

30 November 2024

Mr. Mason Mantla Chair–Wek'èezhìi Land and Water Board #1, 4905-48th Street Yellowknife, NT X1A 3S3

RE: Surveillance Network Program October 2024 Monthly Report for Water Licence W2022L2-0001

Mr. Mantla,

Arctic Canadian Diamond Company Ltd, subsidiary of Burgundy Diamond Mines (Burgundy) is pleased to submit the SNP Report as Per Part "B" of the Surveillance Network Program (SNP) for the Water Licence W2022L2-0001, please find enclosed the SNP Monthly Report for October 2024.

We trust this report is clear and informative. If you have any questions or comments, please contact the undersigned at jonah.kelly@burgundydiamonds.com or 1.867.880.4400 ext. 2157.

Sincerely,

Jonah Kelly

Environment Team Leader, Operations

Burgundy Diamond Mines

Lab Report Enclosures: C481509, C481504, C482656, C483304, C485911

CC: William Liu – Manager, Environmental Reporting & Permitting – william.liu@burgundydiamonds.com Richard Ehlert – Team Leader, Environment Operations – richard.ehlert@burgundydiamonds.com Regulatory Inbox – regulatory@burgundydiamonds.com



Table of Contents

Sampling Summary for Licence W2022L2-0001	3
Part B. Flow and Volume Measurement Requirements	5
B(2) Volume in cubic metres of freshwater obtained from Lakes.	5
B(3) Lake Level and Minewater Storage Ponds Elevation During Open Water	5
B(4) Source and Volume of Recycled Water Used	5
B(5) Volume of Water or Waste Deposit to Containment Facilities	6
B(6) Volume of Water or Waste Discharged from Containment Facilities	6
B(7) Quantities of Minewater Pumped from each Open Pit and Underground Mine	7
B(8) and (9) Quantity of Sewage Effluent Discharged and Sewage Solids Removed from the Sewa Treatment Plant (STP)	_
B(10) Quantity of Sewage Delivered to STP from Sable Development	7
Part C. Other Monitoring Requirements	8
C(1) Precipitation Data from Koala Met Station	8
C(4) Quantity of Ore Produced	8
C(5a) Quantity of Waste Rock and Coarse Kimberlite Produced	8
C(5b) Waste Rock Disposal Locations	8
Appendix A – Field Parameters	1
Appendix B – Lab Report Enclosures	2
Appendix C – Bioassay	3



Sampling Summary for Licence W2022L2-0001

In accordance with the requirements of Water Licence W2022L2-0001, there were 8 water samples collected for the current reporting month. Refer to Figure 1- Surveillance Network Program Monitoring Stations for locations of all Ekati sampling stations.

Job Lab Number	Sample ID	Collection	Comments
		Date	
C481509	1616-46b	06-Oct-2024	
C481504	1616-43_Discharge	08-Oct-2024	Bioassay
C482656	0008-Sa2	11-Oct-2024	
C482656	0008-Sa26	11-Oct-2024	Duplicate for 0008-Sa2
C482656	0008-121	11-Oct-2024	Field Blank
C482656	0008-494	11-Oct-2024	Travel blank
C483304	1616-43_Discharge	15-Oct-2024	Bioassay
C485911	0008-Sa2	22-Oct-2024	



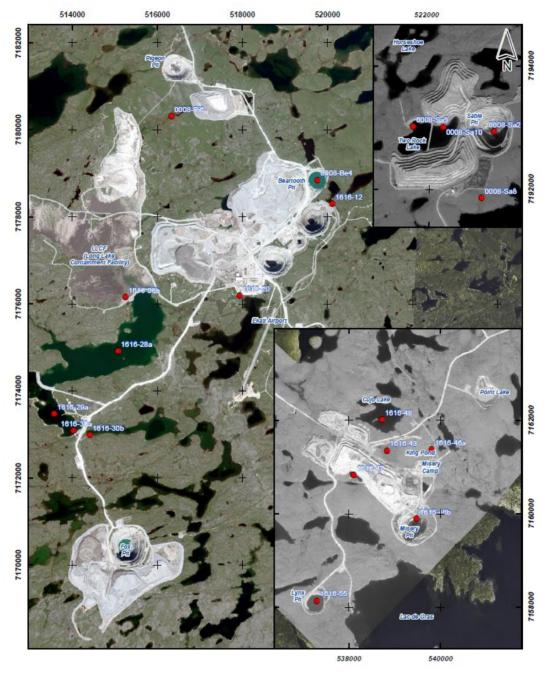


Figure 1. W2022L2-0001 Surveillance Network Monitoring Stations

1:40,000 to 60,000 Imagery acquired JUL2019/AUG2021 insets





Part B. Flow and Volume Measurement Requirements

B(2) Volume in cubic metres of freshwater obtained from Lakes.

Lake Name	Current Month (m³)	Year to Date (m³)
Grizzly Lake	6,667	67,097
Lac de Gras	0	52,240
Little Lake	0	0
Falcon Lake	0	12,880
Thinner Lake	0	0
Lac de Sauvage	0	0
Ursula Lake	0	0
Upper Exeter Lakes	0	0

B(3) Lake Level and Minewater Storage Ponds Elevation During Open Water

Lake Name	Lake Elevation (masl)
Grizzly Lake	467.92*
Little Lake	449.11*
Upper/North Panda Lake	460.53*
Falcon Lake	469.56*
Thinner Lake	451.81
Cell E LLCF	448.18*
King Pond Sedimentation Facility	445.60
Lac du Sauvage	416.20
Two Rock Sedimentation Pond (upstream cell)	487.06*
Lac de Gras	416.23*
Ursula Lake	462.87*
Upper Exeter Lake	443.58*

^{*}Survey not completed in October 2024. September 2024 values used.

B(4) Source and Volume of Recycled Water Used

Plant	Source	Current Month (m³)	Year to Date (m³)
Process	LLCF	398,516	4,451,750



B(5) Volume of Water or Waste Deposit to Containment Facilities

Location	Current Month (m³)	Year to Date (m³)		
Into Long Lake Containment Facility				
Process Plant Liquids	326,774	1,323,330		
Process Plant Solids	63,619	317,973		
Minewater	0	0		
Other	39	3,273		
	Into Beartooth	Pit		
Minewater	0	0		
Other	0	0		
	Into Koala Pit			
Process Plant Liquids	116,947	2,611,185		
Process Plant Solids	22,768	745,611		
	Into Panda Pi	t		
Process Plant Liquids	157,216	1,579,315		
Process Plant Solids	30,608	374,136		
	Into Two Rock Sediment	ation Pond		
Minewater	8,240	41,680		
Other	0	226		
	Into King Pond Settlin	g Facility		
Minewater	32,275	812,965		
Other	0	0		
	Into Lynx Pit			
Minewater	12,400	369,539		
Other	0	0		

B(6) Volume of Water or Waste Discharged from Containment Facilities

Location	Current Month (m³)	Year to Date (m³)			
	From LLCF				
To Leslie Lake	0	0			
For Road Watering	0	0			
	From King Pond				
To Cujo Lake	0	465,685			
For Road Watering	0	80			
Fron	n Two Rock Sedimentati	ion Pond			
To Horseshoe Lake	0	268,101			
For Road Watering	0	36,320			
Fox Berm Pond					
To South Fox Lake	0	0			
For Road Watering	0	0			



B(7) Quantities of Minewater Pumped from each Open Pit and Underground Mine

		Destination								
	LLCF	(m³)	Two Ro	ock (m³)	King Po	ond (m³)	Lynx P	it (m³)	Beart (m	
Origin	Month	YTD	Month	YTD	Month	YTD	Month	YTD	Month	YTD
Pigeon Pit										
Sable Pit			8,240	41,680						
Beartooth Pit										
Misery UG					32,275	122,098				
Panda Pit										
Koala Pit										
Misery Sumps							0	118,454		
Point Lake					0	460,078	12,400	251,085		
Total	0	0	8,240	41,680	32,275	582,176	12,400	369,539	0	0

B(8) and (9) Quantity of Sewage Effluent Discharged and Sewage Solids Removed from the Sewage Treatment Plant (STP)

From STP	Current Month (m³)	Year to Date (m³)
Sewage Solids	31	305
Sewage Effluent	7,111	62,499

B(10) Quantity of Sewage Delivered to STP from Sable Development

Location Name	Current Month (m³)	Year to Date (m³)
Sable Development	1.55	15.25



Part C. Other Monitoring Requirements

C(1) Precipitation Data from Koala Met Station

Month	Precipitation (mm)
October	21.5
Year to Date (mm)	163.4

C(4) Quantity of Ore Produced

Material (tonnes)	Current Month	Year to Date
Processed Ore	338,347	3,489,496

Note: quantity reported represents all operating open pit and underground mines.

C(5a) Quantity of Waste Rock and Coarse Kimberlite Produced

Material (tonnes)	Current Month	Year to Date
Waste Rock Produced	1,044,254	6,117,760
Coarse Processed Kimberlite	101,624	973,197

Note: quantities of coarse processed kimberlite and waste rock reported represents all operating open pits and underground mines.

C(5b) Waste Rock Disposal Locations

Origin	Destination	Waste Rock Produced	Year To Date
Misery Underground	Misery WRSA	7,930	91,112
Point Lake	Point Lake WRSA	742,186	2,662,290
Point Lake	Point Lake OVBSP	212,432	884,271
Sable Pit	Sable West WRSA	0	118,044
Sable Pit	Sable South WRSA	89	41,191
Sable Pit	Sable South WRSA Ext	81,317	1,485,053
Sable Pit	Sable South Pad	327	50,349
Sable Pit	Sable East WRSA	0	785,450
Total		1,044,254	6,117,760

Note: all values are in metric tonnes=. Waste Rock Storage Area (WRSA) & Overburden Stockpile (OVBSP).



Appendix A – Field Parameters

Date/ Time	Station Point	Air Temperature °C	Depth of Sample m	рН	Specific Conductivity µs/cm	Water Colour	Water Temperature	Weather	Wind Direction Degrees	Wind Speed km/hr
06-Oct-2024/11:50	1616-46b	N/D*	0	7.83	3,097	Dark Brown	16.4	N/D*	N/D*	N/D*
08-Oct-2024/11:45	1616-43_Discharge	2.8	0	7.9	426.2	Lightly Tea Stained	1.1	Foggy/partly cloudy	135	7.7
11-Oct-2024/14:10	0008-Sa2	0.0	0	10.77	2,810	Lightly Tea Stained	1.0	Overcast/snowy	104	19.6
11-Oct-2024/14:15	0008-Sa26 (Duplicate)	0.0	0	10.77	2,810	Lightly Tea Stained	1.0	Overcast/snowy	104	19.6
11-Oct-2024/14:09	0008-121 (Field Blank)	0.0	0	N/D**	N/D**	N/D**	N/D**	Overcast/snowy	104	19.6
11-Oct-2024/14:11	0008-494 (Travel Blank)	0.0	0	N/D**	N/D**	N/D**	N/D**	Overcast/snowy	104	19.6
15-Oct-2024/17:28	1616-43_Discharge	0.0	0	7.11	354.1	Colourless	2.2	Calm/cloudy	4	4.2
22-Oct-2024/16:08	0008-Sa2	-7.6	0	11.5	2,849	Lightly Tea Stained	0.6	Overcast	209	3.2

^{*}No Data: sample collected underground; weather data not available.

^{**}No Data: field and travel blanks do not reflect field sample conditions (e.g., water colour).



Appendix B – Lab Report Enclosures



Site Location: MDMER/SNP/SEEPAGE

Your C.O.C. #: 102423

Attention: COMPLIANCE TEAM

Arctic Canadian Diamond Company Ltd 900, 606 4 Street SW Calgary, AB CANADA T2P 1T1

Report Date: 2024/10/23

Report #: R3576135 Version: 1 - Final

CERTIFICATE OF ANALYSIS

BUREAU VERITAS JOB #: C481509 Received: 2024/10/10, 10:00

Sample Matrix: Water # Samples Received: 1

·		Date	Date		
Analyses	Quantity	Extracted	Analyzed	Laboratory Method	Analytical Method
Acidity pH 4.5 & pH 8.3 (as CaCO3)	1	N/A	2024/10/11	AB SOP-00005	SM 24 2310 B m
Alkalinity - Low Level	1	N/A	2024/10/13	AB SOP-00005	SM 24 2320 B m
Low level chloride/sulphate by AC	1	N/A	2024/10/15	AB SOP-00020	SM24-4500-Cl/SO4-E m
Conductance - Low Level	1	N/A	2024/10/16	AB SOP-00005	SM 24 2510 B m
Fluoride - Low Level	1	N/A	2024/10/17	AB SOP-00005	SM 24 4500-F C m
Hardness Total (calculated as CaCO3) (1)	1	N/A	2024/10/18	BBY WI-00033	Auto Calc
Mercury (Total) by CV	1	2024/10/16	2024/10/17	AB SOP-00084	BCMOE BCLM Oct2013 m
Elements by ICP - Total	1	2024/10/16	2024/10/18	AB SOP-00014 / AB SOP-	EPA 6010d R5 m
				00042	
Elements by ICPMS - Total	1	2024/10/16	2024/10/18	AB SOP-00014 / AB SOP- 00043	EPA 6020b R2 m
Ammonia-N Low Level (Preserved)	1	N/A	2024/10/17	AB SOP-00007	SM 24 4500 NH3 A G m
Nitrate + Nitrite-N (calculated) Low Lev	1	N/A	2024/10/16		Auto Calc
Nitrogen (Nitrite - Nitrate) Low Level	1	N/A	2024/10/11	AB SOP-00023	SM 24 4110 B m
pH @25°C (2)	1	N/A	2024/10/13	AB SOP-00005	SM 24 4500-H+B m
Orthophosphate LL by Automated Analyzer (3)	1	N/A	2024/10/22	AB SOP-00025	SM 24 4500-P A, F m
Silica (Reactive)	1	N/A	2024/10/17	AB SOP-00011	EPA 370.1 R1978 m
Sulphate (SO4) by IC	1	N/A	2024/10/15	AB SOP-00026	SM 24 4110 B m
Carbon (total) (Calc Org. + Inorg.)	1	N/A	2024/10/18		Auto Calc
Carbon (Inorganic)	1	N/A	2024/10/17	CAL SOP-00076	Modified AE 2411
Total Kjeldahl Nitrogen (Total)	1	N/A	2024/10/15	BBY WI-00033	Auto Calc
Nitrogen (Total)	1	2024/10/11	2024/10/15	AB SOP-00093	SM 24 4500-N C m
Carbon (Total Organic) (4)	1	N/A	2024/10/18	AB SOP-00087	MMCW 119 1996 m
Total Phosphorus Low Level Dissolved (5)	1	2024/10/22	2024/10/22	AB SOP-00024	SM 24 4500-P A,B,F m
Total Phosphorus Low Level Total	1	2024/10/15	2024/10/16	AB SOP-00024	SM 24 4500-P A,B,F m
Total Suspended Solids (NFR)	1	2024/10/11	2024/10/12	AB SOP-00061	SM 24 2540 D m
Turbidity	1	N/A	2024/10/11	CAL SOP-00081	SM 24 2130 B m
Ion Balance (6)	1	N/A	2024/10/18		
Total Dissolved Solids (Calculated) (6)	1	N/A	2024/10/18		

Remarks:

Bureau Veritas is accredited to ISO/IEC 17025 for specific parameters on scopes of accreditation. Unless otherwise noted, procedures used by Bureau



Site Location: MDMER/SNP/SEEPAGE

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Report Date: 2024/10/23

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CERTIFICATE OF ANALYSIS

BUREAU VERITAS JOB #: C481509 Received: 2024/10/10, 10:00

Veritas are based upon recognized Provincial, Federal or US method compendia such as CCME, EPA, APHA or the Quebec Ministry of Environment.

All work recorded herein has been done in accordance with procedures and practices ordinarily exercised by professionals in Bureau Veritas' profession using accepted testing methodologies, quality assurance and quality control procedures (except where otherwise agreed by the client and Bureau Veritas in writing). All data is in statistical control and has met quality control and method performance criteria unless otherwise noted. All method blanks are reported; unless indicated otherwise, associated sample data are not blank corrected. Where applicable, unless otherwise noted, Measurement Uncertainty has not been accounted for when stating conformity to the referenced standard.

Bureau Veritas liability is limited to the actual cost of the requested analyses, unless otherwise agreed in writing. There is no other warranty expressed or implied. Bureau Veritas has been retained to provide analysis of samples provided by the Client using the testing methodology referenced in this report. Interpretation and use of test results are the sole responsibility of the Client and are not within the scope of services provided by Bureau Veritas, unless otherwise agreed in writing. Bureau Veritas is not responsible for the accuracy or any data impacts, that result from the information provided by the customer or their agent.

Solid sample results, except biota, are based on dry weight unless otherwise indicated. Organic analyses are not recovery corrected except for isotope dilution methods.

Results relate to samples tested. When sampling is not conducted by Bureau Veritas, results relate to the supplied samples tested.

This Certificate shall not be reproduced except in full, without the written approval of the laboratory.

Reference Method suffix "m" indicates test methods incorporate validated modifications from specific reference methods to improve performance.

- * RPDs calculated using raw data. The rounding of final results may result in the apparent difference.
- (1) "Total Hardness" was calculated from Total Ca and Mg concentrations and may be biased high (Hardness, or Dissolved Hardness, calculated from Dissolved Ca and Mg, should be used for compliance if available).
- (2) The CCME method requires pH to be analysed within 15 minutes of sampling and therefore field analysis is required for compliance. All Laboratory pH analyses in this report are reported past the CCME holding time. Bureau Veritas endeavours to analyze samples as soon as possible after receipt.
- (3) Orthophosphate > Total Phosphorus Imbalance: When applicable, Orthophosphate, Total Phosphorus and dissolved Phosphorus results were reviewed and data quality meets acceptable levels unless otherwise noted.
- (4) TOC present in the sample should be considered as non-purgeable TOC.
- (5) Dissolved Phosphorus > Total Phosphorus Imbalance: When applicable, Dissolved Phosphorus and Total Phosphorus results were reviewed and data quality meets acceptable levels unless otherwise noted.
- (6) Calculation was conducted as per client request using CAL PDF-00333.



Site Location: MDMER/SNP/SEEPAGE

Your C.O.C. #: 102423

Attention: COMPLIANCE TEAM

Arctic Canadian Diamond Company Ltd 900, 606 4 Street SW Calgary, AB CANADA T2P 1T1

Report Date: 2024/10/23

Report #: R3576135 Version: 1 - Final

CERTIFICATE OF ANALYSIS

BUREAU VERITAS JOB #: C481509 Received: 2024/10/10, 10:00

Encryption Key

Please direct all questions regarding this Certificate of Analysis to: Geraldlyn Gouthro, Key Account Specialist Email: geraldlyn.gouthro@bureauveritas.com Phone# (403) 291-3077

This report has been generated and distributed using a secure automated process.

Bureau Veritas has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per ISO/IEC 17025, signing the reports. For Service Group specific validation, please refer to the Validation Signatures page if included, otherwise available by request. For Department specific Analyst/Supervisor validation names, please refer to the Test Summary section if included, otherwise available by request. This report is authorized by Scott Cantwell, General Manager responsible for Alberta Environmental laboratory operations.



Your P.O. #: 6404002992

RESULTS OF CHEMICAL ANALYSES OF WATER

Bureau Veritas ID		CXN659		
		2024/10/06		
Sampling Date		11:50		
COC Number		102423		
	UNITS	1616-46B	RDL	QC Batch
Calculated Parameters			*	
Total Hardness (CaCO3)	mg/L	583	0.50	B559189
Calculated Ion Balance (% Difference)	%	6.6		B559769
Nitrate plus Nitrite (N)	mg/L	74	0.022	B559971
Calculated Total Dissolved Solids	mg/L	2200	7.9	B559772
Total Total Kjeldahl Nitrogen (Calc)	mg/L	19	2.0	B559520
Misc. Inorganics		I		
Fluoride (F)	mg/L	0.403	0.010	B563609
рН	рН	6.56	N/A	B563606
Reactive Silica	mg/L	11	0.25	B568734
Acidity (pH 4.5)	mg/L	<1.0	1.0	B559797
Alkalinity (Total as CaCO3)	mg/L	105	0.50	B563605
Total Organic Carbon (C)	mg/L	3.0	0.20	B570180
Acidity (pH 8.3)	mg/L	4.9	1.0	B559797
Alkalinity (PP as CaCO3)	mg/L	<0.50	0.50	B563605
Bicarbonate (HCO3)	mg/L	128	0.50	B563605
Carbonate (CO3)	mg/L	<0.50	0.50	B563605
Hydroxide (OH)	mg/L	<0.50	0.50	B563605
Total Suspended Solids	mg/L	690 (1)	6.8	B560869
Anions	•			
Orthophosphate (P)	mg/L	0.0019	0.0010	B575338
Chloride (CI)	mg/L	210	2.5	B564326
Dissolved-Low Level Sulphate (SO4)	mg/L	850	3.0	B563525
Nutrients				
Total Carbon (C)	mg/L	26	0.50	B559761
Total Inorganic Carbon (C)	mg/L	23	1.0	B568752
Dissolved Phosphorus (P)	mg/L	0.0040	0.0020	B575421
Total Phosphorus (P)	mg/L	0.62 (2)	0.020	B564604
Total Ammonia (N)	mg/L	8.7	0.025	B567993
Nitrite (N)	mg/L	6.2	0.010	B562299
PDI - Papartable Detection Limit				

RDL = Reportable Detection Limit

N/A = Not Applicable

- (1) Detection limit raised based on sample volume used for analysis.
- (2) Due to the sample matrix, sample required dilution. Detection limit was adjusted accordingly.



Your P.O. #: 6404002992

RESULTS OF CHEMICAL ANALYSES OF WATER

Bureau Veritas ID		CXN659		
Campling Data		2024/10/06		
Sampling Date		11:50		
COC Number		102423		
	UNITS	1616-46B	RDL	QC Batch
Nitrate (N)	mg/L	68	0.020	B562299
Total Nitrogen (N)	mg/L	87 (1)	2.0	B562110
Physical Properties	·			
Conductivity	uS/cm	3210	1.0	B563607
Physical Properties	•			•
Turbidity - NTU	NTU	710	0.10	B561426
	•			•

RDL = Reportable Detection Limit

⁽¹⁾ Due to the sample matrix, sample required dilution. Detection limit was adjusted accordingly.



