

CERTIFICATE OF ANALYSIS

Work Order : **EP2100185**
Client : **GASCOYNE WATER COOPERATIVE LTD**
Contact : MISS LISA HODSON
Address : 50 BOUNDARY ROAD PO BOX 5
 CARNARVON WESTERN AUSTRALIA, AUSTRALIA 6701
Telephone : +61 08 9941 4488
Project : 2020 ANNUAL WATER SAMPLING
Order number : 553
C-O-C number : ----
Sampler : KATE CHAPLIN
Site : ----
Quote number : EP/1012/19_V3
No. of samples received : 1
No. of samples analysed : 1

Page : 1 of 2
Laboratory : Environmental Division Perth
Contact : Marnie Thomsett
Address : 26 Rigali Way Wangara WA Australia 6065
Telephone : 08 9406 1311
Date Samples Received : 08-Jan-2021 11:00
Date Analysis Commenced : 08-Jan-2021
Issue Date : 13-Jan-2021 08:27



Accreditation No. 825
 Accredited for compliance with
 ISO/IEC 17025 - Testing

This report supersedes any previous report(s) with this reference. Results apply to the sample(s) as submitted, unless the sampling was conducted by ALS. This document shall not be reproduced, except in full.

This Certificate of Analysis contains the following information:

- General Comments
- Analytical Results

Additional information pertinent to this report will be found in the following separate attachments: Quality Control Report, QA/QC Compliance Assessment to assist with Quality Review and Sample Receipt Notification.

Signatories

This document has been electronically signed by the authorized signatories below. Electronic signing is carried out in compliance with procedures specified in 21 CFR Part 11.

<i>Signatories</i>	<i>Position</i>	<i>Accreditation Category</i>
Vinitha Kesavan	Analyst	Perth Microbiology, Wangara, WA



General Comments

The analytical procedures used by ALS have been developed from established internationally recognised procedures such as those published by the USEPA, APHA, AS and NEPM. In house developed procedures are fully validated and are often at the client request.

Where moisture determination has been performed, results are reported on a dry weight basis.

Where a reported less than (<) result is higher than the LOR, this may be due to primary sample extract/digestate dilution and/or insufficient sample for analysis.

Where the LOR of a reported result differs from standard LOR, this may be due to high moisture content, insufficient sample (reduced weight employed) or matrix interference.

When sampling time information is not provided by the client, sampling dates are shown without a time component. In these instances, the time component has been assumed by the laboratory for processing purposes.

Where a result is required to meet compliance limits the associated uncertainty must be considered. Refer to the ALS Contact for details.

Key : CAS Number = CAS registry number from database maintained by Chemical Abstracts Services. The Chemical Abstracts Service is a division of the American Chemical Society.
 LOR = Limit of reporting
 ^ = This result is computed from individual analyte detections at or above the level of reporting
 ø = ALS is not NATA accredited for these tests.
 ~ = Indicates an estimated value.

- MF = membrane filtration
- CFU = colony forming unit
- Microbiological Comment: In accordance with ALS work instruction QWI-MIC/04, membrane filtration result is reported an approximate (~) when the count of colonies on the filtered membrane is outside the range of 10 - 100cfu.
- MW006 is ALS's internal code and is equivalent to AS4276.7.
- MW007 is ALS's internal code and is equivalent to AS4276.5.

Analytical Results

Sub-Matrix: **WATER**
 (Matrix: **WATER**)

				Sample ID	Bore 2/10	----	----	----	----
				Sampling date / time	07-Jan-2021 12:30	----	----	----	----
Compound	CAS Number	LOR	Unit	EP2100185-001	-----	-----	-----	-----	-----
				Result	----	----	----	----	----
MW006: Faecal Coliforms & E.coli by MF									
Faecal Coliforms	----	1	CFU/100mL	<1	----	----	----	----	----
<i>Escherichia coli</i>	----	1	CFU/100mL	<1	----	----	----	----	----
MW007: Coliforms by MF									
Coliforms	----	1	CFU/100mL	<1	----	----	----	----	----

