Adelaide SA 5001

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Email: awqc@sawater.com.au

Tel: 1300 653 366

Fax: 1300 883 171



DEW - Department of Environment and Water

ATTN: Claire Sims 81-95 Waymouth Street

SA 5000 AUSTRALIA

10/05/2023

Dear Claire

Please find attached the Final Analytical Report for

Customer Service Request: 143419-2022-CSR-9

Account: 143419

Project:

AWQC-181124 DEW - Healthy Coorong Healthy Basin - Non Routine Event 7- 22/23

This report has also been sent to: Tim Branford

AWQC Sample Receipt hours are Monday and Tuesday 8:30am to 8pm and Wednesday, Thursday and Friday 8:30am to 4:30pm.

Yours sincerely,

Scott Kraft

Customer Services Officer Scott.Kraft@sawater.com.au

Justo

+61 8 7424 1250



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Report Information

Project Name AWQC-181124

Customer DEW - Department of Environment and Water

CSR_ID 143419-2022-CSR-9

Analytical Results

Collection Type

 Sampling Point
 351213-EPA - Murray Mouth

 Sampled Date
 12/04/2023 11:30:00AM

 Sample Received Date
 13/04/2023 3:31:50PM

 Sample Analysis Completed
 5/05/2023 1:04:37PM

 Sample ID
 *2023-001-9944

 Status
 Endorsed

Biology Operations LOR Result Test Start Date

Customer Collected

Sample temperature at time of receipt 11.6°C

Algai identification 10393(ADEL)		
Other Organisms	2000 cells/mL	
BLUE GREEN ALGAE		
Cyanodictyon	290 cells/mL	
Merismopedia	440 cells/mL	
Microcystis wesenbergii	20 cells/mL	
Pseudanabaena	5720 cells/mL	
Nodularia spumigena	348 cells/mL	
Anabaenopsis	86 cells/mL	
Phormidium	58 cells/mL	
Planktolyngbya	33700 cells/mL	
Cuspidothrix	106 cells/mL	
Cylindrospermopsis raciborskii	424 cells/mL	
Anabaena	5090 cells/mL	
Dolichospermum circinale	20 cells/mL	
Sphaerospermopsis	6540 cells/mL	
Dolichospermum (straight)	454 cells/mL	
Cyanogranis	260 cells/mL	
DIATOMS		
Asterionellopsis	12 cells/mL	
Pseudo-nitzschia	10 cells/mL	
Chaetoceros	38 cells/mL	
Melosira	10 cells/mL	
Nitzschia	225 cells/mL	

GREEN ALGAE



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Analytical Results

 Sampling Point
 351213-EPA - Murray Mouth

 Sampled Date
 12/04/2023 11:30:00AM

 Sample Received Date
 13/04/2023 3:31:50PM

 Sample Analysis Completed
 5/05/2023 1:04:37PM

 Sample ID
 *2023-001-9944

 Status
 Endorsed

Collection Type Customer Collected

Algal Identification T0393(ADEL)

Planctonema 1250 cells/mL Gonatozygon 570 cells/mL

Sample temperature at time of receipt 11.6°C

Algal Biovolume T0393(ADEL)

BLUE GREEN ALGAE

Dolichospermum (straight) 0.12 mm3/l Sphaerospermopsis 0.60 mm3/L Dolichospermum circinale <0.01 mm3/L Anabaena 0.39 mm3/L Cylindrospermopsis raciborskii 0.02 mm3/L Cuspidothrix <0.01 mm3/L Planktolyngbya 0.17 mm3/L Phormidium <0.01 mm3/L Anabaenopsis <0.01 mm3/L Nodularia spumigena 0.08 mm3/L Pseudanabaena 0.07 mm3/L Microcystis wesenbergii <0.01 mm3/L Merismopedia <0.01 mm3/L Cyanodictyon <0.01 mm3/L Cyanogranis <0.01 mm3/l

DIATOMS

 Melosira
 0.02 mm3/L

 Nitzschia
 0.31 mm3/L

GREEN ALGAE

Gonatozygon 2.34 mm3/L

Algal Biovolume Comment Biovolumes for taxa reported at genus level are

approximate values. Reported taxa and calculated biovolume includes only those with taxon cell volume and associated cell count data. Biovolume totals have specific criteria around how they calculate.

Not Calculated mm3/L

NATA

Total Algae Biovolume

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Analytical Results

 Sampling Point
 351213-EPA - Murray Mouth

 Sampled Date
 12/04/2023 11:30:00AM

 Sample Received Date
 13/04/2023 3:31:50PM

 Sample Analysis Completed
 5/05/2023 1:04:37PM

 Sample ID
 *2023-001-9944

 Status
 Endorsed

Collection Type Customer Collected

Algal Biovolume T0393(ADEL) 12/04/2023

Total Blue_Green Algae Biovolume 1.45 mm3/L

Total Diatom Biovolume Not Calculated mm3/L # Total Green Algae Biovolume Not Calculated mm3/L

Total Toxic BGA Biovolume 0.10 mm3/L

Sample temperature at time of receipt 11.6°C

Algal Count - Total T0393(ADEL) 12/04/2023

 Algae - Total
 55400 cells/mL

 Blue Green Algae - Total
 53600 cells/mL

 Diatoms - Total
 70 cells/mL

 Geosmin-MIB producing BGA - Total
 5800 cells/mL

 Green Algae - Total
 1820 cells/mL

 Toxin producing BGA - Total
 792 cells/mL

Sample temperature at time of receipt 11.6°C Chlorophyll a & Phaeophytin a T0380-02(ADEL)

13/04/2023

Chlorophyll a 0.1 18.5 $\,\mu g/L$ Phaeophytin a 0.1 9.16 $\,\mu g/L$

Inorganic Chemistry - Nutrients	LOR	Result	Test Start Date
Sample temperature at time of receipt	11.6°C		
Ammonia as N T0100-01(ADEL)			02/05/2023
Ammonia as N	0.005	0.161 mg/L	
Nitrate + Nitrite as N (ADEL)			27/04/2023
# Nitrate + Nitrite as N	0.5	11.1 μg/L	
# Nitrate + Nitrite as NO3	2.3	49.2 μg/L	
Nitrogen - Total TMZ-M06(ADEL)			13/04/2023
Nitrogen - Total		1.76 mg/L	
Phosphorus - Filterable Reactive as P (ADEL)		27/04/2023
# Phosphorus -Filterable Reactive as PO4	1.5	47.242 μg/L	
Phosphorus-Filterable Reactive as P	0.5	15.8 μg/L	



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Analytical Results			
Sampling Point	351213-EPA		
Sampled Date	12/04/2023	11:30:00AM	
Sample Received Date	13/04/2023		
Sample Analysis Completed	5/05/2023		
Sample ID	*2023-001-9	1944	
Status Collection Time	Endorsed Customer Co	alleated	
Collection Type	Customer Co	ollected	
Phosphorus - Total T0109-44(ADEL)			26/04/2023
Phosphorus - Total	0.005	0.167 mg/L	
Silica - Reactive T0111-01(ADEL)			18/04/2023
Silica - Reactive	0.05	<0.05 mg/L	
TKN as N T0112-01(ADEL)			26/04/2023
TKN as Nitrogen	0.05	1.75 mg/L	
Organic Chemistry	LOR	Result	Test Start Date
Sample temperature at time of receipt 11.6°C			
Dissolved Organic Carbon T0158-07(ADEL)	-		24/04/2023
Dissolved Organic Carbon	1	8.1 mg/L	
Total Organic Carbon T0158-07(ADEL)		G	24/04/2023
Total Organic Carbon	1	10.8 mg/L	
Inorganic Chemistry - Physical	LOR	Result	Test Start Date
Sample temperature at time of receipt 11.6°C	<u></u>		
Alkalinity Carbonate Bicarbonate and Hydro		1(ADEL)	13/04/2023
Alkalinity as Calcium Carbonate		142 mg/L	
•			
Bicarbonate		173 ma/L	
Bicarbonate Carbonate		173 mg/L 0 mg/L	
		0 mg/L	
Carbonate Hydroxide	-01(ADEL)	•	13/04/2023
Carbonate	- 01(ADEL) 2	0 mg/L	13/04/2023

1

0.1



Turbidity

Note

рΗ

Total Dissolved Solids (by EC)

Turbidity T0018-01(ADEL)

Temperature at which pH is measured

pH T0010-01(ADEL)

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14/04/2023

Conductivity measurement is corrected to 25°C

17000 mg/L

8.0 pH units

21.8 °C

9.4 NTU

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Analytical Results

 Sampling Point
 351213-EPA - Murray Mouth

 Sampled Date
 12/04/2023 11:30:00AM

 Sample Received Date
 13/04/2023 3:31:50PM

 Sample Analysis Completed
 5/05/2023 1:04:37PM

 Sample ID
 *2023-001-9944

 Status
 Endorsed

Collection Type Customer Collected

Inorganic Chemistry - Waste Water LOR Result Test Start Date

Sample temperature at time of receipt 11.6°C

Suspended Solids T0160-01(ADEL)

20/04/2023

Suspended Solids 1.0 5 mg/L



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Analytical Results

Sampling Point 11505-DEW - Mundoo Downstream

 Sampled Date
 12/04/2023
 11:50:00AM

 Sample Received Date
 13/04/2023
 3:28:01PM

 Sample Analysis Completed
 5/05/2023
 1:04:39PM

 Sample ID
 *2023-001-9941

 Status
 Endorsed

Collection Type Customer Collected

Biology Operations	LOR	Result	Test Start Date
Sample temperature at time of rec	eipt 11.6°C		
Algal Identification T0393(ADEL)	•		
Other Organisms		3280 cells/mL	
BLUE GREEN ALGAE			
Merismopedia		32700 cells/mL	
Cyanodictyon		43000 cells/mL	
Cyanogranis		122000 cells/mL	
Dolichospermum (coiled)		310 cells/mL	
Microcystis flos-aquae		180 cells/mL	
Romeria		5300 cells/mL	
Pseudanabaena		14900 cells/mL	
Planktolyngbya		91400 cells/mL	
Anabaenopsis		1380 cells/mL	
Nodularia spumigena		540 cells/mL	
Aphanizomenon		17100 cells/mL	
Sphaerospermopsis		8540 cells/mL	
Dolichospermum circinale		150 cells/mL	
Dolichospermum (straight)		340 cells/mL	
Cylindrospermopsis raciborskii		1580 cells/mL	
DIATOMS			
Nitzschia		4150 cells/mL	
Pseudo-nitzschia		16 cells/mL	
Chaetoceros		775 cells/mL	
Gyrosigma		717 cells/mL	
EUGLENOPHYTES			

1250 cells/mL

1520 cells/mL

3500 cells/mL

1670 cells/mL



Euglena

Planctonema

Gonatozygon

OTHER

GREEN ALGAE Scenedesmus

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Analytical Results

Status

Sampling Point 11505-DEW - Mundoo Downstream

Endorsed

12/04/2023 11:50:00AM **Sampled Date** 13/04/2023 3:28:01PM **Sample Received Date** 5/05/2023 1:04:39PM Sample Analysis Completed *2023-001-9941 Sample ID

Customer Collected Collection Type

Algal Identification T0393(ADEL)

Microbial Filaments Present

Sample temperature at time of receipt 11.6°C

12/04/2023 Algal Biovolume T0393(ADEL)

BLUE GREEN ALGAE

Cylindrospermopsis raciborskii	0.07 mm3/L
Dolichospermum (straight)	0.09 mm3/L
Dolichospermum circinale	0.04 mm3/L
Sphaerospermopsis	0.79 mm3/L
Aphanizomenon	0.84 mm3/L
Nodularia spumigena	0.12 mm3/L
Anabaenopsis	0.14 mm3/L
Planktolyngbya	0.46 mm3/L
Pseudanabaena	0.19 mm3/L
Romeria	0.08 mm3/L
Microcystis flos-aquae	<0.01 mm3/L
Dolichospermum (coiled)	0.08 mm3/L
Cyanogranis	0.06 mm3/L
Cyanodictyon	0.02 mm3/L
Merismopedia	0.02 mm3/L
DIATOMS	
Nitzschia	5.75 mm3/L
Gyrosigma	1.76 mm3/L

EUGLENOPHYTES

Euglena 8.75 mm3/L

GREEN ALGAE

Gonatozygon 6.86 mm3/L Scenedesmus 0.38 mm3/L



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Analytical Results

Sampling Point 11505-DEW - Mundoo Downstream

 Sampled Date
 12/04/2023
 11:50:00AM

 Sample Received Date
 13/04/2023
 3:28:01PM

 Sample Analysis Completed
 5/05/2023
 1:04:39PM

 Sample ID
 *2023-001-9941

 Status
 Endorsed

Collection Type Customer Collected

Algal Biovolume T0393(

12/04/2023

Algal Biovolume Comment

Biovolumes for taxa reported at genus level are approximate values. Reported taxa and calculated biovolume includes only those with taxon cell volume and associated cell count data.

Biovolume totals have specific criteria around

how they calculate.

Not Calculated mm3/L

Total Algae Biovolume Not Calculat # Total Blue_Green Algae Biovolume 3.00 mm3/L

Total Diatom Biovolume Not Calculated mm3/L # Total Green Algae Biovolume Not Calculated mm3/L

Total Toxic BGA Biovolume 0.23 mm3/L

Sample temperature at time of receipt 11.6°C

Algal Count - Total T0393(ADEL) 12/04/2023

 Algae - Total
 353000 cells/mL

 Blue Green Algae - Total
 339000 cells/mL

 Diatoms - Total
 5660 cells/mL

 Geosmin-MIB producing BGA - Total
 15000 cells/mL

 Green Algae - Total
 6690 cells/mL

 Toxin producing BGA - Total
 2450 cells/mL

Sample temperature at time of receipt 11.6°C

Chlorophyll a & Phaeophytin a T0380-02(ADEL)

Chlorophyll a 0.1 54.3 $\,\mu g/L$ Phaeophytin a 0.1 20.2 $\,\mu g/L$

Inorganic Chemistry - Nutrients LOR Result Test Start Date

Sample temperature at time of receipt 11.6°C

Ammonia as N (ADEL)

Ammonia as N

1 35 µg/L

Chloride T0104-02(ADEL) 18/04/2023

Chloride 4.0 5470 mg/L



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Analytical Results			
Sampling Point	11505-DEW - Mundoo Downstream		
Sampled Date	12/04/2023 13/04/2023	11:50:00AM	
Sample Received Date Sample Analysis Completed	5/05/2023		
Sample ID	*2023-001-9		
Status	Endorsed	041	
Collection Type	Customer C	ollected	
Nitrate + Nitrite as N (ADEL)			27/04/2023
# Nitrate + Nitrite as N	0.5	<0.5 µg/L	
# Nitrate + Nitrite as NO3	2.3	<2.3 μg/L	
Nitrogen - Total TMZ-M06(ADEL)			13/04/2023
Nitrogen - Total		2.07 mg/L	
Phosphorus - Filterable Reactive as P (AD	EL)		27/04/2023
# Phosphorus -Filterable Reactive as PO4	1.5	27.807 μg/L	
Phosphorus-Filterable Reactive as P	0.5	9.3 μg/L	
Phosphorus - Total T0109-44(ADEL)			26/04/2023
Phosphorus - Total	0.005	0.192 mg/L	
Silica - Reactive T0111-01(ADEL)			18/04/2023
Silica - Reactive	0.05	<0.05 mg/L	
TKN as N T0112-01(ADEL)			26/04/2023
TKN as Nitrogen	0.05	2.07 mg/L	
Organic Chemistry	LOR	Result	Test Start Date
Sample temperature at time of receipt 11.	.6°C		
Dissolved Organic Carbon T0158-07(ADE	L)		24/04/2023
Dissolved Organic Carbon	1	11.5 mg/L	
Total Organic Carbon T0158-07(ADEL)			24/04/2023
Total Organic Carbon	1	15.5 mg/L	
Inorganic Chemistry - Physical	LOR	Result	Test Start Date
Sample temperature at time of receipt 11.	.6°C		
Alkalinity Carbonate Bicarbonate and Hy	droxide T0101-0	1(ADEL)	13/04/2023
Alkalinity as Calcium Carbonate		151 mg/L	
Bicarbonate		165 mg/L	
Carbonate		10 mg/L	
I bridge stide			

0 mg/L



Hydroxide

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Conductivity & Total Dissolved Solids T0016-01(ADEL)

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Analytical Results

Sampling Point 11505-DEW - Mundoo Downstream

 Sampled Date
 12/04/2023
 11:50:00AM

 Sample Received Date
 13/04/2023
 3:28:01PM

 Sample Analysis Completed
 5/05/2023
 1:04:39PM

 Sample ID
 *2023-001-9941

 Status
 Endorsed

Collection Type Customer Collected

Conductivity & Total Dissolved Solids	T0016-01(ADEL)		13/04/2023
Conductivity	2	17700 μS/cm	
Note		Conductivity measurement is corrected to 25°C	
Total Dissolved Solids (by EC)	1	10700 mg/L	
pH T0010-01(ADEL)			13/04/2023
рН		8.5 pH units	
Temperature at which pH is measured		21.8 °C	

Turbidity T0018-01(ADEL) 14/04/2023

Turbidity 0.1 8.1 NTU

Inorganic Chemistry - Waste Water	LOR	Result	Test Start Date
Sample temperature at time of receipt 1	1.6°C		
Suspended Solids T0160-01(ADEL)			20/04/2023
Suspended Solids	1.0	24 mg/l	



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Analytical Results

11504-DEW - Mundoo Upstream **Sampling Point** 12/04/2023 11:50:00AM **Sampled Date** 13/04/2023 3:27:46PM **Sample Received Date** 5/05/2023 1:04:38PM Sample Analysis Completed *2023-001-9942 Sample ID Endorsed **Status**

Customer Collected Collection Type

Biology Operations	LOR	Result	Test Start Date
--------------------	-----	--------	-----------------

11500 cells/mL

Sample temperature at time of receipt 11.6°C

Algal Identification T0393(ADEL)

Other Organisms 2700 cells/mL **BLUE GREEN ALGAE** Dolichospermum (coiled) 110 cells/mL Limnothrix 4320 cells/mL Pseudanabaena 34300 cells/mL Planktolyngbya 117000 cells/mL Planktothrix 300 cells/mL Dolichospermum (straight) 18 cells/mL Cuspidothrix 874 cells/mL Anabaenopsis 146 cells/mL Phormidium 424 cells/mL 912 cells/mL

Dolichospermum circinale Cylindrospermopsis raciborskii 1340 cells/mL Sphaerospermopsis 46600 cells/mL Anabaena 40400 cells/mL Cyanodictyon 8200 cells/ml Cyanogranis 70600 cells/mL Merismopedia 667 cells/mL

DIATOMS

Gonatozygon

Gyrosigma 8 cells/mL Aulacoseira 18 cells/mL Nitzschia 2550 cells/mL **GREEN ALGAE**

Sample temperature at time of receipt 11.6°C Algal Biovolume T0393(ADEL)

BLUE GREEN ALGAE

Anabaena 3.11 mm3/L



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Analytical Results

 Sampling Point
 11504-DEW - Mundoo Upstream

 Sampled Date
 12/04/2023 11:50:00AM

 Sample Received Date
 13/04/2023 3:27:46PM

 Sample Analysis Completed
 5/05/2023 1:04:38PM

 Sample ID
 *2023-001-9942

 Status
 Endorsed

Collection Type Customer Collected

Algal Biovolume T0393(ADEL) 12/04/2023

Sphaerospermopsis 4.31 mm3/L Cylindrospermopsis raciborskii 0.06 mm3/L Dolichospermum circinale 0.23 mm3/L Phormidium 0.04 mm3/L Anabaenopsis 0.01 mm3/L Cuspidothrix 0.05 mm3/L Dolichospermum (straight) <0.01 mm3/L Planktothrix 0.08 mm3/L Planktolyngbya 0.58 mm3/L Pseudanabaena 0.45 mm3/L Limnothrix 0.05 mm3/L Dolichospermum (coiled) 0.03 mm3/L Merismopedia <0.01 mm3/L Cyanogranis 0.04 mm3/L Cyanodictyon <0.01 mm3/L

DIATOMS

 Aulacoseira
 0.05 mm3/L

 Gyrosigma
 0.02 mm3/L

 Nitzschia
 3.53 mm3/L

GREEN ALGAE

Gonatozygon 47.2 mm3/L

Algal Biovolume Comment Biovolumes for taxa reported at genus level are

approximate values. Reported taxa and calculated biovolume includes only those with taxon cell volume and associated cell count data. Biovolume totals have specific criteria around

how they calculate.

