



CERTIFICATE OF ANALYSIS

Work Order : **EW2403948**
Client : **KIAMA COUNCIL**
Contact : Guy Stearn
Address : 11 MANNING STREET
KIAMA NSW, AUSTRALIA 2533
Telephone : ----
Project : Minnamurra Landfill
Order number : P023779
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 : 29-Aug-2024 16:19
Date Analysis Commenced : 28-Aug-2024
Issue Date : 14-Oct-2024 15:06



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>
Ankit Joshi	Senior Chemist - Inorganics	Sydney Inorganics, Smithfield, NSW
Robert DaLio	Sampler	Laboratory - Wollongong, 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.

- ED041G: LOR raised for Sulfate on sample no.11 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.
- ED041G: LOR raised for Sulfate due to sample matrix
- EN055: Ionic Balance out of acceptable limits for samples EW2403948-#011 and #030 due to analytes not quantified in this report.
- 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				28-Aug-2024 09:48	29-Aug-2024 10:40	29-Aug-2024 10:50	29-Aug-2024 10:57	29-Aug-2024 09:59	
Compound	CAS Number	LOR	Unit	EW2403948-001	EW2403948-002	EW2403948-003	EW2403948-004	EW2403948-005	
				Result	Result	Result	Result	Result	
EA005FD: Field pH									
pH	----	0.1	pH Unit	7.7	7.3	7.1	7.0	7.1	
EA005P: pH by PC Titrator									
pH Value	----	0.01	pH Unit	7.66	7.68	7.67	7.55	7.55	
EA010FD: Field Conductivity									
Conductivity @ 25oC	----	1	µS/cm	618	8700	12400	31200	1380	
EA116: Temperature									
Temperature	----	0.5	°C	20.1	15.0	16.4	16.9	15.0	
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	171	773	703	536	473	
Total Alkalinity as CaCO3	----	1	mg/L	171	773	703	536	473	
ED041G: Sulfate (Turbidimetric) as SO4 2- by DA									
Sulfate as SO4 - Turbidimetric	14808-79-8	1	mg/L	43	378	631	1970	59	
ED045G: Chloride by Discrete Analyser									
Chloride	16887-00-6	1	mg/L	59	3110	4590	10100	282	
ED093F: Dissolved Major Cations									
Calcium	7440-70-2	1	mg/L	52	184	225	384	108	
Magnesium	7439-95-4	1	mg/L	9	238	306	760	58	
Sodium	7440-23-5	1	mg/L	51	1560	2200	6270	131	
Potassium	7440-09-7	1	mg/L	10	110	128	264	31	
EG020F: Dissolved Metals by ICP-MS									
Manganese	7439-96-5	0.001	mg/L	0.042	0.108	0.045	0.113	0.044	
Iron	7439-89-6	0.05	mg/L	0.35	0.22	0.49	1.09	0.27	
EK040P: Fluoride by PC Titrator									
Fluoride	16984-48-8	0.1	mg/L	0.2	1.0	0.8	0.7	0.5	
EK055G: Ammonia as N by Discrete Analyser									
Ammonia as N	7664-41-7	0.01	mg/L	7.76	1.98	15.9	3.51	3.60	



Analytical Results

Sub-Matrix: WATER (Matrix: WATER)				Sample ID	MD 1B	MD 2A	MD 2B	MD 2C	MD 4A
Sampling date / time				28-Aug-2024 09:48	29-Aug-2024 10:40	29-Aug-2024 10:50	29-Aug-2024 10:57	29-Aug-2024 09:59	
Compound	CAS Number	LOR	Unit	EW2403948-001	EW2403948-002	EW2403948-003	EW2403948-004	EW2403948-005	
				Result	Result	Result	Result	Result	
EK058G: Nitrate as N by Discrete Analyser									
Nitrate as N	14797-55-8	0.01	mg/L	0.10	6.05	0.02	<0.01	<0.01	
Nitrate as NO3	14797-55-8	0.05	mg/L	0.44	26.8	0.09	<0.05	<0.05	
EN055: Ionic Balance									
∅ Total Anions	----	0.01	meq/L	5.98	111	157	337	18.6	
∅ Total Cations	----	0.01	meq/L	5.81	99.4	135	361	16.6	
∅ Ionic Balance	----	0.01	%	1.41	5.51	7.29	3.52	5.61	
EP005: Total Organic Carbon (TOC)									
Total Organic Carbon	----	1	mg/L	6	29	30	20	21	
EP025FD: Field Dissolved Oxygen									
Dissolved Oxygen	----	0.01	mg/L	1.77	3.36	5.15	1.86	1.54	
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	1.38	0.48	0.70	0.73	1.86	