CERTIFICATE OF ANALYSIS

Work Order : **EP2013803**
Client : **GASCOYNE WATER COOPERATIVE LTD**
Contact : MISS LISA HODSON
Address : 50 BOUNDARY ROAD PO BOX 5
 CARNARVON WESTERN AUSTRALIA, AUSTRALIA 6701
Telephone : +61 08 9941 4488
Project : 2020 ANNUAL WATER SAMPLING
Order number : 553
C-O-C number : ----
Sampler : Kylie Chaplin
Site : ----
Quote number : EP/1012/19
No. of samples received : 17
No. of samples analysed : 17

Page : 1 of 10
Laboratory : Environmental Division Perth
Contact : Marnie Thomsett
Address : 26 Rigali Way Wangara WA Australia 6065
Telephone : 08 9406 1311
Date Samples Received : 10-Dec-2020 11:00
Date Analysis Commenced : 10-Dec-2020
Issue Date : 17-Dec-2020 07:15



Accreditation No. 825
 Accredited for compliance with
 ISO/IEC 17025 - Testing

This report supersedes any previous report(s) with this reference. Results apply to the sample(s) as submitted, unless the sampling was conducted by ALS. This document shall not be reproduced, except in full.

This Certificate of Analysis contains the following information:

- General Comments
- Analytical Results

Additional information pertinent to this report will be found in the following separate attachments: Quality Control Report, QA/QC Compliance Assessment to assist with Quality Review and Sample Receipt Notification.

Signatories

This document has been electronically signed by the authorized signatories below. Electronic signing is carried out in compliance with procedures specified in 21 CFR Part 11.

<i>Signatories</i>	<i>Position</i>	<i>Accreditation Category</i>
Chris Lemaitre	Laboratory Manager (Perth)	Perth Inorganics, Wangara, WA
Vinitha Kesavan	Analyst	Perth Microbiology, Wangara, WA



General Comments

The analytical procedures used by ALS have been developed from established internationally recognised procedures such as those published by the USEPA, APHA, AS and NEPM. In house developed procedures are fully validated and are often at the client request.

Where moisture determination has been performed, results are reported on a dry weight basis.

Where a reported less than (<) result is higher than the LOR, this may be due to primary sample extract/digestate dilution and/or insufficient sample for analysis.

Where the LOR of a reported result differs from standard LOR, this may be due to high moisture content, insufficient sample (reduced weight employed) or matrix interference.

When sampling time information is not provided by the client, sampling dates are shown without a time component. In these instances, the time component has been assumed by the laboratory for processing purposes.

Where a result is required to meet compliance limits the associated uncertainty must be considered. Refer to the ALS Contact for details.

Key : CAS Number = CAS registry number from database maintained by Chemical Abstracts Services. The Chemical Abstracts Service is a division of the American Chemical Society.
LOR = Limit of reporting
^ = This result is computed from individual analyte detections at or above the level of reporting
ø = ALS is not NATA accredited for these tests.
~ = Indicates an estimated value.

- MF = membrane filtration
- CFU = colony forming unit
- EG020: It is recognised that total boron and zinc concentrations are less than dissolved for various samples. However, the difference is within experimental variation of the methods.
- Microbiological Comment: In accordance with ALS work instruction QWI-MIC/04, membrane filtration result is reported an approximate (~) when the count of colonies on the filtered membrane is outside the range of 10 - 100cfu.
- Ionic balances were calculated using: major anions - chloride, alkalinity and sulfate; and major cations - calcium, magnesium, potassium and sodium.
- MW006 is ALS's internal code and is equivalent to AS4276.7.
- Sodium Adsorption Ratio (where reported): Where results for Na, Ca or Mg are <LOR, a concentration at half the reported LOR is incorporated into the SAR calculation. This represents a conservative approach for Na relative to the assumption that <LOR = zero concentration and a conservative approach for Ca & Mg relative to the assumption that <LOR is equivalent to the LOR concentration.



