

Certificate of Analysis E24-00-1197

Client:	Lismore City Council	Laboratory:	Environmental Analysis Laboratory
Contact:	Commercial Services Compliance	Contact:	EAL Customer Service Team
Address:	Att: Accounts Payable, PO Box 23a, LISMORE, NSW 2480, Australia	Address:	PO Box 157, East Lismore NSW 2480 Australia
Telephone:	02 6625 0500	Telephone:	(02) 6620 3678
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Customer reference:	Q24/48 Water&Waste Sampling-LWF FY24/25	Request ID:	EAL/E24-00-1197
Number of samples:	5	Report ID:	E24-00-1197_EALP3_1
Date samples received:	21 November 2024	Issue date:	10 December 2024

Authorised by:	Alex Smith
Position:	Senior Technical Officer



Comments: EAL is a NATA accredited laboratory (14960), accredited for compliance with ISO/IEC 17025 - Testing.

Certificate of Analysis

Request ID: EAL/E24-00-1197 Report ID: E24-00-1197_EALP3_1 Issue date: 10 December 2024

				Client Sample ID:	MCS01	MCS02	MCS03	MCS04	MCS05
				Sample Date:	20 November 2024	20 November 2024	20 November 2024	20 November 2024	20 November 2024
				Sampled By:	TS	TS	TS	TS	TS
				EAL Sample ID:	E24-00-1197-0001	E24-00-1197-0002	E24-00-1197-0003	E24-00-1197-0004	E24-00-1197-0005
Parameter	Unit	Method Reference	LOR	---	---	---	---	---	---
pH	---	APHA 4500-H+ B	---	7.10	7.37	7.08	6.99	7.00	
Electrical Conductivity	dS/m	APHA 2510-B	<0.01	0.176	0.353	0.223	0.191	0.194	
Total Dissolved Salts (Calculation EC x 680)	mg/L	APHA 2510-B	<7	120	240	152	130	132	
Dissolved Oxygen	mg/L	** APHA 4500-O-G (Onsite method preferable)	<1	6.95	7.40	6.33	6.28	6.62	
Temperature	Celsius	** Inhouse W40	---	21.1	22.8	21.2	20.7	21.3	
Redox Potential	mV	Redox	---	206	233	224	237	237	
Turbidity	NTU	APHA 2130	<1	69	15	60	72	91	
Total Suspended Solids	mg/L	GFC equiv. filter - APHA 2540-D	<1	38	15	38	52	73	
Biochemical Oxygen Demand (BOD5)	mg/L	APHA 5210-B	<1	1.75	2.40	3.05	2.53	2.98	
Total Nitrogen	mg/L N	Inhouse W4	<0.01	1.08	3.33	1.84	1.60	1.78	
Total Phosphorus	mg/L P	Inhouse W4	<0.01	0.224	0.700	0.382	0.377	0.433	
Nitrate	mg/L N	APHA 4500 NO3-F	<0.005	0.031	1.86	0.405	0.114	< 0.005	
Nitrite	mg/L N	APHA 4500 NO2-I	<0.005	0.016	0.055	0.027	0.020	0.014	
Ammonia	mg/L N	APHA 4500 NH3-H	<0.005	0.037	0.595	0.066	0.016	< 0.005	
Faecal Coliforms	cfu/100 mL	APHA 9222-D	<1	7100	390	4400	4100	5700	
Dissolved Organic Carbon	mg/L	** APHA 5310-B	<1	13.3	6.27	11.7	12.5	12.5	
SGS Report No.	---	** Subcontracted SGS Laboratories Australia	---	SE274746	SE274746	SE274746	SE274746	SE274746	
TRH C6-C9	µg/L	** Subcontracted SGS Laboratories Australia	---	<40	<40	<40	<40	<40	
Benzene (F0)	µg/L	** Subcontracted SGS Laboratories Australia	---	<0.5	<0.5	<0.5	<0.5	<0.5	
TRH C6-C10	µg/L	** Subcontracted SGS Laboratories Australia	---	<50	<50	<50	<50	<50	
TRH C6-C10 minus BTEX (F1)	µg/L	** Subcontracted SGS Laboratories Australia	---	<50	<50	<50	<50	<50	
LLTRH C10-C14	µg/L	** Subcontracted SGS Laboratories Australia	---	<50	<50	<50	<50	<50	
LLTRH C15-C28	µg/L	** Subcontracted SGS Laboratories Australia	---	<100	<100	<100	<100	100	
LLTRH C29-C36	µg/L	** Subcontracted SGS Laboratories Australia	---	<50	<50	<50	<50	52	
LLTRH >C10-C16	µg/L	** Subcontracted SGS Laboratories Australia	---	<50	<50	<50	<50	<50	
LLTRH >C16-C34 (F3)	µg/L	** Subcontracted SGS Laboratories Australia	---	<100	<100	<100	<100	140	
LLTRH >C34-C40 (F4)	µg/L	** Subcontracted SGS Laboratories Australia	---	<100	<100	<100	<100	<100	
TRH Sum C10-C36	µg/L	** Subcontracted SGS Laboratories Australia	---	<100	<100	<100	<100	180	
LLTRH C37-C40	µg/L	** Subcontracted SGS Laboratories Australia	---	<100	<100	<100	<100	<100	
Benzene	µg/L	** Subcontracted SGS Laboratories Australia	---	<0.5	<0.5	<0.5	<0.5	<0.5	
Toluene	µg/L	** Subcontracted SGS Laboratories Australia	---	<0.5	5.6	1	<0.5	<0.5	
Ethylbenzene	µg/L	** Subcontracted SGS Laboratories Australia	---	<0.5	<0.5	<0.5	<0.5	<0.5	
m/p-xylene	µg/L	** Subcontracted SGS Laboratories Australia	---	<1	<1	<1	<1	<1	
o-xylene	µg/L	** Subcontracted SGS Laboratories Australia	---	<0.5	<0.5	<0.5	<0.5	<0.5	
Total Xylenes	µg/L	** Subcontracted SGS Laboratories Australia	---	<1.5	<1.5	<1.5	<1.5	<1.5	
Total BTEX	µg/L	** Subcontracted SGS Laboratories Australia	---	<3	6	<3	<3	<3	
Napthalene (VOC)	µg/L	** Subcontracted SGS Laboratories Australia	---	<0.5	<0.5	<0.5	<0.5	<0.5	

