

December 07, 2022

John Rohrback
Douglas Co PUD
1151 Valley Mall Pkwy
E Wenatchee, WA 98802

RE: Wells Dam - Annual
Associated Work Orders: YCK0233

Enclosed are the results of analyses for samples received at the laboratory on 11/9/2022. Sample analysis was performed according to Eurofins-Cascade Analytical's quality assurance program.

If you have any questions concerning this report, please feel free to contact me.

Sincerely,



Kyle Johnson For Brianna Buschbach
Quality Manager

Eurofins-Cascade Analytical uses procedures established by EPA, AOAC, APHA, ASTM, and AWWA. Eurofins-Cascade Analytical makes no warranty of any kind. The client assumes all risk and liability from the use of these results. Results relate only to the items tested and the sample(s) received by the laboratory. This analytical report must be reproduced in its entirety. Please review your data in a timely manner. Data gaps or errors will not be the responsibility of the laboratory. Though we do keep all analytical data for several years, samples are disposed of after six weeks.

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Cascade Analytical

1008 W. Ahtanum Rd.
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Douglas Co PUD
1151 Valley Mall Pkwy
E Wenatchee, WA 98802

Project: Wells Dam - Annual
Project Number: Wells Dam - Annual
Project Manager: John Rohrbach

Reported:
12/07/2022 08:59

Samples in this Report

Lab ID	Sample	Matrix	Date Sampled	Date Received
YCK0233-01	Outfall 1	Water	11/09/2022	11/09/2022
YCK0233-02	Outfall 2	Water	11/09/2022	11/09/2022
YCK0233-03	Outfall 13	Water	11/09/2022	11/09/2022
YCK0233-04	Outfall 15	Water	11/09/2022	11/09/2022
YCK0233-05	Outfall 16	Water	11/09/2022	11/09/2022
YCK0233-06	Outfall 17	Water	11/09/2022	11/09/2022
YCK0233-07	Outfall 18	Water	11/09/2022	11/09/2022
YCK0233-08	Outfall 19	Water	11/09/2022	11/09/2022
YCK0233-09	Outfall 20	Water	11/09/2022	11/09/2022
YCK0233-10	Outfall 21	Water	11/09/2022	11/09/2022
YCK0233-11	Outfall 22	Water	11/09/2022	11/09/2022
YCK0233-12	Outfall 23	Water	11/09/2022	11/09/2022
YCK0233-13	Outfall 24	Water	11/09/2022	11/09/2022
YCK0233-14	Outfall 25	Water	11/09/2022	11/09/2022
YCK0233-15	Outfall 26	Water	11/09/2022	11/09/2022



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Subcontracted Analyses

AmTest Laboratories

Zn 200.8
Zn 200.8
Zn 200.8
Zn 200.8
Zn 200.8
Zn 200.8
Zn 200.8
Zn 200.8
Zn 200.8
Zn 200.8
Zn 200.8
Zn 200.8
Zn 200.8
Zn 200.8
Zn 200.8

Analytical Resources Inc

Ni 200.8
Ni 200.8
Cu 200.8
Ni 200.8
Cu 200.8
Ni 200.8
Cu 200.8
Ni 200.8
Cu 200.8
Ni 200.8
Cu 200.8
Ni 200.8
Cu 200.8
Cu 200.8
Ni 200.8
Cu 200.8
Ni 200.8
Cu 200.8
Cu 200.8
Ni 200.8
Cu 200.8
Cu 200.8
Ni 200.8
Cu 200.8
Cu 200.8
Ni 200.8

Douglas Co PUD	Project: Wells Dam - Annual	
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Ni 200.8
Cu 200.8
Cu 200.8
Ni 200.8
Ni 200.8
Ni 200.8

Anatek Labs, Inc.-Spokane

PCB Low Level
PCB Low Level
PCB Low Level
PCB Low Level
PCB Low Level
PCB Low Level
PCB Low Level
PCB Low Level
PCB Low Level
PCB Low Level
PCB Low Level
PCB Low Level
PCB Low Level
PCB Low Level
PCB Low Level
PCB Low Level

Eurofins Test America - Seattle

Sb 200.8
Pb 200.8
Ag 200.8
Tl 200.8
Cd 200.8
Cr 200.8
Cr 200.8
Cd 200.8
Hg 1631
Sb 200.8
Se 200.8
As 200.8
Ag 200.8
Metals Prep
Pb 200.8
Tl 200.8
Hg 1631
Be 200.8
As 200.8



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As 200.8
Ag 200.8
Se 200.8
Be 200.8
TI 200.8
TI 200.8
Se 200.8
Sb 200.8
Pb 200.8
Metals Prep
Hg 1631
Cr 200.8
Cd 200.8
Be 200.8
Cd 200.8
Ag 200.8
Be 200.8
Se 200.8
Sb 200.8
Pb 200.8
Metals Prep
Hg 1631
Cr 200.8
Cd 200.8
Be 200.8
As 200.8
As 200.8
As 200.8
Metals Prep
Cr 200.8
Cd 200.8
Be 200.8
TI 200.8
Se 200.8
Sb 200.8
Metals Prep
Hg 1631
Ag 200.8
Be 200.8
As 200.8
Ag 200.8
TI 200.8
Se 200.8
Sb 200.8
Pb 200.8
Metals Prep
Hg 1631



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Cr 200.8
Cd 200.8
Pb 200.8
Cr 200.8
Sb 200.8
Sb 200.8
Cr 200.8
Cd 200.8
TI 200.8
Se 200.8
Metals Prep
Hg 1631
Cd 200.8
Be 200.8
Hg 1631
Se 200.8
Ag 200.8
Pb 200.8
Metals Prep
Hg 1631
Be 200.8
As 200.8
Ag 200.8
Sb 200.8
Pb 200.8
Cr 200.8
As 200.8
TI 200.8
TI 200.8
Se 200.8
Sb 200.8
Pb 200.8
Metals Prep
Hg 1631
Cr 200.8
Cd 200.8
Be 200.8
Se 200.8
Ag 200.8
TI 200.8
Se 200.8
Sb 200.8
Pb 200.8
Metals Prep
Hg 1631
Cr 200.8
Cd 200.8



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Be 200.8
As 200.8
Pb 200.8
As 200.8
Ag 200.8
Ag 200.8
Cr 200.8
Cd 200.8
Be 200.8
As 200.8
Ag 200.8
TI 200.8
Se 200.8
Sb 200.8
Metals Prep
Metals Prep
Pb 200.8
Cr 200.8
Cd 200.8
Be 200.8
As 200.8
Ag 200.8
TI 200.8
Se 200.8
Sb 200.8
Pb 200.8
Metals Prep
Pb 200.8
Pb 200.8
Hg 1631
Metals Prep
Hg 1631
Cr 200.8
Cd 200.8
Be 200.8
As 200.8
Ag 200.8
TI 200.8
Hg 1631
Sb 200.8
TI 200.8
Metals Prep
Hg 1631
Cr 200.8
Cd 200.8
Be 200.8
As 200.8



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Ag 200.8
TI 200.8
Se 200.8
Sb 200.8
Se 200.8

Notes and Definitions

Item	Definition
Dry	Sample results reported on a dry weight basis.
ND	Analyte NOT DETECTED at or above the reporting limit.

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Client: Eurofins - Cascade Analytical (Union Gap)
Address: 1008 W. Ahatanum Rd
Union Gap, WA 98903
Attn: Brianna Buschbach

Work Order: WCK0457
Project: YCK0233
Reported: 11/22/2022 19:20

Analytical Results Report

Sample Location: YCK0233-01 (Outfall 1)
Lab/Sample Number: WCK0457-01 **Collect Date:** 11/09/22 14:20
Date Received: 11/11/22 08:00 **Collected By:**
Matrix: Water

Analyte	Result	Units	MDL	PQL	Analyzed	Analyst	Method	Qualifier
Semivolatiles								
Aroclor 1016 (PCB-1016)	ND	ug/L	0.0500	0.200	11/18/22 15:17	GPB	EPA 608.3	
Aroclor 1221 (PCB-1221)	ND	ug/L	0.0500	0.200	11/18/22 15:17	GPB	EPA 608.3	
Aroclor 1232 (PCB-1232)	ND	ug/L	0.0500	0.200	11/18/22 15:17	GPB	EPA 608.3	
Aroclor 1242 (PCB-1242)	ND	ug/L	0.0500	0.200	11/18/22 15:17	GPB	EPA 608.3	
Aroclor 1248 (PCB-1248)	ND	ug/L	0.0500	0.200	11/18/22 15:17	GPB	EPA 608.3	
Aroclor 1254 (PCB-1254)	ND	ug/L	0.0500	0.200	11/18/22 15:17	GPB	EPA 608.3	
Aroclor 1260 (PCB-1260)	ND	ug/L	0.0500	0.200	11/18/22 15:17	GPB	EPA 608.3	
<hr/>								
Surrogate: DCB	90.5%		40-130		11/18/22 15:38	GPB	EPA 608.3	

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Analytical Results Report

(Continued)

Sample Location: YCK0233-02 (Outfall 2)
Lab/Sample Number: WCK0457-02 Collect Date: 11/09/22 14:05
Date Received: 11/11/22 08:00 Collected By:
Matrix: Water

Analyte	Result	Units	MDL	PQL	Analyzed	Analyst	Method	Qualifier
Semivolatiles								
Aroclor 1016 (PCB-1016)	ND	ug/L	0.0500	0.200	11/18/22 15:38	GPB	EPA 608.3	
Aroclor 1221 (PCB-1221)	ND	ug/L	0.0500	0.200	11/18/22 15:38	GPB	EPA 608.3	
Aroclor 1232 (PCB-1232)	ND	ug/L	0.0500	0.200	11/18/22 15:38	GPB	EPA 608.3	
Aroclor 1242 (PCB-1242)	ND	ug/L	0.0500	0.200	11/18/22 15:38	GPB	EPA 608.3	
Aroclor 1248 (PCB-1248)	ND	ug/L	0.0500	0.200	11/18/22 15:38	GPB	EPA 608.3	
Aroclor 1254 (PCB-1254)	ND	ug/L	0.0500	0.200	11/18/22 15:38	GPB	EPA 608.3	
Aroclor 1260 (PCB-1260)	ND	ug/L	0.0500	0.200	11/18/22 15:38	GPB	EPA 608.3	
Surrogate: DCB	83.4%		40-130		11/18/22 15:59	GPB	EPA 608.3	

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Analytical Results Report

(Continued)

Sample Location: YCK0233-03 (Outfall 13)
Lab/Sample Number: WCK0457-03 Collect Date: 11/09/22 14:50
Date Received: 11/11/22 08:00 Collected By:
Matrix: Water

Analyte	Result	Units	MDL	PQL	Analyzed	Analyst	Method	Qualifier
Semivolatiles								
Aroclor 1016 (PCB-1016)	ND	ug/L	0.0500	0.200	11/18/22 15:59	GPB	EPA 608.3	
Aroclor 1221 (PCB-1221)	ND	ug/L	0.0500	0.200	11/18/22 15:59	GPB	EPA 608.3	
Aroclor 1232 (PCB-1232)	ND	ug/L	0.0500	0.200	11/18/22 15:59	GPB	EPA 608.3	
Aroclor 1242 (PCB-1242)	ND	ug/L	0.0500	0.200	11/18/22 15:59	GPB	EPA 608.3	
Aroclor 1248 (PCB-1248)	ND	ug/L	0.0500	0.200	11/18/22 15:59	GPB	EPA 608.3	
Aroclor 1254 (PCB-1254)	ND	ug/L	0.0500	0.200	11/18/22 15:59	GPB	EPA 608.3	
Aroclor 1260 (PCB-1260)	ND	ug/L	0.0500	0.200	11/18/22 15:59	GPB	EPA 608.3	
<hr/>								
Surrogate: DCB	83.7%		40-130		11/18/22 16:20	GPB	EPA 608.3	

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Analytical Results Report

(Continued)

Sample Location: YCK0233-04 (Outfall 15)
Lab/Sample Number: WCK0457-04 Collect Date: 11/09/22 14:30
Date Received: 11/11/22 08:00 Collected By:
Matrix: Water

Analyte	Result	Units	MDL	PQL	Analyzed	Analyst	Method	Qualifier
Semivolatiles								
Aroclor 1016 (PCB-1016)	ND	ug/L	0.0500	0.200	11/18/22 16:20	GPB	EPA 608.3	
Aroclor 1221 (PCB-1221)	ND	ug/L	0.0500	0.200	11/18/22 16:20	GPB	EPA 608.3	
Aroclor 1232 (PCB-1232)	ND	ug/L	0.0500	0.200	11/18/22 16:20	GPB	EPA 608.3	
Aroclor 1242 (PCB-1242)	ND	ug/L	0.0500	0.200	11/18/22 16:20	GPB	EPA 608.3	
Aroclor 1248 (PCB-1248)	ND	ug/L	0.0500	0.200	11/18/22 16:20	GPB	EPA 608.3	
Aroclor 1254 (PCB-1254)	ND	ug/L	0.0500	0.200	11/18/22 16:20	GPB	EPA 608.3	
Aroclor 1260 (PCB-1260)	ND	ug/L	0.0500	0.200	11/18/22 16:20	GPB	EPA 608.3	
<hr/>								
Surrogate: DCB	93.2%		40-130		11/18/22 16:41	GPB	EPA 608.3	

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Analytical Results Report

(Continued)

Sample Location: YCK0233-05 (Outfall 16)
Lab/Sample Number: WCK0457-05 Collect Date: 11/09/22 14:35
Date Received: 11/11/22 08:00 Collected By:
Matrix: Water

Analyte	Result	Units	MDL	PQL	Analyzed	Analyst	Method	Qualifier
Semivolatiles								
Aroclor 1016 (PCB-1016)	ND	ug/L	0.0500	0.200	11/18/22 16:41	GPB	EPA 608.3	
Aroclor 1221 (PCB-1221)	ND	ug/L	0.0500	0.200	11/18/22 16:41	GPB	EPA 608.3	
Aroclor 1232 (PCB-1232)	ND	ug/L	0.0500	0.200	11/18/22 16:41	GPB	EPA 608.3	
Aroclor 1242 (PCB-1242)	ND	ug/L	0.0500	0.200	11/18/22 16:41	GPB	EPA 608.3	
Aroclor 1248 (PCB-1248)	ND	ug/L	0.0500	0.200	11/18/22 16:41	GPB	EPA 608.3	
Aroclor 1254 (PCB-1254)	ND	ug/L	0.0500	0.200	11/18/22 16:41	GPB	EPA 608.3	
Aroclor 1260 (PCB-1260)	ND	ug/L	0.0500	0.200	11/18/22 16:41	GPB	EPA 608.3	
<hr/>								
Surrogate: DCB	88.7%		40-130		11/18/22 17:02	GPB	EPA 608.3	

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Analytical Results Report

(Continued)

Sample Location: YCK0233-06 (Outfall 17)
Lab/Sample Number: WCK0457-06 Collect Date: 11/09/22 14:40
Date Received: 11/11/22 08:00 Collected By:
Matrix: Water

Analyte	Result	Units	MDL	PQL	Analyzed	Analyst	Method	Qualifier
Semivolatiles								
Aroclor 1016 (PCB-1016)	ND	ug/L	0.0500	0.200	11/18/22 17:02	GPB	EPA 608.3	
Aroclor 1221 (PCB-1221)	ND	ug/L	0.0500	0.200	11/18/22 17:02	GPB	EPA 608.3	
Aroclor 1232 (PCB-1232)	ND	ug/L	0.0500	0.200	11/18/22 17:02	GPB	EPA 608.3	
Aroclor 1242 (PCB-1242)	ND	ug/L	0.0500	0.200	11/18/22 17:02	GPB	EPA 608.3	
Aroclor 1248 (PCB-1248)	ND	ug/L	0.0500	0.200	11/18/22 17:02	GPB	EPA 608.3	
Aroclor 1254 (PCB-1254)	ND	ug/L	0.0500	0.200	11/18/22 17:02	GPB	EPA 608.3	
Aroclor 1260 (PCB-1260)	ND	ug/L	0.0500	0.200	11/18/22 17:02	GPB	EPA 608.3	
<hr/>								
Surrogate: DCB	91.3%		40-130		11/18/22 17:23	GPB	EPA 608.3	

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Analytical Results Report

(Continued)

Sample Location: YCK0233-07 (Outfall 18)
Lab/Sample Number: WCK0457-07 Collect Date: 11/09/22 14:45
Date Received: 11/11/22 08:00 Collected By:
Matrix: Water

Analyte	Result	Units	MDL	PQL	Analyzed	Analyst	Method	Qualifier
Semivolatiles								
Aroclor 1016 (PCB-1016)	ND	ug/L	0.0500	0.200	11/18/22 17:23	GPB	EPA 608.3	
Aroclor 1221 (PCB-1221)	ND	ug/L	0.0500	0.200	11/18/22 17:23	GPB	EPA 608.3	
Aroclor 1232 (PCB-1232)	ND	ug/L	0.0500	0.200	11/18/22 17:23	GPB	EPA 608.3	
Aroclor 1242 (PCB-1242)	ND	ug/L	0.0500	0.200	11/18/22 17:23	GPB	EPA 608.3	
Aroclor 1248 (PCB-1248)	ND	ug/L	0.0500	0.200	11/18/22 17:23	GPB	EPA 608.3	
Aroclor 1254 (PCB-1254)	ND	ug/L	0.0500	0.200	11/18/22 17:23	GPB	EPA 608.3	
Aroclor 1260 (PCB-1260)	ND	ug/L	0.0500	0.200	11/18/22 17:23	GPB	EPA 608.3	
Surrogate: DCB	87.4%		40-130		11/18/22 17:44	GPB	EPA 608.3	

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Analytical Results Report

(Continued)

Sample Location: YCK0233-08 (Outfall 19)
Lab/Sample Number: WCK0457-08 Collect Date: 11/09/22 15:00
Date Received: 11/11/22 08:00 Collected By:
Matrix: Water

Analyte	Result	Units	MDL	PQL	Analyzed	Analyst	Method	Qualifier
Semivolatiles								
Aroclor 1016 (PCB-1016)	ND	ug/L	0.0500	0.200	11/18/22 17:44	GPB	EPA 608.3	
Aroclor 1221 (PCB-1221)	ND	ug/L	0.0500	0.200	11/18/22 17:44	GPB	EPA 608.3	
Aroclor 1232 (PCB-1232)	ND	ug/L	0.0500	0.200	11/18/22 17:44	GPB	EPA 608.3	
Aroclor 1242 (PCB-1242)	ND	ug/L	0.0500	0.200	11/18/22 17:44	GPB	EPA 608.3	
Aroclor 1248 (PCB-1248)	ND	ug/L	0.0500	0.200	11/18/22 17:44	GPB	EPA 608.3	
Aroclor 1254 (PCB-1254)	ND	ug/L	0.0500	0.200	11/18/22 17:44	GPB	EPA 608.3	
Aroclor 1260 (PCB-1260)	ND	ug/L	0.0500	0.200	11/18/22 17:44	GPB	EPA 608.3	
Surrogate: DCB	98.8%		40-130		11/18/22 18:05	GPB	EPA 608.3	

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Analytical Results Report

(Continued)

Sample Location: YCK0233-09 (Outfall 20)
Lab/Sample Number: WCK0457-09 Collect Date: 11/09/22 15:05
Date Received: 11/11/22 08:00 Collected By:
Matrix: Water

Analyte	Result	Units	MDL	PQL	Analyzed	Analyst	Method	Qualifier
Semivolatiles								
Aroclor 1016 (PCB-1016)	ND	ug/L	0.0500	0.200	11/18/22 18:05	GPB	EPA 608.3	
Aroclor 1221 (PCB-1221)	ND	ug/L	0.0500	0.200	11/18/22 18:05	GPB	EPA 608.3	
Aroclor 1232 (PCB-1232)	ND	ug/L	0.0500	0.200	11/18/22 18:05	GPB	EPA 608.3	
Aroclor 1242 (PCB-1242)	ND	ug/L	0.0500	0.200	11/18/22 18:05	GPB	EPA 608.3	
Aroclor 1248 (PCB-1248)	ND	ug/L	0.0500	0.200	11/18/22 18:05	GPB	EPA 608.3	
Aroclor 1254 (PCB-1254)	ND	ug/L	0.0500	0.200	11/18/22 18:05	GPB	EPA 608.3	
Aroclor 1260 (PCB-1260)	ND	ug/L	0.0500	0.200	11/18/22 18:05	GPB	EPA 608.3	
Surrogate: DCB	87.2%		40-130		11/18/22 18:26	GPB	EPA 608.3	

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Analytical Results Report

(Continued)

Sample Location: YCK0233-10 (Outfall 21)
Lab/Sample Number: WCK0457-10 Collect Date: 11/09/22 15:10
Date Received: 11/11/22 08:00 Collected By:
Matrix: Water

