kelly.bottem@arilabs.com

RECEIVING LABORATORY:

AmTest Laboratories
13600 NE 126th Pl Suite C
Kirkland, WA 98034
Phone: 425-885-1664
Fax: -

PLEASE SEND DATA AND INVOICE TO subdata@arilabs.com

Analysis	Due	Expires	Sub Laboratory ID	Comments
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Sample ID: 23A0011-01

Sampled: 01/02/23 11:37 Matrix: Solid

Grainsize PSEP (Sieve Only) (Subc) 01/18/23 07/04/23 04:25

Containers Supplied:

23A0011-01 A
Ziploc Bag, Gallon

23A99

Sample ID: 23A0011-02

Sampled: 01/02/23 11:45 Matrix: Solid

Grainsize PSEP (Sieve Only) (Subc) 01/18/23 07/04/23 04:33

Containers Supplied:

23A0011-02 A
Ziploc Bag, Gallon

100

Sample ID: 23A0011-03

Sampled: 01/02/23 11:52 Matrix: Solid

Grainsize PSEP (Sieve Only) (Subc) 01/18/23 07/04/23 04:40

Containers Supplied:

23A0011-03 A
Ziploc Bag, Gallon

101

Sample ID: 23A0011-04

Sampled: 01/02/23 11:59 Matrix: Solid

Grainsize PSEP (Sieve Only) (Subc) 01/18/23 07/04/23 04:47

Containers Supplied:

23A0011-04 A
Ziploc Bag, Gallon

102

T = 1.2°C

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Date

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Date

Received By

Date

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SUBCONTRACT ORDER
To: AmTest Laboratories
ARI Work Order: 23A0011

Analysis	Due	Expires	Sub Laboratory ID	Comments
Sample ID: 23A0011-05				
Sampled: 01/02/23 12:06 Matrix: Solid				
Grainsize PSEP (Sieve Only) (Subc)	01/18/23	07/04/23 04:54		
Containers Supplied:				
23A0011-05 A Ziploc Bag, Gallon		103		
Sample ID: 23A0011-06				
Sampled: 01/02/23 12:12 Matrix: Solid				
Grainsize PSEP (Sieve Only) (Subc)	01/18/23	07/04/23 05:00		
Containers Supplied:				
23A0011-06 A Ziploc Bag, Gallon		104		
Sample ID: 23A0011-07				
Sampled: 01/02/23 12:20 Matrix: Solid				
Grainsize PSEP (Sieve Only) (Subc)	01/18/23	07/04/23 05:08		
Containers Supplied:				
23A0011-07 A Ziploc Bag, Gallon		105		
Sample ID: 23A0011-08				
Sampled: 01/02/23 12:27 Matrix: Solid				
Grainsize PSEP (Sieve Only) (Subc)	01/18/23	07/04/23 05:15		
Containers Supplied:				
23A0011-08 A Ziploc Bag, Gallon		106		
Sample ID: 23A0011-09				
Sampled: 01/02/23 12:32 Matrix: Solid				
Grainsize PSEP (Sieve Only) (Subc)	01/18/23	07/04/23 05:20		
Containers Supplied:				
23A0011-09 A Ziploc Bag, Gallon		107		
Sample ID: 23A0011-10				
Sampled: 01/02/23 12:38 Matrix: Solid				
Grainsize PSEP (Sieve Only) (Subc)	01/18/23	07/04/23 05:26		
Containers Supplied:				
23A0011-10 A Ziploc Bag, Gallon		108		

Released By *CB ART 1350 1/4/23* Date *1/4/23* Received By *KL* Date *13:53*

Released By _____ Date _____ Received By _____ Date _____



SUBCONTRACT ORDER
To: AmTest Laboratories
ARI Work Order: 23A0011

Analysis	Due	Expires	Sub Laboratory ID	Comments
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Sample ID: 23A0011-11

Sampled: 01/02/23 10:51 Matrix: Solid

Grainsize PSEP (Sieve Only) (Subc) 01/18/23 07/04/23 03:39

Containers Supplied:

23A0011-11 A
Ziploc Bag, Gallon

109

Sample ID: 23A0011-12

Sampled: 01/02/23 11:02 Matrix: Solid

Grainsize PSEP (Sieve Only) (Subc) 01/18/23 07/04/23 03:50

Containers Supplied:

23A0011-12 A
Ziploc Bag, Gallon

110

Sample ID: 23A0011-13

Sampled: 01/02/23 11:12 Matrix: Solid

Grainsize PSEP (Sieve Only) (Subc) 01/18/23 07/04/23 04:00

Containers Supplied:

23A0011-13 A
Ziploc Bag, Gallon

111

Sample ID: 23A0011-14

Sampled: 01/02/23 11:20 Matrix: Solid

Grainsize PSEP (Sieve Only) (Subc) 01/18/23 07/04/23 04:08

Containers Supplied:

23A0011-14 A
Ziploc Bag, Gallon

112

Sample ID: 23A0011-15

Sampled: 01/02/23 11:28 Matrix: Solid

Grainsize PSEP (Sieve Only) (Subc) 01/18/23 07/04/23 04:16

Containers Supplied:

23A0011-15 A
Ziploc Bag, Gallon

113

Sample ID: 23A0011-16

Sampled: 01/02/23 13:56 Matrix: Solid

Grainsize PSEP (Sieve Only) (Subc) 01/18/23 07/04/23 06:44

Containers Supplied:

23A0011-16 A
Ziploc Bag, Gallon

114

T = 1.2°C

Released By

Date

Received By

Date

Released By

Date

Received By

Date

Printed: 1/3/2023 2:48:14PM

Page 3 of 5

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LB APT 1350 1/4/23 KL 1/4/23 13:53



SUBCONTRACT ORDER
To: AmTest Laboratories
ARI Work Order: 23A0011

Analysis	Due	Expires	Sub Laboratory ID	Comments
Sample ID: 23A0011-17				
Sampled: 01/02/23 14:02 Matrix: Solid				
Grainsize PSEP (Sieve Only) (Subc)	01/18/23	07/04/23 06:50		
Containers Supplied:				
23A0011-17 A Ziploc Bag, Gallon		115		
Sample ID: 23A0011-18				
Sampled: 01/02/23 14:09 Matrix: Solid				
Grainsize PSEP (Sieve Only) (Subc)	01/18/23	07/04/23 06:57		
Containers Supplied:				
23A0011-18 A Ziploc Bag, Gallon		116		
Sample ID: 23A0011-19				
Sampled: 01/02/23 14:16 Matrix: Solid				
Grainsize PSEP (Sieve Only) (Subc)	01/18/23	07/04/23 07:04		
Containers Supplied:				
23A0011-19 A Ziploc Bag, Gallon		117		
Sample ID: 23A0011-20				
Sampled: 01/02/23 14:24 Matrix: Solid				
Grainsize PSEP (Sieve Only) (Subc)	01/18/23	07/04/23 07:12		
Containers Supplied:				
23A0011-20 A Ziploc Bag, Gallon		118		
Sample ID: 23A0011-21				
Sampled: 01/02/23 13:20 Matrix: Solid				
Grainsize PSEP (Sieve Only) (Subc)	01/18/23	07/04/23 06:08		
Containers Supplied:				
23A0011-21 A Ziploc Bag, Gallon		119		
Sample ID: 23A0011-22				
Sampled: 01/02/23 13:26 Matrix: Solid				
Grainsize PSEP (Sieve Only) (Subc)	01/18/23	07/04/23 06:14		
Containers Supplied:				
23A0011-22 A Ziploc Bag, Gallon		120		

T=1.2°C

Released By OB ART Date 11/4/23 Received By KL Date 11/4/23

Released By _____ Date _____ Received By _____ Date _____

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SUBCONTRACT ORDER
To: AmTest Laboratories
ARI Work Order:23A0011

Analysis	Due	Expires	Sub Laboratory ID	Comments
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Sample ID: 23A0011-23

Sampled: 01/02/23 13:40 Matrix: Solid

Grainsize PSEP (Sieve Only) (Sube) 01/18/23 07/04/23 06:28

Containers Supplied:

23A0011-23 A
Ziploc Bag, Gallon

121

Sample ID: 23A0011-24

Sampled: 01/02/23 13:46 Matrix: Solid

Grainsize PSEP (Sieve Only) (Sube) 01/18/23 07/04/23 06:34

Containers Supplied:

23A0011-24 A
Ziploc Bag, Gallon

122

Sample ID: 23A0011-25

Sampled: 01/02/23 14:32 Matrix: Solid

Grainsize PSEP (Sieve Only) (Sube) 01/18/23 07/04/23 07:20

Containers Supplied:

23A0011-25 A
Ziploc Bag, Gallon

123

Sample ID: 23A0011-26

Sampled: 01/02/23 14:45 Matrix: Solid

Grainsize PSEP (Sieve Only) (Sube) 01/18/23 07/04/23 07:33

Containers Supplied:

23A0011-26 A
Ziploc Bag, Gallon

124

Sample ID: 23A0011-27

Sampled: 01/02/23 14:54 Matrix: Solid

Grainsize PSEP (Sieve Only) (Sube) 01/18/23 07/04/23 07:42

Containers Supplied:

23A0011-27 A
Ziploc Bag, Gallon

125

Sample ID: 23A0011-28

Sampled: 01/02/23 15:01 Matrix: Solid

Grainsize PSEP (Sieve Only) (Sube) 01/18/23 07/04/23 07:49

Containers Supplied:

23A0011-28 A
Ziploc Bag, Gallon

126

Released By

Date

Received By

Date

Released By

Date

Received By

Date

T=1.2°C

1/4/23

1353

KL

ARI 1/4/23 1350

LB



Gravity Environmental LLC
32617 SE 44th St
Fall City WA, 98024

Project: Cooke NPDES
Project Number: Cooke NPDES
Project Manager: Shawn Hinz

Reported:
24-Jan-2023 13:59

CB-W50-1
23A0011-01 (Solid)

Metals and Metallic Compounds

Method: EPA 6020B UCT-KED

Sampled: 01/02/2023 11:37

Instrument: ICPMS2 Analyst: MCB

Analyzed: 01/13/2023 01:51

Analysis by: Analytical Resources, LLC

Sample Preparation:

Preparation Method: SWN EPA 3050B

Extract ID: 23A0011-01 B 01

Preparation Batch: BLA0156

Sample Size: 1.051 g (wet)

Dry Weight: 0.79 g

Prepared: 01/06/2023

Final Volume: 50 mL

% Solids: 75.20

Analyte	CAS Number	Dilution	Detection	Reporting	Result	Units	Notes
			Limit	Limit			
Zinc	7440-66-6	20	3.7	7.6	29.9	mg/kg	



Gravity Environmental LLC
32617 SE 44th St
Fall City WA, 98024

Project: Cooke NPDES
Project Number: Cooke NPDES
Project Manager: Shawn Hinz

Reported:
24-Jan-2023 13:59

CB-W50-1
23A0011-01 (Solid)

Wet Chemistry

Method: EPA 9060A m

Sampled: 01/02/2023 11:37

Instrument: TOC Cube Analyst: DOE

Analyzed: 01/05/2023 18:38

Analysis by: Analytical Resources, LLC

Sample Preparation:

Preparation Method: Plumb 1981

Extract ID: 23A0011-01 B

Preparation Batch: BLA0074

Sample Size: 0.5415 g (wet)

Dry Weight: 0.41 g

Prepared: 01/05/2023

Final Volume: 0.5415 g

% Solids: 75.20

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Total Organic Carbon		1	0.02	0.02	0.20	%	



Gravity Environmental LLC
32617 SE 44th St
Fall City WA, 98024

Project: Cooke NPDES
Project Number: Cooke NPDES
Project Manager: Shawn Hinz

Reported:
24-Jan-2023 13:59

CB-W50-1
23A0011-01 (Solid)

Wet Chemistry

Method: SM 2540 G-97

Sampled: 01/02/2023 11:37

Instrument: BAL2 Analyst: UW

Analyzed: 01/05/2023 13:48

Analysis by: Analytical Resources, LLC

Sample Preparation:

Preparation Method: No Prep Wet Chem

Extract ID: 23A0011-01

Preparation Batch: BLA0102

Sample Size: 5 g (wet)

Dry Weight: 3.76 g

Prepared: 01/05/2023

Final Volume: 5 g

% Solids: 75.20

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Total Solids		1	0.04	0.04	75.20	%	



Gravity Environmental LLC
32617 SE 44th St
Fall City WA, 98024

Project: Cooke NPDES
Project Number: Cooke NPDES
Project Manager: Shawn Hinz

Reported:
24-Jan-2023 13:59

CB-W50-1
23A0011-01 (Solid)

Geotechnical Methods

Method: PSEP-PS

Sampled: 01/02/2023 11:37

Instrument: ALAB Analyst:

Analyzed: 01/17/2023 00:00

Analysis by: AmTest Laboratories

Sample Preparation: Preparation Method: No Prep Geo
Preparation Batch: B170123
Prepared: 01/17/2023

Extract ID: 23A0011-01

Final Volume:

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
Phi Size < -2.25	GS_MFG	1	0.1	0.20	%	
Phi Size -2.25 to -2	GS_FG	1	0.1	ND	%	U
Phi Size -2 to -1	GS_VFG	1	0.1	0.20	%	
Phi Size -1 to 0	GS_VCS	1	0.1	0.70	%	
Phi Size 0 to 1	GS_CS	1	0.1	18.4	%	
Phi Size 1 to 2	GS_MS	1	0.1	69.2	%	
Phi Size 2 to 3	GS_FS	1	0.1	10.0	%	
Phi Size 3 to 4	GS_VFS	1	0.1	0.90	%	



Gravity Environmental LLC
32617 SE 44th St
Fall City WA, 98024

Project: Cooke NPDES
Project Number: Cooke NPDES
Project Manager: Shawn Hinz

Reported:
24-Jan-2023 13:59

CB-W50-2
23A0011-02 (Solid)

Metals and Metallic Compounds

Method: EPA 6020B UCT-KED

Sampled: 01/02/2023 11:45

Instrument: ICPMS2 Analyst: MCB

Analyzed: 01/18/2023 20:39

Analysis by: Analytical Resources, LLC

Sample Preparation:

Preparation Method: SWN EPA 3050B

Extract ID: 23A0011-02 B 01

Preparation Batch: BLA0156

Sample Size: 1.022 g (wet)

Dry Weight: 0.77 g

Prepared: 01/06/2023

Final Volume: 50 mL

% Solids: 75.50

Analyte	CAS Number	Dilution	Detection	Reporting	Result	Units	Notes
			Limit	Limit			
Zinc	7440-66-6	20	3.8	7.8	32.4	mg/kg	



Gravity Environmental LLC
32617 SE 44th St
Fall City WA, 98024

Project: Cooke NPDES
Project Number: Cooke NPDES
Project Manager: Shawn Hinz

Reported:
24-Jan-2023 13:59

CB-W50-2
23A0011-02 (Solid)

Wet Chemistry

Method: EPA 9060A m

Sampled: 01/02/2023 11:45

Instrument: TOC Cube Analyst: DOE

Analyzed: 01/05/2023 20:40

Analysis by: Analytical Resources, LLC

Sample Preparation:

Preparation Method: Plumb 1981

Extract ID: 23A0011-02 B

Preparation Batch: BLA0074

Sample Size: 0.5546 g (wet)

Dry Weight: 0.42 g

Prepared: 01/05/2023

Final Volume: 0.5546 g

% Solids: 75.50

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Total Organic Carbon		1	0.02	0.02	0.17	%	



Gravity Environmental LLC
32617 SE 44th St
Fall City WA, 98024

Project: Cooke NPDES
Project Number: Cooke NPDES
Project Manager: Shawn Hinz

Reported:
24-Jan-2023 13:59

CB-W50-2
23A0011-02 (Solid)

Wet Chemistry

Method: SM 2540 G-97

Sampled: 01/02/2023 11:45

Instrument: BAL2 Analyst: UW

Analyzed: 01/05/2023 13:48

Analysis by: Analytical Resources, LLC

Sample Preparation:

Preparation Method: No Prep Wet Chem

Extract ID: 23A0011-02

Preparation Batch: BLA0102

Sample Size: 5 g (wet)

Dry Weight: 3.77 g

Prepared: 01/05/2023

Final Volume: 5 g

% Solids: 75.50

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Total Solids		1	0.04	0.04	75.50	%	



Gravity Environmental LLC
32617 SE 44th St
Fall City WA, 98024

Project: Cooke NPDES
Project Number: Cooke NPDES
Project Manager: Shawn Hinz

Reported:
24-Jan-2023 13:59

CB-W50-2
23A0011-02 (Solid)