Analytical Results

Sub-Matrix: WATER (Matrix: WATER)				Sample ID	MD 4B	MD 4C	MD 6A	MD 6B	MD 6C
Sampling date / time				29-Aug-2024 10:07	29-Aug-2024 10:20	29-Aug-2024 11:20	29-Aug-2024 11:28	29-Aug-2024 11:40	
Compound	CAS Number	LOR	Unit	EW2403948-006	EW2403948-007	EW2403948-008	EW2403948-009	EW2403948-010	
				Result	Result	Result	Result	Result	
EA005FD: Field pH									
pH	----	0.1	pH Unit	7.1	7.0	7.3	6.8	7.3	
EA005P: pH by PC Titrator									
pH Value	----	0.01	pH Unit	7.74	7.62	7.81	7.47	7.48	
EA010FD: Field Conductivity									
Conductivity @ 25oC	----	1	µS/cm	1990	19600	1910	1440	17500	
EA116: Temperature									
Temperature	----	0.5	°C	16.4	16.8	17.8	18.6	19.1	
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	1000	912	728	751	419	
Total Alkalinity as CaCO3	----	1	mg/L	1000	912	728	751	419	
ED041G: Sulfate (Turbidimetric) as SO4 2- by DA									
Sulfate as SO4 - Turbidimetric	14808-79-8	1	mg/L	10	937	88	30	820	
ED045G: Chloride by Discrete Analyser									
Chloride	16887-00-6	1	mg/L	232	7180	266	112	5340	
ED093F: Dissolved Major Cations									
Calcium	7440-70-2	1	mg/L	126	286	130	152	286	
Magnesium	7439-95-4	1	mg/L	71	451	58	49	371	
Sodium	7440-23-5	1	mg/L	212	3670	195	83	3060	
Potassium	7440-09-7	1	mg/L	74	182	118	37	108	
EG020F: Dissolved Metals by ICP-MS									
Manganese	7439-96-5	0.001	mg/L	0.031	0.099	0.009	0.138	0.056	
Iron	7439-89-6	0.05	mg/L	0.55	1.04	0.21	0.27	14.8	
EK040P: Fluoride by PC Titrator									
Fluoride	16984-48-8	0.1	mg/L	0.6	0.9	0.8	0.4	0.4	
EK055G: Ammonia as N by Discrete Analyser									
Ammonia as N	7664-41-7	0.01	mg/L	59.1	16.2	0.21	18.3	9.13	



Analytical Results

Sub-Matrix: WATER (Matrix: WATER)				Sample ID	MD 4B	MD 4C	MD 6A	MD 6B	MD 6C
Sampling date / time				29-Aug-2024 10:07	29-Aug-2024 10:20	29-Aug-2024 11:20	29-Aug-2024 11:28	29-Aug-2024 11:40	
Compound	CAS Number	LOR	Unit	EW2403948-006	EW2403948-007	EW2403948-008	EW2403948-009	EW2403948-010	
				Result	Result	Result	Result	Result	
EK058G: Nitrate as N by Discrete Analyser									
Nitrate as N	14797-55-8	0.01	mg/L	<0.01	0.04	8.44	<0.01	0.01	
Nitrate as NO3	14797-55-8	0.05	mg/L	<0.05	0.18	37.4	<0.05	<0.05	
EN055: Ionic Balance									
∅ Total Anions	----	0.01	meq/L	26.7	240	23.9	18.8	176	
∅ Total Cations	----	0.01	meq/L	23.2	216	22.8	16.2	181	
∅ Ionic Balance	----	0.01	%	6.98	5.39	2.40	7.48	1.29	
EP005: Total Organic Carbon (TOC)									
Total Organic Carbon	----	1	mg/L	48	40	44	38	18	
EP025FD: Field Dissolved Oxygen									
Dissolved Oxygen	----	0.01	mg/L	2.42	2.71	6.72	1.88	1.46	
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	1.11	1.10	1.10	1.11	1.40	