Certificate of Analysis

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Notes:

- ** denotes NATA accreditation does not cover the performance of this service.
- .. denotes not requested, no data/information or no guidelines available.
- All services undertaken by EAL are covered by the EAL Laboratory Services Terms and Conditions (available on request or at scu.edu.au/eal).
- Analysis conducted between sample arrival date and reporting date.
- This report is not to be reproduced except in full.
- Results only relate to the item tested.
- Analysis performed according to APHA. 2017. Standard Methods for the Examination of Water & Wastewater, 23rd Edition. Except where stated otherwise.
- Metals and salts analysed by Inductively Coupled Plasma - Mass Spectrometry (ICP-MS).
- 1:3 Nitric/HCl digest analysed in accordance with APHA 3125 ICPMS.
- For conductivity 1 dS/m = 1 mS/cm = 1000 μ S/cm.
- mg/L = ppm

RESULTS OF WATER ANALYSIS

5 samples supplied by Lismore City Council on 28/08/2024. Lab Job No. R8210.

Samples submitted by Commercial Services Compliance. Your Job: PO 101426 - TP 23/102 - Lismore Facility 23/24.

PO Box 23A LISMORE NSW 2480

Parameter	Methods reference	Sample 1	Sample 2	Sample 3	Sample 4	Sample 5
		MCS01 28.8.24	MCS02 28.8.24	MCS03 28.8.24	MCS04 28.8.24	MCS05 28.8.24
	Job No.	R8210/1	R8210/2	R8210/3	R8210/4	R8210/5
pH	Onsite	7.05	7.60	7.29	7.20	7.22
Conductivity (EC) (dS/m)	Onsite	0.321	0.504	0.463	0.373	0.451
Total Dissolved Salts (mg/L)	** Calculation using EC x 680	218	343	315	254	307
Temperature (-C)	Onsite	21.1	22.7	22.4	21.7	21.3
Redox Potential (mV)	Onsite	231	246	247	253	256
Total Suspended Solids (mg/L)	GFC equiv. filter - APHA 2540-D	25.0	11.0	49.0	89.0	54.0
Turbidity (ntu)	Onsite	30.9	10.6	47.8	83.0	63.1
Dissolved Oxygen (mg/L O ₂)	Onsite	5.84	6.91	5.93	5.66	4.88
Biochemical Oxygen Demand ₅ (mg/L O ₂)	APHA 5210-B	<1	3.60	8.45	9.60	7.70
Total Phosphorus (mg/L P)	In house method W4	0.120	0.293	0.570	0.663	0.534
Total Nitrogen (mg/L N)	In house method W4	0.368	1.87	2.41	2.35	2.53
Total Kjeldahl Nitrogen (mg/L N)	** Calculation: TN - NO _x	0.347	1.16	1.82	1.99	1.79
Nitrate (mg/L N)	APHA 4500 NO ₃ -F	0.021	0.667	0.466	0.277	0.591
Ammonia (mg/L N)	APHA 4500 NH ₃ -H	0.091	0.243	0.554	0.447	0.770
Faecal Coliforms (cfu/100 ml)	** APHA 9222-D	70	<10	1,650	1,890	260
Dissolved Organic Carbon (mg/L C)	APHA 5310-B	6.41	7.22	7.31	6.95	7.27
BTEX						
Benzene (µg/L)	Subcontracted: SGS report SE 270286	<0.5	<0.5	<0.5	<0.5	<0.5
Toluene (µg/L)	Subcontracted: SGS report SE 270286	<0.5	<0.5	<0.5	<0.5	<0.5
Ethylbenzene (µg/L)	Subcontracted: SGS report SE 270286	<0.5	<0.5	<0.5	<0.5	<0.5
m/p-xylene (µg/L)	Subcontracted: SGS report SE 270286	<1	<1	<1	<1	<1
o-xylene (µg/L)	Subcontracted: SGS report SE 270286	<0.5	<0.5	<0.5	<0.5	<0.5
Total Xylenes (µg/L)	Subcontracted: SGS report SE 270286	<1.5	<1.5	<1.5	<1.5	<1.5
Total BTEX (µg/L)	Subcontracted: SGS report SE 270286	<3	<3	<3	<3	<3
Naphthalene (VOC) (µg/L)	Subcontracted: SGS report SE 270286	<0.5	<0.5	<0.5	<0.5	<0.5
Total Recoverable Hydrocarbons (TRH)						
TRH C6-C9 (µg/L)	Subcontracted: SGS report SE 270286	<40	<40	<40	<40	<40
Benzene (F0) (µg/L)	Subcontracted: SGS report SE 270286	<0.5	<0.5	<0.5	<0.5	<0.5
TRH C6-C10 (µg/L)	Subcontracted: SGS report SE 270286	<50	<50	<50	<50	<50
TRH C6-C10 minus BTEX (F1) (µg/L)	Subcontracted: SGS report SE 270286	<50	<50	<50	<50	<50
LLTRH C10-C14 (µg/L)	Subcontracted: SGS report SE 270286	<50	<50	<50	<50	<50
LLTRH C15-C28 (µg/L)	Subcontracted: SGS report SE 270286	100	150	120	130	130
LLTRH C29-C36 (µg/L)	Subcontracted: SGS report SE 270286	<50	55	50	60	61
LLTRH >C10-C16 (µg/L)	Subcontracted: SGS report SE 270286	<50	62	<50	<50	<50
LLTRH >C16-C34 (F3) (µg/L)	Subcontracted: SGS report SE 270286	120	180	140	160	160
LLTRH >C34-C40 (F4) (µg/L)	Subcontracted: SGS report SE 270286	<100	<100	<100	<100	<100
TRH Sum C10-C36 (µg/L)	Subcontracted: SGS report SE 270286	180	210	170	190	190
LLTRH C37-C40 (µg/L)	Subcontracted: SGS report SE 270286	<100	<100	<100	<100	<100