Analytical Results

Sub-Matrix: WATER (Matrix: WATER)				Sample ID	B52/14	B66/14	B59/14	B78/15	B1/15
Sampling date / time				09-Dec-2020 09:00	09-Dec-2020 09:10	09-Dec-2020 09:20	09-Dec-2020 09:33	09-Dec-2020 09:56	
Compound	CAS Number	LOR	Unit	EP2013803-001	EP2013803-002	EP2013803-003	EP2013803-004	EP2013803-005	
				Result	Result	Result	Result	Result	
EA005P: pH by PC Titrator									
pH Value	----	0.01	pH Unit	7.99	8.02	8.00	8.16	7.89	
EA010P: Conductivity by PC Titrator									
Electrical Conductivity @ 25°C	----	1	µS/cm	806	960	1100	728	862	
EA015: Total Dissolved Solids dried at 180 ± 5 °C									
Total Dissolved Solids @180°C	----	10	mg/L	588	620	792	456	502	
ED037P: Alkalinity by PC Titrator									
Hydroxide Alkalinity as CaCO3	DMO-210-001	1	mg/L	<1	<1	<1	<1	<1	
Carbonate Alkalinity as CaCO3	3812-32-6	1	mg/L	<1	<1	<1	<1	<1	
Bicarbonate Alkalinity as CaCO3	71-52-3	1	mg/L	80	83	80	125	81	
Total Alkalinity as CaCO3	----	1	mg/L	80	83	80	125	81	
ED041G: Sulfate (Turbidimetric) as SO4 2- by DA									
Sulfate as SO4 - Turbidimetric	14808-79-8	1	mg/L	59	57	89	49	70	
ED045G: Chloride by Discrete Analyser									
Chloride	16887-00-6	1	mg/L	213	239	273	127	194	
ED093F: Dissolved Major Cations									
Calcium	7440-70-2	1	mg/L	49	46	77	47	24	
Magnesium	7439-95-4	1	mg/L	21	26	26	22	12	
Sodium	7440-23-5	1	mg/L	78	97	88	67	137	
Potassium	7440-09-7	1	mg/L	8	10	9	10	12	
ED093F: SAR and Hardness Calculations									
Total Hardness as CaCO3	----	1	mg/L	209	222	299	208	109	
EG020F: Dissolved Metals by ICP-MS									
Aluminium	7429-90-5	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	
Arsenic	7440-38-2	0.001	mg/L	0.002	0.001	<0.001	0.001	0.001	
Cadmium	7440-43-9	0.0001	mg/L	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	
Copper	7440-50-8	0.001	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001	
Lead	7439-92-1	0.001	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001	
Manganese	7439-96-5	0.001	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001	
Molybdenum	7439-98-7	0.001	mg/L	<0.001	0.002	<0.001	<0.001	0.013	
Selenium	7782-49-2	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	
Zinc	7440-66-6	0.005	mg/L	0.005	<0.005	0.008	0.005	<0.005	
Boron	7440-42-8	0.05	mg/L	0.19	0.25	0.19	0.22	0.43	
Iron	7439-89-6	0.05	mg/L	<0.05	<0.05	<0.05	<0.05	<0.05	
EG020T: Total Metals by ICP-MS									



