



CERTIFICATE OF ANALYSIS

Work Order : **EW2400467**
Client : **KIAMA COUNCIL**
Contact : Guy Stearn
Address : 11 MANNING STREET
KIAMA NSW, AUSTRALIA 2533
Telephone : ----
Project : Minnamurra Landfill
Order number : 23779
C-O-C number : ----
Sampler : Michael Santos, Robert DaLio
Site : ----
Quote number : EW2023KIACOU0002 V2
No. of samples received : 31
No. of samples analysed : 31

Page : 1 of 14
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 : 01-Feb-2024 16:16
Date Analysis Commenced : 01-Feb-2024
Issue Date : 08-Nov-2024 18:25



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>
Dian Dao	Senior Chemist - Inorganics	Sydney Inorganics, Smithfield, NSW
Robert DaLio	Sampler	Laboratory - Wollongong, NSW
Wisam Marassa	Inorganics Coordinator	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.**
- 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.
- ED041G: LOR raised for Sulfate on various samples due to sample matrix.
- ED041G: LOR raised for Sulfate due to sample matrix
- EK057G: LOR raised for Nitrite due to sample matrix.
- 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.
- Sampling completed by ALS Wollongong in accordance with in-house sampling method EN/67.4 Lakes and Reservoirs
- 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.
- ED045G: The presence of Thiocyanate, Thiosulfate and Sulfite can positively contribute to the chloride result, thereby may bias results higher than expected. Results should be scrutinised accordingly.



Analytical Results

Sub-Matrix: WATER (Matrix: WATER)				Sample ID	MD 1B	MD 2A	MD 2B	MD 2C	MD 4A
Sampling date / time				01-Feb-2024 15:10	01-Feb-2024 13:20	01-Feb-2024 13:05	01-Feb-2024 12:45	01-Feb-2024 12:00	
Compound	CAS Number	LOR	Unit	EW2400467-001	EW2400467-002	EW2400467-003	EW2400467-004	EW2400467-005	
				Result	Result	Result	Result	Result	
EA005FD: Field pH									
pH	----	0.1	pH Unit	7.6	7.0	7.2	7.1	7.0	
EA005P: pH by PC Titrator									
pH Value	----	0.01	pH Unit	7.81	7.50	7.61	7.47	7.51	
EA010FD: Field Conductivity									
Conductivity @ 25oC	----	1	µS/cm	645	13500	21200	38600	1740	
EA116: Temperature									
Temperature	----	0.5	°C	20.8	20.7	18.5	18.4	20.7	
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	184	882	650	512	714	
Total Alkalinity as CaCO3	----	1	mg/L	184	882	650	512	714	
ED041G: Sulfate (Turbidimetric) as SO4 2- by DA									
Sulfate as SO4 - Turbidimetric	14808-79-8	1	mg/L	31	452	872	1810	95	
ED045G: Chloride by Discrete Analyser									
Chloride	16887-00-6	1	mg/L	75	4010	6820	13000	131	
ED093F: Dissolved Major Cations									
Calcium	7440-70-2	1	mg/L	52	202	294	398	116	
Magnesium	7439-95-4	1	mg/L	9	349	468	879	60	
Sodium	7440-23-5	1	mg/L	50	2100	3510	6840	151	
Potassium	7440-09-7	1	mg/L	10	138	168	293	48	
EG020F: Dissolved Metals by ICP-MS									
Manganese	7439-96-5	0.001	mg/L	0.045	0.092	0.067	0.127	0.036	
Iron	7439-89-6	0.05	mg/L	0.40	3.61	0.74	1.22	0.07	
EK040P: Fluoride by PC Titrator									
Fluoride	16984-48-8	0.1	mg/L	0.2	1.2	0.8	0.8	0.6	
EK055G: Ammonia as N by Discrete Analyser									
Ammonia as N	7664-41-7	0.01	mg/L	8.00	5.51	14.0	2.35	8.49	