Analyte	Result	Units	MDL	PQL	Analyzed	Analyst	Method	Qualifier
Semivolatiles								
Aroclor 1016 (PCB-1016)	ND	ug/L	0.0500	0.200	11/18/22 18:26	GPB	EPA 608.3	
Aroclor 1221 (PCB-1221)	ND	ug/L	0.0500	0.200	11/18/22 18:26	GPB	EPA 608.3	
Aroclor 1232 (PCB-1232)	ND	ug/L	0.0500	0.200	11/18/22 18:26	GPB	EPA 608.3	
Aroclor 1242 (PCB-1242)	ND	ug/L	0.0500	0.200	11/18/22 18:26	GPB	EPA 608.3	
Aroclor 1248 (PCB-1248)	ND	ug/L	0.0500	0.200	11/18/22 18:26	GPB	EPA 608.3	
Aroclor 1254 (PCB-1254)	ND	ug/L	0.0500	0.200	11/18/22 18:26	GPB	EPA 608.3	
Aroclor 1260 (PCB-1260)	ND	ug/L	0.0500	0.200	11/18/22 18:26	GPB	EPA 608.3	
<hr/>								
Surrogate: DCB	86.8%		40-130		11/18/22 18:47	GPB	EPA 608.3	

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Analytical Results Report

(Continued)

Sample Location: YCK0233-11 (Outfall 22)
Lab/Sample Number: WCK0457-11 Collect Date: 11/09/22 15:20
Date Received: 11/11/22 08:00 Collected By:
Matrix: Water

Analyte	Result	Units	MDL	PQL	Analyzed	Analyst	Method	Qualifier
Semivolatiles								
Aroclor 1016 (PCB-1016)	ND	ug/L	0.0500	0.200	11/18/22 18:47	GPB	EPA 608.3	
Aroclor 1221 (PCB-1221)	ND	ug/L	0.0500	0.200	11/18/22 18:47	GPB	EPA 608.3	
Aroclor 1232 (PCB-1232)	ND	ug/L	0.0500	0.200	11/18/22 18:47	GPB	EPA 608.3	
Aroclor 1242 (PCB-1242)	ND	ug/L	0.0500	0.200	11/18/22 18:47	GPB	EPA 608.3	
Aroclor 1248 (PCB-1248)	ND	ug/L	0.0500	0.200	11/18/22 18:47	GPB	EPA 608.3	
Aroclor 1254 (PCB-1254)	ND	ug/L	0.0500	0.200	11/18/22 18:47	GPB	EPA 608.3	
Aroclor 1260 (PCB-1260)	ND	ug/L	0.0500	0.200	11/18/22 18:47	GPB	EPA 608.3	
Surrogate: DCB	94.8%		40-130		11/18/22 19:08	GPB	EPA 608.3	

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Analytical Results Report

(Continued)

Sample Location: YCK0233-12 (Outfall 23)
Lab/Sample Number: WCK0457-12 Collect Date: 11/09/22 15:25
Date Received: 11/11/22 08:00 Collected By:
Matrix: Water

Analyte	Result	Units	MDL	PQL	Analyzed	Analyst	Method	Qualifier
Semivolatiles								
Aroclor 1016 (PCB-1016)	ND	ug/L	0.0500	0.200	11/18/22 19:08	GPB	EPA 608.3	
Aroclor 1221 (PCB-1221)	ND	ug/L	0.0500	0.200	11/18/22 19:08	GPB	EPA 608.3	
Aroclor 1232 (PCB-1232)	ND	ug/L	0.0500	0.200	11/18/22 19:08	GPB	EPA 608.3	
Aroclor 1242 (PCB-1242)	ND	ug/L	0.0500	0.200	11/18/22 19:08	GPB	EPA 608.3	
Aroclor 1248 (PCB-1248)	ND	ug/L	0.0500	0.200	11/18/22 19:08	GPB	EPA 608.3	
Aroclor 1254 (PCB-1254)	ND	ug/L	0.0500	0.200	11/18/22 19:08	GPB	EPA 608.3	
Aroclor 1260 (PCB-1260)	ND	ug/L	0.0500	0.200	11/18/22 19:08	GPB	EPA 608.3	
Surrogate: DCB	94.8%		40-130		11/18/22 19:29	GPB	EPA 608.3	

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Analytical Results Report

(Continued)

Sample Location: YCK0233-13 (Outfall 24)
Lab/Sample Number: WCK0457-13 Collect Date: 11/09/22 15:30
Date Received: 11/11/22 08:00 Collected By:
Matrix: Water

Analyte	Result	Units	MDL	PQL	Analyzed	Analyst	Method	Qualifier
Semivolatiles								
Aroclor 1016 (PCB-1016)	ND	ug/L	0.0500	0.200	11/18/22 19:29	GPB	EPA 608.3	
Aroclor 1221 (PCB-1221)	ND	ug/L	0.0500	0.200	11/18/22 19:29	GPB	EPA 608.3	
Aroclor 1232 (PCB-1232)	ND	ug/L	0.0500	0.200	11/18/22 19:29	GPB	EPA 608.3	
Aroclor 1242 (PCB-1242)	ND	ug/L	0.0500	0.200	11/18/22 19:29	GPB	EPA 608.3	
Aroclor 1248 (PCB-1248)	ND	ug/L	0.0500	0.200	11/18/22 19:29	GPB	EPA 608.3	
Aroclor 1254 (PCB-1254)	ND	ug/L	0.0500	0.200	11/18/22 19:29	GPB	EPA 608.3	
Aroclor 1260 (PCB-1260)	ND	ug/L	0.0500	0.200	11/18/22 19:29	GPB	EPA 608.3	
<hr/>								
Surrogate: DCB	83.6%		40-130		11/18/22 19:50	GPB	EPA 608.3	

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Analytical Results Report

(Continued)

Sample Location: YCK0233-14 (Outfall 25)
Lab/Sample Number: WCK0457-14 Collect Date: 11/09/22 14:15
Date Received: 11/11/22 08:00 Collected By:
Matrix: Water

Analyte	Result	Units	MDL	PQL	Analyzed	Analyst	Method	Qualifier
Semivolatiles								
Aroclor 1016 (PCB-1016)	ND	ug/L	0.0500	0.200	11/18/22 19:50	GPB	EPA 608.3	
Aroclor 1221 (PCB-1221)	ND	ug/L	0.0500	0.200	11/18/22 19:50	GPB	EPA 608.3	
Aroclor 1232 (PCB-1232)	ND	ug/L	0.0500	0.200	11/18/22 19:50	GPB	EPA 608.3	
Aroclor 1242 (PCB-1242)	ND	ug/L	0.0500	0.200	11/18/22 19:50	GPB	EPA 608.3	
Aroclor 1248 (PCB-1248)	ND	ug/L	0.0500	0.200	11/18/22 19:50	GPB	EPA 608.3	
Aroclor 1254 (PCB-1254)	ND	ug/L	0.0500	0.200	11/18/22 19:50	GPB	EPA 608.3	
Aroclor 1260 (PCB-1260)	ND	ug/L	0.0500	0.200	11/18/22 19:50	GPB	EPA 608.3	
<hr/>								
Surrogate: DCB	99.1%		40-130		11/18/22 20:11	GPB	EPA 608.3	

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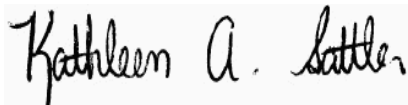
Analytical Results Report

(Continued)

Sample Location: YCK0233-15 (Outfall 26)
Lab/Sample Number: WCK0457-15 Collect Date: 11/09/22 15:35
Date Received: 11/11/22 08:00 Collected By:
Matrix: Water

Analyte	Result	Units	MDL	PQL	Analyzed	Analyst	Method	Qualifier
Semivolatiles								
Aroclor 1016 (PCB-1016)	ND	ug/L	0.0500	0.200	11/18/22 20:11	GPB	EPA 608.3	
Aroclor 1221 (PCB-1221)	ND	ug/L	0.0500	0.200	11/18/22 20:11	GPB	EPA 608.3	
Aroclor 1232 (PCB-1232)	ND	ug/L	0.0500	0.200	11/18/22 20:11	GPB	EPA 608.3	
Aroclor 1242 (PCB-1242)	ND	ug/L	0.0500	0.200	11/18/22 20:11	GPB	EPA 608.3	
Aroclor 1248 (PCB-1248)	ND	ug/L	0.0500	0.200	11/18/22 20:11	GPB	EPA 608.3	
Aroclor 1254 (PCB-1254)	ND	ug/L	0.0500	0.200	11/18/22 20:11	GPB	EPA 608.3	
Aroclor 1260 (PCB-1260)	ND	ug/L	0.0500	0.200	11/18/22 20:11	GPB	EPA 608.3	
Surrogate: DCB	88.2%		40-130		11/18/22 20:32	GPB	EPA 608.3	

Authorized Signature,



Kathleen Sattler, Laboratory Manager

PQL Practical Quantitation Limit
ND Not Detected
MDL Method Detection Limit
Dry Sample results reported on a dry weight basis
* Not a state-certified analyte

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The results reported related only to the samples indicated.

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Quality Control Data

Semivolatiles

Analyte	Result	Qual	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
---------	--------	------	--------------------	-------	----------------	------------------	------	----------------	-----	--------------

Batch: BCK0488 - Pesticides

Blank (BCK0488-BLK1)

Prepared: 11/15/2022 Analyzed: 11/18/2022

Arochlor 1016 (1)	ND		0.200	ug/L						
Arochlor 1221 (1)	ND		0.200	ug/L						
Arochlor 1232 (1)	ND		0.200	ug/L						
Arochlor 1242 (1)	ND		0.200	ug/L						
Arochlor 1248 (1)	ND		0.200	ug/L						
Arochlor 1254 (1)	ND		0.200	ug/L						
Arochlor 1260 (1)	ND		0.200	ug/L						
Surrogate: DCB			1.17	ug/L	1.25		94.0	40-130		

LCS (BCK0488-BS1)

Prepared: 11/15/2022 Analyzed: 11/18/2022

alpha-BHC	0.557		0.0100	ug/L	0.500		111	79-134		
Lindane (BHC-gamma)	0.543		0.0100	ug/L	0.500		109	74-141		
beta-BHC	0.573		0.0100	ug/L	0.500		115	73-132		
delta-BHC	0.544		0.0100	ug/L	0.500		109	74-138		
Heptachlor	0.517		0.0100	ug/L	0.500		103	59-130		
Aldrin	0.494		0.0100	ug/L	0.500		98.8	60-111		
Heptachlor epoxide	0.575		0.0100	ug/L	0.500		115	74-135		
4,4'-DDE	0.547		0.0100	ug/L	0.500		109	69-126		
Endosulfan I	0.597		0.0100	ug/L	0.500		119	70-145		
Dieldrin	0.599		0.0100	ug/L	0.500		120	73-136		
Endrin	0.560		0.0100	ug/L	0.500		112	68-141		
4,4'-DDD	0.579		0.0100	ug/L	0.500		116	72-137		
Endosulfan II	0.596		0.0100	ug/L	0.500		119	64-146		
4,4'-DDT	0.581		0.0100	ug/L	0.500		116	54-141		
Endrin aldehyde	0.553		0.0100	ug/L	0.500		111	52-135		
Methoxychlor	0.574		0.0100	ug/L	0.500		115	58-143		
Endosulfan sulfate	0.591		0.0100	ug/L	0.500		118	69-133		
Endrin ketone	0.597		0.0100	ug/L	0.500		119	73-132		
Surrogate: DCB			1.27	ug/L	1.25		102	40-130		

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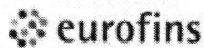
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Quality Control Data (Continued)

Semivolatiles (Continued)

Analyte	Result	Qual	Reporting Limit	Units	Spike Level	Source Result	%REC Limits	RPD	RPD Limit
Batch: BCK0488 - Pesticides (Continued)									
Matrix Spike (BCK0488-MS1)		Source: MCK0367-01			Prepared: 11/15/2022 Analyzed: 11/18/2022				
alpha-BHC	0.499		0.0100	ug/L	0.500	ND	99.9	79-128	
Lindane (BHC-gamma)	0.524		0.0100	ug/L	0.500	ND	105	78-133	
beta-BHC	0.510		0.0100	ug/L	0.500	ND	102	63-133	
delta-BHC	0.475		0.0100	ug/L	0.500	ND	95.0	80-131	
Heptachlor	0.327		0.0100	ug/L	0.500	ND	65.4	53-115	
Aldrin	0.301		0.0100	ug/L	0.500	ND	60.1	38-105	
Heptachlor epoxide	0.500		0.0100	ug/L	0.500	ND	100	70-129	
4,4'-DDE	0.252		0.0100	ug/L	0.500	ND	50.3	35-115	
Endosulfan I	0.522		0.0100	ug/L	0.500	ND	104	58-149	
Dieldrin	0.487		0.0100	ug/L	0.500	ND	97.5	66-129	
Endrin	0.483		0.0100	ug/L	0.500	ND	96.5	68-134	
4,4'-DDD	0.367		0.0100	ug/L	0.500	ND	73.4	49-129	
Endosulfan II	0.521		0.0100	ug/L	0.500	ND	104	62-147	
4,4'-DDT	0.291		0.0100	ug/L	0.500	ND	58.3	38-123	
Endrin aldehyde	0.492		0.0100	ug/L	0.500	ND	98.4	51-130	
Methoxychlor	0.451		0.0100	ug/L	0.500	ND	90.3	59-138	
Endosulfan sulfate	0.549		0.0100	ug/L	0.500	ND	110	72-138	
Endrin ketone	0.535		0.0100	ug/L	0.500	ND	107	75-132	
<i>Surrogate: DCB</i>			0.889	ug/L	1.25		71.1	40-130	

Matrix Spike Dup (BCK0488-MSD1)		Source: MCK0367-01			Prepared: 11/15/2022 Analyzed: 11/18/2022				
alpha-BHC	0.561		0.0100	ug/L	0.500	ND	112	79-128	11.7
Lindane (BHC-gamma)	0.588		0.0100	ug/L	0.500	ND	118	78-133	11.5
beta-BHC	0.572		0.0100	ug/L	0.500	ND	114	63-133	11.3
delta-BHC	0.498		0.0100	ug/L	0.500	ND	99.6	80-131	4.76
Heptachlor	0.380		0.0100	ug/L	0.500	ND	76.0	53-115	15.0
Aldrin	0.340		0.0100	ug/L	0.500	ND	68.0	38-105	12.3
Heptachlor epoxide	0.577		0.0100	ug/L	0.500	ND	115	70-129	14.3
4,4'-DDE	0.296		0.0100	ug/L	0.500	ND	59.2	35-115	16.2
Endosulfan I	0.605		0.0100	ug/L	0.500	ND	121	58-149	14.7
Dieldrin	0.572		0.0100	ug/L	0.500	ND	114	66-129	16.0
Endrin	0.559		0.0100	ug/L	0.500	ND	112	68-134	14.6
4,4'-DDD	0.411		0.0100	ug/L	0.500	ND	82.3	49-129	11.4
Endosulfan II	0.589		0.0100	ug/L	0.500	ND	118	62-147	12.4
4,4'-DDT	0.336		0.0100	ug/L	0.500	ND	67.2	38-123	14.3
Endrin aldehyde	0.465		0.0100	ug/L	0.500	ND	92.9	51-130	5.67
Methoxychlor	0.491		0.0100	ug/L	0.500	ND	98.3	59-138	8.50
Endosulfan sulfate	0.633		0.0100	ug/L	0.500	ND	127	72-138	14.2
Endrin ketone	0.599		0.0100	ug/L	0.500	ND	120	75-132	11.3
<i>Surrogate: DCB</i>			1.03	ug/L	1.25		82.8	40-130	



Cascade Analytical

WCK0457



Due: 11/29/22

Sending Laboratory:

Eurofins Cascade Analytical- Yakima
1008 W Ahtanum Road
Union Gap, WA 98903
Phone: 509-452-7707
Fax: 509-452-7773

Project Manager: Brianna Buschbach
BriannaBuschbach@eurofinsUS.com

Subcontracted Labor

Anatek Labs, Inc.-Spokane
504 E Sprague St. D
Spokane, WA 99202
Phone: (509) 838-3999

Work Order: YCK0233**Analysis****Comments****Lab Sample ID: YCK0233-01 Water Sampled: 11/09/2022 14:20**

PCB Low Level

EPA 608.3

Containers Supplied:

1

Analysis**Comments****Lab Sample ID: YCK0233-02 Water Sampled: 11/09/2022 14:05**

PCB Low Level

EPA 608.3

Containers Supplied:

2

Analysis**Comments****Lab Sample ID: YCK0233-03 Water Sampled: 11/09/2022 14:50**

PCB Low Level

EPA 608.3

Containers Supplied:

13

Analysis**Comments****Lab Sample ID: YCK0233-04 Water Sampled: 11/09/2022 14:30**

PCB Low Level

EPA 608.3

Containers Supplied:

15

Analysis**Comments****Lab Sample ID: YCK0233-05 Water Sampled: 11/09/2022 14:35**

PCB Low Level

EPA 608.3

Containers Supplied:

16

Analysis**Comments****Lab Sample ID: YCK0233-06 Water Sampled: 11/09/2022 14:40**

PCB Low Level

EPA 608.3

Containers Supplied:

17

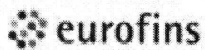
6.8 °C IPA

Released By

Date

Received By

Date



Cascade Analytical

WCK0457



Due: 11/29/22

Work Order: YCK0233 (Continued)

Containers Supplied:

Analysis	Comments
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Lab Sample ID: YCK0233-07 Water Sampled: 11/09/2022 14:45

PCB Low Level EPA 608.3

Containers Supplied:

18

Analysis	Comments
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Lab Sample ID: YCK0233-08 Water Sampled: 11/09/2022 15:00

PCB Low Level EPA 608.3

Containers Supplied:

19

Analysis	Comments
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Lab Sample ID: YCK0233-09 Water Sampled: 11/09/2022 15:05

PCB Low Level EPA 608.3

Containers Supplied:

20

Analysis	Comments
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Lab Sample ID: YCK0233-10 Water Sampled: 11/09/2022 15:10

PCB Low Level EPA 608.3

Containers Supplied:

21

Analysis	Comments
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Lab Sample ID: YCK0233-11 Water Sampled: 11/09/2022 15:20

PCB Low Level EPA 608.3

Containers Supplied:

22

Analysis	Comments
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Lab Sample ID: YCK0233-12 Water Sampled: 11/09/2022 15:25

PCB Low Level EPA 608.3

Containers Supplied:

23

Analysis	Comments
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Lab Sample ID: YCK0233-13 Water Sampled: 11/09/2022 15:30

PCB Low Level EPA 608.3

Containers Supplied:

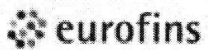
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Date

11/10/22

Received By

Date



Cascade Analytical

WCK0457



Due: 11/29/22

Work Order: YCK0233 (Continued)

Analysis	Comments
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Lab Sample ID: YCK0233-14 Water Sampled: 11/09/2022 14:15

PCB Low Level EPA 608.3

Containers Supplied:

25

Analysis	Comments
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Lab Sample ID: YCK0233-15 Water Sampled: 11/09/2022 15:35

PCB Low Level EPA 608.3

Containers Supplied:

26

Released By Richie Boehm Date 11-10-22

Received By _____ Date _____



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

**Professional
Analytical
Services**

Nov 28 2022
Eurofins Frontier Global
11720 North Creek Pkwy N
Suite 400
Bothell, WA 98011
Attention: Amy Goodall

Dear Amy Goodall:

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
YCK0233-01	Water	22-A019827	Metals-Tot, MET
YCK0233-02	Water	22-A019828	Metals-Tot, MET
YCK0233-03	Water	22-A019829	Metals-Tot, MET
YCK0233-04	Water	22-A019830	Metals-Tot, MET
YCK0233-05	Water	22-A019831	Metals-Tot, MET
YCK0233-06	Water	22-A019832	Metals-Tot, MET
YCK0233-07	Water	22-A019833	Metals-Tot, MET
YCK0233-08	Water	22-A019834	Metals-Tot, MET
YCK0233-09	Water	22-A019835	Metals-Tot, MET
YCK0233-10	Water	22-A019836	Metals-Tot, MET
YCK0233-11	Water	22-A019837	Metals-Tot, MET
YCK0233-12	Water	22-A019838	Metals-Tot, MET
YCK0233-13	Water	22-A019839	Metals-Tot, MET
YCK0233-14	Water	22-A019840	Metals-Tot, MET
YCK0233-15	Water	22-A019841	Metals-Tot, MET

Your samples were received on Tuesday, November 15, 2022. 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.

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).

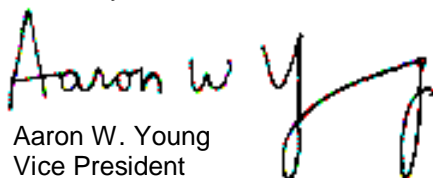
Am Test Inc.
13600 NE 126TH PL
Suite C
Kirkland, WA 98034
(425) 885-1664

**Professional
Analytical
Services**

Nov 28 2022
Eurofins Frontier Global
continued . . .

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

Sincerely,


Aaron W. Young
Vice President

WO Number: YCK0233

BACT = Bacteriological
CONV = Conventionals

MET = Metals
ORG = Organics

NUT=Nutrients
DEM=Demand

MIN=Minerals

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



**Professional
Analytical
Services**

ANALYSIS REPORT

Eurofins Frontier Global
11720 North Creek Pkwy N
Bothell, WA 98011
Attention: Amy Goodall
All results reported on an as received basis.

