



DEW - Department of Environment and Water
ATTN: Patrick Betham
24-26 Tikalara street
Regency Park
SA 5010 AUSTRALIA

25/11/2019

Dear Patrick

Please find attached the Final Analytical Report for

Customer Service Request: 143419-2019-CSR-1
Account: 143419
Project: AWQC-140182 DEW - Healthy Coorong Healthy Basin Phase 0 - Non routine
19/20

This report has also been sent to: Frank Mangeruca Mark de Jong

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

Yours sincerely,

Darren Seebohm
Customer Services Officer
Darren.Seebohm@sawater.com.au
+61 8 7424 2150





FINAL REPORT: 264388

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Report Information

Project Name	AWQC-140182
Customer	DEW - Department of Environment and Water
CSR_ID	143419-2019-CSR-1

Analytical Results

Sampling Point	31511-EPA - 3.2km South Salt Creek
Sampled Date	23/10/2019 8:15:00AM
Sample Received Date	24/10/2019 11:30:06AM
Sample Analysis Completed	15/11/2019 2:27:42PM
Sample ID	2019-006-9931
Status	Endorsed
Collection Type	Customer Collected

Biology Operations	LOR	Result	Test Start Date
Sample temperature at time of receipt 10.2°C			
Chlorophyll a & b T0380-02(ADEL)			24/10/2019
Chlorophyll a	0.1	23.6 µg/L	
Chlorophyll b	0.1	3.41 µg/L	
Chlorophyll comment		Chlorophyll a & b results are the sum of chlorophyll & their degradation by products (Phaeophytins)	
Chlorophyll a & Phaeophytin a T0380-02(ADEL)			24/10/2019
Chlorophyll a	0.1	45.4 µg/L	
Phaeophytin a	0.1	5.60 µg/L	
Inorganic Chemistry - Nutrients	LOR	Result	Test Start Date
Sample temperature at time of receipt 10.2°C			
Ammonia as N T0100-01(ADEL)			06/11/2019
Ammonia as N	0.005	<0.005 mg/L	
Chloride T0104-02(ADEL)			04/11/2019
Chloride	4.0	44600 mg/L	
Nitrate + Nitrite as N T0161-01(ADEL)			28/10/2019
Nitrate + Nitrite as N	0.003	0.004 mg/L	
Nitrogen - Total TMZ-M06(ADEL)			24/10/2019
Nitrogen - Total		5.66 mg/L	
Phosphorus - Filterable Reactive as P T0108-01(ADEL)			28/10/2019
Phosphorus - Filterable Reactive as P	0.003	<0.003 mg/L	
Phosphorus - Total T0109-44(ADEL)			04/11/2019
Phosphorus - Total	0.005	0.192 mg/L	
Silica - Reactive T0111-01(ADEL)			04/11/2019
Silica - Reactive	0.05	2.27 mg/L	
TKN as N T0112-01(ADEL)			04/11/2019



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Analytical Results

Sampling Point	31511-EPA - 3.2km South Salt Creek
Sampled Date	23/10/2019 8:15:00AM
Sample Received Date	24/10/2019 11:30:06AM
Sample Analysis Completed	15/11/2019 2:27:42PM
Sample ID	2019-006-9931
Status	Endorsed
Collection Type	Customer Collected

TKN as N T0112-01(ADEL)			04/11/2019
TKN as Nitrogen	0.05	5.66 mg/L	

Organic Chemistry	LOR	Result	Test Start Date
Sample temperature at time of receipt 10.2°C			
Dissolved Organic Carbon T0158-07(ADEL)			31/10/2019
Dissolved Organic Carbon	1	23.1 mg/L	
Total Organic Carbon T0158-07(ADEL)			31/10/2019
Total Organic Carbon	1	30.8 mg/L	

Inorganic Chemistry - Physical	LOR	Result	Test Start Date
Sample temperature at time of receipt 10.2°C			
Alkalinity Carbonate Bicarbonate and Hydroxide T0101-01(ADEL)			25/10/2019
Alkalinity as Calcium Carbonate		229 mg/L	
Bicarbonate		279 mg/L	
Carbonate		0 mg/L	
Hydroxide		0 mg/L	
Conductivity & Total Dissolved Solids T0016-01(ADEL)			25/10/2019
Conductivity	2	108000 µS/cm	
Total Dissolved Solids (by EC)	1	94600 mg/L	
pH T0010-01(ADEL)			25/10/2019
pH		8.0 pH units	
Temperature at which pH is measured		22.5 °C	
Turbidity T0018-01(ADEL)			28/10/2019
Turbidity	0.1	13 NTU	

Inorganic Chemistry - Waste Water	LOR	Result	Test Start Date
Sample temperature at time of receipt 10.2°C			
Suspended Solids T0160-01(ADEL)			31/10/2019
Suspended Solids	1.0	75 mg/L	
Volatile Suspended Solids T0160-01(ADEL)			31/10/2019
Fixed Solids	1	<1 mg/L	



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Analytical Results

Sampling Point	31511-EPA - 3.2km South Salt Creek
Sampled Date	23/10/2019 8:15:00AM
Sample Received Date	24/10/2019 11:30:06AM
Sample Analysis Completed	15/11/2019 2:27:42PM
Sample ID	2019-006-9931
Status	Endorsed
Collection Type	Customer Collected

Volatile Suspended Solids T0160-01(ADEL)

31/10/2019

Volatile Suspended Solids	1	75 mg/L
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Analytical Results

Sampling Point	31517-EPA - 1.8km West Salt Creek
Sampled Date	23/10/2019 8:15:00AM
Sample Received Date	24/10/2019 11:31:53AM
Sample Analysis Completed	15/11/2019 2:27:42PM
Sample ID	2019-006-9933
Status	Endorsed
Collection Type	Customer Collected

Biology Operations	LOR	Result	Test Start Date
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Sample temperature at time of receipt 10.2°C

Chlorophyll a & b T0380-02(ADEL) 24/10/2019

Chlorophyll a	0.1	62.7 µg/L
Chlorophyll b	0.1	9.27 µg/L
Chlorophyll comment		Chlorophyll a & b results are the sum of chlorophyll & their degradation by products (Phaeophytins)

Chlorophyll a & Phaeophytin a T0380-02(ADEL) 24/10/2019

Chlorophyll a	0.1	58.5 µg/L
Phaeophytin a	0.1	10.7 µg/L

Inorganic Chemistry - Nutrients	LOR	Result	Test Start Date
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Sample temperature at time of receipt 10.2°C

Ammonia as N T0100-01(ADEL) 06/11/2019

Ammonia as N	0.005	<0.005 mg/L
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Chloride T0104-02(ADEL) 04/11/2019

Chloride	4.0	40900 mg/L
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Nitrate + Nitrite as N T0161-01(ADEL) 28/10/2019

Nitrate + Nitrite as N	0.003	<0.003 mg/L
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Nitrogen - Total TMZ-M06(ADEL) 24/10/2019

Nitrogen - Total		5.41 mg/L
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Phosphorus - Filterable Reactive as P T0108-01(ADEL) 28/10/2019

Phosphorus - Filterable Reactive as P	0.003	0.006 mg/L
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Phosphorus - Total T0109-44(ADEL) 04/11/2019

Phosphorus - Total	0.005	0.230 mg/L
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Silica - Reactive T0111-01(ADEL) 04/11/2019

Silica - Reactive	0.05	2.91 mg/L
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TKN as N T0112-01(ADEL) 04/11/2019

TKN as Nitrogen	0.05	5.41 mg/L
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Organic Chemistry	LOR	Result	Test Start Date
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Analytical Results

Sampling Point	31517-EPA - 1.8km West Salt Creek
Sampled Date	23/10/2019 8:15:00AM
Sample Received Date	24/10/2019 11:31:53AM
Sample Analysis Completed	15/11/2019 2:27:42PM
Sample ID	2019-006-9933
Status	Endorsed
Collection Type	Customer Collected

Sample temperature at time of receipt 10.2°C

Dissolved Organic Carbon T0158-07(ADEL) 31/10/2019

Dissolved Organic Carbon	1	21.6 mg/L
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Total Organic Carbon T0158-07(ADEL) 31/10/2019

Total Organic Carbon	1	29.3 mg/L
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Inorganic Chemistry - Physical	LOR	Result	Test Start Date
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Sample temperature at time of receipt 10.2°C

Alkalinity Carbonate Bicarbonate and Hydroxide T0101-01(ADEL) 25/10/2019

Alkalinity as Calcium Carbonate	227 mg/L
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Bicarbonate	277 mg/L
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Carbonate	0 mg/L
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Hydroxide	0 mg/L
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Conductivity & Total Dissolved Solids T0016-01(ADEL) 25/10/2019

Conductivity	2	105000 µS/cm
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Total Dissolved Solids (by EC)	1	91000 mg/L
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pH T0010-01(ADEL) 25/10/2019

pH	8.1 pH units
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Temperature at which pH is measured	22.5 °C
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Turbidity T0018-01(ADEL) 28/10/2019

Turbidity	0.1	12 NTU
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Inorganic Chemistry - Waste Water	LOR	Result	Test Start Date
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Sample temperature at time of receipt 10.2°C

Suspended Solids T0160-01(ADEL) 30/10/2019

Suspended Solids	1.0	29 mg/L
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Volatile Suspended Solids T0160-01(ADEL) 30/10/2019

