



CERTIFICATE OF ANALYSIS

Work Order : **EW2302133**
Client : **KIAMA COUNCIL**
Contact : MS JULIE MILEVSKI
Address : 11 MANNING STREET
KIAMA NSW, AUSTRALIA 2533
Telephone : +61 02 4232 0557
Project : Minnamurra Landfill
Order number :
C-O-C number : ----
Sampler : , Michael Santos, Robert DaLio
Site : Minnamurra Landfill
Quote number : WO/009/21
No. of samples received : 20
No. of samples analysed : 20

Page : 1 of 11
Laboratory : Environmental Division NSW South Coast
Contact : Aneta Prosaroski
Address : 1/19 Ralph Black Dr, North Wollongong 2500 NSW Australia
Telephone : 02 42253125
Date Samples Received : 11-May-2023 14:54
Date Analysis Commenced : 11-May-2023
Issue Date : 18-May-2023 15:57



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>
Aneta Prosaroski	Environmental Services Representative	Laboratory - Wollongong, NSW
Ankit Joshi	Senior Chemist - Inorganics	Sydney Inorganics, Smithfield, NSW



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 Contract 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.

- **Analytical work for this work order will be conducted at ALS Sydney.**
- ED041G: LOR raised for Sulfate on sample 13 & 14 due to sample matrix.
- As per QWI – EN55-3 Data Interpreting Procedures, Ionic balances are typically calculated using Major Anions - Chloride, Alkalinity and Sulfate; and Major Cations - Calcium, Magnesium, Potassium and Sodium. Where applicable and dependent upon sample matrix, the Ionic Balance may also include the additional contribution of Ammonia, Dissolved Metals by ICPMS and H+ to the Cations and Nitrate, SiO₂ and Fluoride to the Anions.
- EK059G: LOR raised for NO_x due to sample matrix.
- EK057G: LOR raised for Nitrite due to sample matrix.
- ED041G: LOR raised for Sulfate due to sample matrix
- It has been noted that Nitrite is greater than NO_x, however this difference is within the limits of experimental variation.
- EP002: It has been noted that DOC is greater than TOC, however this difference is within the limits of experimental variation.
- pH performed by ALS Wollongong via in-house method EA005FD and EN67 PK.
- Electrical conductivity performed by ALS Wollongong via in-house method EA010FD and EN67 PK.
- Sampling and groundwater depth measurements completed by ALS Wollongong via inhouse sampling method EN/67.11 Groundwater Sampling Via High Flow and Bailer Method.
- Sampling completed by ALS Wollongong in accordance with in-house sampling method EN/67.6 Rivers and Streams.
- Temperature performed by ALS Wollongong via in-house method EA116 and EN67 PK.
- Dissolved oxygen (DO) performed by ALS Wollongong via in-house method EP025FD and EN67 PK.
- All field analysis performed by ALS Wollongong were completed at the time of sampling.
- Salinity performed by ALS Wollongong via in-house method EA020FD and EN67 PK.
- Sample collection of Ground Waters by in-house EN67 where the “surface layer of the aquifer was sampled”.
- 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	MD 1A	MD 1B	MD 2A	MD 2B	MD 2C
Sampling date / time				11-May-2023 00:00	11-May-2023 12:30	11-May-2023 11:10	11-May-2023 11:20	11-May-2023 11:25	
Compound	CAS Number	LOR	Unit	EW2302133-001	EW2302133-002	EW2302133-003	EW2302133-004	EW2302133-005	
				Result	Result	Result	Result	Result	
EA005FD: Field pH									
pH	----	0.1	pH Unit	----	----	7.2	7.4	7.3	
EA010FD: Field Conductivity									
Electrical Conductivity (Non Compensated)	----	1	µS/cm	----	----	19800	12500	31600	
EA020FD: Field Salinity									
Salinity	----	0.2	g/L	----	----	14.2	8.5	23.5	
EA116: Temperature									
Temperature	----	0.5	°C	----	----	17.0	17.6	17.3	
ED037P: Alkalinity by PC Titrator									
Hydroxide Alkalinity as CaCO3	DMO-210-001	1	mg/L	----	----	<1	<1	<1	
Carbonate Alkalinity as CaCO3	3812-32-6	1	mg/L	----	----	<1	<1	<1	
Bicarbonate Alkalinity as CaCO3	71-52-3	1	mg/L	----	----	659	773	775	
Total Alkalinity as CaCO3	----	1	mg/L	----	----	659	773	775	
ED041G: Sulfate (Turbidimetric) as SO4 2- by DA									
Sulfate as SO4 - Turbidimetric	14808-79-8	1	mg/L	----	----	998	537	1840	
ED045G: Chloride by Discrete Analyser									
Chloride	16887-00-6	1	mg/L	----	----	7640	4500	12000	
ED093F: Dissolved Major Cations									
Calcium	7440-70-2	1	mg/L	----	----	231	205	388	
Magnesium	7439-95-4	1	mg/L	----	----	437	284	826	
Sodium	7440-23-5	1	mg/L	----	----	3590	2120	6820	
Potassium	7440-09-7	1	mg/L	----	----	147	128	283	
EG020F: Dissolved Metals by ICP-MS									
Manganese	7439-96-5	0.001	mg/L	----	----	0.152	0.038	0.119	
Iron	7439-89-6	0.05	mg/L	----	----	1.14	0.50	1.32	
EK040P: Fluoride by PC Titrator									
Fluoride	16984-48-8	0.1	mg/L	----	----	1.2	0.9	0.8	
EK055G: Ammonia as N by Discrete Analyser									
Ammonia as N	7664-41-7	0.01	mg/L	----	----	0.29	15.6	5.49	
EK057G: Nitrite as N by Discrete Analyser									
Nitrite as N	14797-65-0	0.01	mg/L	----	----	<0.01	<0.01	<0.01	
EK058G: Nitrate as N by Discrete Analyser									
Nitrate as N	14797-55-8	0.01	mg/L	----	----	<0.01	0.01	<0.01	