Your P.O. #: 6404002992

MERCURY BY COLD VAPOR (WATER)

Bureau Veritas ID		CXN659		
Sampling Date		2024/10/06		
Sampling Date		11:50		
COC Number		102423		
	UNITS	1616-46B	RDL	QC Batch
Elements		1616-468	KDL	QC Batch
Elements Total Mercury (Hg)	mg/L	0.0000060	0.0000019	B567307



Your P.O. #: 6404002992

ELEMENTS BY ATOMIC SPECTROSCOPY (WATER)

Bureau Veritas ID		CXN659		
Sampling Date		2024/10/06		
		11:50		
COC Number		102423		
	UNITS	1616-46B	RDL	QC Batch
Elements				
Total Aluminum (AI)	mg/L	13	0.0030	B568663
Total Antimony (Sb)	mg/L	0.0029	0.00060	B568663
Total Arsenic (As)	mg/L	0.011	0.00020	B568663
Total Barium (Ba)	mg/L	0.39	0.10	B568680
Total Beryllium (Be)	mg/L	<0.0010	0.0010	B568663
Total Boron (B)	mg/L	0.30	0.20	B568680
Total Cadmium (Cd)	mg/L	0.00031	0.000020	B568663
Total Calcium (Ca)	mg/L	55	3.0	B568680
Total Chromium (Cr)	mg/L	0.12	0.0010	B568663
Total Cobalt (Co)	mg/L	0.030	0.00030	B568663
Total Copper (Cu)	mg/L	0.020	0.0010	B568663
Total Iron (Fe)	mg/L	29	0.60	B568680
Total Lead (Pb)	mg/L	0.011	0.00020	B568663
Total Lithium (Li)	mg/L	<0.20	0.20	B568680
Total Magnesium (Mg)	mg/L	110	2.0	B568680
Total Manganese (Mn)	mg/L	0.45	0.040	B568680
Total Molybdenum (Mo)	mg/L	0.45	0.00020	B568663
Total Nickel (Ni)	mg/L	0.49	0.00050	B568663
Total Potassium (K)	mg/L	200	3.0	B568680
Total Selenium (Se)	mg/L	0.0035	0.00020	B568663
Total Silicon (Si)	mg/L	59	5.0	B568680
Total Silver (Ag)	mg/L	<0.00010	0.00010	B568663
Total Sodium (Na)	mg/L	390	5.0	B568680
Total Strontium (Sr)	mg/L	1.9	0.20	B568680
Total Sulphur (S)	mg/L	290	2.0	B568680
Total Thallium (TI)	mg/L	<0.00020	0.00020	B568663
Total Tin (Sn)	mg/L	<0.0010	0.0010	B568663
Total Titanium (Ti)	mg/L	0.76	0.0010	B568663
Total Uranium (U)	mg/L	0.036	0.00010	B568663
Total Vanadium (V)	mg/L	0.043	0.0010	B568663
Total Zinc (Zn)	mg/L	0.10	0.0030	B568663
RDL = Reportable Detection L	imit			



Your P.O. #: 6404002992

GENERAL COMMENTS

Each temperature is the average of up to three cooler temperatures taken at receipt

Package 1	8.1°C
Package 2	8.5°C
Package 3	7.3°C
Package 4	7.6°C
Package 5	7.9°C
Package 6	7.1°C
Package 7	8.8°C
Package 8	8.6°C

Sample CXN659 [1616-468]: Turbidity completed within five days of sampling. Data is satisfactory for compliance purposes. NO2 (N); NO2 (N) + NO3 (N) in Water (LL) completed within five days of sampling. Data is satisfactory for compliance purposes. Nitrogen (Nitrite - Nitrate) Low Level completed within five days of sampling. Data is satisfactory for compliance purposes. Sample was analyzed past method specified hold time for Orthophosphate LL by Automated Analyzer. Exceedance of hold time increases the uncertainty of test results but does not necessarily imply that results are compromised.

ELEMENTS BY ATOMIC SPECTROSCOPY (WATER) Comments

Sample CXN659 [1616-46B] Elements by ICP - Total: Due to the sample matrix, sample required dilution. Detection limit was adjusted accordingly.

Results relate only to the items tested.



Bureau Veritas Job #: C481509 Report Date: 2024/10/23

QUALITY ASSURANCE REPORT

Arctic Canadian Diamond Company Ltd
Site Location: MDMER/SNP/SEEPAGE

Your P.O. #: 6404002992

			Matrix	Spike	Spiked	Blank	Method B	Blank	RP	D	QC Sta	ındard
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits	% Recovery	QC Limits
B559797	Acidity (pH 4.5)	2024/10/11					<1.0	mg/L	NC	20		
B559797	Acidity (pH 8.3)	2024/10/11			99	80 - 120	<1.0	mg/L	13	20		
B560869	Total Suspended Solids	2024/10/12	92	80 - 120	101	80 - 120	<1.0	mg/L	2.5	20		
B561426	Turbidity - NTU	2024/10/11			99	80 - 120	<0.10	NTU	6.3	20		
B562110	Total Nitrogen (N)	2024/10/15	90	80 - 120	104	80 - 120	<0.020	mg/L	3.7	20	104	80 - 120
B562299	Nitrate (N)	2024/10/11	NC	80 - 120	100	80 - 120	<0.0020	mg/L	0.11	20		
B562299	Nitrite (N)	2024/10/11	99	80 - 120	100	80 - 120	<0.0010	mg/L	0.065	20		
B563525	Dissolved-Low Level Sulphate (SO4)	2024/10/15	NC	80 - 120	101	80 - 120	<0.30	mg/L	1.0	20		
B563605	Alkalinity (PP as CaCO3)	2024/10/13					<0.50	mg/L	NC	20		
B563605	Alkalinity (Total as CaCO3)	2024/10/13			96	80 - 120	<0.50	mg/L	1.0	20		
B563605	Bicarbonate (HCO3)	2024/10/13					<0.50	mg/L	1.0	20		
B563605	Carbonate (CO3)	2024/10/13					<0.50	mg/L	NC	20		
B563605	Hydroxide (OH)	2024/10/13					<0.50	mg/L	NC	20		
B563606	рН	2024/10/13			100	97 - 103			1.5	N/A		
B563607	Conductivity	2024/10/16			103	90 - 110	<1.0	uS/cm	0.93	20		
B563609	Fluoride (F)	2024/10/17	101	80 - 120	102	80 - 120	<0.010	mg/L	2.7	20		
B564326	Chloride (Cl)	2024/10/15	NC	80 - 120	99	80 - 120	<0.50	mg/L	0.048	20		
B564604	Total Phosphorus (P)	2024/10/16	102	80 - 120	98	80 - 120	<0.0010	mg/L	0.10	20	95	80 - 120
B567307	Total Mercury (Hg)	2024/10/17	93	80 - 120	107	80 - 120	<0.000019	mg/L	NC	20		
B567993	Total Ammonia (N)	2024/10/17	NC	80 - 120	109	80 - 120	<0.0050	mg/L	0.15	20		
B568663	Total Aluminum (Al)	2024/10/18	104	80 - 120	104	80 - 120	<0.0030	mg/L	1.6	20		
B568663	Total Antimony (Sb)	2024/10/18	98	80 - 120	97	80 - 120	<0.00060	mg/L	0.24	20		
B568663	Total Arsenic (As)	2024/10/18	93	80 - 120	93	80 - 120	<0.00020	mg/L	1.6	20		
B568663	Total Beryllium (Be)	2024/10/18	105	80 - 120	103	80 - 120	<0.0010	mg/L	6.3	20		
B568663	Total Cadmium (Cd)	2024/10/18	94	80 - 120	94	80 - 120	<0.000020	mg/L				
B568663	Total Chromium (Cr)	2024/10/18	98	80 - 120	99	80 - 120	<0.0010	mg/L	0	20		
B568663	Total Cobalt (Co)	2024/10/18	98	80 - 120	99	80 - 120	<0.00030	mg/L	1.2	20		
B568663	Total Copper (Cu)	2024/10/18	97	80 - 120	99	80 - 120	<0.0010	mg/L	2.4	20		
B568663	Total Lead (Pb)	2024/10/18	99	80 - 120	100	80 - 120	<0.00020	mg/L	2.0	20		
B568663	Total Molybdenum (Mo)	2024/10/18	103	80 - 120	101	80 - 120	<0.00020	mg/L	8.9	20		
B568663	Total Nickel (Ni)	2024/10/18	98	80 - 120	99	80 - 120	<0.00050	mg/L	0.92	20		
B568663	Total Selenium (Se)	2024/10/18	90	80 - 120	90	80 - 120	<0.00020	mg/L	2.3	20		
B568663	Total Silver (Ag)	2024/10/18	99	80 - 120	99	80 - 120	<0.00010	mg/L	0.53	20		



Bureau Veritas Job #: C481509 Report Date: 2024/10/23

QUALITY ASSURANCE REPORT(CONT'D)

Arctic Canadian Diamond Company Ltd Site Location: MDMER/SNP/SEEPAGE

Your P.O. #: 6404002992

			Matrix	Spike	Spiked	Blank	Method I	Blank	RP	D	QC Sta	ndard
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits	% Recovery	QC Limits
B568663	Total Thallium (TI)	2024/10/18	101	80 - 120	100	80 - 120	<0.00020	mg/L	5.8	20		
B568663	Total Tin (Sn)	2024/10/18	99	80 - 120	98	80 - 120	<0.0010	mg/L	13	20		
B568663	Total Titanium (Ti)	2024/10/18	97	80 - 120	97	80 - 120	<0.0010	mg/L	9.6	20		
B568663	Total Uranium (U)	2024/10/18	103	80 - 120	102	80 - 120	<0.00010	mg/L	2.1	20		
B568663	Total Vanadium (V)	2024/10/18	99	80 - 120	99	80 - 120	<0.0010	mg/L	2.9	20		
B568663	Total Zinc (Zn)	2024/10/18	88	80 - 120	87	80 - 120	<0.0030	mg/L	2.1	20		
B568680	Total Barium (Ba)	2024/10/18	105	80 - 120	103	80 - 120	<0.010	mg/L	1.7	20		
B568680	Total Boron (B)	2024/10/18	102	80 - 120	101	80 - 120	<0.020	mg/L	3.2	20		
B568680	Total Calcium (Ca)	2024/10/18	NC	80 - 120	101	80 - 120	<0.30	mg/L	8.9	20		
B568680	Total Iron (Fe)	2024/10/18	NC	80 - 120	109	80 - 120	<0.060	mg/L	2.9	20		
B568680	Total Lithium (Li)	2024/10/18	102	80 - 120	101	80 - 120	<0.020	mg/L	17	20		
B568680	Total Magnesium (Mg)	2024/10/18	NC	80 - 120	109	80 - 120	<0.20	mg/L	5.5	20		
B568680	Total Manganese (Mn)	2024/10/18	NC	80 - 120	115	80 - 120	<0.0040	mg/L	4.4	20		
B568680	Total Potassium (K)	2024/10/18	112	80 - 120	104	80 - 120	<0.30	mg/L	12	20		
B568680	Total Silicon (Si)	2024/10/18	NC	80 - 120	105	80 - 120	<0.50	mg/L	1.5	20		
B568680	Total Sodium (Na)	2024/10/18	NC	80 - 120	104	80 - 120	<0.50	mg/L	12	20		
B568680	Total Strontium (Sr)	2024/10/18	103	80 - 120	101	80 - 120	<0.020	mg/L	1.6	20		
B568680	Total Sulphur (S)	2024/10/18	105	80 - 120	101	80 - 120	<0.20	mg/L	6.1	20		
B568734	Reactive Silica	2024/10/17	NC	80 - 120	106	80 - 120	<0.050	mg/L	2.5	20		
B568752	Total Inorganic Carbon (C)	2024/10/17	NC	80 - 120	103	80 - 120	<1.0	mg/L	0.40	20		
B570180	Total Organic Carbon (C)	2024/10/18	113	75 - 125	96	80 - 120	<0.20	mg/L	4.8	20		
B575338	Orthophosphate (P)	2024/10/22	91	80 - 120	100	80 - 120	<0.0010	mg/L	0.10	20		
B575421	Dissolved Phosphorus (P)	2024/10/22	105	80 - 120	98	80 - 120	<0.0010	mg/L	3.2	20	91	80 - 120

N/A = Not Applicable

Duplicate: Paired analysis of a separate portion of the same sample. Used to evaluate the variance in the measurement.

Matrix Spike: A sample to which a known amount of the analyte of interest has been added. Used to evaluate sample matrix interference.

QC Standard: A sample of known concentration prepared by an external agency under stringent conditions. Used as an independent check of method accuracy.

Spiked Blank: A blank matrix sample to which a known amount of the analyte, usually from a second source, has been added. Used to evaluate method accuracy.

Method Blank: A blank matrix containing all reagents used in the analytical procedure. Used to identify laboratory contamination.

NC (Matrix Spike): The recovery in the matrix spike was not calculated. The relative difference between the concentration in the parent sample and the spike amount was too small to permit a reliable recovery calculation (matrix spike concentration was less than the native sample concentration)

NC (Duplicate RPD): The duplicate RPD was not calculated. The concentration in the sample and/or duplicate was too low to permit a reliable RPD calculation (absolute difference <= 2x RDL).



VALIDATION SIGNATURE PAGE

The analytical data and all QC contained in this report were reviewed and validated by:

Sandy Yuan, M.Sc., QP, Scientific Specialist

Bureau Veritas has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per ISO/IEC 17025, signing the reports. For Service Group specific validation, please refer to the Validation Signatures page if included, otherwise available by request. For Department specific Analyst/Supervisor validation names, please refer to the Test Summary section if included, otherwise available by request. This report is authorized by Scott Cantwell, General Manager responsible for Alberta Environmental laboratory operations.

COR FCD-00265 / 5 Page <u>1</u> of <u>1</u>

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ROUTINE TAT

CHAIN OF CUSTODY FORM

102423

Burgundy Diamond Mines

900 - 606 4 Street SW, Calgary, Alberta, Canada T2P 1T1 Tel: 867-880-4400 ext 2157 Burgundy Contact: Richard Ehlert / Jonah Kelly

> ANALYSIS REQUESTED Indicate Filtered (F), Preserved (P) or Filtered and Preserved (F/P) below

Send Analytical Results to: compliance.team@burgundydiamonds.com



For Lab		SAM	PLE INFORMATION	ON			Dissolved Nutrient	Major Ions	SNP Total Nutrien	Standard Total Me															Field (pH)	Water Temp (°C)
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Site Location: MDMER/SNP/SEEPAGE

Your C.O.C. #: 1/1

Attention: COMPLIANCE TEAM

Arctic Canadian Diamond Company Ltd 900, 606 4 Street SW Calgary, AB CANADA T2P 1T1

Report Date: 2024/10/29

Report #: R3579137 Version: 1 - Final

CERTIFICATE OF ANALYSIS

BUREAU VERITAS JOB #: C482656 Received: 2024/10/15, 10:13

Sample Matrix: Water # Samples Received: 4

	Date	Date		
Quantity	Extracted	Analyzed	Laboratory Method	Analytical Method
4	N/A	2024/10/18	AB SOP-00005	SM 24 2310 B m
4	N/A	2024/10/18	AB SOP-00005	SM 24 2320 B m
4	N/A	2024/10/16	AB SOP-00020	SM24-4500-CI/SO4-E m
4	N/A	2024/10/18	AB SOP-00005	SM 24 2510 B m
4	N/A	2024/10/18	AB SOP-00005	SM 24 4500-F C m
4	N/A	2024/10/24	BBY WI-00033	Auto Calc
4	2024/10/23	2024/10/24	AB SOP-00084	BCMOE BCLM Oct2013 m
4	2024/10/23	2024/10/24	AB SOP-00014 / AB SOP- 00042	EPA 6010d R5 m
4	2024/10/23	2024/10/24	AB SOP-00014 / AB SOP- 00043	EPA 6020b R2 m
4	N/A	2024/10/17	AB SOP-00007	SM 24 4500 NH3 A G m
4	N/A	2024/10/18		Auto Calc
4	N/A	2024/10/16	AB SOP-00023	SM 24 4110 B m
4	N/A	2024/10/18	AB SOP-00005	SM 24 4500-H+B m
4	N/A	2024/10/15	Field Test	Field Test
4	N/A	2024/10/16	AB SOP-00025	SM 24 4500-P A, F m
4	N/A	2024/10/17	AB SOP-00011	EPA 370.1 R1978 m
4	N/A	2024/10/20	AB SOP-00026	SM 24 4110 B m
4	N/A	2024/10/18		Auto Calc
4	N/A	2024/10/15	Field Test	Field Test
3	N/A	2024/10/17	CAL SOP-00076	Modified AE 2411
1	N/A	2024/10/28	CAL SOP-00076	Modified AE 2411
1	N/A	2024/10/17	BBY WI-00033	Auto Calc
3	N/A	2024/10/18	BBY WI-00033	Auto Calc
1	2024/10/17	2024/10/17	AB SOP-00093	SM 24 4500-N C m
3	2024/10/17	2024/10/18	AB SOP-00093	SM 24 4500-N C m
4	N/A	2024/10/18	AB SOP-00087	MMCW 119 1996 m
4	2024/10/17	2024/10/17	AB SOP-00024	SM 24 4500-P A,B,F m
3	2024/10/17	2024/10/17	AB SOP-00024	SM 24 4500-P A,B,F m
1	2024/10/19	2024/10/21	AB SOP-00024	SM 24 4500-P A,B,F m
4	2024/10/18	2024/10/18	AB SOP-00061	SM 24 2540 D m
	4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4	Quantity Extracted 4 N/A 4 N/A 4 N/A 4 N/A 4 N/A 4 2024/10/23 4 2024/10/23 4 N/A 1 N/A 1 N/A 2024/10/17 N/A 4 2024/10/17 3 2024/10/17 3 2024/10/17 3 2024/10/17 3 2024/10/17 4 <td>Quantity Extracted Analyzed 4 N/A 2024/10/18 4 N/A 2024/10/16 4 N/A 2024/10/18 4 N/A 2024/10/18 4 N/A 2024/10/24 4 N/A 2024/10/24 4 2024/10/23 2024/10/24 4 2024/10/23 2024/10/24 4 N/A 2024/10/18 4 N/A 2024/10/18 4 N/A 2024/10/15 4 N/A 2024/10/16 4 N/A 2024/10/16 4 N/A 2024/10/16 4 N/A 2024/10/16 4 N/A 2024/10/18 <</td> <td>Quantity Extracted Analyzed Laboratory Method 4 N/A 2024/10/18 AB SOP-00005 4 N/A 2024/10/24 BS OP-00005 4 N/A 2024/10/24 BBY WI-00033 4 2024/10/23 2024/10/24 AB SOP-00084 4 2024/10/23 2024/10/24 AB SOP-00014 / AB SOP-00042 4 N/A 2024/10/18 AB SOP-00007 4 N/A 2024/10/18 AB SOP-000023 4 N/A 2024/10/18 AB SOP-00025 4 N/A 2024/10/16 AB SOP-00025 4 N/A 2024/10/17 AB SOP-00011</td>	Quantity Extracted Analyzed 4 N/A 2024/10/18 4 N/A 2024/10/16 4 N/A 2024/10/18 4 N/A 2024/10/18 4 N/A 2024/10/24 4 N/A 2024/10/24 4 2024/10/23 2024/10/24 4 2024/10/23 2024/10/24 4 N/A 2024/10/18 4 N/A 2024/10/18 4 N/A 2024/10/15 4 N/A 2024/10/16 4 N/A 2024/10/16 4 N/A 2024/10/16 4 N/A 2024/10/16 4 N/A 2024/10/18 <	Quantity Extracted Analyzed Laboratory Method 4 N/A 2024/10/18 AB SOP-00005 4 N/A 2024/10/24 BS OP-00005 4 N/A 2024/10/24 BBY WI-00033 4 2024/10/23 2024/10/24 AB SOP-00084 4 2024/10/23 2024/10/24 AB SOP-00014 / AB SOP-00042 4 N/A 2024/10/18 AB SOP-00007 4 N/A 2024/10/18 AB SOP-000023 4 N/A 2024/10/18 AB SOP-00025 4 N/A 2024/10/16 AB SOP-00025 4 N/A 2024/10/17 AB SOP-00011



Site Location: MDMER/SNP/SEEPAGE

Your C.O.C. #: 1/1

Attention: COMPLIANCE TEAM

Arctic Canadian Diamond Company Ltd 900, 606 4 Street SW Calgary, AB CANADA T2P 1T1

Report Date: 2024/10/29

Report #: R3579137 Version: 1 - Final

CERTIFICATE OF ANALYSIS

BUREAU VERITAS JOB #: C482656 Received: 2024/10/15, 10:13

Sample Matrix: Water # Samples Received: 4

	Date	Date	
Analyses	Quantity Extracted	Analyzed Laboratory Method	Analytical Method
Turbidity	4 N/A	2024/10/15 CAL SOP-00081	SM 24 2130 B m
Ion Balance (6)	4 N/A	2024/10/24	
Total Dissolved Solids (Calculated) (6)	4 N/A	2024/10/24	

Remarks:

Bureau Veritas is accredited to ISO/IEC 17025 for specific parameters on scopes of accreditation. Unless otherwise noted, procedures used by Bureau Veritas are based upon recognized Provincial, Federal or US method compendia such as CCME, EPA, APHA or the Quebec Ministry of Environment.

All work recorded herein has been done in accordance with procedures and practices ordinarily exercised by professionals in Bureau Veritas' profession using accepted testing methodologies, quality assurance and quality control procedures (except where otherwise agreed by the client and Bureau Veritas in writing). All data is in statistical control and has met quality control and method performance criteria unless otherwise noted. All method blanks are reported; unless indicated otherwise, associated sample data are not blank corrected. Where applicable, unless otherwise noted, Measurement Uncertainty has not been accounted for when stating conformity to the referenced standard.