Analytical Results

Sub-Matrix: WATER (Matrix: WATER)				Sample ID	MD 1B	MD 2A	MD 2B	MD 2C	MD 4A
Sampling date / time					01-Feb-2024 15:10	01-Feb-2024 13:20	01-Feb-2024 13:05	01-Feb-2024 12:45	01-Feb-2024 12:00
Compound	CAS Number	LOR	Unit		EW2400467-001	EW2400467-002	EW2400467-003	EW2400467-004	EW2400467-005
					Result	Result	Result	Result	Result
EK058G: Nitrate as N by Discrete Analyser									
Nitrate as N	14797-55-8	0.01	mg/L		0.06	0.09	<0.01	0.16	<0.01
Nitrate as NO3	14797-55-8	0.05	mg/L		0.26	0.40	<0.05	0.71	<0.05
EN055: Ionic Balance									
∅ Total Anions	----	0.01	meq/L		6.44	140	224	415	19.9
∅ Total Cations	----	0.01	meq/L		6.34	----	----	----	----
∅ Total Cations	----	0.01	meq/L		----	134	210	397	18.5
∅ Ionic Balance	----	0.01	%		0.81	----	----	----	----
∅ Ionic Balance	----	0.01	%		----	2.36	3.08	2.14	3.68
EP005: Total Organic Carbon (TOC)									
Total Organic Carbon	----	1	mg/L		5	50	28	21	25
EP025FD: Field Dissolved Oxygen									
Dissolved Oxygen	----	0.01	mg/L		0.51	0.89	0.46	0.50	0.26
EP035SF: Total Phenol by Segmented Flow Analyser									
Phenols (Total)	----	0.05	mg/L		<0.05	<0.05	<0.05	<0.10	<0.05
QWI-EN 67.11 Sampling of Groundwaters									
Depth	----	0.01	m		1.48	0.51	0.72	0.76	2.02



Analytical Results

Sub-Matrix: WATER (Matrix: WATER)				Sample ID	MD 4B	MD 4C	MD 6A	MD 6B	MD 6C
Sampling date / time				01-Feb-2024 11:40	01-Feb-2024 11:20	01-Feb-2024 14:26	01-Feb-2024 14:17	01-Feb-2024 14:05	
Compound	CAS Number	LOR	Unit	EW2400467-006	EW2400467-007	EW2400467-008	EW2400467-009	EW2400467-010	
				Result	Result	Result	Result	Result	
EA005FD: Field pH									
pH	----	0.1	pH Unit	7.2	7.0	7.1	7.0	7.4	
EA005P: pH by PC Titrator									
pH Value	----	0.01	pH Unit	7.72	7.51	7.64	7.56	7.53	
EA010FD: Field Conductivity									
Conductivity @ 25oC	----	1	µS/cm	3160	28400	1680	1630	22100	
EA116: Temperature									
Temperature	----	0.5	°C	17.5	17.2	21.5	20.3	19.7	
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	976	925	743	719	428	
Total Alkalinity as CaCO3	----	1	mg/L	976	925	743	719	428	
ED041G: Sulfate (Turbidimetric) as SO4 2- by DA									
Sulfate as SO4 - Turbidimetric	14808-79-8	1	mg/L	<10	1180	25	44	1010	
ED045G: Chloride by Discrete Analyser									
Chloride	16887-00-6	1	mg/L	513	9320	110	108	7380	
ED093F: Dissolved Major Cations									
Calcium	7440-70-2	1	mg/L	87	372	117	158	336	
Magnesium	7439-95-4	1	mg/L	64	609	49	40	476	
Sodium	7440-23-5	1	mg/L	390	4760	113	98	3680	
Potassium	7440-09-7	1	mg/L	72	214	87	34	129	
EG020F: Dissolved Metals by ICP-MS									
Manganese	7439-96-5	0.001	mg/L	0.025	0.127	0.068	0.112	0.064	
Iron	7439-89-6	0.05	mg/L	0.48	1.34	1.64	0.27	18.0	
EK040P: Fluoride by PC Titrator									
Fluoride	16984-48-8	0.1	mg/L	0.6	0.8	0.7	0.4	0.4	
EK055G: Ammonia as N by Discrete Analyser									
Ammonia as N	7664-41-7	0.01	mg/L	43.5	14.3	12.0	23.3	15.0	



