



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

15/08/2019

Dear Patrick

Please find attached the Final Analytical Report for

Customer Service Request: 143419-2019-CSR-1
Account: 143419
Project: AWQC-137396 DEW - Healthy Coorong Healthy Basin Phase 0 - Non routine
19/20

This report has also been sent to: Frank Mangeruca

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: 257197

This report shall not be reproduced, except in full without the written permission of the laboratory.

Report Information

Project Name	AWQC-137396
Customer	DEW - Department of Environment and Water
CSR_ID	143419-2019-CSR-1

Analytical Results

Sampling Point	31518-EPA - 12 South Salt Creek
Sampled Date	10/07/2019 8:15:00AM
Sample Received Date	11/07/2019 1:34:45PM
Sample Analysis Completed	23/07/2019 11:59:14AM
Sample ID	2019-004-2577
Status	Endorsed
Collection Type	Customer Collected

Biology Operations	LOR	Result	Test Start Date
Sample temperature at time of receipt 9.6°C			
Chlorophyll a & b T0380-02(ADEL)			11/07/2019
Chlorophyll a	0.1	79.9 µg/L	
Chlorophyll b	0.1	5.38 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)			11/07/2019
Chlorophyll a	0.1	68.7 µg/L	
Phaeophytin a	0.1	21.1 µg/L	
Inorganic Chemistry - Nutrients	LOR	Result	Test Start Date
Sample temperature at time of receipt 9.6°C			
Ammonia as N T0100-01(ADEL)			22/07/2019
Ammonia as N	0.005	<0.005 mg/L	
Chloride T0104-02(ADEL)			17/07/2019
Chloride	4.0	41300 mg/L	
Nitrate + Nitrite as N T0161-01(ADEL)			12/07/2019
Nitrate + Nitrite as N	0.003	0.005 mg/L	
Nitrogen - Total TMZ-M06(ADEL)			11/07/2019
Nitrogen - Total		6.04 mg/L	
Phosphorus - Filterable Reactive as P T0108-01(ADEL)			12/07/2019
Phosphorus - Filterable Reactive as P	0.003	0.005 mg/L	
Phosphorus - Total T0109-44(ADEL)			17/07/2019
Phosphorus - Total	0.005	0.254 mg/L	
Silica - Reactive T0111-01(ADEL)			15/07/2019
Silica - Reactive	0.05	2.33 mg/L	
TKN as N T0112-01(ADEL)			17/07/2019



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



FINAL REPORT: 257197

This report shall not be reproduced, except in full without the written permission of the laboratory.

Analytical Results

Sampling Point	31518-EPA - 12 South Salt Creek
Sampled Date	10/07/2019 8:15:00AM
Sample Received Date	11/07/2019 1:34:45PM
Sample Analysis Completed	23/07/2019 11:59:14AM
Sample ID	2019-004-2577
Status	Endorsed
Collection Type	Customer Collected

TKN as N T0112-01(ADEL)			17/07/2019
TKN as Nitrogen	0.05	6.03 mg/L	

Organic Chemistry	LOR	Result	Test Start Date
Sample temperature at time of receipt 9.6°C			
Dissolved Organic Carbon T0158-07(ADEL)			18/07/2019
Dissolved Organic Carbon	1	18.9 mg/L	
Total Organic Carbon T0158-07(ADEL)			18/07/2019
Total Organic Carbon	1	24.3 mg/L	

Inorganic Chemistry - Physical	LOR	Result	Test Start Date
Sample temperature at time of receipt 9.6°C			
Alkalinity Carbonate Bicarbonate and Hydroxide T0101-01(ADEL)			15/07/2019
Alkalinity as Calcium Carbonate		213 mg/L	
Bicarbonate		260 mg/L	
Carbonate		0 mg/L	
Hydroxide		0 mg/L	
Conductivity & Total Dissolved Solids T0016-01(ADEL)			15/07/2019
Conductivity	2	106000 µS/cm	
Total Dissolved Solids (by EC)	1	92200 mg/L	
pH T0010-01(ADEL)			15/07/2019
pH		8.0 pH units	
Temperature at which pH is measured		22.2 °C	
Turbidity T0018-01(ADEL)			15/07/2019
Turbidity	0.1	14 NTU	

Inorganic Chemistry - Waste Water	LOR	Result	Test Start Date
Sample temperature at time of receipt 9.6°C			
Suspended Solids T0160-01(ADEL)			15/07/2019
Suspended Solids	1.0	30 mg/L	
Volatile Suspended Solids T0160-01(ADEL)			15/07/2019
Fixed Solids	1	<1 mg/L	



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



FINAL REPORT: 257197

This report shall not be reproduced, except in full without the written permission of the laboratory.

Analytical Results

Sampling Point	31518-EPA - 12 South Salt Creek
Sampled Date	10/07/2019 8:15:00AM
Sample Received Date	11/07/2019 1:34:45PM
Sample Analysis Completed	23/07/2019 11:59:14AM
Sample ID	2019-004-2577
Status	Endorsed
Collection Type	Customer Collected

Volatile Suspended Solids T0160-01(ADEL)

15/07/2019

Volatile Suspended Solids	1	30 mg/L
---------------------------	---	---------



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



FINAL REPORT: 257197

This report shall not be reproduced, except in full without the written permission of the laboratory.

Analytical Results

Sampling Point	31511-EPA - 3.2km South Salt Creek
Sampled Date	10/07/2019 8:20:00AM
Sample Received Date	11/07/2019 1:32:30PM
Sample Analysis Completed	23/07/2019 11:59:06AM
Sample ID	2019-004-2579
Status	Endorsed
Collection Type	Customer Collected

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

Sample temperature at time of receipt 9.6°C

Chlorophyll a & b T0380-02(ADEL) 11/07/2019

Chlorophyll a	0.1	64.3 µg/L
Chlorophyll b	0.1	4.58 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) 11/07/2019

Chlorophyll a	0.1	59.9 µg/L
Phaeophytin a	0.1	9.05 µg/L

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

Sample temperature at time of receipt 9.6°C

Ammonia as N T0100-01(ADEL) 22/07/2019

Ammonia as N	0.005	0.089 mg/L
--------------	-------	------------

Chloride T0104-02(ADEL) 17/07/2019

Chloride	4.0	41200 mg/L
----------	-----	------------

Nitrate + Nitrite as N T0161-01(ADEL) 12/07/2019

Nitrate + Nitrite as N	0.003	0.009 mg/L
------------------------	-------	------------

Nitrogen - Total TMZ-M06(ADEL) 11/07/2019

Nitrogen - Total		5.74 mg/L
------------------	--	-----------

Phosphorus - Filterable Reactive as P T0108-01(ADEL) 12/07/2019

Phosphorus - Filterable Reactive as P	0.003	0.015 mg/L
---------------------------------------	-------	------------

Phosphorus - Total T0109-44(ADEL) 17/07/2019

Phosphorus - Total	0.005	0.208 mg/L
--------------------	-------	------------

Silica - Reactive T0111-01(ADEL) 15/07/2019

Silica - Reactive	0.05	2.16 mg/L
-------------------	------	-----------

TKN as N T0112-01(ADEL) 17/07/2019

TKN as Nitrogen	0.05	5.73 mg/L
-----------------	------	-----------

Organic Chemistry	LOR	Result	Test Start Date
-------------------	-----	--------	-----------------



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



FINAL REPORT: 257197

This report shall not be reproduced, except in full without the written permission of the laboratory.