Analytical Results

Sub-Matrix: WATER (Matrix: WATER)				Sample ID	MD 9A	MD 9B	MD 9C	MD 10A	MD 10B
Sampling date / time				29-Aug-2024 09:37	28-Aug-2024 12:02	28-Aug-2024 11:35	28-Aug-2024 10:30	28-Aug-2024 10:55	
Compound	CAS Number	LOR	Unit	EW2403948-011	EW2403948-012	EW2403948-013	EW2403948-014	EW2403948-015	
				Result	Result	Result	Result	Result	
EA005FD: Field pH									
pH	----	0.1	pH Unit	7.0	7.0	7.1	6.9	7.1	
EA005P: pH by PC Titrator									
pH Value	----	0.01	pH Unit	7.22	7.83	7.86	7.47	7.81	
EA010FD: Field Conductivity									
Conductivity @ 25oC	----	1	µS/cm	501	2720	2820	26200	1490	
EA116: Temperature									
Temperature	----	0.5	°C	15.1	18.8	19.6	16.6	19.9	
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	192	1090	1040	460	604	
Total Alkalinity as CaCO3	----	1	mg/L	192	1090	1040	460	604	
ED041G: Sulfate (Turbidimetric) as SO4 2- by DA									
Sulfate as SO4 - Turbidimetric	14808-79-8	1	mg/L	<50	<20	<20	1320	<50	
ED045G: Chloride by Discrete Analyser									
Chloride	16887-00-6	1	mg/L	65	290	320	8180	110	
ED093F: Dissolved Major Cations									
Calcium	7440-70-2	1	mg/L	12	141	135	427	76	
Magnesium	7439-95-4	1	mg/L	10	61	63	580	30	
Sodium	7440-23-5	1	mg/L	126	253	232	4260	91	
Potassium	7440-09-7	1	mg/L	16	77	100	136	57	
EG020F: Dissolved Metals by ICP-MS									
Manganese	7439-96-5	0.001	mg/L	0.017	0.165	0.144	1.04	0.281	
Iron	7439-89-6	0.05	mg/L	0.11	2.07	5.34	7.14	0.51	
EK040P: Fluoride by PC Titrator									
Fluoride	16984-48-8	0.1	mg/L	0.1	0.6	0.5	0.5	0.8	
EK055G: Ammonia as N by Discrete Analyser									
Ammonia as N	7664-41-7	0.01	mg/L	0.14	42.0	87.8	0.87	68.5	



Analytical Results

Sub-Matrix: WATER (Matrix: WATER)				Sample ID	MD 9A	MD 9B	MD 9C	MD 10A	MD 10B
Sampling date / time				29-Aug-2024 09:37	28-Aug-2024 12:02	28-Aug-2024 11:35	28-Aug-2024 10:30	28-Aug-2024 10:55	
Compound	CAS Number	LOR	Unit	EW2403948-011	EW2403948-012	EW2403948-013	EW2403948-014	EW2403948-015	
				Result	Result	Result	Result	Result	
EK058G: Nitrate as N by Discrete Analyser									
Nitrate as N	14797-55-8	0.01	mg/L	0.13	0.06	0.01	<0.01	<0.01	
Nitrate as NO3	14797-55-8	0.05	mg/L	0.58	0.26	<0.05	<0.05	<0.05	
EN055: Ionic Balance									
∅ Total Anions	----	0.01	meq/L	5.67	30.0	29.8	267	15.2	
∅ Total Cations	----	0.01	meq/L	----	----	----	----	16.6	
∅ Total Cations	----	0.01	meq/L	7.31	25.0	24.6	258	----	
∅ Ionic Balance	----	0.01	%	----	----	----	----	4.37	
∅ Ionic Balance	----	0.01	%	12.6	8.96	9.63	1.83	----	
EP005: Total Organic Carbon (TOC)									
Total Organic Carbon	----	1	mg/L	180	46	62	57	48	
EP025FD: Field Dissolved Oxygen									
Dissolved Oxygen	----	0.01	mg/L	3.36	1.08	1.05	1.27	1.25	
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	0.49	0.72	0.75	0.61	0.78	