Analytical Results

Sub-Matrix: WATER (Matrix: WATER)				Sample ID	MD 4B	MD 4C	MD 6A	MD 6B	MD 6C
Sampling date / time				01-Feb-2024 11:40	01-Feb-2024 11:20	01-Feb-2024 14:26	01-Feb-2024 14:17	01-Feb-2024 14:05	
Compound	CAS Number	LOR	Unit	EW2400467-006	EW2400467-007	EW2400467-008	EW2400467-009	EW2400467-010	
				Result	Result	Result	Result	Result	
EK058G: Nitrate as N by Discrete Analyser									
Nitrate as N	14797-55-8	0.01	mg/L	<0.01	0.01	0.28	0.17	<0.01	
Nitrate as NO3	14797-55-8	0.05	mg/L	<0.05	<0.05	1.24	0.75	<0.05	
EN055: Ionic Balance									
∅ Total Anions	----	0.01	meq/L	34.0	306	18.5	18.3	238	
∅ Total Cations	----	0.01	meq/L	28.4	281	17.0	16.3	219	
∅ Ionic Balance	----	0.01	%	8.91	4.22	4.11	5.83	4.04	
EP005: Total Organic Carbon (TOC)									
Total Organic Carbon	----	1	mg/L	53	40	38	36	18	
EP025FD: Field Dissolved Oxygen									
Dissolved Oxygen	----	0.01	mg/L	0.46	0.63	0.87	0.69	0.41	
EP035SF: Total Phenol by Segmented Flow Analyser									
Phenols (Total)	----	0.05	mg/L	<0.05	<0.10	<0.05	<0.05	<0.05	
QWI-EN 67.11 Sampling of Groundwaters									
Depth	----	0.01	m	1.28	1.13	1.27	1.28	1.38	



Analytical Results

Sub-Matrix: WATER (Matrix: WATER)				Sample ID	MD 9A	MD 9B	MD 9C	MD 10A	MD 10B
Sampling date / time				01-Feb-2024 10:00	01-Feb-2024 10:25	01-Feb-2024 10:47	01-Feb-2024 09:05	01-Feb-2024 09:25	
Compound	CAS Number	LOR	Unit	EW2400467-011	EW2400467-012	EW2400467-013	EW2400467-014	EW2400467-015	
				Result	Result	Result	Result	Result	
EA005FD: Field pH									
pH	----	0.1	pH Unit	7.0	7.0	7.0	6.5	7.1	
EA005P: pH by PC Titrator									
pH Value	----	0.01	pH Unit	7.31	7.47	7.53	7.16	7.54	
EA010FD: Field Conductivity									
Conductivity @ 25oC	----	1	µS/cm	1200	2890	2860	34300	1320	
EA116: Temperature									
Temperature	----	0.5	°C	20.0	19.1	18.7	23.3	21.3	
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	479	1100	1160	266	512	
Total Alkalinity as CaCO3	----	1	mg/L	479	1100	1160	266	512	
ED041G: Sulfate (Turbidimetric) as SO4 2- by DA									
Sulfate as SO4 - Turbidimetric	14808-79-8	1	mg/L	<10	<10	<10	1760	<10	
ED045G: Chloride by Discrete Analyser									
Chloride	16887-00-6	1	mg/L	139	379	300	11300	106	
ED093F: Dissolved Major Cations									
Calcium	7440-70-2	1	mg/L	31	155	136	633	54	
Magnesium	7439-95-4	1	mg/L	28	71	67	853	23	
Sodium	7440-23-5	1	mg/L	192	285	216	5220	84	
Potassium	7440-09-7	1	mg/L	20	74	91	149	49	
EG020F: Dissolved Metals by ICP-MS									
Manganese	7439-96-5	0.001	mg/L	0.071	0.185	0.159	1.14	0.234	
Iron	7439-89-6	0.05	mg/L	0.20	2.90	5.54	0.77	0.42	
EK040P: Fluoride by PC Titrator									
Fluoride	16984-48-8	0.1	mg/L	0.2	0.6	0.5	0.5	1.0	
EK055G: Ammonia as N by Discrete Analyser									
Ammonia as N	7664-41-7	0.01	mg/L	11.4	37.9	72.9	0.34	48.5	