Geotechnical Methods

Method: PSEP-PS

Sampled: 01/02/2023 11:45

Instrument: ALAB Analyst:

Analyzed: 01/17/2023 00:00

Analysis by: AmTest Laboratories

Sample Preparation: Preparation Method: No Prep Geo
Preparation Batch: B170123
Prepared: 01/17/2023

Extract ID: 23A0011-02

Final Volume:

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
Phi Size < -2.25	GS_MFG	1	0.1	0.10	%	
Phi Size -2.25 to -2	GS_FG	1	0.1	ND	%	U
Phi Size -2 to -1	GS_VFG	1	0.1	0.10	%	
Phi Size -1 to 0	GS_VCS	1	0.1	0.40	%	
Phi Size 0 to 1	GS_CS	1	0.1	10.4	%	
Phi Size 1 to 2	GS_MS	1	0.1	78.0	%	
Phi Size 2 to 3	GS_FS	1	0.1	9.20	%	
Phi Size 3 to 4	GS_VFS	1	0.1	0.90	%	



Gravity Environmental LLC
32617 SE 44th St
Fall City WA, 98024

Project: Cooke NPDES
Project Number: Cooke NPDES
Project Manager: Shawn Hinz

Reported:
24-Jan-2023 13:59

CB-W50-3
23A0011-03 (Solid)

Metals and Metallic Compounds

Method: EPA 6020B UCT-KED

Sampled: 01/02/2023 11:52

Instrument: ICPMS2 Analyst: MCB

Analyzed: 01/18/2023 20:44

Analysis by: Analytical Resources, LLC

Sample Preparation:

Preparation Method: SWN EPA 3050B

Extract ID: 23A0011-03 B 01

Preparation Batch: BLA0156

Sample Size: 1.009 g (wet)

Dry Weight: 0.78 g

Prepared: 01/06/2023

Final Volume: 50 mL

% Solids: 76.88

Analyte	CAS Number	Dilution	Detection	Reporting	Result	Units	Notes
			Limit	Limit			
Zinc	7440-66-6	20	3.8	7.7	29.8	mg/kg	



Gravity Environmental LLC
32617 SE 44th St
Fall City WA, 98024

Project: Cooke NPDES
Project Number: Cooke NPDES
Project Manager: Shawn Hinz

Reported:
24-Jan-2023 13:59

CB-W50-3
23A0011-03 (Solid)

Wet Chemistry

Method: EPA 9060A m

Sampled: 01/02/2023 11:52

Instrument: TOC Cube Analyst: DOE

Analyzed: 01/05/2023 21:10

Analysis by: Analytical Resources, LLC

Sample Preparation:

Preparation Method: Plumb 1981

Extract ID: 23A0011-03 B

Preparation Batch: BLA0074

Sample Size: 0.504 g (wet)

Dry Weight: 0.39 g

Prepared: 01/05/2023

Final Volume: 0.504 g

% Solids: 76.88

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Total Organic Carbon		1	0.02	0.02	0.17	%	



Gravity Environmental LLC
32617 SE 44th St
Fall City WA, 98024

Project: Cooke NPDES
Project Number: Cooke NPDES
Project Manager: Shawn Hinz

Reported:
24-Jan-2023 13:59

CB-W50-3
23A0011-03 (Solid)

Wet Chemistry

Method: SM 2540 G-97

Sampled: 01/02/2023 11:52

Instrument: BAL2 Analyst: UW

Analyzed: 01/05/2023 13:48

Analysis by: Analytical Resources, LLC

Sample Preparation:	Preparation Method: No Prep Wet Chem	Sample Size: 5 g (wet)	Extract ID: 23A0011-03
	Preparation Batch: BLA0102	Final Volume: 5 g	Dry Weight: 3.84 g
	Prepared: 01/05/2023		% Solids: 76.88

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Total Solids		1	0.04	0.04	76.88	%	



Gravity Environmental LLC
32617 SE 44th St
Fall City WA, 98024

Project: Cooke NPDES
Project Number: Cooke NPDES
Project Manager: Shawn Hinz

Reported:
24-Jan-2023 13:59

CB-W50-3
23A0011-03 (Solid)

Geotechnical Methods

Method: PSEP-PS

Sampled: 01/02/2023 11:52

Instrument: ALAB Analyst:

Analyzed: 01/17/2023 00:00

Analysis by: AmTest Laboratories

Sample Preparation: Preparation Method: No Prep Geo
Preparation Batch: B170123
Prepared: 01/17/2023

Extract ID: 23A0011-03

Final Volume:

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
Phi Size < -2.25	GS_MFG	1	0.1	0.30	%	
Phi Size -2.25 to -2	GS_FG	1	0.1	0.10	%	
Phi Size -2 to -1	GS_VFG	1	0.1	0.10	%	
Phi Size -1 to 0	GS_VCS	1	0.1	0.40	%	
Phi Size 0 to 1	GS_CS	1	0.1	8.10	%	
Phi Size 1 to 2	GS_MS	1	0.1	82.1	%	
Phi Size 2 to 3	GS_FS	1	0.1	5.20	%	
Phi Size 3 to 4	GS_VFS	1	0.1	1.10	%	



Gravity Environmental LLC
32617 SE 44th St
Fall City WA, 98024

Project: Cooke NPDES
Project Number: Cooke NPDES
Project Manager: Shawn Hinz

Reported:
24-Jan-2023 13:59

CB-W50-4
23A0011-04 (Solid)

Metals and Metallic Compounds

Method: EPA 6020B UCT-KED

Sampled: 01/02/2023 11:59

Instrument: ICPMS2 Analyst: MCB

Analyzed: 01/18/2023 20:48

Analysis by: Analytical Resources, LLC

Sample Preparation:

Preparation Method: SWN EPA 3050B

Extract ID: 23A0011-04 B 01

Preparation Batch: BLA0156

Sample Size: 1.069 g (wet)

Dry Weight: 0.80 g

Prepared: 01/06/2023

Final Volume: 50 mL

% Solids: 74.78

Analyte	CAS Number	Dilution	Detection	Reporting	Result	Units	Notes
			Limit	Limit			
Zinc	7440-66-6	20	3.7	7.5	31.3	mg/kg	



Gravity Environmental LLC
32617 SE 44th St
Fall City WA, 98024

Project: Cooke NPDES
Project Number: Cooke NPDES
Project Manager: Shawn Hinz

Reported:
24-Jan-2023 13:59

CB-W50-4
23A0011-04 (Solid)

Wet Chemistry

Method: EPA 9060A m

Sampled: 01/02/2023 11:59

Instrument: TOC Cube Analyst: DOE

Analyzed: 01/05/2023 21:40

Analysis by: Analytical Resources, LLC

Sample Preparation:

Preparation Method: Plumb 1981

Preparation Batch: BLA0074

Prepared: 01/05/2023

Sample Size: 0.5354 g (wet)

Final Volume: 0.5354 g

Extract ID: 23A0011-04 B

Dry Weight: 0.40 g

% Solids: 74.78

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Total Organic Carbon		1	0.02	0.02	0.21	%	



Gravity Environmental LLC
32617 SE 44th St
Fall City WA, 98024

Project: Cooke NPDES
Project Number: Cooke NPDES
Project Manager: Shawn Hinz

Reported:
24-Jan-2023 13:59

CB-W50-4
23A0011-04 (Solid)

Wet Chemistry

Method: SM 2540 G-97

Sampled: 01/02/2023 11:59

Instrument: BAL2 Analyst: UW

Analyzed: 01/05/2023 13:48

Analysis by: Analytical Resources, LLC

Sample Preparation:	Preparation Method: No Prep Wet Chem	Sample Size: 5 g (wet)	Extract ID: 23A0011-04
	Preparation Batch: BLA0102	Final Volume: 5 g	Dry Weight: 3.74 g
	Prepared: 01/05/2023		% Solids: 74.78

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Total Solids		1	0.04	0.04	74.78	%	



Gravity Environmental LLC
32617 SE 44th St
Fall City WA, 98024

Project: Cooke NPDES
Project Number: Cooke NPDES
Project Manager: Shawn Hinz

Reported:
24-Jan-2023 13:59

CB-W50-4
23A0011-04 (Solid)

Geotechnical Methods

Method: PSEP-PS

Sampled: 01/02/2023 11:59

Instrument: ALAB Analyst:

Analyzed: 01/18/2023 00:00

Analysis by: AmTest Laboratories

Sample Preparation: Preparation Method: No Prep Geo
Preparation Batch: B180123
Prepared: 01/18/2023

Extract ID: 23A0011-04

Final Volume:

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
Phi Size < -2.25	GS_MFG	1	0.1	0.20	%	
Phi Size -2.25 to -2	GS_FG	1	0.1	0.10	%	
Phi Size -2 to -1	GS_VFG	1	0.1	0.20	%	
Phi Size -1 to 0	GS_VCS	1	0.1	0.40	%	
Phi Size 0 to 1	GS_CS	1	0.1	6.20	%	
Phi Size 1 to 2	GS_MS	1	0.1	81.4	%	
Phi Size 2 to 3	GS_FS	1	0.1	7.40	%	
Phi Size 3 to 4	GS_VFS	1	0.1	1.20	%	



Gravity Environmental LLC
32617 SE 44th St
Fall City WA, 98024

Project: Cooke NPDES
Project Number: Cooke NPDES
Project Manager: Shawn Hinz

Reported:
24-Jan-2023 13:59

CB-W50-5
23A0011-05 (Solid)

Metals and Metallic Compounds

Method: EPA 6020B UCT-KED

Sampled: 01/02/2023 12:06

Instrument: ICPMS2 Analyst: MCB

Analyzed: 01/18/2023 20:52

Analysis by: Analytical Resources, LLC

Sample Preparation:

Preparation Method: SWN EPA 3050B

Extract ID: 23A0011-05 B 01

Preparation Batch: BLA0156

Sample Size: 1.078 g (wet)

Dry Weight: 0.81 g

Prepared: 01/06/2023

Final Volume: 50 mL

% Solids: 74.92

Analyte	CAS Number	Dilution	Detection	Reporting	Result	Units	Notes
			Limit	Limit			
Zinc	7440-66-6	20	3.6	7.4	31.2	mg/kg	



Gravity Environmental LLC
32617 SE 44th St
Fall City WA, 98024

Project: Cooke NPDES
Project Number: Cooke NPDES
Project Manager: Shawn Hinz

Reported:
24-Jan-2023 13:59

CB-W50-5
23A0011-05 (Solid)

Wet Chemistry

Method: EPA 9060A m

Sampled: 01/02/2023 12:06

Instrument: TOC Cube Analyst: DOE

Analyzed: 01/05/2023 23:12

Analysis by: Analytical Resources, LLC

Sample Preparation:

Preparation Method: Plumb 1981

Extract ID: 23A0011-05 B

Preparation Batch: BLA0074

Sample Size: 0.524 g (wet)

Dry Weight: 0.39 g

Prepared: 01/05/2023

Final Volume: 0.524 g

% Solids: 74.92

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Total Organic Carbon		1	0.02	0.02	0.20	%	



Gravity Environmental LLC
32617 SE 44th St
Fall City WA, 98024

Project: Cooke NPDES
Project Number: Cooke NPDES
Project Manager: Shawn Hinz

Reported:
24-Jan-2023 13:59

CB-W50-5
23A0011-05 (Solid)

Wet Chemistry

Method: SM 2540 G-97

Sampled: 01/02/2023 12:06

Instrument: BAL2 Analyst: UW

Analyzed: 01/05/2023 13:48

Analysis by: Analytical Resources, LLC

Sample Preparation:

Preparation Method: No Prep Wet Chem

Extract ID: 23A0011-05

Preparation Batch: BLA0102

Sample Size: 5 g (wet)

Dry Weight: 3.75 g

Prepared: 01/05/2023

Final Volume: 5 g

% Solids: 74.92

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Total Solids		1	0.04	0.04	74.92	%	



Gravity Environmental LLC
32617 SE 44th St
Fall City WA, 98024

Project: Cooke NPDES
Project Number: Cooke NPDES
Project Manager: Shawn Hinz

Reported:
24-Jan-2023 13:59

CB-W50-5
23A0011-05 (Solid)

Geotechnical Methods

Method: PSEP-PS

Sampled: 01/02/2023 12:06

Instrument: ALAB Analyst:

Analyzed: 01/18/2023 00:00

Analysis by: AmTest Laboratories

Sample Preparation: Preparation Method: No Prep Geo
Preparation Batch: B180123
Prepared: 01/18/2023

Extract ID: 23A0011-05

Final Volume:

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
Phi Size < -2.25	GS_MFG	1	0.1	0.20	%	
Phi Size -2.25 to -2	GS_FG	1	0.1	0.10	%	
Phi Size -2 to -1	GS_VFG	1	0.1	0.30	%	
Phi Size -1 to 0	GS_VCS	1	0.1	0.60	%	
Phi Size 0 to 1	GS_CS	1	0.1	8.10	%	
Phi Size 1 to 2	GS_MS	1	0.1	74.4	%	
Phi Size 2 to 3	GS_FS	1	0.1	13.3	%	
Phi Size 3 to 4	GS_VFS	1	0.1	1.10	%	



Gravity Environmental LLC
32617 SE 44th St
Fall City WA, 98024

Project: Cooke NPDES
Project Number: Cooke NPDES
Project Manager: Shawn Hinz

Reported:
24-Jan-2023 13:59

CB-W100-1
23A0011-06 (Solid)

Metals and Metallic Compounds

Method: EPA 6020B UCT-KED

Sampled: 01/02/2023 12:12

Instrument: ICPMS2 Analyst: MCB

Analyzed: 01/18/2023 20:57

Analysis by: Analytical Resources, LLC

Sample Preparation:

Preparation Method: SWN EPA 3050B

Extract ID: 23A0011-06 B 01

Preparation Batch: BLA0156

Sample Size: 1.062 g (wet)

Dry Weight: 0.79 g

Prepared: 01/06/2023

Final Volume: 50 mL

% Solids: 74.79

Analyte	CAS Number	Dilution	Detection	Reporting	Result	Units	Notes
			Limit	Limit			
Zinc	7440-66-6	20	3.7	7.6	30.7	mg/kg	



Gravity Environmental LLC
32617 SE 44th St
Fall City WA, 98024

Project: Cooke NPDES
Project Number: Cooke NPDES
Project Manager: Shawn Hinz

Reported:
24-Jan-2023 13:59

CB-W100-1
23A0011-06 (Solid)

Wet Chemistry

Method: EPA 9060A m

Sampled: 01/02/2023 12:12

Instrument: TOC Cube Analyst: DOE

Analyzed: 01/05/2023 23:42

Analysis by: Analytical Resources, LLC

Sample Preparation:

Preparation Method: Plumb 1981

Preparation Batch: BLA0074

Prepared: 01/05/2023

Sample Size: 0.534 g (wet)

Final Volume: 0.534 g

Extract ID: 23A0011-06 B

Dry Weight: 0.40 g

% Solids: 74.79

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Total Organic Carbon		1	0.02	0.02	0.15	%	



Gravity Environmental LLC
32617 SE 44th St
Fall City WA, 98024

Project: Cooke NPDES
Project Number: Cooke NPDES
Project Manager: Shawn Hinz

Reported:
24-Jan-2023 13:59

CB-W100-1
23A0011-06 (Solid)

Wet Chemistry

Method: SM 2540 G-97

Sampled: 01/02/2023 12:12

Instrument: BAL2 Analyst: UW

Analyzed: 01/05/2023 13:48

Analysis by: Analytical Resources, LLC

Sample Preparation:

Preparation Method: No Prep Wet Chem

Extract ID: 23A0011-06

Preparation Batch: BLA0102

Sample Size: 5 g (wet)

Dry Weight: 3.74 g

Prepared: 01/05/2023

Final Volume: 5 g

% Solids: 74.79

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Total Solids		1	0.04	0.04	74.79	%	



Gravity Environmental LLC
32617 SE 44th St
Fall City WA, 98024

Project: Cooke NPDES
Project Number: Cooke NPDES
Project Manager: Shawn Hinz

Reported:
24-Jan-2023 13:59

CB-W100-1
23A0011-06 (Solid)

Geotechnical Methods

Method: PSEP-PS

Sampled: 01/02/2023 12:12

Instrument: ALAB Analyst:

Analyzed: 01/18/2023 00:00

Analysis by: AmTest Laboratories

Sample Preparation: Preparation Method: No Prep Geo
Preparation Batch: B180123
Prepared: 01/18/2023