Fixed Solids	1	<1 mg/L
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Volatile Suspended Solids	1	29 mg/L
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Analytical Results

Sampling Point	31515-EPA - Snipe Point
Sampled Date	23/10/2019 8:45:00AM
Sample Received Date	24/10/2019 11:31:17AM
Sample Analysis Completed	7/11/2019 2:36:28PM
Sample ID	2019-006-9932
Status	Endorsed
Collection Type	Customer Collected

Biology Operations	LOR	Result	Test Start Date
Sample temperature at time of receipt 10.2°C			
Chlorophyll a & b T0380-02(ADEL)			24/10/2019
Chlorophyll a	0.1	41.0 µg/L	
Chlorophyll b	0.1	9.35 µg/L	
Chlorophyll comment		Chlorophyll a & b results are the sum of chlorophyll & their degradation by products (Phaeophytins)	
Chlorophyll a & Phaeophytin a T0380-02(ADEL)			24/10/2019
Chlorophyll a	0.1	38.7 µg/L	
Phaeophytin a	0.1	7.40 µg/L	

Inorganic Chemistry - Nutrients	LOR	Result	Test Start Date
Sample temperature at time of receipt 10.2°C			
Ammonia as N T0100-01(ADEL)			06/11/2019
Ammonia as N	0.005	<0.005 mg/L	
Chloride T0104-02(ADEL)			04/11/2019
Chloride	4.0	44800 mg/L	
Nitrate + Nitrite as N T0161-01(ADEL)			28/10/2019
Nitrate + Nitrite as N	0.003	<0.003 mg/L	
Nitrogen - Total TMZ-M06(ADEL)			24/10/2019
Nitrogen - Total		5.41 mg/L	
Phosphorus - Filterable Reactive as P T0108-01(ADEL)			28/10/2019
Phosphorus - Filterable Reactive as P	0.003	<0.003 mg/L	
Phosphorus - Total T0109-44(ADEL)			04/11/2019
Phosphorus - Total	0.005	0.178 mg/L	
Silica - Reactive T0111-01(ADEL)			04/11/2019
Silica - Reactive	0.05	2.89 mg/L	
TKN as N T0112-01(ADEL)			04/11/2019
TKN as Nitrogen	0.05	5.41 mg/L	

Organic Chemistry	LOR	Result	Test Start Date
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Analytical Results

Sampling Point	31515-EPA - Snipe Point
Sampled Date	23/10/2019 8:45:00AM
Sample Received Date	24/10/2019 11:31:17AM
Sample Analysis Completed	7/11/2019 2:36:28PM
Sample ID	2019-006-9932
Status	Endorsed
Collection Type	Customer Collected

Sample temperature at time of receipt 10.2°C

Dissolved Organic Carbon T0158-07(ADEL)			31/10/2019
Dissolved Organic Carbon	1	22.7 mg/L	
Total Organic Carbon T0158-07(ADEL)			31/10/2019
Total Organic Carbon	1	29.9 mg/L	

Inorganic Chemistry - Physical	LOR	Result	Test Start Date
<i>Sample temperature at time of receipt 10.2°C</i>			
Alkalinity Carbonate Bicarbonate and Hydroxide T0101-01(ADEL)			25/10/2019
Alkalinity as Calcium Carbonate		231 mg/L	
Bicarbonate		282 mg/L	
Carbonate		0 mg/L	
Hydroxide		0 mg/L	
Conductivity & Total Dissolved Solids T0016-01(ADEL)			25/10/2019
Conductivity	2	105000 µS/cm	
Total Dissolved Solids (by EC)	1	91000 mg/L	
pH T0010-01(ADEL)			25/10/2019
pH		8.1 pH units	
Temperature at which pH is measured		22.5 °C	
Turbidity T0018-01(ADEL)			28/10/2019
Turbidity	0.1	12 NTU	

Inorganic Chemistry - Waste Water	LOR	Result	Test Start Date
<i>Sample temperature at time of receipt 10.2°C</i>			
Suspended Solids T0160-01(ADEL)			31/10/2019
Suspended Solids	1.0	50 mg/L	
Volatile Suspended Solids T0160-01(ADEL)			31/10/2019
Fixed Solids	1	5 mg/L	
Volatile Suspended Solids	1	45 mg/L	



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Analytical Results

Sampling Point	31519-EPA - Morella Basin at Outlet Regulator
Sampled Date	23/10/2019 9:00:00AM
Sample Received Date	24/10/2019 11:32:28AM
Sample Analysis Completed	15/11/2019 2:27:42PM
Sample ID	*2019-006-9937
Status	Endorsed
Collection Type	Customer Collected

Biology Operations	LOR	Result	Test Start Date
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Sample temperature at time of receipt 10.2°C

Chlorophyll a & b T0380-02(ADEL) 24/10/2019

Chlorophyll a	0.1	59.5 µg/L
Chlorophyll b	0.1	4.27 µg/L
Chlorophyll comment		Chlorophyll a & b results are the sum of chlorophyll & their degradation by products (Phaeophytins)

Chlorophyll a & Phaeophytin a T0380-02(ADEL) 24/10/2019

Chlorophyll a	0.1	49.2 µg/L
Phaeophytin a	0.1	19.1 µg/L

Inorganic Chemistry - Nutrients	LOR	Result	Test Start Date
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Sample temperature at time of receipt 10.2°C

Ammonia as N T0100-01(ADEL) 06/11/2019

Ammonia as N	0.005	0.085 mg/L
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Chloride T0104-02(ADEL) 04/11/2019

Chloride	4.0	4090 mg/L
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Nitrate + Nitrite as N T0161-01(ADEL) 28/10/2019

Nitrate + Nitrite as N	0.003	<0.003 mg/L
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Nitrogen - Total TMZ-M06(ADEL) 24/10/2019

Nitrogen - Total		3.88 mg/L
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Phosphorus - Filterable Reactive as P T0108-01(ADEL) 28/10/2019

Phosphorus - Filterable Reactive as P	0.003	0.009 mg/L
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Phosphorus - Total T0109-44(ADEL) 04/11/2019

Phosphorus - Total	0.005	0.242 mg/L
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Silica - Reactive T0111-01(ADEL) 04/11/2019

Silica - Reactive	0.05	15.4 mg/L
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TKN as N T0112-01(ADEL) 04/11/2019

TKN as Nitrogen	0.05	3.88 mg/L
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Organic Chemistry	LOR	Result	Test Start Date
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Analytical Results

Sampling Point	31519-EPA - Morella Basin at Outlet Regulator
Sampled Date	23/10/2019 9:00:00AM
Sample Received Date	24/10/2019 11:32:28AM
Sample Analysis Completed	15/11/2019 2:27:42PM
Sample ID	*2019-006-9937
Status	Endorsed
Collection Type	Customer Collected

Sample temperature at time of receipt 10.2°C

Dissolved Organic Carbon T0158-07(ADEL) 31/10/2019

Dissolved Organic Carbon	1	23.0 mg/L
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Total Organic Carbon T0158-07(ADEL) 31/10/2019

Total Organic Carbon	1	29.0 mg/L
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Inorganic Chemistry - Physical LOR Result Test Start Date

Sample temperature at time of receipt 10.2°C

Alkalinity Carbonate Bicarbonate and Hydroxide T0101-01(ADEL) 25/10/2019

Alkalinity as Calcium Carbonate	395 mg/L
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Bicarbonate	443 mg/L
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Carbonate	19 mg/L
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Hydroxide	0 mg/L
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Conductivity & Total Dissolved Solids T0016-01(ADEL) 25/10/2019

Conductivity	2	12100 µS/cm
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Total Dissolved Solids (by EC)	1	7110 mg/L
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pH T0010-01(ADEL) 25/10/2019

pH	8.5 pH units
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Temperature at which pH is measured	22.4 °C
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Turbidity T0018-01(ADEL) 30/10/2019

Turbidity	0.1	9.0 NTU
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Inorganic Chemistry - Waste Water LOR Result Test Start Date

Sample temperature at time of receipt 10.2°C

Suspended Solids T0160-01(ADEL) 30/10/2019

Suspended Solids	1.0	13 mg/L
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Volatile Suspended Solids T0160-01(ADEL) 30/10/2019

Fixed Solids	1	<1 mg/L
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Volatile Suspended Solids	1	13 mg/L
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Analytical Results

Sampling Point	31516-EPA - Seagull Island
Sampled Date	23/10/2019 9:05:00AM
Sample Received Date	24/10/2019 11:31:36AM
Sample Analysis Completed	15/11/2019 2:27:42PM
Sample ID	2019-006-9930
Status	Endorsed
Collection Type	Customer Collected

Biology Operations	LOR	Result	Test Start Date
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Sample temperature at time of receipt 10.2°C

Chlorophyll a & b T0380-02(ADEL) 24/10/2019

Chlorophyll a	0.1	51.2 µg/L
Chlorophyll b	0.1	7.76 µg/L
Chlorophyll comment		Chlorophyll a & b results are the sum of chlorophyll & their degradation by products (Phaeophytins)