Analytical Results

Sub-Matrix: WATER (Matrix: WATER)				Sample ID	MD 1A	MD 1B	MD 2A	MD 2B	MD 2C
Sampling date / time				11-May-2023 00:00	11-May-2023 12:30	11-May-2023 11:10	11-May-2023 11:20	11-May-2023 11:25	
Compound	CAS Number	LOR	Unit	EW2302133-001	EW2302133-002	EW2302133-003	EW2302133-004	EW2302133-005	
				Result	Result	Result	Result	Result	
EK058G: Nitrate as N by Discrete Analyser - Continued									
Nitrate as NO3	14797-55-8	0.05	mg/L	----	----	<0.05	<0.05	<0.05	
EK059G: Nitrite plus Nitrate as N (NOx) by Discrete Analyser									
Nitrite + Nitrate as N	----	0.01	mg/L	----	----	<0.01	0.01	<0.01	
EN055: Ionic Balance									
∅ Total Anions	----	0.01	meq/L	----	----	249	154	392	
∅ Total Cations	----	0.01	meq/L	----	----	207	129	391	
∅ Ionic Balance	----	0.01	%	----	----	9.20	8.66	0.14	
EN67 PK: Field Tests									
Field Observations	----	0.01	--	DESTROYED	NO ACCESS	----	----	----	
EP002: Dissolved Organic Carbon (DOC)									
Dissolved Organic Carbon	----	1	mg/L	----	----	47	32	30	
EP005: Total Organic Carbon (TOC)									
Total Organic Carbon	----	1	mg/L	----	----	48	32	31	
EP025FD: Field Dissolved Oxygen									
Dissolved Oxygen	----	0.01	mg/L	----	----	1.44	0.88	0.77	
Dissolved Oxygen - % Saturation	----	0.1	% saturation	----	----	14.6	0.9	7.8	
EP035SF: Total Phenol by Segmented Flow Analyser									
Phenols (Total)	----	0.05	mg/L	----	----	<0.05	<0.05	<0.05	
QWI-EN 67.11 Sampling of Groundwaters									
Depth	----	0.01	m	----	----	0.21	0.51	0.55	