Bureau Veritas liability is limited to the actual cost of the requested analyses, unless otherwise agreed in writing. There is no other warranty expressed or implied. Bureau Veritas has been retained to provide analysis of samples provided by the Client using the testing methodology referenced in this report. Interpretation and use of test results are the sole responsibility of the Client and are not within the scope of services provided by Bureau Veritas, unless otherwise agreed in writing. Bureau Veritas is not responsible for the accuracy or any data impacts, that result from the information provided by the customer or their agent.

Solid sample results, except biota, are based on dry weight unless otherwise indicated. Organic analyses are not recovery corrected except for isotope dilution methods.

Results relate to samples tested. When sampling is not conducted by Bureau Veritas, results relate to the supplied samples tested.

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 $Reference\ Method\ suffix\ "m"\ indicates\ test\ methods\ incorporate\ validated\ modifications\ from\ specific\ reference\ methods\ to\ improve\ performance.$

- * RPDs calculated using raw data. The rounding of final results may result in the apparent difference.
- (1) "Total Hardness" was calculated from Total Ca and Mg concentrations and may be biased high (Hardness, or Dissolved Hardness, calculated from Dissolved Ca and Mg, should be used for compliance if available).
- (2) The CCME method requires pH to be analysed within 15 minutes of sampling and therefore field analysis is required for compliance. All Laboratory pH analyses in this report are reported past the CCME holding time. Bureau Veritas endeavours to analyze samples as soon as possible after receipt.
- (3) Orthophosphate > Total Phosphorus Imbalance: When applicable, Orthophosphate, Total Phosphorus and dissolved Phosphorus results were reviewed and data quality meets acceptable levels unless otherwise noted.
- (4) TOC present in the sample should be considered as non-purgeable TOC.
- (5) Dissolved Phosphorus > Total Phosphorus Imbalance: When applicable, Dissolved Phosphorus and Total Phosphorus results were reviewed and data quality meets acceptable levels unless otherwise noted.
- (6) Calculation was conducted as per client request using CAL PDF-00333.



Site Location: MDMER/SNP/SEEPAGE

Your C.O.C. #: 1/1

Attention: COMPLIANCE TEAM

Arctic Canadian Diamond Company Ltd 900, 606 4 Street SW Calgary, AB CANADA T2P 1T1

Report Date: 2024/10/29

Report #: R3579137 Version: 1 - Final

CERTIFICATE OF ANALYSIS

BUREAU VERITAS JOB #: C482656 Received: 2024/10/15, 10:13

Encryption Key

Please direct all questions regarding this Certificate of Analysis to: Geraldlyn Gouthro, Key Account Specialist Email: geraldlyn.gouthro@bureauveritas.com Phone# (403) 291-3077

This report has been generated and distributed using a secure automated process.

Bureau Veritas has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per ISO/IEC 17025, signing the reports. For Service Group specific validation, please refer to the Validation Signatures page if included, otherwise available by request. For Department specific Analyst/Supervisor validation names, please refer to the Test Summary section if included, otherwise available by request. This report is authorized by Scott Cantwell, General Manager responsible for Alberta Environmental laboratory operations.



Your P.O. #: 6404002992

RESULTS OF CHEMICAL ANALYSES OF WATER

Bureau Veritas ID		CXV758		CXV759			CXV760		
		2024/10/11		2024/10/11			2024/10/11		
Sampling Date		14:09		14:11			14:15		
COC Number		1/1		1/1			1/1		
	UNITS	0008-121-FB	QC Batch	0008-494-TB	RDL	QC Batch	0008-SA26	RDL	QC Batch
Calculated Parameters	•	-	-						
Total Hardness (CaCO3)	mg/L	<0.50	B564475	<0.50	0.50	B564475	566	0.50	B564475
Calculated Ion Balance (% Difference)	%	NC	B564491	NC		B564491	6.9		B564491
Nitrate plus Nitrite (N)	mg/L	<0.0022	B564476	<0.0022	0.0022	B564476	46	0.010	B564476
Calculated Total Dissolved Solids	mg/L	<0.95	B564492	<0.95	0.95	B564492	1600	3.1	B564492
Total Total Kjeldahl Nitrogen (Calc)	mg/L	<0.020	B564482	<0.020	0.020	B564487	11	1.5	B564487
Field Parameters	•		•						
Field pH	рН	10.77	ONSITE	10.77	N/A	ONSITE	10.77	N/A	ONSITE
Field Temperature (Fd)	deg. C	1.0	ONSITE	1.0	N/A	ONSITE	1.0	N/A	ONSITE
Misc. Inorganics									
Fluoride (F)	mg/L	<0.010	B570896	<0.010	0.010	B570896	0.421	0.010	B570896
рН	рН	5.54	B570891	5.52	N/A	B570891	8.51	N/A	B570891
Reactive Silica	mg/L	<0.050	B568127	<0.050	0.050	B568127	16	0.25	B568127
Acidity (pH 4.5)	mg/L	<1.0	B569390	<1.0	1.0	B569390	<1.0	1.0	B569390
Alkalinity (Total as CaCO3)	mg/L	<0.50	B570889	<0.50	0.50	B570889	106	0.50	B570889
Total Organic Carbon (C)	mg/L	<0.20	B570180	<0.20	0.20	B570180	32	0.80	B570180
Acidity (pH 8.3)	mg/L	<1.0	B569390	1.2	1.0	B569390	<1.0	1.0	B569390
Alkalinity (PP as CaCO3)	mg/L	<0.50	B570889	<0.50	0.50	B570889	5.84	0.50	B570889
Bicarbonate (HCO3)	mg/L	<0.50	B570889	<0.50	0.50	B570889	116	0.50	B570889
Carbonate (CO3)	mg/L	<0.50	B570889	<0.50	0.50	B570889	7.01	0.50	B570889
Hydroxide (OH)	mg/L	<0.50	B570889	<0.50	0.50	B570889	<0.50	0.50	B570889
Total Suspended Solids	mg/L	<1.0	B569727	<1.0	1.0	B569727	6.0	1.0	B569727
Anions									
Orthophosphate (P)	mg/L	<0.0010	B566064	<0.0010	0.0010	B566064	0.0032	0.0010	B566064
Chloride (CI)	mg/L	<0.50	B566321	<0.50	0.50	B566321	37	0.50	B566321
Dissolved-Low Level Sulphate (SO4)	mg/L	<0.30	B572383	<0.30	0.30	B572383	870	3.0	B572383
Nutrients									
Total Carbon (C)	mg/L	<0.50	B564479	<0.50	0.50	B564479	50	0.50	B564479
Total Inorganic Carbon (C)	mg/L	<1.0	B568752	<1.0	1.0	B568752	18 (1)	1.0	B568971
Dissolved Phosphorus (P)	mg/L	<0.0020	B567795	<0.0020	0.0020	B567795	0.0047	0.0020	B567795
Total Phosphorus (P)	mg/L	<0.0020	B567800	<0.0020	0.0020	B571815	0.0098	0.0020	B567800
1									

RDL = Reportable Detection Limit

N/A = Not Applicable

⁽¹⁾ Matrix spike exceeds acceptance limits due to matrix interference.



Your P.O. #: 6404002992

RESULTS OF CHEMICAL ANALYSES OF WATER

Bureau Veritas ID		CXV758		CXV759			CXV760		
Sampling Date		2024/10/11 14:09		2024/10/11 14:11			2024/10/11 14:15		
COC Number		1/1		1/1			1/1		
	UNITS	0008-121-FB	QC Batch	0008-494-TB	RDL	QC Batch	0008-SA26	RDL	QC Batch
Total Ammonia (N)	mg/L	<0.0050	B568004	<0.0050	0.0050	B567999	8.3	0.025	B568004
Nitrite (N)	mg/L	<0.0010	B567269	<0.0010	0.0010	B567269	1.0	0.0010	B567269
Nitrate (N)	mg/L	<0.0020	B567269	<0.0020	0.0020	B567269	45	0.010	B567269
Total Nitrogen (N)	mg/L	<0.020	B568337	<0.020	0.020	B567677	54	1.0	B568337
Physical Properties								•	
Conductivity	uS/cm	1.3	B570893	1.3	1.0	B570893	2160	1.0	B570893
Physical Properties									
Turbidity - NTU	NTU	<0.10	B565010	<0.10	0.10	B565010	6.3	0.10	B565010
RDL = Reportable Detection Limit									



Your P.O. #: 6404002992

RESULTS OF CHEMICAL ANALYSES OF WATER

Burnay Varitas ID		CV\/761		
Bureau Veritas ID		CXV761		
Sampling Date		2024/10/11 14:10		
COC Number		1/1		
	UNITS	0008-SA2	RDL	QC Batch
Calculated Parameters				
Total Hardness (CaCO3)	mg/L	566	0.50	B564475
Calculated Ion Balance (% Difference)	%	7.5		B564491
Nitrate plus Nitrite (N)	mg/L	45	0.010	B564476
Calculated Total Dissolved Solids	mg/L	1600	3.1	B564492
Total Total Kjeldahl Nitrogen (Calc)	mg/L	12	2.0	B564487
Field Parameters	•		•	
Field pH	рН	10.77	N/A	ONSITE
Field Temperature (Fd)	deg. C	1.0	N/A	ONSITE
Misc. Inorganics			•	
Fluoride (F)	mg/L	0.410	0.010	B570896
рН	рН	8.46	N/A	B570891
Reactive Silica	mg/L	16	0.25	B568127
Acidity (pH 4.5)	mg/L	<1.0	1.0	B569390
Alkalinity (Total as CaCO3)	mg/L	104	0.50	B570889
Total Organic Carbon (C)	mg/L	29	1.0	B570180
Acidity (pH 8.3)	mg/L	<1.0	1.0	B569390
Alkalinity (PP as CaCO3)	mg/L	3.80	0.50	B570889
Bicarbonate (HCO3)	mg/L	118	0.50	B570889
Carbonate (CO3)	mg/L	4.56	0.50	B570889
Hydroxide (OH)	mg/L	<0.50	0.50	B570889
Total Suspended Solids	mg/L	4.8	1.0	B569727
Anions				
Orthophosphate (P)	mg/L	0.0034	0.0010	B566064
Chloride (Cl)	mg/L	36	0.50	B566321
Dissolved-Low Level Sulphate (SO4)	mg/L	870	3.0	B572383
Nutrients	•		•	
Total Carbon (C)	mg/L	52	0.50	B564479
Total Inorganic Carbon (C)	mg/L	22 (1)	1.0	B583365
Dissolved Phosphorus (P)	mg/L	0.0046	0.0020	B567795
Total Phosphorus (P)	mg/L	0.011	0.0020	B567800
RDL = Reportable Detection Limit	٠			

N/A = Not Applicable

(1) Matrix spike exceeds acceptance limits due to matrix interference.



Your P.O. #: 6404002992

RESULTS OF CHEMICAL ANALYSES OF WATER

Bureau Veritas ID		CXV761		
Sampling Date		2024/10/11 14:10		
COC Number		1/1		
	UNITS	0008-SA2	RDL	QC Batch
Total Ammonia (N)	mg/L	8.2	0.025	B568004
Nitrite (N)	mg/L	0.99	0.0010	B567269
Nitrate (N)	mg/L	45	0.010	B567269
Total Nitrogen (N)	mg/L	55 (1)	2.0	B568337
Physical Properties	*	•	•	•
Conductivity	uS/cm	2160	1.0	B570893
Physical Properties	•		•	•
Turbidity - NTU	NTU	5.2	0.10	B565010

RDL = Reportable Detection Limit

⁽¹⁾ Due to the sample matrix, sample required dilution. Detection limit was adjusted accordingly.



RDL = Reportable Detection Limit

Arctic Canadian Diamond Company Ltd Site Location: MDMER/SNP/SEEPAGE

Your P.O. #: 6404002992

MERCURY BY COLD VAPOR (WATER)

				-			
Bureau Veritas ID		CXV758	CXV759	CXV760	CXV761		
Sampling Date		2024/10/11 14:09	2024/10/11 14:11	2024/10/11 14:15	2024/10/11 14:10		
COC Number		1/1	1/1	1/1	1/1		
	UNITS	0008-121-FB	0008-494-TB	0008-SA26	0008-SA2	RDL	QC Batch
Elements							
Total Mercury (Hg)	mg/l	<0.0000019	<0.0000019	<0.0000019	<0.0000019	0.0000019	B576546



Your P.O. #: 6404002992

ELEMENTS BY ATOMIC SPECTROSCOPY (WATER)

Bureau Veritas ID		CXV758	CXV759	CXV760		CXV761		
Sampling Date		2024/10/11	2024/10/11	2024/10/11		2024/10/11		
Jamping Date		14:09	14:11	14:15		14:10		
COC Number		1/1	1/1	1/1		1/1		
	UNITS	0008-121-FB	0008-494-TB	0008-SA26	RDL	0008-SA2	RDL	QC Batch
Elements								
Total Aluminum (Al)	mg/L	0.0044	<0.0030	0.18	0.0030	0.16	0.0030	B577199
Total Antimony (Sb)	mg/L	<0.00060	<0.00060	0.0043	0.00060	0.0044	0.00060	B577199
Total Arsenic (As)	mg/L	<0.00020	<0.00020	0.0048	0.00020	0.0051	0.00020	B577199
Total Barium (Ba)	mg/L	<0.010	<0.010	0.052	0.010	0.051	0.010	B577202
Total Beryllium (Be)	mg/L	<0.0010	<0.0010	<0.0010	0.0010	<0.0010	0.0010	B577199
Total Boron (B)	mg/L	<0.020	<0.020	0.14	0.020	0.15	0.020	B577202
Total Cadmium (Cd)	mg/L	<0.000020	<0.000020	0.00045	0.000020	0.00044	0.000020	B577199
Total Calcium (Ca)	mg/L	<0.30	<0.30	87	0.30	87	0.30	B577202
Total Chromium (Cr)	mg/L	<0.0010	<0.0010	<0.0010	0.0010	<0.0010	0.0010	B577199
Total Cobalt (Co)	mg/L	<0.00030	<0.00030	0.026	0.00030	0.026	0.00030	B577199
Total Copper (Cu)	mg/L	0.0010	<0.0010	0.0019	0.0010	0.0016	0.0010	B577199
Total Iron (Fe)	mg/L	<0.060	<0.060	0.28	0.060	0.26	0.060	B577202
Total Lead (Pb)	mg/L	<0.00020	<0.00020	<0.00020	0.00020	<0.00020	0.00020	B577199
Total Lithium (Li)	mg/L	<0.020	<0.020	0.069	0.020	0.068	0.020	B577202
Total Magnesium (Mg)	mg/L	<0.20	<0.20	85	0.20	84	0.20	B577202
Total Manganese (Mn)	mg/L	<0.0040	<0.0040	0.75	0.0040	0.75	0.0040	B577202
Total Molybdenum (Mo)	mg/L	<0.00020	<0.00020	1.4	0.00020	1.4	0.00020	B577199
Total Nickel (Ni)	mg/L	<0.00050	<0.00050	1.1	0.00050	1.1	0.00050	B577199
Total Potassium (K)	mg/L	<0.30	<0.30	110	0.30	110	0.30	B577202
Total Selenium (Se)	mg/L	<0.00020	<0.00020	0.0046	0.00020	0.0049	0.00080	B577199
Total Silicon (Si)	mg/L	<0.50	<0.50	7.9	0.50	7.8	0.50	B577202
Total Silver (Ag)	mg/L	<0.00010	<0.00010	<0.00010	0.00010	<0.00010	0.00010	B577199
Total Sodium (Na)	mg/L	<0.50	<0.50	150	0.50	150	0.50	B577202
Total Strontium (Sr)	mg/L	<0.020	<0.020	0.75	0.020	0.75	0.020	B577202
Total Sulphur (S)	mg/L	<0.20	<0.20	250	0.20	250	0.20	B577202
Total Thallium (Tl)	mg/L	<0.00020	<0.00020	<0.00020	0.00020	<0.00020	0.00020	B577199
Total Tin (Sn)	mg/L	<0.0010	<0.0010	<0.0010	0.0010	<0.0010	0.0010	B577199
Total Titanium (Ti)	mg/L	<0.0010	<0.0010	0.0049	0.0010	0.0039	0.0010	B577199
Total Uranium (U)	mg/L	<0.00010	<0.00010	0.14	0.00010	0.14	0.00010	B577199
Total Vanadium (V)	mg/L	<0.0010	<0.0010	0.0050	0.0010	0.0050	0.0010	B577199
Total Zinc (Zn)	mg/L	<0.0030	<0.0030	0.0050	0.0030	0.0046	0.0030	B577199
RDL = Reportable Detection	Limit							



GENERAL COMMENTS

Each temperature is the average of up to three cooler temperatures taken at receipt

Package 1	7.5°C
Package 2	7.1°C
Package 3	8.1°C
Package 4	7.5°C
Package 5	5.7°C
Package 6	6.8°C
Package 7	7.1°C
Package 8	7.0°C

Sample CXV758 [0008-121-FB]: Turbidity completed within five days of sampling. Data is satisfactory for compliance purposes. NO2 (N); NO2 (N) + NO3 (N) in Water (LL) completed within five days of sampling. Data is satisfactory for compliance purposes. Nitrogen (Nitrite - Nitrate) Low Level completed within five days of sampling. Data is satisfactory for compliance purposes.

Sample CXV759 [0008-494-TB]: Turbidity completed within five days of sampling. Data is satisfactory for compliance purposes. NO2 (N); NO2 (N) + NO3 (N) in Water (LL) completed within five days of sampling. Data is satisfactory for compliance purposes. Nitrogen (Nitrite - Nitrate) Low Level completed within five days of sampling. Data is satisfactory for compliance purposes.

Sample CXV760 [0008-SA26]: Turbidity completed within five days of sampling. Data is satisfactory for compliance purposes. NO2 (N); NO2 (N) + NO3 (N) in Water (LL) completed within five days of sampling. Data is satisfactory for compliance purposes. Nitrogen (Nitrite - Nitrate) Low Level completed within five days of sampling. Data is satisfactory for compliance purposes.

Sample CXV761 [0008-SA2]: Turbidity completed within five days of sampling. Data is satisfactory for compliance purposes. NO2 (N); NO2 (N) + NO3 (N) in Water (LL) completed within five days of sampling. Data is satisfactory for compliance purposes. Nitrogen (Nitrite - Nitrate) Low Level completed within five days of sampling. Data is satisfactory for compliance purposes. Sample was analyzed past method specified hold time for Carbon (Inorganic). Exceedance of hold time increases the uncertainty of test results but does not necessarily imply that results are compromised.

Results relate only to the items tested.



Bureau Veritas Job #: C482656 Report Date: 2024/10/29

QUALITY ASSURANCE REPORT

Arctic Canadian Diamond Company Ltd
Site Location: MDMER/SNP/SEEPAGE

Your P.O. #: 6404002992

			Matrix	Spike	Spiked	Blank	Method Blank		RPD		QC Sta	ndard
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits	% Recovery	QC Limits
B565010	Turbidity - NTU	2024/10/15			101	80 - 120	<0.10	NTU	7.4	20		
B566064	Orthophosphate (P)	2024/10/16	100	80 - 120	108	80 - 120	<0.0010	mg/L	NC	20		
B566321	Chloride (CI)	2024/10/16	NC	80 - 120	102	80 - 120	<0.50	mg/L				
B567269	Nitrate (N)	2024/10/16	105	80 - 120	99	80 - 120	<0.0020	mg/L	NC	20		
B567269	Nitrite (N)	2024/10/16	104	80 - 120	98	80 - 120	<0.0010	mg/L	NC	20		
B567677	Total Nitrogen (N)	2024/10/17	106	80 - 120	100	80 - 120	<0.020	mg/L	NC	20	105	80 - 120
B567795	Dissolved Phosphorus (P)	2024/10/17	103	80 - 120	100	80 - 120	<0.0010	mg/L	NC	20	94	80 - 120
B567800	Total Phosphorus (P)	2024/10/17	105	80 - 120	100	80 - 120	<0.0010	mg/L	NC	20	94	80 - 120
B567999	Total Ammonia (N)	2024/10/17	103	80 - 120	107	80 - 120	<0.0050	mg/L	1.1	20		
B568004	Total Ammonia (N)	2024/10/17	105	80 - 120	108	80 - 120	<0.0050	mg/L	4.5	20		
B568127	Reactive Silica	2024/10/17	101	80 - 120	101	80 - 120	<0.050	mg/L	NC	20		
B568337	Total Nitrogen (N)	2024/10/18	107	80 - 120	101	80 - 120	<0.020	mg/L	12	20	101	80 - 120
B568752	Total Inorganic Carbon (C)	2024/10/17	NC	80 - 120	103	80 - 120	<1.0	mg/L	0.40	20		
B568971	Total Inorganic Carbon (C)	2024/10/17	72 (1)	80 - 120	103	80 - 120	<1.0	mg/L	2.9	20		
B569390	Acidity (pH 4.5)	2024/10/18					<1.0	mg/L	NC	20		
B569390	Acidity (pH 8.3)	2024/10/18			100	80 - 120	<1.0	mg/L	15	20		
B569727	Total Suspended Solids	2024/10/18	83	80 - 120	97	80 - 120	<0.97	mg/L	NC	20		
B570180	Total Organic Carbon (C)	2024/10/18	113	75 - 125	96	80 - 120	<0.20	mg/L	4.8	20		
B570889	Alkalinity (PP as CaCO3)	2024/10/18					<0.50	mg/L	NC	20		
B570889	Alkalinity (Total as CaCO3)	2024/10/18			103	80 - 120	<0.50	mg/L	NC	20		
B570889	Bicarbonate (HCO3)	2024/10/18					<0.50	mg/L	NC	20		
B570889	Carbonate (CO3)	2024/10/18					<0.50	mg/L	NC	20		
B570889	Hydroxide (OH)	2024/10/18					<0.50	mg/L	NC	20		
B570891	рН	2024/10/18			101	97 - 103			0.14	N/A		
B570893	Conductivity	2024/10/18			100	90 - 110	<1.0	uS/cm	0	20		
B570896	Fluoride (F)	2024/10/18	97	80 - 120	101	80 - 120	<0.010	mg/L	NC	20		
B571815	Total Phosphorus (P)	2024/10/21	98	80 - 120	95	80 - 120	<0.0010	mg/L	NC	20	87	80 - 120
B572383	Dissolved-Low Level Sulphate (SO4)	2024/10/20	102	80 - 120	97	80 - 120	<0.050	mg/L	NC	20		
B576546	Total Mercury (Hg)	2024/10/24	98	80 - 120	106	80 - 120	<0.000019	mg/L	NC	20		
B577199	Total Aluminum (Al)	2024/10/24	166 (1)	80 - 120	97	80 - 120	<0.0030	mg/L	NC	20		
B577199	Total Antimony (Sb)	2024/10/24	95	80 - 120	107	80 - 120	<0.00060	mg/L	NC	20		
B577199	Total Arsenic (As)	2024/10/24	93	80 - 120	102	80 - 120	<0.00020	mg/L	NC	20		
B577199	Total Beryllium (Be)	2024/10/24	101	80 - 120	95	80 - 120	<0.0010	mg/L	NC	20		