Date Received: 11/15/22
Date Reported: 11/28/22

AMTEST Identification Number 22-A019827
Client Identification YCK0233-01
Sampling Date 11/09/22, 14:20

ICP/MS Metals 200.8

PARAMETER	RESULT	UNITS	Q	D.L.	METHOD	ANALYST	DATE
Zinc	3.56	ug/L		0.5	EPA 200.8	CM	11/17/22

AMTEST Identification Number 22-A019828
Client Identification YCK0233-02
Sampling Date 11/09/22, 14:05

ICP/MS Metals 200.8

PARAMETER	RESULT	UNITS	Q	D.L.	METHOD	ANALYST	DATE
Zinc	5.24	ug/L		0.5	EPA 200.8	CM	11/17/22

AMTEST Identification Number 22-A019829
Client Identification YCK0233-03
Sampling Date 11/09/22, 14:50

ICP/MS Metals 200.8

PARAMETER	RESULT	UNITS	Q	D.L.	METHOD	ANALYST	DATE
Zinc	3.35	ug/L		0.5	EPA 200.8	CM	11/17/22

AMTEST Identification Number 22-A019830
Client Identification YCK0233-04
Sampling Date 11/09/22, 14:30

ICP/MS Metals 200.8

PARAMETER	RESULT	UNITS	Q	D.L.	METHOD	ANALYST	DATE
Zinc	10.8	ug/L		0.5	EPA 200.8	CM	11/17/22

AMTEST Identification Number 22-A019831
Client Identification YCK0233-05
Sampling Date 11/09/22, 14:35

ICP/MS Metals 200.8

PARAMETER	RESULT	UNITS	Q	D.L.	METHOD	ANALYST	DATE
Zinc	8.58	ug/L		0.5	EPA 200.8	CM	11/17/22

AMTEST Identification Number 22-A019832
Client Identification YCK0233-06
Sampling Date 11/09/22, 14:40

ICP/MS Metals 200.8

PARAMETER	RESULT	UNITS	Q	D.L.	METHOD	ANALYST	DATE
Zinc	18.7	ug/L		0.5	EPA 200.8	CM	11/16/22

AMTEST Identification Number 22-A019833
Client Identification YCK0233-07
Sampling Date 11/09/22, 14:45

ICP/MS Metals 200.8

PARAMETER	RESULT	UNITS	Q	D.L.	METHOD	ANALYST	DATE
Zinc	31.0	ug/L		0.5	EPA 200.8	CM	11/17/22

AMTEST Identification Number 22-A019834
Client Identification YCK0233-08
Sampling Date 11/09/22, 15:00

ICP/MS Metals 200.8

PARAMETER	RESULT	UNITS	Q	D.L.	METHOD	ANALYST	DATE
Zinc	7.55	ug/L		0.5	EPA 200.8	CM	11/17/22

AMTEST Identification Number 22-A019835
Client Identification YCK0233-09
Sampling Date 11/09/22, 15:05

ICP/MS Metals 200.8

PARAMETER	RESULT	UNITS	Q	D.L.	METHOD	ANALYST	DATE
Zinc	19.3	ug/L		0.5	EPA 200.8	CM	11/17/22

AMTEST Identification Number 22-A019836
Client Identification YCK0233-10
Sampling Date 11/09/22, 15:10

ICP/MS Metals 200.8

PARAMETER	RESULT	UNITS	Q	D.L.	METHOD	ANALYST	DATE
Zinc	12.3	ug/L		0.5	EPA 200.8	CM	11/17/22

AMTEST Identification Number 22-A019837
Client Identification YCK0233-11
Sampling Date 11/09/22, 15:20

ICP/MS Metals 200.8

PARAMETER	RESULT	UNITS	Q	D.L.	METHOD	ANALYST	DATE
Zinc	10.8	ug/L		0.5	EPA 200.8	CM	11/17/22

AMTEST Identification Number 22-A019838
Client Identification YCK0233-12
Sampling Date 11/09/22, 15:25

ICP/MS Metals 200.8

PARAMETER	RESULT	UNITS	Q	D.L.	METHOD	ANALYST	DATE
Zinc	5.10	ug/L		0.5	EPA 200.8	CM	11/17/22

AMTEST Identification Number 22-A019839
Client Identification YCK0233-13
Sampling Date 11/09/22, 15:30

ICP/MS Metals 200.8

PARAMETER	RESULT	UNITS	Q	D.L.	METHOD	ANALYST	DATE
Zinc	10.7	ug/L		0.5	EPA 200.8	CM	11/17/22

AMTEST Identification Number 22-A019840
Client Identification YCK0233-14
Sampling Date 11/09/22, 14:15

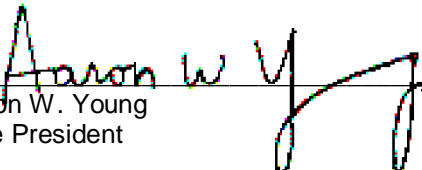
ICP/MS Metals 200.8

PARAMETER	RESULT	UNITS	Q	D.L.	METHOD	ANALYST	DATE
Zinc	< 0.5	ug/L		0.5	EPA 200.8	CM	11/17/22

AMTEST Identification Number 22-A019841
Client Identification YCK0233-15
Sampling Date 11/09/22, 15:35

ICP/MS Metals 200.8

PARAMETER	RESULT	UNITS	Q	D.L.	METHOD	ANALYST	DATE
Zinc	11.6	ug/L		0.5	EPA 200.8	CM	11/17/22


Aaron W. Young
Vice President

QC Summary for sample numbers: 22-A019827 to 22-A019841

MATRIX SPIKES

SAMPLE #	ANALYTE	UNITS	SAMPLE VALUE	SMPL+ SPK	SPK AMT	RECOVERY
22-A019791	Zinc	ug/L	0.97	91.7	100.	90.73 %
22-A019791	Zinc	ug/L	0.97	90.7	100.	89.73 %
22-A019831	Zinc	ug/L	8.58	97.4	100.	88.82 %
22-A019831	Zinc	ug/L	8.58	96.6	100.	88.02 %
22-A019841	Zinc	ug/L	11.6	102.	100.	90.40 %
22-A019841	Zinc	ug/L	11.6	97.4	100.	85.80 %

MATRIX SPIKE DUPLICATES

SAMPLE #	ANALYTE	UNITS	SAMPLE + SPK	MSD VALUE	RPD
Spike	Zinc	ug/L	91.7	90.7	1.1
Spike	Zinc	ug/L	97.4	96.6	0.82
Spike	Zinc	ug/L	102.	97.4	4.6

STANDARD REFERENCE MATERIALS

ANALYTE	UNITS	TRUE VALUE	MEASURED VALUE	RECOVERY
Zinc	ug/L	25.0	22.8	91.2 %
Zinc	ug/L	25.0	22.8	91.2 %
Zinc	ug/L	25.0	23.1	92.4 %

BLANKS

ANALYTE	UNITS	RESULT
Zinc	ug/L	< 0.5
Zinc	ug/L	< 0.5
Zinc	ug/L	< 0.5



Cascade Analytical

SUBCONTRACT ORDER

Sending Laboratory:

Eurofins Cascade Analytical- Yakima
1008 W Ahtanum Road
Union Gap, WA 98903
Phone: 509-452-7707
Fax: 509-452-7773

Project Manager: Brianna Buschbach
BriannaBuschbach@eurofinsUS.com

Subcontracted Laboratory:

AmTest Laboratories
13600 NE 126th PL Suite C
Kirkland, WA 98034
Phone: (425) 885-1664

Work Order: YCK0233

Analysis	Comments
----------	----------

Lab Sample ID: YCK0233-01 Water Sampled: 11/09/2022 14:20

Zn 200.8 19827 EPA 200.8

Containers Supplied:

Analysis	Comments
----------	----------

Lab Sample ID: YCK0233-02 Water Sampled: 11/09/2022 14:05

Zn 200.8 19828 EPA 200.8

Containers Supplied:

Analysis	Comments
----------	----------

Lab Sample ID: YCK0233-03 Water Sampled: 11/09/2022 14:50

Zn 200.8 19829 EPA 200.8

Containers Supplied:

Analysis	Comments
----------	----------

Lab Sample ID: YCK0233-04 Water Sampled: 11/09/2022 14:30

Zn 200.8 19830 EPA 200.8

Containers Supplied:

Analysis	Comments
----------	----------

Lab Sample ID: YCK0233-05 Water Sampled: 11/09/2022 14:35

Zn 200.8 19831 EPA 200.8

Containers Supplied:

Analysis	Comments
----------	----------

Lab Sample ID: YCK0233-06 Water Sampled: 11/09/2022 14:40

Zn 200.8 19832 EPA 200.8

T: 1.20C

1020

Released By

Date

Received By

Date



Cascade Analytical

**SUBCONTRACT
ORDER**
(Continued)**Work Order: YCK0233 (Continued)**

Containers Supplied:

Analysis	Comments
----------	----------

Lab Sample ID: YCK0233-07 Water Sampled: 11/09/2022 14:45

Zn 200.8 EPA 200.8

Containers Supplied:

19833

Analysis	Comments
----------	----------

Lab Sample ID: YCK0233-08 Water Sampled: 11/09/2022 15:00

Zn 200.8 EPA 200.8

Containers Supplied:

19834

Analysis	Comments
----------	----------

Lab Sample ID: YCK0233-09 Water Sampled: 11/09/2022 15:05

Zn 200.8 EPA 200.8

Containers Supplied:

19835

Analysis	Comments
----------	----------

Lab Sample ID: YCK0233-10 Water Sampled: 11/09/2022 15:10

Zn 200.8 EPA 200.8

Containers Supplied:

19836

Analysis	Comments
----------	----------

Lab Sample ID: YCK0233-11 Water Sampled: 11/09/2022 15:20

Zn 200.8 EPA 200.8

Containers Supplied:

19837

Analysis	Comments
----------	----------

Lab Sample ID: YCK0233-12 Water Sampled: 11/09/2022 15:25

Zn 200.8 EPA 200.8

Containers Supplied:

19838

Analysis	Comments
----------	----------

Lab Sample ID: YCK0233-13 Water Sampled: 11/09/2022 15:30

Zn 200.8 EPA 200.8

Containers Supplied:

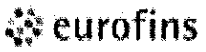
19839

Released By11.14.22
DateKH
Received By11/15/22
Date

1020 T: 1.2°C

End Ex

P.11



Cascade Analytical

**SUBCONTRACT
ORDER**
(Continued)**Work Order: YCK0233 (Continued)**

Analysis	Comments
----------	----------

Lab Sample ID: YCK0233-14 Water Sampled: 11/09/2022 14:15

Zn 200.8 EPA 200.8

Containers Supplied:

19840

Analysis	Comments
----------	----------

Lab Sample ID: YCK0233-15 Water Sampled: 11/09/2022 15:35

Zn 200.8 EPA 200.8

Containers Supplied:

19841

1020 T: 1.2°C

Released By11.14.22
DateKH
Received By11/15/22
Date

FedEx

P.12

Please analyze all samples to the below limits

Analyte Description	Permit Limit (ug/L)
Antimony	0.3
Arsenic	0.1
Beryllium	0.1
Cadmium	0.05
Chromium	0.2
Copper	0.4
Lead	0.1
Nickel	0.1
Selenium	1
Silver	0.04
Thallium	0.09
Zinc	0.5

ANALYTICAL REPORT

PREPARED FOR

Attn: Brianna Buschbach
Cascade Analytical Inc
3019 GS Center Road
Wenatchee, Washington 98801

Generated 12/2/2022 2:01:53 PM Revision 1

JOB DESCRIPTION

YCK0233

JOB NUMBER

580-119980-1

Eurofins Seattle

Job Notes

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The data in the report relate to the field sample(s) as received by the laboratory and associated QC. All results have been reviewed and have been found to be compliant with laboratory and accreditation requirements, with the exception of the noted deviation(s). For questions, please contact the Project Manager.

The test results in this report relate only to the samples as received by the laboratory and will meet all requirements of the methodology, with any exceptions noted. This report shall not be reproduced except in full, without the express written approval of the laboratory. All questions should be directed to the Eurofins Environment Testing Northwest, LLC Project Manager.

Authorization



Authorized for release by
Pauline Matlock, Project Manager
Pauline.Matlock@et.eurofinsus.com
(253)922-2310

Generated
12/2/2022 2:01:53 PM
Revision 1



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Case Narrative

Client: Cascade Analytical Inc
Project/Site: YCK0233

Job ID: 580-119980-1

Job ID: 580-119980-1

Laboratory: Eurofins Seattle

Narrative

Job Narrative
580-119980-1

Comments

No additional comments.

Revision

The report being provided is a revision of the original report sent on 12/1/2022. The report (revision 1) is being revised due to: Client requested that Copper be removed from this report, as it was run already by a different lab. Also low-level Chromium was removed as the regular 200.8 method has a lower limit for that particular analyte.

Receipt

The samples were received on 11/11/2022 8:00 AM. Unless otherwise noted below, the samples arrived in good condition, and where required, properly preserved and on ice. The temperatures of the 3 coolers at receipt time were 4.2° C, 4.8° C and 5.8° C.

Metals

Method 200.8_LL: The method blank for analytical batch 580-410360 contained Be and Tl above the method detection limit. These target analyte concentrations were less than the reporting limit (RL); therefore re-extraction and re-analysis of samples was not performed.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

Definitions/Glossary

Client: Cascade Analytical Inc
Project/Site: YCK0233

Job ID: 580-119980-1

Qualifiers

Metals

Qualifier	Qualifier Description
B	Compound was found in the blank and sample.
F5	Duplicate RPD exceeds limit, and one or both sample results are less than 5 times RL, and the absolute difference between results is < the upper reporting limits for both.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
α	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

Client Sample Results

Client: Cascade Analytical Inc
Project/Site: YCK0233

Job ID: 580-119980-1

Client Sample ID: YCK0233-01

Lab Sample ID: 580-119980-1

Date Collected: 11/09/22 14:20

Matrix: Water

Date Received: 11/11/22 08:00

Method: EPA 1631E - Mercury, Low Level (CVAFS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.43	J	0.50	0.079	ng/L			11/15/22 13:41	1

Method: EPA 200.8 LL - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	0.13		0.10	0.035	ug/L		11/15/22 12:00	11/16/22 21:24	1
Arsenic	0.47		0.20	0.020	ug/L		11/15/22 12:00	11/16/22 05:06	1
Beryllium	ND		0.060	0.024	ug/L		11/15/22 12:00	11/15/22 21:45	1
Cadmium	ND		0.030	0.018	ug/L		11/15/22 12:00	11/16/22 05:06	1
Lead	0.70		0.060	0.027	ug/L		11/15/22 12:00	11/15/22 21:45	1
Selenium	ND		0.30	0.050	ug/L		11/15/22 12:00	11/16/22 21:24	1
Silver	ND		0.020	0.0080	ug/L		11/15/22 12:00	11/15/22 21:45	1
Thallium	0.015	B	0.010	0.0020	ug/L		11/15/22 12:00	11/15/22 21:45	1

Method: EPA 200.8 - Total Recoverable Metals by ICPMS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chromium	0.0016		0.00080	0.00017	mg/L		11/29/22 18:18	11/30/22 20:35	1

Eurofins Seattle

Client Sample Results

Client: Cascade Analytical Inc
Project/Site: YCK0233

Job ID: 580-119980-1

Client Sample ID: YCK0233-02

Lab Sample ID: 580-119980-2

Date Collected: 11/09/22 14:05

Matrix: Water

Date Received: 11/11/22 08:00

Method: EPA 1631E - Mercury, Low Level (CVAFS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.34	J	0.50	0.079	ng/L			11/15/22 17:55	1

Method: EPA 200.8 LL - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	0.23		0.10	0.035	ug/L		11/15/22 12:00	11/16/22 21:37	1
Arsenic	0.39		0.20	0.020	ug/L		11/15/22 12:00	11/16/22 05:20	1
Beryllium	0.039	J B	0.060	0.024	ug/L		11/15/22 12:00	11/15/22 21:59	1
Cadmium	ND		0.030	0.018	ug/L		11/15/22 12:00	11/16/22 05:20	1
Lead	0.31		0.060	0.027	ug/L		11/15/22 12:00	11/15/22 21:59	1
Selenium	0.14	J	0.30	0.050	ug/L		11/15/22 12:00	11/16/22 21:37	1
Silver	ND		0.020	0.0080	ug/L		11/15/22 12:00	11/15/22 21:59	1
Thallium	0.012	B	0.010	0.0020	ug/L		11/15/22 12:00	11/15/22 21:59	1

Method: EPA 200.8 - Total Recoverable Metals by ICPMS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chromium	0.00062	J	0.00080	0.00017	mg/L		11/29/22 18:18	11/30/22 20:32	1

Eurofins Seattle

Client Sample Results

Client: Cascade Analytical Inc
Project/Site: YCK0233

Job ID: 580-119980-1

Client Sample ID: YCK0233-03

Lab Sample ID: 580-119980-3

Date Collected: 11/09/22 14:50

Matrix: Water

Date Received: 11/11/22 08:00

Method: EPA 1631E - Mercury, Low Level (CVAFS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.28	J	0.50	0.079	ng/L			11/15/22 17:59	1

Method: EPA 200.8 LL - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	0.11		0.10	0.035	ug/L		11/15/22 12:00	11/16/22 22:00	1
Arsenic	0.52		0.20	0.020	ug/L		11/15/22 12:00	11/16/22 05:33	1
Beryllium	ND		0.060	0.024	ug/L		11/15/22 12:00	11/15/22 22:12	1
Cadmium	0.031		0.030	0.018	ug/L		11/15/22 12:00	11/16/22 05:33	1
Lead	0.34		0.060	0.027	ug/L		11/15/22 12:00	11/15/22 22:12	1
Selenium	0.091	J	0.30	0.050	ug/L		11/15/22 12:00	11/16/22 22:00	1
Silver	ND		0.020	0.0080	ug/L		11/15/22 12:00	11/15/22 22:12	1
Thallium	0.013	B	0.010	0.0020	ug/L		11/15/22 12:00	11/15/22 22:12	1

Method: EPA 200.8 - Total Recoverable Metals by ICPMS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chromium	0.00045	J	0.00080	0.00017	mg/L		11/29/22 18:18	11/30/22 21:02	1

Eurofins Seattle

Client Sample Results

Client: Cascade Analytical Inc
Project/Site: YCK0233

Job ID: 580-119980-1

Client Sample ID: YCK0233-04

Lab Sample ID: 580-119980-4

Date Collected: 11/09/22 14:30

Matrix: Water

Date Received: 11/11/22 08:00

Method: EPA 1631E - Mercury, Low Level (CVAFS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.22	J	0.50	0.079	ng/L			11/15/22 18:03	1

Method: EPA 200.8 LL - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	0.10		0.10	0.035	ug/L		11/15/22 12:00	11/16/22 22:04	1
Arsenic	0.42		0.20	0.020	ug/L		11/15/22 12:00	11/16/22 05:38	1
Beryllium	ND		0.060	0.024	ug/L		11/15/22 12:00	11/15/22 22:17	1
Cadmium	ND		0.030	0.018	ug/L		11/15/22 12:00	11/16/22 05:38	1
Lead	0.20		0.060	0.027	ug/L		11/15/22 12:00	11/15/22 22:17	1
Selenium	0.24	J	0.30	0.050	ug/L		11/15/22 12:00	11/16/22 22:04	1
Silver	ND		0.020	0.0080	ug/L		11/15/22 12:00	11/15/22 22:17	1
Thallium	0.0068	J B	0.010	0.0020	ug/L		11/15/22 12:00	11/15/22 22:17	1

Method: EPA 200.8 - Total Recoverable Metals by ICPMS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chromium	0.00042	J	0.00080	0.00017	mg/L		11/29/22 18:18	11/30/22 21:04	1

Eurofins Seattle

Client Sample Results

Client: Cascade Analytical Inc
Project/Site: YCK0233

Job ID: 580-119980-1

Client Sample ID: YCK0233-05

Lab Sample ID: 580-119980-5

Date Collected: 11/09/22 14:35

Matrix: Water

Date Received: 11/11/22 08:00

Method: EPA 1631E - Mercury, Low Level (CVAFS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.42	J	0.50	0.079	ng/L			11/15/22 18:07	1

Method: EPA 200.8 LL - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	0.11		0.10	0.035	ug/L		11/15/22 12:00	11/16/22 22:09	1
Arsenic	0.39		0.20	0.020	ug/L		11/15/22 12:00	11/16/22 05:42	1
Beryllium	ND		0.060	0.024	ug/L		11/15/22 12:00	11/15/22 22:21	1
Cadmium	ND		0.030	0.018	ug/L		11/15/22 12:00	11/16/22 05:42	1
Lead	0.092		0.060	0.027	ug/L		11/15/22 12:00	11/15/22 22:21	1
Selenium	0.48		0.30	0.050	ug/L		11/15/22 12:00	11/16/22 22:09	1
Silver	ND		0.020	0.0080	ug/L		11/15/22 12:00	11/15/22 22:21	1
Thallium	0.010	B	0.010	0.0020	ug/L		11/15/22 12:00	11/15/22 22:21	1