Analytical Results

Sub-Matrix: WATER (Matrix: WATER)				Sample ID	B52/14	B66/14	B59/14	B78/15	B1/15
Sampling date / time				09-Dec-2020 09:00	09-Dec-2020 09:10	09-Dec-2020 09:20	09-Dec-2020 09:33	09-Dec-2020 09:56	
Compound	CAS Number	LOR	Unit	EP2013803-001	EP2013803-002	EP2013803-003	EP2013803-004	EP2013803-005	
				Result	Result	Result	Result	Result	
EG020T: Total Metals by ICP-MS - Continued									
Aluminium	7429-90-5	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	
Arsenic	7440-38-2	0.001	mg/L	0.002	0.002	<0.001	0.002	0.002	
Cadmium	7440-43-9	0.0001	mg/L	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	
Copper	7440-50-8	0.001	mg/L	0.002	0.001	0.001	0.002	0.002	
Lead	7439-92-1	0.001	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001	
Manganese	7439-96-5	0.001	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001	
Molybdenum	7439-98-7	0.001	mg/L	<0.001	0.002	<0.001	<0.001	0.016	
Selenium	7782-49-2	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	
Zinc	7440-66-6	0.005	mg/L	<0.005	<0.005	0.009	<0.005	<0.005	
Boron	7440-42-8	0.05	mg/L	0.18	0.25	0.19	0.22	0.43	
Iron	7439-89-6	0.05	mg/L	<0.05	<0.05	<0.05	<0.05	<0.05	
EG052G: Silica by Discrete Analyser									
Reactive Silica	----	0.05	mg/L	50.1	37.8	39.7	56.0	40.4	
EK040P: Fluoride by PC Titrator									
Fluoride	16984-48-8	0.1	mg/L	0.2	0.4	0.2	0.3	1.3	
EK057G: Nitrite as N by Discrete Analyser									
Nitrite as N	14797-65-0	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	
EK058G: Nitrate as N by Discrete Analyser									
Nitrate as N	14797-55-8	0.01	mg/L	0.79	0.52	0.55	0.70	0.42	
EK059G: Nitrite plus Nitrate as N (NOx) by Discrete Analyser									
Nitrite + Nitrate as N	----	0.01	mg/L	0.79	0.52	0.55	0.70	0.42	
EN055: Ionic Balance									
∅ Total Anions	----	0.01	meq/L	8.84	9.59	11.2	7.10	8.55	
∅ Total Cations	----	0.01	meq/L	7.77	8.91	10.0	7.33	8.45	
∅ Ionic Balance	----	0.01	%	6.41	3.66	5.25	1.56	0.57	
MW006: Faecal Coliforms & E.coli by MF									
<i>Escherichia coli</i>	----	1	CFU/100mL	<1	<1	<1	<1	<1	



Analytical Results

Sub-Matrix: WATER (Matrix: WATER)				Sample ID	B22/14	B5/16	B11/13	B1/10	B3/10
Sampling date / time				09-Dec-2020 10:05	09-Dec-2020 10:12	09-Dec-2020 10:22	09-Dec-2020 10:50	09-Dec-2020 11:16	
Compound	CAS Number	LOR	Unit	EP2013803-006	EP2013803-007	EP2013803-008	EP2013803-009	EP2013803-010	
				Result	Result	Result	Result	Result	
EA005P: pH by PC Titrator									
pH Value	----	0.01	pH Unit	7.66	7.94	8.03	8.03	7.76	
EA010P: Conductivity by PC Titrator									
Electrical Conductivity @ 25°C	----	1	µS/cm	959	626	1180	1500	1000	
EA015: Total Dissolved Solids dried at 180 ± 5 °C									
Total Dissolved Solids @180°C	----	10	mg/L	592	380	670	867	664	
ED037P: Alkalinity by PC Titrator									
Hydroxide Alkalinity as CaCO3	DMO-210-001	1	mg/L	<1	<1	<1	<1	<1	
Carbonate Alkalinity as CaCO3	3812-32-6	1	mg/L	<1	<1	<1	<1	<1	
Bicarbonate Alkalinity as CaCO3	71-52-3	1	mg/L	79	74	127	130	93	
Total Alkalinity as CaCO3	----	1	mg/L	79	74	127	130	93	
ED041G: Sulfate (Turbidimetric) as SO4 2- by DA									
Sulfate as SO4 - Turbidimetric	14808-79-8	1	mg/L	73	51	110	96	49	
ED045G: Chloride by Discrete Analyser									
Chloride	16887-00-6	1	mg/L	230	118	240	374	254	
ED093F: Dissolved Major Cations									
Calcium	7440-70-2	1	mg/L	45	13	14	23	47	
Magnesium	7439-95-4	1	mg/L	23	10	9	13	22	
Sodium	7440-23-5	1	mg/L	109	96	213	267	116	
Potassium	7440-09-7	1	mg/L	10	13	12	13	11	
ED093F: SAR and Hardness Calculations									
Total Hardness as CaCO3	----	1	mg/L	207	74	72	111	208	
EG020F: Dissolved Metals by ICP-MS									
Aluminium	7429-90-5	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	
Arsenic	7440-38-2	0.001	mg/L	<0.001	0.001	0.002	0.002	<0.001	
Cadmium	7440-43-9	0.0001	mg/L	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	
Copper	7440-50-8	0.001	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001	
Lead	7439-92-1	0.001	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001	
Manganese	7439-96-5	0.001	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001	
Molybdenum	7439-98-7	0.001	mg/L	0.002	0.009	0.011	0.013	0.002	
Selenium	7782-49-2	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	
Zinc	7440-66-6	0.005	mg/L	0.005	<0.005	<0.005	<0.005	0.006	
Boron	7440-42-8	0.05	mg/L	0.26	0.45	1.68	2.02	0.43	
Iron	7439-89-6	0.05	mg/L	<0.05	<0.05	<0.05	<0.05	<0.05	
EG020T: Total Metals by ICP-MS									