Analytical Results

Sampling Point	31511-EPA - 3.2km South Salt Creek
Sampled Date	10/07/2019 8:20:00AM
Sample Received Date	11/07/2019 1:32:30PM
Sample Analysis Completed	23/07/2019 11:59:06AM
Sample ID	2019-004-2579
Status	Endorsed
Collection Type	Customer Collected

Sample temperature at time of receipt 9.6°C

Dissolved Organic Carbon T0158-07(ADEL) 18/07/2019

Dissolved Organic Carbon	1	21.1 mg/L
--------------------------	---	-----------

Total Organic Carbon T0158-07(ADEL) 18/07/2019

Total Organic Carbon	1	27.0 mg/L
----------------------	---	-----------

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

Sample temperature at time of receipt 9.6°C

Alkalinity Carbonate Bicarbonate and Hydroxide T0101-01(ADEL) 15/07/2019

Alkalinity as Calcium Carbonate		219 mg/L
---------------------------------	--	----------

Bicarbonate		267 mg/L
-------------	--	----------

Carbonate		0 mg/L
-----------	--	--------

Hydroxide		0 mg/L
-----------	--	--------

Conductivity & Total Dissolved Solids T0016-01(ADEL) 15/07/2019

Conductivity	2	107000 µS/cm
--------------	---	--------------

Total Dissolved Solids (by EC)	1	93400 mg/L
--------------------------------	---	------------

pH T0010-01(ADEL) 15/07/2019

pH		7.9 pH units
----	--	--------------

Temperature at which pH is measured		22.2 °C
-------------------------------------	--	---------

Turbidity T0018-01(ADEL) 15/07/2019

Turbidity	0.1	14 NTU
-----------	-----	--------

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

Sample temperature at time of receipt 9.6°C

Suspended Solids T0160-01(ADEL) 16/07/2019

Suspended Solids	1.0	48 mg/L
------------------	-----	---------

Volatile Suspended Solids T0160-01(ADEL) 16/07/2019

Fixed Solids	1	8 mg/L
--------------	---	--------

Volatile Suspended Solids	1	40 mg/L
---------------------------	---	---------



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



FINAL REPORT: 257197

This report shall not be reproduced, except in full without the written permission of the laboratory.

Analytical Results

Sampling Point	31517-EPA - 1.8km West Salt Creek
Sampled Date	10/07/2019 8:40:00AM
Sample Received Date	11/07/2019 1:34:27PM
Sample Analysis Completed	23/07/2019 11:59:03AM
Sample ID	2019-004-2581
Status	Endorsed
Collection Type	Customer Collected

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

Sample temperature at time of receipt 9.6°C

Chlorophyll a & b T0380-02(ADEL) 11/07/2019

Chlorophyll a	0.1	84.6 µg/L
Chlorophyll b	0.1	8.23 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) 11/07/2019

Chlorophyll a	0.1	78.0 µg/L
Phaeophytin a	0.1	14.2 µg/L

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

Sample temperature at time of receipt 9.6°C

Ammonia as N T0100-01(ADEL) 22/07/2019

Ammonia as N	0.005	<0.005 mg/L
--------------	-------	-------------

Chloride T0104-02(ADEL) 17/07/2019

Chloride	4.0	39500 mg/L
----------	-----	------------

Nitrate + Nitrite as N T0161-01(ADEL) 12/07/2019

Nitrate + Nitrite as N	0.003	<0.003 mg/L
------------------------	-------	-------------

Nitrogen - Total TMZ-M06(ADEL) 11/07/2019

Nitrogen - Total		5.66 mg/L
------------------	--	-----------

Phosphorus - Filterable Reactive as P T0108-01(ADEL) 12/07/2019

Phosphorus - Filterable Reactive as P	0.003	0.007 mg/L
---------------------------------------	-------	------------

Phosphorus - Total T0109-44(ADEL) 17/07/2019

Phosphorus - Total	0.005	0.190 mg/L
--------------------	-------	------------

Silica - Reactive T0111-01(ADEL) 15/07/2019

Silica - Reactive	0.05	2.43 mg/L
-------------------	------	-----------

TKN as N T0112-01(ADEL) 17/07/2019

TKN as Nitrogen	0.05	5.66 mg/L
-----------------	------	-----------

Organic Chemistry	LOR	Result	Test Start Date
-------------------	-----	--------	-----------------



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



FINAL REPORT: 257197

This report shall not be reproduced, except in full without the written permission of the laboratory.

Analytical Results

Sampling Point	31517-EPA - 1.8km West Salt Creek
Sampled Date	10/07/2019 8:40:00AM
Sample Received Date	11/07/2019 1:34:27PM
Sample Analysis Completed	23/07/2019 11:59:03AM
Sample ID	2019-004-2581
Status	Endorsed
Collection Type	Customer Collected

Sample temperature at time of receipt 9.6°C

Dissolved Organic Carbon T0158-07(ADEL) 18/07/2019

Dissolved Organic Carbon	1	20.2 mg/L
--------------------------	---	-----------

Total Organic Carbon T0158-07(ADEL) 18/07/2019

Total Organic Carbon	1	25.4 mg/L
----------------------	---	-----------

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

Sample temperature at time of receipt 9.6°C

Alkalinity Carbonate Bicarbonate and Hydroxide T0101-01(ADEL) 12/07/2019

Alkalinity as Calcium Carbonate	208 mg/L
---------------------------------	----------

Bicarbonate	254 mg/L
-------------	----------

Carbonate	0 mg/L
-----------	--------

Hydroxide	0 mg/L
-----------	--------

Conductivity & Total Dissolved Solids T0016-01(ADEL) 12/07/2019

Conductivity	2	107000 µS/cm
--------------	---	--------------

Total Dissolved Solids (by EC)	1	93400 mg/L
--------------------------------	---	------------

pH T0010-01(ADEL) 12/07/2019

pH	8.0 pH units
----	--------------

Temperature at which pH is measured	21.9 °C
-------------------------------------	---------

Turbidity T0018-01(ADEL) 15/07/2019

Turbidity	0.1	14 NTU
-----------	-----	--------

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

Sample temperature at time of receipt 9.6°C

Suspended Solids T0160-01(ADEL) 15/07/2019

Suspended Solids	1.0	32 mg/L
------------------	-----	---------

Volatile Suspended Solids T0160-01(ADEL) 15/07/2019

Fixed Solids	1	<1 mg/L
--------------	---	---------

Volatile Suspended Solids	1	32 mg/L
---------------------------	---	---------



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



FINAL REPORT: 257197

This report shall not be reproduced, except in full without the written permission of the laboratory.

Analytical Results

Sampling Point	31515-EPA - Snipe Point
Sampled Date	10/07/2019 9:05:00AM
Sample Received Date	11/07/2019 1:33:49PM
Sample Analysis Completed	23/07/2019 11:59:14AM
Sample ID	2019-004-2580
Status	Endorsed
Collection Type	Customer Collected

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

Sample temperature at time of receipt 9.6°C

Chlorophyll a & b T0380-02(ADEL) 11/07/2019

Chlorophyll a	0.1	81.6 µg/L
Chlorophyll b	0.1	7.63 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) 11/07/2019

Chlorophyll a	0.1	75.1 µg/L
Phaeophytin a	0.1	13.8 µg/L

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

Sample temperature at time of receipt 9.6°C

Ammonia as N T0100-01(ADEL) 22/07/2019

Ammonia as N	0.005	<0.005 mg/L
--------------	-------	-------------

Chloride T0104-02(ADEL) 17/07/2019

Chloride	4.0	39000 mg/L
----------	-----	------------

Nitrate + Nitrite as N T0161-01(ADEL) 12/07/2019

Nitrate + Nitrite as N	0.003	<0.003 mg/L
------------------------	-------	-------------

Nitrogen - Total TMZ-M06(ADEL) 11/07/2019

Nitrogen - Total		5.79 mg/L
------------------	--	-----------

Phosphorus - Filterable Reactive as P T0108-01(ADEL) 12/07/2019

Phosphorus - Filterable Reactive as P	0.003	0.004 mg/L
---------------------------------------	-------	------------

Phosphorus - Total T0109-44(ADEL) 17/07/2019

Phosphorus - Total	0.005	0.238 mg/L
--------------------	-------	------------

Silica - Reactive T0111-01(ADEL) 15/07/2019

Silica - Reactive	0.05	2.46 mg/L
-------------------	------	-----------

TKN as N T0112-01(ADEL) 17/07/2019

TKN as Nitrogen	0.05	5.79 mg/L
-----------------	------	-----------

Organic Chemistry	LOR	Result	Test Start Date
-------------------	-----	--------	-----------------



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

FINAL REPORT: 257197

This report shall not be reproduced, except in full without the written permission of the laboratory.