Method: EPA 200.8 - Total Recoverable Metals by ICPMS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chromium	0.00043	J	0.00080	0.00017	mg/L		11/29/22 18:18	11/30/22 21:07	1

Eurofins Seattle

Client Sample Results

Client: Cascade Analytical Inc
Project/Site: YCK0233

Job ID: 580-119980-1

Client Sample ID: YCK0233-06

Lab Sample ID: 580-119980-6

Date Collected: 11/09/22 14:40

Matrix: Water

Date Received: 11/11/22 08:00

Method: EPA 1631E - Mercury, Low Level (CVAFS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.27	J	0.50	0.079	ng/L			11/15/22 18:12	1

Method: EPA 200.8 LL - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	0.094	J	0.10	0.035	ug/L		11/15/22 12:00	11/16/22 22:13	1
Arsenic	0.43		0.20	0.020	ug/L		11/15/22 12:00	11/16/22 05:47	1
Beryllium	ND		0.060	0.024	ug/L		11/15/22 12:00	11/15/22 22:26	1
Cadmium	ND		0.030	0.018	ug/L		11/15/22 12:00	11/16/22 05:47	1
Lead	0.25		0.060	0.027	ug/L		11/15/22 12:00	11/15/22 22:26	1
Selenium	0.24	J	0.30	0.050	ug/L		11/15/22 12:00	11/16/22 22:13	1
Silver	ND		0.020	0.0080	ug/L		11/15/22 12:00	11/15/22 22:26	1
Thallium	0.011	B	0.010	0.0020	ug/L		11/15/22 12:00	11/15/22 22:26	1

Method: EPA 200.8 - Total Recoverable Metals by ICPMS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chromium	0.00042	J	0.00080	0.00017	mg/L		11/29/22 18:18	11/30/22 21:09	1

Eurofins Seattle

Client Sample Results

Client: Cascade Analytical Inc
Project/Site: YCK0233

Job ID: 580-119980-1

Client Sample ID: YCK0233-07

Lab Sample ID: 580-119980-7

Date Collected: 11/09/22 14:45

Matrix: Water

Date Received: 11/11/22 08:00

Method: EPA 1631E - Mercury, Low Level (CVAFS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.26	J	0.50	0.079	ng/L			11/15/22 18:16	1

Method: EPA 200.8 LL - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	0.12		0.10	0.035	ug/L		11/15/22 12:00	11/16/22 22:18	1
Arsenic	0.48		0.20	0.020	ug/L		11/15/22 12:00	11/16/22 06:00	1
Beryllium	ND		0.060	0.024	ug/L		11/15/22 12:00	11/15/22 22:39	1
Cadmium	0.026	J	0.030	0.018	ug/L		11/15/22 12:00	11/16/22 06:00	1
Lead	0.46		0.060	0.027	ug/L		11/15/22 12:00	11/15/22 22:39	1
Selenium	ND		0.30	0.050	ug/L		11/15/22 12:00	11/16/22 22:18	1
Silver	ND		0.020	0.0080	ug/L		11/15/22 12:00	11/15/22 22:39	1
Thallium	0.0099	J B	0.010	0.0020	ug/L		11/15/22 12:00	11/15/22 22:39	1

Method: EPA 200.8 - Total Recoverable Metals by ICPMS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chromium	0.0011		0.00080	0.00017	mg/L		11/29/22 18:18	11/30/22 21:11	1

Eurofins Seattle

Client Sample Results

Client: Cascade Analytical Inc
Project/Site: YCK0233

Job ID: 580-119980-1

Client Sample ID: YCK0233-08

Lab Sample ID: 580-119980-8

Date Collected: 11/09/22 15:00

Matrix: Water

Date Received: 11/11/22 08:00

Method: EPA 1631E - Mercury, Low Level (CVAFS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.22	J	0.50	0.079	ng/L			11/15/22 18:20	1

Method: EPA 200.8 LL - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	0.075	J	0.10	0.035	ug/L		11/15/22 12:00	11/16/22 22:22	1
Arsenic	0.39		0.20	0.020	ug/L		11/15/22 12:00	11/16/22 06:05	1
Beryllium	ND		0.060	0.024	ug/L		11/15/22 12:00	11/15/22 22:44	1
Cadmium	ND		0.030	0.018	ug/L		11/15/22 12:00	11/16/22 06:05	1
Lead	0.18		0.060	0.027	ug/L		11/15/22 12:00	11/15/22 22:44	1
Selenium	ND		0.30	0.050	ug/L		11/15/22 12:00	11/16/22 22:22	1
Silver	ND		0.020	0.0080	ug/L		11/15/22 12:00	11/15/22 22:44	1
Thallium	0.0097	J B	0.010	0.0020	ug/L		11/15/22 12:00	11/15/22 22:44	1

Method: EPA 200.8 - Total Recoverable Metals by ICPMS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chromium	0.00042	J	0.00080	0.00017	mg/L		11/29/22 18:18	11/30/22 21:14	1

Eurofins Seattle

Client Sample Results

Client: Cascade Analytical Inc
Project/Site: YCK0233

Job ID: 580-119980-1

Client Sample ID: YCK0233-09

Lab Sample ID: 580-119980-9

Date Collected: 11/09/22 15:05

Matrix: Water

Date Received: 11/11/22 08:00

Method: EPA 1631E - Mercury, Low Level (CVAFS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.22	J	0.50	0.079	ng/L			11/15/22 18:24	1

Method: EPA 200.8 LL - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	0.082	J	0.10	0.035	ug/L		11/15/22 12:00	11/16/22 22:27	1
Arsenic	0.36		0.20	0.020	ug/L		11/15/22 12:00	11/16/22 06:09	1
Beryllium	ND		0.060	0.024	ug/L		11/15/22 12:00	11/15/22 22:48	1
Cadmium	ND		0.030	0.018	ug/L		11/15/22 12:00	11/16/22 06:09	1
Lead	0.10		0.060	0.027	ug/L		11/15/22 12:00	11/15/22 22:48	1
Selenium	0.10	J	0.30	0.050	ug/L		11/15/22 12:00	11/16/22 22:27	1
Silver	ND		0.020	0.0080	ug/L		11/15/22 12:00	11/15/22 22:48	1
Thallium	0.013	B	0.010	0.0020	ug/L		11/15/22 12:00	11/15/22 22:48	1

Method: EPA 200.8 - Total Recoverable Metals by ICPMS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chromium	0.00042	J	0.00080	0.00017	mg/L		11/29/22 18:18	11/30/22 21:16	1

Eurofins Seattle

Client Sample Results

Client: Cascade Analytical Inc
Project/Site: YCK0233

Job ID: 580-119980-1

Client Sample ID: YCK0233-10

Lab Sample ID: 580-119980-10

Date Collected: 11/09/22 15:10

Matrix: Water

Date Received: 11/11/22 08:00

Method: EPA 1631E - Mercury, Low Level (CVAFS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.25	J	0.50	0.079	ng/L			11/15/22 18:37	1

Method: EPA 200.8 LL - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	0.098	J	0.10	0.035	ug/L		11/15/22 12:00	11/16/22 22:31	1
Arsenic	0.45		0.20	0.020	ug/L		11/15/22 12:00	11/16/22 06:14	1
Beryllium	ND		0.060	0.024	ug/L		11/15/22 12:00	11/15/22 22:53	1
Cadmium	0.019	J	0.030	0.018	ug/L		11/15/22 12:00	11/16/22 06:14	1
Lead	0.095		0.060	0.027	ug/L		11/15/22 12:00	11/15/22 22:53	1
Selenium	0.14	J	0.30	0.050	ug/L		11/15/22 12:00	11/16/22 22:31	1
Silver	ND		0.020	0.0080	ug/L		11/15/22 12:00	11/15/22 22:53	1
Thallium	0.0074	J B	0.010	0.0020	ug/L		11/15/22 12:00	11/15/22 22:53	1

Method: EPA 200.8 - Total Recoverable Metals by ICPMS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chromium	0.00043	J	0.00080	0.00017	mg/L		11/29/22 18:21	11/30/22 16:30	1

Eurofins Seattle

Client Sample Results

Client: Cascade Analytical Inc
Project/Site: YCK0233

Job ID: 580-119980-1

Client Sample ID: YCK0233-11

Lab Sample ID: 580-119980-11

Date Collected: 11/09/22 15:20

Matrix: Water

Date Received: 11/11/22 08:00

Method: EPA 1631E - Mercury, Low Level (CVAFS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.21	J	0.50	0.079	ng/L			11/15/22 18:41	1

Method: EPA 200.8 LL - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	0.097	J	0.10	0.035	ug/L		11/15/22 12:00	11/16/22 22:36	1
Arsenic	0.31		0.20	0.020	ug/L		11/15/22 12:00	11/16/22 06:18	1
Beryllium	ND		0.060	0.024	ug/L		11/15/22 12:00	11/15/22 22:57	1
Cadmium	ND		0.030	0.018	ug/L		11/15/22 12:00	11/16/22 06:18	1
Lead	0.11		0.060	0.027	ug/L		11/15/22 12:00	11/15/22 22:57	1
Selenium	0.055	J	0.30	0.050	ug/L		11/15/22 12:00	11/16/22 22:36	1
Silver	ND		0.020	0.0080	ug/L		11/15/22 12:00	11/15/22 22:57	1
Thallium	0.0050	J B	0.010	0.0020	ug/L		11/15/22 12:00	11/15/22 22:57	1

Method: EPA 200.8 - Total Recoverable Metals by ICPMS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chromium	0.00050	J	0.00080	0.00017	mg/L		11/29/22 18:21	11/30/22 16:57	1

Eurofins Seattle

Client Sample Results

Client: Cascade Analytical Inc
Project/Site: YCK0233

Job ID: 580-119980-1

Client Sample ID: YCK0233-12

Lab Sample ID: 580-119980-12

Date Collected: 11/09/22 15:25

Matrix: Water

Date Received: 11/11/22 08:00

Method: EPA 1631E - Mercury, Low Level (CVAFS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.24	J	0.50	0.079	ng/L			11/15/22 18:45	1

Method: EPA 200.8 LL - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	0.069	J	0.10	0.035	ug/L		11/15/22 12:00	11/16/22 22:40	1
Arsenic	0.35		0.20	0.020	ug/L		11/15/22 12:00	11/16/22 06:23	1
Beryllium	ND		0.060	0.024	ug/L		11/15/22 12:00	11/15/22 23:02	1
Cadmium	ND		0.030	0.018	ug/L		11/15/22 12:00	11/16/22 06:23	1
Lead	0.083		0.060	0.027	ug/L		11/15/22 12:00	11/15/22 23:02	1
Selenium	0.10	J	0.30	0.050	ug/L		11/15/22 12:00	11/16/22 22:40	1
Silver	ND		0.020	0.0080	ug/L		11/15/22 12:00	11/15/22 23:02	1
Thallium	0.013	B	0.010	0.0020	ug/L		11/15/22 12:00	11/15/22 23:02	1

Method: EPA 200.8 - Total Recoverable Metals by ICPMS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chromium	0.00045	J	0.00080	0.00017	mg/L		11/29/22 18:21	11/30/22 16:59	1

Eurofins Seattle

Client Sample Results

Client: Cascade Analytical Inc
Project/Site: YCK0233

Job ID: 580-119980-1

Client Sample ID: YCK0233-13

Lab Sample ID: 580-119980-13

Date Collected: 11/09/22 15:30

Matrix: Water

Date Received: 11/11/22 08:00

Method: EPA 1631E - Mercury, Low Level (CVAFS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.34	J	0.50	0.079	ng/L			11/15/22 18:49	1

Method: EPA 200.8 LL - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	0.043	J	0.10	0.035	ug/L		11/15/22 12:00	11/16/22 22:54	1
Arsenic	0.39		0.20	0.020	ug/L		11/15/22 12:00	11/16/22 06:27	1
Beryllium	ND		0.060	0.024	ug/L		11/15/22 12:00	11/15/22 23:06	1
Cadmium	ND		0.030	0.018	ug/L		11/15/22 12:00	11/16/22 06:27	1
Lead	0.069		0.060	0.027	ug/L		11/15/22 12:00	11/15/22 23:06	1
Selenium	ND		0.30	0.050	ug/L		11/15/22 12:00	11/16/22 22:54	1
Silver	ND		0.020	0.0080	ug/L		11/15/22 12:00	11/15/22 23:06	1
Thallium	0.0046	J B	0.010	0.0020	ug/L		11/15/22 12:00	11/15/22 23:06	1

Method: EPA 200.8 - Total Recoverable Metals by ICPMS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chromium	0.00071	J	0.00080	0.00017	mg/L		11/29/22 18:21	11/30/22 17:02	1

Eurofins Seattle

Client Sample Results

Client: Cascade Analytical Inc
Project/Site: YCK0233

Job ID: 580-119980-1

Client Sample ID: YCK0233-14

Lab Sample ID: 580-119980-14

Date Collected: 11/09/22 14:15

Matrix: Water

Date Received: 11/11/22 08:00

Method: EPA 1631E - Mercury, Low Level (CVAFS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.30	J	0.50	0.079	ng/L			11/15/22 18:53	1

Method: EPA 200.8 LL - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	0.096	J	0.10	0.035	ug/L		11/15/22 12:00	11/16/22 22:58	1
Arsenic	0.42		0.20	0.020	ug/L		11/15/22 12:00	11/16/22 06:32	1
Beryllium	ND		0.060	0.024	ug/L		11/15/22 12:00	11/15/22 23:11	1
Cadmium	ND		0.030	0.018	ug/L		11/15/22 12:00	11/16/22 06:32	1
Lead	0.079		0.060	0.027	ug/L		11/15/22 12:00	11/15/22 23:11	1
Selenium	0.064	J	0.30	0.050	ug/L		11/15/22 12:00	11/16/22 22:58	1
Silver	ND		0.020	0.0080	ug/L		11/15/22 12:00	11/15/22 23:11	1
Thallium	0.0098	J B	0.010	0.0020	ug/L		11/15/22 12:00	11/15/22 23:11	1

Method: EPA 200.8 - Total Recoverable Metals by ICPMS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chromium	0.00048	J	0.00080	0.00017	mg/L		11/29/22 18:21	11/30/22 17:04	1

Eurofins Seattle

Client Sample Results

Client: Cascade Analytical Inc
Project/Site: YCK0233

Job ID: 580-119980-1

Client Sample ID: YCK0233-15

Lab Sample ID: 580-119980-15

Date Collected: 11/09/22 15:35

Matrix: Water

Date Received: 11/11/22 08:00

Method: EPA 1631E - Mercury, Low Level (CVAFS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.26	J	0.50	0.079	ng/L			11/15/22 18:58	1

Method: EPA 200.8 LL - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	0.11		0.10	0.035	ug/L		11/15/22 12:00	11/16/22 23:03	1
Arsenic	0.46		0.20	0.020	ug/L		11/15/22 12:00	11/16/22 06:36	1
Beryllium	ND		0.060	0.024	ug/L		11/15/22 12:00	11/15/22 23:15	1
Cadmium	ND		0.030	0.018	ug/L		11/15/22 12:00	11/16/22 06:36	1
Lead	0.12		0.060	0.027	ug/L		11/15/22 12:00	11/15/22 23:15	1
Selenium	ND		0.30	0.050	ug/L		11/15/22 12:00	11/16/22 23:03	1
Silver	ND		0.020	0.0080	ug/L		11/15/22 12:00	11/15/22 23:15	1
Thallium	0.0088	J B	0.010	0.0020	ug/L		11/15/22 12:00	11/15/22 23:15	1

Method: EPA 200.8 - Total Recoverable Metals by ICPMS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chromium	0.00059	J	0.00080	0.00017	mg/L		11/29/22 18:21	11/30/22 17:06	1

Eurofins Seattle

QC Sample Results

Client: Cascade Analytical Inc
Project/Site: YCK0233

Job ID: 580-119980-1

Method: 1631E - Mercury, Low Level (CVAFS)

Lab Sample ID: MB 580-410140/17
Matrix: Water
Analysis Batch: 410140

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.50	0.079	ng/L			11/15/22 14:02	1

Lab Sample ID: MB 580-410140/18
Matrix: Water
Analysis Batch: 410140

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.50	0.079	ng/L			11/15/22 14:06	1

Lab Sample ID: MB 580-410140/19
Matrix: Water
Analysis Batch: 410140

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.50	0.079	ng/L			11/15/22 14:10	1

Lab Sample ID: MB 580-410140/20
Matrix: Water
Analysis Batch: 410140

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.50	0.079	ng/L			11/15/22 14:14	1

Lab Sample ID: MB 580-410140/23
Matrix: Water
Analysis Batch: 410140

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.50	0.079	ng/L			11/15/22 14:27	1

Lab Sample ID: MB 580-410140/24
Matrix: Water
Analysis Batch: 410140

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.50	0.079	ng/L			11/15/22 14:31	1

Lab Sample ID: LCS 580-410140/28
Matrix: Water
Analysis Batch: 410140

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Mercury	5.00	5.04		ng/L		101	77 - 123

Lab Sample ID: LCS 580-410140/30
Matrix: Water
Analysis Batch: 410140

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Mercury	5.00	4.99		ng/L		100	77 - 123

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QC Sample Results

Client: Cascade Analytical Inc
Project/Site: YCK0233

Job ID: 580-119980-1

Method: 1631E - Mercury, Low Level (CVAFS)

Lab Sample ID: LCSD 580-410140/29
Matrix: Water
Analysis Batch: 410140

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Mercury	5.00	5.05		ng/L		101	77 - 123	0	24

Lab Sample ID: LCSD 580-410140/31
Matrix: Water
Analysis Batch: 410140

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Mercury	5.00	4.93		ng/L		99	77 - 123	1	24

Lab Sample ID: 580-119980-1 MS
Matrix: Water
Analysis Batch: 410140

Client Sample ID: YCK0233-01
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Mercury	0.43	J	5.00	5.33		ng/L		98	71 - 125		

Lab Sample ID: 580-119980-1 MSD
Matrix: Water
Analysis Batch: 410140

Client Sample ID: YCK0233-01
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Mercury	0.43	J	5.00	5.32		ng/L		98	71 - 125	0	24

Method: 200.8 - Total Recoverable Metals by ICPMS

Lab Sample ID: MB 580-411359/14-A
Matrix: Water
Analysis Batch: 411579

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 411359

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chromium	ND		0.00080	0.00017	mg/L		11/29/22 18:18	11/30/22 20:30	1

Lab Sample ID: LCS 580-411359/15-A
Matrix: Water
Analysis Batch: 411579

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 411359

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chromium	1.00	1.03		mg/L		103	85 - 115		

Lab Sample ID: LCSD 580-411359/16-A
Matrix: Water
Analysis Batch: 411579

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 411359

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chromium	1.00	1.08		mg/L		108	85 - 115	4	20

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QC Sample Results

Client: Cascade Analytical Inc
Project/Site: YCK0233

Job ID: 580-119980-1

Method: 200.8 - Total Recoverable Metals by ICPMS (Continued)

Lab Sample ID: 580-119980-1 MS

Matrix: Water

Analysis Batch: 411579

Client Sample ID: YCK0233-01

Prep Type: Total/NA

Prep Batch: 411359

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Chromium	0.0016		1.00	0.912		mg/L		91	70 - 130

Lab Sample ID: 580-119980-1 MSD

Matrix: Water

Analysis Batch: 411579

Client Sample ID: YCK0233-01

Prep Type: Total/NA

Prep Batch: 411359

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chromium	0.0016		1.00	0.920		mg/L		92	70 - 130	1	20

Lab Sample ID: 580-119980-1 DU

Matrix: Water

Analysis Batch: 411579

Client Sample ID: YCK0233-01

Prep Type: Total/NA

Prep Batch: 411359

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Chromium	0.0016		0.000868	F5	mg/L		59	20

Lab Sample ID: MB 580-411360/12-A

Matrix: Water

Analysis Batch: 411548

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 411360

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chromium	ND		0.00080	0.00017	mg/L		11/29/22 18:21	11/30/22 16:28	1

Lab Sample ID: LCS 580-411360/13-A

Matrix: Water

Analysis Batch: 411548

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 411360

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Chromium	1.00	0.978		mg/L		98	85 - 115

Lab Sample ID: LCSD 580-411360/14-A

Matrix: Water

Analysis Batch: 411548

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 411360

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chromium	1.00	0.970		mg/L		97	85 - 115	1	20

Lab Sample ID: 580-119980-10 MS

Matrix: Water

Analysis Batch: 411548

Client Sample ID: YCK0233-10

Prep Type: Total/NA

Prep Batch: 411360

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Chromium	0.00043	J	1.00	1.03		mg/L		103	70 - 130

Lab Sample ID: 580-119980-10 MSD

Matrix: Water

Analysis Batch: 411548

Client Sample ID: YCK0233-10

Prep Type: Total/NA

Prep Batch: 411360

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chromium	0.00043	J	1.00	1.06		mg/L		106	70 - 130	3	20

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QC Sample Results

Client: Cascade Analytical Inc
Project/Site: YCK0233

Job ID: 580-119980-1

Method: 200.8 - Total Recoverable Metals by ICPMS

Lab Sample ID: 580-119980-10 DU
Matrix: Water
Analysis Batch: 411548

Client Sample ID: YCK0233-10
Prep Type: Total/NA
Prep Batch: 411360

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	Limit
Chromium	0.00043	J	0.000496	J	mg/L		14	20