Chlorophyll a & Phaeophytin a T0380-02(ADEL) 24/10/2019

Chlorophyll a	0.1	46.0 µg/L
Phaeophytin a	0.1	11.7 µg/L

Inorganic Chemistry - Nutrients	LOR	Result	Test Start Date
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Sample temperature at time of receipt 10.2°C

Ammonia as N T0100-01(ADEL) 06/11/2019

Ammonia as N	0.005	<0.005 mg/L
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Chloride T0104-02(ADEL) 04/11/2019

Chloride	4.0	42100 mg/L
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Nitrate + Nitrite as N T0161-01(ADEL) 28/10/2019

Nitrate + Nitrite as N	0.003	<0.003 mg/L
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Nitrogen - Total TMZ-M06(ADEL) 24/10/2019

Nitrogen - Total		5.08 mg/L
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Phosphorus - Filterable Reactive as P T0108-01(ADEL) 28/10/2019

Phosphorus - Filterable Reactive as P	0.003	<0.003 mg/L
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Phosphorus - Total T0109-44(ADEL) 04/11/2019

Phosphorus - Total	0.005	0.168 mg/L
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Silica - Reactive T0111-01(ADEL) 04/11/2019

Silica - Reactive	0.05	2.49 mg/L
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TKN as N T0112-01(ADEL) 04/11/2019

TKN as Nitrogen	0.05	5.08 mg/L
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Organic Chemistry	LOR	Result	Test Start Date
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Analytical Results

Sampling Point	31516-EPA - Seagull Island
Sampled Date	23/10/2019 9:05:00AM
Sample Received Date	24/10/2019 11:31:36AM
Sample Analysis Completed	15/11/2019 2:27:42PM
Sample ID	2019-006-9930
Status	Endorsed
Collection Type	Customer Collected

Sample temperature at time of receipt 10.2°C

Dissolved Organic Carbon T0158-07(ADEL) 31/10/2019

Dissolved Organic Carbon	1	21.4 mg/L
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Total Organic Carbon T0158-07(ADEL) 31/10/2019

Total Organic Carbon	1	29.5 mg/L
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Inorganic Chemistry - Physical	LOR	Result	Test Start Date
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Sample temperature at time of receipt 10.2°C

Alkalinity Carbonate Bicarbonate and Hydroxide T0101-01(ADEL) 25/10/2019

Alkalinity as Calcium Carbonate	235 mg/L
Bicarbonate	287 mg/L
Carbonate	0 mg/L
Hydroxide	0 mg/L

Conductivity & Total Dissolved Solids T0016-01(ADEL) 25/10/2019

Conductivity	2	104000 µS/cm
Total Dissolved Solids (by EC)	1	89800 mg/L

pH T0010-01(ADEL) 25/10/2019

pH	8.2 pH units
Temperature at which pH is measured	22.4 °C

Turbidity T0018-01(ADEL) 28/10/2019

Turbidity	0.1	12 NTU
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Inorganic Chemistry - Waste Water	LOR	Result	Test Start Date
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Sample temperature at time of receipt 10.2°C

Suspended Solids T0160-01(ADEL) 30/10/2019

Suspended Solids	1.0	43 mg/L
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Volatile Suspended Solids T0160-01(ADEL) 30/10/2019

Fixed Solids	1	7 mg/L
Volatile Suspended Solids	1	36 mg/L



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Analytical Results

Sampling Point	300711-Tilley Swamp Drain U/S Morella
Sampled Date	23/10/2019 9:20:00AM
Sample Received Date	24/10/2019 11:29:14AM
Sample Analysis Completed	15/11/2019 2:27:42PM
Sample ID	2019-006-9938
Status	Endorsed
Collection Type	Customer Collected

Biology Operations	LOR	Result	Test Start Date
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Sample temperature at time of receipt 10.2°C

Chlorophyll a & b T0380-02(ADEL) 24/10/2019

Chlorophyll a	0.1	1.97 µg/L
Chlorophyll b	0.1	<0.1 µg/L
Chlorophyll comment		Chlorophyll a & b results are the sum of chlorophyll & their degradation by products (Phaeophytins)

Chlorophyll a & Phaeophytin a T0380-02(ADEL) 24/10/2019

Chlorophyll a	0.1	1.72 µg/L
Phaeophytin a	0.1	0.44 µg/L

Inorganic Chemistry - Nutrients	LOR	Result	Test Start Date
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Sample temperature at time of receipt 10.2°C

Ammonia as N T0100-01(ADEL) 06/11/2019

Ammonia as N	0.005	0.054 mg/L
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Chloride T0104-02(ADEL) 04/11/2019

Chloride	4.0	4780 mg/L
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Nitrate + Nitrite as N T0161-01(ADEL) 28/10/2019

Nitrate + Nitrite as N	0.003	0.010 mg/L
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Nitrogen - Total TMZ-M06(ADEL) 24/10/2019

Nitrogen - Total		0.78 mg/L
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Phosphorus - Filterable Reactive as P T0108-01(ADEL) 28/10/2019

Phosphorus - Filterable Reactive as P	0.003	0.005 mg/L
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Phosphorus - Total T0109-44(ADEL) 04/11/2019

Phosphorus - Total	0.005	0.024 mg/L
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Silica - Reactive T0111-01(ADEL) 04/11/2019

Silica - Reactive	0.05	2.99 mg/L
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TKN as N T0112-01(ADEL) 04/11/2019

TKN as Nitrogen	0.05	0.77 mg/L
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Organic Chemistry	LOR	Result	Test Start Date
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Analytical Results

Sampling Point	300711-Tilley Swamp Drain U/S Morella
Sampled Date	23/10/2019 9:20:00AM
Sample Received Date	24/10/2019 11:29:14AM
Sample Analysis Completed	15/11/2019 2:27:42PM
Sample ID	2019-006-9938
Status	Endorsed
Collection Type	Customer Collected

Sample temperature at time of receipt 10.2°C

Dissolved Organic Carbon T0158-07(ADEL)			31/10/2019
Dissolved Organic Carbon	1	7.4 mg/L	
Total Organic Carbon T0158-07(ADEL)			31/10/2019
Total Organic Carbon	1	7.5 mg/L	

Inorganic Chemistry - Physical	LOR	Result	Test Start Date
Sample temperature at time of receipt 10.2°C			
Alkalinity Carbonate Bicarbonate and Hydroxide T0101-01(ADEL)			25/10/2019
Alkalinity as Calcium Carbonate		392 mg/L	
Bicarbonate		437 mg/L	
Carbonate		20 mg/L	
Hydroxide		0 mg/L	
Conductivity & Total Dissolved Solids T0016-01(ADEL)			25/10/2019
Conductivity	2	14200 µS/cm	
Total Dissolved Solids (by EC)	1	8440 mg/L	
pH T0010-01(ADEL)			25/10/2019
pH		8.5 pH units	
Temperature at which pH is measured		22.6 °C	
Turbidity T0018-01(ADEL)			28/10/2019
Turbidity	0.1	1.8 NTU	

Inorganic Chemistry - Waste Water	LOR	Result	Test Start Date
Sample temperature at time of receipt 10.2°C			
Suspended Solids T0160-01(ADEL)			30/10/2019
Suspended Solids	1.0	6 mg/L	
Volatile Suspended Solids T0160-01(ADEL)			30/10/2019
Fixed Solids	1	3 mg/L	
Volatile Suspended Solids	1	3 mg/L	



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Analytical Results

Sampling Point	31526-EPA - Nth Jack Point
Sampled Date	23/10/2019 9:40:00AM
Sample Received Date	24/10/2019 11:33:20AM
Sample Analysis Completed	15/11/2019 2:27:42PM
Sample ID	2019-006-9537
Status	Endorsed
Collection Type	Customer Collected

Biology Operations	LOR	Result	Test Start Date
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Sample temperature at time of receipt 10.2°C

Chlorophyll a & b T0380-02(ADEL) 24/10/2019

Chlorophyll a	0.1	45.1 µg/L
Chlorophyll b	0.1	6.63 µg/L
Chlorophyll comment		Chlorophyll a & b results are the sum of chlorophyll & their degradation by products (Phaeophytins)

Chlorophyll a & Phaeophytin a T0380-02(ADEL) 24/10/2019

Chlorophyll a	0.1	43.1 µg/L
Phaeophytin a	0.1	5.86 µg/L

Inorganic Chemistry - Nutrients	LOR	Result	Test Start Date
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Sample temperature at time of receipt 10.2°C

Ammonia as N T0100-01(ADEL) 06/11/2019

Ammonia as N	0.005	<0.005 mg/L
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Chloride T0104-02(ADEL) 04/11/2019

Chloride	4.0	49600 mg/L
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Nitrate + Nitrite as N T0161-01(ADEL) 28/10/2019

Nitrate + Nitrite as N	0.003	<0.003 mg/L
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Nitrogen - Total TMZ-M06(ADEL) 24/10/2019

Nitrogen - Total		4.84 mg/L
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Phosphorus - Filterable Reactive as P T0108-01(ADEL) 28/10/2019

Phosphorus - Filterable Reactive as P	0.003	<0.003 mg/L
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Phosphorus - Total T0109-44(ADEL) 04/11/2019

Phosphorus - Total	0.005	0.200 mg/L
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Silica - Reactive T0111-01(ADEL) 04/11/2019

Silica - Reactive	0.05	1.05 mg/L
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TKN as N T0112-01(ADEL) 04/11/2019