Analytical Results

Sampling Point	31515-EPA - Snipe Point
Sampled Date	10/07/2019 9:05:00AM
Sample Received Date	11/07/2019 1:33:49PM
Sample Analysis Completed	23/07/2019 11:59:14AM
Sample ID	2019-004-2580
Status	Endorsed
Collection Type	Customer Collected

Sample temperature at time of receipt 9.6°C

Dissolved Organic Carbon T0158-07(ADEL)			18/07/2019
Dissolved Organic Carbon	1	20.0 mg/L	
Total Organic Carbon T0158-07(ADEL)			18/07/2019
Total Organic Carbon	1	25.3 mg/L	

Inorganic Chemistry - Physical	LOR	Result	Test Start Date
<i>Sample temperature at time of receipt 9.6°C</i>			
Alkalinity Carbonate Bicarbonate and Hydroxide T0101-01(ADEL)			15/07/2019
Alkalinity as Calcium Carbonate		208 mg/L	
Bicarbonate		254 mg/L	
Carbonate		0 mg/L	
Hydroxide		0 mg/L	
Conductivity & Total Dissolved Solids T0016-01(ADEL)			15/07/2019
Conductivity	2	107000 µS/cm	
Total Dissolved Solids (by EC)	1	93400 mg/L	
pH T0010-01(ADEL)			15/07/2019
pH		8.0 pH units	
Temperature at which pH is measured		22.3 °C	
Turbidity T0018-01(ADEL)			15/07/2019
Turbidity	0.1	13 NTU	

Inorganic Chemistry - Waste Water	LOR	Result	Test Start Date
<i>Sample temperature at time of receipt 9.6°C</i>			
Suspended Solids T0160-01(ADEL)			15/07/2019
Suspended Solids	1.0	24 mg/L	
Volatile Suspended Solids T0160-01(ADEL)			15/07/2019
Fixed Solids	1	<1 mg/L	
Volatile Suspended Solids	1	24 mg/L	



FINAL REPORT: 257197

This report shall not be reproduced, except in full without the written permission of the laboratory.

Analytical Results

Sampling Point	31516-EPA - Seagull Island
Sampled Date	10/07/2019 9:30:00AM
Sample Received Date	11/07/2019 1:34:08PM
Sample Analysis Completed	23/07/2019 11:59:06AM
Sample ID	2019-004-2578
Status	Endorsed
Collection Type	Customer Collected

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

Sample temperature at time of receipt 9.6°C

Chlorophyll a & b T0380-02(ADEL) 11/07/2019

Chlorophyll a	0.1	74.4 µg/L
Chlorophyll b	0.1	6.66 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) 11/07/2019

Chlorophyll a	0.1	67.5 µg/L
Phaeophytin a	0.1	14.1 µg/L

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

Sample temperature at time of receipt 9.6°C

Ammonia as N T0100-01(ADEL) 22/07/2019

Ammonia as N	0.005	<0.005 mg/L
--------------	-------	-------------

Chloride T0104-02(ADEL) 17/07/2019

Chloride	4.0	40400 mg/L
----------	-----	------------

Nitrate + Nitrite as N T0161-01(ADEL) 12/07/2019

Nitrate + Nitrite as N	0.003	<0.003 mg/L
------------------------	-------	-------------

Nitrogen - Total TMZ-M06(ADEL) 11/07/2019

Nitrogen - Total		5.41 mg/L
------------------	--	-----------

Phosphorus - Filterable Reactive as P T0108-01(ADEL) 12/07/2019

Phosphorus - Filterable Reactive as P	0.003	0.011 mg/L
---------------------------------------	-------	------------

Phosphorus - Total T0109-44(ADEL) 17/07/2019

Phosphorus - Total	0.005	0.195 mg/L
--------------------	-------	------------

Silica - Reactive T0111-01(ADEL) 15/07/2019

Silica - Reactive	0.05	2.44 mg/L
-------------------	------	-----------

TKN as N T0112-01(ADEL) 17/07/2019

TKN as Nitrogen	0.05	5.41 mg/L
-----------------	------	-----------

Organic Chemistry	LOR	Result	Test Start Date
-------------------	-----	--------	-----------------



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



FINAL REPORT: 257197

This report shall not be reproduced, except in full without the written permission of the laboratory.

Analytical Results

Sampling Point	31516-EPA - Seagull Island
Sampled Date	10/07/2019 9:30:00AM
Sample Received Date	11/07/2019 1:34:08PM
Sample Analysis Completed	23/07/2019 11:59:06AM
Sample ID	2019-004-2578
Status	Endorsed
Collection Type	Customer Collected

Sample temperature at time of receipt 9.6°C

Dissolved Organic Carbon T0158-07(ADEL)			18/07/2019
Dissolved Organic Carbon	1	18.7 mg/L	
Total Organic Carbon T0158-07(ADEL)			18/07/2019
Total Organic Carbon	1	24.7 mg/L	

Inorganic Chemistry - Physical	LOR	Result	Test Start Date
<hr/>			
<i>Sample temperature at time of receipt 9.6°C</i>			
Alkalinity Carbonate Bicarbonate and Hydroxide T0101-01(ADEL)			12/07/2019
Alkalinity as Calcium Carbonate		208 mg/L	
Bicarbonate		254 mg/L	
Carbonate		0 mg/L	
Hydroxide		0 mg/L	
Conductivity & Total Dissolved Solids T0016-01(ADEL)			12/07/2019
Conductivity	2	106000 µS/cm	
Total Dissolved Solids (by EC)	1	92200 mg/L	
pH T0010-01(ADEL)			12/07/2019
pH		8.0 pH units	
Temperature at which pH is measured		21.9 °C	
Turbidity T0018-01(ADEL)			15/07/2019
Turbidity	0.1	13 NTU	

Inorganic Chemistry - Waste Water	LOR	Result	Test Start Date
<hr/>			
<i>Sample temperature at time of receipt 9.6°C</i>			
Suspended Solids T0160-01(ADEL)			15/07/2019
Suspended Solids	1.0	60 mg/L	
Volatile Suspended Solids T0160-01(ADEL)			15/07/2019
Fixed Solids	1	25 mg/L	
Volatile Suspended Solids	1	35 mg/L	



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



FINAL REPORT: 257197

This report shall not be reproduced, except in full without the written permission of the laboratory.