Analytical Results

Sub-Matrix: WATER (Matrix: WATER)				Sample ID	B22/14	B5/16	B11/13	B1/10	B3/10
Sampling date / time				09-Dec-2020 10:05	09-Dec-2020 10:12	09-Dec-2020 10:22	09-Dec-2020 10:50	09-Dec-2020 11:16	
Compound	CAS Number	LOR	Unit	EP2013803-006	EP2013803-007	EP2013803-008	EP2013803-009	EP2013803-010	
				Result	Result	Result	Result	Result	
EG020T: Total Metals by ICP-MS - Continued									
Aluminium	7429-90-5	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	
Arsenic	7440-38-2	0.001	mg/L	<0.001	0.002	0.003	0.002	<0.001	
Cadmium	7440-43-9	0.0001	mg/L	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	
Copper	7440-50-8	0.001	mg/L	0.002	0.002	<0.001	0.002	0.002	
Lead	7439-92-1	0.001	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001	
Manganese	7439-96-5	0.001	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001	
Molybdenum	7439-98-7	0.001	mg/L	0.002	0.011	0.013	0.016	0.002	
Selenium	7782-49-2	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	
Zinc	7440-66-6	0.005	mg/L	<0.005	<0.005	<0.005	<0.005	<0.005	
Boron	7440-42-8	0.05	mg/L	0.25	0.44	1.61	1.85	0.36	
Iron	7439-89-6	0.05	mg/L	<0.05	<0.05	<0.05	<0.05	<0.05	
EG052G: Silica by Discrete Analyser									
Reactive Silica	----	0.05	mg/L	36.5	57.0	44.4	49.6	61.5	
EK040P: Fluoride by PC Titrator									
Fluoride	16984-48-8	0.1	mg/L	0.3	1.3	1.5	1.6	0.4	
EK057G: Nitrite as N by Discrete Analyser									
Nitrite as N	14797-65-0	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	
EK058G: Nitrate as N by Discrete Analyser									
Nitrate as N	14797-55-8	0.01	mg/L	0.98	0.70	0.67	0.65	1.22	
EK059G: Nitrite plus Nitrate as N (NOx) by Discrete Analyser									
Nitrite + Nitrate as N	----	0.01	mg/L	0.98	0.70	0.67	0.65	1.22	
EN055: Ionic Balance									
∅ Total Anions	----	0.01	meq/L	9.59	5.87	11.6	15.1	10.0	
∅ Total Cations	----	0.01	meq/L	9.14	5.98	11.0	14.2	9.48	
∅ Ionic Balance	----	0.01	%	2.41	0.94	2.59	3.35	2.87	
MW006: Faecal Coliforms & E.coli by MF									
<i>Escherichia coli</i>	----	1	CFU/100mL	<1	<1	<1	<1	<1	