Analytical Results

Sub-Matrix: WATER (Matrix: WATER)				Sample ID	MD 4A	MD 4B	MD 4C	MD 6A	MD 6B
Sampling date / time				11-May-2023 10:32	11-May-2023 10:39	11-May-2023 10:46	11-May-2023 11:50	11-May-2023 12:00	
Compound	CAS Number	LOR	Unit	EW2302133-006	EW2302133-007	EW2302133-008	EW2302133-009	EW2302133-010	
				Result	Result	Result	Result	Result	
EA005FD: Field pH									
pH	----	0.1	pH Unit	7.1	7.2	7.2	7.5	7.1	
EA010FD: Field Conductivity									
Electrical Conductivity (Non Compensated)	----	1	µS/cm	1710	2490	2170	1960	1540	
EA020FD: Field Salinity									
Salinity	----	0.2	g/L	1.0	1.5	1.3	1.1	0.9	
EA116: Temperature									
Temperature	----	0.5	°C	18.4	17.4	17.0	19.6	20.2	
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	648	1060	913	836	693	
Total Alkalinity as CaCO3	----	1	mg/L	648	1060	913	836	693	
ED041G: Sulfate (Turbidimetric) as SO4 2- by DA									
Sulfate as SO4 - Turbidimetric	14808-79-8	1	mg/L	146	66	1050	4	42	
ED045G: Chloride by Discrete Analyser									
Chloride	16887-00-6	1	mg/L	223	347	8060	188	120	
ED093F: Dissolved Major Cations									
Calcium	7440-70-2	1	mg/L	102	110	308	60	134	
Magnesium	7439-95-4	1	mg/L	53	65	494	33	38	
Sodium	7440-23-5	1	mg/L	183	266	4020	256	87	
Potassium	7440-09-7	1	mg/L	36	72	188	127	37	
EG020F: Dissolved Metals by ICP-MS									
Manganese	7439-96-5	0.001	mg/L	0.038	0.032	0.095	0.025	0.101	
Iron	7439-89-6	0.05	mg/L	0.14	0.65	1.03	0.49	0.23	
EK040P: Fluoride by PC Titrator									
Fluoride	16984-48-8	0.1	mg/L	0.6	0.6	0.9	1.1	0.4	
EK055G: Ammonia as N by Discrete Analyser									
Ammonia as N	7664-41-7	0.01	mg/L	5.65	57.3	15.6	3.94	23.2	
EK057G: Nitrite as N by Discrete Analyser									
Nitrite as N	14797-65-0	0.01	mg/L	<0.01	<0.01	<0.01	0.08	<0.01	
EK058G: Nitrate as N by Discrete Analyser									
Nitrate as N	14797-55-8	0.01	mg/L	0.04	<0.01	0.04	3.02	0.26	



Analytical Results

Sub-Matrix: WATER (Matrix: WATER)				Sample ID	MD 4A	MD 4B	MD 4C	MD 6A	MD 6B
Sampling date / time				11-May-2023 10:32	11-May-2023 10:39	11-May-2023 10:46	11-May-2023 11:50	11-May-2023 12:00	
Compound	CAS Number	LOR	Unit	EW2302133-006	EW2302133-007	EW2302133-008	EW2302133-009	EW2302133-010	
				Result	Result	Result	Result	Result	
EK058G: Nitrate as N by Discrete Analyser - Continued									
Nitrate as NO3	14797-55-8	0.05	mg/L	0.18	<0.05	0.18	13.4	1.15	
EK059G: Nitrite plus Nitrate as N (NOx) by Discrete Analyser									
Nitrite + Nitrate as N	----	0.01	mg/L	0.04	<0.01	0.04	3.10	0.26	
EN055: Ionic Balance									
∅ Total Anions	----	0.01	meq/L	22.3	32.3	267	22.1	18.1	
∅ Total Cations	----	0.01	meq/L	----	28.3	----	----	16.2	
∅ Total Cations	----	0.01	meq/L	18.3	----	236	20.1	----	
∅ Ionic Balance	----	0.01	%	----	6.62	----	----	5.59	
∅ Ionic Balance	----	0.01	%	9.71	----	6.31	4.73	----	
EP002: Dissolved Organic Carbon (DOC)									
Dissolved Organic Carbon	----	1	mg/L	34	48	34	50	33	
EP005: Total Organic Carbon (TOC)									
Total Organic Carbon	----	1	mg/L	36	48	37	52	34	
EP025FD: Field Dissolved Oxygen									
Dissolved Oxygen	----	0.01	mg/L	0.83	0.64	0.64	1.14	0.67	
Dissolved Oxygen - % Saturation	----	0.1	% saturation	8.7	6.6	6.5	12.1	7.3	
EP035SF: Total Phenol by Segmented Flow Analyser									
Phenols (Total)	----	0.05	mg/L	<0.05	<0.05	<0.05	<0.05	<0.05	
QWI-EN 67.11 Sampling of Groundwaters									
Depth	----	0.01	m	1.80	1.95	1.91	0.96	1.11	