 # Total Algae Biovolume
 59.8 mm3/L

 # Total Blue_Green Algae Biovolume
 9.04 mm3/L

 # Total Diatom Biovolume
 3.60 mm3/L

 # Total Green Algae Biovolume
 47.2 mm3/L

 Total Toxic BGA Biovolume
 0.29 mm3/L



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13/04/2023

27/04/2023

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Analytical Results

 Sampling Point
 11504-DEW - Mundoo Upstream

 Sampled Date
 12/04/2023 11:50:00AM

 Sample Received Date
 13/04/2023 3:27:46PM

 Sample Analysis Completed
 5/05/2023 1:04:38PM

 Sample ID
 *2023-001-9942

 Status
 Endorsed

Collection Type Customer Collected

Sample temperature at time of receipt 11.6°C

 Algal Count - Total T0393(ADEL)
 12/04/2023

 Algae - Total
 340000 cells/mL

 Blue Green Algae - Total
 326000 cells/mL

 Diatoms - Total
 2580 cells/mL

 Geosmin-MIB producing BGA - Total
 35600 cells/mL

 Green Algae - Total
 11500 cells/mL

 Toxin producing BGA - Total
 2250 cells/mL

Sample temperature at time of receipt 11.6°C Chlorophyll a & Phaeophytin a T0380-02(ADEL)

Chlorophyll a 0.1 70.1 $\mu g/L$ Phaeophytin a 0.1 30.1 $\mu g/L$

Inorganic Chemistry - Nutrients	LOR	Result	Test Start Date
Sample temperature at time of receipt	11.6°C		
Ammonia as N (ADEL)			27/04/2023
# Ammonia as N	1	18 μg/L	
Chloride T0104-02(ADEL)			18/04/2023
Chloride	4.0	438 mg/L	

Nitrate + Nitrite as N 0.5 1.3 µg/L

Nitrate + Nitrite as NO3 2.3 5.76 µg/L

Nitrogen - Total TMZ-M06(ADEL)

Nitrogen - Total TMZ-M06(ADEL)

Nitrogen - Total 1.85 mg/L

Phosphorus - Filterable Reactive as P (ADEL)

27/04/2023

9.867 µg/L

Phosphorus - Total 0.005 0.141 mg/L **Silica - Reactive T0111-01(ADEL)** 18/04/2023

Silica - Reactive 0.05 <0.05 mg/L

Corporate Accreditation
No.1115 Chemical and

1.5

NATA

Biological Testing
Accredited for compliance
with ISO/IEC 17025 Testing

Nitrate + Nitrite as N (ADEL)

Phosphorus -Filterable Reactive as PO4

ACCREDITATION

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Analytical Results

 Sampling Point
 11504-DEW - Mundoo Upstream

 Sampled Date
 12/04/2023 11:50:00AM

 Sample Received Date
 13/04/2023 3:27:46PM

 Sample Analysis Completed
 5/05/2023 1:04:38PM

 Sample ID
 *2023-001-9942

 Status
 Endorsed

Collection Type Customer Collected

TKN as N T0112-01(ADEL) 26/04/2023

TKN as Nitrogen 0.05 1.85 mg/L

Organic Chemistry	LOR	Result	Test Start Date
Sample temperature at time of receipt 11	1.6°C		
Dissolved Organic Carbon T0158-07(ADE	EL)		24/04/2023
Dissolved Organic Carbon	1	13.5 mg/L	
Total Organic Carbon T0158-07(ADEL)			24/04/2023
Total Organic Carbon	1	16.9 mg/L	
Inorganic Chemistry - Physical	LOR	Result	Test Start Date
Sample temperature at time of receipt 11			
Alkalinity Carbonate Bicarbonate and Hy	droxide T0101-0	1(ADEL)	13/04/2023
Alkalinity as Calcium Carbonate		143 mg/L	
Bicarbonate		138 mg/L	
Carbonate		18 mg/L	
Hydroxide		0 mg/L	
Conductivity & Total Dissolved Solids T0	016-01(ADEL)		13/04/2023
Conductivity	2	1880 μS/cm	
Note		Conductivity measurement is corrected to 25°C	
Total Dissolved Solids (by EC)	1	1050 mg/L	
pH T0010-01(ADEL)			13/04/2023
pH		9.0 pH units	
Temperature at which pH is measured		21.8 °C	
Turbidity T0018-01(ADEL)			14/04/2023

10 NTU

Result

0.1

LOR

Sample temperature at time of receipt 11.6°C

Inorganic Chemistry - Waste Water



Turbidity

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Analytical Results

 Sampling Point
 11504-DEW - Mundoo Upstream

 Sampled Date
 12/04/2023 11:50:00AM

 Sample Received Date
 13/04/2023 3:27:46PM

 Sample Analysis Completed
 5/05/2023 1:04:38PM

 Sample ID
 *2023-001-9942

 Status
 Endorsed

Collection Type Customer Collected

Suspended Solids T0160-01(ADEL)

20/04/2023

Suspended Solids 1.0 25 mg/L



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Analytical Results

353179-EPA - Tauwitchere Barrage Upstream **Sampling Point**

12/04/2023 12:36:00PM **Sampled Date** Sample Received Date 13/04/2023 3:32:20PM 5/05/2023 2:52:52PM Sample Analysis Completed *2023-001-9947 Sample ID Endorsed **Status**

Customer Collected Collection Type

Biology Operations	LOR	Result	Test Start Date
Sample temperature at time of re	ceipt 11.6°C		
Algal Identification T0393(ADEL)	•		
Other Organisms		4600 cells/mL	
BLUE GREEN ALGAE			
Planktolyngbya		56500 cells/mL	
Cyanogranis		47800 cells/mL	

50600 cells/ml

	OOOOO OCIIS/IIIL
Anabaenopsis	204 cells/mL
Dolichospermum (straight)	64 cells/mL
Planktothrix perornata_f_attenuata	1030 cells/mL
Cylindrospermopsis raciborskii	2620 cells/mL
Anabaena	57000 cells/mL
Sphaerospermopsis	34800 cells/mL
Dolichospermum (coiled)	82 cells/mL
Dolichospermum circinale	612 cells/mL
Cuspidothrix	3000 cells/mL
Phormidium	434 cells/mL
DIATOMS	

Pseudanabaena

Nitzschia 1320 cells/mL Aulacoseira 1550 cells/mL Navicula 175 cells/mL Cyclotella 325 cells/mL

GREEN ALGAE

Planctonema 74 cells/mL Gonatozygon 11500 cells/mL Scenedesmus 2300 cells/mL

Sample temperature at time of receipt 11.6°C Algal Biovolume T0393(ADEL)

BLUE GREEN ALGAE

Phormidium 0.04 mm3/L



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Analytical Results

Status

Sampling Point 353179-EPA - Tauwitchere Barrage Upstream

Endorsed

 Sampled Date
 12/04/2023
 12:36:00PM

 Sample Received Date
 13/04/2023
 3:32:20PM

 Sample Analysis Completed
 5/05/2023
 2:52:52PM

 Sample ID
 *2023-001-9947

Collection Type Customer Collected

Algal Biovolume T0393(ADEL)	12/04/2023
Aldai Biovolume 10393(ADEL)	12/04/

• ,		
Cuspidothrix	0.17	mm3/L
Dolichospermum circinale	0.15	mm3/L
Dolichospermum (coiled)	0.02	mm3/L
Sphaerospermopsis	3.22	mm3/L
Anabaena	4.39	mm3/L
Cylindrospermopsis raciborskii	0.11	mm3/L
Planktothrix perornata_f_attenuata	0.30	mm3/L
Dolichospermum (straight)	0.02	mm3/L
Anabaenopsis	0.02	mm3/L
Pseudanabaena	0.66	mm3/L
Cyanogranis	0.02	mm3/L
Planktolyngbya	0.28	mm3/L

DIATOMS

 Aulacoseira
 4.43 mm3/L

 Nitzschia
 1.83 mm3/L

 Cyclotella
 0.17 mm3/L

 Navicula
 0.21 mm3/L

GREEN ALGAE

 Gonatozygon
 47.2 mm3/L

 Scenedesmus
 0.58 mm3/L

Algal Biovolume Comment Biovolumes for taxa reported at genus level are

approximate values. Reported taxa and calculated biovolume includes only those with taxon cell volume and associated cell count data. Biovolume totals have specific criteria around

how they calculate.

Total Algae Biovolume Not Calculated mm3/L

Total Blue_Green Algae Biovolume 9.40 mm3/L # Total Diatom Biovolume 6.64 mm3/L

Total Green Algae Biovolume Not Calculated mm3/L

Total Toxic BGA Biovolume 0.26 mm3/L

Sample temperature at time of receipt 11.6°C



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Analytical Results

Sampling Point 353179-EPA - Tauwitchere Barrage Upstream

 Sampled Date
 12/04/2023
 12:36:00PM

 Sample Received Date
 13/04/2023
 3:32:20PM

 Sample Analysis Completed
 5/05/2023
 2:52:52PM

 Sample ID
 *2023-001-9947

 Status
 Endorsed

Collection Type Customer Collected

Algal Count - Total T0393(ADEL)		12/04/2023
Algae - Total	272000 cells/mL	
Blue Green Algae - Total	255000 cells/mL	
Diatoms - Total	3370 cells/ml	

 Diatoms - Total
 3370 cells/mL

 Geosmin-MIB producing BGA - Total
 52700 cells/mL

 Green Algae - Total
 13900 cells/mL

 Toxin producing BGA - Total
 3230 cells/mL

Sample temperature at time of receipt 11.6°C Chlorophyll a & Phaeophytin a T0380-02(ADEL)

hlorophyll a & Phaeophytin a T0380-02(ADEL)

Chlorophyll a 0.1 76.5 $\,\mu g/L$ Phaeophytin a 0.1 29.2 $\,\mu g/L$

Inorganic Chemistry - Nutrients	LOR	Result	Test Start Date
Sample temperature at time of receipt	11.6°C		
Ammonia as N (ADEL)			27/04/2023
# Ammonia as N	1	56 μg/L	
Chloride T0104-02(ADEL)			18/04/2023
Chloride	4.0	745 mg/L	
Nitrate + Nitrite as N (ADEL)			27/04/2023
# Nitrate + Nitrite as N	0.5	41.9 µg/L	
# Nitrate + Nitrite as NO3	2.3	186 μg/L	
Nitrogen - Total TMZ-M06(ADEL)			13/04/2023
Nitrogen - Total		2.49 mg/L	
Phosphorus - Filterable Reactive as P (A	ADEL)		27/04/2023
# Phosphorus -Filterable Reactive as PO4	1.5	8.97 µg/L	
Phosphorus-Filterable Reactive as P	0.5	3.0 µg/L	
Phosphorus - Total T0109-44(ADEL)			26/04/2023
Phosphorus - Total	0.005	0.198 mg/L	
Silica - Reactive T0111-01(ADEL)			18/04/2023
Silica - Reactive	0.05	<0.05 mg/L	

TKN as N T0112-01(ADEL)



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Analytical Results

Sampling Point 353179-EPA - Tauwitchere Barrage Upstream

 Sampled Date
 12/04/2023
 12:36:00 PM

 Sample Received Date
 13/04/2023
 3:32:20 PM

 Sample Analysis Completed
 5/05/2023
 2:52:52 PM

 Sample ID
 *2023-001-9947

 Status
 Endorsed

Collection Type Customer Collected

TKN as N T0112-01(ADEL) 26/04/2023

TKN as Nitrogen 0.05 2.45 mg/L

Organic Chemistry	LOR	Result	Test Start Date
Sample temperature at time of receip	t 11.6°C		
Dissolved Organic Carbon T0158-07(A	ADEL)		24/04/2023
Dissolved Organic Carbon	1	12.9 mg/L	
Total Organic Carbon T0158-07(ADEL))		24/04/2023
Total Organic Carbon	1	18.9 mg/L	
Inorganic Chemistry - Physical	LOR	Result	Test Start Date
Sample temperature at time of receip	t 11.6°C		
Alkalinity Carbonate Bicarbonate and	I Hydroxide T0101-0	1(ADEL)	14/04/2023
Alkalinity as Calcium Carbonate		146 mg/L	
, -		9	
Bicarbonate		162 mg/L	
•		-	
Bicarbonate		162 mg/L	
Bicarbonate Carbonate Hydroxide	T0016-01(ADEL)	162 mg/L 8 mg/L	14/04/2023
Bicarbonate Carbonate Hydroxide	T0016-01(ADEL)	162 mg/L 8 mg/L	14/04/2023
Bicarbonate Carbonate Hydroxide Conductivity & Total Dissolved Solids	, ,	162 mg/L 8 mg/L 0 mg/L	14/04/2023
Bicarbonate Carbonate Hydroxide Conductivity & Total Dissolved Solids Conductivity	, ,	162 mg/L 8 mg/L 0 mg/L 2830 µS/cm	14/04/2023
Bicarbonate Carbonate Hydroxide Conductivity & Total Dissolved Solids Conductivity Note Total Dissolved Solids (by EC)	, ,	162 mg/L 8 mg/L 0 mg/L 2830 μS/cm Conductivity measurement is corrected to 25°C	
Bicarbonate Carbonate Hydroxide Conductivity & Total Dissolved Solids Conductivity Note Total Dissolved Solids (by EC)	, ,	162 mg/L 8 mg/L 0 mg/L 2830 μS/cm Conductivity measurement is corrected to 25°C	
Bicarbonate Carbonate Hydroxide Conductivity & Total Dissolved Solids Conductivity Note Total Dissolved Solids (by EC) pH T0010-01(ADEL)	, ,	162 mg/L 8 mg/L 0 mg/L 2830 μS/cm Conductivity measurement is corrected to 25°C 1590 mg/L	14/04/2023 14/04/2023
Bicarbonate Carbonate Hydroxide Conductivity & Total Dissolved Solids Conductivity Note Total Dissolved Solids (by EC) pH T0010-01(ADEL) pH	, ,	162 mg/L 8 mg/L 0 mg/L 2830 μS/cm Conductivity measurement is corrected to 25°C 1590 mg/L 8.7 pH units	

Result

LOR

Sample temperature at time of receipt 11.6°C

Inorganic Chemistry - Waste Water



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Test Start Date

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Analytical Results

Sampling Point 353179-EPA - Tauwitchere Barrage Upstream

 Sampled Date
 12/04/2023
 12:36:00PM

 Sample Received Date
 13/04/2023
 3:32:20PM

 Sample Analysis Completed
 5/05/2023
 2:52:52PM

 Sample ID
 *2023-001-9947

Status Endorsed

Collection Type Customer Collected

Suspended Solids T0160-01(ADEL)

20/04/2023

Suspended Solids 1.0 71 mg/L



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Analytical Results

Cyanodictyon

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 Sampled Date
 12/04/2023
 12:40:00PM

 Sample Received Date
 13/04/2023
 3:32:04PM

 Sample Analysis Completed
 9/05/2023
 11:50:32AM

 Sample ID
 *2023-001-9948

 Status
 Endorsed

Collection Type Customer Collected

Biology Operations	LOR	Result	Test Start Date
Sample temperature at time of re	ceipt 11.6°C		
Other Organisms		4800 cells/mL	
BLUE GREEN ALGAE			
Cyanocatena		50700 cells/mL	

44000 cells/mL

5050 cells/mL

Cyanogranis	49700 cells/mL
Pseudanabaena	24200 cells/mL
Planktolyngbya	108000 cells/mL
Nodularia spumigena	108 cells/mL
Anabaenopsis	350 cells/mL
Dolichospermum (coiled)	1500 cells/mL
Sphaerospermopsis	10600 cells/mL
Aphanizomenon	54700 cells/mL
Dolichospermum (straight)	600 cells/mL
Cylindrospermopsis raciborskii	5450 cells/mL
Dolichospermum circinale	764 cells/mL
DIATOMS	
Nitzschia	4500 cells/mL
GREEN ALGAE	
Planctonema	9400 cells/mL

Sample temperature at time of receipt 11.6°C

Algal Biovolume T0393(ADEL)

BLUE GREEN ALGAE

Dolichospermum circinale0.19 mm3/LCylindrospermopsis raciborskii0.23 mm3/LDolichospermum (straight)0.16 mm3/LAphanizomenon2.68 mm3/LSphaerospermopsis0.98 mm3/L



Gonatozygon

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Analytical Results

353177-EPA - Tauwitchere Barrage DS **Sampling Point**

12/04/2023 12:40:00PM Sampled Date 13/04/2023 3:32:04PM **Sample Received Date** 9/05/2023 11:50:32AM Sample Analysis Completed *2023-001-9948 Sample ID Endorsed **Status**

Customer Collected Collection Type

12/04/2023 Algal Biovolume T0393(ADEL)

Dolichospermum (coiled) 0.39 mm3/L Anabaenopsis 0.04 mm3/L Nodularia spumigena 0.02 mm3/L Planktolyngbya 0.54 mm3/L Pseudanabaena 0.31 mm3/L Cyanogranis 0.02 mm3/L Cyanodictyon 0.02 mm3/L Cyanocatena <0.01 mm3/L

DIATOMS

Nitzschia 6 23 mm3/L

GREEN ALGAE

Gonatozygon 20.7 mm3/L

Algal Biovolume Comment Biovolumes for taxa reported at genus level are

> approximate values. Reported taxa and calculated biovolume includes only those with taxon cell volume and associated cell count data. Biovolume totals have specific criteria around

how they calculate.

Total Algae Biovolume Not Calculated mm3/L

Total Blue Green Algae Biovolume 5.58 mm3/L # Total Diatom Biovolume 6.23 mm3/L

Total Green Algae Biovolume Not Calculated mm3/L

Total Toxic BGA Biovolume 0.44 mm3/L

Sample temperature at time of receipt 11.6°C

12/04/2023 Algal Count - Total T0393(ADEL)

6320 cells/ml

Algae - Total 370000 cells/mL Blue Green Algae - Total 351000 cells/ml Diatoms - Total 4500 cells/mL Geosmin-MIB producing BGA - Total 25000 cells/mL Green Algae - Total 14400 cells/mL



Toxin producing BGA - Total

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13/04/2023

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Analytical Results

Sampling Point 353177-EPA - Tauwitchere Barrage DS

12/04/2023 12:40:00PM **Sampled Date** 13/04/2023 3:32:04PM **Sample Received Date** 9/05/2023 11:50:32AM Sample Analysis Completed *2023-001-9948 Sample ID Endorsed **Status**

Customer Collected Collection Type

Sample temperature at time of receipt 11.6°C

Chlorophyll a & Phaeophytin a T0380-02(ADEL)

Chlorophyll a 0.1 76.9 µg/L Phaeophytin a 0.1 24.9 µg/L

Inorganic Chemistry - Nutrients	LOR	Result	Test Start Date
Sample temperature at time of receipt 1	1.6°C		
Ammonia as N (ADEL)			27/04/2023
# Ammonia as N	1	3 μg/L	
Chloride T0104-02(ADEL)			18/04/2023
Chloride	4.0	1240 mg/L	
Nitrate + Nitrite as N (ADEL)			27/04/2023
# Nitrate + Nitrite as N	0.5	<0.5 µg/L	
# Nitrate + Nitrite as NO3	2.3	<2.3 μg/L	
Nitrogen - Total TMZ-M06(ADEL)			13/04/2023
Nitrogen - Total		2.02 mg/L	
Phosphorus - Filterable Reactive as P (A	DEL)		27/04/2023
# Phosphorus -Filterable Reactive as PO4	1.5	14.352 μg/L	
Phosphorus-Filterable Reactive as P	0.5	4.8 μg/L	
Phosphorus - Total T0109-44(ADEL)			26/04/2023
Phosphorus - Total	0.005	0.175 mg/L	
Silica - Reactive T0111-01(ADEL)			18/04/2023
Silica - Reactive	0.05	<0.05 mg/L	
TKN as N T0112-01(ADEL)			26/04/2023
TKN as Nitrogen	0.05	2.02 mg/L	
Organic Chemistry	LOR	Result	Test Start Date

Dissolved Organic Carbon T0158-07(ADEL)

24/04/2023



Dissolved Organic Carbon

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13.5 mg/L

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Analytical Results

Sampling Point 353177-EPA - Tauwitchere Barrage DS

 Sampled Date
 12/04/2023
 12:40:00PM

 Sample Received Date
 13/04/2023
 3:32:04PM

 Sample Analysis Completed
 9/05/2023
 11:50:32AM

 Sample ID
 *2023-001-9948

 Status
 Endorsed

Collection Type Customer Collected

Total Organic Carbon T0158-07(ADEL) 24/04/2023

Total Organic Carbon 1 17.1 mg/L

Inorganic Chemistry - Physical	LOR	Result	Test Start Date
Sample temperature at time of receipt 11	1.6°C		
Alkalinity Carbonate Bicarbonate and Hy	droxide T0101-0	1(ADEL)	13/04/2023
Alkalinity as Calcium Carbonate		147 mg/L	
Bicarbonate		156 mg/L	
Carbonate		12 mg/L	
Hydroxide		0 mg/L	
Conductivity & Total Dissolved Solids T0	016-01(ADEL)		13/04/2023
Conductivity	2	4550 µS/cm	
Note		Conductivity measurement is corrected to 25°C	
Total Dissolved Solids (by EC)	1	2570 mg/L	
pH T0010-01(ADEL)			13/04/2023
pH		8.8 pH units	
Temperature at which pH is measured		21.8 °C	
Turbidity T0018-01(ADEL)			14/04/2023
Turbidity	0.1	24 NTU	
Inorganic Chemistry - Waste Water	LOR	Result	Test Start Date
Sample temperature at time of receipt 11	1.6°C		
Suspended Solids T0160-01(ADEL)			20/04/2023
Suspended Solids	1.0	68 mg/L	



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Analytical Results

 Sampling Point
 31522-EPA - Mark Point

 Sampled Date
 12/04/2023 1:07:00PM

 Sample Received Date
 13/04/2023 3:30:22PM

 Sample Analysis Completed
 5/05/2023 1:04:41PM

 Sample ID
 *2023-001-9943

 Status
 Endorsed

Collection Type Customer Collected

Biology Operations	LOR	Result	Test Start Date
Sample temperature at time of receipt	: 11.6°C		
Algal Identification T0393(ADEL)			
Other Organisms		1250 cells/mL	
BLUE GREEN ALGAE			
Pseudanabaena		26400 cells/mL	
Planktolyngbya		203000 cells/mL	
Cyanocatena		86800 cells/mL	
Aphanocapsa		62800 cells/mL	
Cyanodictyon		12000 cells/mL	
Cuspidothrix		3180 cells/mL	
Dolichospermum (coiled)		630 cells/mL	
Dolichospermum crassum		160 cells/mL	
Phormidium		280 cells/mL	
Dolichospermum planctonicum		315 cells/mL	
Anabaena		3840 cells/mL	
Dolichospermum circinale		460 cells/mL	
Anabaenopsis		450 cells/mL	
Cylindrospermopsis raciborskii		12600 cells/mL	
Aphanizomenon		13300 cells/mL	
Sphaerospermopsis		26200 cells/mL	
Merismopedia		1600 cells/mL	
DIATOMS			
Nitzschia		2650 cells/mL	
Aulacoseira		2500 cells/mL	
GREEN ALGAE			
Phytoflagellates		1200 cells/mL	
Monoraphidium sp_2_(short)		1200 cells/mL	
Chlorella		900 cells/mL	
Pediastrum		400 cells/mL	
Planctonema		7150 cells/mL	
Scenedesmus		1000 cells/mL	
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Analytical Results

Collection Type

31522-EPA - Mark Point **Sampling Point** 12/04/2023 1:07:00PM **Sampled Date** 13/04/2023 3:30:22PM **Sample Received Date** 5/05/2023 1:04:41PM Sample Analysis Completed *2023-001-9943 Sample ID Endorsed **Status**

Algal Identification T0393(ADEL)

Gonatozygon 9450 cells/mL

Sample temperature at time of receipt 11.6°C

12/04/2023 Algal Biovolume T0393(ADEL)

Customer Collected

BLUE GREEN ALGAE

Sphaerospermopsis	2.42 mm3/L
Aphanizomenon	0.65 mm3/L
Cylindrospermopsis raciborskii	0.53 mm3/L
Anabaenopsis	0.04 mm3/L
Dolichospermum circinale	0.12 mm3/L
Anabaena	0.30 mm3/L
Dolichospermum planctonicum	0.14 mm3/L
Phormidium	0.03 mm3/L
Dolichospermum crassum	0.06 mm3/L
Dolichospermum (coiled)	0.16 mm3/L
Cuspidothrix	0.18 mm3/L
Cyanodictyon	<0.01 mm3/L
Aphanocapsa	0.03 mm3/L
Cyanocatena	<0.01 mm3/L
Planktolyngbya	1.02 mm3/L
Pseudanabaena	0.34 mm3/L
Merismopedia	<0.01 mm3/L

DIATOMS

Aulacoseira 7.15 mm3/L Nitzschia 3.67 mm3/L

GREEN ALGAE

Gonatozygon 38.8 mm3/L Scenedesmus 0.25 mm3/L Pediastrum 0.48 mm3/L Chlorella 0.04 mm3/L Monoraphidium sp_2_(short) 0.06 mm3/L



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Analytical Results

 Sampling Point
 31522-EPA - Mark Point

 Sampled Date
 12/04/2023
 1:07:00PM

 Sample Received Date
 13/04/2023
 3:30:22PM

 Sample Analysis Completed
 5/05/2023
 1:04:41PM

 Sample ID
 *2023-001-9943

 Status
 Endorsed

Collection Type Customer Collected

Algal Biovolume T0393(ADEL)

Total Algae Biovolume

12/04/2023 or taxa reported at genus level are

Algal Biovolume Comment

Biovolumes for taxa reported at genus level are approximate values. Reported taxa and calculated biovolume includes only those with taxon cell volume and associated cell count data.