Analytical Results

Sub-Matrix: WATER (Matrix: WATER)				Sample ID	MD 9A	MD 9B	MD 9C	MD 10A	MD 10B
Sampling date / time				01-Feb-2024 10:00	01-Feb-2024 10:25	01-Feb-2024 10:47	01-Feb-2024 09:05	01-Feb-2024 09:25	
Compound	CAS Number	LOR	Unit	EW2400467-011	EW2400467-012	EW2400467-013	EW2400467-014	EW2400467-015	
				Result	Result	Result	Result	Result	
EK058G: Nitrate as N by Discrete Analyser									
Nitrate as N	14797-55-8	0.01	mg/L	<0.10	0.03	<0.01	<0.01	<0.01	
Nitrate as NO3	14797-55-8	0.05	mg/L	<0.10	0.13	<0.05	<0.05	<0.05	
EN055: Ionic Balance									
∅ Total Anions	----	0.01	meq/L	13.5	32.7	31.6	361	13.2	
∅ Total Cations	----	0.01	meq/L	----	----	29.2	----	13.0	
∅ Total Cations	----	0.01	meq/L	12.7	27.9	----	333	----	
∅ Ionic Balance	----	0.01	%	----	----	3.99	----	1.04	
∅ Ionic Balance	----	0.01	%	2.96	7.93	----	4.05	----	
EP005: Total Organic Carbon (TOC)									
Total Organic Carbon	----	1	mg/L	149	47	54	34	46	
EP025FD: Field Dissolved Oxygen									
Dissolved Oxygen	----	0.01	mg/L	0.09	0.50	0.52	2.37	0.40	
EP035SF: Total Phenol by Segmented Flow Analyser									
Phenols (Total)	----	0.05	mg/L	<0.05	<0.05	<0.05	<0.10	<0.05	
QWI-EN 67.11 Sampling of Groundwaters									
Depth	----	0.01	m	0.48	0.92	0.94	0.79	0.90	



Analytical Results

Sub-Matrix: WATER (Matrix: WATER)				Sample ID	EW 1	EW 2	EW 3	EW 4	PMW 1A
Sampling date / time				01-Feb-2024 10:10	01-Feb-2024 10:50	01-Feb-2024 10:35	01-Feb-2024 10:45	01-Feb-2024 13:05	
Compound	CAS Number	LOR	Unit	EW2400467-016	EW2400467-017	EW2400467-018	EW2400467-019	EW2400467-020	
				Result	Result	Result	Result	Result	
EA005FD: Field pH									
pH	----	0.1	pH Unit	7.6	7.1	7.2	7.2	6.6	
EA005P: pH by PC Titrator									
pH Value	----	0.01	pH Unit	7.91	7.71	7.72	7.84	7.20	
EA010FD: Field Conductivity									
Conductivity @ 25oC	----	1	µS/cm	2840	2760	2510	3680	704	
EK055G: Ammonia as N by Discrete Analyser									
Ammonia as N	7664-41-7	0.01	mg/L	39.7	70.9	42.1	68.0	0.54	
QWI-EN 67.11 Sampling of Groundwaters									
Depth	----	0.01	m	----	----	----	----	1.10	



Analytical Results

Sub-Matrix: WATER (Matrix: WATER)				Sample ID	PMW 2	PMW 3	PMW 4	PMW 5	PMW 6
Sampling date / time				01-Feb-2024 11:30	01-Feb-2024 11:50	01-Feb-2024 12:05	01-Feb-2024 09:45	01-Feb-2024 00:00	
Compound	CAS Number	LOR	Unit	EW2400467-021	EW2400467-022	EW2400467-023	EW2400467-024	EW2400467-025	
				Result	Result	Result	Result	Result	
EA005FD: Field pH									
pH	----	0.1	pH Unit	6.9	6.8	6.8	6.9	7.0	
EA005P: pH by PC Titrator									
pH Value	----	0.01	pH Unit	7.30	7.35	7.40	7.50	7.53	
EA010FD: Field Conductivity									
Conductivity @ 25oC	----	1	µS/cm	1060	1970	3330	2950	1310	
EK055G: Ammonia as N by Discrete Analyser									
Ammonia as N	7664-41-7	0.01	mg/L	4.53	19.3	35.2	46.1	3.27	
QWI-EN 67.11 Sampling of Groundwaters									
Depth	----	0.01	m	1.83	1.35	1.42	1.59	1.19	