QUALITY ASSURANCE REPORT(CONT'D)

Arctic Canadian Diamond Company Ltd Site Location: MDMER/SNP/SEEPAGE

Your P.O. #: 6404002992

			Matrix	Spike	Spiked	Spiked Blank		Blank	RPD		QC Sta	ndard
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits	% Recovery	QC Limits
B577199	Total Cadmium (Cd)	2024/10/24	96	80 - 120	101	80 - 120	<0.000020	mg/L				
B577199	Total Chromium (Cr)	2024/10/24	97	80 - 120	96	80 - 120	<0.0010	mg/L	NC	20		
B577199	Total Cobalt (Co)	2024/10/24	98	80 - 120	97	80 - 120	<0.00030	mg/L	NC	20		
B577199	Total Copper (Cu)	2024/10/24	96	80 - 120	97	80 - 120	<0.0010	mg/L	NC	20		
B577199	Total Lead (Pb)	2024/10/24	98	80 - 120	96	80 - 120	<0.00020	mg/L	NC	20		
B577199	Total Molybdenum (Mo)	2024/10/24	102	80 - 120	101	80 - 120	<0.00020	mg/L	4.9	20		
B577199	Total Nickel (Ni)	2024/10/24	98	80 - 120	96	80 - 120	<0.00050	mg/L	NC	20		
B577199	Total Selenium (Se)	2024/10/24	90	80 - 120	102	80 - 120	<0.00020	mg/L	8.1	20		
B577199	Total Silver (Ag)	2024/10/24	99	80 - 120	96	80 - 120	<0.00010	mg/L	NC	20		
B577199	Total Thallium (TI)	2024/10/24	100	80 - 120	98	80 - 120	<0.00020	mg/L	NC	20		
B577199	Total Tin (Sn)	2024/10/24	100	80 - 120	101	80 - 120	<0.0010	mg/L	NC	20		
B577199	Total Titanium (Ti)	2024/10/24	100	80 - 120	94	80 - 120	<0.0010	mg/L	NC	20		
B577199	Total Uranium (U)	2024/10/24	103	80 - 120	100	80 - 120	<0.00010	mg/L	1.6	20		
B577199	Total Vanadium (V)	2024/10/24	99	80 - 120	98	80 - 120	<0.0010	mg/L	NC	20		
B577199	Total Zinc (Zn)	2024/10/24	87	80 - 120	101	80 - 120	<0.0030	mg/L	NC	20		
B577202	Total Barium (Ba)	2024/10/24	97	80 - 120	96	80 - 120	<0.010	mg/L	1.3	20		
B577202	Total Boron (B)	2024/10/24	98	80 - 120	97	80 - 120	<0.020	mg/L	0	20		
B577202	Total Calcium (Ca)	2024/10/24	NC	80 - 120	92	80 - 120	<0.30	mg/L	1.5	20		
B577202	Total Iron (Fe)	2024/10/24	102	80 - 120	97	80 - 120	<0.060	mg/L	NC	20		
B577202	Total Lithium (Li)	2024/10/24	94	80 - 120	93	80 - 120	<0.020	mg/L	NC	20		
B577202	Total Magnesium (Mg)	2024/10/24	91	80 - 120	91	80 - 120	<0.20	mg/L	0.80	20		
B577202	Total Manganese (Mn)	2024/10/24	103	80 - 120	95	80 - 120	<0.0040	mg/L	NC	20		
B577202	Total Potassium (K)	2024/10/24	96	80 - 120	95	80 - 120	<0.30	mg/L	2.6	20		
B577202	Total Silicon (Si)	2024/10/24	93	80 - 120	92	80 - 120	<0.50	mg/L	2.8	20		
B577202	Total Sodium (Na)	2024/10/24	95	80 - 120	94	80 - 120	<0.50	mg/L	1.4	20		
B577202	Total Strontium (Sr)	2024/10/24	94	80 - 120	94	80 - 120	<0.020	mg/L	0.93	20		
B577202	Total Sulphur (S)	2024/10/24	100	80 - 120	93	80 - 120	<0.20	mg/L	1.3	20		



Bureau Veritas Job #: C482656 Report Date: 2024/10/29

QUALITY ASSURANCE REPORT(CONT'D)

Arctic Canadian Diamond Company Ltd Site Location: MDMER/SNP/SEEPAGE Your P.O. #: 6404002992

			Matrix Spike		Spiked Blank		Method Blank		RPD		QC Standard	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits	% Recovery	QC Limits
B583365	Total Inorganic Carbon (C)	2024/10/28	78 (1)	80 - 120	103	80 - 120	<1.0	mg/L	0.090	20		

N/A = Not Applicable

Duplicate: Paired analysis of a separate portion of the same sample. Used to evaluate the variance in the measurement.

Matrix Spike: A sample to which a known amount of the analyte of interest has been added. Used to evaluate sample matrix interference.

QC Standard: A sample of known concentration prepared by an external agency under stringent conditions. Used as an independent check of method accuracy.

Spiked Blank: A blank matrix sample to which a known amount of the analyte, usually from a second source, has been added. Used to evaluate method accuracy.

Method Blank: A blank matrix containing all reagents used in the analytical procedure. Used to identify laboratory contamination.

NC (Matrix Spike): The recovery in the matrix spike was not calculated. The relative difference between the concentration in the parent sample and the spike amount was too small to permit a reliable recovery calculation (matrix spike concentration was less than the native sample concentration)

NC (Duplicate RPD): The duplicate RPD was not calculated. The concentration in the sample and/or duplicate was too low to permit a reliable RPD calculation (absolute difference <= 2x RDL).

(1) Recovery or RPD for this parameter is outside control limits. The overall quality control for this analysis meets acceptability criteria.



Your P.O. #: 6404002992

VALIDATION SIGNATURE PAGE

The analytical data and all QC contained in this report were reviewed and validated by:

Ghayasuddin Khan, M.Sc., P.Chem., QP, Scientific Specialist, Inorganics

Sandy Yuan, M.Sc., QP, Scientific Specialist

Suwan (Sze Yeung) Fock, B.Sc., Scientific Specialist

Bureau Veritas has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per ISO/IEC 17025, signing the reports. For Service Group specific validation, please refer to the Validation Signatures page if included, otherwise available by request. For Department specific Analyst/Supervisor validation names, please refer to the Test Summary section if included, otherwise available by request. This report is authorized by Scott Cantwell, General Manager responsible for Alberta Environmental laboratory operations.

CHAIN OF CUSTODY FORM

Burgundy Diamond Mines

900 - 606 4 Street SW, Calgary, Alberta, Canada T2P 1T1 Tel: 867-880-4400 ext 2157 Burgundy Contact: Richard Ehlert / Jonah Kelly

ANALYSIS REQUESTED



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Your P.O. #: 6404002992 Your Project #: 62089

Site Location: MDMER/SNP/SEEPAGE

Your C.O.C. #: 102521

Attention: COMPLIANCE TEAM

Arctic Canadian Diamond Company Ltd 900, 606 4 Street SW Calgary, AB CANADA T2P 1T1

Report Date: 2024/11/07

Report #: R3584596 Version: 1 - Final

CERTIFICATE OF ANALYSIS

BUREAU VERITAS JOB #: C485911 Received: 2024/10/24, 10:31

Sample Matrix: Water # Samples Received: 1

		Date	Date		
Analyses	Quantity	Extracted	Analyzed	Laboratory Method	Analytical Method
Acidity pH 4.5 & pH 8.3 (as CaCO3)	1	N/A	2024/10/27	AB SOP-00005	SM 24 2310 B m
Alkalinity - Low Level	1	N/A	2024/10/25	AB SOP-00005	SM 24 2320 B m
Low level chloride/sulphate by AC	1	N/A	2024/10/25	AB SOP-00020	SM24-4500-Cl/SO4-E m
Conductance - Low Level	1	N/A	2024/10/25	AB SOP-00005	SM 24 2510 B m
Fluoride - Low Level	1	N/A	2024/10/25	AB SOP-00005	SM 24 4500-F C m
Hardness Total (calculated as CaCO3) (1)	1	N/A	2024/11/04	BBY WI-00033	Auto Calc
Mercury (Total) by CV	1	2024/10/28	2024/10/30	AB SOP-00084	BCMOE BCLM Oct2013 m
Elements by ICP - Total	1	2024/11/01	2024/11/04	AB SOP-00014 / AB SOP-	EPA 6010d R5 m
				00042	
Elements by ICPMS - Total	1	2024/11/01	2024/11/04	AB SOP-00014 / AB SOP-	EPA 6020b R2 m
				00043	
Ammonia-N Low Level (Preserved)	1	N/A	2024/10/25	AB SOP-00007	SM 24 4500 NH3 A G m
Nitrate + Nitrite-N (calculated) Low Lev	1	N/A	2024/10/28		Auto Calc
Nitrogen (Nitrite - Nitrate) Low Level	1	N/A	2024/10/24	AB SOP-00023	SM 24 4110 B m
pH @25°C (2)	1	N/A	2024/10/25	AB SOP-00005	SM 24 4500-H+B m
Orthophosphate LL by Automated Analyzer (3)	1	N/A	2024/10/25	AB SOP-00025	SM 24 4500-P A, F m
Silica (Reactive)	1	N/A	2024/10/24	AB SOP-00011	EPA 370.1 R1978 m
Sulphate (SO4) by IC	1	N/A	2024/10/26	AB SOP-00026	SM 24 4110 B m
Carbon (total) (Calc Org. + Inorg.)	1	N/A	2024/11/05		Auto Calc
Carbon (Inorganic)	1	N/A	2024/11/07	CAL SOP-00076	Modified AE 2411
Total Kjeldahl Nitrogen (Total)	1	N/A	2024/10/28	BBY WI-00033	Auto Calc
Nitrogen (Total)	1	2024/10/28	2024/10/28	AB SOP-00093	SM 24 4500-N C m
Carbon (Total Organic) (4)	1	N/A	2024/11/05	AB SOP-00087	MMCW 119 1996 m
Total Phosphorus Low Level Dissolved (5)	1	2024/10/29	2024/10/29	AB SOP-00024	SM 24 4500-P A,B,F m
Total Phosphorus Low Level Total	1	2024/10/29	2024/10/29	AB SOP-00024	SM 24 4500-P A,B,F m
Total Suspended Solids (NFR)	1	2024/10/26	2024/10/26	AB SOP-00061	SM 24 2540 D m
Turbidity	1	N/A	2024/10/24	CAL SOP-00081	SM 24 2130 B m
Ion Balance (6)	1	N/A	2024/11/04		
Total Dissolved Solids (Calculated) (6)	1	N/A	2024/11/04		

Remarks:

Bureau Veritas is accredited to ISO/IEC 17025 for specific parameters on scopes of accreditation. Unless otherwise noted, procedures used by Bureau



Your P.O. #: 6404002992 Your Project #: 62089

Site Location: MDMER/SNP/SEEPAGE

Your C.O.C. #: 102521

Attention: COMPLIANCE TEAM

Arctic Canadian Diamond Company Ltd 900, 606 4 Street SW Calgary, AB CANADA T2P 1T1

Report Date: 2024/11/07

Report #: R3584596 Version: 1 - Final

CERTIFICATE OF ANALYSIS

BUREAU VERITAS JOB #: C485911

Received: 2024/10/24, 10:31

Veritas are based upon recognized Provincial, Federal or US method compendia such as CCME, EPA, APHA or the Quebec Ministry of Environment.

All work recorded herein has been done in accordance with procedures and practices ordinarily exercised by professionals in Bureau Veritas' profession using accepted testing methodologies, quality assurance and quality control procedures (except where otherwise agreed by the client and Bureau Veritas in writing). All data is in statistical control and has met quality control and method performance criteria unless otherwise noted. All method blanks are reported; unless indicated otherwise, associated sample data are not blank corrected. Where applicable, unless otherwise noted, Measurement Uncertainty has not been accounted for when stating conformity to the referenced standard.

Bureau Veritas liability is limited to the actual cost of the requested analyses, unless otherwise agreed in writing. There is no other warranty expressed or implied. Bureau Veritas has been retained to provide analysis of samples provided by the Client using the testing methodology referenced in this report. Interpretation and use of test results are the sole responsibility of the Client and are not within the scope of services provided by Bureau Veritas, unless otherwise agreed in writing. Bureau Veritas is not responsible for the accuracy or any data impacts, that result from the information provided by the customer or their agent.

Solid sample results, except biota, are based on dry weight unless otherwise indicated. Organic analyses are not recovery corrected except for isotope dilution methods.

Results relate to samples tested. When sampling is not conducted by Bureau Veritas, results relate to the supplied samples tested.

This Certificate shall not be reproduced except in full, without the written approval of the laboratory.

Reference Method suffix "m" indicates test methods incorporate validated modifications from specific reference methods to improve performance.

- * RPDs calculated using raw data. The rounding of final results may result in the apparent difference.
- (1) "Total Hardness" was calculated from Total Ca and Mg concentrations and may be biased high (Hardness, or Dissolved Hardness, calculated from Dissolved Ca and Mg, should be used for compliance if available).
- (2) The CCME method requires pH to be analysed within 15 minutes of sampling and therefore field analysis is required for compliance. All Laboratory pH analyses in this report are reported past the CCME holding time. Bureau Veritas endeavours to analyze samples as soon as possible after receipt.
- (3) Orthophosphate > Total Phosphorus Imbalance: When applicable, Orthophosphate, Total Phosphorus and dissolved Phosphorus results were reviewed and data quality meets acceptable levels unless otherwise noted.
- (4) TOC present in the sample should be considered as non-purgeable TOC.
- (5) Dissolved Phosphorus > Total Phosphorus Imbalance: When applicable, Dissolved Phosphorus and Total Phosphorus results were reviewed and data quality meets acceptable levels unless otherwise noted.
- (6) Calculation was conducted as per client request using CAL PDF-00333.



Your P.O. #: 6404002992 Your Project #: 62089

Site Location: MDMER/SNP/SEEPAGE

Your C.O.C. #: 102521

Attention: COMPLIANCE TEAM

Arctic Canadian Diamond Company Ltd 900, 606 4 Street SW Calgary, AB CANADA T2P 1T1

Report Date: 2024/11/07

Report #: R3584596

Version: 1 - Final

CERTIFICATE OF ANALYSIS

BUREAU VERITAS JOB #: C485911 Received: 2024/10/24, 10:31

Encryption Key

Please direct all questions regarding this Certificate of Analysis to: Geraldlyn Gouthro, Key Account Specialist Email: geraldlyn.gouthro@bureauveritas.com Phone# (403) 291-3077

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Client Project #: 62089

Site Location: MDMER/SNP/SEEPAGE

Your P.O. #: 6404002992

RESULTS OF CHEMICAL ANALYSES OF WATER

	_			
Bureau Veritas ID		CYO468		
Sampling Date		2024/10/22		
Janipinig Date		10:20		
COC Number		102521		
	UNITS	0008-SA2	RDL	QC Batch
Calculated Parameters				
Total Hardness (CaCO3)	mg/L	62.8	0.50	B578177
Calculated Ion Balance (% Difference)	%	0.61		B578808
Nitrate plus Nitrite (N)	mg/L	30	0.010	B578292
Calculated Total Dissolved Solids	mg/L	1800	3.1	B578809
Total Total Kjeldahl Nitrogen (Calc)	mg/L	14	1.0	B578109
Misc. Inorganics	•	•	=	•
Fluoride (F)	mg/L	0.193	0.010	B580341
рН	рН	10.7	N/A	B580337
Reactive Silica	mg/L	3.9	0.050	B578341
Acidity (pH 4.5)	mg/L	<1.0	1.0	B581106
Alkalinity (Total as CaCO3)	mg/L	194	0.50	B580334
Total Organic Carbon (C)	mg/L	120	2.0	B594561
Acidity (pH 8.3)	mg/L	<1.0	1.0	B581106
Alkalinity (PP as CaCO3)	mg/L	98.7	0.50	B580334
Bicarbonate (HCO3)	mg/L	<0.50	0.50	B580334
Carbonate (CO3)	mg/L	115	0.50	B580334
Hydroxide (OH)	mg/L	1.08	0.50	B580334
Total Suspended Solids	mg/L	1.6	1.0	B581343
Anions	•	•	=	•
Orthophosphate (P)	mg/L	0.0014 (1)	0.0010	B580013
Chloride (Cl)	mg/L	77	0.50	B579749
Dissolved-Low Level Sulphate (SO4)	mg/L	810	3.0	B581544
Nutrients				
Total Carbon (C)	mg/L	130	0.50	B578810
Total Inorganic Carbon (C)	mg/L	9.7 (2)	1.0	B596186
Dissolved Phosphorus (P)	mg/L	0.0053	0.0020	B584360
RDL = Reportable Detection Limit	•		•	-

RDL = Reportable Detection Limit

N/A = Not Applicable

⁽¹⁾ Matrix Spike exceeds acceptance limits due to matrix interference. Reanalysis yields similar results.

⁽²⁾ checked the sample PH=9,checked the label which is correct, rerun the sample with 2 times dilution, data also confirmed with the first run.



Client Project #: 62089

Site Location: MDMER/SNP/SEEPAGE

Your P.O. #: 6404002992

RESULTS OF CHEMICAL ANALYSES OF WATER

	CYO468		
	2024/10/22		
	10:20		
	102521		
UNITS	0008-SA2	RDL	QC Batch
mg/L	<0.020 (1)	0.020	B584333
mg/L	8.7	0.025	B579686
mg/L	3.1	0.0010	B578745
mg/L	27	0.010	B578745
mg/L	41	1.0	B582557
uS/cm	2800	1.0	B580339
-			
NTU	4.6	0.10	B578974
	mg/L mg/L mg/L mg/L mg/L mg/L	10:20 102521 UNITS 0008-SA2 mg/L <0.020 (1) mg/L 8.7 mg/L 3.1 mg/L 27 mg/L 41 uS/cm 2800	10:20 102521 UNITS 0008-SA2 RDL mg/L <0.020 (1) 0.020 mg/L 8.7 0.025 mg/L 3.1 0.0010 mg/L 27 0.010 mg/L 41 1.0 uS/cm 2800 1.0

RDL = Reportable Detection Limit

⁽¹⁾ Due to the sample matrix, sample required dilution. Detection limit was adjusted accordingly. TP < DP: Both values fall within the method uncertainty for duplicates and are likely equivalent.



Client Project #: 62089

Site Location: MDMER/SNP/SEEPAGE

Your P.O. #: 6404002992

MERCURY BY COLD VAPOR (WATER)

Bureau Veritas ID		CYO468		
Compling Data		2024/10/22		
Sampling Date		10:20		
COC Number		102521		
	UNITS	0008-SA2	RDL	QC Batch
Elements				
Elements Total Mercury (Hg)	mg/L	0.0000423	0.0000019	B583777



Client Project #: 62089

Site Location: MDMER/SNP/SEEPAGE

Your P.O. #: 6404002992

ELEMENTS BY ATOMIC SPECTROSCOPY (WATER)

Bureau Veritas ID		CYO468		
Sampling Date		2024/10/22		
Sumpling Dute		10:20		
COC Number		102521		
	UNITS	0008-SA2	RDL	QC Batch
Elements				
Total Aluminum (AI)	mg/L	0.091	0.0030	B590611
Total Antimony (Sb)	mg/L	0.0019	0.00060	B590611
Total Arsenic (As)	mg/L	0.0032	0.00020	B590611
Total Barium (Ba)	mg/L	0.024	0.010	B590614
Total Beryllium (Be)	mg/L	<0.0010	0.0010	B590611
Total Boron (B)	mg/L	0.057	0.020	B590614
Total Cadmium (Cd)	mg/L	0.000081	0.000020	B590611
Total Calcium (Ca)	mg/L	16	0.30	B590614
Total Chromium (Cr)	mg/L	<0.0010	0.0010	B590611
Total Cobalt (Co)	mg/L	0.00098	0.00030	B590611
Total Copper (Cu)	mg/L	<0.0010	0.0010	B590611
Total Iron (Fe)	mg/L	0.24	0.070	B590614
Total Lead (Pb)	mg/L	<0.00020	0.00020	B590611
Total Lithium (Li)	mg/L	0.035	0.020	B590614
Total Magnesium (Mg)	mg/L	5.4	0.20	B590614
Total Manganese (Mn)	mg/L	<0.0040	0.0040	B590614
Total Molybdenum (Mo)	mg/L	0.76	0.00020	B590611
Total Nickel (Ni)	mg/L	0.015	0.00050	B590611
Total Potassium (K)	mg/L	280	0.30	B590614
Total Selenium (Se)	mg/L	0.0022	0.00020	B590611
Total Silicon (Si)	mg/L	3.0	0.50	B590614
Total Silver (Ag)	mg/L	<0.00010	0.00010	B590611
Total Sodium (Na)	mg/L	370	0.50	B590614
Total Strontium (Sr)	mg/L	0.40	0.020	B590614
Total Sulphur (S)	mg/L	280	0.20	B590614
Total Thallium (TI)	mg/L	<0.00020	0.00020	B590611
Total Tin (Sn)	mg/L	<0.0010	0.0010	B590611
Total Titanium (Ti)	mg/L	0.0043	0.0010	B590611
Total Uranium (U)	mg/L	0.0051	0.00010	B590611
Total Vanadium (V)	mg/L	0.014	0.0010	B590611
Total Zinc (Zn)	mg/L	<0.0030	0.0030	B590611
RDL = Reportable Detection	Limit		-	



Client Project #: 62089

Site Location: MDMER/SNP/SEEPAGE

Your P.O. #: 6404002992

GENERAL COMMENTS

Each temperature is the average of up to three cooler temperatures taken at receipt

Package 1	8.9°C
-----------	-------

Sample CYO468 [0008-SA2]: Sample was analyzed past method specified hold time for Carbon (Inorganic). Exceedance of hold time increases the uncertainty of test results but does not necessarily imply that results are compromised.