Biovolume totals have specific criteria around

how they calculate. Not Calculated mm3/L

Total Blue_Green Algae Biovolume 6.02 mm3/L # Total Diatom Biovolume 10.8 mm3/L

Total Green Algae Biovolume Not Calculated mm3/L

Total Toxic BGA Biovolume 0.65 mm3/L

Sample temperature at time of receipt 11.6°C

Algal Count - Total T0393(ADEL) 12/04/2023

 Algae - Total
 480000 cells/mL

 Blue Green Algae - Total
 454000 cells/mL

 Diatoms - Total
 5150 cells/mL

 Geosmin-MIB producing BGA - Total
 27600 cells/mL

 Green Algae - Total
 21300 cells/mL

 Toxin producing BGA - Total
 13100 cells/mL

Sample temperature at time of receipt 11.6°C

Chlorophyll a & Phaeophytin a T0380-02(ADEL)

Chlorophyll a 0.1 61.1 μ g/L Phaeophytin a 0.1 25.6 μ g/L

Inorganic Chemistry - Nutrients	LOR	Result	Test Start Date
Sample temperature at time of receipt 1	11.6°C		

Ammonia as N 1 3 μg/L

Chloride T0104-02(ADFL) 18/04/2023

Chloride T0104-02(ADEL)Chloride 4.0 2150 mg/L



Ammonia as N (ADEL)

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Analytical Results			
Sampling Point		- Mark Point	
Sampled Date		1:07:00PM	
Sample Received Date		3:30:22PM	
Sample Analysis Completed Sample ID	5/05/2023 *2023-001-9		
Status	Endorsed	9940	
Collection Type	Customer C	collected	
Nitrate + Nitrite as N (ADEL)			27/04/2023
# Nitrate + Nitrite as N	0.5	<0.5 µg/L	
# Nitrate + Nitrite as NO3	2.3	<2.3 μg/L	
Nitrogen - Total TMZ-M06(ADEL)			13/04/2023
Nitrogen - Total		2.40 mg/L	
Phosphorus - Filterable Reactive as P (ADE	L)		27/04/2023
# Phosphorus -Filterable Reactive as PO4	1.5	9.568 µg/L	
Phosphorus-Filterable Reactive as P	0.5	3.2 µg/L	
Phosphorus - Total T0109-44(ADEL)			26/04/2023
Phosphorus - Total	0.005	0.215 mg/L	
Silica - Reactive T0111-01(ADEL)			18/04/2023
Silica - Reactive	0.05	<0.05 mg/L	
TKN as N T0112-01(ADEL)			26/04/2023
TKN as Nitrogen	0.05	2.40 mg/L	
Organic Chemistry	LOR	Result	Test Start Date
Sample temperature at time of receipt 11.6	°C		
Dissolved Organic Carbon T0158-07(ADEL)			24/04/2023
Dissolved Organic Carbon	1	12.3 mg/L	
Total Organic Carbon T0158-07(ADEL)			24/04/2023
Total Organic Carbon	1	20.0 mg/L	
Inorganic Chemistry - Physical	LOR	Result	Test Start Date
Sample temperature at time of receipt 11.6	°C		
Alkalinity Carbonate Bicarbonate and Hydr		1(ADEL)	13/04/2023
Alkalinity as Calcium Carbonate		149 mg/L	
Bicarbonate		168 mg/L	
Carbonate		6 mg/L	
Hydroxide		0 mg/L	40/04/0000



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Conductivity & Total Dissolved Solids T0016-01(ADEL)

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Analytical Results

 Sampling Point
 31522-EPA - Mark Point

 Sampled Date
 12/04/2023 1:07:00PM

 Sample Received Date
 13/04/2023 3:30:22PM

 Sample Analysis Completed
 5/05/2023 1:04:41PM

 Sample ID
 *2023-001-9943

 Status
 Endorsed

Collection Type Customer Collected

Conductivity & Total Dissolved Solids T0016-01(ADEL)		
2	8000 µS/cm	
	Conductivity measurement is corrected to 25°C	
1	4610 mg/L	
		13/04/2023
	8.6 pH units	
	21.8 °C	
		14/04/2023
0.1	32 NTU	
	1	2 8000 μS/cm Conductivity measurement is corrected to 25°C 1 4610 mg/L 8.6 pH units 21.8 °C

Inorganic Chemistry - Waste Water	LOR	Result	Test Start Date
Sample temperature at time of receipt 1	1.6°C		
Suspended Solids T0160-01(ADEL)			20/04/2023
Suspended Solids	1.0	27 mg/l	



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Analytical Results

 Sampling Point
 31523-EPA - Long Point

 Sampled Date
 12/04/2023
 1:55:00PM

 Sample Received Date
 13/04/2023
 3:30:38PM

 Sample Analysis Completed
 5/05/2023
 1:04:42PM

 Sample ID
 *2023-001-9930

 Status
 Endorsed

Collection Type Customer Collected

Biology Operations	LOR	Result	Test Start Date
Sample temperature at time of re	eceipt 11.6°C		
Algal Identification T0393(ADEL)	·		
Other Organisms		150 cells/mL	
BLUE GREEN ALGAE			
Planktolyngbya		3200 cells/mL	
Aphanocapsa		7000 cells/mL	
Cyanodictyon		2800 cells/mL	
Aphanizomenon		250 cells/mL	
Anabaenopsis		310 cells/mL	
Sphaerospermopsis		340 cells/mL	
Dolichospermum (straight)		142 cells/mL	
Nodularia		522 colle/ml	

800 cells/mL

200 cells/mL

Nodularia	532 cells/mL
Anabaena	56 cells/mL
DIATOMS	
Chaetoceros	175 cells/mL
PENNALES	175 cells/mL
Nitzschia	900 cells/mL
GREEN ALGAE	
Gonatozygon	50 cells/mL

Sample temperature at time of receipt 11.6°C

Algal Biovolume T0393(ADEL)

BLUE GREEN ALGAE

Planctonema

Crucigenia

 Anabaena
 <0.01 mm3/L</td>

 Dolichospermum (straight)
 0.04 mm3/L

 Sphaerospermopsis
 0.03 mm3/L

 Anabaenopsis
 0.03 mm3/L

 Aphanizomenon
 0.01 mm3/L

 Cyanodictyon
 <0.01 mm3/L</td>



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Analytical Results

Sampling Point 31523-EPA - Long Point 12/04/2023 1:55:00PM Sampled Date 13/04/2023 3:30:38PM **Sample Received Date** 5/05/2023 1:04:42PM Sample Analysis Completed *2023-001-9930 Sample ID Endorsed **Status**

Customer Collected Collection Type

12/04/2023 Algal Biovolume T0393(ADEL)

<0.01 mm3/L Aphanocapsa Planktolyngbya 0.02 mm3/L

DIATOMS

Nitzschia 1.25 mm3/l **PENNALES** 0.05 mm3/L

GREEN ALGAE

Total Algae Biovolume

Toxin producing BGA - Total

Crucigenia <0.01 mm3/L Gonatozygon 0.21 mm3/L

Algal Biovolume Comment Biovolumes for taxa reported at genus level are

> approximate values. Reported taxa and calculated biovolume includes only those with taxon cell volume and associated cell count data. Biovolume totals have specific criteria around

how they calculate. Not Calculated mm3/L

Total Blue_Green Algae Biovolume Not Calculated mm3/L # Total Diatom Biovolume Not Calculated mm3/L # Total Green Algae Biovolume Not Calculated mm3/L

Total Toxic BGA Biovolume 0.00 mm3/L

Sample temperature at time of receipt 11.6°C

12/04/2023 Algal Count - Total T0393(ADEL)

Algae - Total 16900 cells/mL Blue Green Algae - Total 14600 cells/mL Diatoms - Total 1250 cells/mL Geosmin-MIB producing BGA - Total 0 cells/mL Green Algae - Total 1050 cells/mL

Sample temperature at time of receipt 11.6°C

13/04/2023 Chlorophyll a & Phaeophytin a T0380-02(ADEL)

0 cells/ml

Chlorophyll a $32.6 \mu g/L$ Phaeophytin a 0.1 $33.7 \mu g/L$



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Analytical Results

Collection Type

 Sampling Point
 31523-EPA - Long Point

 Sampled Date
 12/04/2023
 1:55:00PM

 Sample Received Date
 13/04/2023
 3:30:38PM

 Sample Analysis Completed
 5/05/2023
 1:04:42PM

 Sample ID
 *2023-001-9930

 Status
 Endorsed

Inorganic Chemistry - Nutrients	LOR	Result	Test Start Date
Sample temperature at time of receipt 11	1.6°C		
Ammonia as N (ADEL)			27/04/2023
# Ammonia as N	1	13 µg/L	
Chloride T0104-02(ADEL)			18/04/2023
Chloride	4.0	7750 mg/L	
Nitrate + Nitrite as N (ADEL)			27/04/2023
# Nitrate + Nitrite as N	0.5	<0.5 µg/L	
# Nitrate + Nitrite as NO3	2.3	<2.3 μg/L	
Nitrogen - Total TMZ-M06(ADEL)			13/04/2023
Nitrogen - Total		2.48 mg/L	
Phosphorus - Filterable Reactive as P (Al	DEL)		27/04/2023
# Phosphorus -Filterable Reactive as PO4	1.5	11.362 μg/L	
Phosphorus-Filterable Reactive as P	0.5	3.8 µg/L	
Phosphorus - Total T0109-44(ADEL)			26/04/2023
Phosphorus - Total	0.005	0.236 mg/L	
Silica - Reactive T0111-01(ADEL)			18/04/2023
Silica - Reactive	0.05	0.20 mg/L	
TKN as N T0112-01(ADEL)		-	26/04/2023
TKN as Nitrogen	0.05	2.48 mg/L	
Organic Chemistry	LOR	Result	Test Start Date
Sample temperature at time of receipt 11	1.6°C		
Dissolved Organic Carbon T0158-07(ADE	EL)		24/04/2023
Dissolved Organic Carbon	1	14.9 mg/L	
Total Organic Carbon T0158-07(ADEL)			24/04/2023
Total Organic Carbon	1	21.9 mg/L	



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Analytical Results

 Sampling Point
 31523-EPA - Long Point

 Sampled Date
 12/04/2023
 1:55:00PM

 Sample Received Date
 13/04/2023
 3:30:38PM

 Sample Analysis Completed
 5/05/2023
 1:04:42PM

 Sample ID
 *2023-001-9930

 Status
 Endorsed

Collection Type Customer Collected

Inorganic Chemistry - Physical	LOR	Result	Test Start Date
Sample temperature at time of receipt 1	1.6°C		
Alkalinity Carbonate Bicarbonate and Hy		1(ADEL)	13/04/2023
Alkalinity as Calcium Carbonate		156 mg/L	
Bicarbonate		191 mg/L	
Carbonate		0 mg/L	
Hydroxide		0 mg/L	
Conductivity & Total Dissolved Solids T0	016-01(ADEL)		13/04/2023
Conductivity	2	25200 μS/cm	
Note		Conductivity measurement is corrected to 25°C	
Total Dissolved Solids (by EC)	1	15800 mg/L	
pH T0010-01(ADEL)			13/04/2023
pH		8.2 pH units	
Temperature at which pH is measured		21.8 °C	
Turbidity T0018-01(ADEL)			14/04/2023
Turbidity	0.1	56 NTU	
Inorganic Chemistry - Waste Water	LOR	Result	Test Start Date
Sample temperature at time of receipt 1 Suspended Solids T0160-01(ADEL) Suspended Solids	1.6°C	67 mg/L	20/04/2023



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Analytical Results

 Sampling Point
 53032-EPA - Noonameena

 Sampled Date
 12/04/2023 3:00:00PM

 Sample Received Date
 13/04/2023 3:32:35PM

 Sample Analysis Completed
 5/05/2023 1:04:43PM

 Sample ID
 *2023-001-9950

 Status
 Endorsed

Collection Type Customer Collected

Biology Operations	LOR	Result	Test Start Date
Sample temperature at time of receipt 1	1.6°C		
Algal Identification T0393(ADEL)			
Other Organisms		30 cells/mL	
BLUE GREEN ALGAE			
Planktothrix perornata_f_attenuata		64 cells/mL	
Phormidium		10 cells/mL	
DIATOMS			
Amphiprora_(=_Entomoneis)		10 cells/mL	
Urosolenia		20 cells/mL	
Diploneis		30 cells/mL	
Nitzschia		50 cells/mL	
Thalassionema		50 cells/mL	
Nitzschia small_spp		60 cells/mL	
Chaetoceros		4 cells/mL	
Synedra		50 cells/mL	
DINOFLAGELLATES			
Oxyrrhis		20 cells/mL	
Sample temperature at time of receipt 1	1.6°C		
Algal Biovolume T0393(ADEL)			12/04/2023
BLUE GREEN ALGAE			
Planktothrix perornata_f_attenuata		0.02 mm3/L	
Phormidium		<0.01 mm3/L	
DIATOMS			
Synedra		0.03 mm3/L	
Nitzschia small_spp		<0.01 mm3/L	
Nitzschia		0.07 mm3/L	
Urosolenia		0.02 mm3/L	
Amphiprora_(=_Entomoneis)		0.15 mm3/L	



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Analytical Results

 Sampling Point
 53032-EPA - Noonameena

 Sampled Date
 12/04/2023 3:00:00PM

 Sample Received Date
 13/04/2023 3:32:35PM

 Sample Analysis Completed
 5/05/2023 1:04:43PM

 Sample ID
 *2023-001-9950

 Status
 Endorsed

Collection Type Customer Collected

Algal Biovolume T0393(ADEL)

12/04/2023

Algal Biovolume Comment

Biovolumes for taxa reported at genus level are approximate values. Reported taxa and calculated biovolume includes only those with taxon cell volume and associated cell count data. Biovolume totals have specific criteria around

how they calculate.

Not Calculated mm3/L

Total Blue_Green Algae Biovolume

0.02 mm3/L

Total Diatom Biovolume

Total Algae Biovolume

Not Calculated mm3/L

Total Green Algae Biovolume
Total Toxic BGA Biovolume

0.00 mm3/L 0.00 mm3/L

Sample temperature at time of receipt 11.6°C

Algal Count - Total T0393(ADEL) 12/04/2023

 Algae - Total
 368 cells/mL

 Blue Green Algae - Total
 74 cells/mL

 Diatoms - Total
 274 cells/mL

 Geosmin-MIB producing BGA - Total
 74 cells/mL

 Green Algae - Total
 0 cells/mL

 Toxin producing BGA - Total
 0 cells/mL

Sample temperature at time of receipt 11.6°C

Chlorophyll a & Phaeophytin a T0380-02(ADEL)

Chlorophyll a 0.1 3.38 $\,\mu g/L$ Phaeophytin a 0.1 3.70 $\,\mu g/L$

Inorganic Chemistry - Nutrients	LOR	Result	Test Start Date
Sample temperature at time of receipt	11.6°C		

 Ammonia as N (ADEL)
 27/04/2023

 # Ammonia as N
 1
 48 μg/L

Chloride T0104-02(ADEL) 18/04/2023

Chloride 4.0 20600 mg/L



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Analytical Results			
Sampling Point Sampled Date Sample Received Date Sample Analysis Completed Sample ID Status Collection Type	12/04/2023	3:32:35PM 1:04:43PM 950	
Nitrato + Nitrito co N (ADEL)			27/04/2023
Nitrate + Nitrite as N (ADEL) # Nitrate + Nitrite as N	0.5	1.0 µg/L	21104/2020
# Nitrate + Nitrite as NO3	2.3	4.43 μg/L	
Nitrogen - Total TMZ-M06(ADEL)	2.0	4.40 μg/ε	13/04/2023
Nitrogen - Total		1.47 mg/L	
Phosphorus - Filterable Reactive as P (AI	DEL)		27/04/2023
# Phosphorus -Filterable Reactive as PO4	1.5	2.093 µg/L	
Phosphorus-Filterable Reactive as P	0.5	0.7 µg/L	
Phosphorus - Total T0109-44(ADEL)		2 kā, _	26/04/2023
Phosphorus - Total	0.005	0.064 mg/L	
Silica - Reactive T0111-01(ADEL)		5.55 ·g	18/04/2023
Silica - Reactive	0.05	<0.05 mg/L	
TKN as N T0112-01(ADEL)			26/04/2023
TKN as Nitrogen	0.05	1.47 mg/L	
Organic Chemistry	LOR	Result	Test Start Date
Sample temperature at time of receipt 11 Dissolved Organic Carbon T0158-07(ADE			24/04/2023
Dissolved Organic Carbon	- -, 1	16.3 mg/L	
Total Organic Carbon T0158-07(ADEL)		· ·	24/04/2023
Total Organic Carbon	1	17.2 mg/L	
Inorganic Chemistry - Physical	LOR	Result	Test Start Date
Sample temperature at time of receipt 11	7.6°C		
Alkalinity Carbonate Bicarbonate and Hy	droxide T0101-0	1(ADEL)	14/04/2023
Alkalinity as Calcium Carbonate		165 mg/L	
Bicarbonate		201 mg/L	
Carbonate		0 mg/L	

0 mg/L



Hydroxide

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Conductivity & Total Dissolved Solids T0016-01(ADEL)

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Analytical Results

 Sampling Point
 53032-EPA - Noonameena

 Sampled Date
 12/04/2023 3:00:00PM

 Sample Received Date
 13/04/2023 3:32:35PM

 Sample Analysis Completed
 5/05/2023 1:04:43PM

 Sample ID
 *2023-001-9950

 Status
 Endorsed

Collection Type Customer Collected

Conductivity & Total Dissolved Solids	T0016-01(ADEL)		14/04/2023
Conductivity	2	52600 μS/cm	
Note		Conductivity measurement is corrected to 25°C	
Total Dissolved Solids (by EC)	1	37300 mg/L	
pH T0010-01(ADEL)			14/04/2023
pH		8.1 pH units	
Temperature at which pH is measured		21.7 °C	
Turbidity T0018-01(ADEL)			14/04/2023
Turbidity	0.1	4.1 NTU	

Inorganic Chemistry - Waste Water	LOR	Result	Test Start Date
Sample temperature at time of receipt 11	1.6°C		
Suspended Solids T0160-01(ADEL)	20/04/2023		
Suspended Solids	1.0	3 mg/L	



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Analytical Results

 Sampling Point
 31524-EPA - Bonneys

 Sampled Date
 12/04/2023
 3:35:00PM

 Sample Received Date
 13/04/2023
 3:30:52PM

 Sample Analysis Completed
 5/05/2023
 1:04:43PM

 Sample ID
 *2023-001-9945

 Status
 Endorsed

Collection Type Customer Collected

Biology Operations LOR Result Test Start Date

64300 cells/mL

800 cells/mL

15 cells/mL

Sample temperature at time of receipt 11.6°C

Algal Identification T0393(ADEL)

BLUE GREEN ALGAE

Planktothrix	46 cells/mL
Cyanobacterial Filaments (Narrow)	463 cells/mL
DIATOMS	
Amphiprora_(=_Entomoneis)	26 cells/mL
Pennate diatoms small_spp	3000 cells/mL
Gyrosigma	300 cells/mL
Synedra	350 cells/mL
Navicula	650 cells/mL
Pennate diatoms	1100 cells/mL
Nitzschia	1400 cells/mL
Melosira	7 cells/mL
GREEN ALGAE	
Phytoflagellates small_spp	2400 cells/mL

Sample temperature at time of receipt 11.6°C

Algal Biovolume T0393(ADEL)

BLUE GREEN ALGAE

Scenedesmus

Stigeoclonium

Unicellular green algae small_spp



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Analytical Results

 Sampling Point
 31524-EPA - Bonneys

 Sampled Date
 12/04/2023
 3:35:00PM

 Sample Received Date
 13/04/2023
 3:30:52PM

 Sample Analysis Completed
 5/05/2023
 1:04:43PM

 Sample ID
 *2023-001-9945

 Status
 Endorsed

Collection Type Customer Collected

Algal Biovolume T0393(ADEL) 12/04/2023

Gyrosigma 0.74 mm3/L

GREEN ALGAE

 Stigeoclonium
 <0.01 mm3/L</td>

 Scenedesmus
 0.20 mm3/L

 Unicellular green algae small_spp
 0.91 mm3/L

 Phytoflagellates small_spp
 0.19 mm3/L

Algal Biovolume Comment Biovolumes for taxa reported at genus level are

approximate values. Reported taxa and calculated biovolume includes only those with taxon cell volume and associated cell count data. Biovolume totals have specific criteria around

how they calculate.