TKN as Nitrogen	0.05	4.84 mg/L
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Organic Chemistry	LOR	Result	Test Start Date
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Analytical Results

Sampling Point	31526-EPA - Nth Jack Point
Sampled Date	23/10/2019 9:40:00AM
Sample Received Date	24/10/2019 11:33:20AM
Sample Analysis Completed	15/11/2019 2:27:42PM
Sample ID	2019-006-9537
Status	Endorsed
Collection Type	Customer Collected

Sample temperature at time of receipt 10.2°C

Dissolved Organic Carbon T0158-07(ADEL) 31/10/2019

Dissolved Organic Carbon	1	22.0 mg/L
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Total Organic Carbon T0158-07(ADEL) 31/10/2019

Total Organic Carbon	1	29.2 mg/L
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Inorganic Chemistry - Physical	LOR	Result	Test Start Date
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Sample temperature at time of receipt 10.2°C

Alkalinity Carbonate Bicarbonate and Hydroxide T0101-01(ADEL) 25/10/2019

Alkalinity as Calcium Carbonate	232 mg/L
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Bicarbonate	283 mg/L
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Carbonate	0 mg/L
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Hydroxide	0 mg/L
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Conductivity & Total Dissolved Solids T0016-01(ADEL) 25/10/2019

Conductivity	2	101000 µS/cm
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Total Dissolved Solids (by EC)	1	86300 mg/L
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pH T0010-01(ADEL) 25/10/2019

pH	8.2 pH units
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Temperature at which pH is measured	22.3 °C
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Turbidity T0018-01(ADEL) 28/10/2019

Turbidity	0.1	14 NTU
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Inorganic Chemistry - Waste Water	LOR	Result	Test Start Date
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Sample temperature at time of receipt 10.2°C

Suspended Solids T0160-01(ADEL) 30/10/2019

Suspended Solids	1.0	30 mg/L
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Volatile Suspended Solids T0160-01(ADEL) 30/10/2019

Fixed Solids	1	<1 mg/L
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Volatile Suspended Solids	1	30 mg/L
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Analytical Results

Sampling Point	300713-Tilley Swamp Drain D/S Northern Outlet
Sampled Date	23/10/2019 9:40:00AM
Sample Received Date	24/10/2019 11:29:48AM
Sample Analysis Completed	15/11/2019 2:27:42PM
Sample ID	2019-006-9939
Status	Endorsed
Collection Type	Customer Collected

Biology Operations	LOR	Result	Test Start Date
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Sample temperature at time of receipt 10.2°C

Chlorophyll a & b T0380-02(ADEL) 24/10/2019

Chlorophyll a	0.1	1.74 µg/L
Chlorophyll b	0.1	0.28 µg/L
Chlorophyll comment		Chlorophyll a & b results are the sum of chlorophyll & their degradation by products (Phaeophytins)

Chlorophyll a & Phaeophytin a T0380-02(ADEL) 24/10/2019

Chlorophyll a	0.1	1.48 µg/L
Phaeophytin a	0.1	0.54 µg/L

Inorganic Chemistry - Nutrients	LOR	Result	Test Start Date
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Sample temperature at time of receipt 10.2°C

Ammonia as N T0100-01(ADEL) 06/11/2019

Ammonia as N	0.005	0.036 mg/L
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Chloride T0104-02(ADEL) 04/11/2019

Chloride	4.0	4420 mg/L
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Nitrate + Nitrite as N T0161-01(ADEL) 28/10/2019

Nitrate + Nitrite as N	0.003	0.156 mg/L
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Nitrogen - Total TMZ-M06(ADEL) 24/10/2019

Nitrogen - Total		1.22 mg/L
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Phosphorus - Filterable Reactive as P T0108-01(ADEL) 28/10/2019

Phosphorus - Filterable Reactive as P	0.003	0.008 mg/L
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Phosphorus - Total T0109-44(ADEL) 28/10/2019

Phosphorus - Total	0.005	0.077 mg/L
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Silica - Reactive T0111-01(ADEL) 04/11/2019

Silica - Reactive	0.05	7.80 mg/L
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TKN as N T0112-01(ADEL) 28/10/2019

TKN as Nitrogen	0.05	1.06 mg/L
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Organic Chemistry	LOR	Result	Test Start Date
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Analytical Results

Sampling Point	300713-Tilley Swamp Drain D/S Northern Outlet
Sampled Date	23/10/2019 9:40:00AM
Sample Received Date	24/10/2019 11:29:48AM
Sample Analysis Completed	15/11/2019 2:27:42PM
Sample ID	2019-006-9939
Status	Endorsed
Collection Type	Customer Collected

Sample temperature at time of receipt 10.2°C

Dissolved Organic Carbon T0158-07(ADEL) 31/10/2019

Dissolved Organic Carbon	1	6.0 mg/L
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Total Organic Carbon T0158-07(ADEL) 31/10/2019

Total Organic Carbon	1	6.2 mg/L
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Inorganic Chemistry - Physical	LOR	Result	Test Start Date
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Sample temperature at time of receipt 10.2°C

Alkalinity Carbonate Bicarbonate and Hydroxide T0101-01(ADEL) 25/10/2019

Alkalinity as Calcium Carbonate	422 mg/L
Bicarbonate	500 mg/L
Carbonate	7 mg/L
Hydroxide	0 mg/L

Conductivity & Total Dissolved Solids T0016-01(ADEL) 25/10/2019

Conductivity	2	13500 µS/cm
Total Dissolved Solids (by EC)	1	7990 mg/L

pH T0010-01(ADEL) 25/10/2019

pH	8.4 pH units
Temperature at which pH is measured	22.5 °C

Turbidity T0018-01(ADEL) 28/10/2019

Turbidity	0.1	1.6 NTU
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Inorganic Chemistry - Waste Water	LOR	Result	Test Start Date
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Sample temperature at time of receipt 10.2°C

Suspended Solids T0160-01(ADEL) 30/10/2019

Suspended Solids	1.0	2 mg/L
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Volatile Suspended Solids T0160-01(ADEL) 30/10/2019

Fixed Solids	1	1 mg/L
Volatile Suspended Solids	1	1 mg/L



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Analytical Results

Sampling Point	300712-Tilley Swamp Watercourse Outlet Channel
Sampled Date	23/10/2019 9:50:00AM
Sample Received Date	24/10/2019 11:29:31AM
Sample Analysis Completed	7/11/2019 3:02:04PM
Sample ID	2019-006-9941
Status	Endorsed
Collection Type	Customer Collected

Biology Operations	LOR	Result	Test Start Date
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Sample temperature at time of receipt 10.2°C

Chlorophyll a & b T0380-02(ADEL) 24/10/2019

Chlorophyll a	0.1	56.5 µg/L
Chlorophyll b	0.1	19.1 µg/L
Chlorophyll comment		Chlorophyll a & b results are the sum of chlorophyll & their degradation by products (Phaeophytins)

Chlorophyll a & Phaeophytin a T0380-02(ADEL) 24/10/2019

Chlorophyll a	0.1	44.7 µg/L
Phaeophytin a	0.1	27.2 µg/L

Inorganic Chemistry - Nutrients	LOR	Result	Test Start Date
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Sample temperature at time of receipt 10.2°C

Ammonia as N T0100-01(ADEL) 06/11/2019

Ammonia as N	0.005	0.014 mg/L
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Chloride T0104-02(ADEL) 04/11/2019

Chloride	4.0	3910 mg/L
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Nitrate + Nitrite as N T0161-01(ADEL) 28/10/2019

Nitrate + Nitrite as N	0.003	<0.003 mg/L
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Nitrogen - Total TMZ-M06(ADEL) 24/10/2019

Nitrogen - Total		0.64 mg/L
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Phosphorus - Filterable Reactive as P T0108-01(ADEL) 28/10/2019

Phosphorus - Filterable Reactive as P	0.003	<0.003 mg/L
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Phosphorus - Total T0109-44(ADEL) 28/10/2019

Phosphorus - Total	0.005	0.015 mg/L
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Silica - Reactive T0111-01(ADEL) 04/11/2019

Silica - Reactive	0.05	0.65 mg/L
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TKN as N T0112-01(ADEL) 28/10/2019

TKN as Nitrogen	0.05	0.64 mg/L
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Organic Chemistry	LOR	Result	Test Start Date
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Analytical Results

Sampling Point	300712-Tilley Swamp Watercourse Outlet Channel
Sampled Date	23/10/2019 9:50:00AM
Sample Received Date	24/10/2019 11:29:31AM
Sample Analysis Completed	7/11/2019 3:02:04PM
Sample ID	2019-006-9941
Status	Endorsed
Collection Type	Customer Collected

Sample temperature at time of receipt 10.2°C

Dissolved Organic Carbon T0158-07(ADEL) 31/10/2019

Dissolved Organic Carbon	1	39.6 mg/L
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Total Organic Carbon T0158-07(ADEL) 31/10/2019

Total Organic Carbon	1	50.1 mg/L
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Inorganic Chemistry - Physical LOR Result Test Start Date

Sample temperature at time of receipt 10.2°C

Alkalinity Carbonate Bicarbonate and Hydroxide T0101-01(ADEL) 25/10/2019

Alkalinity as Calcium Carbonate	488 mg/L
Bicarbonate	524 mg/L
Carbonate	35 mg/L
Hydroxide	0 mg/L