Results relate only to the items tested.



QUALITY ASSURANCE REPORT

Arctic Canadian Diamond Company Ltd

Client Project #: 62089

Site Location: MDMER/SNP/SEEPAGE

Your P.O. #: 6404002992

			Matrix	Spike	Spiked	Blank	Method E	Blank	RP	D	QC Sta	ndard
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits	% Recovery	QC Limits
B578341	Reactive Silica	2024/10/24	95	80 - 120	107	80 - 120	<0.050	mg/L	0.36	20		
B578745	Nitrate (N)	2024/10/24	100	80 - 120	97	80 - 120	<0.0020	mg/L	0.11	20		
B578745	Nitrite (N)	2024/10/24	100	80 - 120	97	80 - 120	<0.0010	mg/L	2.5	20		
B578974	Turbidity - NTU	2024/10/24			100	80 - 120	<0.10	NTU	0.92	20		
B579686	Total Ammonia (N)	2024/10/25	NC	80 - 120	106	80 - 120	<0.0050	mg/L	0.63	20		
B579749	Chloride (CI)	2024/10/25	NC	80 - 120	96	80 - 120	<0.50	mg/L	0.15	20		
B580013	Orthophosphate (P)	2024/10/25	74 (1)	80 - 120	97	80 - 120	<0.0010	mg/L	7.1	20		
B580334	Alkalinity (PP as CaCO3)	2024/10/25					<0.50	mg/L	NC	20		
B580334	Alkalinity (Total as CaCO3)	2024/10/25			101	80 - 120	<0.50	mg/L	2.2	20		
B580334	Bicarbonate (HCO3)	2024/10/25					<0.50	mg/L	2.2	20		
B580334	Carbonate (CO3)	2024/10/25					<0.50	mg/L	NC	20		
B580334	Hydroxide (OH)	2024/10/25					<0.50	mg/L	NC	20		
B580337	рН	2024/10/25			100	97 - 103			1.8	N/A		
B580339	Conductivity	2024/10/25			100	90 - 110	<1.0	uS/cm	0.57	20		
B580341	Fluoride (F)	2024/10/25	102	80 - 120	100	80 - 120	<0.010	mg/L	4.5	20		
B581106	Acidity (pH 4.5)	2024/10/27					<1.0	mg/L	NC	20		
B581106	Acidity (pH 8.3)	2024/10/27			103	80 - 120	<1.0	mg/L	14	20		
B581343	Total Suspended Solids	2024/10/26	103	80 - 120	97	80 - 120	<0.97	mg/L	12	20		
B581544	Dissolved-Low Level Sulphate (SO4)	2024/10/26	NC	80 - 120	97	80 - 120	<0.050	mg/L	0.35	20		
B582557	Total Nitrogen (N)	2024/10/28	109	80 - 120	106	80 - 120	<0.020	mg/L	3.7	20	105	80 - 120
B583777	Total Mercury (Hg)	2024/10/30	105	80 - 120	105	80 - 120	<0.000019	mg/L	NC	20		
B584333	Total Phosphorus (P)	2024/10/29	107	80 - 120	100	80 - 120	<0.0010	mg/L	0.22	20	96	80 - 120
B584360	Dissolved Phosphorus (P)	2024/10/29	106	80 - 120	99	80 - 120	<0.0010	mg/L	12	20	95	80 - 120
B590611	Total Aluminum (AI)	2024/11/04	104	80 - 120	108	80 - 120	<0.0030	mg/L	4.0	20		
B590611	Total Antimony (Sb)	2024/11/04	108	80 - 120	104	80 - 120	<0.00060	mg/L	3.4	20		
B590611	Total Arsenic (As)	2024/11/04	103	80 - 120	102	80 - 120	<0.00020	mg/L	2.6	20		
B590611	Total Beryllium (Be)	2024/11/04	98	80 - 120	99	80 - 120	<0.0010	mg/L	NC	20		
B590611	Total Cadmium (Cd)	2024/11/04	103	80 - 120	103	80 - 120	<0.000020	mg/L				
B590611	Total Chromium (Cr)	2024/11/04	102	80 - 120	100	80 - 120	<0.0010	mg/L	NC	20		
B590611	Total Cobalt (Co)	2024/11/04	103	80 - 120	102	80 - 120	<0.00030	mg/L	12	20		
B590611	Total Copper (Cu)	2024/11/04	102	80 - 120	102	80 - 120	<0.0010	mg/L	2.4	20		
B590611	Total Lead (Pb)	2024/11/04	103	80 - 120	101	80 - 120	<0.00020	mg/L	0.87	20		



QUALITY ASSURANCE REPORT(CONT'D)

Arctic Canadian Diamond Company Ltd

Client Project #: 62089

Site Location: MDMER/SNP/SEEPAGE

Your P.O. #: 6404002992

			Matrix	Spike	Spiked	Blank	Method E	Blank	RP	D	QC Sta	ndard
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	Value (%) QC Limits		QC Limits
B590611	Total Molybdenum (Mo)	2024/11/04	106	80 - 120	103	80 - 120	<0.00020	mg/L	0.63	20		
B590611	Total Nickel (Ni)	2024/11/04	103	80 - 120	102	80 - 120	<0.00050	mg/L	4.6	20		
B590611	Total Selenium (Se)	2024/11/04	103	80 - 120	101	80 - 120	<0.00020	mg/L	NC	20		
B590611	Total Silver (Ag)	2024/11/04	102	80 - 120	101	80 - 120	<0.00010	mg/L	NC	20		
B590611	Total Thallium (TI)	2024/11/04	101	80 - 120	100	80 - 120	<0.00020	mg/L	NC	20		
B590611	Total Tin (Sn)	2024/11/04	103	80 - 120	102	80 - 120	<0.0010	mg/L	NC	20		
B590611	Total Titanium (Ti)	2024/11/04	98	80 - 120	98	80 - 120	<0.0010	mg/L	19	20		
B590611	Total Uranium (U)	2024/11/04	105	80 - 120	104	80 - 120	<0.00010	mg/L	NC	20		
B590611	Total Vanadium (V)	2024/11/04	104	80 - 120	102	80 - 120	<0.0010	mg/L	NC	20		
B590611	Total Zinc (Zn)	2024/11/04	102	80 - 120	102	80 - 120	<0.0030	mg/L	1.4	20		
B590614	Total Barium (Ba)	2024/11/04	94	80 - 120	96	80 - 120	<0.010	mg/L	NC	20		
B590614	Total Boron (B)	2024/11/04	100	80 - 120	100	80 - 120	<0.020	mg/L	18	20		
B590614	Total Calcium (Ca)	2024/11/04	100	80 - 120	98	80 - 120	<0.30	mg/L	NC	20		
B590614	Total Iron (Fe)	2024/11/04	104	80 - 120	105	80 - 120	<0.070	mg/L	10	20		
B590614	Total Lithium (Li)	2024/11/04	93	80 - 120	95	80 - 120	<0.020	mg/L	NC	20		
B590614	Total Magnesium (Mg)	2024/11/04	98	80 - 120	100	80 - 120	<0.20	mg/L	NC	20		
B590614	Total Manganese (Mn)	2024/11/04	100	80 - 120	100	80 - 120	<0.0040	mg/L	16	20		
B590614	Total Potassium (K)	2024/11/04	97	80 - 120	97	80 - 120	<0.30	mg/L	NC	20		
B590614	Total Silicon (Si)	2024/11/04	101	80 - 120	99	80 - 120	<0.50	mg/L	NC	20		
B590614	Total Sodium (Na)	2024/11/04	NC	80 - 120	93	80 - 120	<0.50	mg/L	13	20		
B590614	Total Strontium (Sr)	2024/11/04	92	80 - 120	93	80 - 120	<0.020	mg/L	NC	20		
B590614	Total Sulphur (S)	2024/11/04	NC	80 - 120	98	80 - 120	<0.20	mg/L	19	20		
B594561	Total Organic Carbon (C)	2024/11/05	NC	75 - 125	102	80 - 120	<0.20	mg/L	1.0	20		



Bureau Veritas Job #: C485911 Report Date: 2024/11/07

QUALITY ASSURANCE REPORT(CONT'D)

Arctic Canadian Diamond Company Ltd

Client Project #: 62089

Site Location: MDMER/SNP/SEEPAGE

Your P.O. #: 6404002992

			Matrix Spike		Spiked	Blank	Method E	Blank	RPI)	QC Standard	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits	% Recovery	QC Limits
B596186	Total Inorganic Carbon (C)	2024/11/07	NC	80 - 120	102	80 - 120	<1.0	mg/L	0.91	20		

N/A = Not Applicable

Duplicate: Paired analysis of a separate portion of the same sample. Used to evaluate the variance in the measurement.

Matrix Spike: A sample to which a known amount of the analyte of interest has been added. Used to evaluate sample matrix interference.

QC Standard: A sample of known concentration prepared by an external agency under stringent conditions. Used as an independent check of method accuracy.

Spiked Blank: A blank matrix sample to which a known amount of the analyte, usually from a second source, has been added. Used to evaluate method accuracy.

Method Blank: A blank matrix containing all reagents used in the analytical procedure. Used to identify laboratory contamination.

NC (Matrix Spike): The recovery in the matrix spike was not calculated. The relative difference between the concentration in the parent sample and the spike amount was too small to permit a reliable recovery calculation (matrix spike concentration was less than the native sample concentration)

NC (Duplicate RPD): The duplicate RPD was not calculated. The concentration in the sample and/or duplicate was too low to permit a reliable RPD calculation (absolute difference <= 2x RDL).

(1) Recovery or RPD for this parameter is outside control limits. The overall quality control for this analysis meets acceptability criteria.



Client Project #: 62089

Site Location: MDMER/SNP/SEEPAGE

Your P.O. #: 6404002992

VALIDATION SIGNATURE PAGE

The analytical data and all QC contained in this report were reviewed and validated by:

Ghayasuddin Khan, M.Sc., P.Chem., QP, Scientific Specialist, Inorganics

Sandy Yuan, M.Sc., QP, Scientific Specialist

Bureau Veritas has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per ISO/IEC 17025, signing the reports. For Service Group specific validation, please refer to the Validation Signatures page if included, otherwise available by request. For Department specific Analyst/Supervisor validation names, please refer to the Test Summary section if included, otherwise available by request. This report is authorized by Scott Cantwell, General Manager responsible for Alberta Environmental laboratory operations.

CHAIN OF CUSTODY FORM

COC# 102521

Burgundy Diamond Mines

900 - 606 4 Street SW, Calgary, Alberta, Canada T2P 1T1 Tel: 867-880-4400 ext 2157 Burgundy Contact: Richard Ehlert / Jonah Kelly

> ANALYSIS REQUESTED Indicate Filtered (F), Preserved (P) or Filtered and Preserved (F/P) below



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Appendix C – Bioassay



Your P.O. #: 6404002992

Site Location: MDMER/SNP/SEEPAGE

Your C.O.C. #: 102423

Attention: COMPLIANCE TEAM

Arctic Canadian Diamond Company Ltd 900, 606 4 Street SW Calgary, AB CANADA T2P 1T1

Report Date: 2024/10/23

Report #: R3576135 Version: 1 - Final

CERTIFICATE OF ANALYSIS

BUREAU VERITAS JOB #: C481509 Received: 2024/10/10, 10:00

Sample Matrix: Water # Samples Received: 1

·		Date	Date		
Analyses	Quantity	Extracted	Analyzed	Laboratory Method	Analytical Method
Acidity pH 4.5 & pH 8.3 (as CaCO3)	1	N/A	2024/10/11	AB SOP-00005	SM 24 2310 B m
Alkalinity - Low Level	1	N/A	2024/10/13	AB SOP-00005	SM 24 2320 B m
Low level chloride/sulphate by AC	1	N/A	2024/10/15	AB SOP-00020	SM24-4500-CI/SO4-E m
Conductance - Low Level	1	N/A	2024/10/16	AB SOP-00005	SM 24 2510 B m
Fluoride - Low Level	1	N/A	2024/10/17	AB SOP-00005	SM 24 4500-F C m
Hardness Total (calculated as CaCO3) (1)	1	N/A	2024/10/18	BBY WI-00033	Auto Calc
Mercury (Total) by CV	1	2024/10/16	2024/10/17	AB SOP-00084	BCMOE BCLM Oct2013 m
Elements by ICP - Total	1	2024/10/16	2024/10/18	AB SOP-00014 / AB SOP-	EPA 6010d R5 m
				00042	
Elements by ICPMS - Total	1	2024/10/16	2024/10/18	AB SOP-00014 / AB SOP-	EPA 6020b R2 m
				00043	
Ammonia-N Low Level (Preserved)	1	N/A		AB SOP-00007	SM 24 4500 NH3 A G m
Nitrate + Nitrite-N (calculated) Low Lev	1	N/A	2024/10/16		Auto Calc
Nitrogen (Nitrite - Nitrate) Low Level	1	N/A	2024/10/11	AB SOP-00023	SM 24 4110 B m
pH @25°C (2)	1	N/A	2024/10/13	AB SOP-00005	SM 24 4500-H+B m
Orthophosphate LL by Automated Analyzer (3)	1	N/A	2024/10/22	AB SOP-00025	SM 24 4500-P A, F m
Silica (Reactive)	1	N/A	2024/10/17	AB SOP-00011	EPA 370.1 R1978 m
Sulphate (SO4) by IC	1	N/A	2024/10/15	AB SOP-00026	SM 24 4110 B m
Carbon (total) (Calc Org. + Inorg.)	1	N/A	2024/10/18		Auto Calc
Carbon (Inorganic)	1	N/A	2024/10/17	CAL SOP-00076	Modified AE 2411
Total Kjeldahl Nitrogen (Total)	1	N/A	2024/10/15	BBY WI-00033	Auto Calc
Nitrogen (Total)	1	2024/10/11	2024/10/15	AB SOP-00093	SM 24 4500-N C m
Carbon (Total Organic) (4)	1	N/A	2024/10/18	AB SOP-00087	MMCW 119 1996 m
Total Phosphorus Low Level Dissolved (5)	1	2024/10/22	2024/10/22	AB SOP-00024	SM 24 4500-P A,B,F m
Total Phosphorus Low Level Total	1	2024/10/15	2024/10/16	AB SOP-00024	SM 24 4500-P A,B,F m
Total Suspended Solids (NFR)	1	2024/10/11	2024/10/12	AB SOP-00061	SM 24 2540 D m
Turbidity	1	N/A	2024/10/11	CAL SOP-00081	SM 24 2130 B m
Ion Balance (6)	1	N/A	2024/10/18		
Total Dissolved Solids (Calculated) (6)	1	N/A	2024/10/18		

Remarks:

Bureau Veritas is accredited to ISO/IEC 17025 for specific parameters on scopes of accreditation. Unless otherwise noted, procedures used by Bureau



Your P.O. #: 6404002992

Site Location: MDMER/SNP/SEEPAGE

Your C.O.C. #: 102423

Attention: COMPLIANCE TEAM

Arctic Canadian Diamond Company Ltd 900, 606 4 Street SW Calgary, AB CANADA T2P 1T1

Report Date: 2024/10/23

Report #: R3576135 Version: 1 - Final

CERTIFICATE OF ANALYSIS

BUREAU VERITAS JOB #: C481509 Received: 2024/10/10, 10:00

Veritas are based upon recognized Provincial, Federal or US method compendia such as CCME, EPA, APHA or the Quebec Ministry of Environment.

All work recorded herein has been done in accordance with procedures and practices ordinarily exercised by professionals in Bureau Veritas' profession using accepted testing methodologies, quality assurance and quality control procedures (except where otherwise agreed by the client and Bureau Veritas in writing). All data is in statistical control and has met quality control and method performance criteria unless otherwise noted. All method blanks are reported; unless indicated otherwise, associated sample data are not blank corrected. Where applicable, unless otherwise noted, Measurement Uncertainty has not been accounted for when stating conformity to the referenced standard.

Bureau Veritas liability is limited to the actual cost of the requested analyses, unless otherwise agreed in writing. There is no other warranty expressed or implied. Bureau Veritas has been retained to provide analysis of samples provided by the Client using the testing methodology referenced in this report. Interpretation and use of test results are the sole responsibility of the Client and are not within the scope of services provided by Bureau Veritas, unless otherwise agreed in writing. Bureau Veritas is not responsible for the accuracy or any data impacts, that result from the information provided by the customer or their agent.

Solid sample results, except biota, are based on dry weight unless otherwise indicated. Organic analyses are not recovery corrected except for isotope dilution methods.

Results relate to samples tested. When sampling is not conducted by Bureau Veritas, results relate to the supplied samples tested.

This Certificate shall not be reproduced except in full, without the written approval of the laboratory.

Reference Method suffix "m" indicates test methods incorporate validated modifications from specific reference methods to improve performance.

- * RPDs calculated using raw data. The rounding of final results may result in the apparent difference.
- (1) "Total Hardness" was calculated from Total Ca and Mg concentrations and may be biased high (Hardness, or Dissolved Hardness, calculated from Dissolved Ca and Mg, should be used for compliance if available).
- (2) The CCME method requires pH to be analysed within 15 minutes of sampling and therefore field analysis is required for compliance. All Laboratory pH analyses in this report are reported past the CCME holding time. Bureau Veritas endeavours to analyze samples as soon as possible after receipt.
- (3) Orthophosphate > Total Phosphorus Imbalance: When applicable, Orthophosphate, Total Phosphorus and dissolved Phosphorus results were reviewed and data quality meets acceptable levels unless otherwise noted.
- (4) TOC present in the sample should be considered as non-purgeable TOC.
- (5) Dissolved Phosphorus > Total Phosphorus Imbalance: When applicable, Dissolved Phosphorus and Total Phosphorus results were reviewed and data quality meets acceptable levels unless otherwise noted.
- (6) Calculation was conducted as per client request using CAL PDF-00333.



Your P.O. #: 6404002992

Site Location: MDMER/SNP/SEEPAGE

Your C.O.C. #: 102423

Attention: COMPLIANCE TEAM

Arctic Canadian Diamond Company Ltd 900, 606 4 Street SW Calgary, AB CANADA T2P 1T1

Report Date: 2024/10/23

Report #: R3576135 Version: 1 - Final

CERTIFICATE OF ANALYSIS

BUREAU VERITAS JOB #: C481509 Received: 2024/10/10, 10:00

Encryption Key

Please direct all questions regarding this Certificate of Analysis to: Geraldlyn Gouthro, Key Account Specialist Email: geraldlyn.gouthro@bureauveritas.com Phone# (403) 291-3077

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Bureau Veritas has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per ISO/IEC 17025, signing the reports. For Service Group specific validation, please refer to the Validation Signatures page if included, otherwise available by request. For Department specific Analyst/Supervisor validation names, please refer to the Test Summary section if included, otherwise available by request. This report is authorized by Scott Cantwell, General Manager responsible for Alberta Environmental laboratory operations.



Your P.O. #: 6404002992

RESULTS OF CHEMICAL ANALYSES OF WATER

Bureau Veritas ID		CXN659		
		2024/10/06		
Sampling Date		11:50		
COC Number		102423		
	UNITS	1616-46B	RDL	QC Batch
Calculated Parameters	•		*	
Total Hardness (CaCO3)	mg/L	583	0.50	B559189
Calculated Ion Balance (% Difference)	%	6.6		B559769
Nitrate plus Nitrite (N)	mg/L	74	0.022	B559971
Calculated Total Dissolved Solids	mg/L	2200	7.9	B559772
Total Total Kjeldahl Nitrogen (Calc)	mg/L	19	2.0	B559520
Misc. Inorganics			I	
Fluoride (F)	mg/L	0.403	0.010	B563609
рН	рН	6.56	N/A	B563606
Reactive Silica	mg/L	11	0.25	B568734
Acidity (pH 4.5)	mg/L	<1.0	1.0	B559797
Alkalinity (Total as CaCO3)	mg/L	105	0.50	B563605
Total Organic Carbon (C)	mg/L	3.0	0.20	B570180
Acidity (pH 8.3)	mg/L	4.9	1.0	B559797
Alkalinity (PP as CaCO3)	mg/L	<0.50	0.50	B563605
Bicarbonate (HCO3)	mg/L	128	0.50	B563605
Carbonate (CO3)	mg/L	<0.50	0.50	B563605
Hydroxide (OH)	mg/L	<0.50	0.50	B563605
Total Suspended Solids	mg/L	690 (1)	6.8	B560869
Anions				
Orthophosphate (P)	mg/L	0.0019	0.0010	B575338
Chloride (CI)	mg/L	210	2.5	B564326
Dissolved-Low Level Sulphate (SO4)	mg/L	850	3.0	B563525
Nutrients		•	•	
Total Carbon (C)	mg/L	26	0.50	B559761
Total Inorganic Carbon (C)	mg/L	23	1.0	B568752
Dissolved Phosphorus (P)	mg/L	0.0040	0.0020	B575421
Total Phosphorus (P)	mg/L	0.62 (2)	0.020	B564604
Total Ammonia (N)	mg/L	8.7	0.025	B567993
Nitrite (N)	mg/L	6.2	0.010	B562299
PDI - Papartable Detection Limit				

RDL = Reportable Detection Limit

N/A = Not Applicable

- (1) Detection limit raised based on sample volume used for analysis.
- (2) Due to the sample matrix, sample required dilution. Detection limit was adjusted accordingly.



Your P.O. #: 6404002992

RESULTS OF CHEMICAL ANALYSES OF WATER

Bureau Veritas ID		CXN659		
Samulina Data		2024/10/06		
Sampling Date		11:50		
COC Number		102423		
	UNITS	1616-46B	RDL	QC Batch
Nitrate (N)	mg/L	68	0.020	B562299
Total Nitrogen (N)	mg/L	87 (1)	2.0	B562110
Physical Properties				
Conductivity	uS/cm	3210	1.0	B563607
Physical Properties	-			•
Turbidity - NTU	NTU	710	0.10	B561426

RDL = Reportable Detection Limit

⁽¹⁾ Due to the sample matrix, sample required dilution. Detection limit was adjusted accordingly.