Total Algae Biovolume Not Calculated mm3/L

Total Blue_Green Algae Biovolume <0.02 mm3/L

Total Diatom Biovolume Not Calculated mm3/L

Total Green Algae Biovolume 1.30 mm3/L
Total Toxic BGA Biovolume 0.00 mm3/L

Sample temperature at time of receipt 11.6°C

Algal Count - Total T0393(ADEL) 12/04/2023

 Algae - Total
 74900 cells/mL

 Blue Green Algae - Total
 509 cells/mL

 Diatoms - Total
 6830 cells/mL

 Geosmin-MIB producing BGA - Total
 0 cells/mL

 Green Algae - Total
 67500 cells/mL

 Toxin producing BGA - Total
 0 cells/mL

Sample temperature at time of receipt 11.6°C

Chlorophyll a & Phaeophytin a T0380-02(ADEL)

Chlorophyll a 0.1 43.4 μ g/L Phaeophytin a 0.1 90.3 μ g/L



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Analytical Results

Sampling Point 31524-EPA - Bonneys 12/04/2023 3:35:00PM **Sampled Date** 13/04/2023 3:30:52PM **Sample Received Date** 5/05/2023 1:04:43PM Sample Analysis Completed *2023-001-9945 Sample ID Endorsed Status

Customer Collected **Collection Type**

Inorganic Chemistry - Nutrients	LOR	Result	Test Start Date
Sample temperature at time of receipt 11.	.6°C		
Ammonia as N (ADEL)			27/04/2023
# Ammonia as N	1	25 μg/L	
Chloride T0104-02(ADEL)			18/04/2023
Chloride	4.0	2520 mg/L	
Nitrate + Nitrite as N (ADEL)			27/04/2023
# Nitrate + Nitrite as N	0.5	<0.5 µg/L	
# Nitrate + Nitrite as NO3	2.3	<2.3 µg/L	
Nitrogen - Total TMZ-M06(ADEL)			13/04/2023
Nitrogen - Total		3.38 mg/L	
Phosphorus - Filterable Reactive as P (AD	DEL)		27/04/2023
# Phosphorus -Filterable Reactive as PO4	1.5	7.774 µg/L	
Phosphorus-Filterable Reactive as P	0.5	2.6 μg/L	
Phosphorus - Total T0109-44(ADEL)			26/04/2023
Phosphorus - Total	0.005	0.274 mg/L	
Silica - Reactive T0111-01(ADEL)		· ·	18/04/2023
Silica - Reactive	0.05	0.07 mg/L	
TKN as N T0112-01(ADEL)		C	26/04/2023
TKN as Nitrogen	0.05	3.38 mg/L	
Organic Chemistry	LOR	Result	Test Start Date
Sample temperature at time of receipt 11.		- Nosuit	Test Start Bate
Dissolved Organic Carbon T0158-07(ADE			24/04/2023
Dissolved Organic Carbon	∟, 1	17.7 mg/L	
	•	17.7 mg/L	24/04/2023
Total Organic Carbon T0158-07(ADEL) Total Organic Carbon	1	24.6 mg/l	24/04/2020
iotal Organio Galbon	ı	24.6 mg/L	
Inorganic Chemistry - Physical	LOR	Result	Test Start Date



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13/04/2023

20/04/2023

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Analytical Results

 Sampling Point
 31524-EPA - Bonneys

 Sampled Date
 12/04/2023
 3:35:00PM

 Sample Received Date
 13/04/2023
 3:30:52PM

 Sample Analysis Completed
 5/05/2023
 1:04:43PM

 Sample ID
 *2023-001-9945

 Status
 Endorsed

Collection Type Customer Collected

Sample temperature at time of receipt 11.6°C

Alkalinity Carbonate Bicarbonate and Hydroxide T0101-01(ADEL)

Alkalinity as Calcium Carbonate 173 $\,$ mg/L Bicarbonate 211 $\,$ mg/L Carbonate 0 $\,$ mg/L Hydroxide 0 $\,$ mg/L

Conductivity & Total Dissolved Solids T0016-01(ADEL) 13/04/2023

Conductivity 2 64900 μ S/cm

Note Conductivity measurement is corrected to 25°C

Total Dissolved Solids (by EC) 1 48400 mg/L

pH T0010-01(ADEL) 13/04/2023

pH 7.7 pH units Temperature at which pH is measured 21.8 $^{\circ}$ C

Turbidity T0018-01(ADEL) 14/04/2023

Turbidity 0.1 38 NTU

Inorganic Chemistry - Waste Water LOR Result Test Start Date

Sample temperature at time of receipt 11.6°C Suspended Solids T0160-01(ADEL)

Suspended Solids 1.0 80 mg/L



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Analytical Results

Sampling Point 31513-EPA - Parnka Point Boat Ramp

 Sampled Date
 12/04/2023
 4:05:00PM

 Sample Received Date
 13/04/2023
 3:28:57PM

 Sample Analysis Completed
 5/05/2023
 1:04:44PM

 Sample ID
 *2023-001-9933

Status Endorsed

Collection Type Customer Collected

Biology Operations LOR Result Test Start Date

Sample temperature at time of receipt 11.6°C

Algal Identification T0393(ADEL)

DIATOMS

Naviculoids110 cells/mLPennate diatoms60 cells/mLAmphiprora_(=_Entomoneis)4 cells/mL

EUGLENOPHYTES

Trachelomonas 10 cells/mL

GREEN ALGAE

Unicellular green algae 123000 cells/mL
Chlorella 1660000 cells/mL

Sample temperature at time of receipt 11.6°C

Algal Biovolume T0393(ADEL)

DIATOMS

Amphiprora_(=_Entomoneis) 0.06 mm3/L

EUGLENOPHYTES

Total Algae Biovolume

Total Diatom Biovolume

Total Toxic BGA Biovolume

Total Green Algae Biovolume

Total Blue_Green Algae Biovolume

Trachelomonas 0.03 mm3/L

GREEN ALGAE

Chlorella 74.7 mm3/L

Algal Biovolume Comment

Biovolumes for taxa reported at genus level are approximate values. Reported taxa and

calculated biovolume includes only those with taxon cell volume and associated cell count data. Biovolume totals have specific criteria around

how they calculate.

Not Calculated mm3/L

0.00 mm3/L

Not Calculated mm3/L

Not Calculated mm3/L

0.00 mm3/L



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Analytical Results

31513-EPA - Parnka Point Boat Ramp **Sampling Point**

12/04/2023 4:05:00PM **Sampled Date** 13/04/2023 3:28:57PM **Sample Received Date** 5/05/2023 1:04:44PM Sample Analysis Completed *2023-001-9933 Sample ID Endorsed **Status**

Customer Collected Collection Type

Sample temperature at time of receipt 11.6°C

12/04/2023 Algal Count - Total T0393(ADEL)

Algae - Total 1780000 cells/mL Blue Green Algae - Total 0 cells/mL Diatoms - Total 174 cells/mL Geosmin-MIB producing BGA - Total 0 cells/mL Green Algae - Total 1780000 cells/mL Toxin producing BGA - Total 0 cells/mL

Sample temperature at time of receipt 11.6°C Chlorophyll a & Phaeophytin a T0380-02(ADEL)

13/04/2023

Chlorophyll a 0.1 85.3 µg/L Phaeophytin a 0.1 87.7 µg/L

Inorganic Chemistry - Nutrients	LOR	Result	Test Start Date
Sample temperature at time of receipt	11.6°C		
Ammonia as N T0100-01(ADEL)			02/05/2023
Ammonia as N	0.005	0.149 mg/L	
Chloride T0104-02(ADEL)			18/04/2023
Chloride	4.0	32000 mg/L	
Nitrate + Nitrite as N (ADEL)			27/04/2023
# Nitrate + Nitrite as N	0.5	8.7 μg/L	
# Nitrate + Nitrite as NO3	2.3	38.5 μg/L	
Nitrogen - Total TMZ-M06(ADEL)			13/04/2023
Nitrogen - Total		5.10 mg/L	
Phosphorus - Filterable Reactive as P (A	ADEL)		27/04/2023
# Phosphorus -Filterable Reactive as PO4	1.5	3.887 µg/L	
Phosphorus-Filterable Reactive as P	0.5	1.3 μg/L	
Phosphorus - Total T0109-44(ADEL)			26/04/2023
Phosphorus - Total	0.005	0.326 mg/L	
Silica - Reactive T0111-01(ADEL)			18/04/2023
Silica - Reactive	0.05	4.96 mg/L	



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Analytical Results

Sampling Point 31513-EPA - Parnka Point Boat Ramp

 Sampled Date
 12/04/2023
 4:05:00PM

 Sample Received Date
 13/04/2023
 3:28:57PM

 Sample Analysis Completed
 5/05/2023
 1:04:44PM

 Sample ID
 *2023-001-9933

 Status
 Endorsed

Collection Type Customer Collected

TKN as N T0112-01(ADEL) 26/04/2023

TKN as Nitrogen 0.05 5.09 mg/L

Organic Chemistry	LOR	Result	Test Start Date
Sample temperature at time of receipt	11.6°C		
Dissolved Organic Carbon T0158-07(Al	DEL)		24/04/2023
Dissolved Organic Carbon	1	19.5 mg/L	
Total Organic Carbon T0158-07(ADEL)			24/04/2023
Total Organic Carbon	1	34.8 mg/L	
Inorganic Chemistry - Physical	LOR	Result	Test Start Date
Sample temperature at time of receipt	11.6°C		
Alkalinity Carbonate Bicarbonate and	Hydroxide T0101-0	1(ADEL)	13/04/2023
Alkalinity as Calcium Carbonate		205 mg/L	

Alkalinity Carbonate Bicarbonate an	a Hyaroxiae 10101-0	I(ADEL)	13/04/2023
Alkalinity as Calcium Carbonate		205 mg/L	
Bicarbonate		250 mg/L	
Carbonate		0 mg/L	
Hydroxide		0 mg/L	
Conductivity & Total Dissolved Solids	s T0016-01(ADEL)		13/04/2023
Conductivity	2	76000 μS/cm	
Note		Conductivity measurement is corrected to 25°C	
Total Dissolved Solids (by EC)	1	59300 mg/L	
pH T0010-01(ADEL)			13/04/2023
рН		7.8 pH units	
Temperature at which pH is measured		21.8 °C	

 Turbidity T0018-01(ADEL)
 14/04/2023

 Turbidity
 0.1
 110 NTU

Inorganic Chemistry - Waste Water LOR Result Test Start Date

Sample temperature at time of receipt 11.6°C



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 Sampled Date
 12/04/2023
 4:05:00PM

 Sample Received Date
 13/04/2023
 3:28:57PM

 Sample Analysis Completed
 5/05/2023
 1:04:44PM

 Sample ID
 *2023-001-9933

Status Endorsed

Collection Type Customer Collected

Suspended Solids T0160-01(ADEL)

20/04/2023

Suspended Solids 1.0 280 mg/L



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 Sampling Point
 31512-EPA - McGrath Flat North

 Sampled Date
 12/04/2023 4:40:00PM

 Sample Received Date
 13/04/2023 3:28:43PM

 Sample Analysis Completed
 5/05/2023 1:04:45PM

 Sample ID
 *2023-001-9937

 Status
 Endorsed

Collection Type Customer Collected

Biology Operations LOR Result Test Start Date

Sample temperature at time of receipt 11.6°C

Algal Identification T0393(ADEL)

DIATOMS

 Pennate diatoms
 1300 cells/mL

 Nitzschia
 50 cells/mL

 Tabellaria
 322 cells/mL

 Naviculoids
 3050 cells/mL

 Amphiprora_(=_Entomoneis)
 8 cells/mL

DINOFLAGELLATES

Oxyrrhis 20 cells/mL

GREEN ALGAE

Unicellular green algae 118000 cells/mL
Tetraselmis 30 cells/mL
Chlorella 674000 cells/mL

Sample temperature at time of receipt 11.6°C

Algal Biovolume T0393(ADEL)

DIATOMS

 Tabellaria
 0.64 mm3/L

 Amphiprora_(=_Entomoneis)
 0.12 mm3/L

 Nitzschia
 0.07 mm3/L

GREEN ALGAE

Chlorella 30.3 mm3/L

Algal Biovolume Comment Biovolumes for taxa reported at genus level are

approximate values. Reported taxa and calculated biovolume includes only those with taxon cell volume and associated cell count data. Biovolume totals have specific criteria around

how they calculate.

Not Calculated mm3/L

0.00 mm3/L

Not Calculated mm3/L

Total Algae Biovolume # Total Blue_Green Algae Biovolume # Total Diatom Biovolume

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Analytical Results

 Sampling Point
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 Sampled Date
 12/04/2023 4:40:00PM

 Sample Received Date
 13/04/2023 3:28:43PM

 Sample Analysis Completed
 5/05/2023 1:04:45PM

 Sample ID
 *2023-001-9937

 Status
 Endorsed

Collection Type Customer Collected

Algal Biovolume T0393(ADEL) 12/04/2023

Total Green Algae Biovolume Not Calculated mm3/L

Total Toxic BGA Biovolume 0.00 mm3/L

Sample temperature at time of receipt 11.6°C

Algal Count - Total T0393(ADEL) 12/04/2023

 Algae - Total
 797000 cells/mL

 Blue Green Algae - Total
 0 cells/mL

 Diatoms - Total
 4730 cells/mL

 Geosmin-MIB producing BGA - Total
 0 cells/mL

 Green Algae - Total
 792000 cells/mL

 Toxin producing BGA - Total
 0 cells/mL

Sample temperature at time of receipt 11.6°C

Chlorophyll a & Phaeophytin a T0380-02(ADEL)

Chlorophyll a 0.1 56.5 $\,\mu g/L$ Phaeophytin a 0.1 49.8 $\,\mu g/L$

Inorganic Chemistry - Nutrients	LOR	Result	Test Start Date
Sample temperature at time of receipt	11.6°C		
Ammonia as N (ADEL)			27/04/2023
# Ammonia as N	1	50 μg/L	
Chloride T0104-02(ADEL)			18/04/2023
Chloride	4.0	30900 mg/L	
Nitrate + Nitrite as N (ADEL)			27/04/2023
# Nitrate + Nitrite as N	0.5	4.0 μg/L	

# Nitrate + Nitrite as NO3	2.3	17.7 µg/L	
Nitrogen - Total TMZ-M06(ADEL)			13/04/2023
Nitrogen - Total		3.98 mg/L	

Nitrogen - Total		3.98 mg/L	
Phosphorus - Filterable Reactive as P (Al	DEL)		27/04/2023
# Phosphorus -Filterable Reactive as PO4	1.5	2.691 μg/L	
Phosphorus-Filterable Reactive as P	0.5	0.9 µg/L	



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 Sampling Point
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 Sampled Date
 12/04/2023 4:40:00PM

 Sample Received Date
 13/04/2023 3:28:43PM

 Sample Analysis Completed
 5/05/2023 1:04:45PM

 Sample ID
 *2023-001-9937

 Status
 Endorsed

Collection Type Customer Collected

Phosphorus - Total T0109-44(ADEL)			26/04/2023
Phosphorus - Total	0.005	0.226 mg/L	
Silica - Reactive T0111-01(ADEL)			18/04/2023
Silica - Reactive	0.05	5.26 mg/L	
TKN as N T0112-01(ADEL)			26/04/2023
TKN as Nitrogen	0.05	3.98 mg/L	

Organic Chemistry	LOR	Result	Test Start Date
Sample temperature at time of receipt 11.	6°C		
Dissolved Organic Carbon T0158-07(ADEL	.)		24/04/2023
Dissolved Organic Carbon	1	19.3 mg/L	
Total Organic Carbon T0158-07(ADEL)			24/04/2023
Total Organic Carbon	1	26.0 mg/L	

Inorganic Chemistry - Physical LOR	Result	Test Start Date
------------------------------------	--------	-----------------

Sample temperature at time of receipt 11.6°C

Alkalinity Carbonate Bicarbonate and Hydroxide T0101-01(ADEL)

Alkalinity as Calcium Carbonate 191 $\,$ mg/L Bicarbonate 233 $\,$ mg/L Carbonate 0 $\,$ mg/L Hydroxide 0 $\,$ mg/L

Conductivity & Total Dissolved Solids T0016-01(ADEL)

Conductivity 2 75300 µS/cm

Note Conductivity measurement is corrected to 25°C

Total Dissolved Solids (by EC) 1 58600 mg/L

pH T0010-01(ADEL) 13/04/2023

pH 7.9 pH units Temperature at which pH is measured 21.8 $^{\circ}$ C

Turbidity T0018-01(ADEL) 14/04/2023

Turbidity 0.1 26 NTU



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Analytical Results

 Sampling Point
 31512-EPA - McGrath Flat North

 Sampled Date
 12/04/2023 4:40:00PM

 Sample Received Date
 13/04/2023 3:28:43PM

 Sample Analysis Completed
 5/05/2023 1:04:45PM

 Sample ID
 *2023-001-9937

 Status
 Endorsed

Collection Type Customer Collected

Inorganic Chemistry - Waste Water LOR Result Test Start Date

Sample temperature at time of receipt 11.6°C

Suspended Solids T0160-01(ADEL)

Suspended Solids 1.0 60 mg/L



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Analytical Results

31511-EPA - 3.2km South Salt Creek **Sampling Point**

13/04/2023 8:22:00AM Sampled Date 13/04/2023 3:28:29PM **Sample Received Date** 8/05/2023 1:31:26PM Sample Analysis Completed *2023-001-9934 Sample ID Endorsed

Customer Collected Collection Type

LOR **Biology Operations** Result **Test Start Date**

Sample temperature at time of receipt 11.6°C

Algal Identification T0393(ADEL)

DIATOMS

Status

Naviculoids 200 cells/ml Amphiprora_(=_Entomoneis) 2 cells/mL Pennate diatoms 390 cells/mL Nitzschia 14 cells/mL

DINOFLAGELLATES

Oxyrrhis 90 cells/mL **PERIDINIACEAE** 1000 cells/ml Gymnodinioids 12 cells/mL

GREEN ALGAE

Phytoflagellates 20500 cells/mL Chlorella 804000 cells/mL Unicellular green algae 265000 cells/mL

Sample temperature at time of receipt 11.6°C

Algal Biovolume T0393(ADEL)

DIATOMS

Nitzschia 0.02 mm3/l Amphiprora_(=_Entomoneis) 0.03 mm3/L

GREEN ALGAE

Chlorella 36.2 mm3/L

Algal Biovolume Comment Biovolumes for taxa reported at genus level are

> approximate values. Reported taxa and calculated biovolume includes only those with taxon cell volume and associated cell count data. Biovolume totals have specific criteria around

how they calculate. Not Calculated mm3/L

0.00 mm3/L

Not Calculated mm3/L

Total Algae Biovolume

Total Blue_Green Algae Biovolume

Total Diatom Biovolume



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Analytical Results

Sampling Point 31511-EPA - 3.2km South Salt Creek

 Sampled Date
 13/04/2023
 8:22:00AM

 Sample Received Date
 13/04/2023
 3:28:29PM

 Sample Analysis Completed
 8/05/2023
 1:31:26PM

 Sample ID
 *2023-001-9934

 Status
 Endorsed

Collection Type Customer Collected

Algal Biovolume T0393(ADEL) 13/04/2023

Total Green Algae Biovolume Not Calculated mm3/L

Total Toxic BGA Biovolume 0.00 mm3/L

Sample temperature at time of receipt 11.6°C

Algal Count - Total T0393(ADEL) 13/04/2023

 Algae - Total
 1090000 cells/mL

 Blue Green Algae - Total
 0 cells/mL

 Diatoms - Total
 606 cells/mL

 Geosmin-MIB producing BGA - Total
 0 cells/mL

 Green Algae - Total
 1090000 cells/mL

 Toxin producing BGA - Total
 0 cells/mL

Sample temperature at time of receipt 11.6°C

Chlorophyll a & Phaeophytin a T0380-02(ADEL)