Conductivity & Total Dissolved Solids T0016-01(ADEL) 25/10/2019

Conductivity	2	11700 µS/cm
Total Dissolved Solids (by EC)	1	6870 mg/L

pH T0010-01(ADEL) 25/10/2019

pH	8.6 pH units
Temperature at which pH is measured	22.7 °C

Turbidity T0018-01(ADEL) 28/10/2019

Turbidity	0.1	6.7 NTU
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Inorganic Chemistry - Waste Water LOR Result Test Start Date

Sample temperature at time of receipt 10.2°C

Suspended Solids T0160-01(ADEL) 31/10/2019

Suspended Solids	1.0	20 mg/L
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Volatile Suspended Solids T0160-01(ADEL) 31/10/2019

Fixed Solids	1	5 mg/L
Volatile Suspended Solids	1	15 mg/L



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Analytical Results

Sampling Point	31514-EPA - Stoney Well
Sampled Date	23/10/2019 10:30:00AM
Sample Received Date	24/10/2019 11:31:00AM
Sample Analysis Completed	15/11/2019 2:27:42PM
Sample ID	2019-006-9934
Status	Endorsed
Collection Type	Customer Collected

Biology Operations	LOR	Result	Test Start Date
Sample temperature at time of receipt 10.2°C			
Chlorophyll a & b T0380-02(ADEL)			24/10/2019
Chlorophyll a	0.1	45.9 µg/L	
Chlorophyll b	0.1	7.31 µg/L	
Chlorophyll comment		Chlorophyll a & b results are the sum of chlorophyll & their degradation by products (Phaeophytins)	
Chlorophyll a & Phaeophytin a T0380-02(ADEL)			24/10/2019
Chlorophyll a	0.1	40.2 µg/L	
Phaeophytin a	0.1	12.4 µg/L	

Inorganic Chemistry - Nutrients	LOR	Result	Test Start Date
Sample temperature at time of receipt 10.2°C			
Ammonia as N T0100-01(ADEL)			06/11/2019
Ammonia as N	0.005	<0.005 mg/L	
Chloride T0104-02(ADEL)			04/11/2019
Chloride	4.0	41300 mg/L	
Nitrate + Nitrite as N T0161-01(ADEL)			28/10/2019
Nitrate + Nitrite as N	0.003	<0.003 mg/L	
Nitrogen - Total TMZ-M06(ADEL)			24/10/2019
Nitrogen - Total		4.62 mg/L	
Phosphorus - Filterable Reactive as P T0108-01(ADEL)			28/10/2019
Phosphorus - Filterable Reactive as P	0.003	<0.003 mg/L	
Phosphorus - Total T0109-44(ADEL)			04/11/2019
Phosphorus - Total	0.005	0.181 mg/L	
Silica - Reactive T0111-01(ADEL)			04/11/2019
Silica - Reactive	0.05	0.51 mg/L	
TKN as N T0112-01(ADEL)			04/11/2019
TKN as Nitrogen	0.05	4.62 mg/L	

Organic Chemistry	LOR	Result	Test Start Date
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Analytical Results

Sampling Point	31514-EPA - Stoney Well
Sampled Date	23/10/2019 10:30:00AM
Sample Received Date	24/10/2019 11:31:00AM
Sample Analysis Completed	15/11/2019 2:27:42PM
Sample ID	2019-006-9934
Status	Endorsed
Collection Type	Customer Collected

Sample temperature at time of receipt 10.2°C

Dissolved Organic Carbon T0158-07(ADEL)			31/10/2019
Dissolved Organic Carbon	1	21.7 mg/L	
Total Organic Carbon T0158-07(ADEL)			31/10/2019
Total Organic Carbon	1	28.2 mg/L	

Inorganic Chemistry - Physical	LOR	Result	Test Start Date
<i>Sample temperature at time of receipt 10.2°C</i>			
Alkalinity Carbonate Bicarbonate and Hydroxide T0101-01(ADEL)			25/10/2019
Alkalinity as Calcium Carbonate		225 mg/L	
Bicarbonate		274 mg/L	
Carbonate		0 mg/L	
Hydroxide		0 mg/L	
Conductivity & Total Dissolved Solids T0016-01(ADEL)			25/10/2019
Conductivity	2	101000 µS/cm	
Total Dissolved Solids (by EC)	1	86300 mg/L	
pH T0010-01(ADEL)			25/10/2019
pH		8.2 pH units	
Temperature at which pH is measured		22.3 °C	
Turbidity T0018-01(ADEL)			28/10/2019
Turbidity	0.1	16 NTU	

Inorganic Chemistry - Waste Water	LOR	Result	Test Start Date
<i>Sample temperature at time of receipt 10.2°C</i>			
Suspended Solids T0160-01(ADEL)			30/10/2019
Suspended Solids	1.0	29 mg/L	
Volatile Suspended Solids T0160-01(ADEL)			30/10/2019
Fixed Solids	1	<1 mg/L	
Volatile Suspended Solids	1	29 mg/L	



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Analytical Results

Sampling Point	31513-EPA - Parnka Point Boat Ramp
Sampled Date	23/10/2019 11:00:00AM
Sample Received Date	24/10/2019 11:30:42AM
Sample Analysis Completed	15/11/2019 2:27:42PM
Sample ID	2019-006-9936
Status	Endorsed
Collection Type	Customer Collected

Biology Operations	LOR	Result	Test Start Date
Sample temperature at time of receipt 10.2°C			
Chlorophyll a & b T0380-02(ADEL)			24/10/2019
Chlorophyll a	0.1	23.2 µg/L	
Chlorophyll b	0.1	2.50 µg/L	
Chlorophyll comment		Chlorophyll a & b results are the sum of chlorophyll & their degradation by products (Phaeophytins)	
Chlorophyll a & Phaeophytin a T0380-02(ADEL)			24/10/2019
Chlorophyll a	0.1	21.5 µg/L	
Phaeophytin a	0.1	3.80 µg/L	
Inorganic Chemistry - Nutrients			
	LOR	Result	Test Start Date
Sample temperature at time of receipt 10.2°C			
Ammonia as N T0100-01(ADEL)			06/11/2019
Ammonia as N	0.005	<0.005 mg/L	
Chloride T0104-02(ADEL)			04/11/2019
Chloride	4.0	36700 mg/L	
Nitrate + Nitrite as N T0161-01(ADEL)			28/10/2019
Nitrate + Nitrite as N	0.003	<0.003 mg/L	
Nitrogen - Total TMZ-M06(ADEL)			24/10/2019
Nitrogen - Total		3.96 mg/L	
Phosphorus - Filterable Reactive as P T0108-01(ADEL)			28/10/2019
Phosphorus - Filterable Reactive as P	0.003	0.004 mg/L	
Phosphorus - Total T0109-44(ADEL)			04/11/2019
Phosphorus - Total	0.005	0.200 mg/L	
Silica - Reactive T0111-01(ADEL)			04/11/2019
Silica - Reactive	0.05	1.07 mg/L	
TKN as N T0112-01(ADEL)			04/11/2019
TKN as Nitrogen	0.05	3.96 mg/L	
Organic Chemistry	LOR	Result	Test Start Date



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Analytical Results

Sampling Point	31513-EPA - Parnka Point Boat Ramp
Sampled Date	23/10/2019 11:00:00AM
Sample Received Date	24/10/2019 11:30:42AM
Sample Analysis Completed	15/11/2019 2:27:42PM
Sample ID	2019-006-9936
Status	Endorsed
Collection Type	Customer Collected

Sample temperature at time of receipt 10.2°C

Dissolved Organic Carbon T0158-07(ADEL) 31/10/2019

Dissolved Organic Carbon	1	19.1 mg/L
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Total Organic Carbon T0158-07(ADEL) 31/10/2019

Total Organic Carbon	1	22.3 mg/L
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Inorganic Chemistry - Physical	LOR	Result	Test Start Date
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Sample temperature at time of receipt 10.2°C

Alkalinity Carbonate Bicarbonate and Hydroxide T0101-01(ADEL) 25/10/2019

Alkalinity as Calcium Carbonate	220 mg/L
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Bicarbonate	268 mg/L
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Carbonate	0 mg/L
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Hydroxide	0 mg/L
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Conductivity & Total Dissolved Solids T0016-01(ADEL) 25/10/2019

Conductivity	2	94800 µS/cm
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Total Dissolved Solids (by EC)	1	79300 mg/L
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pH T0010-01(ADEL) 25/10/2019

pH	8.3 pH units
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Temperature at which pH is measured	22.4 °C
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Turbidity T0018-01(ADEL) 28/10/2019

Turbidity	0.1	15 NTU
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Inorganic Chemistry - Waste Water	LOR	Result	Test Start Date
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Sample temperature at time of receipt 10.2°C

Suspended Solids T0160-01(ADEL) 30/10/2019

Suspended Solids	1.0	30 mg/L
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Volatile Suspended Solids T0160-01(ADEL) 30/10/2019

Fixed Solids	1	8 mg/L
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Volatile Suspended Solids	1	22 mg/L
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Analytical Results