Analytical Results

Sub-Matrix: WATER (Matrix: WATER)				Sample ID	B3/14	B19/10	B21/10	B20/10	B2/10
Sampling date / time				09-Dec-2020 11:24	09-Dec-2020 11:31	09-Dec-2020 11:41	09-Dec-2020 11:48	09-Dec-2020 11:56	
Compound	CAS Number	LOR	Unit	EP2013803-011	EP2013803-012	EP2013803-013	EP2013803-014	EP2013803-015	
				Result	Result	Result	Result	Result	
EA005P: pH by PC Titrator									
pH Value	----	0.01	pH Unit	7.72	7.76	7.96	8.19	7.99	
EA010P: Conductivity by PC Titrator									
Electrical Conductivity @ 25°C	----	1	µS/cm	768	821	768	818	1190	
EA015: Total Dissolved Solids dried at 180 ± 5 °C									
Total Dissolved Solids @180°C	----	10	mg/L	473	552	472	512	702	
ED037P: Alkalinity by PC Titrator									
Hydroxide Alkalinity as CaCO3	DMO-210-001	1	mg/L	<1	<1	<1	<1	<1	
Carbonate Alkalinity as CaCO3	3812-32-6	1	mg/L	<1	<1	<1	<1	<1	
Bicarbonate Alkalinity as CaCO3	71-52-3	1	mg/L	82	82	101	101	79	
Total Alkalinity as CaCO3	----	1	mg/L	82	82	101	101	79	
ED041G: Sulfate (Turbidimetric) as SO4 2- by DA									
Sulfate as SO4 - Turbidimetric	14808-79-8	1	mg/L	75	78	66	63	53	
ED045G: Chloride by Discrete Analyser									
Chloride	16887-00-6	1	mg/L	157	172	166	165	326	
ED093F: Dissolved Major Cations									
Calcium	7440-70-2	1	mg/L	43	53	30	14	30	
Magnesium	7439-95-4	1	mg/L	17	21	15	8	20	
Sodium	7440-23-5	1	mg/L	90	82	103	144	171	
Potassium	7440-09-7	1	mg/L	8	9	10	9	15	
ED093F: SAR and Hardness Calculations									
Total Hardness as CaCO3	----	1	mg/L	177	219	137	68	157	
EG020F: Dissolved Metals by ICP-MS									
Aluminium	7429-90-5	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	
Arsenic	7440-38-2	0.001	mg/L	<0.001	<0.001	0.003	0.007	0.002	
Cadmium	7440-43-9	0.0001	mg/L	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	
Copper	7440-50-8	0.001	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001	
Lead	7439-92-1	0.001	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001	
Manganese	7439-96-5	0.001	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001	
Molybdenum	7439-98-7	0.001	mg/L	0.001	0.001	0.003	0.006	0.003	
Selenium	7782-49-2	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	
Zinc	7440-66-6	0.005	mg/L	<0.005	0.008	<0.005	<0.005	0.007	
Boron	7440-42-8	0.05	mg/L	0.25	0.25	0.40	0.72	0.69	
Iron	7439-89-6	0.05	mg/L	<0.05	<0.05	<0.05	<0.05	<0.05	
EG020T: Total Metals by ICP-MS									