Analytical Results

Sampling Point	300711-Tilley Swamp Drain U/S Morella
Sampled Date	10/07/2019 9:30:00AM
Sample Received Date	11/07/2019 1:31:49PM
Sample Analysis Completed	29/07/2019 5:22:59PM
Sample ID	*2019-004-2586
Status	Endorsed
Collection Type	Customer Collected

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

Sample temperature at time of receipt 9.6°C

Chlorophyll a & b T0380-02(ADEL) 11/07/2019

Chlorophyll a	0.1	1.66 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) 11/07/2019

Chlorophyll a	0.1	1.28 µg/L
Phaeophytin a	0.1	0.64 µg/L

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

Sample temperature at time of receipt 9.6°C

Ammonia as N T0100-01(ADEL) 22/07/2019

Ammonia as N	0.005	0.134 mg/L
--------------	-------	------------

Chloride T0104-02(ADEL) 15/07/2019

Chloride	4.0	2430 mg/L
----------	-----	-----------

Nitrate + Nitrite as N T0161-01(ADEL) 12/07/2019

Nitrate + Nitrite as N	0.003	0.967 mg/L
------------------------	-------	------------

Nitrogen - Total TMZ-M06(ADEL) 11/07/2019

Nitrogen - Total		1.44 mg/L
------------------	--	-----------

Phosphorus - Filterable Reactive as P T0108-01(ADEL) 12/07/2019

Phosphorus - Filterable Reactive as P	0.003	0.011 mg/L
---------------------------------------	-------	------------

Phosphorus - Total T0109-44(ADEL) 17/07/2019

Phosphorus - Total	0.005	0.023 mg/L
--------------------	-------	------------

Silica - Reactive T0111-01(ADEL) 15/07/2019

Silica - Reactive	0.05	10.7 mg/L
-------------------	------	-----------

TKN as N T0112-01(ADEL) 17/07/2019

TKN as Nitrogen	0.05	0.47 mg/L
-----------------	------	-----------

Organic Chemistry	LOR	Result	Test Start Date
-------------------	-----	--------	-----------------



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



FINAL REPORT: 257197

This report shall not be reproduced, except in full without the written permission of the laboratory.

Analytical Results

Sampling Point	300711-Tilley Swamp Drain U/S Morella
Sampled Date	10/07/2019 9:30:00AM
Sample Received Date	11/07/2019 1:31:49PM
Sample Analysis Completed	29/07/2019 5:22:59PM
Sample ID	*2019-004-2586
Status	Endorsed
Collection Type	Customer Collected

Sample temperature at time of receipt 9.6°C

Dissolved Organic Carbon T0158-09(ADEL) 29/07/2019

Dissolved Organic Carbon	1.0	3.6 mg/L
--------------------------	-----	----------

Total Organic Carbon T0158-09(ADEL) 29/07/2019

Total Organic Carbon	1.0	4.0 mg/L
----------------------	-----	----------

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

Sample temperature at time of receipt 9.6°C

Alkalinity Carbonate Bicarbonate and Hydroxide T0101-01(ADEL) 12/07/2019

Alkalinity as Calcium Carbonate	399 mg/L
Bicarbonate	487 mg/L
Carbonate	0 mg/L
Hydroxide	0 mg/L

Conductivity & Total Dissolved Solids T0016-01(ADEL) 12/07/2019

Conductivity	2	8580 µS/cm
Total Dissolved Solids (by EC)	1	4950 mg/L

pH T0010-01(ADEL) 12/07/2019

pH	8.3 pH units
Temperature at which pH is measured	21.9 °C

Turbidity T0018-01(ADEL) 15/07/2019

Turbidity	0.1	1.1 NTU
-----------	-----	---------

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

Sample temperature at time of receipt 9.6°C

Suspended Solids T0160-01(ADEL) 15/07/2019

Suspended Solids	1.0	4 mg/L
------------------	-----	--------

Volatile Suspended Solids T0160-01(ADEL) 15/07/2019

Fixed Solids	1	3 mg/L
Volatile Suspended Solids	1	1 mg/L



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



FINAL REPORT: 257197

This report shall not be reproduced, except in full without the written permission of the laboratory.

Analytical Results

Sampling Point	31526-EPA - Nth Jack Point
Sampled Date	10/07/2019 10:00:00AM
Sample Received Date	11/07/2019 1:35:59PM
Sample Analysis Completed	23/07/2019 11:59:13AM
Sample ID	2019-004-2576
Status	Endorsed
Collection Type	Customer Collected

Biology Operations	LOR	Result	Test Start Date
Sample temperature at time of receipt 9.6°C			
Chlorophyll a & b T0380-02(ADEL)			11/07/2019
Chlorophyll a	0.1	102 µg/L	
Chlorophyll b	0.1	5.18 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)			11/07/2019
Chlorophyll a	0.1	87.9 µg/L	
Phaeophytin a	0.1	26.3 µg/L	

Inorganic Chemistry - Nutrients	LOR	Result	Test Start Date
Sample temperature at time of receipt 9.6°C			
Ammonia as N T0100-01(ADEL)			22/07/2019
Ammonia as N	0.005	<0.005 mg/L	
Chloride T0104-02(ADEL)			17/07/2019
Chloride	4.0	36400 mg/L	
Nitrate + Nitrite as N T0161-01(ADEL)			12/07/2019
Nitrate + Nitrite as N	0.003	<0.003 mg/L	
Nitrogen - Total TMZ-M06(ADEL)			11/07/2019
Nitrogen - Total		6.08 mg/L	
Phosphorus - Filterable Reactive as P T0108-01(ADEL)			12/07/2019
Phosphorus - Filterable Reactive as P	0.003	0.003 mg/L	
Phosphorus - Total T0109-44(ADEL)			17/07/2019
Phosphorus - Total	0.005	0.275 mg/L	
Silica - Reactive T0111-01(ADEL)			15/07/2019
Silica - Reactive	0.05	2.10 mg/L	
TKN as N T0112-01(ADEL)			17/07/2019
TKN as Nitrogen	0.05	6.08 mg/L	

Organic Chemistry	LOR	Result	Test Start Date
-------------------	-----	--------	-----------------



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



FINAL REPORT: 257197

This report shall not be reproduced, except in full without the written permission of the laboratory.

Analytical Results

Sampling Point	31526-EPA - Nth Jack Point
Sampled Date	10/07/2019 10:00:00AM
Sample Received Date	11/07/2019 1:35:59PM
Sample Analysis Completed	23/07/2019 11:59:13AM
Sample ID	2019-004-2576
Status	Endorsed
Collection Type	Customer Collected

Sample temperature at time of receipt 9.6°C

Dissolved Organic Carbon T0158-07(ADEL)			18/07/2019
Dissolved Organic Carbon	1	17.3 mg/L	
Total Organic Carbon T0158-07(ADEL)			18/07/2019
Total Organic Carbon	1	24.8 mg/L	

Inorganic Chemistry - Physical	LOR	Result	Test Start Date
<i>Sample temperature at time of receipt 9.6°C</i>			
Alkalinity Carbonate Bicarbonate and Hydroxide T0101-01(ADEL)			12/07/2019
Alkalinity as Calcium Carbonate		211 mg/L	
Bicarbonate		258 mg/L	
Carbonate		0 mg/L	
Hydroxide		0 mg/L	
Conductivity & Total Dissolved Solids T0016-01(ADEL)			12/07/2019
Conductivity	2	101000 µS/cm	
Total Dissolved Solids (by EC)	1	86300 mg/L	
pH T0010-01(ADEL)			12/07/2019
pH		8.1 pH units	
Temperature at which pH is measured		21.9 °C	
Turbidity T0018-01(ADEL)			15/07/2019
Turbidity	0.1	39 NTU	

Inorganic Chemistry - Waste Water	LOR	Result	Test Start Date
<i>Sample temperature at time of receipt 9.6°C</i>			
Suspended Solids T0160-01(ADEL)			15/07/2019
Suspended Solids	1.0	64 mg/L	
Volatile Suspended Solids T0160-01(ADEL)			15/07/2019
Fixed Solids	1	26 mg/L	
Volatile Suspended Solids	1	38 mg/L	



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



FINAL REPORT: 257197

This report shall not be reproduced, except in full without the written permission of the laboratory.