Sampling Point	31512-EPA - McGrath Flat North
Sampled Date	23/10/2019 12:15:00PM
Sample Received Date	24/10/2019 11:30:24AM
Sample Analysis Completed	15/11/2019 2:27:42PM
Sample ID	2019-006-9935
Status	Endorsed
Collection Type	Customer Collected

Biology Operations	LOR	Result	Test Start Date
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Sample temperature at time of receipt 10.2°C

Chlorophyll a & b T0380-02(ADEL) 24/10/2019

Chlorophyll a	0.1	15.7 µg/L
Chlorophyll b	0.1	0.99 µg/L
Chlorophyll comment		Chlorophyll a & b results are the sum of chlorophyll & their degradation by products (Phaeophytins)

Chlorophyll a & Phaeophytin a T0380-02(ADEL) 24/10/2019

Chlorophyll a	0.1	14.8 µg/L
Phaeophytin a	0.1	1.93 µg/L

Inorganic Chemistry - Nutrients	LOR	Result	Test Start Date
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Sample temperature at time of receipt 10.2°C

Ammonia as N T0100-01(ADEL) 06/11/2019

Ammonia as N	0.005	<0.005 mg/L
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Chloride T0104-02(ADEL) 04/11/2019

Chloride	4.0	36300 mg/L
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Nitrate + Nitrite as N T0161-01(ADEL) 28/10/2019

Nitrate + Nitrite as N	0.003	<0.003 mg/L
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Nitrogen - Total TMZ-M06(ADEL) 24/10/2019

Nitrogen - Total		3.98 mg/L
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Phosphorus - Filterable Reactive as P T0108-01(ADEL) 28/10/2019

Phosphorus - Filterable Reactive as P	0.003	0.003 mg/L
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Phosphorus - Total T0109-44(ADEL) 04/11/2019

Phosphorus - Total	0.005	0.203 mg/L
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Silica - Reactive T0111-01(ADEL) 04/11/2019

Silica - Reactive	0.05	0.74 mg/L
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TKN as N T0112-01(ADEL) 04/11/2019

TKN as Nitrogen	0.05	3.98 mg/L
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Organic Chemistry	LOR	Result	Test Start Date
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Analytical Results

Sampling Point	31512-EPA - McGrath Flat North
Sampled Date	23/10/2019 12:15:00PM
Sample Received Date	24/10/2019 11:30:24AM
Sample Analysis Completed	15/11/2019 2:27:42PM
Sample ID	2019-006-9935
Status	Endorsed
Collection Type	Customer Collected

Sample temperature at time of receipt 10.2°C

Dissolved Organic Carbon T0158-07(ADEL) 31/10/2019

Dissolved Organic Carbon	1	18.3 mg/L
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Total Organic Carbon T0158-07(ADEL) 31/10/2019

Total Organic Carbon	1	21.1 mg/L
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Inorganic Chemistry - Physical	LOR	Result	Test Start Date
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Sample temperature at time of receipt 10.2°C

Alkalinity Carbonate Bicarbonate and Hydroxide T0101-01(ADEL) 25/10/2019

Alkalinity as Calcium Carbonate	222 mg/L
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Bicarbonate	271 mg/L
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Carbonate	0 mg/L
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Hydroxide	0 mg/L
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Conductivity & Total Dissolved Solids T0016-01(ADEL) 25/10/2019

Conductivity	2	91000 µS/cm
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Total Dissolved Solids (by EC)	1	75000 mg/L
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pH T0010-01(ADEL) 25/10/2019

pH	8.3 pH units
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Temperature at which pH is measured	22.5 °C
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Turbidity T0018-01(ADEL) 28/10/2019

Turbidity	0.1	15 NTU
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Inorganic Chemistry - Waste Water	LOR	Result	Test Start Date
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Sample temperature at time of receipt 10.2°C

Suspended Solids T0160-01(ADEL) 30/10/2019

Suspended Solids	1.0	40 mg/L
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Volatile Suspended Solids T0160-01(ADEL) 30/10/2019

Fixed Solids	1	12 mg/L
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Volatile Suspended Solids	1	28 mg/L
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Analytical Results

Sampling Point	31523-EPA - Long Point
Sampled Date	23/10/2019 2:10:00PM
Sample Received Date	24/10/2019 11:32:45AM
Sample Analysis Completed	15/11/2019 2:27:42PM
Sample ID	2019-006-9536
Status	Endorsed
Collection Type	Customer Collected

Biology Operations	LOR	Result	Test Start Date
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Sample temperature at time of receipt 10.2°C

Chlorophyll a & b T0380-02(ADEL) 24/10/2019

Chlorophyll a	0.1	7.61 µg/L
Chlorophyll b	0.1	<0.1 µg/L
Chlorophyll comment		Chlorophyll a & b results are the sum of chlorophyll & their degradation by products (Phaeophytins)

Chlorophyll a & Phaeophytin a T0380-02(ADEL) 24/10/2019

Chlorophyll a	0.1	7.13 µg/L
Phaeophytin a	0.1	0.62 µg/L

Inorganic Chemistry - Nutrients	LOR	Result	Test Start Date
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Sample temperature at time of receipt 10.2°C

Ammonia as N T0100-01(ADEL) 06/11/2019

Ammonia as N	0.005	0.012 mg/L
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Chloride T0104-02(ADEL) 04/11/2019

Chloride	4.0	11900 mg/L
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Nitrate + Nitrite as N T0161-01(ADEL) 28/10/2019

Nitrate + Nitrite as N	0.003	0.012 mg/L
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Nitrogen - Total TMZ-M06(ADEL) 24/10/2019

Nitrogen - Total		1.47 mg/L
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Phosphorus - Filterable Reactive as P T0108-01(ADEL) 28/10/2019

Phosphorus - Filterable Reactive as P	0.003	0.003 mg/L
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Phosphorus - Total T0109-44(ADEL) 04/11/2019

Phosphorus - Total	0.005	0.075 mg/L
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Silica - Reactive T0111-01(ADEL) 04/11/2019

Silica - Reactive	0.05	0.15 mg/L
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TKN as N T0112-01(ADEL) 04/11/2019

TKN as Nitrogen	0.05	1.46 mg/L
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Organic Chemistry	LOR	Result	Test Start Date
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Analytical Results

Sampling Point	31523-EPA - Long Point
Sampled Date	23/10/2019 2:10:00PM
Sample Received Date	24/10/2019 11:32:45AM
Sample Analysis Completed	15/11/2019 2:27:42PM
Sample ID	2019-006-9536
Status	Endorsed
Collection Type	Customer Collected

Sample temperature at time of receipt 10.2°C

Dissolved Organic Carbon T0158-07(ADEL)			31/10/2019
Dissolved Organic Carbon	1	10.7 mg/L	
Total Organic Carbon T0158-07(ADEL)			31/10/2019
Total Organic Carbon	1	11.7 mg/L	

Inorganic Chemistry - Physical	LOR	Result	Test Start Date
<i>Sample temperature at time of receipt 10.2°C</i>			
Alkalinity Carbonate Bicarbonate and Hydroxide T0101-01(ADEL)			25/10/2019
Alkalinity as Calcium Carbonate		145 mg/L	
Bicarbonate		176 mg/L	
Carbonate		0 mg/L	
Hydroxide		0 mg/L	
Conductivity & Total Dissolved Solids T0016-01(ADEL)			25/10/2019
Conductivity	2	36500 µS/cm	
Total Dissolved Solids (by EC)	1	24100 mg/L	
pH T0010-01(ADEL)			25/10/2019
pH		8.3 pH units	
Temperature at which pH is measured		22.6 °C	
Turbidity T0018-01(ADEL)			28/10/2019
Turbidity	0.1	3.8 NTU	

Inorganic Chemistry - Waste Water	LOR	Result	Test Start Date
<i>Sample temperature at time of receipt 10.2°C</i>			
Suspended Solids T0160-01(ADEL)			31/10/2019
Suspended Solids	1.0	10 mg/L	
Volatile Suspended Solids T0160-01(ADEL)			31/10/2019
Fixed Solids	1	<1 mg/L	
Volatile Suspended Solids	1	10 mg/L	



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Analytical Results

Sampling Point	31518-EPA - 12 South Salt Creek
Sampled Date	23/10/2019 2:45:00PM
Sample Received Date	24/10/2019 11:29:09AM
Sample Analysis Completed	15/11/2019 2:27:42PM
Sample ID	2019-006-9538-03
Status	Endorsed
Collection Type	Customer Collected

Biology Operations	LOR	Result	Test Start Date
Sample temperature at time of receipt 10.2°C			
Chlorophyll a & b T0380-02(ADEL)			
Chlorophyll a	0.1	55.9 µg/L	
Chlorophyll b	0.1	8.78 µg/L	
Chlorophyll comment		Chlorophyll a & b results are the sum of chlorophyll & their degradation by products (Phaeophytins)	
Chlorophyll a & Phaeophytin a T0380-02(ADEL)			
Chlorophyll a	0.1	53.8 µg/L	
Phaeophytin a	0.1	6.79 µg/L	

