

TOXIC MINERALS/METALS IN KLAMATH RIVER

AFTER DAM OPENINGS AND LAKE DRAINAGE – JANUARY 2024

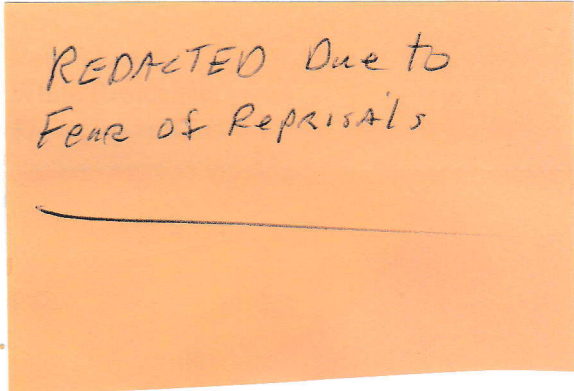
Water collected January 28, 2024 – Klamathon Bridge - M.P. 5 Copco Road, Astoria, OR

Metals detected	EPA Permissible limits mg/L	Value detected mg/L	Detection value over permissible limits
MERCURY	0.000200	0.00143	X 7
ARSENIC	0.0500	0.319	X 6
BARIUM	0.100	3.73	X 37
CADMIUM	0.00500	0.0300	X 6
CHROMIUM	0.00500	0.891	X 178
LEAD	0.0500	0.293	X 6
SELENIUM	0.0500	Not detected	
SILVER	0.00500	Not detected	



Neilson Research Corporation  
245 S Grape St  
Medford, OR 97501  
TEL: (541) 770-5678 FAX: (541) 770-2901  
Website: www.nrclabs.com

February 09, 2024



Order No.: 24010958

Neilson Research Corporation received 1 sample(s) on 1/29/2024 for the analyses presented in the following report.

The results relate only to the parameters tested or to the sample as received by the laboratory. This report shall not be reproduced except in full, without the written approval of Neilson Research Corporation. If you have any questions regarding these test results, please feel free to call.

Sincerely,  
Neilson Research Corporation

Tamra Schmedemann  
Senior Project Manager  
245 S Grape St  
Medford, OR 97501



Original



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## Case Narrative

WO#: 24010958

Date: 2/9/2024

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**CLIENT:**

**Project:**

The analyses were performed according to the guidelines in the Neilson Research Corporation Quality Assurance Program. This report contains analytical results for the sample(s) as received by the laboratory.

Neilson Research Corporation certifies that this report is in compliance with the requirements of NELAP. No unusual difficulties were experienced during analysis of this batch except as noted below or qualified with data flags on the reports.

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# Analytical Report

WO#: 24010958  
 Date Reported: 2/9/2024

**CLIENT:** [REDACTED] **Collection Date:** 1/28/2024 12:00:00 PM  
**Lab ID:** 24010958-01 **Received Date:** 1/29/2024 10:21:00 AM  
**Client Sample ID:** RCRA 8 Metals **Matrix:** AQUEOUS  
**Project:** 37 Copco Rd  
**Sample Address:** 37 Copco Rd  
 Hornbrook, CA 96044

**Sample Location:** Klamath River at Klamathon Bridge

Analyses	Method	NELAP Status	Result	Qual	DF	RL	Units	MCL	Date Analyzed/Analyst
<b>RCRA 8 METALS FOR WATER</b>									
<b>MERCURY BY EPA 7470 A</b>									
Mercury	EPA 7470 A	A	0.00143		1	0.000200	mg/L		02/02/24 15:10 CJS
<b>RCRA 8 METALS FOR WATER</b>									
<b>TRACE METALS BY EPA 6010 B ICP</b>									
Arsenic	EPA 6010	A	0.319		1	0.0500	mg/L		02/07/24 22:54 CBB
Barium	EPA 6010	A	3.73		1	0.100	mg/L		02/07/24 22:54 CBB
Cadmium	EPA 6010	A	0.0300		1	0.00500	mg/L		02/07/24 22:54 CBB
Chromium	EPA 6010	A	0.891		1	0.00500	mg/L		02/07/24 22:54 CBB
Lead	EPA 6010	A	0.293		1	0.0500	mg/L		02/07/24 22:54 CBB
Selenium	EPA 6010	A	ND		1	0.0500	mg/L		02/07/24 22:54 CBB
Silver	EPA 6010	A	ND		1	0.00500	mg/L		02/07/24 22:54 CBB