Notes:

- Total metals - samples digested with nitric acid; Total available (acid soluble/ extractable) metals - samples acidified with nitric acid to <2pH;
Dissolved metals - samples filtered through 0.45µm cellulose acetate and then acidified with nitric acid prior to analysis
- Metals and salts analysed by Inductively Coupled Plasma - Mass Spectrometry (ICP-MS).
- 1 mg/L (milligram per litre) = 1 ppm (part per million) = 1000 µg/L (micrograms per litre) = 1000 ppb (part per billion).
- For conductivity 1 dS/m = 1 mS/cm = 1000 µS/cm.
- Analysis performed according to APHA (2012) 'Standard Methods for the Examination of Water & Wastewater', 22nd Edition, except where stated otherwise.
- Analysis conducted between sample arrival date and reporting date.
- ** NATA accreditation does not cover the performance of this service.
- ... Denotes not requested.
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- Results relate only to the samples tested.
- This report was issued on 6/09/2024.



RESULTS OF WATER ANALYSIS

15 samples supplied by Lismore City Council on 29/05/2024, Lab Job No. R4777. Samples submitted by Commercial Services Compliance, Your Job: PO 101428 -TP 23/102-Lismore Waste Facility FY23

PO Box 234 LISMORE NSW 2480

Table with columns for Parameter, Methods reference, Sample 1-15 (MW01-MW25), and Job No. Rows include pH, Conductivity (EC) (dS/m), Total Dissolved Solids (mg/L), Redox Potential (mV), Standing Water Level (m), Total Alkalinity (mg/L CaCO3 equivalent), Dissolved Oxygen (mg/L O2), Biochemical Oxygen Demand (mg/L O2), Total Phosphorus (mg/L P), Total Nitrogen (mg/L N), Nitrate (mg/L N), Ammonia (mg/L N), Temperature (C), Sodium (mg/L), Potassium (mg/L), Calcium (mg/L), Magnesium (mg/L), Chloride Absorption Ratio (SAR), Sulfate (mg/L SO4 2-), Chloride:Sulfate Ratio, Fluoride (mg/L), Faecal Coliforms (cfu/100 ml), Dissolved Organic Carbon (mg/L), Arsenic (mg/L), Iron (mg/L), Manganese (mg/L), Total Phenolics (mg/L), Pesticide analysis screen, BTEX, and Total Recoverable Hydrocarbons (TRH).

- Notes: 1. Total metals - samples digested with nitric acid; 2. Dissolved metals - samples filtered through 0.45µm cellulose acetate; 3. 1 mg/L (milligram per litre) = 1 ppm (part per million) = 1000 µg/L (micrograms per litre) = 1000 ppb (part per billion); 4. For conductivity 1 dS/m = 1 mS/cm = 1000 µS/cm; 5. Analysis performed according to APHA (2017) 'Standard Methods for the Examination of Water & Wastewater', 23rd Edition; 6. Analysis conducted between sample arrival date and reporting date; 7. NATA accreditation does not cover the performance of this service; 8. Denotes not requested; 9. This report is not to be reproduced except in full; 10. All services undertaken by EAL are covered by the EAL Laboratory Services Terms and Conditions; 11. Results relate only to the samples tested; 12. This report was issued on 4/07/2024 and replaces the report issued on 14/06/2024, Ca, Mg, K, Na and SAR added.



RESULTS OF WATER ANALYSIS

5 samples supplied by Lismore City Council on 27/05/2024. Lab Job No. R4681.
 Samples submitted by CS Compliance. Your Job: PO 101426-TP 23/102-Lismore Waste Facility FY23
 USE Commercial Services Compliance LISMORE NSW 2480