Analytical Results

Sub-Matrix: WATER (Matrix: WATER)				Sample ID	B3/14	B19/10	B21/10	B20/10	B2/10
Sampling date / time				09-Dec-2020 11:24	09-Dec-2020 11:31	09-Dec-2020 11:41	09-Dec-2020 11:48	09-Dec-2020 11:56	
Compound	CAS Number	LOR	Unit	EP2013803-011	EP2013803-012	EP2013803-013	EP2013803-014	EP2013803-015	
				Result	Result	Result	Result	Result	
EG020T: Total Metals by ICP-MS - Continued									
Aluminium	7429-90-5	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	
Arsenic	7440-38-2	0.001	mg/L	<0.001	<0.001	0.004	0.008	0.002	
Cadmium	7440-43-9	0.0001	mg/L	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	
Copper	7440-50-8	0.001	mg/L	0.002	<0.001	<0.001	0.001	0.002	
Lead	7439-92-1	0.001	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001	
Manganese	7439-96-5	0.001	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001	
Molybdenum	7439-98-7	0.001	mg/L	0.001	0.002	0.004	0.007	0.004	
Selenium	7782-49-2	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	
Zinc	7440-66-6	0.005	mg/L	<0.005	0.008	<0.005	<0.005	0.007	
Boron	7440-42-8	0.05	mg/L	0.24	0.24	0.39	0.69	0.66	
Iron	7439-89-6	0.05	mg/L	<0.05	<0.05	<0.05	<0.05	<0.05	
EG052G: Silica by Discrete Analyser									
Reactive Silica	----	0.05	mg/L	48.2	60.6	55.7	58.6	62.3	
EK040P: Fluoride by PC Titrator									
Fluoride	16984-48-8	0.1	mg/L	0.2	0.3	0.8	1.4	0.6	
EK057G: Nitrite as N by Discrete Analyser									
Nitrite as N	14797-65-0	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	
EK058G: Nitrate as N by Discrete Analyser									
Nitrate as N	14797-55-8	0.01	mg/L	0.71	0.85	0.98	3.05	0.79	
EK059G: Nitrite plus Nitrate as N (NOx) by Discrete Analyser									
Nitrite + Nitrate as N	----	0.01	mg/L	0.71	0.85	0.98	3.05	0.79	
EN055: Ionic Balance									
∅ Total Anions	----	0.01	meq/L	7.63	8.11	8.07	7.98	11.9	
∅ Total Cations	----	0.01	meq/L	7.66	8.17	7.47	7.85	11.0	
∅ Ionic Balance	----	0.01	%	0.23	0.34	3.91	0.84	4.00	
MW006: Faecal Coliforms & E.coli by MF									
<i>Escherichia coli</i>	----	1	CFU/100mL	<1	<1	<1	<1	~1	



Analytical Results

Sub-Matrix: WATER (Matrix: WATER)		Sample ID		B18/10	B2/14	----	----	----
		Sampling date / time		09-Dec-2020 12:06	09-Dec-2020 12:15	----	----	----
Compound	CAS Number	LOR	Unit	EP2013803-016	EP2013803-017	-----	-----	-----
				Result	Result	----	----	----
EA005P: pH by PC Titrator								
pH Value	----	0.01	pH Unit	8.21	7.98	----	----	----
EA010P: Conductivity by PC Titrator								
Electrical Conductivity @ 25°C	----	1	µS/cm	650	483	----	----	----
EA015: Total Dissolved Solids dried at 180 ± 5 °C								
Total Dissolved Solids @180°C	----	10	mg/L	394	300	----	----	----
ED037P: Alkalinity by PC Titrator								
Hydroxide Alkalinity as CaCO3	DMO-210-001	1	mg/L	<1	<1	----	----	----
Carbonate Alkalinity as CaCO3	3812-32-6	1	mg/L	<1	<1	----	----	----
Bicarbonate Alkalinity as CaCO3	71-52-3	1	mg/L	106	100	----	----	----
Total Alkalinity as CaCO3	----	1	mg/L	106	100	----	----	----
ED041G: Sulfate (Turbidimetric) as SO4 2- by DA								
Sulfate as SO4 - Turbidimetric	14808-79-8	1	mg/L	44	33	----	----	----
ED045G: Chloride by Discrete Analyser								
Chloride	16887-00-6	1	mg/L	114	59	----	----	----
ED093F: Dissolved Major Cations								
Calcium	7440-70-2	1	mg/L	20	37	----	----	----
Magnesium	7439-95-4	1	mg/L	11	12	----	----	----
Sodium	7440-23-5	1	mg/L	94	43	----	----	----
Potassium	7440-09-7	1	mg/L	12	7	----	----	----
ED093F: SAR and Hardness Calculations								
Total Hardness as CaCO3	----	1	mg/L	95	142	----	----	----
EG020F: Dissolved Metals by ICP-MS								
Aluminium	7429-90-5	0.01	mg/L	<0.01	<0.01	----	----	----
Arsenic	7440-38-2	0.001	mg/L	0.005	<0.001	----	----	----
Cadmium	7440-43-9	0.0001	mg/L	<0.0001	<0.0001	----	----	----
Copper	7440-50-8	0.001	mg/L	<0.001	<0.001	----	----	----
Lead	7439-92-1	0.001	mg/L	<0.001	<0.001	----	----	----
Manganese	7439-96-5	0.001	mg/L	<0.001	<0.001	----	----	----
Molybdenum	7439-98-7	0.001	mg/L	0.003	<0.001	----	----	----
Selenium	7782-49-2	0.01	mg/L	<0.01	<0.01	----	----	----
Zinc	7440-66-6	0.005	mg/L	<0.005	0.005	----	----	----
Boron	7440-42-8	0.05	mg/L	0.52	0.20	----	----	----
Iron	7439-89-6	0.05	mg/L	<0.05	<0.05	----	----	----
EG020T: Total Metals by ICP-MS								