Analytical Results

Sampling Point	300713-Tilley Swamp Drain D/S Northern Outlet
Sampled Date	10/07/2019 10:10:00AM
Sample Received Date	11/07/2019 1:32:11PM
Sample Analysis Completed	29/07/2019 5:22:59PM
Sample ID	*2019-004-2587
Status	Endorsed
Collection Type	Customer Collected

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

Sample temperature at time of receipt 9.6°C

Chlorophyll a & b T0380-02(ADEL) 11/07/2019

Chlorophyll a	0.1	1.76 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) 11/07/2019

Chlorophyll a	0.1	1.48 µg/L
Phaeophytin a	0.1	0.46 µg/L

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

Sample temperature at time of receipt 9.6°C

Ammonia as N T0100-01(ADEL) 22/07/2019

Ammonia as N	0.005	0.054 mg/L
--------------	-------	------------

Chloride T0104-02(ADEL) 15/07/2019

Chloride	4.0	2360 mg/L
----------	-----	-----------

Nitrate + Nitrite as N T0161-01(ADEL) 12/07/2019

Nitrate + Nitrite as N	0.003	0.843 mg/L
------------------------	-------	------------

Nitrogen - Total TMZ-M06(ADEL) 11/07/2019

Nitrogen - Total		1.38 mg/L
------------------	--	-----------

Phosphorus - Filterable Reactive as P T0108-01(ADEL) 12/07/2019

Phosphorus - Filterable Reactive as P	0.003	0.009 mg/L
---------------------------------------	-------	------------

Phosphorus - Total T0109-44(ADEL) 17/07/2019

Phosphorus - Total	0.005	0.015 mg/L
--------------------	-------	------------

Silica - Reactive T0111-01(ADEL) 15/07/2019

Silica - Reactive	0.05	11.4 mg/L
-------------------	------	-----------

TKN as N T0112-01(ADEL) 17/07/2019

TKN as Nitrogen	0.05	0.54 mg/L
-----------------	------	-----------

Organic Chemistry	LOR	Result	Test Start Date
-------------------	-----	--------	-----------------



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



FINAL REPORT: 257197

This report shall not be reproduced, except in full without the written permission of the laboratory.

Analytical Results

Sampling Point	300713-Tilley Swamp Drain D/S Northern Outlet
Sampled Date	10/07/2019 10:10:00AM
Sample Received Date	11/07/2019 1:32:11PM
Sample Analysis Completed	29/07/2019 5:22:59PM
Sample ID	*2019-004-2587
Status	Endorsed
Collection Type	Customer Collected

Sample temperature at time of receipt 9.6°C

Dissolved Organic Carbon T0158-09(ADEL) 29/07/2019

Dissolved Organic Carbon	1.0	3.8 mg/L
--------------------------	-----	----------

Total Organic Carbon T0158-09(ADEL) 29/07/2019

Total Organic Carbon	1.0	3.9 mg/L
----------------------	-----	----------

Inorganic Chemistry - Physical LOR Result Test Start Date

Sample temperature at time of receipt 9.6°C

Alkalinity Carbonate Bicarbonate and Hydroxide T0101-01(ADEL) 15/07/2019

Alkalinity as Calcium Carbonate	402 mg/L
Bicarbonate	490 mg/L
Carbonate	0 mg/L
Hydroxide	0 mg/L

Conductivity & Total Dissolved Solids T0016-01(ADEL) 15/07/2019

Conductivity	2	8520 µS/cm
Total Dissolved Solids (by EC)	1	4920 mg/L

pH T0010-01(ADEL) 15/07/2019

pH	8.3 pH units
Temperature at which pH is measured	22.2 °C

Turbidity T0018-01(ADEL) 15/07/2019

Turbidity	0.1	1.1 NTU
-----------	-----	---------

Inorganic Chemistry - Waste Water LOR Result Test Start Date

Sample temperature at time of receipt 9.6°C

Suspended Solids T0160-01(ADEL) 15/07/2019

Suspended Solids	1.0	5 mg/L
------------------	-----	--------

Volatile Suspended Solids T0160-01(ADEL) 15/07/2019

Fixed Solids	1	3 mg/L
Volatile Suspended Solids	1	2 mg/L



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



FINAL REPORT: 257197

This report shall not be reproduced, except in full without the written permission of the laboratory.

Analytical Results

Sampling Point	31514-EPA - Stoney Well
Sampled Date	10/07/2019 10:45:00AM
Sample Received Date	11/07/2019 1:33:28PM
Sample Analysis Completed	23/07/2019 11:59:05AM
Sample ID	2019-004-2582
Status	Endorsed
Collection Type	Customer Collected

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

Sample temperature at time of receipt 9.6°C

Chlorophyll a & b T0380-02(ADEL) 11/07/2019

Chlorophyll a	0.1	68.9 µg/L
Chlorophyll b	0.1	6.55 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) 11/07/2019

Chlorophyll a	0.1	59.4 µg/L
Phaeophytin a	0.1	18.5 µg/L

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

Sample temperature at time of receipt 9.6°C

Ammonia as N T0100-01(ADEL) 22/07/2019

Ammonia as N	0.005	<0.005 mg/L
--------------	-------	-------------

Chloride T0104-02(ADEL) 17/07/2019

Chloride	4.0	36300 mg/L
----------	-----	------------

Nitrate + Nitrite as N T0161-01(ADEL) 12/07/2019

Nitrate + Nitrite as N	0.003	<0.003 mg/L
------------------------	-------	-------------

Nitrogen - Total TMZ-M06(ADEL) 11/07/2019

Nitrogen - Total		5.44 mg/L
------------------	--	-----------

Phosphorus - Filterable Reactive as P T0108-01(ADEL) 12/07/2019

Phosphorus - Filterable Reactive as P	0.003	0.003 mg/L
---------------------------------------	-------	------------

Phosphorus - Total T0109-44(ADEL) 17/07/2019

Phosphorus - Total	0.005	0.240 mg/L
--------------------	-------	------------

Silica - Reactive T0111-01(ADEL) 15/07/2019

Silica - Reactive	0.05	2.03 mg/L
-------------------	------	-----------

TKN as N T0112-01(ADEL) 17/07/2019

TKN as Nitrogen	0.05	5.44 mg/L
-----------------	------	-----------

Organic Chemistry	LOR	Result	Test Start Date
-------------------	-----	--------	-----------------



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



FINAL REPORT: 257197

This report shall not be reproduced, except in full without the written permission of the laboratory.

Analytical Results

Sampling Point	31514-EPA - Stoney Well
Sampled Date	10/07/2019 10:45:00AM
Sample Received Date	11/07/2019 1:33:28PM
Sample Analysis Completed	23/07/2019 11:59:05AM
Sample ID	2019-004-2582
Status	Endorsed
Collection Type	Customer Collected

Sample temperature at time of receipt 9.6°C

Dissolved Organic Carbon T0158-07(ADEL)			18/07/2019
Dissolved Organic Carbon	1	18.8 mg/L	
Total Organic Carbon T0158-07(ADEL)			18/07/2019
Total Organic Carbon	1	23.8 mg/L	

Inorganic Chemistry - Physical	LOR	Result	Test Start Date
<hr/>			
<i>Sample temperature at time of receipt 9.6°C</i>			
Alkalinity Carbonate Bicarbonate and Hydroxide T0101-01(ADEL)			15/07/2019
Alkalinity as Calcium Carbonate		213 mg/L	
Bicarbonate		260 mg/L	
Carbonate		0 mg/L	
Hydroxide		0 mg/L	
Conductivity & Total Dissolved Solids T0016-01(ADEL)			15/07/2019
Conductivity	2	98700 µS/cm	
Total Dissolved Solids (by EC)	1	83700 mg/L	
pH T0010-01(ADEL)			15/07/2019
pH		8.1 pH units	
Temperature at which pH is measured		22.3 °C	
Turbidity T0018-01(ADEL)			15/07/2019
Turbidity	0.1	23 NTU	

Inorganic Chemistry - Waste Water	LOR	Result	Test Start Date
<hr/>			
<i>Sample temperature at time of receipt 9.6°C</i>			
Suspended Solids T0160-01(ADEL)			15/07/2019
Suspended Solids	1.0	110 mg/L	
Volatile Suspended Solids T0160-01(ADEL)			15/07/2019
Fixed Solids	1	60 mg/L	
Volatile Suspended Solids	1	50 mg/L	



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



FINAL REPORT: 257197

This report shall not be reproduced, except in full without the written permission of the laboratory.