Analytical Results

Sub-Matrix: WATER (Matrix: WATER)				Sample ID	EW 1	EW 2	EW 3	EW 4	PMW 1A
Sampling date / time				28-Aug-2024 11:20	28-Aug-2024 11:00	28-Aug-2024 11:03	28-Aug-2024 11:15	29-Aug-2024 08:40	
Compound	CAS Number	LOR	Unit	EW2403948-016	EW2403948-017	EW2403948-018	EW2403948-019	EW2403948-020	
				Result	Result	Result	Result	Result	
EA005FD: Field pH									
pH	----	0.1	pH Unit	7.3	7.0	7.0	7.2	6.4	
EA005P: pH by PC Titrator									
pH Value	----	0.01	pH Unit	7.87	7.85	7.89	8.00	6.92	
EA010FD: Field Conductivity									
Conductivity @ 25oC	----	1	µS/cm	1350	2050	1880	1950	974	
EK055G: Ammonia as N by Discrete Analyser									
Ammonia as N	7664-41-7	0.01	mg/L	29.6	115	48.3	103	0.89	
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				29-Aug-2024 09:10	29-Aug-2024 08:57	29-Aug-2024 08:22	28-Aug-2024 11:45	29-Aug-2024 09:23	
Compound	CAS Number	LOR	Unit	EW2403948-021	EW2403948-022	EW2403948-023	EW2403948-024	EW2403948-025	
				Result	Result	Result	Result	Result	
EA005FD: Field pH									
pH	----	0.1	pH Unit	6.6	6.5	6.6	6.7	6.7	
EA005P: pH by PC Titrator									
pH Value	----	0.01	pH Unit	7.26	7.20	7.35	7.66	7.43	
EA010FD: Field Conductivity									
Conductivity @ 25oC	----	1	µS/cm	723	853	3000	2340	1180	
EK055G: Ammonia as N by Discrete Analyser									
Ammonia as N	7664-41-7	0.01	mg/L	2.90	4.92	28.0	9.26	0.99	
QWI-EN 67.11 Sampling of Groundwaters									
Depth	----	0.01	m	1.84	1.36	1.48	1.68	1.11	



Analytical Results

Sub-Matrix: WATER (Matrix: WATER)				Sample ID	Rocklow Up	Rocklow Middle	Rocklow Down	Dam SW	Dam NW
Sampling date / time				28-Aug-2024 09:05	28-Aug-2024 09:30	28-Aug-2024 08:40	28-Aug-2024 09:45	28-Aug-2024 09:57	
Compound	CAS Number	LOR	Unit	EW2403948-026	EW2403948-027	EW2403948-028	EW2403948-029	EW2403948-030	
				Result	Result	Result	Result	Result	
EA005FD: Field pH									
pH	----	0.1	pH Unit	7.4	7.4	7.6	7.4	7.3	
EA005P: pH by PC Titrator									
pH Value	----	0.01	pH Unit	6.96	7.31	7.37	7.30	7.35	
EA010FD: Field Conductivity									
Conductivity @ 25oC	----	1	µS/cm	3700	8880	7910	337	273	
EA116: Temperature									
Temperature	----	0.5	°C	17.9	16.3	16.7	15.3	15.9	
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	101	141	138	141	166	
Total Alkalinity as CaCO3	----	1	mg/L	101	141	138	141	166	
ED041G: Sulfate (Turbidimetric) as SO4 2- by DA									
Sulfate as SO4 - Turbidimetric	14808-79-8	1	mg/L	193	446	405	<10	<10	
ED045G: Chloride by Discrete Analyser									
Chloride	16887-00-6	1	mg/L	1070	3180	2820	23	34	
ED093F: Dissolved Major Cations									
Calcium	7440-70-2	1	mg/L	45	94	86	35	28	
Magnesium	7439-95-4	1	mg/L	78	198	177	10	10	
Sodium	7440-23-5	1	mg/L	627	1640	1470	14	18	
Potassium	7440-09-7	1	mg/L	26	67	60	21	28	
EG020T: Total Metals by ICP-MS									
Manganese	7439-96-5	0.001	mg/L	0.215	0.052	0.044	0.478	0.096	
Iron	7439-89-6	0.05	mg/L	2.32	1.00	0.70	1.87	2.20	
EK040P: Fluoride by PC Titrator									
Fluoride	16984-48-8	0.1	mg/L	0.3	0.4	0.3	0.2	0.1	
EK055G: Ammonia as N by Discrete Analyser									
Ammonia as N	7664-41-7	0.01	mg/L	0.27	0.37	0.21	0.89	0.12	