Analytical Results

Sub-Matrix: WATER (Matrix: WATER)				Sample ID	B18/10	B2/14	----	----	----
Sampling date / time				09-Dec-2020 12:06	09-Dec-2020 12:15	----	----	----	
Compound	CAS Number	LOR	Unit	EP2013803-016	EP2013803-017	-----	-----	-----	
				Result	Result	----	----	----	
EG020T: Total Metals by ICP-MS - Continued									
Aluminium	7429-90-5	0.01	mg/L	<0.01	<0.01	----	----	----	
Arsenic	7440-38-2	0.001	mg/L	0.006	0.001	----	----	----	
Cadmium	7440-43-9	0.0001	mg/L	<0.0001	<0.0001	----	----	----	
Copper	7440-50-8	0.001	mg/L	<0.001	0.002	----	----	----	
Lead	7439-92-1	0.001	mg/L	<0.001	<0.001	----	----	----	
Manganese	7439-96-5	0.001	mg/L	<0.001	<0.001	----	----	----	
Molybdenum	7439-98-7	0.001	mg/L	0.004	<0.001	----	----	----	
Selenium	7782-49-2	0.01	mg/L	<0.01	<0.01	----	----	----	
Zinc	7440-66-6	0.005	mg/L	<0.005	<0.005	----	----	----	
Boron	7440-42-8	0.05	mg/L	0.51	0.19	----	----	----	
Iron	7439-89-6	0.05	mg/L	<0.05	<0.05	----	----	----	
EG052G: Silica by Discrete Analyser									
Reactive Silica	----	0.05	mg/L	53.4	31.2	----	----	----	
EK040P: Fluoride by PC Titrator									
Fluoride	16984-48-8	0.1	mg/L	0.6	0.2	----	----	----	
EK057G: Nitrite as N by Discrete Analyser									
Nitrite as N	14797-65-0	0.01	mg/L	<0.01	<0.01	----	----	----	
EK058G: Nitrate as N by Discrete Analyser									
Nitrate as N	14797-55-8	0.01	mg/L	0.98	5.99	----	----	----	
EK059G: Nitrite plus Nitrate as N (NOx) by Discrete Analyser									
Nitrite + Nitrate as N	----	0.01	mg/L	0.98	5.99	----	----	----	
EN055: Ionic Balance									
∅ Total Anions	----	0.01	meq/L	6.25	4.35	----	----	----	
∅ Total Cations	----	0.01	meq/L	6.30	4.88	----	----	----	
∅ Ionic Balance	----	0.01	%	0.39	5.78	----	----	----	
MW006: Faecal Coliforms & E.coli by MF									
<i>Escherichia coli</i>	----	1	CFU/100mL	<1	<1	----	----	----	

Note:

This report was delayed due to one of the readings on one of the bores being contaminated.

The bore was removed from service.

A second water sample was taken and a second test sent away for analysis with the results showing there was no problem with the bore.

The bore was reinstated into service.