Your P.O. #: 6404002992

MERCURY BY COLD VAPOR (WATER)

Bureau Veritas ID		CXN659		
Sampling Date		2024/10/06		
Sampling Date		11:50		
COC Number		102423		
	UNITS	1616-46B	RDL	QC Batch
Elements	UNITS	1616-46B	RDL	QC Batch
Elements Total Mercury (Hg)	mg/L	0.0000060	0.0000019	QC Batch B567307



Your P.O. #: 6404002992

ELEMENTS BY ATOMIC SPECTROSCOPY (WATER)

Bureau Veritas ID		CXN659		
Compling Data		2024/10/06		
Sampling Date		11:50		
COC Number		102423		
	UNITS	1616-46B	RDL	QC Batch
Elements				
Total Aluminum (Al)	mg/L	13	0.0030	B568663
Total Antimony (Sb)	mg/L	0.0029	0.00060	B568663
Total Arsenic (As)	mg/L	0.011	0.00020	B568663
Total Barium (Ba)	mg/L	0.39	0.10	B568680
Total Beryllium (Be)	mg/L	<0.0010	0.0010	B568663
Total Boron (B)	mg/L	0.30	0.20	B568680
Total Cadmium (Cd)	mg/L	0.00031	0.000020	B568663
Total Calcium (Ca)	mg/L	55	3.0	B568680
Total Chromium (Cr)	mg/L	0.12	0.0010	B568663
Total Cobalt (Co)	mg/L	0.030	0.00030	B568663
Total Copper (Cu)	mg/L	0.020	0.0010	B568663
Total Iron (Fe)	mg/L	29	0.60	B568680
Total Lead (Pb)	mg/L	0.011	0.00020	B568663
Total Lithium (Li)	mg/L	<0.20	0.20	B568680
Total Magnesium (Mg)	mg/L	110	2.0	B568680
Total Manganese (Mn)	mg/L	0.45	0.040	B568680
Total Molybdenum (Mo)	mg/L	0.45	0.00020	B568663
Total Nickel (Ni)	mg/L	0.49	0.00050	B568663
Total Potassium (K)	mg/L	200	3.0	B568680
Total Selenium (Se)	mg/L	0.0035	0.00020	B568663
Total Silicon (Si)	mg/L	59	5.0	B568680
Total Silver (Ag)	mg/L	<0.00010	0.00010	B568663
Total Sodium (Na)	mg/L	390	5.0	B568680
Total Strontium (Sr)	mg/L	1.9	0.20	B568680
Total Sulphur (S)	mg/L	290	2.0	B568680
Total Thallium (TI)	mg/L	<0.00020	0.00020	B568663
Total Tin (Sn)	mg/L	<0.0010	0.0010	B568663
Total Titanium (Ti)	mg/L	0.76	0.0010	B568663
Total Uranium (U)	mg/L	0.036	0.00010	B568663
Total Vanadium (V)	mg/L	0.043	0.0010	B568663
Total Zinc (Zn)	mg/L	0.10	0.0030	B568663
RDL = Reportable Detection	Limit		•	



Your P.O. #: 6404002992

GENERAL COMMENTS

Each temperature is the average of up to three cooler temperatures taken at receipt

Package 1	8.1°C
Package 2	8.5°C
Package 3	7.3°C
Package 4	7.6°C
Package 5	7.9°C
Package 6	7.1°C
Package 7	8.8°C
Package 8	8.6°C

Sample CXN659 [1616-468]: Turbidity completed within five days of sampling. Data is satisfactory for compliance purposes. NO2 (N); NO2 (N) + NO3 (N) in Water (LL) completed within five days of sampling. Data is satisfactory for compliance purposes. Nitrogen (Nitrite - Nitrate) Low Level completed within five days of sampling. Data is satisfactory for compliance purposes. Sample was analyzed past method specified hold time for Orthophosphate LL by Automated Analyzer. Exceedance of hold time increases the uncertainty of test results but does not necessarily imply that results are compromised.

ELEMENTS BY ATOMIC SPECTROSCOPY (WATER) Comments

Sample CXN659 [1616-46B] Elements by ICP - Total: Due to the sample matrix, sample required dilution. Detection limit was adjusted accordingly.

Results relate only to the items tested.



Bureau Veritas Job #: C481509 Report Date: 2024/10/23

QUALITY ASSURANCE REPORT

Arctic Canadian Diamond Company Ltd Site Location: MDMER/SNP/SEEPAGE

Your P.O. #: 6404002992

			Matrix	Spike	Spiked	Blank	Method B	Blank	RP	D	QC Sta	ındard
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits	% Recovery	QC Limits
B559797	Acidity (pH 4.5)	2024/10/11					<1.0	mg/L	NC	20		
B559797	Acidity (pH 8.3)	2024/10/11			99	80 - 120	<1.0	mg/L	13	20		
B560869	Total Suspended Solids	2024/10/12	92	80 - 120	101	80 - 120	<1.0	mg/L	2.5	20		
B561426	Turbidity - NTU	2024/10/11			99	80 - 120	<0.10	NTU	6.3	20		
B562110	Total Nitrogen (N)	2024/10/15	90	80 - 120	104	80 - 120	<0.020	mg/L	3.7	20	104	80 - 120
B562299	Nitrate (N)	2024/10/11	NC	80 - 120	100	80 - 120	<0.0020	mg/L	0.11	20		
B562299	Nitrite (N)	2024/10/11	99	80 - 120	100	80 - 120	<0.0010	mg/L	0.065	20		
B563525	Dissolved-Low Level Sulphate (SO4)	2024/10/15	NC	80 - 120	101	80 - 120	<0.30	mg/L	1.0	20		
B563605	Alkalinity (PP as CaCO3)	2024/10/13					<0.50	mg/L	NC	20		
B563605	Alkalinity (Total as CaCO3)	2024/10/13			96	80 - 120	<0.50	mg/L	1.0	20		
B563605	Bicarbonate (HCO3)	2024/10/13					<0.50	mg/L	1.0	20		
B563605	Carbonate (CO3)	2024/10/13					<0.50	mg/L	NC	20		
B563605	Hydroxide (OH)	2024/10/13					<0.50	mg/L	NC	20		
B563606	рН	2024/10/13			100	97 - 103			1.5	N/A		
B563607	Conductivity	2024/10/16			103	90 - 110	<1.0	uS/cm	0.93	20		
B563609	Fluoride (F)	2024/10/17	101	80 - 120	102	80 - 120	<0.010	mg/L	2.7	20		
B564326	Chloride (Cl)	2024/10/15	NC	80 - 120	99	80 - 120	<0.50	mg/L	0.048	20		
B564604	Total Phosphorus (P)	2024/10/16	102	80 - 120	98	80 - 120	<0.0010	mg/L	0.10	20	95	80 - 120
B567307	Total Mercury (Hg)	2024/10/17	93	80 - 120	107	80 - 120	<0.000019	mg/L	NC	20		
B567993	Total Ammonia (N)	2024/10/17	NC	80 - 120	109	80 - 120	<0.0050	mg/L	0.15	20		
B568663	Total Aluminum (Al)	2024/10/18	104	80 - 120	104	80 - 120	<0.0030	mg/L	1.6	20		
B568663	Total Antimony (Sb)	2024/10/18	98	80 - 120	97	80 - 120	<0.00060	mg/L	0.24	20		
B568663	Total Arsenic (As)	2024/10/18	93	80 - 120	93	80 - 120	<0.00020	mg/L	1.6	20		
B568663	Total Beryllium (Be)	2024/10/18	105	80 - 120	103	80 - 120	<0.0010	mg/L	6.3	20		
B568663	Total Cadmium (Cd)	2024/10/18	94	80 - 120	94	80 - 120	<0.000020	mg/L				
B568663	Total Chromium (Cr)	2024/10/18	98	80 - 120	99	80 - 120	<0.0010	mg/L	0	20		
B568663	Total Cobalt (Co)	2024/10/18	98	80 - 120	99	80 - 120	<0.00030	mg/L	1.2	20		
B568663	Total Copper (Cu)	2024/10/18	97	80 - 120	99	80 - 120	<0.0010	mg/L	2.4	20		
B568663	Total Lead (Pb)	2024/10/18	99	80 - 120	100	80 - 120	<0.00020	mg/L	2.0	20		
B568663	Total Molybdenum (Mo)	2024/10/18	103	80 - 120	101	80 - 120	<0.00020	mg/L	8.9	20		
B568663	Total Nickel (Ni)	2024/10/18	98	80 - 120	99	80 - 120	<0.00050	mg/L	0.92	20		
B568663	Total Selenium (Se)	2024/10/18	90	80 - 120	90	80 - 120	<0.00020	mg/L	2.3	20		
B568663	Total Silver (Ag)	2024/10/18	99	80 - 120	99	80 - 120	<0.00010	mg/L	0.53	20		



Bureau Veritas Job #: C481509 Report Date: 2024/10/23

QUALITY ASSURANCE REPORT(CONT'D)

Arctic Canadian Diamond Company Ltd Site Location: MDMER/SNP/SEEPAGE

Your P.O. #: 6404002992

			Matrix	Spike	Spiked	Blank	Method E	Blank	RP	D	QC Sta	ndard
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits	% Recovery	QC Limits
B568663	Total Thallium (TI)	2024/10/18	101	80 - 120	100	80 - 120	<0.00020	mg/L	5.8	20		
B568663	Total Tin (Sn)	2024/10/18	99	80 - 120	98	80 - 120	<0.0010	mg/L	13	20		
B568663	Total Titanium (Ti)	2024/10/18	97	80 - 120	97	80 - 120	<0.0010	mg/L	9.6	20		İ
B568663	Total Uranium (U)	2024/10/18	103	80 - 120	102	80 - 120	<0.00010	mg/L	2.1	20		İ
B568663	Total Vanadium (V)	2024/10/18	99	80 - 120	99	80 - 120	<0.0010	mg/L	2.9	20		
B568663	Total Zinc (Zn)	2024/10/18	88	80 - 120	87	80 - 120	<0.0030	mg/L	2.1	20		
B568680	Total Barium (Ba)	2024/10/18	105	80 - 120	103	80 - 120	<0.010	mg/L	1.7	20		İ
B568680	Total Boron (B)	2024/10/18	102	80 - 120	101	80 - 120	<0.020	mg/L	3.2	20		
B568680	Total Calcium (Ca)	2024/10/18	NC	80 - 120	101	80 - 120	<0.30	mg/L	8.9	20		
B568680	Total Iron (Fe)	2024/10/18	NC	80 - 120	109	80 - 120	<0.060	mg/L	2.9	20		<u> </u>
B568680	Total Lithium (Li)	2024/10/18	102	80 - 120	101	80 - 120	<0.020	mg/L	17	20		<u> </u>
B568680	Total Magnesium (Mg)	2024/10/18	NC	80 - 120	109	80 - 120	<0.20	mg/L	5.5	20		
B568680	Total Manganese (Mn)	2024/10/18	NC	80 - 120	115	80 - 120	<0.0040	mg/L	4.4	20		<u> </u>
B568680	Total Potassium (K)	2024/10/18	112	80 - 120	104	80 - 120	<0.30	mg/L	12	20		<u> </u>
B568680	Total Silicon (Si)	2024/10/18	NC	80 - 120	105	80 - 120	<0.50	mg/L	1.5	20		
B568680	Total Sodium (Na)	2024/10/18	NC	80 - 120	104	80 - 120	<0.50	mg/L	12	20		<u> </u>
B568680	Total Strontium (Sr)	2024/10/18	103	80 - 120	101	80 - 120	<0.020	mg/L	1.6	20		<u> </u>
B568680	Total Sulphur (S)	2024/10/18	105	80 - 120	101	80 - 120	<0.20	mg/L	6.1	20		
B568734	Reactive Silica	2024/10/17	NC	80 - 120	106	80 - 120	<0.050	mg/L	2.5	20		<u> </u>
B568752	Total Inorganic Carbon (C)	2024/10/17	NC	80 - 120	103	80 - 120	<1.0	mg/L	0.40	20		
B570180	Total Organic Carbon (C)	2024/10/18	113	75 - 125	96	80 - 120	<0.20	mg/L	4.8	20		<u> </u>
B575338	Orthophosphate (P)	2024/10/22	91	80 - 120	100	80 - 120	<0.0010	mg/L	0.10	20		<u> </u>
B575421	Dissolved Phosphorus (P)	2024/10/22	105	80 - 120	98	80 - 120	<0.0010	mg/L	3.2	20	91	80 - 120

N/A = Not Applicable

Duplicate: Paired analysis of a separate portion of the same sample. Used to evaluate the variance in the measurement.

Matrix Spike: A sample to which a known amount of the analyte of interest has been added. Used to evaluate sample matrix interference.

QC Standard: A sample of known concentration prepared by an external agency under stringent conditions. Used as an independent check of method accuracy.

Spiked Blank: A blank matrix sample to which a known amount of the analyte, usually from a second source, has been added. Used to evaluate method accuracy.

Method Blank: A blank matrix containing all reagents used in the analytical procedure. Used to identify laboratory contamination.

NC (Matrix Spike): The recovery in the matrix spike was not calculated. The relative difference between the concentration in the parent sample and the spike amount was too small to permit a reliable recovery calculation (matrix spike concentration was less than the native sample concentration)

NC (Duplicate RPD): The duplicate RPD was not calculated. The concentration in the sample and/or duplicate was too low to permit a reliable RPD calculation (absolute difference <= 2x RDL).



VALIDATION SIGNATURE PAGE

The analytical data and all QC contained in this report were reviewed and validated by:

Sandy Yuan, M.Sc., QP, Scientific Specialist

Bureau Veritas has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per ISO/IEC 17025, signing the reports. For Service Group specific validation, please refer to the Validation Signatures page if included, otherwise available by request. For Department specific Analyst/Supervisor validation names, please refer to the Test Summary section if included, otherwise available by request. This report is authorized by Scott Cantwell, General Manager responsible for Alberta Environmental laboratory operations.

COR FCD-00265 / 5 Page <u>1</u> of <u>1</u>

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ROUTINE TAT

CHAIN OF CUSTODY FORM

102423

Burgundy Diamond Mines

900 - 606 4 Street SW, Calgary, Alberta, Canada T2P 1T1 Tel: 867-880-4400 ext 2157 Burgundy Contact: Richard Ehlert / Jonah Kelly

> ANALYSIS REQUESTED Indicate Filtered (F), Preserved (P) or Filtered and Preserved (F/P) below

Send Analytical Results to: compliance.team@burgundydiamonds.com



							Dissolved Nutrients	Major Ions	SNP Total Nutrients	Standard Total Met														pH Field (pH)	Water Temp (°C)
For Lab	The Control Name of	SAM	PLE INFORMATION	ON		diam'r.	Solv	jor	<u>L</u>	nda														E E	P T
Use	Sample Point	Station Type	Date	Time	Matrix	Туре	Dis	Ma	S	Sta														H	Wat
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RESULTS OF RAINBOW TROUT LC50 MULTI-CONCENTRATION

Client: 13553 Arctic Canadian Diamond Company Ltd Job Number: C481504

Client Project Name & Number:

Test Result:

96 hrs LC50 % vol/vol (95% CL): >100% (N/A) Statistical Method: Visual

Sample Name: 1616-43 DISCHARGE Sample Matrix: Water Description: PALE YELLOW, HAZY Sample Number: CXN624-03

EKA 2001 1616 Sample Collected: Oct 08, 2024 11:45 AM Sampling Method: N/A Site Collection:

Sample Collected By: Volume Received: 40 L N/A Avg Temp Arrival: 8°C Storage: 2-6°C

Sample Received: Oct 10, 2024 10:00 AM pH: 7.5 Dissolved Oxygen: 100.0 % Analysis Start: Oct 12, 2024 09:20 AM Temperature: 15 °C Sample Conductance: 386 μS/cm

Concentration	Temperature (°C)	pH (pH)	Conductivity (uS/cm)	Dissolved Oxygen (mg/L)	Mortality (#)	Mortality (%)	Atypical Behaviour (#)	Atypical Behaviour (%)	Mortality (#)	Mortality (%)	Atypical Behaviour (#)	Atypical Behaviour (%)
% vol/vol	Start	Start	Start	Start	24 hrs	24 hrs	24 hrs	24 hrs	48 hrs	48 hrs	48 hrs	48 hrs
0	14	8.0	351	9.2	0	0	0	0	0	0	0	0
6.25	14	8.0	353	9.5	0	0	0	0	0	0	0	0
12.5	14	8.0	355	9.2	0	0	0	0	0	0	0	0
25	14	7.9	359	9.6	0	0	0	0	0	0	0	0
50	14	7.9	366	9.4	0	0	0	0	0	0	0	0
100	15	7.5	386	9.6	0	0	0	0	0	0	0	0

Concentration	Mortality (#)	Mortality (%)	Atypical Behaviour (#)	Atypical Behaviour (%)	Temperature (°C)	pH (pH)	Conductivity (uS/cm)	Dissolved Oxygen (mg/L)	Mortality (#)	Mortality (%)	Atypical Behaviour (#)	Atypical Behaviour (%)
% vol/vol	72 hrs	72 hrs	72 hrs	72 hrs	96 hrs	96 hr	96 hrs	96 hrs	96 hrs	96 hrs	96 hrs	96 hrs
0	0	0	0	0	14	7.8	364	9.3	0	0	0	0
6.25	0	0	0	0	14	7.9	367	9.0	0	0	0	0
12.5	0	0	0	0	14	8.0	370	9.4	0	0	0	0
25	0	0	0	0	14	7.5	374	8.1	0	0	0	0
50	0	0	0	0	14	7.9	381	8.8	0	0	0	0
100	0	0	0	0	14	7.7	404	9.3	0	0	0	0

Comments: None

Culture/Control/Dilution Water City of Edmonton dechlorinated tap water

Hardness: 180 mg/L CaCO₃ Other parameters available on request.

Test Conditions Test concentration: 0,6.25,12.5,25,50,100 (% vol/vol)

Organisms per Vessel: 10 Test Temperature: 15 ± 1 °C Solution Depth: >15 cm

Total # of Organisms Used: 60 Pre-aeration Time: 30 min. Rate of Aeration 6.5±1 mL/ (min*L)

20 L Vessel Volume: 38L Test pH Adjusted: No

Test Volume: Loading Density: 0.4 g/LPhotoperiod: 16:8 (light: dark)

Rainbow Trout (Oncorhynchus mykiss) LSL Trout Hatchery **Test Organism:** Source:

Culture Temperature: 15 ± 2 °C Weight (Mean) +- SD: $0.7 \pm 0.2 g$ Length (Mean) +- SD: 4.36 ± 0.54 cm Culture Water Renewal: ≥ 1.0 L/min/kg fish Weight (Range): 0.3 - 1.0 gLength (Range): 3.40 - 5.00 cm

Culture Photoperiod: 16:8 (light: dark) % Mortality within 7 days: 0%

Acclimation Time: Feeding rate and frequency: daily: 1-5% biomass of trout. >14 days

Reference chemical: Phenol Test Date: Oct 07, 2024 Probit

Test Endpoint 96 hrs LC50 (95% confidence interval) : 9.24 (8.52, 10.0)mg/L Statistical Method: Concentration: 0,7.59,9.15,11,13.3,16 mg/L Historical Mean LC50 (warning limits): 7.84 (4.68, 13.1) mg/L



RESULTS OF RAINBOW TROUT LC50 MULTI-CONCENTRATION

Client:13553Arctic Canadian Diamond Company LtdJob Number:C481504Client Project Name & Number:Sample Number:CXN624-03

<u>Test Method</u> EPS 1/RM/13

Method Deviations : None

Note: The results contained in this report refer only to the testing of the sample submitted. Bureau Veritas is accredited to ISO/IEC 17025 for

specific parameters on scopes of accreditation, including the toxicity parameters reported herein. The conductivity, dissolved oxygen and pH data contained within the toxicity report are provided for information purposes and are not individually accredited parameters. This report

may not be reproduced, except in its entirety, without the written approval of the laboratory.

Analyst: Joey Pilgrim, Kyle Monaghan, Maninder Brar, Svetlana Sofrenovic

Verified By: Natasha Lloyd, Team Lead Date: Oct 23, 2024 02:19 PM



RESULTS OF DAPHNIA MAGNA LC50 MULTI-CONCENTRATION

Client:13553Arctic Canadian Diamond Company LtdJob Number:C481504Client Project Name & Number:Sample Number:CXN624-02

Test Result:

48 hrs LC50 % vol/vol (95% CL): >100% (N/A) Statistical Method: Visual

Sample Name: 1616-43_DISCHARGE Sample Matrix: Water

Description: CLEAR COLOURLESS Sample Prior to Analysis:

Sample Collected: Oct 08, 2024 11:45 AM Sampling Method: N/A pH: 7.6
Sample Collected By: N/A Site Collection: EKA 2001 1616 Temperature: 18 °C

Sample Received: Oct 10, 2024 10:00 AM Volume Received: 1 L Dissolved Oxygen: 127.0 %

Analysis Start: Oct 11, 2024 01:16 PM Avg Temp Arrival: 8 °C Sample Conductance: 390 μS/cm

End: Oct 13, 2024 01:24 PM Storage: 2-6°C Hardness: 60 mg CaCO ₃/L

Concentration	Temperature (°C)	pH (pH)	Conductivity (uS/cm)	Dissolved Oxygen (mg/L)	Mortality (#)	Mortality (%)	Immobility (#)	Immobility (%)	Temperature (°C)	pH (pH)	Conductivity (uS/cm)	Dissolved Oxygen (mg/L)
% vol/vol	Start	Start	Start	Start	24 hrs	24 hrs	24 hrs	24 hrs	48 hrs	48 hr	48 hrs	48 hrs
0	20	8.2	355	8.2	0	0	0	0	19	8.4	352	8.1
6.25	20	8.4	360	8.2	0	0	0	0	19	8.5	354	8.1
12.5	20	8.4	363	8.3	0	0	0	0	19	8.4	368	8.1
25	20	8.3	367	8.5	0	0	0	0	20	8.4	357	8.0
50	20	8.3	374	8.7	0	0	0	0	20	8.4	364	8.3
100	19	8.0	395	9.6	0	0	0	0	19	8.4	398	8.3

Concentration	Mortality (#)	Mortality (%)	Immobility (#)	Immobility (%)
% vol/vol	48 hrs	48 hrs	48 hrs	48 hrs
0	0	0	0	0
6.25	0	0	0	0
12.5	0	0	0	0
25	0	0	0	0
50	0	0	0	0
100	0	0	0	0

Comments: None

Culture/Control/Dilution Water: City of Edmonton dechlorinated tap water

Hardness: 160 mg/L CaCO₃ Other parameters available on request.