**QUALIFIERS**

C1 Sample container temperature is out of limit as specified at testcode  
 H Holding times for preparation or analysis exceeded  
 ND Not Detected at the Reporting Limit

E Value above quantitation range  
 MI Recovery outside control limits due to Matrix Interference  
 PL Permit Limit

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**NELAP** NELAP A Accredited in accordance with NELAP ORELAP 100016, OR-028





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# QC SUMMARY REPORT

WO#: 24010958  
 09-Feb-24

Client: [Redacted]  
 Project: 37 Copco Rd

TestCode: HG\_W\_7470

Sample ID: MB-24129	SampType: MBLK	TestCode: HG_W_7470	Units: mg/L	Prep Date: 1/30/2024	RunNo: 47047						
Client ID: PBW	Batch ID: 24129	TestNo: SW7470A	E245.1	Analysis Date: 2/2/2024	SeqNo: 769892						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	ND	0.000200									

Sample ID: LCS-24129	SampType: LCS	TestCode: HG_W_7470	Units: mg/L	Prep Date: 1/30/2024	RunNo: 47047						
Client ID: LCSW	Batch ID: 24129	TestNo: SW7470A	E245.1	Analysis Date: 2/2/2024	SeqNo: 769893						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	0.00406	0.000200	0.004000	0	102	85	115				

Sample ID: 24010832-01AMS	SampType: MS	TestCode: HG_W_7470	Units: mg/L	Prep Date: 1/30/2024	RunNo: 47047						
Client ID: BatchQC	Batch ID: 24129	TestNo: SW7470A	E245.1	Analysis Date: 2/2/2024	SeqNo: 769895						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	0.00403	0.000200	0.004000	0	101	75	125				

Sample ID: 24010832-01AMSD	SampType: MSD	TestCode: HG_W_7470	Units: mg/L	Prep Date: 1/30/2024	RunNo: 47047						
Client ID: BatchQC	Batch ID: 24129	TestNo: SW7470A	E245.1	Analysis Date: 2/2/2024	SeqNo: 769896						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	0.00414	0.000200	0.004000	0	104	75	125	0.004030	2.69		20

**Qualifiers:** C1 Sample container temperature is out of limit as specified at testcode E Value above quantitation range H Holding times for preparation or analysis exceed  
 MI Recovery outside control limits due to Matrix Interference ND Not Detected at the Reporting Limit PL Permit Limit  
 RL Reporting Detection Limit

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# QC SUMMARY REPORT

WO#: 24010958  
 09-Feb-24

**Client:** [Redacted]  
**Project:** 37 Copco Rd

**TestCode:** ICP\_6010\_W

Sample ID: MB-24189	SampType: MBLK	TestCode: ICP_6010_W	Units: mg/L	Prep Date: 2/5/2024	RunNo: 47130						
Client ID: PBW	Batch ID: 24189	TestNo: SW6010	SW3010A	Analysis Date: 2/7/2024	SeqNo: 771149						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	ND	0.0500									
Barium	ND	0.100									
Cadmium	ND	0.00500									
Chromium	ND	0.00500									
Lead	ND	0.0500									
Selenium	ND	0.0500									
Silver	ND	0.00500									

Sample ID: LCS-24189	SampType: LCS	TestCode: ICP_6010_W	Units: mg/L	Prep Date: 2/5/2024	RunNo: 47130						
Client ID: LCSW	Batch ID: 24189	TestNo: SW6010	SW3010A	Analysis Date: 2/7/2024	SeqNo: 771150						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	1.00	0.0500	1.000	0	100	85	115				
Barium	1.02	0.100	1.000	0	102	85	115				
Cadmium	1.03	0.00500	1.000	0	103	85	115				
Chromium	1.06	0.00500	1.000	0	106	85	115				
Lead	1.07	0.0500	1.000	0	107	85	115				
Selenium	1.01	0.0500	1.000	0	101	85	115				
Silver	0.127	0.00500	0.1250	0	102	85	115				

**Qualifiers:**  
 C1 Sample container temperature is out of limit as specified at testcode  
 MI Recovery outside control limits due to Matrix Interference  
 RL Reporting Detection Limit  
 E Value above quantitation range  
 ND Not Detected at the Reporting Limit  
 H Holding times for preparation or analysis exceed  
 PL Permit Limit