Parameter	Methods reference	Sample 1	Sample 2	Sample 3	Sample 4	Sample 5
		MCS01 27/05/24	MCS02 27/05/24	MCS03 27/05/24	MCS04 27/05/24	MCS05 27/05/24
	Job No.	R4681/1	R4681/2	R4681/3	R4681/4	R4681/5
pH	APHA 4500-H ⁺ -B	6.87	7.07	7.11	7.06	7.11
Conductivity (EC) (dS/m)	APHA 2510-B	0.208	0.268	0.289	0.276	0.300
Total Dissolved Solids (mg/L)	** Calculation using EC x 0.80	141	182	197	188	204
Redox Potential (mV)	Onsite	250	220	241	250	254
Total Suspended Solids (mg/L)	GFC equiv. filter - APHA 2540-D	17	38	35	46	45
Turbidity (NTU)	APHA 2130	29.9	33.9	31.9	39.5	46.0
Total Alkalinity (mg/L CaCO ₃ equivalent)	** Total Alkalinity - APHA 2320	52	66	70	68	70
Dissolved Oxygen (mg/L O ₂)	** APHA 4500-O-G (Oxide method preferable)	6.79	6.88	6.63	6.18	6.02
Biochemical Oxygen Demand (mg/L O ₂)	APHA 5210-B	1.68	4.64	4.73	5.01	3.37
Total Phosphorus (mg/L P)	In house method W4	0.116	0.383	0.372	0.390	0.388
Total Nitrogen (mg/L N)	In house method W4	0.388	2.37	2.51	2.29	2.62
Total Kjeldahl Nitrogen (mg/L N)	** Calculation: TN - NO _x	0.341	1.14	1.34	0.445	1.32
Nitrate (mg/L N)	APHA 4500-NO ₃ -F	0.047	1.17	1.10	1.77	1.20
Ammonia (mg/L N)	APHA 4500-NH ₂ -H	<0.005	0.193	0.167	0.216	0.271
Temperature (°C)	data supplied by client	18	19	18	17	18
Sodium (mg/L)	APHA 3125 ICPMS TM 182	23.5	34.6	36.4	34.0	36.5
Potassium (mg/L)	APHA 3125 ICPMS TM 182	0.730	4.40	5.20	4.51	5.15
Calcium (mg/L)	APHA 3125 ICPMS TM 182	10.2	14.1	15.1	14.2	14.7
Magnesium (mg/L)	APHA 3125 ICPMS TM 182	7.16	6.65	7.02	6.79	6.84
Sodium Absorption Ratio (SAR)	** By calculation	1.38	1.90	1.94	1.86	1.97
Chloride (mg/L)	APHA 3125 ICPMS TM 182	33.5	38.9	41.6	41.9	38.7
Sulfate (mg/L SO ₄ ²⁻)	APHA 3125 ICPMS TM 182	<9	9.59	<9	<9	9.15
Chloride/Sulfate Ratio	** Calculation	..	4.05	4.23
Fluoride (mg/L)	** APHA 4500-F-D	0.090	0.090	0.090	0.090	0.090
Faecal Coliforms (cfu/100 ml)	APHA 9222-D	270	850	580	720	360
Dissolved Organic Carbon (mg/L)	APHA 5310-B	4.57	4.83	5.06	4.72	5.15
Iron (mg/L)	Total Available - APHA 3125 ICPMS TM 182	2.11	1.10	1.44	1.50	1.46
Manganese (mg/L)	Total Available - APHA 3125 ICPMS TM 182	0.041	0.058	0.076	0.101	0.137
BTEX						
Benzene (µg/L)	Subcontracted SGS report SE 265977	<0.5	<0.5	<0.5	<0.5	<0.5
Toluene (µg/L)	Subcontracted SGS report SE 265977	<0.5	<0.5	<0.5	<0.5	<0.5
Ethylbenzene (µg/L)	Subcontracted SGS report SE 265977	<0.5	<0.5	<0.5	<0.5	<0.5
m/p-xylene (µg/L)	Subcontracted SGS report SE 265977	<1	<1	<1	<1	<1
o-xylene (µg/L)	Subcontracted SGS report SE 265977	<0.5	<0.5	<0.5	<0.5	<0.5
Total Xylenes (µg/L)	Subcontracted SGS report SE 265977	<1.5	<1.5	<1.5	<1.5	<1.5
Total BTEX (µg/L)	Subcontracted SGS report SE 265977	<3	<3	<3	<3	<3
Naphthalene (VOC) (µg/L)	Subcontracted SGS report SE 265977	<0.5	<0.5	<0.5	<0.5	<0.5
Total Recoverable Hydrocarbons (TRH)						
TRH C6-C9 (µg/L)	Subcontracted SGS report SE 265977	<40	<40	<40	<40	<40
Benzene (F9) (µg/L)	Subcontracted SGS report SE 265977	<0.5	<0.5	<0.5	<0.5	<0.5
TRH C6-C10 (µg/L)	Subcontracted SGS report SE 265977	<50	<50	<50	<50	<50
TRH C6-C10 minus BTEX (F1) (µg/L)	Subcontracted SGS report SE 265977	<50	<50	<50	<50	<50
LLTR C10-C14 (µg/L)	Subcontracted SGS report SE 265977	<50	<50	<50	<50	<50
LLTR C15-C28 (µg/L)	Subcontracted SGS report SE 265977	<100	100.0	<100	<100	<100
LLTR C29-C36 (µg/L)	Subcontracted SGS report SE 265977	<50	<50	<50	<50	<50
LLTR >C10-C16 (µg/L)	Subcontracted SGS report SE 265977	<50	<50	<50	<50	<50
LLTR >C16-C34 (F3) (µg/L)	Subcontracted SGS report SE 265977	<100	100.0	<100	<100	<100
LLTR >C34-C40 (F4) (µg/L)	Subcontracted SGS report SE 265977	<100	<100	<100	<100	<100
TRH Sum C10-C36 (µg/L)	Subcontracted SGS report SE 265977	<100	150.0	<100	<100	<100
LLTR C37-C40 (µg/L)	Subcontracted SGS report SE 265977	<100	<100	<100	<100	<100
Phenol (µg/L)						
Phenol (µg/L)	Subcontracted SGS report SE 265977	<0.5	<0.5	<0.5	<0.5	<0.5
2-methyl phenol (o-cresol) (µg/L)	Subcontracted SGS report SE 265977	<0.5	<0.5	<0.5	<0.5	<0.5
3/4-methyl phenol (m/p-cresol) (µg/L)	Subcontracted SGS report SE 265977	<1	<1	<1	<1	<1
2-chlorophenol (µg/L)	Subcontracted SGS report SE 265977	<0.5	<0.5	<0.5	<0.5	<0.5
2,4-dimethylphenol (µg/L)	Subcontracted SGS report SE 265977	<0.5	<0.5	<0.5	<0.5	<0.5
2,6-dichlorophenol (µg/L)	Subcontracted SGS report SE 265977	<0.5	<0.5	<0.5	<0.5	<0.5
2,4-dichlorophenol (µg/L)	Subcontracted SGS report SE 265977	<0.5	<0.5	<0.5	<0.5	<0.5
2,4,6-trichlorophenol (µg/L)	Subcontracted SGS report SE 265977	<0.5	<0.5	<0.5	<0.5	<0.5
2-nitrophenol (µg/L)	Subcontracted SGS report SE 265977	<0.5	<0.5	<0.5	<0.5	<0.5
4-nitrophenol (µg/L)	Subcontracted SGS report SE 265977	<1	<1	<1	<1	<1
2,4,5-trichlorophenol (µg/L)	Subcontracted SGS report SE 265977	<0.5	<0.5	<0.5	<0.5	<0.5
Pentachlorophenol (µg/L)	Subcontracted SGS report SE 265977	<0.5	<0.5	<0.5	<0.5	<0.5
2,4-dinitrophenol (µg/L)	Subcontracted SGS report SE 265977	<2	<2	<2	<2	<2