Chlorophyll a 0.1 43.6 $\,\mu g/L$ Phaeophytin a 0.1 15.8 $\,\mu g/L$

Inorganic Chemistry - Nutrients	LOR	Result	Test Start Date
Sample temperature at time of receipt	11.6°C		
Ammonia as N (ADEL)			27/04/2023
# Ammonia as N	1	106 μg/L	
Chloride T0104-02(ADEL)			18/04/2023
Chloride	4.0	52200 mg/L	
Nitrate + Nitrite as N (ADEL)			27/04/2023
# Nitrate + Nitrite as N	0.5	4.0 μg/L	
# Nitrate + Nitrite as NO3	2.3	17.7 μg/L	
Nitrogen - Total TMZ-M06(ADEL)			13/04/2023
Nitrogen - Total		4.21 mg/L	
Phosphorus - Filterable Reactive as P (ADEL)		27/04/2023
# Phosphorus -Filterable Reactive as PO4	1.5	5.681 µg/L	
Phosphorus-Filterable Reactive as P	0.5	1.9 µg/L	



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Analytical Results			
Sampling Point	31511-EPA - 3.2km South Salt Creek		
Sampled Date	13/04/2023	8:22:00AM	
Sample Received Date	13/04/2023	3:28:29PM	
Sample Analysis Completed	8/05/2023		
Sample ID	*2023-001-9	934	
Status	Endorsed		
Collection Type	Customer Co	ollected	
Phosphorus - Total T0109-44(ADEL)			26/04/2023
Phosphorus - Total	0.005	0.212 mg/L	
Silica - Reactive T0111-01(ADEL)		-	18/04/2023
Silica - Reactive	0.05	6.31 mg/L	
TKN as N T0112-01(ADEL)		· ·	26/04/2023
TKN as Nitrogen	0.05	4.21 mg/L	
Organic Chemistry	LOR	Result	Test Start Date
Sample temperature at time of receipt 11.	6°C		
Dissolved Organic Carbon T0158-07(ADEL	_)		05/05/2023
Dissolved Organic Carbon	1	26.3 mg/L	
Total Organic Carbon T0158-07(ADEL)			05/05/2023
Total Organic Carbon	1	36.3 mg/L	
Inorganic Chemistry - Physical	LOR	Result	Test Start Date
Sample temperature at time of receipt 11.	6°C		
Alkalinity Carbonate Bicarbonate and Hyd	droxide T0101-0	1(ADEL)	13/04/2023
Alkalinity as Calcium Carbonate		247 mg/L	
Bicarbonate		301 mg/L	
Carbonate		0 mg/L	
		U IIIg/L	
Hydroxide		0 mg/L	

7.8 pH units

21.7 °C

18 NTU

Result

0.1

LOR

Sample temperature at time of receipt 11.6°C



Turbidity

pH T0010-01(ADEL)

Temperature at which pH is measured

Inorganic Chemistry - Waste Water

Turbidity T0018-01(ADEL)

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14/04/2023

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Analytical Results

Collection Type

31511-EPA - 3.2km South Salt Creek **Sampling Point**

13/04/2023 8:22:00AM **Sampled Date** 13/04/2023 3:28:29PM **Sample Received Date** 8/05/2023 1:31:26PM Sample Analysis Completed *2023-001-9934 Sample ID

Endorsed Status **Customer Collected**

21/04/2023 Suspended Solids T0160-01(ADEL)

Suspended Solids 1.0 8 mg/L

Total Dissolved Solids by Evaporation T015-05(ADEL)

Total Dissolved Solids (by evaporation) 97800 mg/L



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Analytical Results

 Sampling Point
 31528-EPA - Salt Creek Outlet

 Sampled Date
 13/04/2023 8:25:00AM

 Sample Received Date
 13/04/2023 3:31:36PM

 Sample Analysis Completed
 8/05/2023 1:31:27PM

 Sample ID
 *2023-001-9946

 Status
 Endorsed

Collection Type Customer Collected

Biology Operations LOR Result Test Start Date

Sample temperature at time of receipt 11.6°C

Algal Identification T0393(ADEL)

DIATOMS

PENNALES 30 cells/mL

DINOFLAGELLATES

Heterocapsa 240 cells/mL Gymnodinioids 22 cells/mL Oxyrrhis 12 cells/mL

GREEN ALGAE

Unicellular green algae 254000 cells/mL Chlorella 847000 cells/mL

Sample temperature at time of receipt 11.6°C

Algal Biovolume T0393(ADEL)

DIATOMS

PENNALES <0.01 mm3/L

GREEN ALGAE

Total Algae Biovolume

Total Diatom Biovolume

Total Toxic BGA Biovolume

Total Green Algae Biovolume

Chlorella 38.1 mm3/L

Algal Biovolume Comment Biovolumes for taxa reported at genus level are

approximate values. Reported taxa and calculated biovolume includes only those with taxon cell volume and associated cell count data. Biovolume totals have specific criteria around

how they calculate.

Not Calculated mm3/L

0.00 mm3/L

<0.01 mm3/L

Not Calculated mm3/L

0.00 mm3/L

Sample temperature at time of receipt 11.6°C

Algal Count - Total T0393(ADEL)

Total Blue_Green Algae Biovolume

13/04/2023

13/04/2023



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Analytical Results

31528-EPA - Salt Creek Outlet **Sampling Point** 13/04/2023 8:25:00AM **Sampled Date** 13/04/2023 3:31:36PM **Sample Received Date** 8/05/2023 1:31:27PM Sample Analysis Completed *2023-001-9946 Sample ID Endorsed **Status**

Customer Collected Collection Type

13/04/2023 Algal Count - Total T0393(ADEL)

Algae - Total 1100000 cells/mL Blue Green Algae - Total 0 cells/mL Diatoms - Total 30 cells/mL Geosmin-MIB producing BGA - Total 0 cells/mL Green Algae - Total 1100000 cells/mL Test - Comment 1 3 Toxin producing BGA - Total 0 cells/mL

Sample temperature at time of receipt 11.6°C

13/04/2023 Chlorophyll a & Phaeophytin a T0380-02(ADEL)

Chlorophyll a 0.1 53.0 µg/L Phaeophytin a 0.1 19.5 µg/L

Inorganic Chemistry - Nutrients	LOR	Result	Test Start Date
Sample temperature at time of receipt	11.6°C		
Ammonia as N (ADEL)			27/04/2023
# Ammonia as N	1	43 μg/L	
Chloride T0104-02(ADEL)			18/04/2023
Chloride	4.0	46400 mg/L	
Nitrate + Nitrite as N (ADEL)			27/04/2023
# Nitrate + Nitrite as N	0.5	<0.5 µg/L	

Nitrate + Nitrite as NO3 2.3 <2.3 µg/L Nitrogen - Total TMZ-M06(ADEL) 13/04/2023 Nitrogen - Total 3.54 mg/L

<0.5 µg/L

27/04/2023 Phosphorus - Filterable Reactive as P (ADEL) # Phosphorus -Filterable Reactive as PO4 1.5 12.259 µg/L 0.5

Phosphorus-Filterable Reactive as P $4.1 \mu g/L$ 26/04/2023 Phosphorus - Total T0109-44(ADEL) 0.005

Phosphorus - Total 0.172 mg/L 18/04/2023

Silica - Reactive T0111-01(ADEL) 0.05 Silica - Reactive 6.39 mg/L

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Analytical Results

31528-EPA - Salt Creek Outlet **Sampling Point** 13/04/2023 8:25:00AM **Sampled Date** 13/04/2023 3:31:36PM **Sample Received Date** 8/05/2023 1:31:27PM Sample Analysis Completed *2023-001-9946 Sample ID Endorsed **Status**

Customer Collected Collection Type

26/04/2023 TKN as N T0112-01(ADEL)

TKN as Nitrogen 0.05 3.54 mg/L

Organic Chemistry	LOR	Result	Test Start Date
Sample temperature at time of receipt	: 11.6°C		
Dissolved Organic Carbon T0158-07(A	DEL)		05/05/2023
Dissolved Organic Carbon	. 1	23.4 mg/L	
Total Organic Carbon T0158-07(ADEL)			05/05/2023
Total Organic Carbon	1	33.0 mg/L	
Inorganic Chemistry - Physical	LOR	Result	Test Start Date

Sample temperature at time of receipt 11.6°C	

Sample temperature at time of receipt 11.0 C		
Alkalinity Carbonate Bicarbonate and Hydroxide T0101-01(ADI	≣L)	13/04/2023
Alkalinity as Calcium Carbonate	242 mg/L	

Bicarbonate 295 mg/L Carbonate 0 mg/L Hydroxide 0 mg/L

13/04/2023 Conductivity & Total Dissolved Solids T0016-01(ADEL)

Conductivity 103000 μS/cm Note Conductivity measurement is corrected to 25°C

0.1

Total Dissolved Solids (by EC) 1 88700 mg/L

13/04/2023 pH T0010-01(ADEL)

8.0 pH units Temperature at which pH is measured 21.8 °C

14/04/2023 **Turbidity T0018-01(ADEL)**

13 NTU

Inorganic Chemistry - Waste Water LOR Result **Test Start Date**

Sample temperature at time of receipt 11.6°C



Turbidity

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Analytical Results

 Sampling Point
 31528-EPA - Salt Creek Outlet

 Sampled Date
 13/04/2023 8:25:00AM

 Sample Received Date
 13/04/2023 3:31:36PM

 Sample Analysis Completed
 8/05/2023 1:31:27PM

 Sample ID
 *2023-001-9946

 Status
 Endorsed

Collection Type Customer Collected

Suspended Solids T0160-01(ADEL)

21/04/2023

Suspended Solids 1.0 16 mg/L



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Analytical Results

Sampling Point 31517-EPA - 1.8km West Salt Creek

 Sampled Date
 13/04/2023
 8:40:00AM

 Sample Received Date
 13/04/2023
 3:29:39PM

 Sample Analysis Completed
 8/05/2023
 1:31:28PM

 Sample ID
 *2023-001-9935

Collection Type Customer Collected

Biology Operations LOR Result Test Start Date

Endorsed

Sample temperature at time of receipt 11.6°C

Algal Identification T0393(ADEL)

DIATOMS

Status

Navicula 40 cells/mL

DINOFLAGELLATES

 PERIDINIACEAE
 170 cells/mL

 Heterocapsa
 270 cells/mL

 Gymnodinioids
 90 cells/mL

 Oxyrrhis
 80 cells/mL

GREEN ALGAE

Unicellular green algae small_spp 471000 cells/mL Chlorella 1230000 cells/mL

Sample temperature at time of receipt 11.6°C Algal Biovolume T0393(ADEL)

13/04/2023

DIATOMS

Navicula 0.05 mm3/L

GREEN ALGAE

Chlorella 55.4 mm3/L Unicellular green algae small_spp 6.64 mm3/L

Algal Biovolume Comment Biovolumes for taxa reported at genus level are

approximate values. Reported taxa and calculated biovolume includes only those with taxon cell volume and associated cell count data. Biovolume totals have specific criteria around

how they calculate.

0.00 mm3/L

Total Algae Biovolume 62.1 mm3/L
Total Blue_Green Algae Biovolume 0.00 mm3/L
Total Diatom Biovolume 0.05 mm3/L
Total Green Algae Biovolume 62.0 mm3/L



Total Toxic BGA Biovolume

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Analytical Results

Sampling Point 31517-EPA - 1.8km West Salt Creek

 Sampled Date
 13/04/2023
 8:40:00AM

 Sample Received Date
 13/04/2023
 3:29:39PM

 Sample Analysis Completed
 8/05/2023
 1:31:28PM

 Sample ID
 *2023-001-9935

 Status
 Endorsed

Collection Type Customer Collected

Sample temperature at time of receipt 11.6°C

Algal Count - Total T0393(ADEL)

 Algae - Total
 1700000 cells/mL

 Blue Green Algae - Total
 0 cells/mL

 Diatoms - Total
 40 cells/mL

 Geosmin-MIB producing BGA - Total
 0 cells/mL

 Green Algae - Total
 1700000 cells/mL

 Toxin producing BGA - Total
 0 cells/mL

Sample temperature at time of receipt 11.6°C Chlorophyll a & Phaeophytin a T0380-02(ADEL)

13/04/2023

Chlorophyll a 0.1 80.6 $\,\mu g/L$ Phaeophytin a 0.1 29.4 $\,\mu g/L$

Inorganic Chemistry - Nutrients	LOR	Result	Test Start Date
Sample temperature at time of receipt	11.6°C		
Ammonia as N (ADEL)			27/04/2023
# Ammonia as N	1	25 μg/L	
Chloride T0104-02(ADEL)			18/04/2023
Chloride	4.0	46200 mg/L	
Nitrate + Nitrite as N (ADEL)			27/04/2023
# Nitrate + Nitrite as N	0.5	<0.5 µg/L	
# Nitrate + Nitrite as NO3	2.3	<2.3 μg/L	
Nitrogen - Total TMZ-M06(ADEL)			13/04/2023
Nitrogen - Total		3.77 mg/L	
Phosphorus - Filterable Reactive as P (ADEL)		27/04/2023
# Phosphorus -Filterable Reactive as PO4	1.5	4.485 µg/L	
Phosphorus-Filterable Reactive as P	0.5	1.5 µg/L	
Phosphorus - Total T0109-44(ADEL)			26/04/2023
Phosphorus - Total	0.005	0.168 mg/L	
Silica - Reactive T0111-01(ADEL)			18/04/2023
Silica - Reactive	0.05	6.45 mg/L	



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Analytical Results

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 Sampled Date
 13/04/2023
 8:40:00AM

 Sample Received Date
 13/04/2023
 3:29:39PM

 Sample Analysis Completed
 8/05/2023
 1:31:28PM

 Sample ID
 *2023-001-9935

 Status
 Endorsed

Collection Type Customer Collected

TKN as N T0112-01(ADEL) 26/04/2023

TKN as Nitrogen 0.05 3.77 mg/L

Organic Chemistry	LOR	Result	Test Start Date
Sample temperature at time of receipt 1	1.6°C		
Dissolved Organic Carbon T0158-07(ADE	EL)		05/05/2023
Dissolved Organic Carbon	1	23.4 mg/L	
Total Organic Carbon T0158-07(ADEL)			05/05/2023
Total Organic Carbon	1	32.5 mg/L	
Inorganic Chemistry - Physical	LOR	Result	Test Start Date
Sample temperature at time of receipt 1			10/04/0000
Alkalinity Carbonate Bicarbonate and Hy	droxide T0101-0	1(ADEL)	13/04/2023
Alkalinity as Calcium Carbonate		241 mg/L	
Bicarbonate		294 mg/L	
Carbonate		0 mg/L	
Hydroxide		0 mg/L	
Conductivity & Total Dissolved Solids T0	016-01(ADEL)		13/04/2023
Conductivity	2	102000 μS/cm	
Note		Conductivity measurement is corrected to 25°C	
Total Dissolved Solids (by EC)	1	87500 mg/L	
pH T0010-01(ADEL)			13/04/2023
pH		8.0 pH units	
Temperature at which pH is measured		21.8 °C	
Turbidity T0018-01(ADEL)			14/04/2023

13 NTU

Result

0.1

LOR

Sample temperature at time of receipt 11.6°C

Inorganic Chemistry - Waste Water



Turbidity

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Analytical Results

Sampling Point 31517-EPA - 1.8km West Salt Creek

 Sampled Date
 13/04/2023
 8:40:00AM

 Sample Received Date
 13/04/2023
 3:29:39PM

 Sample Analysis Completed
 8/05/2023
 1:31:28PM

 Sample ID
 *2023-001-9935

Status Endorsed

Collection Type Customer Collected

Suspended Solids T0160-01(ADEL)

21/04/2023

Suspended Solids 1.0 12 mg/L



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Analytical Results

315191-EPA - Morella Creek @ guage **Sampling Point**

Endorsed

13/04/2023 8:40:00AM Sampled Date 13/04/2023 3:30:08PM **Sample Received Date** 8/05/2023 1:31:29PM Sample Analysis Completed *2023-001-9939 Sample ID

Customer Collected Collection Type

LOR **Biology Operations** Result **Test Start Date**

Sample temperature at time of receipt 11.6°C

Algal Identification T0393(ADEL)

DIATOMS

Status

PENNALES 4 cells/mL

DINOFLAGELLATES

PERIDINIALES 10 cells/ml Protoperidinium 58 cells/mL PERIDINIACEAE 34 cells/mL Oxyrrhis 8 cells/mL

GREEN ALGAE

Phytoflagellates 30 cells/mL Monoraphidium sp_2_(short) 500 cells/mL Chlorella 850 cells/mL

Organism - Comment PERIDINIALES - This was Ensiculifera.

Sample temperature at time of receipt 11.6°C

Algal Biovolume T0393(ADEL)

DIATOMS

PENNALES <0.01 mm3/L

GREEN ALGAE

Chlorella 0.04 mm3/L Monoraphidium sp 2 (short) 0.03 mm3/L

Algal Biovolume Comment Biovolumes for taxa reported at genus level are approximate values. Reported taxa and calculated biovolume includes only those with taxon cell volume and associated cell count data.

> Biovolume totals have specific criteria around how they calculate.

Not Calculated mm3/L

0.00 mm3/L <0.01 mm3/L

Not Calculated mm3/L

Total Algae Biovolume

Total Blue_Green Algae Biovolume # Total Diatom Biovolume

Total Green Algae Biovolume



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Analytical Results

315191-EPA - Morella Creek @ guage **Sampling Point**

13/04/2023 8:40:00AM **Sampled Date** 13/04/2023 3:30:08PM **Sample Received Date** 8/05/2023 1:31:29PM Sample Analysis Completed *2023-001-9939 Sample ID Endorsed **Status**

Customer Collected Collection Type

Algal Biovolume T0393(ADEL)	13/04/2023
-----------------------------	------------

Total Toxic BGA Biovolume 0.00 mm3/L

Sample temperature at time of receipt 11.6°C

13/04/2023 Algal Count - Total T0393(ADEL)

Algae - Total 1490 cells/mL Blue Green Algae - Total 0 cells/mL Diatoms - Total 4 cells/mL Geosmin-MIB producing BGA - Total 0 cells/mL Green Algae - Total 1380 cells/mL Toxin producing BGA - Total 0 cells/mL

Sample temperature at time of receipt 11.6°C

13/04/2023 Chlorophyll a & Phaeophytin a T0380-02(ADEL)

Chlorophyll a 0.1 5.18 µg/L Phaeophytin a 0.1 1.41 µg/L

Inorganic Chemistry - Nutrients	LOR	Result	Test Start Date
Sample temperature at time of receipt	11.6°C		
Ammonia as N (ADEL)			27/04/2023
# Ammonia as N	1	19 μg/L	
Chloride T0104-02(ADEL)			18/04/2023
Chloride	4.0	6560 mg/L	
Nitrate + Nitrite as N (ADEL)			27/04/2023
# Nitrate + Nitrite as N	0.5	<0.5 µg/L	
# Nitrate + Nitrite as NO3	2.3	<2.3 µg/L	
Nitrogen - Total TMZ-M06(ADEL)			13/04/2023
Nitrogen - Total		1.30 mg/L	
Phosphorus - Filterable Reactive as P (ADEL)		27/04/2023
# Phosphorus -Filterable Reactive as PO4	1.5	5.98 µg/L	
Phosphorus-Filterable Reactive as P	0.5	2.0 µg/L	
Phosphorus - Total T0109-44(ADEL)			26/04/2023



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Analyt	ical	Resul	ts
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315191-EPA - Morella Creek @ guage **Sampling Point**

13/04/2023 8:40:00AM Sampled Date 13/04/2023 3:30:08PM **Sample Received Date** 8/05/2023 1:31:29PM Sample Analysis Completed *2023-001-9939 Sample ID Endorsed **Status**

Customer Collected Collection Type

Phosphorus - Total T0109-44(ADEL)			26/04/2023
Phosphorus - Total	0.005	0.028 mg/L	
Silica - Reactive T0111-01(ADEL)			18/04/2023

Silica - Reactive 0.05 5.41 mg/L

26/04/2023 TKN as N T0112-01(ADEL) 0.05 TKN as Nitrogen 1.30 mg/L

Organic Chemistry LOR Result **Test Start Date**

Sample temperature at time of receipt 11.6°C 05/05/2023 **Dissolved Organic Carbon T0158-07(ADEL)** Dissolved Organic Carbon 1 14.8 mg/L

Total Organic Carbon T0158-07(ADEL) Total Organic Carbon 1

Inorganic Chemistry - Physical LOR Result **Test Start Date**

14.6 ma/L

Sample temperature at time of receipt 11.6°C

13/04/2023 Alkalinity Carbonate Bicarbonate and Hydroxide T0101-01(ADEL)

Alkalinity as Calcium Carbonate 262 mg/L Bicarbonate 154 mg/L Carbonate 82 mg/L Hydroxide 0 mg/L

Conductivity & Total Dissolved Solids T0016-01(ADEL) 13/04/2023

Conductivity 22900 µS/cm

Note Conductivity measurement is corrected to 25°C

Total Dissolved Solids (by EC) 1 14200 mg/L

pH T0010-01(ADEL) 13/04/2023

9.3 pH units Temperature at which pH is measured 21.8 °C

14/04/2023 **Turbidity T0018-01(ADEL)**

Turbidity 0.1 3.4 NTU

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05/05/2023

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Analytical Results

Sampling Point 315191-EPA - Morella Creek @ guage

 Sampled Date
 13/04/2023
 8:40:00AM

 Sample Received Date
 13/04/2023
 3:30:08PM

 Sample Analysis Completed
 8/05/2023
 1:31:29PM

 Sample ID
 *2023-001-9939

Status Endorsed

Collection Type Customer Collected

Inorganic Chemistry - Waste Water LOR Result Test Start Date

Sample temperature at time of receipt 11.6°C

Suspended Solids T0160-01(ADEL)

Suspended Solids 1.0 <1 mg/L



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Analytical Results

31519-EPA - Morella Basin at Outlet Regulator **Sampling Point**

13/04/2023 8:55:00AM Sampled Date 13/04/2023 3:29:53PM Sample Received Date 8/05/2023 1:31:30PM Sample Analysis Completed *2023-001-9938 Sample ID Endorsed **Status**

Customer Collected Collection Type

LOR **Biology Operations** Result **Test Start Date**

Sample temperature at time of receipt 11.6°C

Algal Identification T0393(ADEL)

DIATOMS

Pennate diatoms 110 cells/mL

DINOFLAGELLATES

Protoperidinium 50 cells/ml PERIDINIACEAE 120 cells/ml Oxyrrhis 40 cells/mL

GREEN ALGAE

Phytoflagellates small_spp 500 cells/mL Unicellular green algae small_spp 550 cells/mL Monoraphidium sp_2_(short) 1050 cells/mL

Sample temperature at time of receipt 11.6°C Algal Biovolume T0393(ADEL)

GREEN ALGAE

Total Algae Biovolume

Total Diatom Biovolume

Total Toxic BGA Biovolume

Total Green Algae Biovolume

Total Blue_Green Algae Biovolume

Monoraphidium sp_2_(short) 0.06 mm3/L Unicellular green algae small_spp <0.01 mm3/L Phytoflagellates small_spp 0.04 mm3/L

Algal Biovolume Comment Biovolumes for taxa reported at genus level are

approximate values. Reported taxa and calculated biovolume includes only those with taxon cell volume and associated cell count data. Biovolume totals have specific criteria around

how they calculate.