Method: 200.8 LL - Metals (ICP/MS)

Lab Sample ID: MB 580-409985/1-A
Matrix: Water
Analysis Batch: 410360

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 409985

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Beryllium	0.0514	J	0.060	0.024	ug/L		11/15/22 12:00	11/15/22 20:06	1
Lead	ND		0.060	0.027	ug/L		11/15/22 12:00	11/15/22 20:06	1
Silver	ND		0.020	0.0080	ug/L		11/15/22 12:00	11/15/22 20:06	1
Thallium	0.00232	J	0.010	0.0020	ug/L		11/15/22 12:00	11/15/22 20:06	1

Lab Sample ID: MB 580-409985/1-A
Matrix: Water
Analysis Batch: 410378

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 409985

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	ND		0.20	0.020	ug/L		11/15/22 12:00	11/16/22 03:27	1
Cadmium	ND		0.030	0.018	ug/L		11/15/22 12:00	11/16/22 03:27	1

Lab Sample ID: MB 580-409985/1-A
Matrix: Water
Analysis Batch: 410549

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 409985

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		0.10	0.035	ug/L		11/15/22 12:00	11/16/22 21:06	1
Selenium	ND		0.30	0.050	ug/L		11/15/22 12:00	11/16/22 21:06	1

Lab Sample ID: MB 580-409985/2-A
Matrix: Water
Analysis Batch: 410360

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 409985

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Beryllium	ND		0.060	0.024	ug/L		11/15/22 12:00	11/15/22 20:11	1
Lead	ND		0.060	0.027	ug/L		11/15/22 12:00	11/15/22 20:11	1
Silver	ND		0.020	0.0080	ug/L		11/15/22 12:00	11/15/22 20:11	1
Thallium	ND		0.010	0.0020	ug/L		11/15/22 12:00	11/15/22 20:11	1

Lab Sample ID: MB 580-409985/2-A
Matrix: Water
Analysis Batch: 410378

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 409985

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	ND		0.20	0.020	ug/L		11/15/22 12:00	11/16/22 03:32	1
Cadmium	ND		0.030	0.018	ug/L		11/15/22 12:00	11/16/22 03:32	1

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QC Sample Results

Client: Cascade Analytical Inc
Project/Site: YCK0233

Job ID: 580-119980-1

Method: 200.8 LL - Metals (ICP/MS) (Continued)

Lab Sample ID: MB 580-409985/2-A
Matrix: Water
Analysis Batch: 410549

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 409985

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		0.10	0.035	ug/L		11/15/22 12:00	11/16/22 21:10	1
Selenium	ND		0.30	0.050	ug/L		11/15/22 12:00	11/16/22 21:10	1

Lab Sample ID: LCS 580-409985/3-A
Matrix: Water
Analysis Batch: 410360

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 409985

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Beryllium	20.0	20.4		ug/L		102	85 - 115
Lead	50.0	48.9		ug/L		98	85 - 115
Silver	20.0	19.8		ug/L		99	85 - 115
Thallium	20.0	18.7		ug/L		94	85 - 115

Lab Sample ID: LCS 580-409985/3-A
Matrix: Water
Analysis Batch: 410378

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 409985

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Arsenic	50.0	50.8		ug/L		102	85 - 115
Cadmium	40.0	40.7		ug/L		102	85 - 115

Lab Sample ID: LCS 580-409985/3-A
Matrix: Water
Analysis Batch: 410549

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 409985

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Antimony	20.0	21.4		ug/L		107	85 - 115
Selenium	50.0	51.3		ug/L		103	85 - 115

Lab Sample ID: LCSD 580-409985/4-A
Matrix: Water
Analysis Batch: 410360

Client Sample ID: Lab Control Sample Dup
Prep Type: Total Recoverable
Prep Batch: 409985

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Beryllium	20.0	20.0		ug/L		100	85 - 115	2	20
Lead	50.0	50.0		ug/L		100	85 - 115	2	20
Silver	20.0	20.9		ug/L		105	85 - 115	5	20
Thallium	20.0	20.0		ug/L		100	85 - 115	7	20

Lab Sample ID: LCSD 580-409985/4-A
Matrix: Water
Analysis Batch: 410378

Client Sample ID: Lab Control Sample Dup
Prep Type: Total Recoverable
Prep Batch: 409985

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Arsenic	50.0	50.3		ug/L		101	85 - 115	1	20
Cadmium	40.0	40.0		ug/L		100	85 - 115	2	20

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QC Sample Results

Client: Cascade Analytical Inc
Project/Site: YCK0233

Job ID: 580-119980-1

Method: 200.8 LL - Metals (ICP/MS) (Continued)

Lab Sample ID: LCSD 580-409985/4-A

Matrix: Water

Analysis Batch: 410549

Client Sample ID: Lab Control Sample Dup

Prep Type: Total Recoverable

Prep Batch: 409985

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Antimony	20.0	21.0		ug/L		105	85 - 115	2	20
Selenium	50.0	48.9		ug/L		98	85 - 115	5	20

Lab Sample ID: 580-119980-1 MS

Matrix: Water

Analysis Batch: 410360

Client Sample ID: YCK0233-01

Prep Type: Total Recoverable

Prep Batch: 409985

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Beryllium	ND		20.0	21.7		ug/L		108	70 - 130
Lead	0.70		50.0	53.4		ug/L		105	70 - 130
Silver	ND		20.0	21.4		ug/L		107	70 - 130
Thallium	0.015	B	20.0	19.8		ug/L		99	70 - 130

Lab Sample ID: 580-119980-1 MS

Matrix: Water

Analysis Batch: 410378

Client Sample ID: YCK0233-01

Prep Type: Total Recoverable

Prep Batch: 409985

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Arsenic	0.47		50.0	49.9		ug/L		99	70 - 130
Cadmium	ND		40.0	38.9		ug/L		97	70 - 130

Lab Sample ID: 580-119980-1 MS

Matrix: Water

Analysis Batch: 410549

Client Sample ID: YCK0233-01

Prep Type: Total Recoverable

Prep Batch: 409985

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Antimony	0.13		20.0	21.3		ug/L		106	70 - 130
Selenium	ND		50.0	50.9		ug/L		102	70 - 130

Lab Sample ID: 580-119980-1 MSD

Matrix: Water

Analysis Batch: 410360

Client Sample ID: YCK0233-01

Prep Type: Total Recoverable

Prep Batch: 409985

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Beryllium	ND		20.0	21.5		ug/L		108	70 - 130	1	20
Lead	0.70		50.0	51.9		ug/L		102	70 - 130	3	20
Silver	ND		20.0	21.1		ug/L		106	70 - 130	2	20
Thallium	0.015	B	20.0	20.0		ug/L		100	70 - 130	1	20

Lab Sample ID: 580-119980-1 MSD

Matrix: Water

Analysis Batch: 410378

Client Sample ID: YCK0233-01

Prep Type: Total Recoverable

Prep Batch: 409985

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Arsenic	0.47		50.0	48.4		ug/L		96	70 - 130	3	20
Cadmium	ND		40.0	37.5		ug/L		94	70 - 130	4	20

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QC Sample Results

Client: Cascade Analytical Inc
Project/Site: YCK0233

Job ID: 580-119980-1

Method: 200.8 LL - Metals (ICP/MS) (Continued)

Lab Sample ID: 580-119980-1 MSD

Matrix: Water

Analysis Batch: 410549

Client Sample ID: YCK0233-01

Prep Type: Total Recoverable

Prep Batch: 409985

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Antimony	0.13		20.0	21.3		ug/L		106	70 - 130	0	20
Selenium	ND		50.0	47.5		ug/L		95	70 - 130	7	20

Lab Sample ID: 580-119980-2 MS

Matrix: Water

Analysis Batch: 410360

Client Sample ID: YCK0233-02

Prep Type: Total Recoverable

Prep Batch: 409985

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Beryllium	0.039	J B	20.0	21.4		ug/L		107	70 - 130		
Lead	0.31		50.0	52.4		ug/L		104	70 - 130		
Silver	ND		20.0	20.8		ug/L		104	70 - 130		
Thallium	0.012	B	20.0	19.8		ug/L		99	70 - 130		

Lab Sample ID: 580-119980-2 MS

Matrix: Water

Analysis Batch: 410378

Client Sample ID: YCK0233-02

Prep Type: Total Recoverable

Prep Batch: 409985

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Arsenic	0.39		50.0	48.1		ug/L		95	70 - 130		
Cadmium	ND		40.0	38.0		ug/L		95	70 - 130		

Lab Sample ID: 580-119980-2 MS

Matrix: Water

Analysis Batch: 410549

Client Sample ID: YCK0233-02

Prep Type: Total Recoverable

Prep Batch: 409985

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Antimony	0.23		20.0	20.9		ug/L		103	70 - 130		
Selenium	0.14	J	50.0	52.8		ug/L		105	70 - 130		

Lab Sample ID: 580-119980-2 MSD

Matrix: Water

Analysis Batch: 410360

Client Sample ID: YCK0233-02

Prep Type: Total Recoverable

Prep Batch: 409985

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Beryllium	0.039	J B	20.0	22.0		ug/L		110	70 - 130	2	20
Lead	0.31		50.0	52.4		ug/L		104	70 - 130	0	20
Silver	ND		20.0	21.1		ug/L		105	70 - 130	2	20
Thallium	0.012	B	20.0	20.2		ug/L		101	70 - 130	2	20

Lab Sample ID: 580-119980-2 MSD

Matrix: Water

Analysis Batch: 410378

Client Sample ID: YCK0233-02

Prep Type: Total Recoverable

Prep Batch: 409985

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Arsenic	0.39		50.0	48.4		ug/L		96	70 - 130	0	20
Cadmium	ND		40.0	37.7		ug/L		94	70 - 130	1	20

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QC Sample Results

Client: Cascade Analytical Inc
Project/Site: YCK0233

Job ID: 580-119980-1

Method: 200.8 LL - Metals (ICP/MS) (Continued)

Lab Sample ID: 580-119980-2 MSD

Matrix: Water

Analysis Batch: 410549

Client Sample ID: YCK0233-02

Prep Type: Total Recoverable

Prep Batch: 409985

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Antimony	0.23		20.0	20.5		ug/L		101	70 - 130	2	20
Selenium	0.14	J	50.0	48.8		ug/L		97	70 - 130	8	20

Lab Chronicle

Client: Cascade Analytical Inc
Project/Site: YCK0233

Job ID: 580-119980-1

Client Sample ID: YCK0233-01

Lab Sample ID: 580-119980-1

Date Collected: 11/09/22 14:20

Matrix: Water

Date Received: 11/11/22 08:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	1631E		1	410140	COW	EET SEA	11/15/22 13:41
Total/NA	Prep	200.8			411359	JLS	EET SEA	11/29/22 18:18
Total/NA	Analysis	200.8		1	411579	FCW	EET SEA	11/30/22 20:35
Total Recoverable	Prep	200.8			409985	AJR	EET SEA	11/15/22 12:00
Total Recoverable	Analysis	200.8 LL		1	410360	AJR	EET SEA	11/15/22 21:45
Total Recoverable	Prep	200.8			409985	AJR	EET SEA	11/15/22 12:00
Total Recoverable	Analysis	200.8 LL		1	410378	AJR	EET SEA	11/16/22 05:06
Total Recoverable	Prep	200.8			409985	AJR	EET SEA	11/15/22 12:00
Total Recoverable	Analysis	200.8 LL		1	410549	AJR	EET SEA	11/16/22 21:24

Client Sample ID: YCK0233-02

Lab Sample ID: 580-119980-2

Date Collected: 11/09/22 14:05

Matrix: Water

Date Received: 11/11/22 08:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	1631E		1	410140	COW	EET SEA	11/15/22 17:55
Total/NA	Prep	200.8			411359	JLS	EET SEA	11/29/22 18:18
Total/NA	Analysis	200.8		1	411579	FCW	EET SEA	11/30/22 20:32
Total Recoverable	Prep	200.8			409985	AJR	EET SEA	11/15/22 12:00
Total Recoverable	Analysis	200.8 LL		1	410360	AJR	EET SEA	11/15/22 21:59
Total Recoverable	Prep	200.8			409985	AJR	EET SEA	11/15/22 12:00
Total Recoverable	Analysis	200.8 LL		1	410378	AJR	EET SEA	11/16/22 05:20
Total Recoverable	Prep	200.8			409985	AJR	EET SEA	11/15/22 12:00
Total Recoverable	Analysis	200.8 LL		1	410549	AJR	EET SEA	11/16/22 21:37

Client Sample ID: YCK0233-03

Lab Sample ID: 580-119980-3

Date Collected: 11/09/22 14:50

Matrix: Water

Date Received: 11/11/22 08:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	1631E		1	410140	COW	EET SEA	11/15/22 17:59
Total/NA	Prep	200.8			411359	JLS	EET SEA	11/29/22 18:18
Total/NA	Analysis	200.8		1	411579	FCW	EET SEA	11/30/22 21:02
Total Recoverable	Prep	200.8			409985	AJR	EET SEA	11/15/22 12:00
Total Recoverable	Analysis	200.8 LL		1	410360	AJR	EET SEA	11/15/22 22:12
Total Recoverable	Prep	200.8			409985	AJR	EET SEA	11/15/22 12:00
Total Recoverable	Analysis	200.8 LL		1	410378	AJR	EET SEA	11/16/22 05:33
Total Recoverable	Prep	200.8			409985	AJR	EET SEA	11/15/22 12:00
Total Recoverable	Analysis	200.8 LL		1	410549	AJR	EET SEA	11/16/22 22:00

Eurofins Seattle

Lab Chronicle

Client: Cascade Analytical Inc
Project/Site: YCK0233

Job ID: 580-119980-1

Client Sample ID: YCK0233-04

Lab Sample ID: 580-119980-4

Date Collected: 11/09/22 14:30

Matrix: Water

Date Received: 11/11/22 08:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	1631E		1	410140	COW	EET SEA	11/15/22 18:03
Total/NA	Prep	200.8			411359	JLS	EET SEA	11/29/22 18:18
Total/NA	Analysis	200.8		1	411579	FCW	EET SEA	11/30/22 21:04
Total Recoverable	Prep	200.8			409985	AJR	EET SEA	11/15/22 12:00
Total Recoverable	Analysis	200.8 LL		1	410360	AJR	EET SEA	11/15/22 22:17
Total Recoverable	Prep	200.8			409985	AJR	EET SEA	11/15/22 12:00
Total Recoverable	Analysis	200.8 LL		1	410378	AJR	EET SEA	11/16/22 05:38
Total Recoverable	Prep	200.8			409985	AJR	EET SEA	11/15/22 12:00
Total Recoverable	Analysis	200.8 LL		1	410549	AJR	EET SEA	11/16/22 22:04

Client Sample ID: YCK0233-05

Lab Sample ID: 580-119980-5

Date Collected: 11/09/22 14:35

Matrix: Water

Date Received: 11/11/22 08:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	1631E		1	410140	COW	EET SEA	11/15/22 18:07
Total/NA	Prep	200.8			411359	JLS	EET SEA	11/29/22 18:18
Total/NA	Analysis	200.8		1	411579	FCW	EET SEA	11/30/22 21:07
Total Recoverable	Prep	200.8			409985	AJR	EET SEA	11/15/22 12:00
Total Recoverable	Analysis	200.8 LL		1	410360	AJR	EET SEA	11/15/22 22:21
Total Recoverable	Prep	200.8			409985	AJR	EET SEA	11/15/22 12:00
Total Recoverable	Analysis	200.8 LL		1	410378	AJR	EET SEA	11/16/22 05:42
Total Recoverable	Prep	200.8			409985	AJR	EET SEA	11/15/22 12:00
Total Recoverable	Analysis	200.8 LL		1	410549	AJR	EET SEA	11/16/22 22:09

Client Sample ID: YCK0233-06

Lab Sample ID: 580-119980-6

Date Collected: 11/09/22 14:40

Matrix: Water

Date Received: 11/11/22 08:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	1631E		1	410140	COW	EET SEA	11/15/22 18:12
Total/NA	Prep	200.8			411359	JLS	EET SEA	11/29/22 18:18
Total/NA	Analysis	200.8		1	411579	FCW	EET SEA	11/30/22 21:09
Total Recoverable	Prep	200.8			409985	AJR	EET SEA	11/15/22 12:00
Total Recoverable	Analysis	200.8 LL		1	410360	AJR	EET SEA	11/15/22 22:26
Total Recoverable	Prep	200.8			409985	AJR	EET SEA	11/15/22 12:00
Total Recoverable	Analysis	200.8 LL		1	410378	AJR	EET SEA	11/16/22 05:47
Total Recoverable	Prep	200.8			409985	AJR	EET SEA	11/15/22 12:00
Total Recoverable	Analysis	200.8 LL		1	410549	AJR	EET SEA	11/16/22 22:13

Eurofins Seattle

Lab Chronicle

Client: Cascade Analytical Inc
Project/Site: YCK0233

Job ID: 580-119980-1

Client Sample ID: YCK0233-07

Lab Sample ID: 580-119980-7

Date Collected: 11/09/22 14:45

Matrix: Water

Date Received: 11/11/22 08:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	1631E		1	410140	COW	EET SEA	11/15/22 18:16
Total/NA	Prep	200.8			411359	JLS	EET SEA	11/29/22 18:18
Total/NA	Analysis	200.8		1	411579	FCW	EET SEA	11/30/22 21:11
Total Recoverable	Prep	200.8			409985	AJR	EET SEA	11/15/22 12:00
Total Recoverable	Analysis	200.8 LL		1	410360	AJR	EET SEA	11/15/22 22:39
Total Recoverable	Prep	200.8			409985	AJR	EET SEA	11/15/22 12:00
Total Recoverable	Analysis	200.8 LL		1	410378	AJR	EET SEA	11/16/22 06:00
Total Recoverable	Prep	200.8			409985	AJR	EET SEA	11/15/22 12:00
Total Recoverable	Analysis	200.8 LL		1	410549	AJR	EET SEA	11/16/22 22:18

Client Sample ID: YCK0233-08

Lab Sample ID: 580-119980-8

Date Collected: 11/09/22 15:00

Matrix: Water

Date Received: 11/11/22 08:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	1631E		1	410140	COW	EET SEA	11/15/22 18:20
Total/NA	Prep	200.8			411359	JLS	EET SEA	11/29/22 18:18
Total/NA	Analysis	200.8		1	411579	FCW	EET SEA	11/30/22 21:14
Total Recoverable	Prep	200.8			409985	AJR	EET SEA	11/15/22 12:00
Total Recoverable	Analysis	200.8 LL		1	410360	AJR	EET SEA	11/15/22 22:44
Total Recoverable	Prep	200.8			409985	AJR	EET SEA	11/15/22 12:00
Total Recoverable	Analysis	200.8 LL		1	410378	AJR	EET SEA	11/16/22 06:05
Total Recoverable	Prep	200.8			409985	AJR	EET SEA	11/15/22 12:00
Total Recoverable	Analysis	200.8 LL		1	410549	AJR	EET SEA	11/16/22 22:22

Client Sample ID: YCK0233-09

Lab Sample ID: 580-119980-9

Date Collected: 11/09/22 15:05

Matrix: Water

Date Received: 11/11/22 08:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	1631E		1	410140	COW	EET SEA	11/15/22 18:24
Total/NA	Prep	200.8			411359	JLS	EET SEA	11/29/22 18:18
Total/NA	Analysis	200.8		1	411579	FCW	EET SEA	11/30/22 21:16
Total Recoverable	Prep	200.8			409985	AJR	EET SEA	11/15/22 12:00
Total Recoverable	Analysis	200.8 LL		1	410360	AJR	EET SEA	11/15/22 22:48
Total Recoverable	Prep	200.8			409985	AJR	EET SEA	11/15/22 12:00
Total Recoverable	Analysis	200.8 LL		1	410378	AJR	EET SEA	11/16/22 06:09
Total Recoverable	Prep	200.8			409985	AJR	EET SEA	11/15/22 12:00
Total Recoverable	Analysis	200.8 LL		1	410549	AJR	EET SEA	11/16/22 22:27

Eurofins Seattle

Lab Chronicle

Client: Cascade Analytical Inc
Project/Site: YCK0233

Job ID: 580-119980-1

Client Sample ID: YCK0233-10

Lab Sample ID: 580-119980-10

Date Collected: 11/09/22 15:10

Matrix: Water

Date Received: 11/11/22 08:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	1631E		1	410140	COW	EET SEA	11/15/22 18:37
Total/NA	Prep	200.8			411360	JLS	EET SEA	11/29/22 18:21
Total/NA	Analysis	200.8		1	411548	FCW	EET SEA	11/30/22 16:30
Total Recoverable	Prep	200.8			409985	AJR	EET SEA	11/15/22 12:00
Total Recoverable	Analysis	200.8 LL		1	410360	AJR	EET SEA	11/15/22 22:53
Total Recoverable	Prep	200.8			409985	AJR	EET SEA	11/15/22 12:00
Total Recoverable	Analysis	200.8 LL		1	410378	AJR	EET SEA	11/16/22 06:14
Total Recoverable	Prep	200.8			409985	AJR	EET SEA	11/15/22 12:00
Total Recoverable	Analysis	200.8 LL		1	410549	AJR	EET SEA	11/16/22 22:31