Extract ID: 23A0011-06

Final Volume:

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
Phi Size < -2.25	GS_MFG	1	0.1	0.10	%	
Phi Size -2.25 to -2	GS_FG	1	0.1	0.10	%	
Phi Size -2 to -1	GS_VFG	1	0.1	0.10	%	
Phi Size -1 to 0	GS_VCS	1	0.1	0.60	%	
Phi Size 0 to 1	GS_CS	1	0.1	5.30	%	
Phi Size 1 to 2	GS_MS	1	0.1	80.9	%	
Phi Size 2 to 3	GS_FS	1	0.1	8.00	%	
Phi Size 3 to 4	GS_VFS	1	0.1	1.50	%	



Gravity Environmental LLC
32617 SE 44th St
Fall City WA, 98024

Project: Cooke NPDES
Project Number: Cooke NPDES
Project Manager: Shawn Hinz

Reported:
24-Jan-2023 13:59

CB-W100-2
23A0011-07 (Solid)

Metals and Metallic Compounds

Method: EPA 6020B UCT-KED

Sampled: 01/02/2023 12:20

Instrument: ICPMS2 Analyst: MCB

Analyzed: 01/18/2023 21:01

Analysis by: Analytical Resources, LLC

Sample Preparation:

Preparation Method: SWN EPA 3050B

Extract ID: 23A0011-07 B 01

Preparation Batch: BLA0156

Sample Size: 1.03 g (wet)

Dry Weight: 0.78 g

Prepared: 01/06/2023

Final Volume: 50 mL

% Solids: 75.44

Analyte	CAS Number	Dilution	Detection	Reporting	Result	Units	Notes
			Limit	Limit			
Zinc	7440-66-6	20	3.8	7.7	30.8	mg/kg	



Gravity Environmental LLC
32617 SE 44th St
Fall City WA, 98024

Project: Cooke NPDES
Project Number: Cooke NPDES
Project Manager: Shawn Hinz

Reported:
24-Jan-2023 13:59

CB-W100-2
23A0011-07 (Solid)

Wet Chemistry

Method: EPA 9060A m

Sampled: 01/02/2023 12:20

Instrument: TOC Cube Analyst: DOE

Analyzed: 01/06/2023 00:12

Analysis by: Analytical Resources, LLC

Sample Preparation:

Preparation Method: Plumb 1981

Extract ID: 23A0011-07 B

Preparation Batch: BLA0074

Sample Size: 0.5339 g (wet)

Dry Weight: 0.40 g

Prepared: 01/05/2023

Final Volume: 0.5339 g

% Solids: 75.44

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Total Organic Carbon		1	0.02	0.02	0.19	%	



Gravity Environmental LLC
32617 SE 44th St
Fall City WA, 98024

Project: Cooke NPDES
Project Number: Cooke NPDES
Project Manager: Shawn Hinz

Reported:
24-Jan-2023 13:59

CB-W100-2
23A0011-07 (Solid)

Wet Chemistry

Method: SM 2540 G-97

Sampled: 01/02/2023 12:20

Instrument: BAL2 Analyst: UW

Analyzed: 01/05/2023 13:48

Analysis by: Analytical Resources, LLC

Sample Preparation:

Preparation Method: No Prep Wet Chem

Extract ID: 23A0011-07

Preparation Batch: BLA0102

Sample Size: 5 g (wet)

Dry Weight: 3.77 g

Prepared: 01/05/2023

Final Volume: 5 g

% Solids: 75.44

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Total Solids		1	0.04	0.04	75.44	%	



Gravity Environmental LLC
32617 SE 44th St
Fall City WA, 98024

Project: Cooke NPDES
Project Number: Cooke NPDES
Project Manager: Shawn Hinz

Reported:
24-Jan-2023 13:59

CB-W100-2
23A0011-07 (Solid)

Geotechnical Methods

Method: PSEP-PS

Sampled: 01/02/2023 12:20

Instrument: ALAB Analyst:

Analyzed: 01/18/2023 00:00

Analysis by: AmTest Laboratories

Sample Preparation: Preparation Method: No Prep Geo
Preparation Batch: B180123
Prepared: 01/18/2023

Extract ID: 23A0011-07

Final Volume:

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
Phi Size < -2.25	GS_MFG	1	0.1	0.20	%	
Phi Size -2.25 to -2	GS_FG	1	0.1	0.10	%	
Phi Size -2 to -1	GS_VFG	1	0.1	0.30	%	
Phi Size -1 to 0	GS_VCS	1	0.1	0.30	%	
Phi Size 0 to 1	GS_CS	1	0.1	3.90	%	
Phi Size 1 to 2	GS_MS	1	0.1	74.6	%	
Phi Size 2 to 3	GS_FS	1	0.1	12.8	%	
Phi Size 3 to 4	GS_VFS	1	0.1	1.70	%	



Gravity Environmental LLC
32617 SE 44th St
Fall City WA, 98024

Project: Cooke NPDES
Project Number: Cooke NPDES
Project Manager: Shawn Hinz

Reported:
24-Jan-2023 13:59

CB-W100-3
23A0011-08 (Solid)

Metals and Metallic Compounds

Method: EPA 6020B UCT-KED

Sampled: 01/02/2023 12:27

Instrument: ICPMS2 Analyst: MCB

Analyzed: 01/18/2023 21:05

Analysis by: Analytical Resources, LLC

Sample Preparation:

Preparation Method: SWN EPA 3050B

Extract ID: 23A0011-08 B 01

Preparation Batch: BLA0156

Sample Size: 1.026 g (wet)

Dry Weight: 0.77 g

Prepared: 01/06/2023

Final Volume: 50 mL

% Solids: 75.09

Analyte	CAS Number	Dilution	Detection	Reporting	Result	Units	Notes
			Limit	Limit			
Zinc	7440-66-6	20	3.8	7.8	30.1	mg/kg	



Gravity Environmental LLC
32617 SE 44th St
Fall City WA, 98024

Project: Cooke NPDES
Project Number: Cooke NPDES
Project Manager: Shawn Hinz

Reported:
24-Jan-2023 13:59

CB-W100-3
23A0011-08 (Solid)

Wet Chemistry

Method: EPA 9060A m

Sampled: 01/02/2023 12:27

Instrument: TOC Cube Analyst: DOE

Analyzed: 01/06/2023 00:43

Analysis by: Analytical Resources, LLC

Sample Preparation:

Preparation Method: Plumb 1981

Extract ID: 23A0011-08 B

Preparation Batch: BLA0074

Sample Size: 0.571 g (wet)

Dry Weight: 0.43 g

Prepared: 01/05/2023

Final Volume: 0.571 g

% Solids: 75.09

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Total Organic Carbon		1	0.02	0.02	0.15	%	



Gravity Environmental LLC
32617 SE 44th St
Fall City WA, 98024

Project: Cooke NPDES
Project Number: Cooke NPDES
Project Manager: Shawn Hinz

Reported:
24-Jan-2023 13:59

CB-W100-3
23A0011-08 (Solid)

Wet Chemistry

Method: SM 2540 G-97

Sampled: 01/02/2023 12:27

Instrument: BAL2 Analyst: UW

Analyzed: 01/05/2023 13:48

Analysis by: Analytical Resources, LLC

Sample Preparation:

Preparation Method: No Prep Wet Chem

Extract ID: 23A0011-08

Preparation Batch: BLA0102

Sample Size: 5 g (wet)

Dry Weight: 3.75 g

Prepared: 01/05/2023

Final Volume: 5 g

% Solids: 75.09

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Total Solids		1	0.04	0.04	75.09	%	



Gravity Environmental LLC
32617 SE 44th St
Fall City WA, 98024

Project: Cooke NPDES
Project Number: Cooke NPDES
Project Manager: Shawn Hinz

Reported:
24-Jan-2023 13:59

CB-W100-3
23A0011-08 (Solid)

Geotechnical Methods

Method: PSEP-PS

Sampled: 01/02/2023 12:27

Instrument: ALAB Analyst:

Analyzed: 01/18/2023 00:00

Analysis by: AmTest Laboratories

Sample Preparation: Preparation Method: No Prep Geo
Preparation Batch: B180123
Prepared: 01/18/2023

Extract ID: 23A0011-08

Final Volume:

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
Phi Size < -2.25	GS_MFG	1	0.1	0.20	%	
Phi Size -2.25 to -2	GS_FG	1	0.1	ND	%	U
Phi Size -2 to -1	GS_VFG	1	0.1	0.30	%	
Phi Size -1 to 0	GS_VCS	1	0.1	0.60	%	
Phi Size 0 to 1	GS_CS	1	0.1	5.30	%	
Phi Size 1 to 2	GS_MS	1	0.1	68.7	%	
Phi Size 2 to 3	GS_FS	1	0.1	19.6	%	
Phi Size 3 to 4	GS_VFS	1	0.1	1.40	%	



Gravity Environmental LLC
32617 SE 44th St
Fall City WA, 98024

Project: Cooke NPDES
Project Number: Cooke NPDES
Project Manager: Shawn Hinz

Reported:
24-Jan-2023 13:59

CB-W100-4
23A0011-09 (Solid)

Metals and Metallic Compounds

Method: EPA 6020B UCT-KED

Sampled: 01/02/2023 12:32

Instrument: ICPMS2 Analyst: MCB

Analyzed: 01/18/2023 21:10

Analysis by: Analytical Resources, LLC

Sample Preparation:

Preparation Method: SWN EPA 3050B

Extract ID: 23A0011-09 B 01

Preparation Batch: BLA0156

Sample Size: 1.072 g (wet)

Dry Weight: 0.80 g

Prepared: 01/06/2023

Final Volume: 50 mL

% Solids: 74.86

Analyte	CAS Number	Dilution	Detection	Reporting	Result	Units	Notes
			Limit	Limit			
Zinc	7440-66-6	20	3.6	7.5	29.5	mg/kg	



Gravity Environmental LLC
32617 SE 44th St
Fall City WA, 98024

Project: Cooke NPDES
Project Number: Cooke NPDES
Project Manager: Shawn Hinz

Reported:
24-Jan-2023 13:59

CB-W100-4
23A0011-09 (Solid)

Wet Chemistry

Method: EPA 9060A m

Sampled: 01/02/2023 12:32

Instrument: TOC Cube Analyst: DOE

Analyzed: 01/06/2023 01:13

Analysis by: Analytical Resources, LLC

Sample Preparation:

Preparation Method: Plumb 1981

Preparation Batch: BLA0074

Prepared: 01/05/2023

Sample Size: 0.5031 g (wet)

Final Volume: 0.5031 g

Extract ID: 23A0011-09 B

Dry Weight: 0.38 g

% Solids: 74.86

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Total Organic Carbon		1	0.02	0.02	0.14	%	



Gravity Environmental LLC
32617 SE 44th St
Fall City WA, 98024

Project: Cooke NPDES
Project Number: Cooke NPDES
Project Manager: Shawn Hinz

Reported:
24-Jan-2023 13:59

CB-W100-4
23A0011-09 (Solid)

Wet Chemistry

Method: SM 2540 G-97

Sampled: 01/02/2023 12:32

Instrument: BAL2 Analyst: UW

Analyzed: 01/05/2023 13:48

Analysis by: Analytical Resources, LLC

Sample Preparation:

Preparation Method: No Prep Wet Chem

Extract ID: 23A0011-09

Preparation Batch: BLA0102

Sample Size: 5 g (wet)

Dry Weight: 3.74 g

Prepared: 01/05/2023

Final Volume: 5 g

% Solids: 74.86

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Total Solids		1	0.04	0.04	74.86	%	



Gravity Environmental LLC
32617 SE 44th St
Fall City WA, 98024

Project: Cooke NPDES
Project Number: Cooke NPDES
Project Manager: Shawn Hinz

Reported:
24-Jan-2023 13:59

CB-W100-4
23A0011-09 (Solid)

Geotechnical Methods

Method: PSEP-PS

Sampled: 01/02/2023 12:32

Instrument: ALAB Analyst:

Analyzed: 01/18/2023 00:00

Analysis by: AmTest Laboratories

Sample Preparation: Preparation Method: No Prep Geo
Preparation Batch: B180123
Prepared: 01/18/2023

Extract ID: 23A0011-09

Final Volume:

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
Phi Size < -2.25	GS_MFG	1	0.1	0.10	%	
Phi Size -2.25 to -2	GS_FG	1	0.1	0.10	%	
Phi Size -2 to -1	GS_VFG	1	0.1	0.20	%	
Phi Size -1 to 0	GS_VCS	1	0.1	0.50	%	
Phi Size 0 to 1	GS_CS	1	0.1	4.90	%	
Phi Size 1 to 2	GS_MS	1	0.1	81.5	%	
Phi Size 2 to 3	GS_FS	1	0.1	8.50	%	
Phi Size 3 to 4	GS_VFS	1	0.1	1.20	%	



Gravity Environmental LLC
32617 SE 44th St
Fall City WA, 98024

Project: Cooke NPDES
Project Number: Cooke NPDES
Project Manager: Shawn Hinz

Reported:
24-Jan-2023 13:59

CB-W100-5
23A0011-10 (Solid)

Metals and Metallic Compounds

Method: EPA 6020B UCT-KED

Sampled: 01/02/2023 12:38

Instrument: ICPMS2 Analyst: MCB

Analyzed: 01/18/2023 21:14

Analysis by: Analytical Resources, LLC

Sample Preparation:

Preparation Method: SWN EPA 3050B

Extract ID: 23A0011-10 B 01

Preparation Batch: BLA0156

Sample Size: 1.078 g (wet)

Dry Weight: 0.80 g

Prepared: 01/06/2023

Final Volume: 50 mL

% Solids: 74.07

Analyte	CAS Number	Dilution	Detection	Reporting	Result	Units	Notes
			Limit	Limit			
Zinc	7440-66-6	20	3.7	7.5	35.5	mg/kg	



Gravity Environmental LLC
32617 SE 44th St
Fall City WA, 98024

Project: Cooke NPDES
Project Number: Cooke NPDES
Project Manager: Shawn Hinz

Reported:
24-Jan-2023 13:59

CB-W100-5
23A0011-10 (Solid)

Wet Chemistry

Method: EPA 9060A m

Sampled: 01/02/2023 12:38

Instrument: TOC Cube Analyst: DOE

Analyzed: 01/06/2023 01:44

Analysis by: Analytical Resources, LLC

Sample Preparation:

Preparation Method: Plumb 1981

Extract ID: 23A0011-10 B

Preparation Batch: BLA0074

Sample Size: 0.5246 g (wet)

Dry Weight: 0.39 g

Prepared: 01/05/2023

Final Volume: 0.5246 g

% Solids: 74.07

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Total Organic Carbon		1	0.02	0.02	0.22	%	



Gravity Environmental LLC
32617 SE 44th St
Fall City WA, 98024

Project: Cooke NPDES
Project Number: Cooke NPDES
Project Manager: Shawn Hinz

Reported:
24-Jan-2023 13:59

CB-W100-5
23A0011-10 (Solid)

Wet Chemistry

Method: SM 2540 G-97

Sampled: 01/02/2023 12:38

Instrument: BAL2 Analyst: UW

Analyzed: 01/05/2023 13:48

Analysis by: Analytical Resources, LLC

Sample Preparation:	Preparation Method: No Prep Wet Chem	Sample Size: 5 g (wet)	Extract ID: 23A0011-10
	Preparation Batch: BLA0102	Final Volume: 5 g	Dry Weight: 3.70 g
	Prepared: 01/05/2023		% Solids: 74.07

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Total Solids		1	0.04	0.04	74.07	%	



Gravity Environmental LLC
32617 SE 44th St
Fall City WA, 98024

Project: Cooke NPDES
Project Number: Cooke NPDES
Project Manager: Shawn Hinz

Reported:
24-Jan-2023 13:59

CB-W100-5
23A0011-10 (Solid)

Geotechnical Methods

Method: PSEP-PS

Sampled: 01/02/2023 12:38

Instrument: ALAB Analyst:

Analyzed: 01/18/2023 00:00

Analysis by: AmTest Laboratories

Sample Preparation: Preparation Method: No Prep Geo
Preparation Batch: B180123
Prepared: 01/18/2023

Extract ID: 23A0011-10

Final Volume:

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
Phi Size < -2.25	GS_MFG	1	0.1	0.60	%	
Phi Size -2.25 to -2	GS_FG	1	0.1	0.10	%	
Phi Size -2 to -1	GS_VFG	1	0.1	0.30	%	
Phi Size -1 to 0	GS_VCS	1	0.1	0.70	%	
Phi Size 0 to 1	GS_CS	1	0.1	5.00	%	
Phi Size 1 to 2	GS_MS	1	0.1	78.0	%	
Phi Size 2 to 3	GS_FS	1	0.1	9.60	%	
Phi Size 3 to 4	GS_VFS	1	0.1	1.20	%	



Gravity Environmental LLC
32617 SE 44th St
Fall City WA, 98024

Project: Cooke NPDES
Project Number: Cooke NPDES
Project Manager: Shawn Hinz

Reported:
24-Jan-2023 13:59

CB-N100-1
23A0011-11 (Solid)

Metals and Metallic Compounds

Method: EPA 6020B UCT-KED

Sampled: 01/02/2023 10:51

Instrument: ICPMS2 Analyst: MCB

Analyzed: 01/18/2023 21:34

Analysis by: Analytical Resources, LLC

Sample Preparation:

Preparation Method: SWN EPA 3050B

Extract ID: 23A0011-11 B 01

Preparation Batch: BLA0156

Sample Size: 1.07 g (wet)

Dry Weight: 0.78 g

Prepared: 01/06/2023

Final Volume: 50 mL

% Solids: 73.22

Analyte	CAS Number	Dilution	Detection	Reporting	Result	Units	Notes
			Limit	Limit			
Zinc	7440-66-6	20	3.7	7.7	31.2	mg/kg	



Gravity Environmental LLC
32617 SE 44th St
Fall City WA, 98024

Project: Cooke NPDES
Project Number: Cooke NPDES
Project Manager: Shawn Hinz

Reported:
24-Jan-2023 13:59

CB-N100-1
23A0011-11 (Solid)

Wet Chemistry

Method: EPA 9060A m

Sampled: 01/02/2023 10:51

Instrument: TOC Cube Analyst: DOE

Analyzed: 01/06/2023 02:14

Analysis by: Analytical Resources, LLC

Sample Preparation:

Preparation Method: Plumb 1981

Preparation Batch: BLA0074

Prepared: 01/05/2023

Sample Size: 0.5438 g (wet)

Final Volume: 0.5438 g

Extract ID: 23A0011-11 B

Dry Weight: 0.40 g

% Solids: 73.22

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Total Organic Carbon		1	0.02	0.02	0.19	%	



Gravity Environmental LLC
32617 SE 44th St
Fall City WA, 98024

Project: Cooke NPDES
Project Number: Cooke NPDES
Project Manager: Shawn Hinz

Reported:
24-Jan-2023 13:59

CB-N100-1
23A0011-11 (Solid)

Wet Chemistry

Method: SM 2540 G-97

Sampled: 01/02/2023 10:51

Instrument: BAL2 Analyst: UW

Analyzed: 01/05/2023 13:48

Analysis by: Analytical Resources, LLC

Sample Preparation:

Preparation Method: No Prep Wet Chem

Extract ID: 23A0011-11

Preparation Batch: BLA0102

Sample Size: 5 g (wet)

Dry Weight: 3.66 g

Prepared: 01/05/2023

Final Volume: 5 g

% Solids: 73.22

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Total Solids		1	0.04	0.04	73.22	%	



Gravity Environmental LLC
32617 SE 44th St
Fall City WA, 98024

Project: Cooke NPDES
Project Number: Cooke NPDES
Project Manager: Shawn Hinz

Reported:
24-Jan-2023 13:59

CB-N100-1
23A0011-11 (Solid)

Geotechnical Methods

Method: PSEP-PS

Sampled: 01/02/2023 10:51

Instrument: ALAB Analyst:

Analyzed: 01/18/2023 00:00

Analysis by: AmTest Laboratories

Sample Preparation: Preparation Method: No Prep Geo
Preparation Batch: B180123
Prepared: 01/18/2023

Extract ID: 23A0011-11

Final Volume:

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
Phi Size < -2.25	GS_MFG	1	0.1	0.10	%	
Phi Size -2.25 to -2	GS_FG	1	0.1	ND	%	U
Phi Size -2 to -1	GS_VFG	1	0.1	0.10	%	
Phi Size -1 to 0	GS_VCS	1	0.1	0.70	%	
Phi Size 0 to 1	GS_CS	1	0.1	10.6	%	
Phi Size 1 to 2	GS_MS	1	0.1	68.9	%	
Phi Size 2 to 3	GS_FS	1	0.1	13.2	%	
Phi Size 3 to 4	GS_VFS	1	0.1	0.90	%	



Gravity Environmental LLC
32617 SE 44th St
Fall City WA, 98024

Project: Cooke NPDES
Project Number: Cooke NPDES
Project Manager: Shawn Hinz

Reported:
24-Jan-2023 13:59

CB-N100-2
23A0011-12 (Solid)

Metals and Metallic Compounds

Method: EPA 6020B UCT-KED

Sampled: 01/02/2023 11:02

Instrument: ICPMS2 Analyst: MCB

Analyzed: 01/18/2023 21:38

Analysis by: Analytical Resources, LLC

Sample Preparation:

Preparation Method: SWN EPA 3050B

Extract ID: 23A0011-12 B 01

Preparation Batch: BLA0156

Sample Size: 1.012 g (wet)

Dry Weight: 0.75 g

Prepared: 01/06/2023

Final Volume: 50 mL

% Solids: 73.82

Analyte	CAS Number	Dilution	Detection	Reporting	Result	Units	Notes
			Limit	Limit			
Zinc	7440-66-6	20	3.9	8.0	27.9	mg/kg	



Gravity Environmental LLC
32617 SE 44th St
Fall City WA, 98024

Project: Cooke NPDES
Project Number: Cooke NPDES
Project Manager: Shawn Hinz

Reported:
24-Jan-2023 13:59

CB-N100-2
23A0011-12 (Solid)

Wet Chemistry

Method: EPA 9060A m

Sampled: 01/02/2023 11:02

Instrument: TOC Cube Analyst: DOE

Analyzed: 01/06/2023 02:45

Analysis by: Analytical Resources, LLC

Sample Preparation:

Preparation Method: Plumb 1981

Extract ID: 23A0011-12 B

Preparation Batch: BLA0074

Sample Size: 0.5176 g (wet)

Dry Weight: 0.38 g

Prepared: 01/05/2023

Final Volume: 0.5176 g

% Solids: 73.82

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Total Organic Carbon		1	0.02	0.02	0.14	%	



Gravity Environmental LLC
32617 SE 44th St
Fall City WA, 98024

Project: Cooke NPDES
Project Number: Cooke NPDES
Project Manager: Shawn Hinz

Reported:
24-Jan-2023 13:59

CB-N100-2
23A0011-12 (Solid)

Wet Chemistry

Method: SM 2540 G-97

Sampled: 01/02/2023 11:02

Instrument: BAL2 Analyst: UW

Analyzed: 01/05/2023 13:48

Analysis by: Analytical Resources, LLC

Sample Preparation:

Preparation Method: No Prep Wet Chem

Extract ID: 23A0011-12

Preparation Batch: BLA0102

Sample Size: 5 g (wet)

Dry Weight: 3.69 g

Prepared: 01/05/2023

Final Volume: 5 g

% Solids: 73.82

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Total Solids		1	0.04	0.04	73.82	%	



Gravity Environmental LLC
32617 SE 44th St
Fall City WA, 98024

Project: Cooke NPDES
Project Number: Cooke NPDES
Project Manager: Shawn Hinz

Reported:
24-Jan-2023 13:59

CB-N100-2
23A0011-12 (Solid)

Geotechnical Methods

Method: PSEP-PS

Sampled: 01/02/2023 11:02

Instrument: ALAB Analyst:

Analyzed: 01/18/2023 00:00

Analysis by: AmTest Laboratories

Sample Preparation: Preparation Method: No Prep Geo
Preparation Batch: B180123
Prepared: 01/18/2023

Extract ID: 23A0011-12

Final Volume:

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
Phi Size < -2.25	GS_MFG	1	0.1	0.20	%	
Phi Size -2.25 to -2	GS_FG	1	0.1	0.20	%	
Phi Size -2 to -1	GS_VFG	1	0.1	0.10	%	
Phi Size -1 to 0	GS_VCS	1	0.1	0.80	%	
Phi Size 0 to 1	GS_CS	1	0.1	6.30	%	
Phi Size 1 to 2	GS_MS	1	0.1	80.7	%	
Phi Size 2 to 3	GS_FS	1	0.1	5.90	%	
Phi Size 3 to 4	GS_VFS	1	0.1	0.90	%	



Gravity Environmental LLC
32617 SE 44th St
Fall City WA, 98024

Project: Cooke NPDES
Project Number: Cooke NPDES
Project Manager: Shawn Hinz

Reported:
24-Jan-2023 13:59

CB-N100-3
23A0011-13 (Solid)

Metals and Metallic Compounds

Method: EPA 6020B UCT-KED

Sampled: 01/02/2023 11:12

Instrument: ICPMS2 Analyst: MCB

Analyzed: 01/18/2023 21:43

Analysis by: Analytical Resources, LLC

Sample Preparation:

Preparation Method: SWN EPA 3050B

Extract ID: 23A0011-13 B 01

Preparation Batch: BLA0156

Sample Size: 1.044 g (wet)

Dry Weight: 0.77 g

Prepared: 01/06/2023

Final Volume: 50 mL

% Solids: 73.38

Analyte	CAS Number	Dilution	Detection	Reporting	Result	Units	Notes
			Limit	Limit			
Zinc	7440-66-6	20	3.8	7.8	25.8	mg/kg	



Gravity Environmental LLC
32617 SE 44th St
Fall City WA, 98024

Project: Cooke NPDES
Project Number: Cooke NPDES
Project Manager: Shawn Hinz

Reported:
24-Jan-2023 13:59

CB-N100-3
23A0011-13 (Solid)

Wet Chemistry

Method: EPA 9060A m

Sampled: 01/02/2023 11:12

Instrument: TOC Cube Analyst: DOE

Analyzed: 01/06/2023 03:15

Analysis by: Analytical Resources, LLC

Sample Preparation:

Preparation Method: Plumb 1981

Extract ID: 23A0011-13 B

Preparation Batch: BLA0074

Sample Size: 0.5047 g (wet)

Dry Weight: 0.37 g

Prepared: 01/05/2023

Final Volume: 0.5047 g

% Solids: 73.38

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Total Organic Carbon		1	0.02	0.02	0.14	%	



Gravity Environmental LLC
32617 SE 44th St
Fall City WA, 98024

Project: Cooke NPDES
Project Number: Cooke NPDES
Project Manager: Shawn Hinz

Reported:
24-Jan-2023 13:59

CB-N100-3
23A0011-13 (Solid)

Wet Chemistry

Method: SM 2540 G-97

Sampled: 01/02/2023 11:12

Instrument: BAL2 Analyst: UW

Analyzed: 01/05/2023 13:48

Analysis by: Analytical Resources, LLC

Sample Preparation:

Preparation Method: No Prep Wet Chem

Extract ID: 23A0011-13

Preparation Batch: BLA0102

Sample Size: 5 g (wet)

Dry Weight: 3.67 g

Prepared: 01/05/2023

Final Volume: 5 g

% Solids: 73.38

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Total Solids		1	0.04	0.04	73.38	%	



Gravity Environmental LLC
32617 SE 44th St
Fall City WA, 98024

Project: Cooke NPDES
Project Number: Cooke NPDES
Project Manager: Shawn Hinz

Reported:
24-Jan-2023 13:59

CB-N100-3
23A0011-13 (Solid)

Geotechnical Methods

Method: PSEP-PS

Sampled: 01/02/2023 11:12

Instrument: ALAB Analyst:

Analyzed: 01/20/2023 00:00

Analysis by: AmTest Laboratories

Sample Preparation: Preparation Method: No Prep Geo
Preparation Batch: B200123
Prepared: 01/20/2023

Extract ID: 23A0011-13

Final Volume:

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
Phi Size < -2.25	GS_MFG	1	0.1	0.10	%	
Phi Size -2.25 to -2	GS_FG	1	0.1	0.10	%	
Phi Size -2 to -1	GS_VFG	1	0.1	0.10	%	
Phi Size -1 to 0	GS_VCS	1	0.1	0.50	%	
Phi Size 0 to 1	GS_CS	1	0.1	5.00	%	
Phi Size 1 to 2	GS_MS	1	0.1	79.7	%	
Phi Size 2 to 3	GS_FS	1	0.1	9.10	%	
Phi Size 3 to 4	GS_VFS	1	0.1	0.70	%	



Gravity Environmental LLC
32617 SE 44th St
Fall City WA, 98024

Project: Cooke NPDES
Project Number: Cooke NPDES
Project Manager: Shawn Hinz

Reported:
24-Jan-2023 13:59

CB-N100-4
23A0011-14 (Solid)

Metals and Metallic Compounds

Method: EPA 6020B UCT-KED

Sampled: 01/02/2023 11:20

Instrument: ICPMS1 Analyst: MCB

Analyzed: 01/20/2023 23:41

Analysis by: Analytical Resources, LLC

Sample Preparation:

Preparation Method: SWN EPA 3050B

Extract ID: 23A0011-14 B 01

Preparation Batch: BLA0156

Sample Size: 1.049 g (wet)

Dry Weight: 0.78 g

Prepared: 01/06/2023

Final Volume: 50 mL

% Solids: 74.34

Analyte	CAS Number	Dilution	Detection	Reporting	Result	Units	Notes
			Limit	Limit			
Zinc	7440-66-6	20	3.7	7.7	26.9	mg/kg	



Gravity Environmental LLC
32617 SE 44th St
Fall City WA, 98024

Project: Cooke NPDES
Project Number: Cooke NPDES
Project Manager: Shawn Hinz

Reported:
24-Jan-2023 13:59

CB-N100-4
23A0011-14 (Solid)

Wet Chemistry

Method: EPA 9060A m

Sampled: 01/02/2023 11:20

Instrument: TOC Cube Analyst: DOE

Analyzed: 01/06/2023 03:46

Analysis by: Analytical Resources, LLC

Sample Preparation:

Preparation Method: Plumb 1981

Extract ID: 23A0011-14 B

Preparation Batch: BLA0074

Sample Size: 0.531 g (wet)

Dry Weight: 0.39 g

Prepared: 01/05/2023

Final Volume: 0.531 g

% Solids: 74.34

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Total Organic Carbon		1	0.02	0.02	0.17	%	



Gravity Environmental LLC
32617 SE 44th St
Fall City WA, 98024

Project: Cooke NPDES
Project Number: Cooke NPDES
Project Manager: Shawn Hinz

Reported:
24-Jan-2023 13:59

CB-N100-4
23A0011-14 (Solid)

Wet Chemistry

Method: SM 2540 G-97

Sampled: 01/02/2023 11:20

Instrument: BAL2 Analyst: UW

Analyzed: 01/05/2023 13:48

Analysis by: Analytical Resources, LLC

Sample Preparation:

Preparation Method: No Prep Wet Chem

Extract ID: 23A0011-14

Preparation Batch: BLA0102

Sample Size: 5 g (wet)

Dry Weight: 3.72 g

Prepared: 01/05/2023

Final Volume: 5 g

% Solids: 74.34

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Total Solids		1	0.04	0.04	74.34	%	



Gravity Environmental LLC
32617 SE 44th St
Fall City WA, 98024

Project: Cooke NPDES
Project Number: Cooke NPDES
Project Manager: Shawn Hinz

Reported:
24-Jan-2023 13:59

CB-N100-4
23A0011-14 (Solid)

Geotechnical Methods

Method: PSEP-PS

Sampled: 01/02/2023 11:20

Instrument: ALAB Analyst:

Analyzed: 01/20/2023 00:00

Analysis by: AmTest Laboratories

Sample Preparation: Preparation Method: No Prep Geo
Preparation Batch: B200123
Prepared: 01/20/2023

Extract ID: 23A0011-14

Final Volume:

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
Phi Size < -2.25	GS_MFG	1	0.1	2.40	%	
Phi Size -2.25 to -2	GS_FG	1	0.1	ND	%	U
Phi Size -2 to -1	GS_VFG	1	0.1	0.10	%	
Phi Size -1 to 0	GS_VCS	1	0.1	0.80	%	
Phi Size 0 to 1	GS_CS	1	0.1	6.40	%	
Phi Size 1 to 2	GS_MS	1	0.1	68.0	%	
Phi Size 2 to 3	GS_FS	1	0.1	15.8	%	
Phi Size 3 to 4	GS_VFS	1	0.1	0.80	%	