Analytical Results

Sub-Matrix: WATER (Matrix: WATER)				Sample ID	MD 6C	MD 9A	MD 9B	MD 9C	MD 10A
Sampling date / time				11-May-2023 12:05	11-May-2023 10:05	11-May-2023 10:10	11-May-2023 10:15	11-May-2023 09:39	
Compound	CAS Number	LOR	Unit	EW2302133-011	EW2302133-012	EW2302133-013	EW2302133-014	EW2302133-015	
				Result	Result	Result	Result	Result	
EA005FD: Field pH									
pH	----	0.1	pH Unit	7.6	7.0	6.9	7.0	6.9	
EA010FD: Field Conductivity									
Electrical Conductivity (Non Compensated)	----	1	µS/cm	20000	859	2830	2860	35100	
EA020FD: Field Salinity									
Salinity	----	0.2	g/L	13.5	0.5	1.6	1.7	25.8	
EA116: Temperature									
Temperature	----	0.5	°C	19.4	19.1	20.0	19.8	18.2	
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	423	325	1020	1100	412	
Total Alkalinity as CaCO3	----	1	mg/L	423	325	1020	1100	412	
ED041G: Sulfate (Turbidimetric) as SO4 2- by DA									
Sulfate as SO4 - Turbidimetric	14808-79-8	1	mg/L	1050	<10	<10	<10	1920	
ED045G: Chloride by Discrete Analyser									
Chloride	16887-00-6	1	mg/L	7180	123	486	416	13100	
ED093F: Dissolved Major Cations									
Calcium	7440-70-2	1	mg/L	299	12	148	112	767	
Magnesium	7439-95-4	1	mg/L	411	13	71	52	976	
Sodium	7440-23-5	1	mg/L	3390	186	276	233	6550	
Potassium	7440-09-7	1	mg/L	112	13	71	97	176	
EG020F: Dissolved Metals by ICP-MS									
Manganese	7439-96-5	0.001	mg/L	0.060	0.014	0.189	0.102	1.08	
Iron	7439-89-6	0.05	mg/L	16.9	0.11	2.91	3.71	4.29	
EK040P: Fluoride by PC Titrator									
Fluoride	16984-48-8	0.1	mg/L	0.4	0.2	0.6	0.5	0.4	
EK055G: Ammonia as N by Discrete Analyser									
Ammonia as N	7664-41-7	0.01	mg/L	13.3	1.10	37.7	88.9	0.44	
EK057G: Nitrite as N by Discrete Analyser									
Nitrite as N	14797-65-0	0.01	mg/L	<0.01	<0.10	<0.01	0.01	0.01	
EK058G: Nitrate as N by Discrete Analyser									
Nitrate as N	14797-55-8	0.01	mg/L	<0.01	<0.10	<0.01	<0.01	0.04	