Test Conditions Test concentration: 0,6.25,12.5,25,50,100 (% vol/vol)

Organisms per Vessel: 10 Pre-aeration Time: 30 min Rate of Pre-aeration: 25-50 mL/(min*L)

Total # of Organisms Used : 60 Test Temperature : 20 ± 2 °C Test Hardness Adjusted : No Test Volume : $200 \, \text{mL}$ Test pH Adjusted: No

Loading Density: 15.0 mL/Daphnia Photoperiod: 16:8 (light: dark)

<u>Test Organism :</u> Daphnia magna Source : In House Culture

Age at Test Initiation :<24 hrs</th>Average Brood Size :27.9Culture Photoperiod :16:8 (light: dark)% Mortality within 7 days :0Culture Temperature :20 ± 2 °CTime To First Brood :9 Days

Culture Diet Culture is fed algae: 800-1800uL; YCT: 200-800uL Daily. New cultures weekly, 63 daphnids distributed into 6

culture vessels and 3 reproductive vessels.



RESULTS OF DAPHNIA MAGNA LC50 MULTI-CONCENTRATION

Client:13553Arctic Canadian Diamond Company LtdJob Number:C481504Client Project Name & Number:Sample Number:CXN624-02

Reference chemical: Sodium Chloride Test Date: Oct 07, 2024

Test Endpoint 48 hrs LC50 (95% confidence interval) : 6.69 (6.20, 7.21)g/L Statistical Method : Untrimmed

Spearman-Kärber

Historical Mean LC50 (warning limits): 6.02 (4.81, 7.53) g/L Concentration: 0,1.71,2.56,3.82,5.7,8.5 g/L

Test Method EPS 1/RM/14

Method Deviations: None

Note: The results contained in this report refer only to the testing of the sample submitted. Bureau Veritas is accredited to ISO/IEC 17025 for

specific parameters on scopes of accreditation, including the toxicity parameters reported herein. The conductivity, dissolved oxygen and pH data contained within the toxicity report are provided for information purposes and are not individually accredited parameters. This report

may not be reproduced, except in its entirety, without the written approval of the laboratory.

Analyst : Cara Shurgot, Maninder Brar, Natasha Lloyd, Svetlana Sofrenovic

Verified By: Natasha Lloyd, Team Lead Date: Oct 25, 2024 01:12 PM



Ceriodaphnia dubia 7 Day Bioassay Report

Test Details

Job and Sample ID: C481504-CX624

Client Sample ID: 1616-43-DISCHARGE

Date sample collected: 10/8/2024

Test Performed By: NM9,J3P,SVC,KMG

Test Initiation Date: 10/11/2024 Test End Date: 10/18/2024

Dates when subsamples used: 10/11/2024 10/15/2024

10/12/2024 10/16/2024 10/13/2024 10/17/2024

10/14/2024

Chemistries prior to test: Dissolved Oxygen(mg/L): 10.0 Temperature (°C): 24

pH(pH units): 7.9 Conductivity (μS/cm): 393

Т	est Results		Endpoint	95% LCL	95% UCL	Method	Data Transforms	Outliers* (concentration- replicate)
Sample Test Results	7 day Survival Result	LC50	>100	n/a	n/a	Linear Interpolation	Log-X	n/a
(% vol/vol)	7 day Reproduction Result	IC25	>100	n/a	n/a	Linear Interpolation	Log-X	n/a
Reference Toxicant Test Results (g/L)	7 day Survival Result	LC50	1.32	1.05	1.66	Untrimmed Spearman- Karber	Log-X	n/a
	7 day Reproduction Result	IC50	0.70	0.45	1.00	Linear Interpolation	Log-X	0.25-6
Control Chart Data (g/L)	7 day Survival Result	LC50	1.52	1.15	2.00	Lovoy lonnings	n/a	n/a
	7 day Reproduction Result	IC50	1.14	0.70	1.87	Levey-Jennings	ii/a	n/a
Reference Toxicant Test Initiation Date:		2024	4/10/20		•	•		

 $[\]ensuremath{^{*}}$ If outliers were removed, description in comments.

Test Validity Criteria

Mean mortality of the control adults ≤20%:	PASS
Average of ≥15 neonates/surviving adult in the control:	PASS
3 broods produced by ≥60% of control organisms by the end of the 8th day:	PASS
Valid Reference Toxicant test:	PASS

Comments		
25% Concentration analyzed with 9 organisms.		

Test Organisms

Species:	Ceriodaphnia dubia
Source of test organisms:	Aquatic Research Organisms. Hampton, NH
Age of organisms at test initiation:	≤ 24 hours, within 12 hours
Unusual Appearance, behaviour or treatment prior to use in test :	None
Mean % mortality of brood organisms during 7-day period proceding test:	3.5
Number of neonates produced by each organism in its third or subsequent brood:	≥8 neonates
Mean number of neonates per adult during first 3 broods in 7 days preceding test:	23
Observations of ephippia:	None

All test organisms used to initiate this test were taken from a series of individual cultures, that originated from the same mass culture. The 4th brood or subsequent broods produced during the test are not included in the final statistical analysis.

Test Facilities and Apparatus

Tost vossols usodu	16 v 135 mm harasilisata glass tast tuhas
Test vessels used:	16 x 125 mm borosilicate glass test tubes

Control/Dilution Water

Consists of:	16 L RODI from in-house system, to which the following are added:
	4 L Perrier Brand carbonated spring water
	1 mL cyanocobalamin (Vitamin B-12)
	1 mL Sodium Selenate Decahydrate

Test Method

Reference method used for testing:	Biological Test Method: Test of Reproduction and Survival Using the Cladoceran <i>Ceriodaphnia dubia</i> . Environment Canada, EPS 1/RM/21 Second Edition - February 2007		
Did the following occur during sample preparations:	•		
Filtered:	No		
Adjusted for hardness:	No		
Adjusted for pH:	No		
Frequency of observations:	24 ± 2 hours		
Frequency of water quality measurements:	Daily		
Design and description of any specialized procedure:	N/A		
Program used for statistical calculations:	Comprehensive Environmental Toxicity Information System (CETIS). Tidepool Scientific Software. Version 2.1.2.3		
Reference method used for statistical calculations:	Guidance Document on Statistical Methods for Environmental Toxicity Tests. Environment Canada, EPS 1/RM/46 - March 2005, Amendments: June 2007.		

Test Conditions and Procedures

Number of test solutions:	80
Number of test concentrations:	7 and a negative control
Concentrations tested (%):	1.56 3.13 6.25 12.5 25 50 100
Units of tested concentrations:	% vol/vol
Number of replicates:	10
Volume of test solutions:	≥ 15 mL
Depth of test solutions:	≥ 5 cm
Individuals per test vessel:	1
Was pre-aeration performed:	Yes
Procedure:	Oil-free compressed air is dispensed through airline tubing and a disposable
	pipette
Rate:	≤ 100 bubbles / minute
Duration:	20 minutes
Dates where pre-aeration occurred:	10/11/2024 10/15/2024
	10/12/2024 10/16/2024
	10/13/2024 10/17/2024
	10/14/2024
Aeration during testing:	None

Refer to comments section for any deviations.

The reference toxicity test was performed under the same experimental conditions as those used with the test sample.

Refer to comments section for any deviations regarding reference toxicity testing.

The results contained in this report refer only to the testing of the sample submitted. Bureau Veritas is accredited to ISO/IEC 17025 for specific parameters on scopes of accreditation, including the toxicity parameters reported herein. The conductivity, dissolved oxygen and pH data contained within the toxicity report are provided for information purposes and are not individually accredited parameters. This report may not be reproduced, except in its entirety, without the written approval of the laboratory.

Ceriodaphnia dubia Survival and Reproduction Observations

Note: Mortalities are indicated by an "X" in the column and row of the concentration, replicate and day of occurance. If organism was not used for testing, this will be indicated by "N/A" in mortality and neonate columns for the replicate.

	nortality and = Reproduct						•													<u> </u>
Conc.	Replicate								Day of	Testin								Cumulative	Cumulative	SD of mean
(%vol/vol)			1		2		3		4		5		5		7		8	Mean % Mortality	Mean Reproduction	reproduction
	1 2	0 0	М	0 0	М	0 0	М	3 0	M	9 10	M	0 0	М	12 18	М	R	M	Mortality	Reproduction	
Control	3 4 5 6	0 0 0		0 0 0		0 0 0		5 4 5 2		11 9 9 8		0 0 10 0		12 10 13				0.0%	25	2.7
	7 8 9	0 0 0		0 0 0		0 0 0		0 2 0		12 13 8		0 0 0		10 15 18						
	10 1 2 3	0 0 0		0 0 0		0 0 0		0 0 5		12 8 11 12		0 0 0		7 12 16 13						
1.56	4 5 6 7	0 0 0		0 0 0		0 0 0		6 5 2 0		13 8 9 12		0 0 0		18 20 11 20				0.0%	28	5.5
	8 9 10	0 0 0		0 0 0		0 0 0		6 2 4		11 8 11		0 0 0		10 17 6						
	1 2 3 4	0 0 0		0 0 0		0 0 0		0 0 3 5		7 13 11 12		0 0 0		16 15 15 15						
3.13	5 6 7 8	0 0 0		0 0 0		0 0 0		3 0 0 5		11 8 11 10		0 0 0		5 18 22 12				0.0%	27	4.5
	9 10 1	0 0		0 0		0 0		0 6 0		10 11 10 7		0 0		12 12 15						
	2 3 4 5	0 0 0		0 0 0		0 0 0		3 2 5 7		10 7 8 7		0 0 0		18 16 15 12						
6.25	6 7 8	0 0 0		0 0 0		0 0 0		3 2 4		10 13 10		0 0 0		20 23 9				0.0%	27	5.7
	9 10 1 2	0 0 0		0 0 0		0 0 0		2 2 0 0		8 10 6 11		0 0 0		12 12 9 16						
12.5	3 4 5	0 0 0		0 0 0		0 0 0		3 3 3		4 12 12		0 0 0		15 0 18				0.0%	26	6.9
	6 7 8 9	0 0 0		0 0 0		0 0 0		3 0 4 3		13 9 9 10		0 0 0		19 18 17 14						
	10 1 2 3	0 n/a 0 0	n/a	0 n/a 0 0	n/a	0 n/a 0 0	n/a	0 n/a 2 5	n/a	11 n/a 8 11	n/a	0 n/a 0 0	n/a	20 n/a 18 16	n/a	n/a	n/a			
25	4 5 6	0 0 0		0 0 0		0 0 0		3 0 2		6 4 7		0 0 0		18 7 16				0.0%	28	7.3
	7 8 9 10	0 0 0		0 0 0		0 0 0		4 3 4 3		16 13 10 5		12 0 0 0		12 24 21						
	1 2 3 4	0 0 0		0 0 0		0 0 0		3 2 4 2		11 13 12 8		0 12 0 0		16 18 16						
50	5 6 7	0 0 0		0 0 0		0 0 0		4 0 7		8 5 8		0 0 14		20 15				0.0%	30	4.8
	8 9 10 1	0 0 0		0 0 0		0 0 0		5 4 4 5		10 10 6 11		0 0 0		21 21 20 19						
	2 3 4	0 0 0		0 0 0		0 0 0		6 4 4		9 11 16		0 0 0		10 18 20						
100	5 6 7 8	0 0 0		0 0 0		0 0 0		5 5 6 2		8 10 13 10		0 0 0		22 23 19 25				0.0%	33	6.0
	9 10	0		0		0		4 6		12 8		0 15		6						

Average Values for Chemical Data of Test Concentrations

Test Concentration (%		Before Effluent Ren	ewal			After Effluent Rene	ewal	
vol/vol)	Date	Temperature (°C)	рН	DO (mg/L)	Date	Temperature (°C)	рН	DO (mg/L)
Control		25	7.9	7.2		24	7.9	6.5
1.56		25	8.1	7.3		25	7.9	6.3
3.13	_	25	8.1	7.3		24	8.0	6.4
6.25	10/11/2024	24	8.2	7.4	24/10/12	25	8.0	6.5
12.5		24	8.2	7.5	<u> </u>	24	8.0	6.5
25	-	24	8.2	7.8	-	24	8.0	6.7
50	-	24	8.1	8.3	-	24	8.0	6.9
100 Control		24	7.7 8.2	9.5 7.3		24 25	7.9 7.9	7.1 6.2
1.56	-	25	8.2	7.3	-	25	7.9	5.9
3.13	-	25	8.2	7.3	-	25	7.9	6.0
6.25		24	8.2	7.4	1	25	8.0	6.0
12.5	24/10/12	24	8.2	7.4	10/13/2024	25	7.9	5.9
25	-	24	8.2	7.6		25	8.1	6.2
50	-	24	8.1	7.8		25	7.8	6.0
100		24	7.9	8.4		25	7.7	6.0
Control		26	8.5	7.1		25	7.8	6.1
1.56		26	8.4	7.0		25	7.9	6.1
3.13		26	8.5	7.1] [24	7.9	6.2
6.25	24/10/13	25	8.5	7.2	24/10/14	25	7.9	6.2
12.5	, -, -	25	8.5	7.2	' '	24	7.9	6.1
25	-	26	8.4	7.3	-	24	7.9	6.1
50	-	26	8.3	7.5	4	24	7.9	6.3
100		25	8.1	8.2		24	7.8	6.5
Control 1.56	-	24	8.1 8.3	7.2 7.1	-	25 25	7.6 7.7	6.2
3.13	-	24	8.2	7.1	-	25	7.7	6.1
6.25	-	24	8.2	7.1	-	25	7.8	6.2
12.5	24/10/14	24	8.2	7.2	10/15/2024	25	7.8	6.2
25	-	24	8.2	7.3	1	25	7.8	6.2
50	=	24	8.2	7.4		24	7.8	6.3
100	•	24	8.1	7.9	1	24	7.7	6.3
Control		24	8.2	7.2		25	7.8	6.2
1.56		25	8.2	7.2		25	7.8	5.8
3.13		25	8.2	7.3		25	7.9	6.0
6.25	10/15/2024	25	8.2	7.3	24/10/16	25	7.8	6.0
12.5	,, :	24	8.4	7.4	1, _ 2, _ 2	25	7.6	5.9
25	_	24	8.1	7.5	-	24	7.8	5.9
50	-	24	8.6	7.8	-	24	7.7	5.9
100		24	7.9	8.5		24	7.5	6.3
Control 1.56	-	24 25	8.2	7.0	-	25 25	7.6 7.7	5.1 5.2
3.13	-	25	8.3	7.1	-	25	7.7	5.2
6.25		25	8.3	7.2	-	25	7.6	4.9
12.5	24/10/16	25	8.3	7.2	24/10/17	25	7.7	5.0
25	-	24	8.2	7.4	1	25	7.6	5.3
50	Ī	24	8.2	7.6	1	24	7.6	5.2
100		24	7.9	8.3	<u>1</u>	24	7.5	5.3
Control		24	8.2	7.1]	25	7.7	5.8
1.56		24	8.2	7.1] [25	7.8	5.8
3.13		24	8.3	7.1] [25	7.8	5.7
6.25	24/10/17	24	8.2	7.2	24/10/18	25	7.8	5.8
12.5	,,,	24	8.2	7.3] ,,	25	7.8	6.0
25	<u> </u>	24	8.2	7.4	<u> </u>	24	7.8	5.9
50	<u> </u>	24	8.1	7.7	ļ ļ	24	7.7	5.9
100		24	7.6	8.5		24	7.6	6.0
Control	-	N/A	N/A	N/A	↓	N/A	N/A	N/A
1.56	-	N/A	N/A	N/A		N/A	N/A	N/A
3.13 6.25	}	N/A N/A	N/A	N/A		N/A	N/A	N/A
12.5	N/A	N/A N/A	N/A N/A	N/A N/A	N/A	N/A N/A	N/A N/A	N/A N/A
25	-	N/A N/A	N/A N/A	N/A N/A	 	N/A N/A	N/A N/A	N/A N/A
50	-	N/A N/A	N/A	N/A N/A	 	N/A N/A	N/A N/A	N/A N/A
50		N/A	N/A	N/A N/A	1	N/A	N/A	N/A



Your P.O. #: 6404002992 Your Project #: 57216

Site Location: MDMER/SNP/SEEPAGE

Your C.O.C. #: 102495

Attention: COMPLIANCE TEAM

Arctic Canadian Diamond Company Ltd 900, 606 4 Street SW Calgary, AB CANADA T2P 1T1

Report Date: 2024/11/14

Report #: R3587196 Version: 1 - Final

CERTIFICATE OF ANALYSIS

BUREAU VERITAS JOB #: C483304 Received: 2024/10/16, 14:48

Sample Matrix: Water # Samples Received: 1

		Date	Date		
Analyses	Quantity	Extracted	Analyzed	Laboratory Method	Analytical Method
Ecotox Report Attachment (1)	1	2024/11/13	2024/11/13		
pH (Field)	1	N/A	2024/10/16	Field Test	Field Test
Temperature (Field)	1	N/A	2024/10/16	Field Test	Field Test

Remarks:

Bureau Veritas is accredited to ISO/IEC 17025 for specific parameters on scopes of accreditation. Unless otherwise noted, procedures used by Bureau Veritas are based upon recognized Provincial, Federal or US method compendia such as CCME, EPA, APHA or the Quebec Ministry of Environment.

All work recorded herein has been done in accordance with procedures and practices ordinarily exercised by professionals in Bureau Veritas' profession using accepted testing methodologies, quality assurance and quality control procedures (except where otherwise agreed by the client and Bureau Veritas in writing). All data is in statistical control and has met quality control and method performance criteria unless otherwise noted. All method blanks are reported; unless indicated otherwise, associated sample data are not blank corrected. Where applicable, unless otherwise noted, Measurement Uncertainty has not been accounted for when stating conformity to the referenced standard.

Bureau Veritas liability is limited to the actual cost of the requested analyses, unless otherwise agreed in writing. There is no other warranty expressed or implied. Bureau Veritas has been retained to provide analysis of samples provided by the Client using the testing methodology referenced in this report. Interpretation and use of test results are the sole responsibility of the Client and are not within the scope of services provided by Bureau Veritas, unless otherwise agreed in writing. Bureau Veritas is not responsible for the accuracy or any data impacts, that result from the information provided by the customer or their agent.

Solid sample results, except biota, are based on dry weight unless otherwise indicated. Organic analyses are not recovery corrected except for isotope dilution methods.

Results relate to samples tested. When sampling is not conducted by Bureau Veritas, results relate to the supplied samples tested.

This Certificate shall not be reproduced except in full, without the written approval of the laboratory.

 $Reference\ Method\ suffix\ "m"\ indicates\ test\ methods\ incorporate\ validated\ modifications\ from\ specific\ reference\ methods\ to\ improve\ performance.$

- * RPDs calculated using raw data. The rounding of final results may result in the apparent difference.
- (1) This test was performed by Bureau Veritas Vancouver, 4606 Canada Way, Burnaby, BC, V5G 1K5



Your P.O. #: 6404002992 Your Project #: 57216

Site Location: MDMER/SNP/SEEPAGE

Your C.O.C. #: 102495

Attention: COMPLIANCE TEAM

Arctic Canadian Diamond Company Ltd 900, 606 4 Street SW Calgary, AB CANADA T2P 1T1

Report Date: 2024/11/14

Report #: R3587196 Version: 1 - Final

CERTIFICATE OF ANALYSIS

BUREAU VERITAS JOB #: C483304 Received: 2024/10/16, 14:48

Encryption Key

Please direct all questions regarding this Certificate of Analysis to: Geraldlyn Gouthro, Key Account Specialist Email: geraldlyn.gouthro@bureauveritas.com Phone# (403) 291-3077

This report has been generated and distributed using a secure automated process.

Bureau Veritas has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per ISO/IEC 17025, signing the reports. For Service Group specific validation, please refer to the Validation Signatures page if included, otherwise available by request. For Department specific Analyst/Supervisor validation names, please refer to the Test Summary section if included, otherwise available by request. This report is authorized by Scott Cantwell, General Manager responsible for Alberta Environmental laboratory operations.



Arctic Canadian Diamond Company Ltd

Client Project #: 57216

Site Location: MDMER/SNP/SEEPAGE

Your P.O. #: 6404002992

RESULTS OF CHEMICAL ANALYSES OF WATER

Bureau Varitas ID		CXZ024	
Bureau Veritas ID		CX2024	
		2024/10/15	
Sampling Date		17:28	
COC Number		102495	
	UNITS	1616-43_DISCHARGE	QC Batch
Ecotox			
No Parameter	N/A	ATTACHED	DC04546
	IN/A	ATTACHED	B604516
Field Parameters	IN/A	ATTACHED	B604516
	рН	7.11	ONSITE



Arctic Canadian Diamond Company Ltd

Client Project #: 57216

Site Location: MDMER/SNP/SEEPAGE

Your P.O. #: 6404002992

GENERAL COMMENTS

Each temperature is the average of up to three cooler temperatures taken at receipt

Package 1 5.1°C

Results relate only to the items tested.



Arctic Canadian Diamond Company Ltd

Client Project #: 57216

Site Location: MDMER/SNP/SEEPAGE

Your P.O. #: 6404002992

VALIDATION SIGNATURE PAGE

The analytical data and all QC contained in this report were reviewed and validated by:

Kemala						
Kimberly Tamaki, Scientist, Ecotoxicology						
I The						
Suwan (Sze Yeung) Fock, B.Sc., Scientific Specialist						

Bureau Veritas has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per ISO/IEC 17025, signing the reports. For Service Group specific validation, please refer to the Validation Signatures page if included, otherwise available by request. For Department specific Analyst/Supervisor validation names, please refer to the Test Summary section if included, otherwise available by request. This report is authorized by Scott Cantwell, General Manager responsible for Alberta Environmental laboratory operations.