Gravity Environmental LLC
32617 SE 44th St
Fall City WA, 98024

Project: Cooke NPDES
Project Number: Cooke NPDES
Project Manager: Shawn Hinz

Reported:
24-Jan-2023 13:59

CB-N100-5
23A0011-15 (Solid)

Metals and Metallic Compounds

Method: EPA 6020B UCT-KED

Sampled: 01/02/2023 11:28

Instrument: ICPMS2 Analyst: MCB

Analyzed: 01/18/2023 21:51

Analysis by: Analytical Resources, LLC

Sample Preparation:

Preparation Method: SWN EPA 3050B

Extract ID: 23A0011-15 B 01

Preparation Batch: BLA0156

Sample Size: 1.032 g (wet)

Dry Weight: 0.75 g

Prepared: 01/06/2023

Final Volume: 50 mL

% Solids: 72.50

Analyte	CAS Number	Dilution	Detection	Reporting	Result	Units	Notes
			Limit	Limit			
Zinc	7440-66-6	20	3.9	8.0	30.2	mg/kg	



Gravity Environmental LLC
32617 SE 44th St
Fall City WA, 98024

Project: Cooke NPDES
Project Number: Cooke NPDES
Project Manager: Shawn Hinz

Reported:
24-Jan-2023 13:59

CB-N100-5
23A0011-15 (Solid)

Wet Chemistry

Method: EPA 9060A m

Sampled: 01/02/2023 11:28

Instrument: TOC Cube Analyst: DOE

Analyzed: 01/06/2023 05:17

Analysis by: Analytical Resources, LLC

Sample Preparation:

Preparation Method: Plumb 1981

Preparation Batch: BLA0074

Prepared: 01/05/2023

Sample Size: 0.5181 g (wet)

Final Volume: 0.5181 g

Extract ID: 23A0011-15 B

Dry Weight: 0.38 g

% Solids: 72.50

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Total Organic Carbon		1	0.02	0.02	0.24	%	



Gravity Environmental LLC
32617 SE 44th St
Fall City WA, 98024

Project: Cooke NPDES
Project Number: Cooke NPDES
Project Manager: Shawn Hinz

Reported:
24-Jan-2023 13:59

CB-N100-5
23A0011-15 (Solid)

Wet Chemistry

Method: SM 2540 G-97

Sampled: 01/02/2023 11:28

Instrument: BAL2 Analyst: UW

Analyzed: 01/05/2023 13:48

Analysis by: Analytical Resources, LLC

Sample Preparation:	Preparation Method: No Prep Wet Chem	Sample Size: 5 g (wet)	Extract ID: 23A0011-15
	Preparation Batch: BLA0102	Final Volume: 5 g	Dry Weight: 3.62 g
	Prepared: 01/05/2023		% Solids: 72.50

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Total Solids		1	0.04	0.04	72.50	%	



Gravity Environmental LLC
32617 SE 44th St
Fall City WA, 98024

Project: Cooke NPDES
Project Number: Cooke NPDES
Project Manager: Shawn Hinz

Reported:
24-Jan-2023 13:59

CB-N100-5
23A0011-15 (Solid)

Geotechnical Methods

Method: PSEP-PS

Sampled: 01/02/2023 11:28

Instrument: ALAB Analyst:

Analyzed: 01/20/2023 00:00

Analysis by: AmTest Laboratories

Sample Preparation: Preparation Method: No Prep Geo
Preparation Batch: B200123
Prepared: 01/20/2023

Extract ID: 23A0011-15

Final Volume:

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
Phi Size < -2.25	GS_MFG	1	0.1	0.10	%	
Phi Size -2.25 to -2	GS_FG	1	0.1	0.10	%	
Phi Size -2 to -1	GS_VFG	1	0.1	0.10	%	
Phi Size -1 to 0	GS_VCS	1	0.1	0.90	%	
Phi Size 0 to 1	GS_CS	1	0.1	7.80	%	
Phi Size 1 to 2	GS_MS	1	0.1	84.4	%	
Phi Size 2 to 3	GS_FS	1	0.1	5.90	%	
Phi Size 3 to 4	GS_VFS	1	0.1	0.70	%	



Gravity Environmental LLC
32617 SE 44th St
Fall City WA, 98024

Project: Cooke NPDES
Project Number: Cooke NPDES
Project Manager: Shawn Hinz

Reported:
24-Jan-2023 13:59

CB-E100-1
23A0011-16 (Solid)

Metals and Metallic Compounds

Method: EPA 6020B UCT-KED

Sampled: 01/02/2023 13:56

Instrument: ICPMS2 Analyst: MCB

Analyzed: 01/18/2023 21:56

Analysis by: Analytical Resources, LLC

Sample Preparation:

Preparation Method: SWN EPA 3050B

Extract ID: 23A0011-16 B 01

Preparation Batch: BLA0156

Sample Size: 1.004 g (wet)

Dry Weight: 0.69 g

Prepared: 01/06/2023

Final Volume: 50 mL

% Solids: 68.85

Analyte	CAS Number	Dilution	Detection	Reporting	Result	Units	Notes
			Limit	Limit			
Zinc	7440-66-6	20	4.2	8.7	119	mg/kg	



Gravity Environmental LLC
32617 SE 44th St
Fall City WA, 98024

Project: Cooke NPDES
Project Number: Cooke NPDES
Project Manager: Shawn Hinz

Reported:
24-Jan-2023 13:59

CB-E100-1
23A0011-16 (Solid)

Wet Chemistry

Method: EPA 9060A m

Sampled: 01/02/2023 13:56

Instrument: TOC Cube Analyst: DOE

Analyzed: 01/06/2023 05:48

Analysis by: Analytical Resources, LLC

Sample Preparation:

Preparation Method: Plumb 1981

Extract ID: 23A0011-16 B

Preparation Batch: BLA0074

Sample Size: 0.5855 g (wet)

Dry Weight: 0.40 g

Prepared: 01/05/2023

Final Volume: 0.5855 g

% Solids: 68.85

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Total Organic Carbon		1	0.02	0.02	0.38	%	



Gravity Environmental LLC
32617 SE 44th St
Fall City WA, 98024

Project: Cooke NPDES
Project Number: Cooke NPDES
Project Manager: Shawn Hinz

Reported:
24-Jan-2023 13:59

CB-E100-1
23A0011-16 (Solid)

Wet Chemistry

Method: SM 2540 G-97

Sampled: 01/02/2023 13:56

Instrument: BAL2 Analyst: UW

Analyzed: 01/05/2023 13:48

Analysis by: Analytical Resources, LLC

Sample Preparation:

Preparation Method: No Prep Wet Chem

Extract ID: 23A0011-16

Preparation Batch: BLA0102

Sample Size: 5 g (wet)

Dry Weight: 3.44 g

Prepared: 01/05/2023

Final Volume: 5 g

% Solids: 68.85

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Total Solids		1	0.04	0.04	68.85	%	



Gravity Environmental LLC
32617 SE 44th St
Fall City WA, 98024

Project: Cooke NPDES
Project Number: Cooke NPDES
Project Manager: Shawn Hinz

Reported:
24-Jan-2023 13:59

CB-E100-1
23A0011-16 (Solid)

Geotechnical Methods

Method: PSEP-PS

Sampled: 01/02/2023 13:56

Instrument: ALAB Analyst:

Analyzed: 01/20/2023 00:00

Analysis by: AmTest Laboratories

Sample Preparation: Preparation Method: No Prep Geo
Preparation Batch: B200123
Prepared: 01/20/2023

Extract ID: 23A0011-16

Final Volume:

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
Phi Size < -2.25	GS_MFG	1	0.1	0.20	%	
Phi Size -2.25 to -2	GS_FG	1	0.1	0.30	%	
Phi Size -2 to -1	GS_VFG	1	0.1	1.70	%	
Phi Size -1 to 0	GS_VCS	1	0.1	3.40	%	
Phi Size 0 to 1	GS_CS	1	0.1	11.5	%	
Phi Size 1 to 2	GS_MS	1	0.1	69.6	%	
Phi Size 2 to 3	GS_FS	1	0.1	7.20	%	
Phi Size 3 to 4	GS_VFS	1	0.1	0.60	%	



Gravity Environmental LLC
32617 SE 44th St
Fall City WA, 98024

Project: Cooke NPDES
Project Number: Cooke NPDES
Project Manager: Shawn Hinz

Reported:
24-Jan-2023 13:59

CB-E100-2
23A0011-17 (Solid)

Metals and Metallic Compounds

Method: EPA 6020B UCT-KED

Sampled: 01/02/2023 14:02

Instrument: ICPMS2 Analyst: MCB

Analyzed: 01/18/2023 22:00

Analysis by: Analytical Resources, LLC

Sample Preparation:

Preparation Method: SWN EPA 3050B

Extract ID: 23A0011-17 B 01

Preparation Batch: BLA0156

Sample Size: 1.008 g (wet)

Dry Weight: 0.72 g

Prepared: 01/06/2023

Final Volume: 50 mL

% Solids: 71.62

Analyte	CAS Number	Dilution	Detection	Reporting	Result	Units	Notes
			Limit	Limit			
Zinc	7440-66-6	20	4.0	8.3	52.6	mg/kg	



Gravity Environmental LLC
32617 SE 44th St
Fall City WA, 98024

Project: Cooke NPDES
Project Number: Cooke NPDES
Project Manager: Shawn Hinz

Reported:
24-Jan-2023 13:59

CB-E100-2
23A0011-17 (Solid)

Wet Chemistry

Method: EPA 9060A m

Sampled: 01/02/2023 14:02

Instrument: TOC Cube Analyst: DOE

Analyzed: 01/06/2023 06:19

Analysis by: Analytical Resources, LLC

Sample Preparation:

Preparation Method: Plumb 1981

Extract ID: 23A0011-17 B

Preparation Batch: BLA0074

Sample Size: 0.5148 g (wet)

Dry Weight: 0.37 g

Prepared: 01/05/2023

Final Volume: 0.5148 g

% Solids: 71.62

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Total Organic Carbon		1	0.02	0.02	0.34	%	



Gravity Environmental LLC
32617 SE 44th St
Fall City WA, 98024

Project: Cooke NPDES
Project Number: Cooke NPDES
Project Manager: Shawn Hinz

Reported:
24-Jan-2023 13:59

CB-E100-2
23A0011-17 (Solid)

Wet Chemistry

Method: SM 2540 G-97

Sampled: 01/02/2023 14:02

Instrument: BAL2 Analyst: UW

Analyzed: 01/05/2023 13:48

Analysis by: Analytical Resources, LLC

Sample Preparation:

Preparation Method: No Prep Wet Chem

Extract ID: 23A0011-17

Preparation Batch: BLA0102

Sample Size: 5 g (wet)

Dry Weight: 3.58 g

Prepared: 01/05/2023

Final Volume: 5 g

% Solids: 71.62

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Total Solids		1	0.04	0.04	71.62	%	



Gravity Environmental LLC
32617 SE 44th St
Fall City WA, 98024

Project: Cooke NPDES
Project Number: Cooke NPDES
Project Manager: Shawn Hinz

Reported:
24-Jan-2023 13:59

CB-E100-2
23A0011-17 (Solid)

Geotechnical Methods

Method: PSEP-PS

Sampled: 01/02/2023 14:02

Instrument: ALAB Analyst:

Analyzed: 01/20/2023 00:00

Analysis by: AmTest Laboratories

Sample Preparation: Preparation Method: No Prep Geo
Preparation Batch: B200123
Prepared: 01/20/2023

Extract ID: 23A0011-17

Final Volume:

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
Phi Size < -2.25	GS_MFG	1	0.1	2.70	%	
Phi Size -2.25 to -2	GS_FG	1	0.1	0.10	%	
Phi Size -2 to -1	GS_VFG	1	0.1	0.60	%	
Phi Size -1 to 0	GS_VCS	1	0.1	2.00	%	
Phi Size 0 to 1	GS_CS	1	0.1	9.90	%	
Phi Size 1 to 2	GS_MS	1	0.1	70.7	%	
Phi Size 2 to 3	GS_FS	1	0.1	7.60	%	
Phi Size 3 to 4	GS_VFS	1	0.1	0.60	%	



Gravity Environmental LLC
32617 SE 44th St
Fall City WA, 98024

Project: Cooke NPDES
Project Number: Cooke NPDES
Project Manager: Shawn Hinz

Reported:
24-Jan-2023 13:59

CB-E100-3
23A0011-18 (Solid)

Metals and Metallic Compounds

Method: EPA 6020B UCT-KED

Sampled: 01/02/2023 14:09

Instrument: ICPMS2 Analyst: MCB

Analyzed: 01/18/2023 22:04

Analysis by: Analytical Resources, LLC

Sample Preparation:

Preparation Method: SWN EPA 3050B

Extract ID: 23A0011-18 B 01

Preparation Batch: BLA0156

Sample Size: 1.048 g (wet)

Dry Weight: 0.75 g

Prepared: 01/06/2023

Final Volume: 50 mL

% Solids: 71.92

Analyte	CAS Number	Dilution	Detection	Reporting	Result	Units	Notes
			Limit	Limit			
Zinc	7440-66-6	20	3.9	8.0	57.4	mg/kg	



Gravity Environmental LLC
32617 SE 44th St
Fall City WA, 98024

Project: Cooke NPDES
Project Number: Cooke NPDES
Project Manager: Shawn Hinz

Reported:
24-Jan-2023 13:59

CB-E100-3
23A0011-18 (Solid)

Wet Chemistry

Method: EPA 9060A m

Sampled: 01/02/2023 14:09

Instrument: TOC Cube Analyst: DOE

Analyzed: 01/06/2023 06:49

Analysis by: Analytical Resources, LLC

Sample Preparation:

Preparation Method: Plumb 1981

Extract ID: 23A0011-18 B

Preparation Batch: BLA0074

Sample Size: 0.574 g (wet)

Dry Weight: 0.41 g

Prepared: 01/05/2023

Final Volume: 0.574 g

% Solids: 71.92

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Total Organic Carbon		1	0.02	0.02	0.41	%	



Gravity Environmental LLC
32617 SE 44th St
Fall City WA, 98024

Project: Cooke NPDES
Project Number: Cooke NPDES
Project Manager: Shawn Hinz

Reported:
24-Jan-2023 13:59

CB-E100-3
23A0011-18 (Solid)

Wet Chemistry

Method: SM 2540 G-97

Sampled: 01/02/2023 14:09

Instrument: BAL2 Analyst: UW

Analyzed: 01/05/2023 13:48

Analysis by: Analytical Resources, LLC

Sample Preparation:	Preparation Method: No Prep Wet Chem	Sample Size: 5 g (wet)	Extract ID: 23A0011-18
	Preparation Batch: BLA0102	Final Volume: 5 g	Dry Weight: 3.60 g
	Prepared: 01/05/2023		% Solids: 71.92

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Total Solids		1	0.04	0.04	71.92	%	



Gravity Environmental LLC
32617 SE 44th St
Fall City WA, 98024

Project: Cooke NPDES
Project Number: Cooke NPDES
Project Manager: Shawn Hinz

Reported:
24-Jan-2023 13:59

CB-E100-3
23A0011-18 (Solid)

Geotechnical Methods

Method: PSEP-PS

Sampled: 01/02/2023 14:09

Instrument: ALAB Analyst:

Analyzed: 01/20/2023 00:00

Analysis by: AmTest Laboratories

Sample Preparation: Preparation Method: No Prep Geo
Preparation Batch: B200123
Prepared: 01/20/2023

Extract ID: 23A0011-18

Final Volume:

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
Phi Size < -2.25	GS_MFG	1	0.1	0.70	%	
Phi Size -2.25 to -2	GS_FG	1	0.1	0.10	%	
Phi Size -2 to -1	GS_VFG	1	0.1	0.80	%	
Phi Size -1 to 0	GS_VCS	1	0.1	2.70	%	
Phi Size 0 to 1	GS_CS	1	0.1	13.9	%	
Phi Size 1 to 2	GS_MS	1	0.1	71.5	%	
Phi Size 2 to 3	GS_FS	1	0.1	5.30	%	
Phi Size 3 to 4	GS_VFS	1	0.1	0.70	%	



Gravity Environmental LLC
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Fall City WA, 98024

Project: Cooke NPDES
Project Number: Cooke NPDES
Project Manager: Shawn Hinz

Reported:
24-Jan-2023 13:59

CB-E100-4
23A0011-19 (Solid)