Analytical Results

Sub-Matrix: WATER (Matrix: WATER)				Sample ID	MD 6C	MD 9A	MD 9B	MD 9C	MD 10A
Sampling date / time				11-May-2023 12:05	11-May-2023 10:05	11-May-2023 10:10	11-May-2023 10:15	11-May-2023 09:39	
Compound	CAS Number	LOR	Unit	EW2302133-011	EW2302133-012	EW2302133-013	EW2302133-014	EW2302133-015	
				Result	Result	Result	Result	Result	
EK058G: Nitrate as N by Discrete Analyser - Continued									
Nitrate as NO3	14797-55-8	0.05	mg/L	<0.05	<0.10	<0.05	<0.05	0.18	
EK059G: Nitrite plus Nitrate as N (NOx) by Discrete Analyser									
Nitrite + Nitrate as N	----	0.01	mg/L	<0.01	<0.10	<0.01	<0.01	0.05	
EN055: Ionic Balance									
∅ Total Anions	----	0.01	meq/L	233	9.96	34.1	33.7	418	
∅ Total Cations	----	0.01	meq/L	----	----	29.7	28.8	----	
∅ Total Cations	----	0.01	meq/L	199	10.1	----	----	408	
∅ Ionic Balance	----	0.01	%	----	----	6.84	7.83	----	
∅ Ionic Balance	----	0.01	%	7.82	0.64	----	----	1.18	
EP002: Dissolved Organic Carbon (DOC)									
Dissolved Organic Carbon	----	1	mg/L	16	234	49	58	35	
EP005: Total Organic Carbon (TOC)									
Total Organic Carbon	----	1	mg/L	16	240	51	57	39	
EP025FD: Field Dissolved Oxygen									
Dissolved Oxygen	----	0.01	mg/L	0.58	0.82	0.81	0.55	2.44	
Dissolved Oxygen - % Saturation	----	0.1	% saturation	6.2	8.6	8.7	6.0	24.3	
EP035SF: Total Phenol by Segmented Flow Analyser									
Phenols (Total)	----	0.05	mg/L	<0.05	<0.05	<0.05	<0.05	<0.05	
QWI-EN 67.11 Sampling of Groundwaters									
Depth	----	0.01	m	1.25	0.25	0.83	0.64	0.31	



Analytical Results

Sub-Matrix: WATER (Matrix: WATER)				Sample ID	MD 10B	Rocklow Down	Rocklow Middle	Rocklow Up	BLANK
Sampling date / time				11-May-2023 09:47	11-May-2023 08:30	11-May-2023 09:20	11-May-2023 09:00	11-May-2023 08:25	
Compound	CAS Number	LOR	Unit	EW2302133-016	EW2302133-017	EW2302133-018	EW2302133-019	EW2302133-020	
				Result	Result	Result	Result	Result	
EA005FD: Field pH									
pH	----	0.1	pH Unit	7.2	7.5	7.5	7.2	----	
EA010FD: Field Conductivity									
Electrical Conductivity (Non Compensated)	----	1	µS/cm	1360	14000	11600	1420	----	
EA020FD: Field Salinity									
Salinity	----	0.2	g/L	0.7	10.6	8.5	0.9	----	
EA116: Temperature									
Temperature	----	0.5	°C	21.5	13.7	14.1	14.7	----	
ED037P: Alkalinity by PC Titrator									
Hydroxide Alkalinity as CaCO3	DMO-210-001	1	mg/L	<1	<1	<1	<1	----	
Carbonate Alkalinity as CaCO3	3812-32-6	1	mg/L	<1	<1	<1	<1	----	
Bicarbonate Alkalinity as CaCO3	71-52-3	1	mg/L	542	136	133	80	----	
Total Alkalinity as CaCO3	----	1	mg/L	542	136	133	80	----	
ED041G: Sulfate (Turbidimetric) as SO4 2- by DA									
Sulfate as SO4 - Turbidimetric	14808-79-8	1	mg/L	<1	734	604	80	----	
ED045G: Chloride by Discrete Analyser									
Chloride	16887-00-6	1	mg/L	132	5900	4860	500	----	
ED093F: Dissolved Major Cations									
Calcium	7440-70-2	1	mg/L	54	----	----	----	----	
Magnesium	7439-95-4	1	mg/L	25	----	----	----	----	
Sodium	7440-23-5	1	mg/L	77	----	----	----	----	
Potassium	7440-09-7	1	mg/L	52	----	----	----	----	
ED093T: Total Major Cations									
Calcium	7440-70-2	1	mg/L	----	156	131	27	----	
Magnesium	7439-95-4	1	mg/L	----	373	306	36	----	
Sodium	7440-23-5	1	mg/L	----	3170	2600	262	----	
Potassium	7440-09-7	1	mg/L	----	116	94	12	----	
EG020F: Dissolved Metals by ICP-MS									
Manganese	7439-96-5	0.001	mg/L	0.256	----	----	----	<0.001	
Iron	7439-89-6	0.05	mg/L	0.54	----	----	----	<0.05	
EG020T: Total Metals by ICP-MS									
Manganese	7439-96-5	0.001	mg/L	----	0.226	0.273	0.183	----	
Iron	7439-89-6	0.05	mg/L	----	0.56	0.67	1.97	----	