Notes:

- Total metals - samples digested with nitric acid; Total available (acid soluble/ extractable) metals - samples acidified with nitric acid to pH <2.
Dissolved metals - samples filtered through 0.45µm cellulose acetate and then acidified with nitric acid prior to analysis
- Metals and salts analysed by Inductively Coupled Plasma - Mass Spectrometry (ICP-MS).
- 1 mg/L (milligram per litre) = 1 ppm (part per million) = 1000 µg/L (micrograms per litre) = 1000 ppb (part per billion).
- For conductivity 1 dS/m = 1 mS/cm = 1000 µS/cm.
- Analysis performed according to APHA (2017) 'Standard Methods for the Examination of Water & Wastewater', 23rd Edition, except where stated otherwise.
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- All services undertaken by EAL are covered by the EAL Laboratory Services Terms and Conditions (refer scu.edu.au/eal or on request).
- Results relate only to the samples tested.
- This report was re-issued on 16/08/2024 and replaces the report issued on 11/06/2024. TRH_Phenol units added.



RESULTS OF LEACHATE ANALYSIS

2 samples supplied by Lismore City Council on 27/05/2024. Lab Job No. R4682.
 Samples submitted by CS Compliance . Your Job: PO 101426 -TP 23/102 -Lismore Waste Facility FY23
 USE Commercial Services Compliance LISMORE NSW 2480

Parameter	Methods reference	Sample 1	Sample 2
		LD 27/05/24	TWP 27/05/24
	Job No.	R4682/1	R4682/2
pH	APHA 4500-H ⁺ -B	9.22	7.84
Conductivity (EC) (dS/m)	APHA 2510-B	0.618	1.06
Total Dissolved Salts (mg/L)	** Calculation using EC x 680	420	721
Total Alkalinity (mg/L CaCO ₃ equivalent)	** Total Alkalinity - APHA 2320	179	403
Chemical Oxygen Demand (mg/L O ₂)	** APHA 5220-D	118	114
Total Phosphorus (mg/L P)	In house method W4	0.476	1.28
Total Nitrogen (mg/L N)	In house method W4	5.33	11.9
Nitrate (mg/L N)	APHA 4500 NO ₃ ⁻ -F	<0.005	0.042
Ammonia (mg/L N)	APHA 4500 NH ₃ -H	0.014	7.74
Sodium (mg/L)	APHA 3125 ICPMS ^{7006 152}	69.0	97.0
Potassium (mg/L)	APHA 3125 ICPMS ^{7006 152}	33.8	47.6
Calcium (mg/L)	APHA 3125 ICPMS ^{7006 152}	29.9	72.5
Magnesium (mg/L)	APHA 3125 ICPMS ^{7006 152}	15.6	22.6
Sodium Absorption Ratio (SAR)	** By calculation	2.55	2.55
Sulfate (mg/L)	APHA 3125 ICPMS ^{7006 152}	39.9	43.8
Chloride (mg/L)	APHA 3125 ICPMS ^{7006 152}	69.6	94.3
Fluoride (mg/L)	** APHA 4500-F-D	0.110	0.110
Faecal Coliforms (cfu/100 ml)	APHA 9222-D	2,800	47,000
Dissolved Organic Carbon (mg/L)	APHA 5310-B	17.3	26.8
Arsenic (mg/L)	Total Available - APHA 3125 ICPMS ^{7006 152}	0.002	0.003
Pesticide analysis screen *see notes			
Hexachlorobenzene (HCB) (µg/L)	Subcontracted: SGS report SE 265976	<0.1	<0.1
Alpha BHC (µg/L)	Subcontracted: SGS report SE 265976	<0.1	<0.1
Lindane (gamma BHC) (µg/L)	Subcontracted: SGS report SE 265976	<0.1	<0.1
Heptachlor (µg/L)	Subcontracted: SGS report SE 265976	<0.1	<0.1
Aldrin (µg/L)	Subcontracted: SGS report SE 265976	<0.1	<0.1
Beta BHC (µg/L)	Subcontracted: SGS report SE 265976	<0.1	<0.1
Delta BHC (µg/L)	Subcontracted: SGS report SE 265976	<0.1	<0.1
Heptachlor epoxide (µg/L)	Subcontracted: SGS report SE 265976	<0.1	<0.1
o,p'-DDE (µg/L)	Subcontracted: SGS report SE 265976	<0.1	<0.1
Alpha Endosulfan (µg/L)	Subcontracted: SGS report SE 265976	<0.1	<0.1
Gamma Chlordane (µg/L)	Subcontracted: SGS report SE 265976	<0.1	<0.1
Alpha Chlordane (µg/L)	Subcontracted: SGS report SE 265976	<0.1	<0.1
trans-Nonachlor (µg/L)	Subcontracted: SGS report SE 265976	<0.1	<0.1
p,p'-DDE (µg/L)	Subcontracted: SGS report SE 265976	<0.1	<0.1
Dieldrin (µg/L)	Subcontracted: SGS report SE 265976	<0.1	<0.1
Endrin (µg/L)	Subcontracted: SGS report SE 265976	<0.1	<0.1
o,p'-DDD (µg/L)	Subcontracted: SGS report SE 265976	<0.1	<0.1
o,p'-DDT (µg/L)	Subcontracted: SGS report SE 265976	<0.1	<0.1
Beta Endosulfan (µg/L)	Subcontracted: SGS report SE 265976	<0.1	<0.1
p,p'-DDD (µg/L)	Subcontracted: SGS report SE 265976	<0.1	<0.1
p,p'-DDT (µg/L)	Subcontracted: SGS report SE 265976	<0.1	<0.1
Endosulfan sulphate (µg/L)	Subcontracted: SGS report SE 265976	<0.1	<0.1
Endrin aldehyde (µg/L)	Subcontracted: SGS report SE 265976	<0.1	<0.1
Methoxychlor (µg/L)	Subcontracted: SGS report SE 265976	<0.1	<0.1
Endrin ketone (µg/L)	Subcontracted: SGS report SE 265976	<0.1	<0.1
Isodrin (µg/L)	Subcontracted: SGS report SE 265976	<0.1	<0.1
Mirex (µg/L)	Subcontracted: SGS report SE 265976	<0.1	<0.1
Total OC (µg/L)	Subcontracted: SGS report SE 265976	<1	<1
Total OC (µg/L)	Subcontracted: SGS report SE 265976	<1	<1
Dichlorvos (µg/L)	Subcontracted: SGS report SE 265976	<0.5	<0.5
Dimethoate (µg/L)	Subcontracted: SGS report SE 265976	<0.5	<0.5
Diazinon (Dimpylate) (µg/L)	Subcontracted: SGS report SE 265976	<0.5	<0.5
Fenitrothion (µg/L)	Subcontracted: SGS report SE 265976	<0.2	<0.2
Malathion (µg/L)	Subcontracted: SGS report SE 265976	<0.2	<0.2
Chlorpyrifos (Chlorpyrifos Ethyl) (µg/L)	Subcontracted: SGS report SE 265976	<0.2	<0.2
Parathion-ethyl (Parathion) (µg/L)	Subcontracted: SGS report SE 265976	<0.2	<0.2
Bromophos Ethyl (µg/L)	Subcontracted: SGS report SE 265976	<0.2	<0.2
Methidathion (µg/L)	Subcontracted: SGS report SE 265976	<0.5	<0.5
Ethion (µg/L)	Subcontracted: SGS report SE 265976	<0.2	<0.2
Azinphos-methyl (µg/L)	Subcontracted: SGS report SE 265976	<0.2	<0.2