Not Calculated mm3/L

0.00 mm3/l

Not Calculated mm3/L

0.10 mm3/L 0.00 mm3/L

Sample temperature at time of receipt 11.6°C



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13/04/2023

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Analytical Results

31519-EPA - Morella Basin at Outlet Regulator **Sampling Point**

13/04/2023 8:55:00AM **Sampled Date** 13/04/2023 3:29:53PM Sample Received Date 8/05/2023 1:31:30PM Sample Analysis Completed *2023-001-9938 Sample ID Endorsed **Status**

Customer Collected Collection Type

Algal Count - Total T0393(ADEL)		13/04/2023
Algae - Total	2420 cells/mL	

Blue Green Algae - Total 0 cells/mL Diatoms - Total 110 cells/mL Geosmin-MIB producing BGA - Total 0 cells/mL Green Algae - Total 2100 cells/mL Toxin producing BGA - Total 0 cells/mL

Sample temperature at time of receipt 11.6°C Chlorophyll a & Phaeophytin a T0380-02(ADEL)

Chlorophyll a 3.38 µg/L Phaeophytin a 0.1 1.05 µg/L

Inorganic Chemistry - Nutrients	LOR	Result	Test Start Date
Sample temperature at time of receipt	11.6°C		
Ammonia as N (ADEL)			27/04/2023

Ammonia as N (ADEL)			27/04/2023
# Ammonia as N	1	30 μg/L	
Chloride T0104-02(ADEL)			18/04/2023
Chloride	4.0	6490 mg/L	
Nitrate + Nitrite as N (ADEL)			27/04/2023
# Nitrate + Nitrite as N	0.5	<0.5 µg/L	
# Nitrate + Nitrite as NO3	2.3	<2.3 μg/L	
Nitrogen - Total TMZ-M06(ADEL)			13/04/2023
Nitrogen - Total		1.28 mg/L	
Phosphorus - Filterable Reactive as P (A	ADEL)		27/04/2023
# Phosphorus -Filterable Reactive as PO4	1.5	5.681 µg/L	
Phosphorus-Filterable Reactive as P	0.5	1.9 µg/L	
Phosphorus - Total T0109-44(ADEL)			26/04/2023
Phosphorus - Total	0.005	0.017 mg/L	

18/04/2023 Silica - Reactive T0111-01(ADEL) 5.57 mg/L

Silica - Reactive 0.05 TKN as N T0112-01(ADEL)

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Analytical Results

Sampling Point 31519-EPA - Morella Basin at Outlet Regulator

 Sampled Date
 13/04/2023
 8:55:00AM

 Sample Received Date
 13/04/2023
 3:29:53PM

 Sample Analysis Completed
 8/05/2023
 1:31:30PM

 Sample ID
 *2023-001-9938

 Status
 Endorsed

Collection Type Customer Collected

TKN as N T0112-01(ADEL) 26/04/2023

TKN as Nitrogen 0.05 1.28 mg/L

Organic Chemistry	LOR	Result	Test Start Date
Sample temperature at time of receipt			05/05/0000
Dissolved Organic Carbon T0158-07(A	DEL)		05/05/2023
Dissolved Organic Carbon	1	13.5 mg/L	
Total Organic Carbon T0158-07(ADEL)			05/05/2023
Total Organic Carbon	1	14.0 mg/L	
Inorganic Chemistry - Physical	LOR	Result	Test Start Date

Sample temperature at time of receipt 11.6°C	
Alkalinity Carbonate Bicarbonate and Hydroxide T0101-01(ADEL)	14/04/2023

Alkalinity as Calcium Carbonate	257 mg/L
Bicarbonate	148 mg/L
Carbonate	81 mg/L
Hydroxide	0 mg/L

Conductivity & Total Dissolved Solids T0016-01(ADEL) Conductivity 2 22600 μ S/cm

Note Conductivity measurement is corrected to 25°C

Total Dissolved Solids (by EC)

1 14000 mg/L

pH T0010-01(ADEL)

pH 9.3 pH units
Temperature at which pH is measured 21.7 °C

 Turbidity T0018-01(ADEL)
 14/04/2023

 Turbidity
 0.1
 1.8 NTU

Inorganic Chemistry - Waste Water LOR Result Test Start Date

Sample temperature at time of receipt 11.6°C



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Analytical Results

Sampling Point 31519-EPA - Morella Basin at Outlet Regulator

 Sampled Date
 13/04/2023
 8:55:00AM

 Sample Received Date
 13/04/2023
 3:29:53PM

 Sample Analysis Completed
 8/05/2023
 1:31:30PM

 Sample ID
 *2023-001-9938

 Status
 Endorsed

Collection Type Customer Collected

Suspended Solids T0160-01(ADEL)

21/04/2023

Suspended Solids 1.0 <1 mg/L



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Analytical Results

31515-EPA - Snipe Point **Sampling Point** 13/04/2023 9:00:00AM **Sampled Date** 13/04/2023 3:29:24PM Sample Received Date 8/05/2023 1:31:31PM Sample Analysis Completed *2023-001-9932 Sample ID Endorsed **Status**

Customer Collected Collection Type

Biology Operations	LOR	Result	Test Start Date
Sample temperature at time of rec	eipt 11.6°C		
Algal Identification T0393(ADEL)			
BLUE GREEN ALGAE			
Cyanobacterial Filaments (Narrow)		222 cells/mL	

,				
	10/			

222 cells/mL

LOR

CHRYSOPHYTES

Mallomonas 50 cells/ml

DIATOMS

Pennate diatoms small_spp 4360 cells/mL Nitzschia 80 cells/mL

DINOFLAGELLATES

PERIDINIACEAE 140 cells/mL Oxyrrhis 40 cells/mL Gymnodinioids 38 cells/mL Heterocapsa 480 cells/mL

GREEN ALGAE

Phytoflagellates small_spp 20700 cells/mL Unicellular green algae small_spp 343000 cells/mL Chlorella 546000 cells/mL

Sample temperature at time of receipt 11.6°C

13/04/2023 Algal Biovolume T0393(ADEL)

BLUE GREEN ALGAE

Cyanobacterial Filaments (Narrow) <0.01 mm3/L

CHRYSOPHYTES

Mallomonas 0.33 mm3/L

DIATOMS

Nitzschia 0.11 mm3/L

GREEN ALGAE

Chlorella 24.6 mm3/L Unicellular green algae small spp 4.84 mm3/L Phytoflagellates small_spp 1.62 mm3/L



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Analytical Results

31515-EPA - Snipe Point **Sampling Point** 13/04/2023 9:00:00AM Sampled Date 13/04/2023 3:29:24PM Sample Received Date 8/05/2023 1:31:31PM Sample Analysis Completed *2023-001-9932 Sample ID Endorsed **Status**

Customer Collected Collection Type

Algal Biovolume T0393(ADEL)

Algal Biovolume Comment

Total Algae Biovolume

Biovolumes for taxa reported at genus level are

approximate values. Reported taxa and calculated biovolume includes only those with taxon cell volume and associated cell count data. Biovolume totals have specific criteria around

how they calculate. Not Calculated mm3/L

Total Blue_Green Algae Biovolume <0.01 mm3/L

Total Diatom Biovolume Not Calculated mm3/L

Total Green Algae Biovolume 31.1 mm3/L Total Toxic BGA Biovolume 0.00 mm3/L

Sample temperature at time of receipt 11.6°C

13/04/2023 Algal Count - Total T0393(ADEL)

Algae - Total 915000 cells/ml Blue Green Algae - Total 222 cells/mL Diatoms - Total 4440 cells/mL Geosmin-MIB producing BGA - Total 0 cells/mL Green Algae - Total 910000 cells/mL Toxin producing BGA - Total 0 cells/mL

Sample temperature at time of receipt 11.6°C

Chlorophyll a & Phaeophytin a T0380-02(ADEL) 13/04/2023

Chlorophyll a 0 1 85.8 µg/L Phaeophytin a 0.1 28.2 µg/L

Inorganic Chemistry - Nutrients	LOR	Result	Test Start Date
Sample temperature at time of receipt	11.6°C		

Ammonia as N 26 µg/L 18/04/2023 Chloride T0104-02(ADEL)

Chloride 4.0

45900 mg/L



Ammonia as N (ADEL)

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Analytical Results			
Sampling Point	31515-EPA	- Snipe Point	
Sampled Date	13/04/2023		
Sample Received Date	13/04/2023		
Sample Analysis Completed	8/05/2023		
Sample ID Status	*2023-001-9 Endorsed	932	
Collection Type	Customer C	ollected	
Nitrate + Nitrite as N (ADEL)	0.5	0.5	27/04/2023
# Nitrate + Nitrite as N	0.5 2.3	<0.5 µg/L	
# Nitrate + Nitrite as NO3	2.3	<2.3 μg/L	13/04/2023
Nitrogen - Total TMZ-M06(ADEL) Nitrogen - Total		2.02	13/04/2023
· ·	=1.\	3.93 mg/L	27/04/2023
Phosphorus - Filterable Reactive as P (ADI # Phosphorus -Filterable Reactive as PO4	EL) 1.5	E 092//	21/04/2023
Phosphorus-Filterable Reactive as P	0.5	5.083 μg/L 1.7 μg/L	
Phosphorus - Total T0109-44(ADEL)	0.0	1.7 μg/L	26/04/2023
Phosphorus - Total	0.005	0.066 mg/L	
Silica - Reactive T0111-01(ADEL)		51555 mg/2	18/04/2023
Silica - Reactive	0.05	6.45 mg/L	
TKN as N T0112-01(ADEL)		5.1.5 Mg/L	26/04/2023
TKN as Nitrogen	0.05	3.93 mg/L	
Organic Chemistry	LOR	Result	Test Start Date
Sample temperature at time of receipt 11.6			
Dissolved Organic Carbon T0158-07(ADEL	-		05/05/2023
Dissolved Organic Carbon	1	22.5 mg/L	05/05/0000
Total Organic Carbon T0158-07(ADEL)			05/05/2023
Total Organic Carbon	1	32.3 mg/L	
Inorganic Chemistry - Physical	LOR	Result	Test Start Date
Sample temperature at time of receipt 11.0	6°C		
Alkalinity Carbonate Bicarbonate and Hyd	roxide T0101-0	1(ADEL)	13/04/2023
Alkalinity as Calcium Carbonate		239 mg/L	
Bicarbonate		291 mg/L	
Carbonate		0 mg/L	
Hydroxide		0 mg/L	
			40/04/0000



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Conductivity & Total Dissolved Solids T0016-01(ADEL)

ON

13/04/2023

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Analytical Results

 Sampling Point
 31515-EPA - Snipe Point

 Sampled Date
 13/04/2023 9:00:00AM

 Sample Received Date
 13/04/2023 3:29:24PM

 Sample Analysis Completed
 8/05/2023 1:31:31PM

 Sample ID
 *2023-001-9932

 Status
 Endorsed

Collection Type Customer Collected

Conductivity & Total Dissolved Solids T0016-01(ADEL)		
2	100000 μS/cm	
	Conductivity measurement is corrected to 25°C	
1	85200 mg/L	
		13/04/2023
	7.9 pH units	
	21.8 °C	
		14/04/2023
0.1	13 NTU	
	1	2 100000 μS/cm Conductivity measurement is corrected to 25°C 1 85200 mg/L 7.9 pH units 21.8 °C

Inorganic Chemistry - Waste Water	LOR	Result	Test Start Date
Sample temperature at time of receipt 1	1.6°C		
Suspended Solids T0160-01(ADEL)	21/04/2023		
Suspended Solids	1.0	22 mg/L	



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Analytical Results

531012-EPA - Sth Policeman Point **Sampling Point**

13/04/2023 9:10:00AM **Sampled Date** 13/04/2023 3:32:49PM **Sample Received Date** 8/05/2023 1:31:33PM Sample Analysis Completed *2023-001-9949 Sample ID Endorsed **Status**

Customer Collected Collection Type

biology Operations Lon Result lest Statt Da	Biology Operations	LOR	Result	Test Start Date
---	--------------------	-----	--------	-----------------

Sample temperature at time of receipt 11.6°C

Algal Identification T0393(ADEL)

BLUE GREEN ALGAE

Cyanobacterial Filaments (Narrow) 274 cells/mL

DIATOMS

Pennate diatoms small spp 8720 cells/ml Gyrosigma 30 cells/mL

DINOFLAGELLATES

Gymnodinioids 42 cells/mL Heterocapsa 430 cells/mL Oxyrrhis 110 cells/mL PERIDINIACEAE 120 cells/mL

GREEN ALGAE

Phytoflagellates small_spp 18500 cells/mL Unicellular green algae small spp 358000 cells/mL Chlorella 942000 cells/mL

Sample temperature at time of receipt 11.6°C

BLUE GREEN ALGAE

Cyanobacterial Filaments (Narrow)

Algal Biovolume T0393(ADEL)

<0.01 mm3/L DIATOMS

Gyrosigma 0.07 mm3/L

GREEN ALGAE

Chlorella 42.4 mm3/l Unicellular green algae small_spp 5.05 mm3/L Phytoflagellates small_spp 1.45 mm3/L



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Analytical Results

Sampling Point 531012-EPA - Sth Policeman Point

 Sampled Date
 13/04/2023
 9:10:00AM

 Sample Received Date
 13/04/2023
 3:32:49PM

 Sample Analysis Completed
 8/05/2023
 1:31:33PM

 Sample ID
 *2023-001-9949

 Status
 Endorsed

Collection Type Customer Collected

Algal Biovolume T0393(ADEL)

Total Algae Biovolume

13/04/2023

Algal Biovolume Comment

Biovolumes for taxa reported at genus level are approximate values. Reported taxa and calculated biovolume includes only those with

taxon cell volume and associated cell count data. Biovolume totals have specific criteria around

how they calculate.

Not Calculated mm3/L

Total Blue_Green Algae Biovolume <0.01 mm3/L

Total Diatom Biovolume Not Calculated mm3/L

Total Green Algae Biovolume 48.9 mm3/L
Total Toxic BGA Biovolume 0.00 mm3/L

Sample temperature at time of receipt 11.6°C

Algal Count - Total T0393(ADEL) 13/04/2023

 Algae - Total
 1330000 cells/mL

 Blue Green Algae - Total
 274 cells/mL

 Diatoms - Total
 8750 cells/mL

 Geosmin-MIB producing BGA - Total
 0 cells/mL

 Green Algae - Total
 1320000 cells/mL

 Toxin producing BGA - Total
 0 cells/mL

Sample temperature at time of receipt 11.6°C

Chlorophyll a & Phaeophytin a T0380-02(ADEL)

Chlorophyll a 0.1 91.0 $\,\mu g/L$ Phaeophytin a 0.1 34.0 $\,\mu g/L$

Inorganic Chemistry - Nutrients	LOR	Result	Test Start Date

Sample temperature at time of receipt 11.6°C

Ammonia as N (ADEL)

Ammonia as N

1

54 µg/L

Chloride T0104-02(ADEL) 18/04/2023

Chloride 4.0 44100 mg/L

NATA

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531012-EPA - Sth Policeman Point 13/04/2023 9:10:00AM					
13/04/2023	13/04/2023 3:32:49PM 8/05/2023 1:31:33PM *2023-001-9949				
Customer Co	ollected				
		27/04/2023			
0.5	<0.5 µg/L				
2.3	<2.3 μg/L				
		13/04/2023			
	3.80 mg/L				
DEL)		27/04/2023			
1.5	4.186 µg/L				
0.5	1.4 μg/L				
		26/04/2023			
0.005	0.171 mg/L				
		18/04/2023			
0.05	6.14 mg/L				
		26/04/2023			
0.05	3.80 mg/L				
LOR	Result	Test Start Date			
1.6°C					
EL)		05/05/2023			
1	23.4 mg/L				
		05/05/2023			
1	33.2 mg/L				
LOR	Result	Test Start Date			
	13/04/2023 13/04/2023 8/05/2023 *2023-001-9 Endorsed Customer Co 0.5 2.3 DEL) 1.5 0.05 0.005 0.05 LOR 1.6°C EL) 1	13/04/2023 9:10:00AM 13/04/2023 3:32:49PM 8/05/2023 1:31:33PM *2023-001-9949 Endorsed Customer Collected 0.5 < 0.5 μg/L 2.3 < 2.3 μg/L 3.80 mg/L 1.5			

236 mg/L

288 mg/L

0 mg/L

0 mg/L



Bicarbonate

Carbonate

Hydroxide

Alkalinity as Calcium Carbonate

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Conductivity & Total Dissolved Solids T0016-01(ADEL)

Alkalinity Carbonate Bicarbonate and Hydroxide T0101-01(ADEL)

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13/04/2023

13/04/2023

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Analytical Results

Turbidity

Sampling Point 531012-EPA - Sth Policeman Point

 Sampled Date
 13/04/2023
 9:10:00AM

 Sample Received Date
 13/04/2023
 3:32:49PM

 Sample Analysis Completed
 8/05/2023
 1:31:33PM

 Sample ID
 *2023-001-9949

 Status
 Endorsed

Collection Type Customer Collected

Conductivity & Total Dissolved Solids T0016-01(ADEL)			13/04/2023
Conductivity	2	98600 µS/cm	
Note		Conductivity measurement is corrected to 25°C	
Total Dissolved Solids (by EC)	1	83600 mg/L	
pH T0010-01(ADEL)			13/04/2023
рН		8.0 pH units	
Temperature at which pH is measured		21.8 °C	
			4.4/0.4/0.000

Turbidity T0018-01(ADEL) 14/04/2023

14 NTU

0.1

Inorganic Chemistry - Waste Water LOR Result Test Start Date

Sample temperature at time of receipt 11.6°C
Suspended Solids T0160-01(ADEL)
21/04/2023

Suspended Solids 1.0 22 mg/L



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Analytical Results

 Sampling Point
 31526-EPA - Nth Jack Point

 Sampled Date
 13/04/2023
 9:45:00AM

 Sample Received Date
 13/04/2023
 3:31:21PM

 Sample Analysis Completed
 8/05/2023
 1:31:34PM

 Sample ID
 *2023-001-9931

 Status
 Endorsed

Collection Type Customer Collected

Biology Operations LOR Result Test Start Date

Sample temperature at time of receipt 11.6°C

Algal Identification T0393(ADEL)

DIATOMS

Pennate diatoms 4 cells/mL
Pennate diatoms small_spp 50 cells/mL

DINOFLAGELLATES

 PERIDINIACEAE
 14 cells/mL

 Gymnodinioids
 4 cells/mL

 Oxyrrhis
 2 cells/mL

GREEN ALGAE

Unicellular green algae 135000 cells/mL
Chlorella 1540000 cells/mL

Sample temperature at time of receipt 11.6°C Algal Biovolume T0393(ADEL)

GREEN ALGAE

Chlorella 69.3 mm3/L

Algal Biovolume Comment

Biovolumes for taxa reported at genus level are approximate values. Reported taxa and colouited biovolume includes poly these with

calculated biovolume includes only those with taxon cell volume and associated cell count data. Biovolume totals have specific criteria around

how they calculate.