Analytical Results

Sampling Point	31513-EPA - Parnka Point Boat Ramp
Sampled Date	10/07/2019 12:30:00PM
Sample Received Date	11/07/2019 1:33:08PM
Sample Analysis Completed	23/07/2019 11:59:15AM
Sample ID	2019-004-2584
Status	Endorsed
Collection Type	Customer Collected

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

Sample temperature at time of receipt 9.6°C

Chlorophyll a & b T0380-02(ADEL) 11/07/2019

Chlorophyll a	0.1	64.4 µg/L
Chlorophyll b	0.1	4.50 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) 11/07/2019

Chlorophyll a	0.1	54.7 µg/L
Phaeophytin a	0.1	18.1 µg/L

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

Sample temperature at time of receipt 9.6°C

Ammonia as N T0100-01(ADEL) 22/07/2019

Ammonia as N	0.005	<0.005 mg/L
--------------	-------	-------------

Chloride T0104-02(ADEL) 15/07/2019

Chloride	4.0	29700 mg/L
----------	-----	------------

Nitrate + Nitrite as N T0161-01(ADEL) 12/07/2019

Nitrate + Nitrite as N	0.003	0.003 mg/L
------------------------	-------	------------

Nitrogen - Total TMZ-M06(ADEL) 11/07/2019

Nitrogen - Total		4.88 mg/L
------------------	--	-----------

Phosphorus - Filterable Reactive as P T0108-01(ADEL) 12/07/2019

Phosphorus - Filterable Reactive as P	0.003	0.005 mg/L
---------------------------------------	-------	------------

Phosphorus - Total T0109-44(ADEL) 17/07/2019

Phosphorus - Total	0.005	0.249 mg/L
--------------------	-------	------------

Silica - Reactive T0111-01(ADEL) 15/07/2019

Silica - Reactive	0.05	1.19 mg/L
-------------------	------	-----------

TKN as N T0112-01(ADEL) 17/07/2019

TKN as Nitrogen	0.05	4.88 mg/L
-----------------	------	-----------

Organic Chemistry	LOR	Result	Test Start Date
-------------------	-----	--------	-----------------



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



FINAL REPORT: 257197

This report shall not be reproduced, except in full without the written permission of the laboratory.

Analytical Results

Sampling Point	31513-EPA - Parnka Point Boat Ramp
Sampled Date	10/07/2019 12:30:00PM
Sample Received Date	11/07/2019 1:33:08PM
Sample Analysis Completed	23/07/2019 11:59:15AM
Sample ID	2019-004-2584
Status	Endorsed
Collection Type	Customer Collected

Sample temperature at time of receipt 9.6°C

Dissolved Organic Carbon T0158-07(ADEL)			18/07/2019
Dissolved Organic Carbon	1	16.3 mg/L	
Total Organic Carbon T0158-07(ADEL)			18/07/2019
Total Organic Carbon	1	21.4 mg/L	

Inorganic Chemistry - Physical	LOR	Result	Test Start Date
Sample temperature at time of receipt 9.6°C			
Alkalinity Carbonate Bicarbonate and Hydroxide T0101-01(ADEL)			15/07/2019
Alkalinity as Calcium Carbonate		204 mg/L	
Bicarbonate		249 mg/L	
Carbonate		0 mg/L	
Hydroxide		0 mg/L	
Conductivity & Total Dissolved Solids T0016-01(ADEL)			15/07/2019
Conductivity	2	92200 µS/cm	
Total Dissolved Solids (by EC)	1	76400 mg/L	
pH T0010-01(ADEL)			15/07/2019
pH		8.1 pH units	
Temperature at which pH is measured		22.2 °C	
Turbidity T0018-01(ADEL)			15/07/2019
Turbidity	0.1	25 NTU	

Inorganic Chemistry - Waste Water	LOR	Result	Test Start Date
Sample temperature at time of receipt 9.6°C			
Suspended Solids T0160-01(ADEL)			15/07/2019
Suspended Solids	1.0	24 mg/L	
Volatile Suspended Solids T0160-01(ADEL)			15/07/2019
Fixed Solids	1	<1 mg/L	
Volatile Suspended Solids	1	24 mg/L	



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



FINAL REPORT: 257197

This report shall not be reproduced, except in full without the written permission of the laboratory.

Analytical Results

Sampling Point	31512-EPA - McGrath Flat North
Sampled Date	10/07/2019 1:30:00PM
Sample Received Date	11/07/2019 1:32:50PM
Sample Analysis Completed	23/07/2019 11:59:05AM
Sample ID	2019-004-2583
Status	Endorsed
Collection Type	Customer Collected

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

Sample temperature at time of receipt 9.6°C

Chlorophyll a & b T0380-02(ADEL) 11/07/2019

Chlorophyll a	0.1	38.7 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) 11/07/2019

Chlorophyll a	0.1	32.0 µg/L
Phaeophytin a	0.1	12.3 µg/L

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

Sample temperature at time of receipt 9.6°C

Ammonia as N T0100-01(ADEL) 22/07/2019

Ammonia as N	0.005	<0.005 mg/L
--------------	-------	-------------

Chloride T0104-02(ADEL) 15/07/2019

Chloride	4.0	28800 mg/L
----------	-----	------------

Nitrate + Nitrite as N T0161-01(ADEL) 12/07/2019

Nitrate + Nitrite as N	0.003	0.004 mg/L
------------------------	-------	------------

Nitrogen - Total TMZ-M06(ADEL) 11/07/2019

Nitrogen - Total		3.79 mg/L
------------------	--	-----------

Phosphorus - Filterable Reactive as P T0108-01(ADEL) 12/07/2019

Phosphorus - Filterable Reactive as P	0.003	0.008 mg/L
---------------------------------------	-------	------------

Phosphorus - Total T0109-44(ADEL) 17/07/2019

Phosphorus - Total	0.005	0.172 mg/L
--------------------	-------	------------

Silica - Reactive T0111-01(ADEL) 15/07/2019

Silica - Reactive	0.05	0.56 mg/L
-------------------	------	-----------

TKN as N T0112-01(ADEL) 17/07/2019

TKN as Nitrogen	0.05	3.79 mg/L
-----------------	------	-----------

Organic Chemistry	LOR	Result	Test Start Date
-------------------	-----	--------	-----------------



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



FINAL REPORT: 257197

This report shall not be reproduced, except in full without the written permission of the laboratory.