Inorganic Chemistry - Nutrients	LOR	Result	Test Start Date
Sample temperature at time of receipt 10.2°C			
Ammonia as N T0100-01(ADEL)			
Ammonia as N	0.005	<0.005 mg/L	
Chloride T0104-02(ADEL)			
Chloride	4.0	43200 mg/L	
Nitrate + Nitrite as N T0161-01(ADEL)			
Nitrate + Nitrite as N	0.003	<0.003 mg/L	
Nitrite as N T0107-01(ADEL)			
Nitrite as Nitrogen	0.003	<0.003 mg/L	
Nitrogen - Total TMZ-M06(ADEL)			
Nitrogen - Total		5.37 mg/L	
Phosphorus - Filterable Reactive as P T0108-01(ADEL)			
Phosphorus - Filterable Reactive as P	0.003	<0.003 mg/L	
Phosphorus - Total T0109-44(ADEL)			
Phosphorus - Total	0.005	0.190 mg/L	
Silica - Reactive T0111-01(ADEL)			
Silica - Reactive	0.05	2.84 mg/L	
TKN as N T0112-01(ADEL)			
TKN as Nitrogen	0.05	5.37 mg/L	



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Analytical Results

Sampling Point	31518-EPA - 12 South Salt Creek
Sampled Date	23/10/2019 2:45:00PM
Sample Received Date	24/10/2019 11:29:09AM
Sample Analysis Completed	15/11/2019 2:27:42PM
Sample ID	2019-006-9538-03
Status	Endorsed
Collection Type	Customer Collected

Organic Chemistry	LOR	Result	Test Start Date
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Sample temperature at time of receipt 10.2°C

Dissolved Organic Carbon T0158-07(ADEL)

Dissolved Organic Carbon	1	22.7 mg/L
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Total Organic Carbon T0158-07(ADEL)

Total Organic Carbon	1	29.7 mg/L
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Inorganic Chemistry - Physical	LOR	Result	Test Start Date
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Sample temperature at time of receipt 10.2°C

Alkalinity Carbonate Bicarbonate and Hydroxide T0101-01(ADEL)

Alkalinity as Calcium Carbonate		227 mg/L
Bicarbonate		277 mg/L
Carbonate		0 mg/L
Hydroxide		0 mg/L

Conductivity & Total Dissolved Solids T0016-01(ADEL)

Conductivity	2	106000 µS/cm
Total Dissolved Solids (by EC)	1	92200 mg/L

pH T0010-01(ADEL)

pH		8.1 pH units
Temperature at which pH is measured		22.5 °C

Turbidity T0018-01(ADEL)

Turbidity	0.1	12 NTU
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Inorganic Chemistry - Waste Water	LOR	Result	Test Start Date
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Sample temperature at time of receipt 10.2°C

Suspended Solids T0160-01(ADEL)

Suspended Solids	1.0	50 mg/L
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Volatile Suspended Solids T0160-01(ADEL)

Fixed Solids	1	5 mg/L
Volatile Suspended Solids	1	45 mg/L



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Analytical Results

Sampling Point	31518-EPA - 12 South Salt Creek
Sampled Date	23/10/2019 2:45:00PM
Sample Received Date	24/10/2019 11:32:10AM
Sample Analysis Completed	15/11/2019 2:27:42PM
Sample ID	2019-006-9538
Status	Endorsed
Collection Type	Customer Collected

Biology Operations	LOR	Result	Test Start Date
Sample temperature at time of receipt 10.2°C			
Chlorophyll a & b T0380-02(ADEL)			24/10/2019
Chlorophyll a	0.1	55.9 µg/L	
Chlorophyll b	0.1	8.78 µg/L	
Chlorophyll comment		Chlorophyll a & b results are the sum of chlorophyll & their degradation by products (Phaeophytins)	
Chlorophyll a & Phaeophytin a T0380-02(ADEL)			
Chlorophyll a	0.1	53.8 µg/L	24/10/2019
Phaeophytin a	0.1	6.79 µg/L	

Inorganic Chemistry - Nutrients	LOR	Result	Test Start Date
Sample temperature at time of receipt 10.2°C			
Ammonia as N T0100-01(ADEL)			06/11/2019
Ammonia as N	0.005	<0.005 mg/L	
Chloride T0104-02(ADEL)			04/11/2019
Chloride	4.0	43200 mg/L	
Nitrate + Nitrite as N T0161-01(ADEL)			28/10/2019
Nitrate + Nitrite as N	0.003	<0.003 mg/L	
Nitrite as N T0107-01(ADEL)			28/10/2019
Nitrite as Nitrogen	0.003	<0.003 mg/L	
Nitrogen - Total TMZ-M06(ADEL)			24/10/2019
Nitrogen - Total		5.37 mg/L	
Phosphorus - Filterable Reactive as P T0108-01(ADEL)			28/10/2019
Phosphorus - Filterable Reactive as P	0.003	<0.003 mg/L	
Phosphorus - Total T0109-44(ADEL)			04/11/2019
Phosphorus - Total	0.005	0.190 mg/L	
Silica - Reactive T0111-01(ADEL)			04/11/2019
Silica - Reactive	0.05	2.84 mg/L	
TKN as N T0112-01(ADEL)			04/11/2019
TKN as Nitrogen	0.05	5.37 mg/L	



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Analytical Results

Sampling Point	31518-EPA - 12 South Salt Creek
Sampled Date	23/10/2019 2:45:00PM
Sample Received Date	24/10/2019 11:32:10AM
Sample Analysis Completed	15/11/2019 2:27:42PM
Sample ID	2019-006-9538
Status	Endorsed
Collection Type	Customer Collected

Organic Chemistry	LOR	Result	Test Start Date
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Sample temperature at time of receipt 10.2°C

Dissolved Organic Carbon T0158-07(ADEL) 31/10/2019

Dissolved Organic Carbon	1	22.7 mg/L
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Total Organic Carbon T0158-07(ADEL) 31/10/2019

Total Organic Carbon	1	29.7 mg/L
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Inorganic Chemistry - Physical	LOR	Result	Test Start Date
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Sample temperature at time of receipt 10.2°C

Alkalinity Carbonate Bicarbonate and Hydroxide T0101-01(ADEL) 25/10/2019

Alkalinity as Calcium Carbonate		227 mg/L
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Bicarbonate		277 mg/L
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Carbonate		0 mg/L
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Hydroxide		0 mg/L
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Conductivity & Total Dissolved Solids T0016-01(ADEL) 25/10/2019

Conductivity	2	106000 µS/cm
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Total Dissolved Solids (by EC)	1	92200 mg/L
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pH T0010-01(ADEL) 25/10/2019

pH		8.1 pH units
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Temperature at which pH is measured		22.5 °C
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Turbidity T0018-01(ADEL) 28/10/2019

Turbidity	0.1	12 NTU
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Inorganic Chemistry - Waste Water	LOR	Result	Test Start Date
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Sample temperature at time of receipt 10.2°C

Suspended Solids T0160-01(ADEL) 31/10/2019

Suspended Solids	1.0	50 mg/L
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Volatile Suspended Solids T0160-01(ADEL) 31/10/2019

Fixed Solids	1	5 mg/L
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Volatile Suspended Solids	1	45 mg/L
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Analytical Results

Sampling Point	353180-EPA - Tauwitschere
Sampled Date	23/10/2019 3:00:00PM
Sample Received Date	24/10/2019 11:33:38AM
Sample Analysis Completed	7/11/2019 2:19:14PM
Sample ID	2019-006-9535
Status	Endorsed
Collection Type	Customer Collected

Biology Operations	LOR	Result	Test Start Date
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Sample temperature at time of receipt 10.2°C

Chlorophyll a & b T0380-02(ADEL) 24/10/2019

Chlorophyll a	0.1	51.0 µg/L
Chlorophyll b	0.1	12.4 µg/L
Chlorophyll comment		Chlorophyll a & b results are the sum of chlorophyll & their degradation by products (Phaeophytins)

Chlorophyll a & Phaeophytin a T0380-02(ADEL) 24/10/2019

Chlorophyll a	0.1	48.3 µg/L
Phaeophytin a	0.1	9.23 µg/L

Inorganic Chemistry - Nutrients	LOR	Result	Test Start Date
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Sample temperature at time of receipt 10.2°C

Ammonia as N T0100-01(ADEL) 06/11/2019

Ammonia as N	0.005	0.046 mg/L
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Chloride T0104-02(ADEL) 04/11/2019

Chloride	4.0	389 mg/L
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Nitrate + Nitrite as N T0161-01(ADEL) 28/10/2019

Nitrate + Nitrite as N	0.003	0.046 mg/L
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Nitrogen - Total TMZ-M06(ADEL) 24/10/2019

Nitrogen - Total		1.95 mg/L
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Phosphorus - Filterable Reactive as P T0108-01(ADEL) 28/10/2019

Phosphorus - Filterable Reactive as P	0.003	0.004 mg/L
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Phosphorus - Total T0109-44(ADEL) 04/11/2019

Phosphorus - Total	0.005	0.125 mg/L
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Silica - Reactive T0111-01(ADEL) 04/11/2019

Silica - Reactive	0.05	0.70 mg/L
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TKN as N T0112-01(ADEL) 04/11/2019

TKN as Nitrogen	0.05	1.90 mg/L
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Organic Chemistry	LOR	Result	Test Start Date
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Analytical Results

Sampling Point	353180-EPA - Tauwitschere
Sampled Date	23/10/2019 3:00:00PM
Sample Received Date	24/10/2019 11:33:38AM
Sample Analysis Completed	7/11/2019 2:19:14PM
Sample ID	2019-006-9535
Status	Endorsed
Collection Type	Customer Collected