Notes:

- Total metals - samples digested with nitric acid; Total available (acid soluble/ extractable) metals - samples acidified with nitric acid to pH <2; Dissolved metals - samples filtered through 0.45µm cellulose acetate and then acidified with nitric acid prior to analysis
- Metals and salts analysed by Inductively Coupled Plasma - Mass Spectrometry (ICP-MS).
- 1 mg/L (milligram per litre) = 1 ppm (part per million) = 1000 µg/L (micrograms per litre) = 1000 ppb (part per billion).
- For conductivity 1 dS/m = 1 mS/cm = 1000 µS/cm.
- Analysis performed according to APHA (2017) 'Standard Methods for the Examination of Water & Wastewater', 23rd Edition, except where stated otherwise.
- Analysis conducted between sample arrival date and reporting date.
- ** NATA accreditation does not cover the performance of this service.
- .. Denotes not requested.
- This report is not to be reproduced except in full.
- All services undertaken by EAL are covered by the EAL Laboratory Services Terms and Conditions (refer scu.edu.au/eal or on request).
- Results relate only to the samples tested.
- This report was re-issued on 1/08/2024 and replaces the report issued on 11/06/2024. Chloride and Sulfate data added.



RESULTS OF WATER ANALYSIS

5 samples supplied by Lismore City Council on 27/02/2024. Lab Job No. R1071.

Samples submitted by Accounts Payable. Your Job: PO 101426 -TP 23/102 -Lismore Waste Facility FY 23.

PO Box 23a LISMORE NSW 2480

Parameter	Methods reference	Sample 1	Sample 2	Sample 3	Sample 4	Sample 5
		MCS01	MCS02	MCS03	MCS04	MCS05
	Job No.	R1071/1	R1071/2	R1071/3	R1071/4	R1071/5
pH	APHA 4500-H ⁺ -B	7.06	7.82	7.45	7.25	7.19
Conductivity (EC) (dS/m)	APHA 2510-B	0.249	0.541	0.446	0.379	0.380
Total Dissolved Salts (mg/L)	** Calculation using EC x 680	169	368	303	258	258
Temperature (°C)	Onsite	27.2	28.4	27.7	26.6	27.6
Redox Potential (mV)	Onsite	197	226	236	231	244
Total Suspended Solids (mg/L)	GFC equiv. filter - APHA 2540-D	15	67	32	45	62
Turbidity (ntu)	APHA 2130	18.5	36.3	32.9	35.5	73.5
Dissolved Oxygen (mg/L O ₂)	Onsite	4.4	6.8	6.0	5.3	4.3
Biochemical Oxygen Demand ₅ (mg/L O ₂)	APHA 5210-B	<1	14.0	5.9	6.4	6.2
Total Phosphorus (mg/L P)	In house method W4	0.17	0.51	0.43	0.57	0.63
Total Nitrogen (mg/L N)	In house method W4	0.60	5.39	3.78	3.54	3.54
Total Kjeldahl Nitrogen (mg/L N)	** Calculation: TN – NO _x	0.59	1.91	1.18	1.50	1.49
Nitrate (mg/L N)	APHA 4500 NO ₃ -F	0.013	3.25	2.42	1.89	1.91
Ammonia (mg/L N)	APHA 4500 NH ₃ -H	0.065	0.219	0.212	0.194	0.264
Faecal Coliforms (cfu/100 ml)	** APHA 9222-D	13,000	92,000	26,000	9,000	15,000
Dissolved Organic Carbon (mg/L C)	APHA 5310-B	10.6	6.47	7.60	8.54	8.85
BTEX						
Benzene (µg/L)	Subcontracted: SGS report SE 261354	<0.5	<0.5	<0.5	<0.5	<0.5
Toluene (µg/L)	Subcontracted: SGS report SE 261354	<0.5	<0.5	<0.5	<0.5	<0.5
Ethylbenzene (µg/L)	Subcontracted: SGS report SE 261354	<0.5	<0.5	<0.5	<0.5	<0.5
m/p-xylene (µg/L)	Subcontracted: SGS report SE 261354	<1	<1	<1	<1	<1
o-xylene (µg/L)	Subcontracted: SGS report SE 261354	<0.5	<0.5	<0.5	<0.5	<0.5
Total Xylenes (µg/L)	Subcontracted: SGS report SE 261354	<1.5	<1.5	<1.5	<1.5	<1.5
Total BTEX (µg/L)	Subcontracted: SGS report SE 261354	<3	<3	<3	<3	<3
Naphthalene (VOC) (µg/L)	Subcontracted: SGS report SE 261354	<0.5	<0.5	<0.5	<0.5	<0.5
Total Recoverable Hydrocarbons (TRH)						
TRH C6-C9 (µg/L)	Subcontracted: SGS report SE 261354	<40	<40	<40	<40	<40
Benzene (F0) (µg/L)	Subcontracted: SGS report SE 261354	<0.5	<0.5	<0.5	<0.5	<0.5
TRH C6-C10 (µg/L)	Subcontracted: SGS report SE 261354	<50	<50	<50	<50	<50
TRH C6-C10 minus BTEX (F1) (µg/L)	Subcontracted: SGS report SE 261354	<50	<50	<50	<50	<50
LLTRH C10-C14 (µg/L)	Subcontracted: SGS report SE 261354	<50	<50	<50	<50	<50
LLTRH C15-C28 (µg/L)	Subcontracted: SGS report SE 261354	<100	<100	<100	<100	<100
LLTRH C29-C36 (µg/L)	Subcontracted: SGS report SE 261354	<50	<50	<50	<50	<50
LLTRH >C10-C16 (µg/L)	Subcontracted: SGS report SE 261354	<50	<50	<50	<50	<50
LLTRH >C16-C34 (F3) (µg/L)	Subcontracted: SGS report SE 261354	<100	<100	<100	<100	<100
LLTRH >C34-C40 (F4) (µg/L)	Subcontracted: SGS report SE 261354	<100	<100	<100	<100	<100
TRH Sum C10-C36 (µg/L)	Subcontracted: SGS report SE 261354	<100	<100	<100	<100	<100
LLTRH C37-C40 (µg/L)	Subcontracted: SGS report SE 261354	<100	<100	<100	<100	<100