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# QC SUMMARY REPORT

WO#: 24010958  
 09-Feb-24

**Client:** [Redacted] **Project:** 37 Copco Rd **TestCode:** ICP\_6010\_W

Sample ID:	24010958-01AMS	SampType:	MS	TestCode:	ICP_6010_W	Units:	mg/L	Prep Date:	2/5/2024	RunNo:	47130
Client ID:	RCRA 8 Metals	Batch ID:	24189	TestNo:	SW6010	SPK Ref Val	SW3010A	Analysis Date:	2/7/2024	SeqNo:	771152
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	1.10	0.0500	1.000	0.3190	78.5	75	125				
Barium	4.77	0.100	1.000	3.732	104	75	125				
Cadmium	0.886	0.00500	1.000	0.03000	85.6	75	125				
Chromium	1.84	0.00500	1.000	0.8906	95.3	75	125				
Lead	1.16	0.0500	1.000	0.2935	86.8	75	125				
Selenium	0.805	0.0500	1.000	0.01854	78.6	75	125				
Silver	0.126	0.00500	0.1250	0.004720	97.0	75	125				

Sample ID:	24010958-01AMSD	SampType:	MSD	TestCode:	ICP_6010_W	Units:	mg/L	Prep Date:	2/5/2024	RunNo:	47130
Client ID:	RCRA 8 Metals	Batch ID:	24189	TestNo:	SW6010	SPK Ref Val	SW3010A	Analysis Date:	2/7/2024	SeqNo:	771153
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	1.11	0.0500	1.000	0.3190	79.2	75	125	1.104	0.641	20	
Barium	4.86	0.100	1.000	3.732	113	75	125	4.769	1.83	20	
Cadmium	0.895	0.00500	1.000	0.03000	86.5	75	125	0.8861	0.943	20	
Chromium	1.88	0.00500	1.000	0.8906	99.0	75	125	1.843	2.00	20	
Lead	1.19	0.0500	1.000	0.2935	89.2	75	125	1.162	2.06	20	
Selenium	0.808	0.0500	1.000	0.01854	78.9	75	125	0.8046	0.380	20	
Silver	0.127	0.00500	0.1250	0.004720	97.8	75	125	0.1260	0.790	20	

**Qualifiers:** C1 Sample container temperature is out of limit as specified at testcode E Value above quantization range H Holding times for preparation or analysis exceed  
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 RL Reporting Detection Limit

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# Sample Log-In Check List

Client Name: [Redacted] Work Order Number: **24010958** RcptNo: **1**

Logged by: **Ashley Spiegelberg** 1/29/2024 10:21:00 AM  
 Completed By: **Erin Hernandez** 1/30/2024 2:39:00 PM  
 Reviewed By: **Tamra Schmedemann** 2/9/2024 11:06:14 AM

*[Handwritten signatures: Ashley Spiegelberg, Erin Hernandez, Tamra Schmedemann]*

### Chain of Custody

1. Is Chain of Custody complete? Yes  No  Not Present   
 2. How was the sample delivered? Client

### Log In

3. Coolers are present? Yes  No  NA   
 4. Shipping container/cooler in good condition? Yes  No   
 Custody seals intact on shipping container/cooler? Yes  No  Not Present   
 No. Seal Date: Signed By:  
 5. Was an attempt made to cool the samples? Yes  No  NA   
 6. Were all samples received at a temperature of >0° C to 6.0°C Yes  No  NA   
 7. Sample(s) in proper container(s)? Yes  No   
 8. Sufficient sample volume for indicated test(s)? Yes  No   
 9. Are samples (except VOA and ONG) properly preserved? Yes  No   
 10. Was preservative added to bottles? Yes  No  NA   
 HNO3 pH<2  
 11. Is the headspace in the VOA vials less than 1/4 inch or 6 mm? Yes  No  No VOA Vials   
 12. Were any sample containers received broken? Yes  No   
 13. Does paperwork match bottle labels? Yes  No   
 (Note discrepancies on chain of custody)  
 14. Are matrices correctly identified on Chain of Custody? Yes  No   
 15. Is it clear what analyses were requested? Yes  No   
 16. Were all holding times able to be met? Yes  No   
 (If no, notify customer for authorization.)

### Special Handling (if applicable)

17. Was client notified of all discrepancies with this order? Yes  No  NA

Person Notified:	<input type="text"/>	Date:	<input type="text"/>
By Whom:	<input type="text"/>	Via:	<input type="checkbox"/> eMail <input type="checkbox"/> Phone <input type="checkbox"/> Fax <input type="checkbox"/> In Person
Regarding:	<input type="text"/>		
Client Instructions:	<input type="text"/>		

18. Additional remarks:

### Cooler Information

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
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