Location: 538830, 7161344

CHAIN OF CUSTODY FORM

COC# 102495 57716



Burgundy Diamond Mines

900 - 606 4 Street SW, Calgary, Alberta, Canada T2P 1T1 Tel: 867-880-4400 ext 2157 Burgundy Contact: Richard Ehlert / Jonah Kelly

> ANALYSIS REQUESTED Indicate Filtered (F), Preserved (P) or Filtered and Preserved (F/P) below



SO#	17214			VEF	RITAS		y Pseudo.K.S														pH Field (pH)	Water Temp (°C)
For Lab		SAMI	PLE INFORMAT	ION			assay												- 1		ield	e Te
Use	Sample Point	Station Type	Date	Time	Matrix	Туре	Bio														F	Wat
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	tions (Billing details,	QC reporting etc):			Re	linquished by:	11	4		D	ate //	c-CCT	-74	Rece	ived by	r	- 1 1	110	0	Dat	e 7017	10/16
Routine TAT						\longrightarrow	Sa	ott)	Т	ime	09	00	M	n	7 4	:41	Er	1	Tim	e 14	48
Once each year least 2 weeks in	before fall freeze up. 3 advance before collect	Schedule on Monday cting sample.	s. Contact BV a	t	Re	linquished by:					ate ime			Rece	ived by	r.				Dat Tim		
Even if NOT d		************************************				ESTERNA PARENT							- 111	JSE ON	NLY							
								Co	oler sea	al inta	ct upo	n receipt	?	Sar	mple to	emper	ature i	upon r	eceipt:			

5.3, 4.8, 5.3

Yes No

Frozen?

Send Analytical Results to: compliance.team@burgundydiamonds.com

Yes No

CHAIN OF CUSTODY FORM

TAS TAS
BUREAU

Burgundy Diamond Mines

900 - 606 4 Street SW, Calgary, Alberta, Canada T2P 1T1 Tel: 867-880-4400 ext 2157 Burgundy Contact: Richard Ehlert / Jonah Kelly

ANALYSIS REQUESTED Indicate Filtered (F), Preserved (P) or Filtered and Preserved (F/P) below

-	B
	BURGUNDY

COC#	102495			1	828			1																		
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																									pH Field (pH)	Water Temp (°C)
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Use		Station Type	Date	Time	Matrix																				표	
	1616-43_Discharge	EKA 2001 1616	15-Oct-2024	17:28	Water	SNP	Y																		7.11	2.2
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	structions (Billing details,	QC reporting etc):				Relinquished by:	11	4					·-cc			R	eceiv	ed by	: (7	- 6	il	m			LOW/	
Routine TA	A.I.						Ju	A	?	_	Time	9	(90	c	+	Am		1 t	4	V E	, 0		Time	14)	48
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east 2 wee	ks in advance before colle	ecting sample.				California excellente	HINE IS	New Y	THE REAL PROPERTY.	Name :	Time		EILES		0.0	DA # 25	Marie Marie	10.2	WHEN					Time		
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ocation: 5	38830, 7161344						l٦		ooier s es	seal II	ntact No	upon T		V/A			Sam _l rozer		mper	rature Ye:	_	n rece	27.			
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www.bvlabs.com

BUREAU VERITAS 4606 Canada Way Burnaby, BC V5G 1K5 Office 604 734 7276 Toll Free 800 665 8566 Fax 604 731 2386

SUBLETHAL TOXICITY TEST ON: 1616-43 DISCHARGE

SAMPLING DATE: OCTOBER 15, 2024

Prepared for:

Arctic Canadian Diamond Company 900, 606 4 Street SW Calgary, AB Canada T2P 1T1

Prepared by:

Ecotoxicology Group Bureau Veritas

Job No.: C483304 November 2024



Summary of Test Results for Samples from Arctic Canadian Diamond Company Sample Date: October 15, 2024 Job C483304

Sample: 1616-43_DISCHARGE

Test		IC25 or LC25 (%v/v)
P. subcapitata:	Cell yield	>90.9 (N/A, N/A)

The results contained in this report refer only to the testing of the sample submitted. Bureau Veritas is accredited to ISO/IEC 17025 for specific parameters on scopes of accreditation, including the toxicity parameters reported herein. The hardness, conductivity, dissolved oxygen, and pH data contained within the toxicity report are provided for information purposes and are not individually accredited parameters. This report may not be reproduced, except in its entirety, without written approval of the laboratory.



Pseudokirchneriella subcapitata Test Data Summary

Client Name/Location	Arctic Canadian Diamond Company / Calgary, AB
Testing Lab/Location	Bureau Veritas / Burnaby, BC
Collection Approach	1 sample
Effluent Sample	
Name of Samples	1616-43_DISCHARGE
Information on labelling/coding	Submissions logged under Job # C483304. See Certificate of Analysis for details.
Sample collection date (y/m/d)	2024/Oct/15
Date (y/m/d) of sample receipt at lab	2024/Oct/16 @ 14:48
Test Organisms	
Species	Pseudokirchneriella subcapitata
Strain number and origin of culture	Strain CPCC #37 was obtained from the Canadian Phycological Culture Centre
Age of culture used to provide inoculum, at start of test	3 days old
Culture in logarithmic growth phase?	See attached growth curve
Inoculum prepared less than 2- 3 hrs before microplate incubation?	Yes, at 11:25
Initial cell density of inoculum	9,318 cells/mL
Appearance, behaviour, or treatment of known-age culture before use	See "Data Summary" data sheet
Test Conditions & Facilities	
Test method	EPS 1/RM/25, 2 nd Edition, March 2007 BBY2SOP-00006 - <i>Pseudokirchneriella subcapitata</i> 72H Growth Inhibition Test
Date & time test(s) started	2024/Oct/18 @ 11:36
Date & time test(s) ended	2024/Oct/21 @ 11:40
Persons performing test(s)	P. Fang, N. Shergill, D. Lai
Mean test temperature	25°C
Procedure/rate/duration of aeration of sample(s) before test	No aeration of the sample
pH adjustment	No pH adjustment of the sample

pH of aqueous sample(s) before preparation and use in toxicity test	See "Data Summary" data sheet
pH of sample before any dilution at start of test	See "Data Summary" data sheet
pH from two controls at start & end of test	See "Data Summary" data sheet
Procedure for sample filtration	10 mL sub-sample was filtered through a pre-conditioned 0.45 μm pore diameter filter
Type & source of control/dilution water	Reconstituted water
Type & quantity of chemicals added to control/dilution H ₂ O	NaHCO ₃ , CaSO ₄ , MgSO ₄ , and KCl in the ratio of 1.6:0.8:1.0:0.07
# and conc. of test solutions	See Cell Counts sheet
# of replicates per conc.	See Cell Counts sheet
Absorbance not used	Cell counts done by Nexcelom Cellometer® Auto X4HM cell counter
Culture/test incubators & apparatus	Conviron Environmental Chamber – Costar Microplate- w/96 u-shaped wells
Microplate final volume	220 μL / well (200 μL sample, 10 μL enrichment media, and 10 μL algal inoculum)
Light intensity & quality	Full spectrum fluorescent lights, 3686-4068 lux
Composition of growth medium	As per Table 1 in EPS 1/RM/25
Test observations and/or deviations from test method and standard practices	There was nothing unusual about the test, no deviations from the test method, and no problems with the test.
Results	Results contained in this report refer only to the testing of samples as submitted.
Date cells counted (y/m/d)	2024/Oct/21
Cell counts in each replicate	See Cell Counts sheet
Any findings of growth stimulation at any concentration?	Yes, significant growth stimulation was found in the 5.682% and 22.728% up to the 90.91% v/v concentrations. See Dunnett Multiple Comparison Test in CETIS.
Name and citation of program(s) and methods used for calculating statistical endpoint(s)	CETIS v2.1.2.3: Linear Interpolation (ICPIN)
Weighting techniques applied?	N/A
Residuals Analysis	N/A
Outliers?	None

QA						
Did the test pass the test validity criteria:	Yes, • % CV: 20%					
• Homogeneity in the control (CV is ≤20%)	• Trend in the control: No					
No trend or gradient in the control	Algal cells increased by: 49.10					
Increase by a factor of >16 in the control						
Ref tox test IC50 (95% CL) (mg	0.0356; 2SD: (0.0293, 0.0428)					
Zn/L) and duration of test	Duration was ~72 hrs					
Ref tox test historic mean & 2SD range (mg Zn/L)	0.0436; 2SD: (0.0267, 0.0713)					
Invalid ref tox test?	No					
Date of ref tox test (y/m/d)	2024/Oct/11					
Conditions of ref tox test	Same as test conditions					

CETIS Analytical Report

Report Date: Test Code/ID:

21 Oct-24 13:02 (p 1 of 2) SL-13553-0524 / 15-4663-9409

Alga Growth	Inhibition Tes	t								Bur	eau Veritas
Analysis ID: Analyzed: Edit Date:	16-1438-5072 21 Oct-24 13	:02 🛕	indpoint: analysis: ID5 Hash	Cell Yield Parametric-C : 15D07B0F90			Sta	TIS Version Itus Level		2.1.2	
_	01-2345-7963 18 Oct-24 11: 21 Oct-24 11:	3936 P	est Type: rotocol: pecies:	: Cell Growth EC/EPS 1/RN Pseudokirchr		pitata		uent: A	P. Fang Algal Culture M Not Applicable	1edia	
Test Length:	72h	Т	axon:	Chlorophyta			Sou	urce: (Canadian Phyd	cological Cu	ılt Age:
Sample ID:	19-8014-0903	3 C	ode:	C483304			Pro	ject: 2	!-11-0691		
Sample Date:	15 Oct-24 17:	28 N	laterial:	Water					Arctic Canadia	n Diamond	
-	: 16 Oct-24 14:	_	AS (PC):				Sta		616-43_DISC		
Sample Age:	66h	C	lient:	Arctic Canadi	an Diamond	Company					
Data Transfor		Alt Hy	0			NOEL	LOEL	TOEL	Tox Unit	s MSDu	PMSD
Untransformed	d	C <> T				2.841	5.682	4.018	35.2	20	40.72%
Dunnett Multi	iple Comparis	on Test									
Control	vs Conc-%		df Test	Stat Critical	MSD	P-Type	P-Value	Decisio	on(α:5%)		
Lab Control 1	1.42		9 0.284	6 2.919	20	CDF	0.9999		gnificant Effec	t	
	2.841		9 1.64	2.919	20	CDF	0.5074		gnificant Effec		
	5.682*		9 3.029	2.919	20	CDF	0.0394		ant Effect		
	11.364		9 2.547	2.919	20	CDF	0.1084	Non-Si	gnificant Effec	t	
	22.728*		9 3.732		20	CDF	0.0080	Signific	ant Effect		
	45.455*		9 3.637		20	CDF	0.0100	Signific	ant Effect		
F - 191	90.91*		9 5.732	2.919	20	CDF	7.6E-05	Signific	ant Effect		
Auxiliary Test	s										
4 ttribute	Test				Test Stat	Critical	P-Value	Decisio	on(α:5%)		
Outlier	Grubbs	Extreme V	alue Test		2.003	2.893	1.0000		liers Detected	70	
Control Trend	Mann-k	Cendall Trer	d Test		0.3987	0.05	0.3987	Non-Si	gnificant Contr	ol Trend	
ANOVA Table											
Source	Sum Sq	uares	Mean	Square	DF	F Stat	P-Value	Decisio	on(α:5%)		
Between	4862.62		694.6	6	7	6.784	0.0003		ant Effect		
Error	2150.31		102.3	96	21			. 0			
Total	7012.93				28						
ANOVA Assun	nptions Tests										
Attribute	Test				Test Stat	Critical	P-Value	Decisio	on(α:1%)		
Variance	Bartlett E	Equality of \	/ariance T	est	3.936	18.48	0.7871		ariances		
Distribution		Wilk W Nor			0.9706	0.9004	0.5753		Distribution		
Cell Yield Sum	nmary										
Conc-%	Code	Count	Mean	95% LCL	. 95% UCL	Median	Min	Max	Std Err	CV%	%Effect
0	N1	8	49.1	41.07	57.13	46.85	37.85	66.65	3.395	19.56%	0.00%
1.42		3	51.05	32.67	69.43	49.5	44.55	59.1	4.271	14.49%	-3.97%
2.841		3	60.33	27.44	93.23	56.2	49.65	75.15	7.646	21.95%	-22.88%
5.682		3	69.85	40.08	99.62	65.5	60.65	83.4	6.918	17.15%	-42.26%
11.364		3	66.55	40.83	92.27	69.65	55	75	5.978	15.56%	-35.54%
22.728		3	74.67	51.46	97.88	75.35	65	83.65	5.395	12.51%	-52.07%
45.455		3	74.02	67.24	80.8	74.2	71.2	76.65	1.576	3.69%	-50.75%
90.91		3	88.37	55.34	121.4	93.6	73.25	98.25	7.677	15.05%	-79.97%

CETIS Analytical Report

Report Date: Test Code/ID:

21 Oct-24 13:02 (p 2 of 2) SL-13553-0524 / 15-4663-9409

Alga Growth Inhibition Test

Bureau Veritas

Analysis ID: 16-1438-5072

Endpoint: Cell Yield

Analysis: Parametric-Control vs Treatments

CETIS Version:

CETISv2.1.2 1

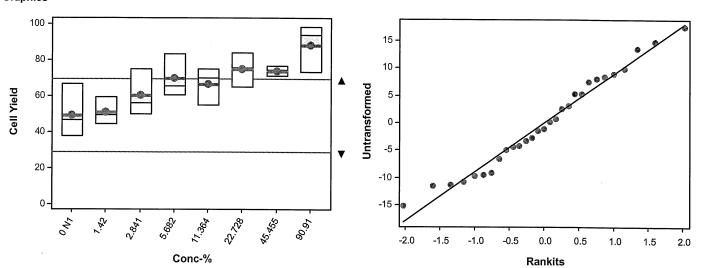
Analyzed: **Edit Date:**

21 Oct-24 13:02

MD5 Hash: 15D07B0F90E5F4D74A82619FF668A860

Status Level: **Editor ID:**

Graphics



CETIS Analytical Report

Report Date:

21 Oct-24 13:02 (p 1 of 1)

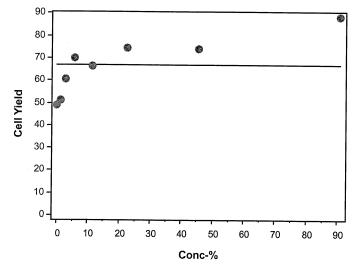
Test Code/ID:

SL-13553-0524 / 15-4663-9409

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Alga G	rowth I	nhibition Test										Bureau Veritas
Analys Analyz Edit Da	ed:	01-4286-4841 21 Oct-24 13:02	2	Anal	ysis:	Cell Yield Linear Interpola 15D07B0F90E5	` '	F668A860	CETIS Ver Status Lev Editor ID:		CETISv2.1.2 1	
	ate:	01-2345-7963 (18 Oct-24 11:34 21 Oct-24 11:40 72h	736	Test Prote Spec Taxo	ocol: ies:	Cell Growth EC/EPS 1/RM/2 Pseudokirchner Chlorophyta	25 iella subcapitata	1	Analyst: Diluent: Brine: Source:	Not /	ang I Culture Media Applicable adian Phycologio	cal Cult Age :
Receip	e Date:	19-8014-0903 15 Oct-24 17:28 16 Oct-24 14:48 66h		Code Mate CAS Clien	rial: (PC):	C483304 Water Arctic Canadian	Diamond Comp	pany	Project: Source: Station:	Arcti	-0691 c Canadian Diar 3-43_DISCHARC	
Linear	Interpo	lation Options			-		•					
X Trans	sform	Y Transforn	1	Seed		Resamples	Exp 95% CL	Method				
Log(X+	1)	Linear		1237	706	200	Yes	Two-Point	Interpolation	1		
Point E	Estimate	es							· · · · · · · · · · · · · · · · · · ·			
Level	%	95% LCL	95%	UCL	Tox U	nits 95% LCL	95% UCL					
IC15	>90.9	•			<1.1							
IC20	>90.9				<1.1							
IC25	>90.9				<1.1							
IC40 IC50	>90.9 >90.9	-			<1.1 <1.1							

Cell Yield Summary			Calculated Variate					Isotonic Variate		
Conc-%	Code	Count	Mean	Median	Min	Max	CV%	%Effect	Mean	%Effect
)	N1	8	49.1	46.85	37.85	66.65	19.56%	0.00%	66.74	0.00%
1.42		3	51.05	49.5	44.55	59.1	14.49%	-3.97%	66.74	0.00%
2.841		3	60.33	56.2	49.65	75.15	21.95%	-22.88%	66.74	0.00%
5.682		3	69.85	65.5	60.65	83.4	17.15%	-42.26%	66.74	0.00%
11.364		3	66.55	69.65	55	75	15.56%	-35.54%	66.74	0.00%
22.728		3	74.67	75.35	65	83.65	12.51%	-52.07%	66.74	0.00%
45.455		3	74.02	74.2	71.2	76.65	3.69%	-50.75%	66.74	0.00%
90.91		3 .	88.37	93.6	73.25	98.25	15.05%	-79.97%	66.74	0.00%

Graphics



Environment Canada PKS Test Data Sheets Cell Counts

BUREAU VERIAS BBY2FCD-00264/13 Tab - Cell Counts Page 1 of 1

Client Name: Arctic Canadian Diamond Company

Date Sampled: 2024 Oct 15

Date & Time Started: 2024 Oct 18 @ 11:36

Sample ID: 1616-43_DISCHARGE

Job / Sample #: C483304 / CXZ024

Date & Time Ended: 2024 Oct 21 @ 11:40

Analyst(s): D. Lai

Instrument ID: BBY2-0006, BBY2-0549

Conc. (% v/v)	Well	Counts (*10 ⁴ Cells/mL) Cell Yield 1 2			Mean Cell Yield	Standard	
(** ***)	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,			(*10 ⁴ Cells/mL)	(*10 ⁴ Cells/mL)	Deviation	%CV
Lab Control	D2	54.9	60.2	56.55	49.10	9.60	20
Lab Control	D3	55.5	42.4	47.95			
Lab Control	D4	48.1	42.1	44.10		1	
Lab Control	D5	56.5	78.8	66.65			
Lab Control	D8	34.2	43.5	37.85]		
Lab Control	D9	40.0	53.5	45.75	1		
Lab Control	D10	52.3	58.4	54.35			
Lab Control	D11	39.0	42.2	39.60			
1.420	C8	54.8	65.4	59.10	51.05	7.40	14
1.420	E8	50.4	50.6	49.50	51.55		14
1.420	F8	40.6	50.5	44.55			
2.841	C7	71.1	81.2	75.15	60.33	13.24	22
2.841	E7	54.1	47.2	49.65	00.00		
2.841	F7	60.4	54.0	56.20			
5.682	C6	85.1	83.7	83.40	69.85	11.98	17
5.682	E6	80.1	52.9	65.50	00.00	11.90	17
5.682	F6	66.1	57.2	60.65			
11.364	C5	53.1	58.9	55.00	66.55	10.35	10
11.364	E5	81.8	59.5	69.65	00.00	10.35	16
11.364	F5	73.3	78.7	75.00			
22.728	C4	66.5	65.5	65.00	74.67	9.34	40
22.728	E4	75.1	94.2	83.65	74.07	9.34	13
22.728	F4	70.7	82.0	75.35			
45.455	C3	73.8	76.6	74.20	74.02	0.70	
45.455	E3	87.0	57.4	71.20	14.02	2.73	4
45.455	F3	73.2	82.1	76.65			
90.91	C2	100.0	89.2		00.07	10.00	
90.91	E2	72.9	75.6	93.60	88.37	13.30	15
90.91	F2	74.5	124.0	73.25 98.25			

Proofed: Mt 2024 NOV 12

Environment Canada PKS Test Data Sheets Data Summary

BUREAU VERITAS BBY2FCD-00264/13 Tab - Test Data Summary Page 1 of 1

Client Name: Arctic Canadian Diamond Company	Job / Sample #: <u>C483304 / CXZ024</u>
Date Sampled: 2024 Oct 15	Sample ID: 1616-43_DISCHARGE
Date Received: 2024 Oct 16	Culture Date: 2024 Oct 15 🔌
Date & Time Started: 2024 Oct 18 @ 🐧 🛂	Culture Description: Green
Date & Time Ended: 2024 Oct 21 @ \\\ \\ \\ \\	Light Intensity at Surface (lux): 3686 - 4068
Analyst(s): P. Fang NSwegill D.LG	
Instrument ID(s): BBY2-0549, BBY2-0550, BBY2-0006, BBY2-0	128, BBY2-0111, BBY2-0077, BBY2-0042
Reagent Water Preparation:	
Date of reconstituted water prep:	Hardness (~20 mg/L CaCO ₃):
Volume prepared: 150 mL reconstituted water to 1L DI water	Analyst:
Temperature (°C):	
Day 0: 15 Day 1: 15 Day 2: _	25 Day 3: <u>45</u>
Sample Water Quality	
Initial pH: Initial Temp (°C): Sample D	escription: <u>Clear, pale yellow. Native orga</u> n
Initial Filtered pH (well B2):	Final Filtered pH (well B2):
Control Water Quality	
Initial Filtered pH (well D6): Determination of Initial Cell Concentration of Inoculum:	Final Filtered pH (well D7): 75
	(*10 ⁴ cells/mL)
Time of inoculum prep:	
Therefore, (Xi) 2050 cells were initially put into each test well and the	ne initial cell density
was (Xd)	
To calculate # cells initially put into each test well:	
Xi = [(0.5 * X) * 0.02] = [(0.5 *	cells
To calculate the initial cell density:	
Xd = [(Xi) * (1000/220)] = [(93 <i>i</i> 8cells/mL
Observations during Test (Y/N):	•

Date	Algal Growth	Condensation	Rotated Plates	Analyst
2024 OCT 19	Y	Y	Y	R
2014 00 20	~	~	7	NSC
2024 oct 21	1	7		qw/

Pseudokirchneriella subcapitata Growth Curve using CP240703; Date: 2024/Jul/09 EC~4000lux, 24°C, 0.5ml culture to 50 mL nutrient medium