Not Calculated mm3/L

0.00 mm3/L

Not Calculated mm3/L Not Calculated mm3/L

1680000 cells/mL

0.00 mm3/L

Sample temperature at time of receipt 11.6°C

Algal Count - Total T0393(ADEL)

Algae - Total

Total Algae Biovolume

Total Diatom Biovolume

Total Toxic BGA Biovolume

Total Green Algae Biovolume

Total Blue_Green Algae Biovolume

13/04/2023

13/04/2023

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Test Start Date

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Analytical Results

 Sampling Point
 31526-EPA - Nth Jack Point

 Sampled Date
 13/04/2023
 9:45:00AM

 Sample Received Date
 13/04/2023
 3:31:21PM

 Sample Analysis Completed
 8/05/2023
 1:31:34PM

 Sample ID
 *2023-001-9931

 Status
 Endorsed

Collection Type Customer Collected

Algal Count - Total T0393(ADEL)	13/04/2023
---------------------------------	------------

 Blue Green Algae - Total
 0 cells/mL

 Diatoms - Total
 54 cells/mL

 Geosmin-MIB producing BGA - Total
 0 cells/mL

 Green Algae - Total
 1680000 cells/mL

 Toxin producing BGA - Total
 0 cells/mL

Sample temperature at time of receipt 11.6°C Chlorophyll a & Phaeophytin a T0380-02(ADEL)

Inorganic Chemistry - Nutrients

Chlorophyll a 0.1 110 $\,\mu g/L$ Phaeophytin a 0.1 44.4 $\,\mu g/L$

Result

LOR

1.6°C		
		27/04/2023
1	36 µg/L	
		18/04/2023
4.0	38700 mg/L	
		27/04/2023
0.5	<0.5 µg/L	
2.3	<2.3 μg/L	
		13/04/2023
	3.94 mg/L	
DEL)		27/04/2023
1.5	2.093 μg/L	
0.5	0.7 µg/L	
		26/04/2023
0.005	0.164 mg/L	
		18/04/2023
0.05	4.27 mg/L	
		26/04/2023
0.05	3.94 mg/L	
	4.0 0.5 2.3 DEL) 1.5 0.5 0.005	1 36 μg/L 4.0 38700 mg/L 0.5 <0.5 μg/L 2.3 <2.3 μg/L 3.94 mg/L 1.5 2.093 μg/L 0.5 0.7 μg/L 0.005 0.164 mg/L 0.05 4.27 mg/L



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Analytical Results

 Sampling Point
 31526-EPA - Nth Jack Point

 Sampled Date
 13/04/2023 9:45:00AM

 Sample Received Date
 13/04/2023 3:31:21PM

 Sample Analysis Completed
 8/05/2023 1:31:34PM

 Sample ID
 *2023-001-9931

 Status
 Endorsed

 Collection Type
 Customer Collected

Organic Chemistry	LOR	Result	Test Start Date
Sample temperature at time of receipt 11.	.6°C		
Dissolved Organic Carbon T0158-07(ADEI	L)		05/05/2023
Dissolved Organic Carbon	1	22.0 mg/L	
Total Organic Carbon T0158-07(ADEL)			05/05/2023
Total Organic Carbon	1	30.7 mg/L	
Inorganic Chemistry - Physical	LOR	Result	Test Start Date
Sample temperature at time of receipt 11.		(ADEL)	13/04/2023
Alkalinity Carbonate Bicarbonate and Hyd Alkalinity as Calcium Carbonate	aroxiae 10101-0		13/04/2023
Bicarbonate		242 mg/L 295 mg/L	
Carbonate		0 mg/L	
Hydroxide		0 mg/L	
Conductivity & Total Dissolved Solids T00	16-01(ADEL)	o mg/L	13/04/2023
Conductivity	2	89200 µS/cm	
Note		Conductivity measurement is corrected to 25°C	
Total Dissolved Solids (by EC)	1	73100 mg/L	
pH T0010-01(ADEL)			13/04/2023
pH		8.0 pH units	
Temperature at which pH is measured		21.8 °C	
Turbidity T0018-01(ADEL)			14/04/2023
Turbidity	0.1	15 NTU	
Inorganic Chemistry - Waste Water	LOR	Result	Test Start Date
Sample temperature at time of receipt 11.	.6°C		
Suspended Solids T0160-01(ADEL)	1.0	00 #	21/04/2023
Suspended Solids	1.0	28 mg/L	



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Analytical Results

 Sampling Point
 31526-EPA - Nth Jack Point

 Sampled Date
 13/04/2023 9:45:00AM

 Sample Received Date
 13/04/2023 3:31:21PM

 Sample Analysis Completed
 8/05/2023 1:31:34PM

 Sample ID
 *2023-001-9931

 Status
 Endorsed

Collection Type Customer Collected



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Analytical Results

Sampling Point 300713-Tilley Swamp Drain D/S Northern Outlet

 Sampled Date
 13/04/2023
 9:45:00AM

 Sample Received Date
 13/04/2023
 3:28:15PM

 Sample Analysis Completed
 9/05/2023
 11:51:43AM

 Sample ID
 *2023-001-9940

 Status
 Endorsed

Collection Type Customer Collected

Biology Operations	LOR	Result	Test Start Date
Sample temperature at time of receipt 11.6	°C		
Algal Identification T0393(ADEL)			
BLUE GREEN ALGAE			
Chroococcus		130 cells/mL	
Merismopedia		480 cells/mL	
DIATOMS			
Pennate diatoms small_spp		350 cells/mL	
Nitzschia		2 cells/mL	
Synedra		6 cells/mL	
DINOFLAGELLATES			
PERIDINIACEAE		78 cells/mL	
Oxyrrhis		4 cells/mL	
GREEN ALGAE			
Monoraphidium sp_2_(short)		20 cells/mL	
Chlorella		80 cells/mL	
Sample temperature at time of receipt 11.6	°C		
Algal Biovolume T0393(ADEL)			13/04/2023
BLUE GREEN ALGAE			
Merismopedia		<0.01 mm3/L	
Chroococcus		<0.01 mm3/L	
DIATOMS			
Synedra		<0.01 mm3/L	
Nitzschia		<0.01 mm3/L	
GREEN ALGAE			
Chlorella		<0.01 mm3/L	

<0.01 mm3/L



Monoraphidium sp_2_(short)

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Analytical Results

Sampling Point 300713-Tilley Swamp Drain D/S Northern Outlet

 Sampled Date
 13/04/2023
 9:45:00AM

 Sample Received Date
 13/04/2023
 3:28:15PM

 Sample Analysis Completed
 9/05/2023
 11:51:43AM

 Sample ID
 *2023-001-9940

 Status
 Endorsed

Collection Type Customer Collected

Algal Biovolume T0393(ADEL)		

Algal Biovolume Comment Biovolumes for taxa reported at genus level are approximate values. Reported taxa and

calculated biovolume includes only those with taxon cell volume and associated cell count data. Biovolume totals have specific criteria around

how they calculate.

Not Calculated mm3/L

Total Algae Biovolume Not Calculated mm
Total Blue_Green Algae Biovolume <0.02 mm3/L

Total Diatom Biovolume Not Calculated mm3/L

Total Green Algae Biovolume <0.02 mm3/L
Total Toxic BGA Biovolume 0.00 mm3/L

Sample temperature at time of receipt 11.6°C

Algal Count - Total T0393(ADEL) 13/04/2023

 Algae - Total
 1150 cells/mL

 Blue Green Algae - Total
 610 cells/mL

 Diatoms - Total
 358 cells/mL

 Geosmin-MIB producing BGA - Total
 0 cells/mL

 Green Algae - Total
 100 cells/mL

 Toxin producing BGA - Total
 0 cells/mL

Sample temperature at time of receipt 11.6°C

Chlorophyll a & Phaeophytin a T0380-02(ADEL)

Chlorophyll a 0.1 3.99 $\,\mu g/L$ Phaeophytin a 0.1 1.05 $\,\mu g/L$

Inorganic Chemistry - Nutrients	LOR	Result	Test Start Date
---------------------------------	-----	--------	-----------------

Sample temperature at time of receipt 11.6°C

Ammonia as N (ADEL)

27/04/2023

Ammonia as N 1 82 µg/L **Chloride T0104-02(ADEL)** 18/04/2023

Chloride 4.0 3250 mg/L



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Analy	vtical	Results
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Sampling Point 300713-Tilley Swamp Drain D/S Northern Outlet

 Sampled Date
 13/04/2023
 9:45:00AM

 Sample Received Date
 13/04/2023
 3:28:15PM

 Sample Analysis Completed
 9/05/2023
 11:51:43AM

 Sample ID
 *2023-001-9940

 Status
 Endorsed

Collection Type Customer Collected

		27/04/2023
0.5	6.5 µg/L	
2.3	28.8 μg/L	
		13/04/2023
	0.77 mg/L	
ADEL)		27/04/2023
1.5	5.98 µg/L	
0.5	2.0 μg/L	
		26/04/2023
0.005	0.030 mg/L	
		18/04/2023
0.05	16.1 mg/L	
		26/04/2023
0.05	0.76 mg/L	
LOR	Result	Test Start Date
	2.3 ADEL) 1.5 0.5 0.005 0.05 0.05	2.3 28.8 µg/L 0.77 mg/L 1.5 5.98 µg/L 0.5 2.0 µg/L 0.005 0.030 mg/L 0.05 16.1 mg/L 0.05 0.76 mg/L

Organic Chemistry	LOR	Result	lest Start Date
Sample temperature at time of rec	eipt 11.6°C		
Dissolved Organic Carbon T0158-0	7(ADEL)		05/05/2023
Dissolved Organic Carbon	1	8.1 mg/L	
Total Organic Carbon T0158-07(AD	EL)		05/05/2023
Total Organic Carbon	1	8.6 mg/L	

Inorganic Chemistry - Physical	LOR	Result	Test Start Date
--------------------------------	-----	--------	-----------------

Sample temperature at time of receipt 11.6°C

Alkalinity Carbonate Bicarbonate and Hydroxide T0101-01(ADEL)

Alkalinity as Calcium Carbonate 462 mg/L
Bicarbonate 563 mg/L
Carbonate 0 mg/L
Hydroxide 0 mg/L

Conductivity & Total Dissolved Solids T0016-01(ADEL)



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Analytical Results

Sampling Point 300713-Tilley Swamp Drain D/S Northern Outlet

13/04/2023 9:45:00AM **Sampled Date** 13/04/2023 3:28:15PM **Sample Received Date** 9/05/2023 11:51:43AM Sample Analysis Completed *2023-001-9940 Sample ID Endorsed Status

Customer Collected **Collection Type**

Conductivity & Total Dissolved Solids T0016-01(ADEL)			13/04/2023
Conductivity	2	10600 μS/cm	
Note		Conductivity measurement is corrected to 25°C	
Total Dissolved Solids (by EC)	1	6190 mg/L	
pH T0010-01(ADEL)			13/04/2023
pH		8.2 pH units	
Temperature at which pH is measured		21.8 °C	
Turbidity T0018-01(ADEL)			14/04/2023
Turkidity	0.1	O.F. NITH	

Turbidity 0.1 3.5 NTU

Inorganic Chemistry - Waste Water	LOR	Result	Test Start Date
Sample temperature at time of receipt 17 Suspended Solids T0160-01(ADEL)	1.6°C		21/04/2023
Suspended Solids Suspended Solids	1.0	5 mg/L	2110112320



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Analytical Results

 Sampling Point
 31514-EPA - Stoney Well

 Sampled Date
 13/04/2023 10:00:00AM

 Sample Received Date
 13/04/2023 3:29:11PM

 Sample Analysis Completed
 8/05/2023 1:31:36PM

 Sample ID
 *2023-001-9936

 Status
 Endorsed

Collection Type Customer Collected

Biology Operations LOR Result Test Start Date

Sample temperature at time of receipt 11.6°C

Algal Identification T0393(ADEL)

DIATOMS

Pennate diatoms80 cells/mLNitzschia40 cells/mLNavicula6 cells/mL

GREEN ALGAE

Unicellular green algae 108000 cells/mL
Chlorella 190000 cells/mL

Sample temperature at time of receipt 11.6°C

Algal Biovolume T0393(ADEL)

DIATOMS

Navicula <0.01 mm3/L
Nitzschia 0.06 mm3/L

GREEN ALGAE

Total Algae Biovolume

Total Diatom Biovolume

Total Toxic BGA Biovolume

Total Green Algae Biovolume

Total Blue_Green Algae Biovolume

Chlorella 85.5 mm3/L

Algal Biovolume Comment Biovolumes for taxa reported at genus level are

approximate values. Reported taxa and calculated biovolume includes only those with taxon cell volume and associated cell count data. Biovolume totals have specific criteria around

how they calculate.

Not Calculated mm3/L

0.00 mm3/L

Not Calculated mm3/L Not Calculated mm3/L

0.00 mm3/L

Sample temperature at time of receipt 11.6°C Algal Count - Total T0393(ADEL)

Algae - Total 2010000 cells/mL



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Analytical Results

 Sampling Point
 31514-EPA - Stoney Well

 Sampled Date
 13/04/2023 10:00:00AM

 Sample Received Date
 13/04/2023 3:29:11PM

 Sample Analysis Completed
 8/05/2023 1:31:36PM

 Sample ID
 *2023-001-9936

 Status
 Endorsed

Collection Type Customer Collected

Algal Count - Total T0393(ADEL)	13/04/2023
---------------------------------	------------

 Blue Green Algae - Total
 0 cells/mL

 Diatoms - Total
 126 cells/mL

 Geosmin-MIB producing BGA - Total
 0 cells/mL

 Green Algae - Total
 2010000 cells/mL

 Toxin producing BGA - Total
 0 cells/mL

Sample temperature at time of receipt 11.6°C Chlorophyll a & Phaeophytin a T0380-02(ADEL)

Chlorophyll a 0.1 139 $\,\mu g/L$ Phaeophytin a 0.1 74.2 $\,\mu g/L$

Inorganic Chemistry - Nutrients	LOR	Result	Test Start Date

Sample temperature at time of receipt 1	11.6°C		
Ammonia as N (ADEL)			27/04/2023
# Ammonia as N	1	48 μg/L	
Chloride T0104-02(ADEL)			18/04/2023
Chloride	4.0	37400 mg/L	
Nitrate + Nitrite as N (ADEL)			27/04/2023
# Nitrate + Nitrite as N	0.5	0.6 μg/L	
# Nitrate + Nitrite as NO3	2.3	2.66 μg/L	
Nitrogen - Total TMZ-M06(ADEL)			13/04/2023
Nitrogen - Total		4.68 mg/L	
Phosphorus - Filterable Reactive as P (A	ADEL)		27/04/2023
# Phosphorus -Filterable Reactive as PO4	1.5	10.166 μg/L	
Phosphorus-Filterable Reactive as P	0.5	3.4 µg/L	
Phosphorus - Total T0109-44(ADEL)			26/04/2023
Phosphorus - Total	0.005	0.238 mg/L	
Silica - Reactive T0111-01(ADEL)			18/04/2023
Silica - Reactive	0.05	4.20 mg/L	
TKN as N T0112-01(ADEL)			26/04/2023
TKN as Nitrogen	0.05	4.68 mg/L	



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Analytical Results

 Sampling Point
 31514-EPA - Stoney Well

 Sampled Date
 13/04/2023 10:00:00AM

 Sample Received Date
 13/04/2023 3:29:11PM

 Sample Analysis Completed
 8/05/2023 1:31:36PM

 Sample ID
 *2023-001-9936

 Status
 Endorsed

Collection Type Customer Collected

Organic Chemistry	LOR	Result	Test Start Date
Sample temperature at time of receipt 1	1.6°C		
Dissolved Organic Carbon T0158-07(AD	EL)		05/05/2023
Dissolved Organic Carbon	1	21.6 mg/L	
Total Organic Carbon T0158-07(ADEL)			05/05/2023
Total Organic Carbon	1	34.0 mg/L	
Inorganic Chemistry - Physical	LOR	Result	Test Start Date
Sample temperature at time of receipt 1	1.6°C		
Alkalinity Carbonate Bicarbonate and H	ydroxide T0101-01	I(ADEL)	13/04/2023
Alkalinity as Calcium Carbonate		235 mg/L	
Bicarbonate		286 mg/L	
Carbonate		0 mg/L	
Hydroxide		0 mg/L	
Conductivity & Total Dissolved Solids To)016-01(ADEL)		13/04/2023
Conductivity	2	86700 µS/cm	
Note		Conductivity measurement is corrected to 25°C	
Total Dissolved Solids (by EC)	1	70400 mg/L	
pH T0010-01(ADEL)			13/04/2023
рН		8.0 pH units	
Temperature at which pH is measured		21.8 °C	
Turbidity T0018-01(ADEL)			14/04/2023
Turbidity	0.1	36 NTU	
Inorganic Chemistry - Waste Water	LOR	Result	Test Start Date
Sample temperature at time of receipt 1	1.6°C		
Suspended Solids T0160-01(ADEL)	-		21/04/2023
	1.0	44 mg/L	



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Analytical Results

Sampling Point 31514-EPA - Stoney Well 13/04/2023 10:00:00AM **Sampled Date** 13/04/2023 3:29:11PM **Sample Received Date** 8/05/2023 1:31:36PM Sample Analysis Completed *2023-001-9936 Sample ID Endorsed Status

Customer Collected Collection Type



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Analytical Results

 Sampling Point
 31525-EPA - Villa de Yumpa

 Sampled Date
 13/04/2023 10:20:00AM

 Sample Received Date
 13/04/2023 3:31:06PM

 Sample Analysis Completed
 9/05/2023 11:52:13AM

 Sample ID
 *2023-001-9929

 Status
 Endorsed

Collection Type Customer Collected

Biology Operations LOR Result Test Start Date

Sample temperature at time of receipt 11.6°C

Algal Identification T0393(ADEL)

BLUE GREEN ALGAE

Merismopedia 1600 cells/mL

DIATOMS

 Gyrosigma
 2 cells/mL

 Pennate diatoms
 30 cells/mL

 Nitzschia
 20 cells/mL

 Navicula
 2 cells/mL

DINOFLAGELLATES

PERIDINIACEAE 4 cells/mL

GREEN ALGAE

Unicellular green algae 76000 cells/mL
Chlorella 2000000 cells/mL

Sample temperature at time of receipt 11.6°C

Algal Biovolume T0393(ADEL)

BLUE GREEN ALGAE

Merismopedia <0.01 mm3/L

DIATOMS

 Gyrosigma
 <0.01 mm3/L</td>

 Navicula
 <0.01 mm3/L</td>

 Nitzschia
 0.03 mm3/L

GREEN ALGAE

Chlorella 90.0 mm3/L

Algal Biovolume Comment

Biovolumes for taxa reported at genus level are approximate values. Reported taxa and calculated biovolume includes only those with

taxon cell volume and associated cell count data. Biovolume totals have specific criteria around

how they calculate.