Client Sample ID: YCK0233-11

Lab Sample ID: 580-119980-11

Date Collected: 11/09/22 15:20

Matrix: Water

Date Received: 11/11/22 08:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	1631E		1	410140	COW	EET SEA	11/15/22 18:41
Total/NA	Prep	200.8			411360	JLS	EET SEA	11/29/22 18:21
Total/NA	Analysis	200.8		1	411548	FCW	EET SEA	11/30/22 16:57
Total Recoverable	Prep	200.8			409985	AJR	EET SEA	11/15/22 12:00
Total Recoverable	Analysis	200.8 LL		1	410360	AJR	EET SEA	11/15/22 22:57
Total Recoverable	Prep	200.8			409985	AJR	EET SEA	11/15/22 12:00
Total Recoverable	Analysis	200.8 LL		1	410378	AJR	EET SEA	11/16/22 06:18
Total Recoverable	Prep	200.8			409985	AJR	EET SEA	11/15/22 12:00
Total Recoverable	Analysis	200.8 LL		1	410549	AJR	EET SEA	11/16/22 22:36

Client Sample ID: YCK0233-12

Lab Sample ID: 580-119980-12

Date Collected: 11/09/22 15:25

Matrix: Water

Date Received: 11/11/22 08:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	1631E		1	410140	COW	EET SEA	11/15/22 18:45
Total/NA	Prep	200.8			411360	JLS	EET SEA	11/29/22 18:21
Total/NA	Analysis	200.8		1	411548	FCW	EET SEA	11/30/22 16:59
Total Recoverable	Prep	200.8			409985	AJR	EET SEA	11/15/22 12:00
Total Recoverable	Analysis	200.8 LL		1	410360	AJR	EET SEA	11/15/22 23:02
Total Recoverable	Prep	200.8			409985	AJR	EET SEA	11/15/22 12:00
Total Recoverable	Analysis	200.8 LL		1	410378	AJR	EET SEA	11/16/22 06:23
Total Recoverable	Prep	200.8			409985	AJR	EET SEA	11/15/22 12:00
Total Recoverable	Analysis	200.8 LL		1	410549	AJR	EET SEA	11/16/22 22:40

Eurofins Seattle

Lab Chronicle

Client: Cascade Analytical Inc
Project/Site: YCK0233

Job ID: 580-119980-1

Client Sample ID: YCK0233-13

Lab Sample ID: 580-119980-13

Date Collected: 11/09/22 15:30

Matrix: Water

Date Received: 11/11/22 08:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	1631E		1	410140	COW	EET SEA	11/15/22 18:49
Total/NA	Prep	200.8			411360	JLS	EET SEA	11/29/22 18:21
Total/NA	Analysis	200.8		1	411548	FCW	EET SEA	11/30/22 17:02
Total Recoverable	Prep	200.8			409985	AJR	EET SEA	11/15/22 12:00
Total Recoverable	Analysis	200.8 LL		1	410360	AJR	EET SEA	11/15/22 23:06
Total Recoverable	Prep	200.8			409985	AJR	EET SEA	11/15/22 12:00
Total Recoverable	Analysis	200.8 LL		1	410378	AJR	EET SEA	11/16/22 06:27
Total Recoverable	Prep	200.8			409985	AJR	EET SEA	11/15/22 12:00
Total Recoverable	Analysis	200.8 LL		1	410549	AJR	EET SEA	11/16/22 22:54

Client Sample ID: YCK0233-14

Lab Sample ID: 580-119980-14

Date Collected: 11/09/22 14:15

Matrix: Water

Date Received: 11/11/22 08:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	1631E		1	410140	COW	EET SEA	11/15/22 18:53
Total/NA	Prep	200.8			411360	JLS	EET SEA	11/29/22 18:21
Total/NA	Analysis	200.8		1	411548	FCW	EET SEA	11/30/22 17:04
Total Recoverable	Prep	200.8			409985	AJR	EET SEA	11/15/22 12:00
Total Recoverable	Analysis	200.8 LL		1	410360	AJR	EET SEA	11/15/22 23:11
Total Recoverable	Prep	200.8			409985	AJR	EET SEA	11/15/22 12:00
Total Recoverable	Analysis	200.8 LL		1	410378	AJR	EET SEA	11/16/22 06:32
Total Recoverable	Prep	200.8			409985	AJR	EET SEA	11/15/22 12:00
Total Recoverable	Analysis	200.8 LL		1	410549	AJR	EET SEA	11/16/22 22:58

Client Sample ID: YCK0233-15

Lab Sample ID: 580-119980-15

Date Collected: 11/09/22 15:35

Matrix: Water

Date Received: 11/11/22 08:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	1631E		1	410140	COW	EET SEA	11/15/22 18:58
Total/NA	Prep	200.8			411360	JLS	EET SEA	11/29/22 18:21
Total/NA	Analysis	200.8		1	411548	FCW	EET SEA	11/30/22 17:06
Total Recoverable	Prep	200.8			409985	AJR	EET SEA	11/15/22 12:00
Total Recoverable	Analysis	200.8 LL		1	410360	AJR	EET SEA	11/15/22 23:15
Total Recoverable	Prep	200.8			409985	AJR	EET SEA	11/15/22 12:00
Total Recoverable	Analysis	200.8 LL		1	410378	AJR	EET SEA	11/16/22 06:36
Total Recoverable	Prep	200.8			409985	AJR	EET SEA	11/15/22 12:00
Total Recoverable	Analysis	200.8 LL		1	410549	AJR	EET SEA	11/16/22 23:03

Laboratory References:

EET SEA = Eurofins Seattle, 5755 8th Street East, Tacoma, WA 98424, TEL (253)922-2310

Eurofins Seattle

Accreditation/Certification Summary

Client: Cascade Analytical Inc
Project/Site: YCK0233

Job ID: 580-119980-1

Laboratory: Eurofins Seattle

The accreditations/certifications listed below are applicable to this report.

Authority	Program	Identification Number	Expiration Date
Washington	State	C788	07-13-23

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11

Sample Summary

Client: Cascade Analytical Inc
Project/Site: YCK0233

Job ID: 580-119980-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
580-119980-1	YCK0233-01	Water	11/09/22 14:20	11/11/22 08:00
580-119980-2	YCK0233-02	Water	11/09/22 14:05	11/11/22 08:00
580-119980-3	YCK0233-03	Water	11/09/22 14:50	11/11/22 08:00
580-119980-4	YCK0233-04	Water	11/09/22 14:30	11/11/22 08:00
580-119980-5	YCK0233-05	Water	11/09/22 14:35	11/11/22 08:00
580-119980-6	YCK0233-06	Water	11/09/22 14:40	11/11/22 08:00
580-119980-7	YCK0233-07	Water	11/09/22 14:45	11/11/22 08:00
580-119980-8	YCK0233-08	Water	11/09/22 15:00	11/11/22 08:00
580-119980-9	YCK0233-09	Water	11/09/22 15:05	11/11/22 08:00
580-119980-10	YCK0233-10	Water	11/09/22 15:10	11/11/22 08:00
580-119980-11	YCK0233-11	Water	11/09/22 15:20	11/11/22 08:00
580-119980-12	YCK0233-12	Water	11/09/22 15:25	11/11/22 08:00
580-119980-13	YCK0233-13	Water	11/09/22 15:30	11/11/22 08:00
580-119980-14	YCK0233-14	Water	11/09/22 14:15	11/11/22 08:00
580-119980-15	YCK0233-15	Water	11/09/22 15:35	11/11/22 08:00

Case Analysis

Sending Laboratory:

Eurofins Cascade Analytical- Yakima
1008 W Ahtanum Road
Union Gap, WA 98903
Phone: 509-452-7707
Fax: 509-452-7773

Project Manager: Brianna Buschbach
BriannaBuschbach@eurofinsUS.com

Subcontracted Laboratory:

Eurofins Test America - Seattle
5755 8th St East
Tacoma, WA 98424
Phone: (253) 922-2310

Work Order: YCK0233

Analysis	Comments
Lab Sample ID: YCK0233-01	Water Sampled: 11/09/2022 14:20
Hg 1631	EPA 1631 E
Cd 200.8	EPA 200.8
Se 200.8	EPA 200.8
Pb 200.8	EPA 200.8
Be 200.8	EPA 200.8
As 200.8	EPA 200.8
Cr 200.8	EPA 200.8
Cu 200.8	EPA 200.8
Sb 200.8	EPA 200.8
Bi 200.8	EPA 200.8
Ag 200.8	EPA 200.8
Metals Prep	EPA 200.7

Containers Supplied:

43

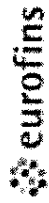
Analysis	Sample ID: YCK0233-02	Water	Sampled: 11/09/2022 14:05	Comments
Page 1	EPA 1631 E			
Metals Prep	EPA 200.7			
id 200.8	EPA 200.8			
u 200.8	EPA 200.8			
b 200.8	EPA 200.8			
b 200.8	EPA 200.8			
r 200.8	EPA 200.8			
l 200.8	EPA 200.8			
g 200.8	EPA 200.8			
s 200.8	EPA 200.8			
e 200.8	EPA 200.8			
e 200.8	EPA 200.8			

Therm. ID: 200 Cor: 4.2 ° Unc: 4.4 °
 Cooler Desc: Styro FedEx: _____
 Packing: Bubb UPS: _____
 Cast. Seal: Yes No Lab Cour: _____
 Blue Ice, Wet, Dry, None None Other: Sample

Containers Supplied:

Containers Supplied:

Analysis	Comments
<div style="text-align: right;"> <i>[Signature]</i> Released By _____ Date <u>11-10-22</u> </div>	<div style="text-align: left;"> Received By <i>[Signature]</i> <u>8:00</u> Date <u>11/11/22</u> </div>



Cascade Analytical

SUBCONTRACT ORDER (Continued)

Work Order: YCK0233 (Continued)


Analysis	Comments
Lab Sample ID: YCK0233-03 Water Sampled: 11/09/2022 14:50	
Hg 1631	EPA 1631 E
Ag 200.8	EPA 200.8
As 200.8	EPA 200.8
Cd 200.8	EPA 200.8
Metals Prep	EPA 200.7
Cr 200.8	EPA 200.8
Pb 200.8	EPA 200.8
Sb 200.8	EPA 200.8
Se 200.8	EPA 200.8
Tl 200.8	EPA 200.8
Cu 200.8	EPA 200.8
Be 200.8	EPA 200.8

Containers Supplied:

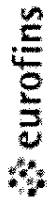
Analysis	Comments
Lab Sample ID: YCK0233-04 Water Sampled: 11/09/2022 14:30	
Hg 1631	EPA 1631 E
Sb 200.8	EPA 200.8
Ag 200.8	EPA 200.8
Se 200.8	EPA 200.8
Be 200.8	EPA 200.8
Ag 200.8	EPA 200.8
As 200.8	EPA 200.8
Cr 200.8	EPA 200.8
Cu 200.8	EPA 200.8
Metals Prep	EPA 200.7
200.8	EPA 200.8
p 200.8	EPA 200.8

Containers Supplied:

Analysis	Comments
Lab Sample ID: YCK0233-05 Water Sampled: 11/09/2022 14:35	
Hg 1631	EPA 1631 E
d 200.8	EPA 200.8
200.8	EPA 200.8
t 200.8	EPA 200.8
e 200.8	EPA 200.8
u 200.8	EPA 200.8
Metals Prep	EPA 200.7
p 200.8	EPA 200.8
e 200.8	EPA 200.8

Received By  8:00 11/11/22 Date





Cascade Analytical

SUBCONTRACT ORDER (Continued)

Work Order: YCK0233 (Continued)

Analysis	Comments
Lab Sample ID: YCK0233-05 Water Sampled: 11/09/2022 14:35	
As 200.8	EPA 200.8
Ag 200.8	EPA 200.8
Pb 200.8	EPA 200.8

Containers Supplied:


Analysis	Comments
Lab Sample ID: YCK0233-06 Water Sampled: 11/09/2022 14:40	
Hg 1631	EPA 1631 E
As 200.8	EPA 200.8
Metals Prep	EPA 200.7
Pb 200.8	EPA 200.8
Se 200.8	EPA 200.8
Sb 200.8	EPA 200.8
Cr 200.8	EPA 200.8
Cd 200.8	EPA 200.8
Be 200.8	EPA 200.8
Tl 200.8	EPA 200.8
Ag 200.8	EPA 200.8
Cu 200.8	EPA 200.8

Containers Supplied:

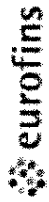
Analysis	Comments
Lab Sample ID: YCK0233-07 Water Sampled: 11/09/2022 14:45	
Hg 1631	EPA 1631 E
As 200.8	EPA 200.8
Pb 200.8	EPA 200.8
Se 200.8	EPA 200.8
Sb 200.8	EPA 200.8
Cr 200.8	EPA 200.8
Cd 200.8	EPA 200.8
Be 200.8	EPA 200.8
Tl 200.8	EPA 200.8
Ag 200.8	EPA 200.8
Cu 200.8	EPA 200.8

Containers Supplied:

Analysis	Comments
Lab Sample ID: YCK0233-08 Water Sampled: 11/09/2022 15:00	
Hg 1631	EPA 1631 E

Received By  Date 11/11/22





Cascade Analytical

SUBCONTRACT ORDER (Continued)

Work Order: YCK0233 (Continued)

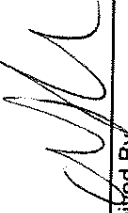
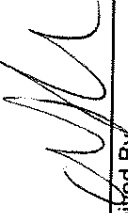
Analysis	Comments
Lab Sample ID: YCK0233-08	Water Sampled: 11/09/2022 15:00
Be 200.8	EPA 200.8
Cd 200.8	EPA 200.8
As 200.8	EPA 200.8
Cr 200.8	EPA 200.8
Ag 200.8	EPA 200.8
Tl 200.8	EPA 200.8
Se 200.8	EPA 200.8
Cu 200.8	EPA 200.8
Metals Prep	EPA 200.7
Pb 200.8	EPA 200.8
Sb 200.8	EPA 200.8

Containers Supplied:

Analysis	Comments
Lab Sample ID: YCK0233-09	Water Sampled: 11/09/2022 15:05
Hg 1631	EPA 1631 E
Metals Prep	EPA 200.7
Pb 200.8	EPA 200.8
Sb 200.8	EPA 200.8
Se 200.8	EPA 200.8
Ag 200.8	EPA 200.8
Cr 200.8	EPA 200.8
Cd 200.8	EPA 200.8
As 200.8	EPA 200.8
Cu 200.8	EPA 200.8
Pb 200.8	EPA 200.8
Sb 200.8	EPA 200.8

Containers Supplied:

Analysis	Comments
Lab Sample ID: YCK0233-10	Water Sampled: 11/09/2022 15:10
Hg 1631	EPA 1631 E
Metals Prep	EPA 200.7
Pb 200.8	EPA 200.8
Sb 200.8	EPA 200.8
Se 200.8	EPA 200.8
Ag 200.8	EPA 200.8
Cr 200.8	EPA 200.8
Cd 200.8	EPA 200.8
As 200.8	EPA 200.8
Cu 200.8	EPA 200.8
Pb 200.8	EPA 200.8
Sb 200.8	EPA 200.8

Received By		Received By	
Date		Date	11/14/22

9:00





Cascade Analytical

SUBCONTRACT ORDER (Continued)

Work Order: YCK0233 (Continued)

Analysis	Comments
Lab Sample ID: YCK0233-10	Water Sampled: 11/09/2022 15:10
Tl 200.8	EPA 200.8
Cr 200.8	EPA 200.8
Containers Supplied:	


Analysis	Comments
Lab Sample ID: YCK0233-11	Water Sampled: 11/09/2022 15:10
Hg 1631	EPA 1631 E
As 200.8	EPA 200.8
Tl 200.8	EPA 200.8
Sb 200.8	EPA 200.8
Ag 200.8	EPA 200.8
Metals Prep	EPA 200.7
Be 200.8	EPA 200.8
Cd 200.8	EPA 200.8
Cr 200.8	EPA 200.8
Se 200.8	EPA 200.8
Pb 200.8	EPA 200.8
Cu 200.8	EPA 200.8
Containers Supplied:	

Page 40 of 40

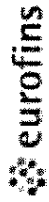
Analysis	Comments
Lab Sample ID: YCK0233-12	Water Sampled: 11/09/2022 15:25
Hg 1631	EPA 1631 E
As 200.8	EPA 200.8
Metals Prep	EPA 200.7
Lu 200.8	EPA 200.8
Id 200.8	EPA 200.8
Pb 200.8	EPA 200.8
Ir 200.8	EPA 200.8
Ir 200.8	EPA 200.8
Ir 200.8	EPA 200.8
Ir 200.8	EPA 200.8
Ir 200.8	EPA 200.8
Ir 200.8	EPA 200.8
Ir 200.8	EPA 200.8
Containers Supplied:	

Page 82 of 120

Analysis	Comments
Lab Sample ID: YCK0233-13	Water Sampled: 11/09/2022 15:30
Hg 1631	EPA 1631 E
Ir 200.8	EPA 200.8

Released By		Received By	900
Date		Date	11/11/22





Cascade Analytical

SUBCONTRACT ORDER (Continued)

Work Order: YCK0233 (Continued)


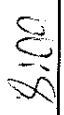
Analysis	Comments
Lab Sample ID: YCK0233-13	Water Sampled: 11/09/2022 15:30
Se 200.8	EPA 200.8
Tl 200.8	EPA 200.8
Metals Prep	EPA 200.7
Cd 200.8	EPA 200.8
Be 200.8	EPA 200.8
As 200.8	EPA 200.8
Ag 200.8	EPA 200.8
Pb 200.8	EPA 200.8
Sb 200.8	EPA 200.8
Cu 200.8	EPA 200.8

Containers Supplied:

Analysis	Comments
Lab Sample ID: YCK0233-14	Water Sampled: 11/09/2022 14:15
Hg 1631	EPA 1631 E
Metals Prep	EPA 200.7
Cr 200.8	EPA 200.8
Tl 200.8	EPA 200.8
Cu 200.8	EPA 200.8
Ag 200.8	EPA 200.8
As 200.8	EPA 200.8
Pb 200.8	EPA 200.8
Sb 200.8	EPA 200.8
Se 200.8	EPA 200.8
Cd 200.8	EPA 200.8
Fe 200.8	EPA 200.8

Containers Supplied:

Analysis	Comments
Lab Sample ID: YCK0233-15	Water Sampled: 11/09/2022 15:35
Hg 1631	EPA 1631 E
Fe 200.8	EPA 200.8
Cr 200.8	EPA 200.8
Se 200.8	EPA 200.8
As 200.8	EPA 200.8
Pb 200.8	EPA 200.8
Sb 200.8	EPA 200.8
Ag 200.8	EPA 200.8
Fe 200.8	EPA 200.8
As 200.8	EPA 200.8
Metals Prep	EPA 200.7
200.8	EPA 200.8

Released By:  Received By:  Date: 11/11/22






Cascade Analytical

**SUBCONTRACT
ORDER**
(Continued)

Work Order: YCK0233 (Continued)

Analysis	Comments
Lab Sample ID: YCK0233-15 Water Sampled: 11/09/2022 15:35	
Pb 200.8	EPA 200.8
Containers Supplied:	

Revised By	_____	Date	_____
Received By		8:00	11/11/22
		Date	

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11

Login Sample Receipt Checklist

Client: Cascade Analytical Inc

Job Number: 580-119980-1

Login Number: 119980

List Source: Eurofins Seattle

List Number: 1

Creator: Holdener, Heather D

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	N/A	Received project as a subcontract.
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	



Analytical Resources, LLC
Analytical Chemists and Consultants

06 December 2022

Brianna Buschbach
Eurofins - Cascade Analytical, Inc.-Yakima
1008 W Ahtanum Road
Yakima, WA 98903

RE: General 2021-2022 (YCK0233)

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)
22K0287

Associated SDG ID(s)
N/A

Shelly Fishel

Digitally signed by Shelly
Fishel
Date: 2022.12.06 13:20:10
-08'00'

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

Shelly Fishel, Project 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.