Notes:

- Total metals - samples digested with nitric acid; Total available (acid soluble/ extractable) metals - samples acidified with nitric acid to <2pH;
Dissolved metals - samples filtered through 0.45µm cellulose acetate and then acidified with nitric acid prior to analysis
- Metals and salts analysed by Inductively Coupled Plasma - Mass Spectrometry (ICP-MS).
- 1 mg/L (milligram per litre) = 1 ppm (part per million) = 1000 µg/L (micrograms per litre) = 1000 ppb (part per billion).
- For conductivity 1 dS/m = 1 mS/cm = 1000 µS/cm.
- Analysis performed according to APHA (2012) 'Standard Methods for the Examination of Water & Wastewater', 22nd Edition, except where stated otherwise.
- Analysis conducted between sample arrival date and reporting date.
- ** NATA accreditation does not cover the performance of this service.
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- Results relate only to the samples tested.
- This report was issued on 11/03/2024.



RESULTS OF LEACHATE ANALYSIS

2 samples supplied by Lismore City Council on 27/02/2024. Lab Job No. R1070.

Samples submitted by Commercial Services Compliance. Your Job: PO 101426 -TP 23/102 -Lismore Waste Facility FY 23

PO Box 23A LISMORE NSW 2480

Parameter	Methods reference	Sample 1	Sample 2
		LD	TWP
	<i>Job No.</i>	<i>R1070/1</i>	<i>R1070/2</i>
pH	APHA 4500-H ⁺ -B	9.14	7.42
Conductivity (EC) (dS/m)	APHA 2510-B	0.951	0.903
Total Dissolved Salts (mg/L)	** Calculation using EC x 680	647	614
Total Alkalinity (mg/L CaCO ₃ equivalent)	** Total Alkalinity - APHA 2320	268	327
Chemical Oxygen Demand (mg/L O ₂)	** APHA 5220-D	140	120
Total Phosphorus (mg/L P)	In house method W4	0.87	1.65
Total Nitrogen (mg/L N)	In house method W4	12.0	10.7
Total Kjeldahl Nitrogen (mg/L N)	** Calculation: TN – NOx	11.9	10.7
Nitrate (mg/L N)	APHA 4500 NO ₃ ⁻ -F	<0.005	<0.005
Ammonia (mg/L N)	APHA 4500 NH ₃ -H	0.474	4.78
Sodium (mg/L)	APHA 3125 ICPMS ^{note 1&2}	124	87.8
Potassium (mg/L)	APHA 3125 ICPMS ^{note 1&2}	53.0	39.7
Calcium (mg/L)	APHA 3125 ICPMS ^{note 1&2}	19.9	57.6
Magnesium (mg/L)	APHA 3125 ICPMS ^{note 1&2}	14.4	14.7
Sodium Absorption Ratio (SAR)	** By calculation	5.16	2.67
Chloride (mg/L)	APHA 3125 ICPMS ^{note 1&2}	138	95.0
Sulfate (mg/L SO ₄ ²⁻)	APHA 3125 ICPMS ^{note 1&2}	40.0	56.1
Chloride/Sulfate Ratio	** Calculation	3.43	1.70
Fluoride (mg/L)	** APHA 4500-F-D	0.14	0.60
Faecal Coliforms (cfu/100 ml)	APHA 9222-D	7,000	78,000,000
Dissolved Organic Carbon (mg/L)	APHA 5310-B	41.3	42.5
Arsenic (mg/L)	Total Available - APHA 3125 ICPMS ^{note 1&2}	0.004	0.005

Notes:

- Total metals - samples digested with nitric acid; Total available (acid soluble/ extractable) metals - samples acidified with nitric acid to pH <2;
Dissolved metals - samples filtered through 0.45µm cellulose acetate and then acidified with nitric acid prior to analysis
- Metals and salts analysed by Inductively Coupled Plasma - Mass Spectrometry (ICP-MS).
- 1 mg/L (milligram per litre) = 1 ppm (part per million) = 1000 µg/L (micrograms per litre) = 1000 ppb (part per billion).
- For conductivity 1 dS/m = 1 mS/cm = 1000 µS/cm.
- Analysis performed according to APHA (2017) 'Standard Methods for the Examination of Water & Wastewater', 23rd Edition, except where stated otherwise.
- Analysis conducted between sample arrival date and reporting date.
- ** NATA accreditation does not cover the performance of this service.
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- Results relate only to the samples tested.
- This report was issued on 6/03/2024.