Analytical Results

Sub-Matrix: WATER (Matrix: WATER)				Sample ID	Rocklow Up	Rocklow Middle	Rocklow Down	Dam SW	Dam NW
Sampling date / time				01-Feb-2024 00:00	01-Feb-2024 00:00	01-Feb-2024 00:00	01-Feb-2024 00:00	01-Feb-2024 09:20	
Compound	CAS Number	LOR	Unit	EW2400467-026	EW2400467-027	EW2400467-028	EW2400467-029	EW2400467-030	
				Result	Result	Result	Result	Result	
EA005FD: Field pH									
pH	----	0.1	pH Unit	7.0	7.1	7.2	7.4	6.9	
EA005P: pH by PC Titrator									
pH Value	----	0.01	pH Unit	7.76	7.66	7.68	7.79	7.39	
EA010FD: Field Conductivity									
Conductivity @ 25oC	----	1	µS/cm	982	12600	14500	397	313	
EA116: Temperature									
Temperature	----	0.5	°C	22.0	21.7	21.2	23.7	21.6	
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	145	185	186	168	112	
Total Alkalinity as CaCO3	----	1	mg/L	145	185	186	168	112	
ED041G: Sulfate (Turbidimetric) as SO4 2- by DA									
Sulfate as SO4 - Turbidimetric	14808-79-8	1	mg/L	32	516	635	<10	<10	
ED045G: Chloride by Discrete Analyser									
Chloride	16887-00-6	1	mg/L	213	4170	5290	30	39	
ED093F: Dissolved Major Cations									
Calcium	7440-70-2	1	mg/L	28	121	149	40	26	
Magnesium	7439-95-4	1	mg/L	22	257	328	11	8	
Sodium	7440-23-5	1	mg/L	134	2040	2650	17	19	
Potassium	7440-09-7	1	mg/L	9	78	101	24	22	
EG020T: Total Metals by ICP-MS									
Manganese	7439-96-5	0.001	mg/L	0.159	0.194	0.165	0.527	0.117	
Iron	7439-89-6	0.05	mg/L	0.95	0.60	0.50	1.20	2.01	
EK040P: Fluoride by PC Titrator									
Fluoride	16984-48-8	0.1	mg/L	0.3	0.5	0.5	0.2	0.1	
EK055G: Ammonia as N by Discrete Analyser									
Ammonia as N	7664-41-7	0.01	mg/L	0.14	0.69	0.49	0.02	0.13	



Analytical Results

Sub-Matrix: WATER (Matrix: WATER)				Sample ID	Rocklow Up	Rocklow Middle	Rocklow Down	Dam SW	Dam NW
Sampling date / time				01-Feb-2024 00:00	01-Feb-2024 00:00	01-Feb-2024 00:00	01-Feb-2024 00:00	01-Feb-2024 09:20	
Compound	CAS Number	LOR	Unit	EW2400467-026	EW2400467-027	EW2400467-028	EW2400467-029	EW2400467-030	
				Result	Result	Result	Result	Result	
EK058G: Nitrate as N by Discrete Analyser									
Nitrate as N	14797-55-8	0.01	mg/L	0.04	0.09	0.06	<0.01	<0.01	
Nitrate as NO3	14797-55-8	0.05	mg/L	0.18	0.40	0.26	<0.05	<0.05	
EN055: Ionic Balance									
∅ Total Anions	----	0.01	meq/L	9.57	132	166	4.20	3.34	
∅ Total Cations	----	0.01	meq/L	9.27	118	152	4.25	3.34	
∅ Ionic Balance	----	0.01	%	1.62	5.66	4.36	0.61	0.10	
EP005: Total Organic Carbon (TOC)									
Total Organic Carbon	----	1	mg/L	12	11	11	20	32	
EP025FD: Field Dissolved Oxygen									
Dissolved Oxygen	----	0.01	mg/L	3.58	4.79	4.76	3.12	2.48	
EP035SF: Total Phenol by Segmented Flow Analyser									
Phenols (Total)	----	0.05	mg/L	<0.05	<0.05	<0.05	<0.05	<0.05	