72K0287



Cascade Analytical

**SUBCONTRACT
ORDER****Sending Laboratory:**

Eurofins Cascade Analytical- Yakima
1008 W Ahtanum Road
Union Gap, WA 98903
Phone: 509-452-7707
Fax: 509-452-7773

Project Manager: Brianna Buschbach
BriannaBuschbach@eurofinsUS.com

Subcontracted Laboratory:

Analytical Resources Inc
4611 S 134th Pl #100
Tukwilla, WA 98168
Phone: (206) 695-6200

Work Order: YCK0233

Analysis	Comments
----------	----------

Lab Sample ID: YCK0233-01 Water Sampled: 11/09/2022 14:20

Cu 200.8 EPA 200.8
Ni 200.8 EPA 200.8

Containers Supplied:

Analysis	Comments
----------	----------

Lab Sample ID: YCK0233-02 Water Sampled: 11/09/2022 14:05

Cu 200.8 EPA 200.8
Ni 200.8 EPA 200.8

Containers Supplied:

Analysis	Comments
----------	----------

Lab Sample ID: YCK0233-03 Water Sampled: 11/09/2022 14:50

Cu 200.8 EPA 200.8
Ni 200.8 EPA 200.8

Containers Supplied:

Analysis	Comments
----------	----------

Lab Sample ID: YCK0233-04 Water Sampled: 11/09/2022 14:30

Cu 200.8 EPA 200.8
Ni 200.8 EPA 200.8

Containers Supplied:

Analysis	Comments
----------	----------

Lab Sample ID: YCK0233-05 Water Sampled: 11/09/2022 14:35

Cu 200.8 EPA 200.8
Ni 200.8 EPA 200.8

Containers Supplied:

Released By

Date

Received By

Date

**SUBCONTRACT
ORDER**
(Continued)

Work Order: YCK0233 (Continued)

Analysis	Comments
----------	----------

Lab Sample ID: YCK0233-06 *Water* **Sampled: 11/09/2022 14:40**

Cu 200.8 EPA 200.8
Ni 200.8 EPA 200.8

Containers Supplied:

Analysis	Comments
----------	----------

Lab Sample ID: YCK0233-07 *Water* **Sampled: 11/09/2022 14:45**

Cu 200.8 EPA 200.8
Ni 200.8 EPA 200.8

Containers Supplied:

Analysis	Comments
----------	----------

Lab Sample ID: YCK0233-08 *Water* **Sampled: 11/09/2022 15:00**

Ni 200.8 EPA 200.8
Cu 200.8 EPA 200.8

Containers Supplied:

Analysis	Comments
----------	----------

Lab Sample ID: YCK0233-09 *Water* **Sampled: 11/09/2022 15:05**

Cu 200.8 EPA 200.8
Ni 200.8 EPA 200.8

Containers Supplied:

Analysis	Comments
----------	----------

Lab Sample ID: YCK0233-10 *Water* **Sampled: 11/09/2022 15:10**

Cu 200.8 EPA 200.8
Ni 200.8 EPA 200.8

Containers Supplied:

Analysis	Comments
----------	----------

Lab Sample ID: YCK0233-11 *Water* **Sampled: 11/09/2022 15:20**

Cu 200.8 EPA 200.8
Ni 200.8 EPA 200.8

Containers Supplied:

Analysis	Comments
----------	----------

Lab Sample ID: YCK0233-12 *Water* **Sampled: 11/09/2022 15:25**

Cu 200.8 EPA 200.8

Released By

Date

Received By

Date

Phillip BKH

11/15/22

22K0287



Cascade Analytical

SUBCONTRACT ORDER (Continued)

Work Order: YCK0233 (Continued)

Analysis	Comments
----------	----------

Lab Sample ID: YCK0233-12 Water Sampled: 11/09/2022 15:25

Ni 200.8 EPA 200.8

Containers Supplied:

Analysis	Comments
----------	----------

Lab Sample ID: YCK0233-13 Water Sampled: 11/09/2022 15:30

Cu 200.8 EPA 200.8

Ni 200.8 EPA 200.8

Containers Supplied:

Analysis	Comments
----------	----------

Lab Sample ID: YCK0233-14 Water Sampled: 11/09/2022 14:15

Cu 200.8 EPA 200.8

Ni 200.8 EPA 200.8

Containers Supplied:

Analysis	Comments
----------	----------

Lab Sample ID: YCK0233-15 Water Sampled: 11/09/2022 15:35

Cu 200.8 EPA 200.8

Ni 200.8 EPA 200.8

Containers Supplied:

Released By

Date

Received By

Date

Philip 202

11/15/22

Work Order: YCK0233 (Continued)

Containers Supplied:

Analysis	Comments
Lab Sample ID: YCK0233-07 <i>Water</i> Sampled: 11/09/2022 14:45	
Ni 200.8	EPA 200.8

Containers Supplied:

Analysis	Comments
Lab Sample ID: YCK0233-08 <i>Water</i> Sampled: 11/09/2022 15:00	
Ni 200.8	EPA 200.8

Containers Supplied:

Analysis	Comments
Lab Sample ID: YCK0233-09 <i>Water</i> Sampled: 11/09/2022 15:05	
Ni 200.8	EPA 200.8

Containers Supplied:

Analysis	Comments
Lab Sample ID: YCK0233-10 <i>Water</i> Sampled: 11/09/2022 15:10	
Ni 200.8	EPA 200.8

Containers Supplied:

Analysis	Comments
Lab Sample ID: YCK0233-11 <i>Water</i> Sampled: 11/09/2022 15:20	
Ni 200.8	EPA 200.8



Containers Supplied:

Analysis	Comments
Lab Sample ID: YCK0233-12 <i>Water</i> Sampled: 11/09/2022 15:25	
Ni 200.8	EPA 200.8

Containers Supplied:

Analysis	Comments
Lab Sample ID: YCK0233-13 <i>Water</i> Sampled: 11/09/2022 15:30	
Ni 200.8	EPA 200.8

Containers Supplied:

Released By  Date 11.14.22 Received By  Date 11/15/22

**SUBCONTRACT
ORDER**
(Continued)

7740287

Work Order: YCK0233 (Continued)

Analysis	Comments
Lab Sample ID: YCK0233-14 Water Sampled: 11/09/2022 14:15	
Ni 200.8	EPA 200.8
Containers Supplied:	

Analysis	Comments
Lab Sample ID: YCK0233-15 Water Sampled: 11/09/2022 15:35	
Ni 200.8	EPA 200.8
Containers Supplied:	

<u>Richie H.</u>	<u>11.14.22</u>	<u>Phillip</u>	<u>11/15/22</u>
Released By	Date	Received By	Date

22K0287

Please analyze all samples to the below limits

Analyte Description	Permit Limits ug/L
Antimony	0.3
Arsenic	0.1
Beryllium	0.1
Cadmium	0.05
Chromium	0.2
Copper	0.4
Lead	0.1
Nickel	0.1
Selenium	1
Silver	0.04
Thallium	0.09
Zinc	0.5



Eurofins - Cascade Analytical, Inc.-Yakima
1008 W Ahtanum Road
Yakima WA, 98903

Project: General 2021-2022
Project Number: YCK0233
Project Manager: Brianna Buschbach

Reported:
06-Dec-2022 13:14

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
YCK0233-01	22K0287-01	Water	09-Nov-2022 14:20	15-Nov-2022 10:30
YCK0233-02	22K0287-02	Water	09-Nov-2022 14:05	15-Nov-2022 10:30
YCK0233-03	22K0287-03	Water	09-Nov-2022 14:50	15-Nov-2022 10:30
YCK0233-04	22K0287-04	Water	09-Nov-2022 14:30	15-Nov-2022 10:30
YCK0233-05	22K0287-05	Water	09-Nov-2022 14:35	15-Nov-2022 10:30
YCK0233-06	22K0287-06	Water	09-Nov-2022 14:40	15-Nov-2022 10:30
YCK0233-07	22K0287-07	Water	09-Nov-2022 14:45	15-Nov-2022 10:30
YCK0233-08	22K0287-08	Water	09-Nov-2022 15:00	15-Nov-2022 10:30
YCK0233-09	22K0287-09	Water	09-Nov-2022 15:05	15-Nov-2022 10:30
YCK0233-10	22K0287-10	Water	09-Nov-2022 15:10	15-Nov-2022 10:30
YCK0233-11	22K0287-11	Water	09-Nov-2022 15:20	15-Nov-2022 10:30
YCK0233-12	22K0287-12	Water	09-Nov-2022 15:25	15-Nov-2022 10:30
YCK0233-13	22K0287-13	Water	09-Nov-2022 15:30	15-Nov-2022 10:30
YCK0233-14	22K0287-14	Water	09-Nov-2022 14:15	15-Nov-2022 10:30
YCK0233-15	22K0287-15	Water	09-Nov-2022 15:35	15-Nov-2022 10:30



Eurofins - Cascade Analytical, Inc.-Yakima
1008 W Ahtanum Road
Yakima WA, 98903

Project: General 2021-2022
Project Number: YCK0233
Project Manager: Brianna Buschbach

Reported:
06-Dec-2022 13:14

Work Order Case Narrative

Client: Eurofins - Cascade Analytical, Inc.-Yakima

Project: General 2021-2022

Project Number: YCK0233

Work Order: 22K0287

Sample receipt

Sample(s) as listed on the preceding page were received 15-Nov-2022 10:30 under ARI work order 22K0287. For details regarding sample receipt, please refer to the Cooler Receipt Form.

Total Metals - EPA Method 200.8

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.



WORK ORDER

22K0287

Samples will be discarded 90 days after submission of a final report unless other instructions are received.

Client: Eurofins - Cascade Analytical, Inc.-Yakima

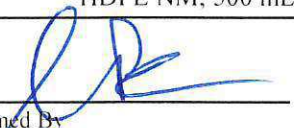
Project Manager: Shelly Fishel

Project: General 2021-2022

Project Number: YCK0233

Preservation Confirmation

Container ID	Container Type	pH
22K0287-01 A	HDPE NM, 500 mL, 1:1 HNO3	4.2 pass
22K0287-02 A	HDPE NM, 500 mL, 1:1 HNO3	4.2 pass
22K0287-03 A	HDPE NM, 500 mL, 1:1 HNO3	4.2 pass
22K0287-04 A	HDPE NM, 500 mL, 1:1 HNO3	4.2 pass
22K0287-05 A	HDPE NM, 500 mL, 1:1 HNO3	4.2 pass
22K0287-06 A	HDPE NM, 500 mL, 1:1 HNO3	4.2 pass
22K0287-07 A	HDPE NM, 500 mL, 1:1 HNO3	4.2 pass
22K0287-08 A	HDPE NM, 500 mL, 1:1 HNO3	4.2 pass
22K0287-09 A	HDPE NM, 500 mL, 1:1 HNO3	4.2 pass
22K0287-10 A	HDPE NM, 500 mL, 1:1 HNO3	4.2 pass
22K0287-11 A	HDPE NM, 500 mL, 1:1 HNO3	4.2 pass
22K0287-12 A	HDPE NM, 500 mL, 1:1 HNO3	4.2 pass
22K0287-13 A	HDPE NM, 500 mL, 1:1 HNO3	4.2 pass
22K0287-14 A	HDPE NM, 500 mL, 1:1 HNO3	4.2 pass
22K0287-15 A	HDPE NM, 500 mL, 1:1 HNO3	4.2 pass

Preservation Confirmed By 

Date 11/15/22



Analytical Resources, LLC
Analytical Chemists and Consultants

Cooler Receipt Form

ARI Client: EuroFins

Project Name: YCK0233

COC No(s): _____ (NA)

Delivered by: Fed-Ex UPS Courier Hand Delivered Other: _____

Assigned ARI Job No: 22K0287

Tracking No: 0201 7704 8572 8686 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 10:30 2.8

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

Temp Gun ID#: 7009708

Cooler Accepted by: PIB Date: 11/15/22 Time: 10:30

Complete custody forms and attach all shipping documents

Log-In Phase:

Was a temperature blank included in the cooler? _____

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

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: lb Date: 11/15/22 Time: 12:38 Labels checked by: _____

**** 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: _____



Eurofins - Cascade Analytical, Inc.-Yakima
1008 W Ahtanum Road
Yakima WA, 98903

Project: General 2021-2022
Project Number: YCK0233
Project Manager: Brianna Buschbach

Reported:
06-Dec-2022 13:14

YCK0233-01
22K0287-01 (Water)

Metals and Metallic Compounds

Method: EPA 200.8 UCT-KED

Sampled: 11/09/2022 14:20

Instrument: ICPMS1 Analyst: MCB

Analyzed: 11/29/2022 21:47

Analysis by: Analytical Resources, LLC

Sample Preparation: Preparation Method: REN - EPA 3010A M
Preparation Batch: BKK0799
Prepared: 11/29/2022

Sample Size: 25 mL
Final Volume: 25 mL

Extract ID: 22K0287-01 A 01

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Copper	7440-50-8	1	0.173	0.500	1.47	ug/L	
Nickel	7440-02-0	1	0.0792	0.500	0.373	ug/L	J



Eurofins - Cascade Analytical, Inc.-Yakima
1008 W Ahtanum Road
Yakima WA, 98903

Project: General 2021-2022
Project Number: YCK0233
Project Manager: Brianna Buschbach

Reported:
06-Dec-2022 13:14

YCK0233-02
22K0287-02 (Water)

Metals and Metallic Compounds

Method: EPA 200.8 UCT-KED

Sampled: 11/09/2022 14:05

Instrument: ICPMS1 Analyst: MCB

Analyzed: 12/03/2022 02:28

Analysis by: Analytical Resources, LLC

Sample Preparation: Preparation Method: REN - EPA 3010A M
Preparation Batch: BKK0799
Prepared: 11/29/2022

Sample Size: 25 mL
Final Volume: 25 mL

Extract ID: 22K0287-02 A 01

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Copper	7440-50-8	1	0.173	0.500	3.19	ug/L	
Nickel	7440-02-0	1	0.0792	0.500	1.39	ug/L	



Eurofins - Cascade Analytical, Inc.-Yakima
1008 W Ahtanum Road
Yakima WA, 98903

Project: General 2021-2022
Project Number: YCK0233
Project Manager: Brianna Buschbach

Reported:
06-Dec-2022 13:14

YCK0233-03
22K0287-03 (Water)

Metals and Metallic Compounds

Method: EPA 200.8 UCT-KED

Sampled: 11/09/2022 14:50

Instrument: ICPMS1 Analyst: MCB

Analyzed: 12/03/2022 02:33

Analysis by: Analytical Resources, LLC

Sample Preparation: Preparation Method: REN - EPA 3010A M
Preparation Batch: BKK0799
Prepared: 11/29/2022

Sample Size: 25 mL
Final Volume: 25 mL

Extract ID: 22K0287-03 A 01

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Copper	7440-50-8	1	0.173	0.500	1.19	ug/L	
Nickel	7440-02-0	1	0.0792	0.500	0.293	ug/L	J



Eurofins - Cascade Analytical, Inc.-Yakima
1008 W Ahtanum Road
Yakima WA, 98903

Project: General 2021-2022
Project Number: YCK0233
Project Manager: Brianna Buschbach

Reported:
06-Dec-2022 13:14

YCK0233-04
22K0287-04 (Water)

Metals and Metallic Compounds

Method: EPA 200.8 UCT-KED

Sampled: 11/09/2022 14:30

Instrument: ICPMS1 Analyst: MCB

Analyzed: 12/03/2022 02:38

Analysis by: Analytical Resources, LLC

Sample Preparation:

Preparation Method: REN - EPA 3010A M

Extract ID: 22K0287-04 A 01

Preparation Batch: BKK0799

Sample Size: 25 mL

Prepared: 11/29/2022

Final Volume: 25 mL

Analyte	CAS Number	Dilution	Detection	Reporting	Result	Units	Notes
			Limit	Limit			
Copper	7440-50-8	1	0.173	0.500	37.6	ug/L	
Nickel	7440-02-0	1	0.0792	0.500	0.303	ug/L	J



Eurofins - Cascade Analytical, Inc.-Yakima
1008 W Ahtanum Road
Yakima WA, 98903

Project: General 2021-2022
Project Number: YCK0233
Project Manager: Brianna Buschbach

Reported:
06-Dec-2022 13:14

YCK0233-05
22K0287-05 (Water)

Metals and Metallic Compounds

Method: EPA 200.8 UCT-KED

Sampled: 11/09/2022 14:35

Instrument: ICPMS1 Analyst: MCB

Analyzed: 12/03/2022 02:47

Analysis by: Analytical Resources, LLC

Sample Preparation: Preparation Method: REN - EPA 3010A M
Preparation Batch: BKK0799
Prepared: 11/29/2022

Sample Size: 25 mL
Final Volume: 25 mL

Extract ID: 22K0287-05 A 01

Analyte	CAS Number	Dilution	Detection	Reporting	Result	Units	Notes
			Limit	Limit			
Copper	7440-50-8	1	0.173	0.500	7.93	ug/L	
Nickel	7440-02-0	1	0.0792	0.500	0.372	ug/L	J



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1008 W Ahtanum Road
Yakima WA, 98903

Project: General 2021-2022
Project Number: YCK0233
Project Manager: Brianna Buschbach

Reported:
06-Dec-2022 13:14

YCK0233-06
22K0287-06 (Water)

Metals and Metallic Compounds

Method: EPA 200.8 UCT-KED

Sampled: 11/09/2022 14:40

Instrument: ICPMS1 Analyst: MCB

Analyzed: 12/03/2022 02:52

Analysis by: Analytical Resources, LLC

Sample Preparation: Preparation Method: REN - EPA 3010A M
Preparation Batch: BKK0799
Prepared: 11/29/2022

Sample Size: 25 mL
Final Volume: 25 mL

Extract ID: 22K0287-06 A 01

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Copper	7440-50-8	1	0.173	0.500	2.91	ug/L	
Nickel	7440-02-0	1	0.0792	0.500	0.388	ug/L	J



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Project: General 2021-2022
Project Number: YCK0233
Project Manager: Brianna Buschbach

Reported:
06-Dec-2022 13:14

YCK0233-07
22K0287-07 (Water)

Metals and Metallic Compounds

Method: EPA 200.8 UCT-KED

Sampled: 11/09/2022 14:45

Instrument: ICPMS1 Analyst: MCB

Analyzed: 12/03/2022 02:58

Analysis by: Analytical Resources, LLC

Sample Preparation: Preparation Method: REN - EPA 3010A M
Preparation Batch: BKK0799
Prepared: 11/29/2022

Sample Size: 25 mL
Final Volume: 25 mL

Extract ID: 22K0287-07 A 01

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Copper	7440-50-8	1	0.173	0.500	14.2	ug/L	
Nickel	7440-02-0	1	0.0792	0.500	0.502	ug/L	



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Yakima WA, 98903

Project: General 2021-2022
Project Number: YCK0233
Project Manager: Brianna Buschbach

Reported:
06-Dec-2022 13:14

YCK0233-08
22K0287-08 (Water)

Metals and Metallic Compounds

Method: EPA 200.8 UCT-KED

Sampled: 11/09/2022 15:00

Instrument: ICPMS1 Analyst: MCB

Analyzed: 12/03/2022 03:20

Analysis by: Analytical Resources, LLC

Sample Preparation: Preparation Method: REN - EPA 3010A M
Preparation Batch: BKK0799
Prepared: 11/29/2022

Sample Size: 25 mL
Final Volume: 25 mL

Extract ID: 22K0287-08 A 01

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Copper	7440-50-8	1	0.173	0.500	10.4	ug/L	
Nickel	7440-02-0	1	0.0792	0.500	0.378	ug/L	J



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Yakima WA, 98903

Project: General 2021-2022
Project Number: YCK0233
Project Manager: Brianna Buschbach

Reported:
06-Dec-2022 13:14

YCK0233-09
22K0287-09 (Water)

Metals and Metallic Compounds

Method: EPA 200.8 UCT-KED

Sampled: 11/09/2022 15:05

Instrument: ICPMS1 Analyst: MCB

Analyzed: 12/03/2022 03:25

Analysis by: Analytical Resources, LLC

Sample Preparation: Preparation Method: REN - EPA 3010A M
Preparation Batch: BKK0799
Prepared: 11/29/2022

Sample Size: 25 mL
Final Volume: 25 mL

Extract ID: 22K0287-09 A 01

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Copper	7440-50-8	1	0.173	0.500	36.1	ug/L	
Nickel	7440-02-0	1	0.0792	0.500	0.349	ug/L	J



Eurofins - Cascade Analytical, Inc.-Yakima
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Yakima WA, 98903

Project: General 2021-2022
Project Number: YCK0233
Project Manager: Brianna Buschbach

Reported:
06-Dec-2022 13:14

YCK0233-10
22K0287-10 (Water)

Metals and Metallic Compounds

Method: EPA 200.8 UCT-KED

Sampled: 11/09/2022 15:10

Instrument: ICPMS1 Analyst: MCB

Analyzed: 12/03/2022 03:28

Analysis by: Analytical Resources, LLC

Sample Preparation: Preparation Method: REN - EPA 3010A M
Preparation Batch: BKK0799
Prepared: 11/29/2022

Sample Size: 25 mL
Final Volume: 25 mL

Extract ID: 22K0287-10 A 01

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Copper	7440-50-8	1	0.173	0.500	23.9	ug/L	
Nickel	7440-02-0	1	0.0792	0.500	0.343	ug/L	J



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Reported:
06-Dec-2022 13:14

YCK0233-11
22K0287-11 (Water)

Metals and Metallic Compounds

Method: EPA 200.8 UCT-KED

Sampled: 11/09/2022 15:20

Instrument: ICPMS1 Analyst: MCB

Analyzed: 12/03/2022 03:33

Analysis by: Analytical Resources, LLC

Sample Preparation: Preparation Method: REN - EPA 3010A M
Preparation Batch: BKK0799
Prepared: 11/29/2022

Sample Size: 25 mL
Final Volume: 25 mL

Extract ID: 22K0287-11 A 01

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Copper	7440-50-8	1	0.173	0.500	71.9	ug/L	
Nickel	7440-02-0	1	0.0792	0.500	0.335	ug/L	J