Metals and Metallic Compounds

Method: EPA 6020B UCT-KED

Sampled: 01/02/2023 14:16

Instrument: ICPMS1 Analyst: MCB

Analyzed: 01/20/2023 23:45

Analysis by: Analytical Resources, LLC

Sample Preparation:

Preparation Method: SWN EPA 3050B

Extract ID: 23A0011-19 B 01

Preparation Batch: BLA0156

Sample Size: 1.019 g (wet)

Dry Weight: 0.73 g

Prepared: 01/06/2023

Final Volume: 50 mL

% Solids: 71.82

Analyte	CAS Number	Dilution	Detection	Reporting	Result	Units	Notes
			Limit	Limit			
Zinc	7440-66-6	20	4.0	8.2	57.6	mg/kg	



Gravity Environmental LLC
32617 SE 44th St
Fall City WA, 98024

Project: Cooke NPDES
Project Number: Cooke NPDES
Project Manager: Shawn Hinz

Reported:
24-Jan-2023 13:59

CB-E100-4
23A0011-19 (Solid)

Wet Chemistry

Method: EPA 9060A m

Sampled: 01/02/2023 14:16

Instrument: TOC Cube Analyst: DOE

Analyzed: 01/06/2023 07:20

Analysis by: Analytical Resources, LLC

Sample Preparation:

Preparation Method: Plumb 1981

Extract ID: 23A0011-19 B

Preparation Batch: BLA0074

Sample Size: 0.5135 g (wet)

Dry Weight: 0.37 g

Prepared: 01/05/2023

Final Volume: 0.5135 g

% Solids: 71.82

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Total Organic Carbon		1	0.02	0.02	0.37	%	



Gravity Environmental LLC
32617 SE 44th St
Fall City WA, 98024

Project: Cooke NPDES
Project Number: Cooke NPDES
Project Manager: Shawn Hinz

Reported:
24-Jan-2023 13:59

CB-E100-4
23A0011-19 (Solid)

Wet Chemistry

Method: SM 2540 G-97

Sampled: 01/02/2023 14:16

Instrument: BAL2 Analyst: UW

Analyzed: 01/05/2023 13:48

Analysis by: Analytical Resources, LLC

Sample Preparation:	Preparation Method: No Prep Wet Chem	Sample Size: 5 g (wet)	Extract ID: 23A0011-19
	Preparation Batch: BLA0102	Final Volume: 5 g	Dry Weight: 3.59 g
	Prepared: 01/05/2023		% Solids: 71.82

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Total Solids		1	0.04	0.04	71.82	%	



Gravity Environmental LLC
32617 SE 44th St
Fall City WA, 98024

Project: Cooke NPDES
Project Number: Cooke NPDES
Project Manager: Shawn Hinz

Reported:
24-Jan-2023 13:59

CB-E100-4
23A0011-19 (Solid)

Geotechnical Methods

Method: PSEP-PS

Sampled: 01/02/2023 14:16

Instrument: ALAB Analyst:

Analyzed: 01/20/2023 00:00

Analysis by: AmTest Laboratories

Sample Preparation: Preparation Method: No Prep Geo
Preparation Batch: B200123
Prepared: 01/20/2023

Extract ID: 23A0011-19

Final Volume:

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
Phi Size < -2.25	GS_MFG	1	0.1	0.30	%	
Phi Size -2.25 to -2	GS_FG	1	0.1	0.10	%	
Phi Size -2 to -1	GS_VFG	1	0.1	1.00	%	
Phi Size -1 to 0	GS_VCS	1	0.1	3.40	%	
Phi Size 0 to 1	GS_CS	1	0.1	14.2	%	
Phi Size 1 to 2	GS_MS	1	0.1	70.0	%	
Phi Size 2 to 3	GS_FS	1	0.1	4.90	%	
Phi Size 3 to 4	GS_VFS	1	0.1	0.60	%	



Gravity Environmental LLC
32617 SE 44th St
Fall City WA, 98024

Project: Cooke NPDES
Project Number: Cooke NPDES
Project Manager: Shawn Hinz

Reported:
24-Jan-2023 13:59

CB-E100-5
23A0011-20 (Solid)

Metals and Metallic Compounds

Method: EPA 6020B UCT-KED

Sampled: 01/02/2023 14:24

Instrument: ICPMS2 Analyst: MCB

Analyzed: 01/18/2023 22:29

Analysis by: Analytical Resources, LLC

Sample Preparation:

Preparation Method: SWN EPA 3050B

Extract ID: 23A0011-20 B 01

Preparation Batch: BLA0156

Sample Size: 1.021 g (wet)

Dry Weight: 0.74 g

Prepared: 01/06/2023

Final Volume: 50 mL

% Solids: 72.71

Analyte	CAS Number	Dilution	Detection	Reporting	Result	Units	Notes
			Limit	Limit			
Zinc	7440-66-6	20	3.9	8.1	48.5	mg/kg	



Gravity Environmental LLC
32617 SE 44th St
Fall City WA, 98024

Project: Cooke NPDES
Project Number: Cooke NPDES
Project Manager: Shawn Hinz

Reported:
24-Jan-2023 13:59

CB-E100-5
23A0011-20 (Solid)

Wet Chemistry

Method: EPA 9060A m

Sampled: 01/02/2023 14:24

Instrument: TOC Cube Analyst: DOE

Analyzed: 01/06/2023 07:50

Analysis by: Analytical Resources, LLC

Sample Preparation:

Preparation Method: Plumb 1981

Extract ID: 23A0011-20 B

Preparation Batch: BLA0074

Sample Size: 0.5072 g (wet)

Dry Weight: 0.37 g

Prepared: 01/05/2023

Final Volume: 0.5072 g

% Solids: 72.71

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Total Organic Carbon		1	0.02	0.02	0.32	%	



Gravity Environmental LLC
32617 SE 44th St
Fall City WA, 98024

Project: Cooke NPDES
Project Number: Cooke NPDES
Project Manager: Shawn Hinz

Reported:
24-Jan-2023 13:59

CB-E100-5
23A0011-20 (Solid)

Wet Chemistry

Method: SM 2540 G-97

Sampled: 01/02/2023 14:24

Instrument: BAL2 Analyst: UW

Analyzed: 01/05/2023 13:48

Analysis by: Analytical Resources, LLC

Sample Preparation:

Preparation Method: No Prep Wet Chem

Extract ID: 23A0011-20

Preparation Batch: BLA0102

Sample Size: 5 g (wet)

Dry Weight: 3.64 g

Prepared: 01/05/2023

Final Volume: 5 g

% Solids: 72.71

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Total Solids		1	0.04	0.04	72.71	%	



Gravity Environmental LLC
32617 SE 44th St
Fall City WA, 98024

Project: Cooke NPDES
Project Number: Cooke NPDES
Project Manager: Shawn Hinz

Reported:
24-Jan-2023 13:59

CB-E100-5
23A0011-20 (Solid)

Geotechnical Methods

Method: PSEP-PS

Sampled: 01/02/2023 14:24

Instrument: ALAB Analyst:

Analyzed: 01/20/2023 00:00

Analysis by: AmTest Laboratories

Sample Preparation: Preparation Method: No Prep Geo
Preparation Batch: B200123
Prepared: 01/20/2023

Extract ID: 23A0011-20

Final Volume:

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
Phi Size < -2.25	GS_MFG	1	0.1	0.10	%	
Phi Size -2.25 to -2	GS_FG	1	0.1	0.10	%	
Phi Size -2 to -1	GS_VFG	1	0.1	0.30	%	
Phi Size -1 to 0	GS_VCS	1	0.1	1.90	%	
Phi Size 0 to 1	GS_CS	1	0.1	16.9	%	
Phi Size 1 to 2	GS_MS	1	0.1	68.2	%	
Phi Size 2 to 3	GS_FS	1	0.1	9.20	%	
Phi Size 3 to 4	GS_VFS	1	0.1	0.60	%	



Gravity Environmental LLC
32617 SE 44th St
Fall City WA, 98024

Project: Cooke NPDES
Project Number: Cooke NPDES
Project Manager: Shawn Hinz

Reported:
24-Jan-2023 13:59

CB-S100-1
23A0011-21 (Solid)

Metals and Metallic Compounds

Method: EPA 6020B UCT-KED

Sampled: 01/02/2023 13:20

Instrument: ICPMS1 Analyst: MCB

Analyzed: 01/20/2023 23:49

Analysis by: Analytical Resources, LLC

Sample Preparation:	Preparation Method: SWN EPA 3050B	Sample Size: 1.061 g (wet)	Extract ID: 23A0011-21 B 02
	Preparation Batch: BLA0372	Final Volume: 50 mL	Dry Weight: 0.80 g
	Prepared: 01/18/2023		% Solids: 75.07

Analyte	CAS Number	Dilution	Detection	Reporting	Result	Units	Notes
			Limit	Limit			
Zinc	7440-66-6	20	3.7	7.5	55.0	mg/kg	



Gravity Environmental LLC
32617 SE 44th St
Fall City WA, 98024

Project: Cooke NPDES
Project Number: Cooke NPDES
Project Manager: Shawn Hinz

Reported:
24-Jan-2023 13:59

CB-S100-1
23A0011-21 (Solid)

Wet Chemistry

Method: EPA 9060A m

Sampled: 01/02/2023 13:20

Instrument: TOC Cube Analyst: DOE

Analyzed: 01/06/2023 09:52

Analysis by: Analytical Resources, LLC

Sample Preparation:

Preparation Method: Plumb 1981

Extract ID: 23A0011-21 B

Preparation Batch: BLA0075

Sample Size: 0.5116 g (wet)

Dry Weight: 0.38 g

Prepared: 01/05/2023

Final Volume: 0.5116 g

% Solids: 74.83

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Total Organic Carbon		1	0.02	0.02	0.28	%	



Gravity Environmental LLC
32617 SE 44th St
Fall City WA, 98024

Project: Cooke NPDES
Project Number: Cooke NPDES
Project Manager: Shawn Hinz

Reported:
24-Jan-2023 13:59

CB-S100-1
23A0011-21 (Solid)

Wet Chemistry

Method: SM 2540 G-97

Sampled: 01/02/2023 13:20

Instrument: BAL2 Analyst: UW

Analyzed: 01/05/2023 13:51

Analysis by: Analytical Resources, LLC

Sample Preparation:

Preparation Method: No Prep Wet Chem

Extract ID: 23A0011-21

Preparation Batch: BLA0103

Sample Size: 5 g (wet)

Dry Weight: 3.74 g

Prepared: 01/05/2023

Final Volume: 5 g

% Solids: 74.83

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Total Solids		1	0.04	0.04	74.83	%	



Gravity Environmental LLC
32617 SE 44th St
Fall City WA, 98024

Project: Cooke NPDES
Project Number: Cooke NPDES
Project Manager: Shawn Hinz

Reported:
24-Jan-2023 13:59

CB-S100-1
23A0011-21 (Solid)

Geotechnical Methods

Method: PSEP-PS

Sampled: 01/02/2023 13:20

Instrument: ALAB Analyst:

Analyzed: 01/20/2023 00:00

Analysis by: AmTest Laboratories

Sample Preparation: Preparation Method: No Prep Geo
Preparation Batch: B200123
Prepared: 01/20/2023

Extract ID: 23A0011-21

Final Volume:

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
Phi Size < -2.25	GS_MFG	1	0.1	3.00	%	
Phi Size -2.25 to -2	GS_FG	1	0.1	0.20	%	
Phi Size -2 to -1	GS_VFG	1	0.1	2.10	%	
Phi Size -1 to 0	GS_VCS	1	0.1	10.1	%	
Phi Size 0 to 1	GS_CS	1	0.1	24.0	%	
Phi Size 1 to 2	GS_MS	1	0.1	53.3	%	
Phi Size 2 to 3	GS_FS	1	0.1	3.90	%	
Phi Size 3 to 4	GS_VFS	1	0.1	0.70	%	



Gravity Environmental LLC
32617 SE 44th St
Fall City WA, 98024

Project: Cooke NPDES
Project Number: Cooke NPDES
Project Manager: Shawn Hinz

Reported:
24-Jan-2023 13:59

CB-S100-2
23A0011-22 (Solid)

Metals and Metallic Compounds

Method: EPA 6020B UCT-KED

Sampled: 01/02/2023 13:26

Instrument: ICPMS1 Analyst: MCB

Analyzed: 01/20/2023 23:53

Analysis by: Analytical Resources, LLC

Sample Preparation:

Preparation Method: SWN EPA 3050B

Extract ID: 23A0011-22 B 02

Preparation Batch: BLA0372

Sample Size: 1.055 g (wet)

Dry Weight: 0.79 g

Prepared: 01/18/2023

Final Volume: 50 mL

% Solids: 74.97

Analyte	CAS Number	Dilution	Detection	Reporting	Result	Units	Notes
			Limit	Limit			
Zinc	7440-66-6	20	3.7	7.6	53.2	mg/kg	



Gravity Environmental LLC
32617 SE 44th St
Fall City WA, 98024

Project: Cooke NPDES
Project Number: Cooke NPDES
Project Manager: Shawn Hinz

Reported:
24-Jan-2023 13:59

CB-S100-2
23A0011-22 (Solid)

Wet Chemistry

Method: EPA 9060A m

Sampled: 01/02/2023 13:26

Instrument: TOC Cube Analyst: DOE

Analyzed: 01/06/2023 12:56

Analysis by: Analytical Resources, LLC

Sample Preparation:

Preparation Method: Plumb 1981

Extract ID: 23A0011-22 B

Preparation Batch: BLA0075

Sample Size: 0.5261 g (wet)

Dry Weight: 0.39 g

Prepared: 01/05/2023

Final Volume: 0.5261 g

% Solids: 73.64

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Total Organic Carbon		1	0.02	0.02	0.27	%	



Gravity Environmental LLC
32617 SE 44th St
Fall City WA, 98024

Project: Cooke NPDES
Project Number: Cooke NPDES
Project Manager: Shawn Hinz

Reported:
24-Jan-2023 13:59

CB-S100-2
23A0011-22 (Solid)

Wet Chemistry

Method: SM 2540 G-97

Sampled: 01/02/2023 13:26

Instrument: BAL2 Analyst: UW

Analyzed: 01/05/2023 13:51

Analysis by: Analytical Resources, LLC

Sample Preparation:

Preparation Method: No Prep Wet Chem

Extract ID: 23A0011-22

Preparation Batch: BLA0103

Sample Size: 5 g (wet)

Dry Weight: 3.68 g

Prepared: 01/05/2023

Final Volume: 5 g

% Solids: 73.64

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Total Solids		1	0.04	0.04	73.64	%	



Gravity Environmental LLC
32617 SE 44th St
Fall City WA, 98024

Project: Cooke NPDES
Project Number: Cooke NPDES
Project Manager: Shawn Hinz

Reported:
24-Jan-2023 13:59

CB-S100-2
23A0011-22 (Solid)

Geotechnical Methods

Method: PSEP-PS

Sampled: 01/02/2023 13:26

Instrument: ALAB Analyst:

Analyzed: 01/20/2023 00:00

Analysis by: AmTest Laboratories

Sample Preparation: Preparation Method: No Prep Geo
Preparation Batch: B200123
Prepared: 01/20/2023

Extract ID: 23A0011-22

Final Volume:

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
Phi Size < -2.25	GS_MFG	1	0.1	1.40	%	
Phi Size -2.25 to -2	GS_FG	1	0.1	0.20	%	
Phi Size -2 to -1	GS_VFG	1	0.1	2.60	%	
Phi Size -1 to 0	GS_VCS	1	0.1	9.40	%	
Phi Size 0 to 1	GS_CS	1	0.1	22.5	%	
Phi Size 1 to 2	GS_MS	1	0.1	56.4	%	
Phi Size 2 to 3	GS_FS	1	0.1	6.20	%	
Phi Size 3 to 4	GS_VFS	1	0.1	0.70	%	



Gravity Environmental LLC
32617 SE 44th St
Fall City WA, 98024

Project: Cooke NPDES
Project Number: Cooke NPDES
Project Manager: Shawn Hinz

Reported:
24-Jan-2023 13:59

CB-S100-4
23A0011-23 (Solid)

Metals and Metallic Compounds

Method: EPA 6020B UCT-KED

Sampled: 01/02/2023 13:40

Instrument: ICPMS1 Analyst: MCB

Analyzed: 01/20/2023 23:57

Analysis by: Analytical Resources, LLC

Sample Preparation:

Preparation Method: SWN EPA 3050B

Extract ID: 23A0011-23 B 02

Preparation Batch: BLA0372

Sample Size: 1.081 g (wet)