Not Calculated mm3/L

Total Algae Biovolume



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Analytical Results

Sampling Point 31525-EPA - Villa de Yumpa 13/04/2023 10:20:00AM **Sampled Date** 13/04/2023 3:31:06PM **Sample Received Date** 9/05/2023 11:52:13AM Sample Analysis Completed *2023-001-9929 Sample ID Endorsed **Status**

Customer Collected Collection Type

13/04/2023 Algal Biovolume T0393(ADEL)

Total Blue_Green Algae Biovolume <0.01 mm3/L # Total Diatom Biovolume Not Calculated mm3/L # Total Green Algae Biovolume Not Calculated mm3/L

Total Toxic BGA Biovolume 0.00 mm3/L

Sample temperature at time of receipt 11.6°C

Algal Count - Total T0393(ADEL) 13/04/2023

Algae - Total 2080000 cells/mL Blue Green Algae - Total 1600 cells/mL Diatoms - Total 54 cells/mL Geosmin-MIB producing BGA - Total 0 cells/mL Green Algae - Total 2080000 cells/mL

Toxin producing BGA - Total 0 cells/mL

Sample temperature at time of receipt 11.6°C Chlorophyll a & Phaeophytin a T0380-02(ADEL)

13/04/2023

Chlorophyll a 0.1 130 µg/L Phaeophytin a 0.1 61.3 µg/L

Inorganic Chemistry - Nutrients	LOR	Result	Test Start Date
Sample temperature at time of receipt	11.6°C		
Ammonia as N (ADEL)			27/04/2023
# Ammonia as N	1	52 μg/L	
Chloride T0104-02(ADEL)			18/04/2023
Chloride	4.0	35000 mg/L	
Nitrate + Nitrite as N (ADEL)			27/04/2023
# Nitrate + Nitrite as N	0.5	0.8 μg/L	
# Nitrate + Nitrite as NO3	2.3	3.54 µg/L	
Nitrogen - Total TMZ-M06(ADEL)			13/04/2023
Nitrogen - Total		4.35 mg/L	
Phosphorus - Filterable Reactive as P (ADEL)		27/04/2023



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Analy	vtical	Results
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31525-EPA - Villa de Yumpa **Sampling Point** 13/04/2023 10:20:00AM **Sampled Date** 13/04/2023 3:31:06PM **Sample Received Date** 9/05/2023 11:52:13AM Sample Analysis Completed *2023-001-9929 Sample ID Endorsed **Status**

Customer Collected Collection Type

Organic Chemistry	LOR	Pocult	Tost Start Date
TKN as Nitrogen	0.05	4.35 mg/L	
TKN as N T0112-01(ADEL)	0.05		26/04/2023
Silica - Reactive	0.05	3.89 mg/L	
Silica - Reactive T0111-01(ADEL)			18/04/2023
Phosphorus - Total	0.005	0.194 mg/L	
Phosphorus - Total T0109-44(ADEL)			26/04/2023
Phosphorus-Filterable Reactive as P	0.5	3.1 µg/L	
# Phosphorus -Filterable Reactive as PO4	1.5	9.269 µg/L	
Phosphorus - Filterable Reactive as P (A	DEL)		27/04/2023

LOR	Result	Test Start Date
ot 11.6°C		
ADEL)		05/05/2023
1	21.3 mg/L	
-)		05/05/2023
1	32.9 mg/L	
	LOR pt 11.6°C ADEL) 1 -)	pt 11.6°C ADEL) 1 21.3 mg/L

Inorganic Chemistry - Physical	LOR	Result	Test Start Date
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Sample temperature at time of receipt 11.6°C

Alkalinity Carbonate Bicarbonate and Hydroxide T0101-01(ADEL)

13/04/2023

13/04/2023

Alkalinity as Calcium Carbonate 242 mg/L Bicarbonate 295 mg/L Carbonate 0 mg/L Hydroxide 0 mg/L

Conductivity & Total Dissolved Solids T0016-01(ADEL) Conductivity

1

86200 µS/cm

Note

Conductivity measurement is corrected to 25°C

Total Dissolved Solids (by EC)

pH T0010-01(ADEL)

69800 mg/L 13/04/2023

8.0 pH units



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14/04/2023

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Analytical Results

 Sampling Point
 31525-EPA - Villa de Yumpa

 Sampled Date
 13/04/2023 10:20:00AM

 Sample Received Date
 13/04/2023 3:31:06PM

 Sample Analysis Completed
 9/05/2023 11:52:13AM

 Sample ID
 *2023-001-9929

Status Endorsed

Collection Type Customer Collected

pH T0010-01(ADEL) 13/04/2023

Temperature at which pH is measured 21.8 °C

Turbidity T0018-01(ADEL)

Turbidity 0.1 26 NTU

Inorganic Chemistry - Waste Water LOR Result Test Start Date

Sample temperature at time of receipt 11.6°C

 Suspended Solids T0160-01(ADEL)
 21/04/2023

 Suspended Solids
 1.0
 67 mg/L

NATA

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Sharon Helgeson - Technical Officer Life Sciences

Kerrie Jooste - Manager Chemistry Services

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Melissa Phillips - Technical Officer Chemistry

Gayle Polley - Supervisor Nutrients and Waste

Lyudmila Tsymbal - Technical Officer Life Sciences



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Incidents

Sample ID	S.Point	Description	Sampled Date	Analysis (where Applicable)	Incident Description
2023-001-9929	31525	EPA - Villa de Yumpa	13/04/2023	Silica - Reactive	Test not processed within holding time
2023-001-9929	31525	EPA - Villa de Yumpa	13/04/2023	Suspended Solids	Test not processed within holding time
2023-001-9929	31525	EPA - Villa de Yumpa	13/04/2023	Total Organic Carbon	Test not processed within holding time
2023-001-9929	31525	EPA - Villa de Yumpa	13/04/2023	Dissolved Organic Carbon	Test not processed within holding time
2023-001-9930	31523	EPA - Long Point	12/04/2023	Turbidity	Test not processed within holding time
2023-001-9930	31523	EPA - Long Point	12/04/2023	pН	Test not processed within holding time
2023-001-9930	31523	EPA - Long Point	12/04/2023	Silica - Reactive	Test not processed within holding time
2023-001-9930	31523	EPA - Long Point	12/04/2023	Suspended Solids	Test not processed within holding time
2023-001-9930	31523	EPA - Long Point	12/04/2023	Total Organic Carbon	Test not processed within holding time
2023-001-9930	31523	EPA - Long Point	12/04/2023	Dissolved Organic Carbon	Test not processed within holding time
2023-001-9931	31526	EPA - Nth Jack Point	13/04/2023	pН	Test not processed within holding time
2023-001-9931	31526	EPA - Nth Jack Point	13/04/2023	Silica - Reactive	Test not processed within holding time
2023-001-9931	31526	EPA - Nth Jack Point	13/04/2023	Suspended Solids	Test not processed within holding time
2023-001-9931	31526	EPA - Nth Jack Point	13/04/2023	Total Organic Carbon	Test not processed within holding time
2023-001-9931	31526	EPA - Nth Jack Point	13/04/2023	Dissolved Organic Carbon	Test not processed within holding time
2023-001-9932	31515	EPA - Snipe Point	13/04/2023	рН	Test not processed within holding time
2023-001-9932	31515	EPA - Snipe Point	13/04/2023	Turbidity	Test results outside of specification limits have been checked and the results verified
2023-001-9932	31515	EPA - Snipe Point	13/04/2023	Silica - Reactive	Test not processed within holding time
2023-001-9932	31515	EPA - Snipe Point	13/04/2023	Suspended Solids	Test not processed within holding time



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Incidents

Sample ID	S.Point	Description	Sampled Date	Analysis (where Applicable)	Incident Description
2023-001-9932	31515	EPA - Snipe Point	13/04/2023	Total Organic Carbon	Test not processed within holding time
2023-001-9932	31515	EPA - Snipe Point	13/04/2023	Dissolved Organic Carbon	Test not processed within
2023-001-9933	31513	EPA - Parnka Point Boat Ramp	12/04/2023	рН	holding time Test not processed within holding time
2023-001-9933	31513	EPA - Parnka Point Boat Ramp	12/04/2023	Turbidity	Test results outside of specification limits have been checked and the results verified
2023-001-9933	31513	EPA - Parnka Point Boat Ramp	12/04/2023	Silica - Reactive	Test not processed within holding time
2023-001-9933	31513	EPA - Parnka Point Boat Ramp	12/04/2023	Suspended Solids	Test not processed within holding time
2023-001-9933	31513	EPA - Parnka Point Boat Ramp	12/04/2023	Total Organic Carbon	Test not processed within holding time
2023-001-9933	31513	EPA - Parnka Point Boat Ramp	12/04/2023	Dissolved Organic Carbon	Test not processed within holding time
2023-001-9934	31511	EPA - 3.2km South Salt Creek	13/04/2023	рН	Test not processed within holding time
2023-001-9934	31511	EPA - 3.2km South Salt Creek	13/04/2023	Turbidity	Test results outside of specification limits have been checked and the results verified
2023-001-9934	31511	EPA - 3.2km South Salt Creek	13/04/2023	Silica - Reactive	Test not processed within holding time
2023-001-9934	31511	EPA - 3.2km South Salt Creek	13/04/2023	Suspended Solids	Test not processed within holding time
2023-001-9934	31511	EPA - 3.2km South Salt Creek	13/04/2023	Total Organic Carbon	Test not processed within holding time
2023-001-9934	31511	EPA - 3.2km South Salt Creek	13/04/2023	Dissolved Organic Carbon	Test not processed within holding time
2023-001-9935	31517	EPA - 1.8km West Salt Creek	13/04/2023	рН	Test not processed within holding time
2023-001-9935	31517	EPA - 1.8km West Salt Creek	13/04/2023	Silica - Reactive	Test not processed within holding time
2023-001-9935	31517	EPA - 1.8km West Salt Creek	13/04/2023	Suspended Solids	Test not processed within holding time
2023-001-9935	31517	EPA - 1.8km West Salt Creek	13/04/2023	Total Organic Carbon	Test not processed within holding time



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Incidents

Sample ID	S.Point	Description	Sampled Date	Analysis (where Applicable)	Incident Description
2023-001-9935	31517	EPA - 1.8km West Salt Creek	13/04/2023	Dissolved Organic Carbon	Test not processed within holding time
2023-001-9936	31514	EPA - Stoney Well	13/04/2023	рН	Test not processed within holding time
2023-001-9936	31514	EPA - Stoney Well	13/04/2023	Turbidity	Test results outside of specification limits have been checked and the results verified
2023-001-9936	31514	EPA - Stoney Well	13/04/2023	Silica - Reactive	Test not processed within holding time
2023-001-9936	31514	EPA - Stoney Well	13/04/2023	Suspended Solids	Test not processed within holding time
2023-001-9936	31514	EPA - Stoney Well	13/04/2023	Total Organic Carbon	Test not processed within holding time
2023-001-9936	31514	EPA - Stoney Well	13/04/2023	Dissolved Organic Carbon	Test not processed within holding time
2023-001-9937	31512	EPA - McGrath Flat North	12/04/2023	рН	Test not processed within holding time
2023-001-9937	31512	EPA - McGrath Flat North	12/04/2023	Turbidity	Test results outside of specification limits have been checked and the results verified
2023-001-9937	31512	EPA - McGrath Flat North	12/04/2023	Silica - Reactive	Test not processed within holding time
2023-001-9937	31512	EPA - McGrath Flat North	12/04/2023	Suspended Solids	Test not processed within holding time
2023-001-9937	31512	EPA - McGrath Flat North	12/04/2023	Total Organic Carbon	Test not processed within holding time
2023-001-9937	31512	EPA - McGrath Flat North	12/04/2023	Dissolved Organic Carbon	Test not processed within holding time
2023-001-9938	31519	EPA - Morella Basin at Outlet Regulator	13/04/2023	рН	Test not processed within holding time
2023-001-9938	31519	EPA - Morella Basin at Outlet Regulator	13/04/2023	Silica - Reactive	Test not processed within holding time
2023-001-9938	31519	EPA - Morella Basin at Outlet Regulator	13/04/2023	Suspended Solids	Test not processed within holding time
2023-001-9938	31519	EPA - Morella Basin at Outlet Regulator	13/04/2023	Total Organic Carbon	Test not processed within holding time
2023-001-9938	31519	EPA - Morella Basin at Outlet Regulator	13/04/2023	Dissolved Organic Carbon	Test not processed within holding time



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Incidents

Sample ID	S.Point	Description	Sampled Date	Analysis (where Applicable)	Incident Description
2023-001-9939	315191	EPA - Morella Creek @ guage	13/04/2023	pH	Test not processed within holding time
2023-001-9939	315191	EPA - Morella Creek @ guage	13/04/2023	Silica - Reactive	Test not processed within holding time
2023-001-9939	315191	EPA - Morella Creek @ guage	13/04/2023	Suspended Solids	Test not processed within holding time
2023-001-9939	315191	EPA - Morella Creek @ guage	13/04/2023	Total Organic Carbon	Test not processed within holding time
2023-001-9939	315191	EPA - Morella Creek @ guage	13/04/2023	Dissolved Organic Carbon	Test not processed within holding time
2023-001-9939	315191	EPA - Morella Creek @ guage	13/04/2023	Dissolved Organic Carbon	DOC > TOC but within method uncertainty
2023-001-9940	300713	Tilley Swamp Drain D/S Northern Outlet	13/04/2023	рН	Test not processed within holding time
2023-001-9940	300713	Tilley Swamp Drain D/S Northern Outlet	13/04/2023	Silica - Reactive	Test not processed within holding time
2023-001-9940	300713	Tilley Swamp Drain D/S Northern Outlet	13/04/2023	Suspended Solids	Test not processed within holding time
2023-001-9940	300713	Tilley Swamp Drain D/S Northern Outlet	13/04/2023	Total Organic Carbon	Test not processed within holding time
2023-001-9940	300713	Tilley Swamp Drain D/S Northern Outlet	13/04/2023	Dissolved Organic Carbon	Test not processed within holding time
2023-001-9941	11505	DEW - Mundoo Downstream	12/04/2023	Turbidity	Test not processed within holding time
2023-001-9941	11505	DEW - Mundoo Downstream	12/04/2023	рН	Test not processed within holding time
2023-001-9941	11505	DEW - Mundoo Downstream	12/04/2023	Turbidity	Test results outside of specification limits have been checked and the results verified
2023-001-9941	11505	DEW - Mundoo Downstream	12/04/2023	Turbidity	Test results outside of specification limits have been checked and the results verified
2023-001-9941	11505	DEW - Mundoo Downstream	12/04/2023	Silica - Reactive	Test not processed within holding time
2023-001-9941	11505	DEW - Mundoo Downstream	12/04/2023	Suspended Solids	Test not processed within holding time
2023-001-9941	11505	DEW - Mundoo Downstream	12/04/2023	Total Organic Carbon	Test not processed within holding time



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Incidents

Sample ID	S.Point	Description	Sampled Date	Analysis (where Applicable)	Incident Description
2023-001-9941	11505	DEW - Mundoo Downstream	12/04/2023	Dissolved Organic Carbon	Test not processed within holding time
2023-001-9942	11504	DEW - Mundoo Upstream	12/04/2023	Turbidity	Test not processed within holding time
023-001-9942	11504	DEW - Mundoo Upstream	12/04/2023	рН	Test not processed within holding time
023-001-9942	11504	DEW - Mundoo Upstream	12/04/2023	Silica - Reactive	Test not processed within holding time
023-001-9942	11504	DEW - Mundoo Upstream	12/04/2023	Suspended Solids	Test not processed within holding time
023-001-9942	11504	DEW - Mundoo Upstream	12/04/2023	Total Organic Carbon	Test not processed within holding time
023-001-9942	11504	DEW - Mundoo Upstream	12/04/2023	Dissolved Organic Carbon	Test not processed within holding time
023-001-9943	31522	EPA - Mark Point	12/04/2023	Turbidity	Test not processed within holding time
023-001-9943	31522	EPA - Mark Point	12/04/2023	рН	Test not processed within holding time
023-001-9943	31522	EPA - Mark Point	12/04/2023	Silica - Reactive	Test not processed within holding time
023-001-9943	31522	EPA - Mark Point	12/04/2023	Suspended Solids	Test not processed within holding time
023-001-9943	31522	EPA - Mark Point	12/04/2023	Total Organic Carbon	Test not processed within holding time
023-001-9943	31522	EPA - Mark Point	12/04/2023	Dissolved Organic Carbon	Test not processed within holding time
023-001-9944	351213	EPA - Murray Mouth	12/04/2023	Turbidity	Test not processed within holding time
023-001-9944	351213	EPA - Murray Mouth	12/04/2023	рН	Test not processed within holding time
023-001-9944	351213	EPA - Murray Mouth	12/04/2023	Silica - Reactive	Test not processed within holding time
023-001-9944	351213	EPA - Murray Mouth	12/04/2023	Suspended Solids	Test not processed within holding time
023-001-9944	351213	EPA - Murray Mouth	12/04/2023	Total Organic Carbon	Test not processed within holding time
023-001-9944	351213	EPA - Murray Mouth	12/04/2023	Dissolved Organic Carbon	Test not processed within holding time
023-001-9945	31524	EPA - Bonneys	12/04/2023	рН	Test not processed within holding time



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Incidents

Sample ID	S.Point	Description	Sampled Date	Analysis (where Applicable)	Incident Description
2023-001-9945	31524	EPA - Bonneys	12/04/2023	Turbidity	Test results outside of specification limits have been checked and the results verified
2023-001-9945	31524	EPA - Bonneys	12/04/2023	Silica - Reactive	Test not processed within holding time
2023-001-9945	31524	EPA - Bonneys	12/04/2023	Suspended Solids	Test not processed within holding time
2023-001-9945	31524	EPA - Bonneys	12/04/2023	Total Organic Carbon	Test not processed within holding time
2023-001-9945	31524	EPA - Bonneys	12/04/2023	Dissolved Organic Carbon	Test not processed within holding time
2023-001-9946	31528	EPA - Salt Creek Outlet	13/04/2023	рН	Test not processed within holding time
2023-001-9946	31528	EPA - Salt Creek Outlet	13/04/2023	Silica - Reactive	Test not processed within holding time
2023-001-9946	31528	EPA - Salt Creek Outlet	13/04/2023	Suspended Solids	Test not processed within holding time
2023-001-9946	31528	EPA - Salt Creek Outlet	13/04/2023	Total Organic Carbon	Test not processed within holding time
2023-001-9946	31528	EPA - Salt Creek Outlet	13/04/2023	Dissolved Organic Carbon	Test not processed within holding time
2023-001-9947	353179	EPA - Tauwitchere Barrage Upstream	12/04/2023	рН	Test not processed within holding time
2023-001-9947	353179	EPA - Tauwitchere Barrage Upstream	12/04/2023	Turbidity	Test not processed within holding time
2023-001-9947	353179	EPA - Tauwitchere Barrage Upstream	12/04/2023	Silica - Reactive	Test not processed within holding time
2023-001-9947	353179	EPA - Tauwitchere Barrage Upstream	12/04/2023	Suspended Solids	Test not processed within holding time
2023-001-9947	353179	EPA - Tauwitchere Barrage Upstream	12/04/2023	Total Organic Carbon	Test not processed within holding time
2023-001-9947	353179	EPA - Tauwitchere Barrage Upstream	12/04/2023	Dissolved Organic Carbon	Test not processed within holding time
2023-001-9948	353177	EPA - Tauwitchere Barrage DS	12/04/2023	Turbidity	Test not processed within holding time
2023-001-9948	353177	EPA - Tauwitchere Barrage DS	12/04/2023	рН	Test not processed within holding time
2023-001-9948	353177	EPA - Tauwitchere Barrage DS	12/04/2023	Silica - Reactive	Test not processed within holding time



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Incidents

Sample ID	S.Point	Description	Sampled Date	Analysis (where Applicable)	Incident Description
2023-001-9948	353177	EPA - Tauwitchere Barrage DS	12/04/2023	Suspended Solids	Test not processed within holding time
2023-001-9948	353177	EPA - Tauwitchere Barrage DS	12/04/2023	Total Organic Carbon	Test not processed within holding time
2023-001-9948	353177	EPA - Tauwitchere Barrage DS	12/04/2023	Dissolved Organic Carbon	Test not processed within holding time
023-001-9949	531012	EPA - Sth Policeman Point	13/04/2023	рН	Test not processed within holding time
023-001-9949	531012	EPA - Sth Policeman Point	13/04/2023	Silica - Reactive	Test not processed within holding time
023-001-9949	531012	EPA - Sth Policeman Point	13/04/2023	Suspended Solids	Test not processed within holding time
023-001-9949	531012	EPA - Sth Policeman Point	13/04/2023	Total Organic Carbon	Test not processed within holding time
023-001-9949	531012	EPA - Sth Policeman Point	13/04/2023	Dissolved Organic Carbon	Test not processed within holding time
023-001-9950	53032	EPA - Noonameena	12/04/2023	pН	Test not processed within holding time
023-001-9950	53032	EPA - Noonameena	12/04/2023	Silica - Reactive	Test not processed within holding time
023-001-9950	53032	EPA - Noonameena	12/04/2023	Suspended Solids	Test not processed within holding time
023-001-9950	53032	EPA - Noonameena	12/04/2023	Total Organic Carbon	Test not processed within holding time
023-001-9950	53032	EPA - Noonameena	12/04/2023	Dissolved Organic Carbon	Test not processed within holding time



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Analytical Method

Analytical Method Code	Description	Reference Method
T0010-01	Determination of pH	AP4500HB
T0016-01	Determination of Conductivity - Corrected to 25C	AP2510B
T0018-01	Turbidity - Nephelometric Measurement	APAWWA-WEF
T0100-01	Ammonia/Ammonium - Automated Flow Colorimetry	AP4500NH3G
T0101-01	Alkalinity - Automated Acidimetric Titration	AP2320B
T0104-02	Chloride - Discrete Analyser	AP4500CLE
T0109-44	Phosphorous -total Kjeldahl for seawater by automated flow colorimetry	AP4500PF
T0111-01	Silica by automated fow colorimetry	AP4500SI02
T0112-01	Nitrogen- Total Kjeldahl by discrete analyser	AP4500NORGA
T015-05	Total Dissolved Solids by Evaporation	AP2540C
T0158-07	Total and Dissolved Organic Carbon (OI Analytical)	SM5310C
T0160-01	Suspended Solids 103C to 105C	AP4500
T0380-02	Chlorophyll a & b and phaeophytin	ISO10260
T0393	Microalgae & Cyanobacteria - Scan & Identification	
T0393	Microalgae & Cyanobacteria - Scan & Identification	Hotzel1999
TMZ-M06	Derived Results and Data Checks	AP4500NORGA

Sampling Method

Sampling Method Code	Description	
W09-023	Sampling Method for Chemical Analyses	
W09-024	Sampling Method for Biological Analyses	
	Sampling point and date sampled are provided when collected by customers. Validity of results are based on information and samples supplied by customers. Unless it is reported that sampling has been performed by AWQC, the samples have been analysed as received.	

Laboratory Information

Laboratory	NATA accreditation ID
Inorganic Chemistry - Physical	1115
Inorganic Chemistry - Waste Water	1115
Inorganic Chemistry - Nutrients	1115
Organic Chemistry	1115
Biology Operations	1115



Corporate Accreditation No.1115 Chemical and **Biological Testing** Accredited for compliance with ISO/IEC 17025 -Testing

Notes 1. The last figure of the result value is a significant figure

- 2. # determination of the component is not covered by NATA Accreditation.
- 3. ^ indicates result is out of specification according to the reference guideline. Refer to report footer.
- 4. * indicates an incident has been recorded against the sample. Refer to report footer.
- 5. & Indicates the results have changed since the last issued report.
- 6. Where a result is required to meet compliance limits the associated measurement uncertainty must be considered. Measurement uncertainty is
- 7. Uncertainty of Measurement is reported with a coverage factor of 2 providing approximately 95% confidence interval
- 8. The Limit of Reporting (LOR) is the lowest concentration of analyte which is reported at the AWQC and is based on the LOQ rounded up to a more readily used value. The Limit of Quantitation (LOQ) is the lowest concentration of analyte for which quantitative results may be obtained within a specified degree of confidence.
- 9. Where collection type is AWQC Collect, NATA has confirmed that due to a robust system in place for maintaining the temperature integrity for samples collected by AWQC's Field Laboratory Services, the recording of temperature when samples arrive at the AWQC is out of scope
- 10. If pH has been tested then the pH will be outside of its holding time unless measured in the field. 11. (ADEL) indicates analysed in Adelaide, (MELB) indicates analysed in Melbourne.
- 12. AWQC Melbourne Laboratory are only NATA accredited for sampling of potable waters by inhouse method W 09-023.