Analytical Results

Sub-Matrix: WATER (Matrix: WATER)				Sample ID	Rocklow Up	Rocklow Middle	Rocklow Down	Dam SW	Dam NW
Sampling date / time				28-Aug-2024 09:05	28-Aug-2024 09:30	28-Aug-2024 08:40	28-Aug-2024 09:45	28-Aug-2024 09:57	
Compound	CAS Number	LOR	Unit	EW2403948-026	EW2403948-027	EW2403948-028	EW2403948-029	EW2403948-030	
				Result	Result	Result	Result	Result	
EK058G: Nitrate as N by Discrete Analyser									
Nitrate as N	14797-55-8	0.01	mg/L	0.08	0.35	0.36	<0.01	<0.01	
Nitrate as NO3	14797-55-8	0.05	mg/L	0.35	1.55	1.59	<0.05	<0.05	
EN055: Ionic Balance									
∅ Total Anions	----	0.01	meq/L	36.2	102	90.7	3.46	4.28	
∅ Total Cations	----	0.01	meq/L	----	----	----	----	3.85	
∅ Total Cations	----	0.01	meq/L	36.6	94.0	84.3	3.72	----	
∅ Ionic Balance	----	0.01	%	----	----	----	----	5.25	
∅ Ionic Balance	----	0.01	%	0.53	3.97	3.66	3.48	----	
EP005: Total Organic Carbon (TOC)									
Total Organic Carbon	----	1	mg/L	12	8	7	17	26	
EP025FD: Field Dissolved Oxygen									
Dissolved Oxygen	----	0.01	mg/L	7.69	8.00	8.35	2.76	1.89	
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				28-Aug-2024 09:20	----	----	----	----	
Compound	CAS Number	LOR	Unit	EW2403948-031	-----	-----	-----	-----	
				Result	---	---	---	---	
EA005FD: Field pH									
pH	----	0.1	pH Unit	6.9	----	----	----	----	
EA005P: pH by PC Titrator									
pH Value	----	0.01	pH Unit	7.26	----	----	----	----	
EA010FD: Field Conductivity									
Conductivity @ 25oC	----	1	µS/cm	437	----	----	----	----	
EA116: Temperature									
Temperature	----	0.5	°C	14.9	----	----	----	----	
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	208	----	----	----	----	
Total Alkalinity as CaCO3	----	1	mg/L	208	----	----	----	----	
ED041G: Sulfate (Turbidimetric) as SO4 2- by DA									
Sulfate as SO4 - Turbidimetric	14808-79-8	1	mg/L	14	----	----	----	----	
ED045G: Chloride by Discrete Analyser									
Chloride	16887-00-6	1	mg/L	44	----	----	----	----	
ED093F: Dissolved Major Cations									
Calcium	7440-70-2	1	mg/L	43	----	----	----	----	
Magnesium	7439-95-4	1	mg/L	14	----	----	----	----	
Sodium	7440-23-5	1	mg/L	30	----	----	----	----	
Potassium	7440-09-7	1	mg/L	16	----	----	----	----	
EG020T: Total Metals by ICP-MS									
Manganese	7439-96-5	0.001	mg/L	1.85	----	----	----	----	
Iron	7439-89-6	0.05	mg/L	6.24	----	----	----	----	
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	0.11	----	----	----	----	



Analytical Results

Sub-Matrix: WATER (Matrix: WATER)				Sample ID	Dam SE	----	----	----	----
Sampling date / time				28-Aug-2024 09:20	----	----	----	----	
Compound	CAS Number	LOR	Unit	EW2403948-031	-----	-----	-----	-----	
				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	5.69	----	----	----	----	
∅ Total Cations	----	0.01	meq/L	5.01	----	----	----	----	
∅ Ionic Balance	----	0.01	%	6.32	----	----	----	----	
EP005: Total Organic Carbon (TOC)									
Total Organic Carbon	----	1	mg/L	20	----	----	----	----	
EP025FD: Field Dissolved Oxygen									
Dissolved Oxygen	----	0.01	mg/L	2.59	----	----	----	----	
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) 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) EK058G: Nitrate as N by Discrete Analyser

(WATER) EG020T: Total Metals by ICP-MS