Dry Weight: 0.79 g

Prepared: 01/18/2023

Final Volume: 50 mL

% Solids: 73.17

Analyte	CAS Number	Dilution	Detection	Reporting	Result	Units	Notes
			Limit	Limit			
Zinc	7440-66-6	20	3.7	7.6	59.3	mg/kg	



Gravity Environmental LLC
32617 SE 44th St
Fall City WA, 98024

Project: Cooke NPDES
Project Number: Cooke NPDES
Project Manager: Shawn Hinz

Reported:
24-Jan-2023 13:59

CB-S100-4
23A0011-23 (Solid)

Wet Chemistry

Method: EPA 9060A m

Sampled: 01/02/2023 13:40

Instrument: TOC Cube Analyst: DOE

Analyzed: 01/06/2023 13:26

Analysis by: Analytical Resources, LLC

Sample Preparation:

Preparation Method: Plumb 1981

Extract ID: 23A0011-23 B

Preparation Batch: BLA0075

Sample Size: 0.5199 g (wet)

Dry Weight: 0.38 g

Prepared: 01/05/2023

Final Volume: 0.5199 g

% Solids: 73.65

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Total Organic Carbon		1	0.02	0.02	0.28	%	



Gravity Environmental LLC
32617 SE 44th St
Fall City WA, 98024

Project: Cooke NPDES
Project Number: Cooke NPDES
Project Manager: Shawn Hinz

Reported:
24-Jan-2023 13:59

CB-S100-4
23A0011-23 (Solid)

Wet Chemistry

Method: SM 2540 G-97

Sampled: 01/02/2023 13:40

Instrument: BAL2 Analyst: UW

Analyzed: 01/05/2023 13:51

Analysis by: Analytical Resources, LLC

Sample Preparation:

Preparation Method: No Prep Wet Chem

Extract ID: 23A0011-23

Preparation Batch: BLA0103

Sample Size: 5 g (wet)

Dry Weight: 3.68 g

Prepared: 01/05/2023

Final Volume: 5 g

% Solids: 73.65

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Total Solids		1	0.04	0.04	73.65	%	



Gravity Environmental LLC
32617 SE 44th St
Fall City WA, 98024

Project: Cooke NPDES
Project Number: Cooke NPDES
Project Manager: Shawn Hinz

Reported:
24-Jan-2023 13:59

CB-S100-4
23A0011-23 (Solid)

Geotechnical Methods

Method: PSEP-PS

Sampled: 01/02/2023 13:40

Instrument: ALAB Analyst:

Analyzed: 01/20/2023 00:00

Analysis by: AmTest Laboratories

Sample Preparation: Preparation Method: No Prep Geo
Preparation Batch: B200123
Prepared: 01/20/2023

Extract ID: 23A0011-23

Final Volume:

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
Phi Size < -2.25	GS_MFG	1	0.1	0.90	%	
Phi Size -2.25 to -2	GS_FG	1	0.1	0.20	%	
Phi Size -2 to -1	GS_VFG	1	0.1	1.90	%	
Phi Size -1 to 0	GS_VCS	1	0.1	7.80	%	
Phi Size 0 to 1	GS_CS	1	0.1	19.0	%	
Phi Size 1 to 2	GS_MS	1	0.1	56.0	%	
Phi Size 2 to 3	GS_FS	1	0.1	8.20	%	
Phi Size 3 to 4	GS_VFS	1	0.1	0.80	%	



Gravity Environmental LLC
32617 SE 44th St
Fall City WA, 98024

Project: Cooke NPDES
Project Number: Cooke NPDES
Project Manager: Shawn Hinz

Reported:
24-Jan-2023 13:59

CB-S100-5
23A0011-24 (Solid)

Metals and Metallic Compounds

Method: EPA 6020B UCT-KED

Sampled: 01/02/2023 13:46

Instrument: ICPMS1 Analyst: MCB

Analyzed: 01/21/2023 00:02

Analysis by: Analytical Resources, LLC

Sample Preparation:

Preparation Method: SWN EPA 3050B

Extract ID: 23A0011-24 B 02

Preparation Batch: BLA0372

Sample Size: 1.066 g (wet)

Dry Weight: 0.76 g

Prepared: 01/18/2023

Final Volume: 50 mL

% Solids: 71.26

Analyte	CAS Number	Dilution	Detection	Reporting	Result	Units	Notes
			Limit	Limit			
Zinc	7440-66-6	20	3.8	7.9	56.8	mg/kg	



Gravity Environmental LLC
32617 SE 44th St
Fall City WA, 98024

Project: Cooke NPDES
Project Number: Cooke NPDES
Project Manager: Shawn Hinz

Reported:
24-Jan-2023 13:59

CB-S100-5
23A0011-24 (Solid)

Wet Chemistry

Method: EPA 9060A m

Sampled: 01/02/2023 13:46

Instrument: TOC Cube Analyst: DOE

Analyzed: 01/06/2023 13:57

Analysis by: Analytical Resources, LLC

Sample Preparation:

Preparation Method: Plumb 1981

Extract ID: 23A0011-24 B

Preparation Batch: BLA0075

Sample Size: 0.5091 g (wet)

Dry Weight: 0.37 g

Prepared: 01/05/2023

Final Volume: 0.5091 g

% Solids: 71.78

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Total Organic Carbon		1	0.02	0.02	0.43	%	



Gravity Environmental LLC
32617 SE 44th St
Fall City WA, 98024

Project: Cooke NPDES
Project Number: Cooke NPDES
Project Manager: Shawn Hinz

Reported:
24-Jan-2023 13:59

CB-S100-5
23A0011-24 (Solid)

Wet Chemistry

Method: SM 2540 G-97

Sampled: 01/02/2023 13:46

Instrument: BAL2 Analyst: UW

Analyzed: 01/05/2023 13:51

Analysis by: Analytical Resources, LLC

Sample Preparation:

Preparation Method: No Prep Wet Chem

Extract ID: 23A0011-24

Preparation Batch: BLA0103

Sample Size: 5 g (wet)

Dry Weight: 3.59 g

Prepared: 01/05/2023

Final Volume: 5 g

% Solids: 71.78

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Total Solids		1	0.04	0.04	71.78	%	



Gravity Environmental LLC
32617 SE 44th St
Fall City WA, 98024

Project: Cooke NPDES
Project Number: Cooke NPDES
Project Manager: Shawn Hinz

Reported:
24-Jan-2023 13:59

CB-S100-5
23A0011-24 (Solid)

Geotechnical Methods

Method: PSEP-PS

Sampled: 01/02/2023 13:46

Instrument: ALAB Analyst:

Analyzed: 01/20/2023 00:00

Analysis by: AmTest Laboratories

Sample Preparation: Preparation Method: No Prep Geo
Preparation Batch: B200123
Prepared: 01/20/2023

Extract ID: 23A0011-24

Final Volume:

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
Phi Size < -2.25	GS_MFG	1	0.1	4.50	%	
Phi Size -2.25 to -2	GS_FG	1	0.1	0.20	%	
Phi Size -2 to -1	GS_VFG	1	0.1	2.10	%	
Phi Size -1 to 0	GS_VCS	1	0.1	8.10	%	
Phi Size 0 to 1	GS_CS	1	0.1	16.6	%	
Phi Size 1 to 2	GS_MS	1	0.1	54.5	%	
Phi Size 2 to 3	GS_FS	1	0.1	4.20	%	
Phi Size 3 to 4	GS_VFS	1	0.1	1.40	%	



Gravity Environmental LLC
32617 SE 44th St
Fall City WA, 98024

Project: Cooke NPDES
Project Number: Cooke NPDES
Project Manager: Shawn Hinz

Reported:
24-Jan-2023 13:59

CB-Ref.-1
23A0011-25 (Solid)

Metals and Metallic Compounds

Method: EPA 6020B UCT-KED

Sampled: 01/02/2023 14:32

Instrument: ICPMS1 Analyst: MCB

Analyzed: 01/21/2023 00:06

Analysis by: Analytical Resources, LLC

Sample Preparation:

Preparation Method: SWN EPA 3050B

Extract ID: 23A0011-25 B 02

Preparation Batch: BLA0372

Sample Size: 1.018 g (wet)

Dry Weight: 0.74 g

Prepared: 01/18/2023

Final Volume: 50 mL

% Solids: 72.34

Analyte	CAS Number	Dilution	Detection	Reporting	Result	Units	Notes
			Limit	Limit			
Zinc	7440-66-6	20	4.0	8.1	44.4	mg/kg	



Gravity Environmental LLC
32617 SE 44th St
Fall City WA, 98024

Project: Cooke NPDES
Project Number: Cooke NPDES
Project Manager: Shawn Hinz

Reported:
24-Jan-2023 13:59

CB-Ref.-1
23A0011-25 (Solid)

Wet Chemistry

Method: EPA 9060A m

Sampled: 01/02/2023 14:32

Instrument: TOC Cube Analyst: DOE

Analyzed: 01/06/2023 14:27

Analysis by: Analytical Resources, LLC

Sample Preparation:

Preparation Method: Plumb 1981

Extract ID: 23A0011-25 B

Preparation Batch: BLA0075

Sample Size: 0.5416 g (wet)

Dry Weight: 0.39 g

Prepared: 01/05/2023

Final Volume: 0.5416 g

% Solids: 72.07

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Total Organic Carbon		1	0.02	0.02	0.27	%	



Gravity Environmental LLC
32617 SE 44th St
Fall City WA, 98024

Project: Cooke NPDES
Project Number: Cooke NPDES
Project Manager: Shawn Hinz

Reported:
24-Jan-2023 13:59

CB-Ref.-1
23A0011-25 (Solid)

Wet Chemistry

Method: SM 2540 G-97

Sampled: 01/02/2023 14:32

Instrument: BAL2 Analyst: UW

Analyzed: 01/05/2023 13:51

Analysis by: Analytical Resources, LLC

Sample Preparation:

Preparation Method: No Prep Wet Chem

Extract ID: 23A0011-25

Preparation Batch: BLA0103

Sample Size: 5 g (wet)

Dry Weight: 3.60 g

Prepared: 01/05/2023

Final Volume: 5 g

% Solids: 72.07

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Total Solids		1	0.04	0.04	72.07	%	



Gravity Environmental LLC
32617 SE 44th St
Fall City WA, 98024

Project: Cooke NPDES
Project Number: Cooke NPDES
Project Manager: Shawn Hinz

Reported:
24-Jan-2023 13:59

CB-Ref.-1
23A0011-25 (Solid)

Geotechnical Methods

Method: PSEP-PS

Sampled: 01/02/2023 14:32

Instrument: ALAB Analyst:

Analyzed: 01/20/2023 00:00

Analysis by: AmTest Laboratories

Sample Preparation: Preparation Method: No Prep Geo
Preparation Batch: B200123
Prepared: 01/20/2023

Extract ID: 23A0011-25

Final Volume:

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
Phi Size < -2.25	GS_MFG	1	0.1	3.20	%	
Phi Size -2.25 to -2	GS_FG	1	0.1	0.10	%	
Phi Size -2 to -1	GS_VFG	1	0.1	0.30	%	
Phi Size -1 to 0	GS_VCS	1	0.1	1.30	%	
Phi Size 0 to 1	GS_CS	1	0.1	7.70	%	
Phi Size 1 to 2	GS_MS	1	0.1	72.0	%	
Phi Size 2 to 3	GS_FS	1	0.1	10.3	%	
Phi Size 3 to 4	GS_VFS	1	0.1	2.00	%	



Gravity Environmental LLC
32617 SE 44th St
Fall City WA, 98024

Project: Cooke NPDES
Project Number: Cooke NPDES
Project Manager: Shawn Hinz

Reported:
24-Jan-2023 13:59

CB-Ref.-3
23A0011-26 (Solid)

Metals and Metallic Compounds

Method: EPA 6020B UCT-KED

Sampled: 01/02/2023 14:45

Instrument: ICPMS1 Analyst: MCB

Analyzed: 01/21/2023 00:10

Analysis by: Analytical Resources, LLC

Sample Preparation:

Preparation Method: SWN EPA 3050B

Extract ID: 23A0011-26 B 02

Preparation Batch: BLA0372

Sample Size: 1.047 g (wet)

Dry Weight: 0.78 g

Prepared: 01/18/2023

Final Volume: 50 mL

% Solids: 74.48

Analyte	CAS Number	Dilution	Detection	Reporting	Result	Units	Notes
			Limit	Limit			
Zinc	7440-66-6	20	3.7	7.7	38.2	mg/kg	



Gravity Environmental LLC
32617 SE 44th St
Fall City WA, 98024

Project: Cooke NPDES
Project Number: Cooke NPDES
Project Manager: Shawn Hinz

Reported:
24-Jan-2023 13:59

CB-Ref.-3
23A0011-26 (Solid)

Wet Chemistry

Method: EPA 9060A m

Sampled: 01/02/2023 14:45

Instrument: TOC Cube Analyst: DOE

Analyzed: 01/06/2023 14:58

Analysis by: Analytical Resources, LLC

Sample Preparation:

Preparation Method: Plumb 1981

Extract ID: 23A0011-26 B

Preparation Batch: BLA0075

Sample Size: 0.5474 g (wet)

Dry Weight: 0.40 g

Prepared: 01/05/2023

Final Volume: 0.5474 g

% Solids: 73.98

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Total Organic Carbon		1	0.02	0.02	0.23	%	



Gravity Environmental LLC
32617 SE 44th St
Fall City WA, 98024

Project: Cooke NPDES
Project Number: Cooke NPDES
Project Manager: Shawn Hinz

Reported:
24-Jan-2023 13:59

CB-Ref.-3
23A0011-26 (Solid)

Wet Chemistry

Method: SM 2540 G-97

Sampled: 01/02/2023 14:45

Instrument: BAL2 Analyst: UW

Analyzed: 01/05/2023 13:51

Analysis by: Analytical Resources, LLC

Sample Preparation:	Preparation Method: No Prep Wet Chem	Sample Size: 5 g (wet)	Extract ID: 23A0011-26
	Preparation Batch: BLA0103	Final Volume: 5 g	Dry Weight: 3.70 g
	Prepared: 01/05/2023		% Solids: 73.98

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Total Solids		1	0.04	0.04	73.98	%	



Gravity Environmental LLC
32617 SE 44th St
Fall City WA, 98024

Project: Cooke NPDES
Project Number: Cooke NPDES
Project Manager: Shawn Hinz

Reported:
24-Jan-2023 13:59

CB-Ref.-3
23A0011-26 (Solid)

Geotechnical Methods

Method: PSEP-PS

Sampled: 01/02/2023 14:45

Instrument: ALAB Analyst:

Analyzed: 01/20/2023 00:00

Analysis by: AmTest Laboratories

Sample Preparation: Preparation Method: No Prep Geo
Preparation Batch: B200123
Prepared: 01/20/2023

Extract ID: 23A0011-26

Final Volume:

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
Phi Size < -2.25	GS_MFG	1	0.1	0.20	%	
Phi Size -2.25 to -2	GS_FG	1	0.1	ND	%	U
Phi Size -2 to -1	GS_VFG	1	0.1	0.20	%	
Phi Size -1 to 0	GS_VCS	1	0.1	1.40	%	
Phi Size 0 to 1	GS_CS	1	0.1	8.10	%	
Phi Size 1 to 2	GS_MS	1	0.1	71.1	%	
Phi Size 2 to 3	GS_FS	1	0.1	15.4	%	
Phi Size 3 to 4	GS_VFS	1	0.1	1.50	%	



Gravity Environmental LLC
32617 SE 44th St
Fall City WA, 98024

Project: Cooke NPDES
Project Number: Cooke NPDES
Project Manager: Shawn Hinz

Reported:
24-Jan-2023 13:59

CB-Ref.-4
23A0011-27 (Solid)

Metals and Metallic Compounds

Method: EPA 6020B UCT-KED

Sampled: 01/02/2023 14:54

Instrument: ICPMS1 Analyst: MCB

Analyzed: 01/21/2023 00:14

Analysis by: Analytical Resources, LLC

Sample Preparation:

Preparation Method: SWN EPA 3050B

Extract ID: 23A0011-27 B 02

Preparation Batch: BLA0372

Sample Size: 1.082 g (wet)

Dry Weight: 0.81 g

Prepared: 01/18/2023

Final Volume: 50 mL

% Solids: 74.51

Analyte	CAS Number	Dilution	Detection	Reporting	Result	Units	Notes
			Limit	Limit			
Zinc	7440-66-6	20	3.6	7.4	40.4	mg/kg	