Analytical Results

Sampling Point	31512-EPA - McGrath Flat North
Sampled Date	10/07/2019 1:30:00PM
Sample Received Date	11/07/2019 1:32:50PM
Sample Analysis Completed	23/07/2019 11:59:05AM
Sample ID	2019-004-2583
Status	Endorsed
Collection Type	Customer Collected

Sample temperature at time of receipt 9.6°C

Dissolved Organic Carbon T0158-07(ADEL)			18/07/2019
Dissolved Organic Carbon	1	15.7 mg/L	
Total Organic Carbon T0158-07(ADEL)			18/07/2019
Total Organic Carbon	1	19.0 mg/L	

Inorganic Chemistry - Physical	LOR	Result	Test Start Date
<hr/>			
<i>Sample temperature at time of receipt 9.6°C</i>			
Alkalinity Carbonate Bicarbonate and Hydroxide T0101-01(ADEL)			15/07/2019
Alkalinity as Calcium Carbonate		207 mg/L	
Bicarbonate		252 mg/L	
Carbonate		0 mg/L	
Hydroxide		0 mg/L	
Conductivity & Total Dissolved Solids T0016-01(ADEL)			15/07/2019
Conductivity	2	87500 µS/cm	
Total Dissolved Solids (by EC)	1	71200 mg/L	
pH T0010-01(ADEL)			15/07/2019
pH		8.2 pH units	
Temperature at which pH is measured		22.2 °C	
Turbidity T0018-01(ADEL)			15/07/2019
Turbidity	0.1	25 NTU	

Inorganic Chemistry - Waste Water	LOR	Result	Test Start Date
<hr/>			
<i>Sample temperature at time of receipt 9.6°C</i>			
Suspended Solids T0160-01(ADEL)			12/07/2019
Suspended Solids	1.0	65 mg/L	
Volatile Suspended Solids T0160-01(ADEL)			12/07/2019
Fixed Solids	1	35 mg/L	
Volatile Suspended Solids	1	30 mg/L	



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



FINAL REPORT: 257197

This report shall not be reproduced, except in full without the written permission of the laboratory.

Analytical Results

Sampling Point	31523-EPA - Long Point
Sampled Date	10/07/2019 2:45:00PM
Sample Received Date	11/07/2019 1:35:22PM
Sample Analysis Completed	23/07/2019 11:59:16AM
Sample ID	*2019-004-2575
Status	Endorsed
Collection Type	Customer Collected

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

Sample temperature at time of receipt 9.6°C

Chlorophyll a & b T0380-02(ADEL) 11/07/2019

Chlorophyll a	0.1	28.7 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) 11/07/2019

Chlorophyll a	0.1	16.9 µg/L
Phaeophytin a	0.1	19.8 µg/L

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

Sample temperature at time of receipt 9.6°C

Ammonia as N T0100-01(ADEL) 22/07/2019

Ammonia as N	0.005	<0.005 mg/L
--------------	-------	-------------

Chloride T0104-02(ADEL) 15/07/2019

Chloride	4.0	15500 mg/L
----------	-----	------------

Nitrate + Nitrite as N T0161-01(ADEL) 12/07/2019

Nitrate + Nitrite as N	0.003	0.009 mg/L
------------------------	-------	------------

Nitrogen - Total TMZ-M06(ADEL) 11/07/2019

Nitrogen - Total		1.30 mg/L
------------------	--	-----------

Phosphorus - Filterable Reactive as P T0108-01(ADEL) 12/07/2019

Phosphorus - Filterable Reactive as P	0.003	0.007 mg/L
---------------------------------------	-------	------------

Phosphorus - Total T0109-44(ADEL) 17/07/2019

Phosphorus - Total	0.005	0.129 mg/L
--------------------	-------	------------

Silica - Reactive T0111-01(ADEL) 15/07/2019

Silica - Reactive	0.05	0.14 mg/L
-------------------	------	-----------

TKN as N T0112-01(ADEL) 17/07/2019

TKN as Nitrogen	0.05	1.29 mg/L
-----------------	------	-----------

Organic Chemistry	LOR	Result	Test Start Date
-------------------	-----	--------	-----------------



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



FINAL REPORT: 257197

This report shall not be reproduced, except in full without the written permission of the laboratory.

Analytical Results

Sampling Point	31523-EPA - Long Point
Sampled Date	10/07/2019 2:45:00PM
Sample Received Date	11/07/2019 1:35:22PM
Sample Analysis Completed	23/07/2019 11:59:16AM
Sample ID	*2019-004-2575
Status	Endorsed
Collection Type	Customer Collected

Sample temperature at time of receipt 9.6°C

Dissolved Organic Carbon T0158-07(ADEL)			18/07/2019
Dissolved Organic Carbon	1	8.0 mg/L	
Total Organic Carbon T0158-07(ADEL)			18/07/2019
Total Organic Carbon	1	9.7 mg/L	

Inorganic Chemistry - Physical	LOR	Result	Test Start Date
<i>Sample temperature at time of receipt 9.6°C</i>			
Alkalinity Carbonate Bicarbonate and Hydroxide T0101-01(ADEL)			15/07/2019
Alkalinity as Calcium Carbonate		143 mg/L	
Bicarbonate		175 mg/L	
Carbonate		0 mg/L	
Hydroxide		0 mg/L	
Conductivity & Total Dissolved Solids T0016-01(ADEL)			15/07/2019
Conductivity	2	44700 µS/cm	
Total Dissolved Solids (by EC)	1	30700 mg/L	
pH T0010-01(ADEL)			15/07/2019
pH		8.1 pH units	
Temperature at which pH is measured		22.3 °C	
Turbidity T0018-01(ADEL)			15/07/2019
Turbidity	0.1	29 NTU	

Inorganic Chemistry - Waste Water	LOR	Result	Test Start Date
<i>Sample temperature at time of receipt 9.6°C</i>			
Suspended Solids T0160-01(ADEL)			15/07/2019
Suspended Solids	1.0	61 mg/L	
Volatile Suspended Solids T0160-01(ADEL)			15/07/2019
Fixed Solids	1	47 mg/L	
Volatile Suspended Solids	1	14 mg/L	



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



FINAL REPORT: 257197

This report shall not be reproduced, except in full without the written permission of the laboratory.

Analytical Results

Sampling Point	353180-EPA - Tauwitschere
Sampled Date	10/07/2019 3:55:00PM
Sample Received Date	11/07/2019 1:36:17PM
Sample Analysis Completed	23/07/2019 11:59:04AM
Sample ID	*2019-004-2574
Status	Endorsed
Collection Type	Customer Collected

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

Sample temperature at time of receipt 9.6°C

Chlorophyll a & b T0380-02(ADEL) 11/07/2019

Chlorophyll a	0.1	73.5 µg/L
Chlorophyll b	0.1	5.36 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) 11/07/2019

Chlorophyll a	0.1	50.1 µg/L
Phaeophytin a	0.1	41.7 µg/L

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

Sample temperature at time of receipt 9.6°C

Ammonia as N T0100-01(ADEL) 22/07/2019

Ammonia as N	0.005	0.210 mg/L
--------------	-------	------------

Chloride T0104-02(ADEL) 15/07/2019

Chloride	4.0	5090 mg/L
----------	-----	-----------

Nitrate + Nitrite as N T0161-01(ADEL) 12/07/2019

Nitrate + Nitrite as N	0.003	0.032 mg/L
------------------------	-------	------------

Nitrogen - Total TMZ-M06(ADEL) 11/07/2019

Nitrogen - Total		2.45 mg/L
------------------	--	-----------

Phosphorus - Filterable Reactive as P T0108-01(ADEL) 12/07/2019

Phosphorus - Filterable Reactive as P	0.003	0.003 mg/L
---------------------------------------	-------	------------

Phosphorus - Total T0109-44(ADEL) 17/07/2019

Phosphorus - Total	0.005	0.198 mg/L
--------------------	-------	------------

Silica - Reactive T0111-01(ADEL) 15/07/2019

Silica - Reactive	0.05	0.18 mg/L
-------------------	------	-----------

TKN as N T0112-01(ADEL) 17/07/2019

TKN as Nitrogen	0.05	2.42 mg/L
-----------------	------	-----------

Organic Chemistry	LOR	Result	Test Start Date
-------------------	-----	--------	-----------------



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



FINAL REPORT: 257197

This report shall not be reproduced, except in full without the written permission of the laboratory.