Analytical Results

Sub-Matrix: WATER (Matrix: WATER)				Sample ID	Dam SE	----	----	----	----
Sampling date / time				01-Feb-2024 00:00	----	----	----	----	
Compound	CAS Number	LOR	Unit	EW2400467-031	-----	-----	-----	-----	
				Result	---	---	---	---	
EA005FD: Field pH									
pH	----	0.1	pH Unit	6.8	----	----	----	----	
EA005P: pH by PC Titrator									
pH Value	----	0.01	pH Unit	7.33	----	----	----	----	
EA010FD: Field Conductivity									
Conductivity @ 25oC	----	1	µS/cm	387	----	----	----	----	
EA116: Temperature									
Temperature	----	0.5	°C	20.9	----	----	----	----	
ED037P: Alkalinity by PC Titrator									
Hydroxide Alkalinity as CaCO3	DMO-210-001	1	mg/L	<1	----	----	----	----	
Carbonate Alkalinity as CaCO3	3812-32-6	1	mg/L	<1	----	----	----	----	
Bicarbonate Alkalinity as CaCO3	71-52-3	1	mg/L	173	----	----	----	----	
Total Alkalinity as CaCO3	----	1	mg/L	173	----	----	----	----	
ED041G: Sulfate (Turbidimetric) as SO4 2- by DA									
Sulfate as SO4 - Turbidimetric	14808-79-8	1	mg/L	<10	----	----	----	----	
ED045G: Chloride by Discrete Analyser									
Chloride	16887-00-6	1	mg/L	32	----	----	----	----	
ED093F: Dissolved Major Cations									
Calcium	7440-70-2	1	mg/L	41	----	----	----	----	
Magnesium	7439-95-4	1	mg/L	10	----	----	----	----	
Sodium	7440-23-5	1	mg/L	24	----	----	----	----	
Potassium	7440-09-7	1	mg/L	14	----	----	----	----	
EG020T: Total Metals by ICP-MS									
Manganese	7439-96-5	0.001	mg/L	0.706	----	----	----	----	
Iron	7439-89-6	0.05	mg/L	4.93	----	----	----	----	
EK040P: Fluoride by PC Titrator									
Fluoride	16984-48-8	0.1	mg/L	0.3	----	----	----	----	
EK055G: Ammonia as N by Discrete Analyser									
Ammonia as N	7664-41-7	0.01	mg/L	0.12	----	----	----	----	



Analytical Results

Sub-Matrix: WATER (Matrix: WATER)				Sample ID	Dam SE	----	----	----	----
Sampling date / time				01-Feb-2024 00:00	----	----	----	----	
Compound	CAS Number	LOR	Unit	EW2400467-031	-----	-----	-----	-----	
				Result	---	---	---	---	
EK058G: Nitrate as N by Discrete Analyser									
Nitrate as N	14797-55-8	0.01	mg/L	<0.01	----	----	----	----	
Nitrate as NO3	14797-55-8	0.05	mg/L	<0.05	----	----	----	----	
EN055: Ionic Balance									
∅ Total Anions	----	0.01	meq/L	4.36	----	----	----	----	
∅ Total Cations	----	0.01	meq/L	4.27	----	----	----	----	
∅ Ionic Balance	----	0.01	%	1.02	----	----	----	----	
EP005: Total Organic Carbon (TOC)									
Total Organic Carbon	----	1	mg/L	20	----	----	----	----	
EP025FD: Field Dissolved Oxygen									
Dissolved Oxygen	----	0.01	mg/L	2.10	----	----	----	----	
EP035SF: Total Phenol by Segmented Flow Analyser									
Phenols (Total)	----	0.05	mg/L	<0.05	----	----	----	----	

Inter-Laboratory Testing

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

- (WATER) EK058G: Nitrate as N by Discrete Analyser
- (WATER) EA005P: pH by PC Titrator
- (WATER) EP005: Total Organic Carbon (TOC)
- (WATER) EP035SF: Total Phenol by Segmented Flow Analyser
- (WATER) EK055G: Ammonia as N by Discrete Analyser
- (WATER) EG020F: Dissolved Metals by ICP-MS
- (WATER) EN055: Ionic Balance
- (WATER) ED045G: Chloride by Discrete Analyser
- (WATER) ED041G: Sulfate (Turbidimetric) as SO4 2- by DA
- (WATER) EK040P: Fluoride by PC Titrator
- (WATER) ED037P: Alkalinity by PC Titrator
- (WATER) ED093F: Dissolved Major Cations
- (WATER) EG020T: Total Metals by ICP-MS