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Reported:
06-Dec-2022 13:14

YCK0233-12
22K0287-12 (Water)

Metals and Metallic Compounds

Method: EPA 200.8 UCT-KED

Sampled: 11/09/2022 15:25

Instrument: ICPMS1 Analyst: MCB

Analyzed: 12/03/2022 03:41

Analysis by: Analytical Resources, LLC

Sample Preparation: Preparation Method: REN - EPA 3010A M
Preparation Batch: BKK0799
Prepared: 11/29/2022

Sample Size: 25 mL
Final Volume: 25 mL

Extract ID: 22K0287-12 A 01

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Copper	7440-50-8	1	0.173	0.500	15.2	ug/L	
Nickel	7440-02-0	1	0.0792	0.500	0.308	ug/L	J



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1008 W Ahtanum Road
Yakima WA, 98903

Project: General 2021-2022
Project Number: YCK0233
Project Manager: Brianna Buschbach

Reported:
06-Dec-2022 13:14

YCK0233-13
22K0287-13 (Water)

Metals and Metallic Compounds

Method: EPA 200.8 UCT-KED

Sampled: 11/09/2022 15:30

Instrument: ICPMS1 Analyst: MCB

Analyzed: 12/03/2022 03:45

Analysis by: Analytical Resources, LLC

Sample Preparation: Preparation Method: REN - EPA 3010A M
Preparation Batch: BKK0799
Prepared: 11/29/2022

Sample Size: 25 mL
Final Volume: 25 mL

Extract ID: 22K0287-13 A 01

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Copper	7440-50-8	1	0.173	0.500	38.8	ug/L	
Nickel	7440-02-0	1	0.0792	0.500	0.398	ug/L	J



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Project: General 2021-2022
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Reported:
06-Dec-2022 13:14

YCK0233-14
22K0287-14 (Water)

Metals and Metallic Compounds

Method: EPA 200.8 UCT-KED

Sampled: 11/09/2022 14:15

Instrument: ICPMS1 Analyst: MCB

Analyzed: 12/03/2022 03:48

Analysis by: Analytical Resources, LLC

Sample Preparation: Preparation Method: REN - EPA 3010A M
Preparation Batch: BKK0799
Prepared: 11/29/2022

Sample Size: 25 mL
Final Volume: 25 mL

Extract ID: 22K0287-14 A 01

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Copper	7440-50-8	1	0.173	0.500	0.961	ug/L	
Nickel	7440-02-0	1	0.0792	0.500	0.276	ug/L	J



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Reported:
06-Dec-2022 13:14

YCK0233-15
22K0287-15 (Water)

Metals and Metallic Compounds

Method: EPA 200.8 UCT-KED

Sampled: 11/09/2022 15:35

Instrument: ICPMS1 Analyst: MCB

Analyzed: 12/03/2022 03:53

Analysis by: Analytical Resources, LLC

Sample Preparation: Preparation Method: REN - EPA 3010A M
Preparation Batch: BKK0799
Prepared: 11/29/2022

Sample Size: 25 mL
Final Volume: 25 mL

Extract ID: 22K0287-15 A 01

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Copper	7440-50-8	1	0.173	0.500	3.08	ug/L	
Nickel	7440-02-0	1	0.0792	0.500	0.304	ug/L	J



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Project: General 2021-2022
Project Number: YCK0233
Project Manager: Brianna Buschbach

Reported:
06-Dec-2022 13:14

Analysis by: Analytical Resources, LLC

Metals and Metallic Compounds - Quality Control

Batch BKK0799 - EPA 200.8 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 (BKK0799-BLK1)			Prepared: 29-Nov-2022 Analyzed: 29-Nov-2022 18:17									
Copper	63	ND	0.173	0.500	ug/L							U
Nickel	60	ND	0.0792	0.500	ug/L							U
LCS (BKK0799-BS1)			Prepared: 29-Nov-2022 Analyzed: 29-Nov-2022 18:22									
Copper	63	27.1	0.173	0.500	ug/L	25.0		108	80-120			
Nickel	60	26.0	0.0792	0.500	ug/L	25.0		104	80-120			
Duplicate (BKK0799-DUP1)			Source: 22K0287-01		Prepared: 29-Nov-2022 Analyzed: 29-Nov-2022 21:52							
Copper	63	1.50	0.173	0.500	ug/L		1.47			2.22	20	
Nickel	60	0.366	0.0792	0.500	ug/L		0.373			1.89	20	J
Matrix Spike (BKK0799-MS1)			Source: 22K0287-01		Prepared: 29-Nov-2022 Analyzed: 29-Nov-2022 21:58							
Copper	63	25.0	0.173	0.500	ug/L	25.0	1.47	94.0	75-125			
Nickel	60	24.0	0.0792	0.500	ug/L	25.0	0.373	94.6	75-125			

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



Eurofins - Cascade Analytical, Inc.-Yakima
1008 W Ahtanum Road
Yakima WA, 98903

Project: General 2021-2022
Project Number: YCK0233
Project Manager: Brianna Buschbach

Reported:
06-Dec-2022 13:14

Certified Analyses included in this Report

Analyte	Certifications
EPA 200.8 UCT-KED in Water	
Copper-63	NELAP,WADOE,WA-DW,DoD-ELAP
Copper-65	NELAP,WADOE,WA-DW,DoD-ELAP
Nickel-60	NELAP,WADOE,WA-DW,DoD-ELAP
Nickel-62	NELAP,WADOE,WA-DW,DoD-ELAP

Code	Description	Number	Expires
ADEC	Alaska Dept of Environmental Conservation	17-015	03/28/2023
DoD-ELAP	DoD-Environmental Laboratory Accreditation Program	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



Eurofins - Cascade Analytical, Inc.-Yakima
1008 W Ahtanum Road
Yakima WA, 98903

Project: General 2021-2022
Project Number: YCK0233
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Reported:
06-Dec-2022 13:14

Notes and Definitions

D	The reported value is from a dilution
J	Estimated concentration value detected below the reporting limit.
L	Analyte concentration is ≤ 5 times the reporting limit and the replicate control limit defaults to \pm RL instead of 20% RPD
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.



YCK0233

CASCADE ANALYTICAL

A EUROFINIS COMPANY

3019 G. S. Center Rd.
Wenatchee, WA 98801
(509) 662-1888
Fax: (509) 662-8183
1-800-545-4206

1008 W. Ahtanum Rd.
Union Gap, WA 98903
(509) 452-7707
Fax: (509) 452-7773

WATER ANALYSIS ORDER FORM

Batch#

SAMPLE #

SEND RESULTS TO

1) Client 2) Billing 3) Both

SAMPLE REPRESENTS

1) Irrigation 2) Waste Water 3) Other

SAMPLE BY

1) Client 2) Quality Control 3) Cascade 4) Other

New Acct. #

(see legend on back)

SAMPLE #

CLIENT NAME/ADDRESS

Douglas County P.U.D
1151 Deer Valley Mall Pkwy
E. Wenatchee WA 98802

SAMPLER'S NAME

Michael Darlington

BILLING NAME/ADDRESS

Annual L.L. Hg, PCB, Metals

PHONE

509-884-7179

E-mail

E-mail

RELINQUISHED BY: (Signature) [1]	DATE	RELINQUISHED BY: (Signature) [2]	DATE	RELINQUISHED BY: (Signature) [3]	DATE
(Printed)	TIME	(Printed)	TIME	(Printed)	TIME
RECEIVED BY: (Signature)	DATE	RECEIVED BY: (Signature)	DATE	RECEIVED FOR LAB BY: (Signature)	DATE
(Printed)	TIME	(Printed)	TIME	(Printed)	TIME

Y.S. 11/9/22
Gunnar Stubblefield 11/9/22

FORM MUST BE COMPLETED BEFORE ANALYSIS WILL BE PERFORMED.

YCK0233-01	Outfall 1	11/9/22
-02	Outfall 2	11/9/22 14:20
-03	Outfall 13	11/9/22 14:05
-04	Outfall 15	11/9/22 14:30
-05	Outfall 16	11/9/22 14:35

*METALS - circle type of analysis - T=total or D=dissolved

Total N package = TKN, NO₃, NO₂, NH₃

Sample container received by client was sealed Yes _____ No _____

Sample container received by laboratory was sealed Yes _____ No _____

Disclaimer:

Cascade Analytical, Inc., makes no warranty of any kind, expressed or implied, and customer assumes all risk and liability from the use of Cascade's test results. Cascade neither assumes nor authorizes any person to assume for Cascade any other liability in connection with the testing done by Cascade Analytical, Inc., and there are no other oral agreements or warranties collateral to or affecting this agreement.

Cascade Analytical Inc.'s liability to customer as a result of customers use of Cascade's test results shall be limited to a sum equal to the fees paid by customer to Cascade Analytical, Inc. for the testing work.

Customer Signature: _____ Date: _____

This form also serves as "Chain of Custody."

CAICOF - 03

IRRIGATION WATER	1	2	3	4	5
Standard					
GENERAL CHEMISTRY					
1135 pH					
1140 Conductivity					
1200 Solids-Dis. (TDS)					
1230 Solids-Susp. (TSS)					
1240 Tot. Phosphorus					
1250 Orthophosphate					
1260 Kjeldahl Nitrogen (TKN)					
1170 Nitrate+Nitrite					
1265 NO ₃ (As N)					
1280 Ammonia					
1300 Biol. Oxy. Demand					
1310 Chem. Oxy. Demand					
1190 Sulfate (SO ₄)					
1180 Chloride (Cl)					
1150 Turbidity					
1320 Hexane Ext. Mat.					
1340 Alkalinity					
217 Total N Pkg					
MICROBIOLOGY					
10040 Total Coliform MF					
10010 Fecal Coliform MF					
10041 Total Coliform MPN					
10011 Fecal Coliform MPN					
METALS - TOTAL OR DISSOLVED					
1391 Antimony (Sb)					
1011 Arsenic (As)					
1025 Barium (Ba)					
1405 Beryllium (Be)					
1031 Cadmium (Cd)					
1045 Chromium (Cr)					
1215 Copper (Cu)					
1065 Iron (Fe)					
1075 Manganese (Mn)					
1081 Mercury (Hg)					
1435 Molybdenum (Mo)					
1051 Lead (Pb)					
1335 Nickel (Ni)					
1091 Selenium (Se)					
1105 Silver (Ag)					
1381 Thallium (Tl)					
1225 Zinc (Zn)					
MINERALS					
1120 Calcium (Ca)					
1130 Magnesium (Mg)					
1115 Potassium (K)					

2/3



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1008 W. Ahtanum Rd.
Union Gap, WA 98903
(509) 452-7707
Fax: (509) 452-7773

WATER ANALYSIS ORDER FORM

Batch#	SAMPLE #				
	1	2	3	4	5
	SEND RESULTS TO				
	1) Client 2) Billing 3) Both				
SAMPLE REPRESENTS					
	1) Irrigation 2) Waste Water 3) Other				
SAMPLE BY					
	1) Client 2) Quality Control 3) Cascade 4) Other				

CLIENT NAME/ADDRESS	BILLING NAME/ADDRESS
SAMPLER'S NAME	PHONE

E-mail		E-mail			
RELINQUISHED BY: (Signature) 1	DATE	RELINQUISHED BY: (Signature) 2	DATE	RELINQUISHED BY: (Signature) 3	DATE
(Printed)	TIME	(Printed)	TIME	(Printed)	TIME
RECEIVED BY: (Signature)	DATE	RECEIVED BY: (Signature)	DATE	RECEIVED FOR LAB BY: (Signature)	DATE
(Printed)	TIME	(Printed)	TIME	(Printed)	TIME

FORM MUST BE COMPLETED BEFORE ANALYSIS WILL BE PERFORMED.

-06	1	Outfall 17	Sample Date 11/16/22
			Sample Time 11:40
-07	2	Outfall 18	Sample Date 11/16/22
			Sample Time 11:45
-08	3	Outfall 19	Sample Date 11/16/22
			Sample Time 15:00
-09	4	Outfall 20	Sample Date 11/16/22
			Sample Time 15:05
-10	5	Outfall 21	Sample Date 11/16/22
			Sample Time 15:10

*METALS - circle type of analysis - T=total or D=dissolved
Total N package = TKN, NO₃, NO₂, NH₃
Sample container received by client was sealed Yes No
Sample container received by laboratory was sealed Yes No

Disclaimer:
Cascade Analytical, Inc., makes no warranty of any kind, expressed or implied, and customer assumes all risk and liability from the use of Cascade's test results. Cascade neither assumes nor authorizes any person to assume for Cascade any other liability in connection with the testing done by Cascade Analytical, Inc., and there are no other oral agreements or warranties collateral to or affecting this agreement.
Cascade Analytical Inc.'s liability to customer as a result of customers use of Cascade's test results shall be limited to a sum equal to the fees paid by customer to Cascade Analytical, Inc. for the testing work.

Customer Signature: _____ Date: _____

This form also serves as "Chain of Custody."
CAICOF - 03

		SAMPLE #				
		1	2	3	4	5
IRRIGATION WATER						
	Standard					
GENERAL CHEMISTRY						
1135	pH					
1140	Conductivity					
1200	Solids-Dis. (TDS)					
1230	Solids-Susp. (TSS)					
1240	Tot. Phosphorus					
1250	Orthophosphate					
1260	Kjeldahl Nitrogen (TKN)					
1170	Nitrate+Nitrite					
1265	NO ₃ (As N)					
1280	Ammonia					
1300	Biol. Oxy. Demand					
1310	Chem. Oxy. Demand					
1190	Sulfate (SO ₄)					
1180	Chloride (Cl)					
1150	Turbidity					
1320	Hexane Ext. Mat.					
1340	Alkalinity					
217	Total N Pkg					
MICROBIOLOGY						
10040	Total Coliform MF					
10010	Fecal Coliform MF					
10041	Total Coliform MPN					
10011	Fecal Coliform MPN					
METALS - TOTAL OR DISSOLVED						
1391	Antimony (Sb)					
1011	Arsenic (As)					
1025	Barium (Ba)					
1405	Beryllium (Be)					
1031	Cadmium (Cd)					
1045	Chromium (Cr)					
1215	Copper (Cu)					
1065	Iron (Fe)					
1075	Manganese (Mn)					
1081	Mercury (Hg)					
1435	Molybdenum (Mo)					
1051	Lead (Pb)					
1335	Nickel (Ni)					
1091	Selenium (Se)					
1105	Silver (Ag)					
1381	Thallium (Tl)					
1225	Zinc (Zn)					
MINERALS						
1120	Calcium (Ca)					
1130	Magnesium (Mg)					
1115	Potassium (K)					

3/3



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Union Gap, WA 98903
(509) 452-7707
Fax: (509) 452-7773

WATER ANALYSIS ORDER FORM

Batch#	SAMPLE #				
	1	2	3	4	5
SEND RESULTS TO					
1) Client 2) Billing 3) Both					
SAMPLE REPRESENTS					
1) Irrigation 2) Waste Water 3) Other					
SAMPLE BY					
1) Client 2) Quality Control 3) Cascade 4) Other					

CLIENT NAME/ADDRESS
SAMPLER'S NAME

BILLING NAME/ADDRESS
PHONE

E-mail _____ E-mail _____

RELINQUISHED BY: (Signature) [1]	DATE	RELINQUISHED BY: (Signature) [2]	DATE	RELINQUISHED BY: (Signature) [3]	DATE
(Printed)	TIME	(Printed)	TIME	(Printed)	TIME
RECEIVED BY: (Signature)	DATE	RECEIVED BY: (Signature)	DATE	RECEIVED FOR LAB BY: (Signature)	DATE
(Printed)	TIME	(Printed)	TIME	(Printed)	TIME

FORM MUST BE COMPLETED BEFORE ANALYSIS WILL BE PERFORMED.

-11	1	Outfall 22	Sample Time
			15:20
-12	2	Outfall 23	Sample Time
			15:25
-13	3	Outfall 24	Sample Time
			15:30
-14	4	Outfall 25	Sample Time
			14:15
-15	5	Outfall 26	Sample Time
			15:35

*METALS - circle type of analysis - T=total or D=dissolved
Total N package = TKN, NO₃, NO₂, NH₃
Sample container received by client was sealed Yes _____ No _____
Sample container received by laboratory was sealed Yes _____ No _____

Disclaimer:
Cascade Analytical, Inc., makes no warranty of any kind, expressed or implied, and customer assumes all risk and liability from the use of Cascade's test results. Cascade neither assumes nor authorizes any person to assume for Cascade any other liability in connection with the testing done by Cascade Analytical, Inc., and there are no other oral agreements or warranties collateral to or affecting this agreement.
Cascade Analytical Inc.'s liability to customer as a result of customers use of Cascade's test results shall be limited to a sum equal to the fees paid by customer to Cascade Analytical, Inc. for the testing work.

Customer Signature: _____ Date _____

This form also serves as "Chain of Custody."
CAICOF - 03

	SAMPLE #				
	1	2	3	4	5
IRRIGATION WATER					
Standard					
GENERAL CHEMISTRY					
1135	pH				
1140	Conductivity				
1200	Solids-Dis. (TDS)				
1230	Solids-Susp. (TSS)				
1240	Tot. Phosphorus				
1250	Orthophosphate				
1260	Kjeldahl Nitrogen (TKN)				
1170	Nitrate+Nitrite				
1265	NO ₃ (As N)				
1280	Ammonia				
1300	Biol. Oxy. Demand				
1310	Chem. Oxy. Demand				
1190	Sulfate (SO ₄)				
1180	Chloride (Cl)				
1150	Turbidity				
1320	Hexane Ext. Mat.				
1340	Alkalinity				
217	Total N Pkg				
MICROBIOLOGY					
10040	Total Coliform MF				
10010	Fecal Coliform MF				
10041	Total Coliform MPN				
10011	Fecal Coliform MPN				
METALS - TOTAL OR DISSOLVED					
1391	Antimony (Sb)				
1011	Arsenic (As)				
1025	Barium (Ba)				
1405	Beryllium (Be)				
1031	Cadmium (Cd)				
1045	Chromium (Cr)				
1215	Copper (Cu)				
1065	Iron (Fe)				
1075	Manganese (Mn)				
1081	Mercury (Hg)				
1435	Molybdenum (Mo)				
1051	Lead (Pb)				
1335	Nickel (Ni)				
1091	Selenium (Se)				
1105	Silver (Ag)				
1381	Thallium (Tl)				
1225	Zinc (Zn)				
MINERALS					
1120	Calcium (Ca)				
1130	Magnesium (Mg)				
1115	Potassium (K)				



YCK0233

Water Quality - Drinking & Wastewater

FIELD SERVICES REPORT

DATE 11/9/22 CLIENT: Douglas Co PUD BATCH NUMBER: _____Contact Person: John Roberbark Phone: _____ Email: _____Location/Facility: Wells Dam Check in/out time: 10:30 - 2:30
4:00

On-Site Analyses, Measurements, Observations

Description Annual Samples Day 2Comments: Final composites and sample LL Hg's

Water System / Identification	On-Site Analyses	Notes
<u>Outfalls 1, 2, 13-26</u>	<u>—</u>	<u>Composites & LL Hg's</u>

Billable Services

Site Time: 5 hrs = \$1125.00 (sample preparation, sampling, documentation, on-site analysis)Drive Time: 2 hrs = \$90.00Mileage: 95 mi = \$55.10 Circle one: round trip to/from lab between client facilities

Comments: _____

Cascade Analytical Employee Signature: _____

CSF-01 Revised 3.1.2017



YCK0233

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Cascade Analytical

Sample Receipt Form

Date Received: 11.9.22 Time Received: 19:30 Initials: YS
Client Name: Douglas Co. PoD Project Name: Annals
Temperature of cooler upon receipt: 15 °C Thermometer ID: OR2
Custody seals: Intact Broken (None) N/A

Chain of Custody Completed:

Client name, address, and phone number;	<u>(Yes)</u>	No
Date and time of sampling;	<u>(Yes)</u>	No
Test requests clear;	<u>(Yes)</u>	No
Completed in ink;	<u>(Yes)</u>	No
Signed by client;	<u>(Yes)</u>	No

All samples received:	<u>(Yes)</u>	No
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All samples intact:	<u>(Yes)</u>	No
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Sample ID's match COC form:	<u>(Yes)</u>	No
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Appropriate containers used:	<u>(Yes)</u>	No
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Sufficient amount of sample for analysis:	<u>(Yes)</u>	No
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Correct preservative verified:	<u>(N/A)</u>	Yes No
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Air bubbles in VOC, TTHM, or HAA5 samples:	<u>(N/A)</u>	Yes No
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Sample(s) exceed hold time:	Yes	<u>(No)</u>
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Type of coolant:	Ice Blue Ice <u>(None)</u> Other	Comment: _____
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Shipping Method:	FedEx UPS USPS Brett & Sons <u>(Hand Delivered)</u> CAI Sampled
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Shipping Container:	E-CA Cooler E-CA Cooler Box Client's Cooler <u>(None)</u> Other _____
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Samples accepted for analysis:	<u>(Yes)</u>	No
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Reason for Rejection: _____

Name of Person Contacted: _____ Date Contacted: _____

Comments: 15 x 44 Hg, 15 x 2.5 Gal Plastic