Analytical Results

Sampling Point	353180-EPA - Tauwitschere
Sampled Date	10/07/2019 3:55:00PM
Sample Received Date	11/07/2019 1:36:17PM
Sample Analysis Completed	23/07/2019 11:59:04AM
Sample ID	*2019-004-2574
Status	Endorsed
Collection Type	Customer Collected

Sample temperature at time of receipt 9.6°C

Dissolved Organic Carbon T0158-07(ADEL) 18/07/2019

Dissolved Organic Carbon	1	7.8 mg/L
--------------------------	---	----------

Total Organic Carbon T0158-07(ADEL) 18/07/2019

Total Organic Carbon	1	19.5 mg/L
----------------------	---	-----------

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

Sample temperature at time of receipt 9.6°C

Alkalinity Carbonate Bicarbonate and Hydroxide T0101-01(ADEL) 15/07/2019

Alkalinity as Calcium Carbonate		113 mg/L
Bicarbonate		138 mg/L
Carbonate		0 mg/L
Hydroxide		0 mg/L

Conductivity & Total Dissolved Solids T0016-01(ADEL) 15/07/2019

Conductivity	2	4170 µS/cm
Total Dissolved Solids (by EC)	1	2350 mg/L

pH T0010-01(ADEL) 15/07/2019

pH		7.9 pH units
Temperature at which pH is measured		22.3 °C

Turbidity T0018-01(ADEL) 15/07/2019

Turbidity	0.1	62 NTU
-----------	-----	--------

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

Sample temperature at time of receipt 9.6°C

Suspended Solids T0160-01(ADEL) 15/07/2019

Suspended Solids	1.0	290 mg/L
------------------	-----	----------

Volatile Suspended Solids T0160-01(ADEL) 15/07/2019

Fixed Solids	1	195 mg/L
Volatile Suspended Solids	1	95 mg/L



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



FINAL REPORT: 257197

This report shall not be reproduced, except in full without the written permission of the laboratory.

Analytical Results

Sampling Point	300712-Tilley Swamp Watercourse Outlet Channel
Sampled Date	24/07/2019 10:00:00AM
Sample Received Date	25/07/2019 11:53:39AM
Sample Analysis Completed	8/08/2019 12:43:21PM
Sample ID	2019-004-2589
Status	Endorsed
Collection Type	Customer Collected

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

Sample temperature at time of receipt 9.6°C

Chlorophyll a & b T0380-02(ADEL) 25/07/2019

Chlorophyll a	0.1	3.81 µg/L
Chlorophyll b	0.1	0.19 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) 25/07/2019

Chlorophyll a	0.1	3.03 µg/L
Phaeophytin a	0.1	1.40 µg/L

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

Sample temperature at time of receipt 9.6°C

Ammonia as N T0100-01(ADEL) 31/07/2019

Ammonia as N	0.005	0.048 mg/L
--------------	-------	------------

Chloride T0104-02(ADEL) 25/07/2019

Chloride	4.0	2800 mg/L
----------	-----	-----------

Nitrate + Nitrite as N T0161-01(ADEL) 26/07/2019

Nitrate + Nitrite as N	0.003	1.00 mg/L
------------------------	-------	-----------

Nitrogen - Total TMZ-M06(ADEL) 25/07/2019

Nitrogen - Total		1.45 mg/L
------------------	--	-----------

Phosphorus - Filterable Reactive as P T0108-01(ADEL) 26/07/2019

Phosphorus - Filterable Reactive as P	0.003	0.010 mg/L
---------------------------------------	-------	------------

Phosphorus - Total T0109-44(ADEL) 29/07/2019

Phosphorus - Total	0.005	0.015 mg/L
--------------------	-------	------------

Silica - Reactive T0111-01(ADEL) 25/07/2019

Silica - Reactive	0.05	9.91 mg/L
-------------------	------	-----------

TKN as N T0112-01(ADEL) 29/07/2019

TKN as Nitrogen	0.05	0.45 mg/L
-----------------	------	-----------

Organic Chemistry	LOR	Result	Test Start Date
-------------------	-----	--------	-----------------



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



FINAL REPORT: 257197

This report shall not be reproduced, except in full without the written permission of the laboratory.

Analytical Results

Sampling Point	300712-Tilley Swamp Watercourse Outlet Channel
Sampled Date	24/07/2019 10:00:00AM
Sample Received Date	25/07/2019 11:53:39AM
Sample Analysis Completed	8/08/2019 12:43:21PM
Sample ID	2019-004-2589
Status	Endorsed
Collection Type	Customer Collected

Sample temperature at time of receipt 9.6°C

Dissolved Organic Carbon T0158-07(ADEL) 01/08/2019

Dissolved Organic Carbon	1	5.4 mg/L
--------------------------	---	----------

Total Organic Carbon T0158-07(ADEL) 01/08/2019

Total Organic Carbon	1	4.9 mg/L
----------------------	---	----------

Inorganic Chemistry - Physical LOR Result Test Start Date

Sample temperature at time of receipt 9.6°C

Alkalinity Carbonate Bicarbonate and Hydroxide T0101-01(ADEL) 25/07/2019

Alkalinity as Calcium Carbonate	395 mg/L
Bicarbonate	453 mg/L
Carbonate	14 mg/L
Hydroxide	0 mg/L

Conductivity & Total Dissolved Solids T0016-01(ADEL) 25/07/2019

Conductivity	2	9510 µS/cm
Total Dissolved Solids (by EC)	1	5520 mg/L

pH T0010-01(ADEL) 25/07/2019

pH	8.5 pH units
Temperature at which pH is measured	22.0 °C

Turbidity T0018-01(ADEL) 25/07/2019

Turbidity	0.1	5.3 NTU
-----------	-----	---------

Inorganic Chemistry - Waste Water LOR Result Test Start Date

Sample temperature at time of receipt 9.6°C

Suspended Solids T0160-01(ADEL) 31/07/2019

Suspended Solids	1.0	8 mg/L
------------------	-----	--------

Volatile Suspended Solids T0160-01(ADEL) 31/07/2019

Fixed Solids	1	5 mg/L
Volatile Suspended Solids	1	3 mg/L



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



FINAL REPORT: 257197

This report shall not be reproduced, except in full without the written permission of the laboratory.

AWQC Signatories

Dzung Bui - Supervisor Metals and Physical

Ivana Cech - Technical Officer Chemistry

Kerrie Davey - Supervisor Nutrients and Waste

Thuy Diep - Technical Officer Chemistry

David Evans - Technical Officer Chemistry

Qiong Huang - Senior Chemist

John Martini - Method Development Coordinator

Andrew Mlynowskyj - Technical Officer Chemistry

Melissa Phillips - Technical Officer Chemistry

Gayle Polley - Snr Technical Officer

Elloise Trotta - Technical Officer Life Science

Lyudmila Tsymbal - Technical Officer Life Science



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



FINAL REPORT: 257197

This report shall not be reproduced, except in full without the written permission of the laboratory.

Incidents

Sample ID	S.Point	Description	Sampled Date	Analysis (where Applicable)	Incident Description
2019-004-2586	300711	Tilley Swamp Drain U/S Morella	10/07/2019	Dissolved Organic Carbon	DOC > TOC but within method uncertainty
2019-004-2587	300713	Tilley Swamp Drain D/S Northern Outlet	10/07/2019	Dissolved Organic Carbon	DOC > TOC but within method uncertainty

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
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
T0158-09	Total and Dissolved Organic Carbon (Shimadzu TOC VCSH)	SM5310B
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



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. 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.