Sample temperature at time of receipt 10.2°C

Dissolved Organic Carbon T0158-07(ADEL) 31/10/2019

Dissolved Organic Carbon	1	8.7 mg/L
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Total Organic Carbon T0158-07(ADEL) 31/10/2019

Total Organic Carbon	1	16.1 mg/L
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Inorganic Chemistry - Physical LOR Result Test Start Date

Sample temperature at time of receipt 10.2°C

Alkalinity Carbonate Bicarbonate and Hydroxide T0101-01(ADEL) 25/10/2019

Alkalinity as Calcium Carbonate	110 mg/L
Bicarbonate	102 mg/L
Carbonate	16 mg/L
Hydroxide	0 mg/L

Conductivity & Total Dissolved Solids T0016-01(ADEL) 25/10/2019

Conductivity	2	1660 µS/cm
Total Dissolved Solids (by EC)	1	924 mg/L

pH T0010-01(ADEL) 25/10/2019

pH	9.0 pH units
Temperature at which pH is measured	22.5 °C

Turbidity T0018-01(ADEL) 28/10/2019

Turbidity	0.1	31 NTU
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Inorganic Chemistry - Waste Water LOR Result Test Start Date

Sample temperature at time of receipt 10.2°C

Suspended Solids T0160-01(ADEL) 30/10/2019

Suspended Solids	1.0	48 mg/L
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Volatile Suspended Solids T0160-01(ADEL) 30/10/2019

Fixed Solids	1	24 mg/L
Volatile Suspended Solids	1	24 mg/L



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Analytical Results

Sampling Point	31525-EPA - Villa de Yumpa
Sampled Date	23/10/2019 4:00:00PM
Sample Received Date	24/10/2019 11:33:03AM
Sample Analysis Completed	15/11/2019 2:06:53PM
Sample ID	2019-006-9534
Status	Endorsed
Collection Type	Customer Collected

Biology Operations	LOR	Result	Test Start Date
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Sample temperature at time of receipt 10.2°C

Chlorophyll a & b T0380-02(ADEL) 24/10/2019

Chlorophyll a	0.1	21.7 µg/L
Chlorophyll b	0.1	2.76 µg/L
Chlorophyll comment		Chlorophyll a & b results are the sum of chlorophyll & their degradation by products (Phaeophytins)

Chlorophyll a & Phaeophytin a T0380-02(ADEL) 24/10/2019

Chlorophyll a	0.1	20.1 µg/L
Phaeophytin a	0.1	3.77 µg/L

Inorganic Chemistry - Nutrients	LOR	Result	Test Start Date
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Sample temperature at time of receipt 10.2°C

Ammonia as N T0100-01(ADEL) 06/11/2019

Ammonia as N	0.005	<0.005 mg/L
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Chloride T0104-02(ADEL) 04/11/2019

Chloride	4.0	39700 mg/L
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Nitrate + Nitrite as N T0161-01(ADEL) 28/10/2019

Nitrate + Nitrite as N	0.003	<0.003 mg/L
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Nitrogen - Total TMZ-M06(ADEL) 24/10/2019

Nitrogen - Total		3.74 mg/L
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Phosphorus - Filterable Reactive as P T0108-01(ADEL) 28/10/2019

Phosphorus - Filterable Reactive as P	0.003	<0.003 mg/L
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Phosphorus - Total T0109-44(ADEL) 04/11/2019

Phosphorus - Total	0.005	0.162 mg/L
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Silica - Reactive T0111-01(ADEL) 04/11/2019

Silica - Reactive	0.05	1.00 mg/L
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TKN as N T0112-01(ADEL) 04/11/2019

TKN as Nitrogen	0.05	3.74 mg/L
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Organic Chemistry	LOR	Result	Test Start Date
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Analytical Results

Sampling Point	31525-EPA - Villa de Yumpa
Sampled Date	23/10/2019 4:00:00PM
Sample Received Date	24/10/2019 11:33:03AM
Sample Analysis Completed	15/11/2019 2:06:53PM
Sample ID	2019-006-9534
Status	Endorsed
Collection Type	Customer Collected

Sample temperature at time of receipt 10.2°C

Dissolved Organic Carbon T0158-07(ADEL) 31/10/2019

Dissolved Organic Carbon	1	19.3 mg/L
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Total Organic Carbon T0158-07(ADEL) 31/10/2019

Total Organic Carbon	1	21.9 mg/L
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Inorganic Chemistry - Physical LOR Result Test Start Date

Sample temperature at time of receipt 10.2°C

Alkalinity Carbonate Bicarbonate and Hydroxide T0101-01(ADEL) 25/10/2019

Alkalinity as Calcium Carbonate	222 mg/L
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Bicarbonate	252 mg/L
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Carbonate	9 mg/L
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Hydroxide	0 mg/L
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Conductivity & Total Dissolved Solids T0016-01(ADEL) 25/10/2019

Conductivity	2	94600 µS/cm
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Total Dissolved Solids (by EC)	1	79000 mg/L
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pH T0010-01(ADEL) 25/10/2019

pH	8.4 pH units
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Temperature at which pH is measured	22.4 °C
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Turbidity T0018-01(ADEL) 28/10/2019

Turbidity	0.1	9.8 NTU
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Inorganic Chemistry - Waste Water LOR Result Test Start Date

Sample temperature at time of receipt 10.2°C

Suspended Solids T0160-01(ADEL) 30/10/2019

Suspended Solids	1.0	39 mg/L
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Volatile Suspended Solids T0160-01(ADEL) 30/10/2019

Fixed Solids	1	14 mg/L
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Volatile Suspended Solids	1	25 mg/L
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AWQC Signatories

Dzung Bui - Supervisor Metals and Physical
Thuy Diep - Technical Officer Chemistry
David Evans - Technical Officer Chemistry
Andrew Ford - Technical Officer Chemistry
Kerrie Jooste - Supervisor Nutrients and Waste
Aji John - Technical Officer Chemistry
John Martini - Method Development Coordinator
Andrew Mlynowskyj - Technical Officer Chemistry
Dean Newman - Algal Specialist
Elena Panuccio - Technical Officer Chemistry
Melissa Phillips - Technical Officer Chemistry
Gayle Polley - Snr Technical Officer
Lyudmila Tsymbal - Technical Officer Life Science



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Incidents

Sample ID	S.Point	Description	Sampled Date	Analysis (where Applicable)	Incident Description
2019-006-9937	31519	EPA - Morella Basin at Outlet Regulator	23/10/2019	Turbidity	Test results have been checked and the results verified

Samples Not Collected

Sample ID	S.Point	Description	Sampled Date	Non Collect Reason
2019-006-9940	315191	EPA - Morella Creek @ guage	7/10/2019	Dry

Bottles Not Collected

Sample ID	S.Point	Description	Sampled Date	Laboratory	Non Collect Reason
2019-006-9940-0	315191	EPA - Morella Creek @ guage	7/10/2019	Inorganic Chemistry - Nutrients	Bottle not received at AWQC
2019-006-9940-0	315191	EPA - Morella Creek @ guage	7/10/2019	Biology Operations	Bottle not received at AWQC
2019-006-9940-0	315191	EPA - Morella Creek @ guage	7/10/2019	Inorganic Chemistry - Physical	Bottle not received at AWQC
2019-006-9940-0	315191	EPA - Morella Creek @ guage	7/10/2019	Organic Chemistry	Bottle not received at AWQC
2019-006-9940-0	315191	EPA - Morella Creek @ guage	7/10/2019	Inorganic Chemistry - Nutrients	Bottle not received at AWQC
2019-006-9940-0	315191	EPA - Morella Creek @ guage	7/10/2019	Inorganic Chemistry - Waste Water	Bottle not received at AWQC
2019-006-9940-0	315191	EPA - Morella Creek @ guage	7/10/2019	Inorganic Chemistry - Nutrients	Bottle not received at AWQC
2019-006-9940-0	315191	EPA - Morella Creek @ guage	7/10/2019	Inorganic Chemistry - Nutrients	Bottle not received at AWQC



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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
T0107-01	Nitrite - Automated Flow Colorimetry	AP4500NO3I
T0108-01	Filterable Reactive Phosphorus - Automated Flow Colorimetry	AP4500PG
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
T0158-07	Total and Dissolved Organic Carbon (OI Analytical)	SM5310C
T0160-01	Suspended Solids 103C to 105C	AP2540DE
T0160-01	Suspended Solids 103C to 105C	AP4500
T0161-01	Nitrate + Nitrate (NOx) - Automated Flow Colorimetry	AP4500NO3I
T0380-02	Chlorophyll a & b and phaeophytin	ISO10260
T0380-02	Chlorophyll a & b and phaeophytin	Wintermans
TMZ-M06	Derived Results and Data Checks	AP4500NORGA

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



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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. 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.
7. 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.
8. Where applicable the [Measurement of Uncertainty](https://www.awqc.com.au/our-services/analytical-services/measurement-uncertainty) is available at <https://www.awqc.com.au/our-services/analytical-services/measurement-uncertainty>.
9. If pH has been tested then the pH will be outside of its holding time unless measured in the field.
10. (ADEL) indicates analysed in Adelaide, (MELB) indicates analysed in Melbourne.