Gravity Environmental LLC
32617 SE 44th St
Fall City WA, 98024

Project: Cooke NPDES
Project Number: Cooke NPDES
Project Manager: Shawn Hinz

Reported:
24-Jan-2023 13:59

CB-Ref.-4
23A0011-27 (Solid)

Wet Chemistry

Method: EPA 9060A m

Sampled: 01/02/2023 14:54

Instrument: TOC Cube Analyst: DOE

Analyzed: 01/06/2023 15:28

Analysis by: Analytical Resources, LLC

Sample Preparation:

Preparation Method: Plumb 1981

Extract ID: 23A0011-27 B

Preparation Batch: BLA0075

Sample Size: 0.514 g (wet)

Dry Weight: 0.38 g

Prepared: 01/05/2023

Final Volume: 0.514 g

% Solids: 74.11

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Total Organic Carbon		1	0.02	0.02	0.21	%	



Gravity Environmental LLC
32617 SE 44th St
Fall City WA, 98024

Project: Cooke NPDES
Project Number: Cooke NPDES
Project Manager: Shawn Hinz

Reported:
24-Jan-2023 13:59

CB-Ref.-4
23A0011-27 (Solid)

Wet Chemistry

Method: SM 2540 G-97

Sampled: 01/02/2023 14:54

Instrument: BAL2 Analyst: UW

Analyzed: 01/05/2023 13:51

Analysis by: Analytical Resources, LLC

Sample Preparation:

Preparation Method: No Prep Wet Chem

Extract ID: 23A0011-27

Preparation Batch: BLA0103

Sample Size: 5 g (wet)

Dry Weight: 3.71 g

Prepared: 01/05/2023

Final Volume: 5 g

% Solids: 74.11

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Total Solids		1	0.04	0.04	74.11	%	



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32617 SE 44th St
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Project: Cooke NPDES
Project Number: Cooke NPDES
Project Manager: Shawn Hinz

Reported:
24-Jan-2023 13:59

CB-Ref.-4
23A0011-27 (Solid)

Geotechnical Methods

Method: PSEP-PS

Sampled: 01/02/2023 14:54

Instrument: ALAB Analyst:

Analyzed: 01/20/2023 00:00

Analysis by: AmTest Laboratories

Sample Preparation: Preparation Method: No Prep Geo
Preparation Batch: B200123
Prepared: 01/20/2023

Extract ID: 23A0011-27

Final Volume:

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
Phi Size < -2.25	GS_MFG	1	0.1	2.00	%	
Phi Size -2.25 to -2	GS_FG	1	0.1	0.30	%	
Phi Size -2 to -1	GS_VFG	1	0.1	0.80	%	
Phi Size -1 to 0	GS_VCS	1	0.1	2.30	%	
Phi Size 0 to 1	GS_CS	1	0.1	11.8	%	
Phi Size 1 to 2	GS_MS	1	0.1	71.5	%	
Phi Size 2 to 3	GS_FS	1	0.1	6.80	%	
Phi Size 3 to 4	GS_VFS	1	0.1	1.60	%	



Gravity Environmental LLC
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Project: Cooke NPDES
Project Number: Cooke NPDES
Project Manager: Shawn Hinz

Reported:
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CB-Ref.-5
23A0011-28 (Solid)

Metals and Metallic Compounds

Method: EPA 6020B UCT-KED

Sampled: 01/02/2023 15:01

Instrument: ICPMS1 Analyst: MCB

Analyzed: 01/20/2023 20:45

Analysis by: Analytical Resources, LLC

Sample Preparation:

Preparation Method: SWN EPA 3050B

Extract ID: 23A0011-28 B 02

Preparation Batch: BLA0372

Sample Size: 1.063 g (wet)

Dry Weight: 0.81 g

Prepared: 01/18/2023

Final Volume: 50 mL

% Solids: 75.82

Analyte	CAS Number	Dilution	Detection	Reporting	Result	Units	Notes
			Limit	Limit			
Zinc	7440-66-6	20	3.6	7.4	36.2	mg/kg	



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Project Manager: Shawn Hinz

Reported:
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CB-Ref.-5
23A0011-28 (Solid)

Wet Chemistry

Method: EPA 9060A m

Sampled: 01/02/2023 15:01

Instrument: TOC Cube Analyst: DOE

Analyzed: 01/06/2023 15:59

Analysis by: Analytical Resources, LLC

Sample Preparation:

Preparation Method: Plumb 1981

Extract ID: 23A0011-28 B

Preparation Batch: BLA0075

Sample Size: 0.5093 g (wet)

Dry Weight: 0.38 g

Prepared: 01/05/2023

Final Volume: 0.5093 g

% Solids: 75.22

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Total Organic Carbon		1	0.02	0.02	0.24	%	



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Project: Cooke NPDES
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Project Manager: Shawn Hinz

Reported:
24-Jan-2023 13:59

CB-Ref.-5
23A0011-28 (Solid)

Wet Chemistry

Method: SM 2540 G-97

Sampled: 01/02/2023 15:01

Instrument: BAL2 Analyst: UW

Analyzed: 01/05/2023 13:51

Analysis by: Analytical Resources, LLC

Sample Preparation:

Preparation Method: No Prep Wet Chem

Extract ID: 23A0011-28

Preparation Batch: BLA0103

Sample Size: 5 g (wet)

Dry Weight: 3.76 g

Prepared: 01/05/2023

Final Volume: 5 g

% Solids: 75.22

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Total Solids		1	0.04	0.04	75.22	%	



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Project Manager: Shawn Hinz

Reported:
24-Jan-2023 13:59

CB-Ref.-5
23A0011-28 (Solid)

Geotechnical Methods

Method: PSEP-PS

Sampled: 01/02/2023 15:01

Instrument: ALAB Analyst:

Analyzed: 01/20/2023 00:00

Analysis by: AmTest Laboratories

Sample Preparation: Preparation Method: No Prep Geo
Preparation Batch: B200123
Prepared: 01/20/2023

Extract ID: 23A0011-28

Final Volume:

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
Phi Size < -2.25	GS_MFG	1	0.1	0.20	%	
Phi Size -2.25 to -2	GS_FG	1	0.1	ND	%	U
Phi Size -2 to -1	GS_VFG	1	0.1	0.10	%	
Phi Size -1 to 0	GS_VCS	1	0.1	0.50	%	
Phi Size 0 to 1	GS_CS	1	0.1	5.60	%	
Phi Size 1 to 2	GS_MS	1	0.1	81.0	%	
Phi Size 2 to 3	GS_FS	1	0.1	6.10	%	
Phi Size 3 to 4	GS_VFS	1	0.1	1.40	%	



Gravity Environmental LLC
32617 SE 44th St
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Project: Cooke NPDES
Project Number: Cooke NPDES
Project Manager: Shawn Hinz

Reported:
24-Jan-2023 13:59

Analysis by: Analytical Resources, LLC

Metals and Metallic Compounds - Quality Control

Batch BLA0156 - EPA 6020B UCT-KED

Instrument: ICPMS2 Analyst: MCB

QC Sample/Analyte	Isotope	Result	Detection Limit	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Blank (BLA0156-BLK1)						Prepared: 06-Jan-2023 Analyzed: 12-Jan-2023 23:22						
Zinc	66	ND	2.9	6.0	mg/kg							U
LCS (BLA0156-BS1)						Prepared: 06-Jan-2023 Analyzed: 12-Jan-2023 23:27						
Zinc	66	83.9	2.9	6.0	mg/kg	80.0		105	80-120			
Duplicate (BLA0156-DUP1)						Source: 23A0011-01 Prepared: 06-Jan-2023 Analyzed: 13-Jan-2023 01:55						
Zinc	66	31.0	3.7	7.6	mg/kg		29.9			3.60	20	
Matrix Spike (BLA0156-MS1)						Source: 23A0011-01 Prepared: 06-Jan-2023 Analyzed: 13-Jan-2023 01:59						
Zinc	66	136	3.7	7.6	mg/kg	101	29.9	105	75-125			

Recovery limits for target analytes in MS/MSD QC samples are advisory only.

Matrix Spike Dup (BLA0156-MSD1)						Source: 23A0011-01 Prepared: 06-Jan-2023 Analyzed: 13-Jan-2023 02:04						
Zinc	66	135	3.7	7.6	mg/kg	101	29.9	104	75-125	0.93	20	

Recovery limits for target analytes in MS/MSD QC samples are advisory only.



Gravity Environmental LLC
32617 SE 44th St
Fall City WA, 98024

Project: Cooke NPDES
Project Number: Cooke NPDES
Project Manager: Shawn Hinz

Reported:
24-Jan-2023 13:59

Analysis by: Analytical Resources, LLC

Metals and Metallic Compounds - Quality Control

Batch BLA0372 - EPA 6020B UCT-KED

Instrument: ICPMS1 Analyst: MCB

QC Sample/Analyte	Isotope	Result	Detection Limit	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Blank (BLA0372-BLK1)						Prepared: 18-Jan-2023 Analyzed: 20-Jan-2023 18:52						
Zinc	66	ND	2.9	6.0	mg/kg							U
LCS (BLA0372-BS1)						Prepared: 18-Jan-2023 Analyzed: 20-Jan-2023 18:56						
Zinc	66	87.3	2.9	6.0	mg/kg	80.0		109	80-120			
Duplicate (BLA0372-DUP1)						Source: 23A0011-28 Prepared: 18-Jan-2023 Analyzed: 20-Jan-2023 20:27						
Zinc	66	39.3	3.6	7.5	mg/kg		36.2			8.14	20	
Matrix Spike (BLA0372-MS1)						Source: 23A0011-28 Prepared: 18-Jan-2023 Analyzed: 20-Jan-2023 20:35						
Zinc	66	144	3.6	7.5	mg/kg	99.6	36.2	108	75-125			
Recovery limits for target analytes in MS/MSD QC samples are advisory only.												
Matrix Spike Dup (BLA0372-MSD1)						Source: 23A0011-28 Prepared: 18-Jan-2023 Analyzed: 20-Jan-2023 20:39						
Zinc	66	142	3.6	7.4	mg/kg	99.3	36.2	106	75-125	1.19	20	
Recovery limits for target analytes in MS/MSD QC samples are advisory only.												



Gravity Environmental LLC
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Project: Cooke NPDES
Project Number: Cooke NPDES
Project Manager: Shawn Hinz

Reported:
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Analysis by: Analytical Resources, LLC

Wet Chemistry - Quality Control

Batch BLA0074 - EPA 9060A m

Instrument: TOC Cube Analyst: DOE

QC Sample/Analyte	Result	Detection Limit	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Blank (BLA0074-BLK1)					Prepared: 05-Jan-2023 Analyzed: 05-Jan-2023 17:37						
Total Organic Carbon	ND	0.02	0.02	%							U
LCS (BLA0074-BS1)					Prepared: 05-Jan-2023 Analyzed: 05-Jan-2023 18:07						
Total Organic Carbon	44.8	0.02	0.02	%	44.4		101	80-120			
Duplicate (BLA0074-DUP1)					Source: 23A0011-01 Prepared: 05-Jan-2023 Analyzed: 05-Jan-2023 19:08						
Total Organic Carbon	0.16	0.02	0.02	%		0.20			23.40	20	*
Matrix Spike (BLA0074-MS1)					Source: 23A0011-01 Prepared: 05-Jan-2023 Analyzed: 05-Jan-2023 19:39						
Total Organic Carbon	0.95	0.02	0.02	%	0.811	0.20	91.8	75-125			
Recovery limits for target analytes in MS/MSD QC samples are advisory only.											
Matrix Spike Dup (BLA0074-MSD1)					Source: 23A0011-01 Prepared: 05-Jan-2023 Analyzed: 05-Jan-2023 20:09						
Total Organic Carbon	1.05	0.02	0.02	%	0.851	0.20	99.3	75-125	10.10	20	
Recovery limits for target analytes in MS/MSD QC samples are advisory only.											



Gravity Environmental LLC
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Project: Cooke NPDES
Project Number: Cooke NPDES
Project Manager: Shawn Hinz

Reported:
24-Jan-2023 13:59

Analysis by: Analytical Resources, LLC

Wet Chemistry - Quality Control

Batch BLA0075 - EPA 9060A m

Instrument: TOC Cube Analyst: DOE

QC Sample/Analyte	Result	Detection Limit	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Blank (BLA0075-BLK1)					Prepared: 05-Jan-2023 Analyzed: 06-Jan-2023 08:51						
Total Organic Carbon	ND	0.02	0.02	%							U
LCS (BLA0075-BS1)					Prepared: 05-Jan-2023 Analyzed: 06-Jan-2023 09:22						
Total Organic Carbon	44.0	0.02	0.02	%	44.4		99.0	80-120			
Duplicate (BLA0075-DUP1)					Source: 23A0011-21 Prepared: 05-Jan-2023 Analyzed: 06-Jan-2023 11:24						
Total Organic Carbon	0.29	0.02	0.02	%		0.28			5.15	20	
Matrix Spike (BLA0075-MS1)					Source: 23A0011-21 Prepared: 05-Jan-2023 Analyzed: 06-Jan-2023 11:55						
Total Organic Carbon	1.23	0.02	0.02	%	0.927	0.28	102	75-125			
Recovery limits for target analytes in MS/MSD QC samples are advisory only.											
Matrix Spike Dup (BLA0075-MSD1)					Source: 23A0011-21 Prepared: 05-Jan-2023 Analyzed: 06-Jan-2023 12:25						
Total Organic Carbon	1.17	0.02	0.02	%	0.860	0.28	104	75-125	4.57	20	

Recovery limits for target analytes in MS/MSD QC samples are advisory only.



Gravity Environmental LLC
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Project Manager: Shawn Hinz

Reported:
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Analysis by: Analytical Resources, LLC

Wet Chemistry - Quality Control

Batch BLA0102 - SM 2540 G-97

Instrument: BAL2 Analyst: UW

QC Sample/Analyte	Result	Detection Limit	Reporting Limit	Units	Spike Level	Source Result	%REC Limits	RPD	RPD Limit	Notes
Blank (BLA0102-BLK1)					Prepared: 05-Jan-2023 Analyzed: 05-Jan-2023 13:48					
Total Solids	ND	0.04	0.04	%						U
Duplicate (BLA0102-DUP1)					Source: 23A0011-01 Prepared: 05-Jan-2023 Analyzed: 05-Jan-2023 13:48					
Total Solids	75.01	0.04	0.04	%		75.20		0.26	20	
Duplicate (BLA0102-DUP2)					Source: 23A0011-01 Prepared: 05-Jan-2023 Analyzed: 05-Jan-2023 13:48					
Total Solids	75.60	0.04	0.04	%		75.20		0.53	20	



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Project Manager: Shawn Hinz

Reported:
24-Jan-2023 13:59

Analysis by: Analytical Resources, LLC

Wet Chemistry - Quality Control

Batch BLA0103 - SM 2540 G-97

Instrument: BAL2 Analyst: UW

QC Sample/Analyte	Result	Detection Limit	Reporting Limit	Units	Spike Level	Source Result	%REC Limits	RPD Limit	Notes
Blank (BLA0103-BLK1)					Prepared: 05-Jan-2023 Analyzed: 05-Jan-2023 13:51				
Total Solids	ND	0.04	0.04	%					U



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Certified Analyses included in this Report

Analyte	Certifications
<i>EPA 6020B UCT-KED in Solid</i>	
Zinc-66	NELAP,DoD-ELAP,WADOE
Zinc-67	NELAP,DoD-ELAP,WADOE
<i>EPA 9060A m in Solid</i>	
Total Organic Carbon	WADOE

Code	Description	Number	Expires
ADEC	Alaska Dept of Environmental Conservation	17-015	03/28/2023
DoD-ELAP	DoD-Environmental Laboratory Accreditation Program, PJLA Testing	66169	02/28/2023
NELAP	ORELAP - Oregon Laboratory Accreditation Program	WA100006-012	05/12/2023
WADOE	WA Dept of Ecology	C558	06/30/2023
WA-DW	Ecology - Drinking Water	C558	06/30/2023



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Notes and Definitions

*	Flagged value is not within established control limits.
B	This analyte was detected in the method blank.
D	The reported value is from a dilution
J	Estimated concentration value detected below the reporting limit.
U	This analyte is not detected above the reporting limit (RL) or if noted, not detected above the limit of detection (LOD).
DET	Analyte DETECTED
ND	Analyte NOT DETECTED at or above the reporting limit
NR	Not Reported
dry	Sample results reported on a dry weight basis
RPD	Relative Percent Difference
[2C]	Indicates this result was quantified on the second column on a dual column analysis.