Analytical Results

Sub-Matrix: WATER (Matrix: WATER)				Sample ID	MD 10B	Rocklow Down	Rocklow Middle	Rocklow Up	BLANK
Sampling date / time				11-May-2023 09:47	11-May-2023 08:30	11-May-2023 09:20	11-May-2023 09:00	11-May-2023 08:25	
Compound	CAS Number	LOR	Unit	EW2302133-016	EW2302133-017	EW2302133-018	EW2302133-019	EW2302133-020	
				Result	Result	Result	Result	Result	
EK040P: Fluoride by PC Titrator									
Fluoride	16984-48-8	0.1	mg/L	1.0	0.5	0.4	0.2	----	
EK055G: Ammonia as N by Discrete Analyser									
Ammonia as N	7664-41-7	0.01	mg/L	58.5	1.17	0.36	0.13	----	
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	----	
EK058G: Nitrate as N by Discrete Analyser									
Nitrate as N	14797-55-8	0.01	mg/L	<0.01	0.09	0.11	0.04	----	
Nitrate as NO3	14797-55-8	0.05	mg/L	<0.05	0.40	0.49	0.18	----	
EK059G: Nitrite plus Nitrate as N (NOx) by Discrete Analyser									
Nitrite + Nitrate as N	----	0.01	mg/L	<0.01	0.10	0.12	0.04	----	
EN055: Ionic Balance									
∅ Total Anions	----	0.01	meq/L	14.6	----	----	----	----	
∅ Total Cations	----	0.01	meq/L	13.6	----	----	----	----	
∅ Ionic Balance	----	0.01	%	3.38	----	----	----	----	
EP002: Dissolved Organic Carbon (DOC)									
Dissolved Organic Carbon	----	1	mg/L	46	9	8	8	<1	
EP005: Total Organic Carbon (TOC)									
Total Organic Carbon	----	1	mg/L	48	8	8	8	----	
EP025FD: Field Dissolved Oxygen									
Dissolved Oxygen	----	0.01	mg/L	0.84	7.34	7.60	8.98	----	
Dissolved Oxygen - % Saturation	----	0.1	% saturation	9.3	69.9	72.7	86.4	----	
EP035SF: Total Phenol by Segmented Flow Analyser									
Phenols (Total)	----	0.05	mg/L	<0.05	<0.05	<0.05	<0.05	----	
QWI-EN 67.11 Sampling of Groundwaters									
Depth	----	0.01	m	0.72	----	----	----	----	



Inter-Laboratory Testing

Analysis conducted by ALS Sydney, NATA accreditation no. 825, site no. 10911 (Chemistry) 14913 (Biology).

(WATER) EP002: Dissolved Organic Carbon (DOC)

(WATER) EP005: Total Organic Carbon (TOC)

(WATER) EK058G: Nitrate as N by Discrete Analyser

(WATER) EK057G: Nitrite as N by Discrete Analyser

(WATER) EK059G: Nitrite plus Nitrate as N (NO_x) by Discrete Analyser

(WATER) EK055G: Ammonia as N by Discrete Analyser

(WATER) EG020F: Dissolved Metals by ICP-MS

(WATER) ED093F: Dissolved Major Cations

(WATER) EN055: Ionic Balance

(WATER) ED045G: Chloride by Discrete Analyser

(WATER) ED037P: Alkalinity by PC Titrator

(WATER) EK040P: Fluoride by PC Titrator

(WATER) ED041G: Sulfate (Turbidimetric) as SO₄ 2- by DA

(WATER) EP035SF: Total Phenol by Segmented Flow Analyser

(WATER) EG020T: Total Metals by ICP-MS

(WATER) ED093T: Total Major Cations