Certificate of Analysis E24-00-1113

Client:	Lismore City Council	Laboratory:	Environmental Analysis Laboratory
Contact:	Commercial Services Compliance	Contact:	EAL Customer Service Team
Address:	Att: Accounts Payable, PO Box 23a, LISMORE, NSW 2480, Australia	Address:	PO Box 157, East Lismore NSW 2480 Australia
Telephone:		Telephone:	(02) 6620 3678
Email:		Email:	eal@scu.edu.au

Customer reference:	Q24/48 Water & Waste Sampling	Request ID:	EAL/E24-00-1113
Number of samples:	16	Report ID:	E24-00-1113_EALP3_1
Date samples received:	19 November 2024	Issue date:	02 December 2024

Authorised by:	Alex Smith
Position:	Senior Technical Officer



Comments: EAL is a NATA accredited laboratory (14960), accredited for compliance with ISO/IEC 17025 - Testing.

Certificate of Analysis

Request ID: EAL/E24-00-1113 Report ID: E24-00-1113_EALP3_1 Issue date: 02 December 2024

				Client Sample ID:	MW01	MW02	MW09	MW11	MW12
				EAL Sample ID:	E24-00-1113-0001	E24-00-1113-0002	E24-00-1113-0003	E24-00-1113-0004	E24-00-1113-0005
Parameter	Unit	Method Reference	LOR						
pH	---	APHA 4500-H+ B	---	---	6.24	6.56	6.78	6.58	11.16
Electrical Conductivity	dS/m	APHA 2510-B	<0.01	---	0.259	3.78	0.584	8.50	5.08
Total Dissolved Salts (Calculation EC x 680)	mg/L	APHA 2510-B	<7	---	176	2572	397	5782	3454
Dissolved Oxygen	mg/L	** APHA 4500-O-G (Onsite method preferable)	<1	---	2.51	2.85	3.79	1.64	2.23
Temperature	Celsius	** Inhouse W40	---	---	20.6	23.4	21.3	20.7	20.8
Redox Potential	---	Redox	---	---	235	252	233	-14	-102
Biochemical Oxygen Demand (BOD5)	mg/L	APHA 5210-B	<1	---	1.80	3.50	< 1	3.35	2.75
Nitrate	mg/L N	APHA 4500 NO3-F	<0.005	---	0.643	0.051	0.053	< 0.005	0.311
Nitrite	mg/L N	APHA 4500 NO2-I	<0.005	---	0.050	0.050	0.050	0.050	0.050
Ammonia	mg/L N	APHA 4500 NH3-H	<0.005	---	0.050	0.050	0.050	4.92	23.4
Total Nitrogen	mg/L N	Inhouse W4	<0.01	---	1.15	0.908	0.431	3.26	42.1
Total Phosphorus	mg/L P	Inhouse W4	<0.01	---	0.246	0.122	0.344	1.23	0.029
Dissolved Organic Carbon	mg/L	** APHA 5310-B	<1	---	2.22	12.8	2.16	<10.0	<10.0
SGS Report No.	---	** Subcontracted SGS Laboratories Australia	---	---	SE274568	SE274568	SE274568	SE274568	SE274568
TRH C6-C9	µg/L	** Subcontracted SGS Laboratories Australia	---	---	<40	<40	<40	<40	<40
Benzene (F0)	µg/L	** Subcontracted SGS Laboratories Australia	---	---	<0.5	<0.5	<0.5	<0.5	<0.5
TRH C6-C10	µg/L	** Subcontracted SGS Laboratories Australia	---	---	<50	<50	<50	<50	<50
TRH C6-C10 minus BTEX (F1)	µg/L	** Subcontracted SGS Laboratories Australia	---	---	<50	<50	<50	<50	<50
LLTRH C10-C14	µg/L	** Subcontracted SGS Laboratories Australia	---	---	<50	88	<50	<50	<50
LLTRH C15-C28	µg/L	** Subcontracted SGS Laboratories Australia	---	---	<100	460	<100	150	120
LLTRH C29-C36	µg/L	** Subcontracted SGS Laboratories Australia	---	---	<50	<50	<50	<50	<50
LLTRH >C10-C16	µg/L	** Subcontracted SGS Laboratories Australia	---	---	<50	180	<50	<50	62
LLTRH >C16-C34 (F3)	µg/L	** Subcontracted SGS Laboratories Australia	---	---	<100	390	<100	170	130
LLTRH >C34-C40 (F4)	µg/L	** Subcontracted SGS Laboratories Australia	---	---	<100	<100	<100	<100	<100
TRH Sum C10-C36	µg/L	** Subcontracted SGS Laboratories Australia	---	---	<100	570	<100	210	200
LLTRH C37-C40	µg/L	** Subcontracted SGS Laboratories Australia	---	---	<100	<100	<100	<100	<100
GW Level	---	Ground Water Level	---	---	2.09	0.00	2.24	1.34	0.73
Turbidity	NTU	APHA 2130	<1	---	30	1.1	190	280	5.4

				Client Sample ID:	MW13	MW15	MW16	MW17	MW18
				EAL Sample ID:	E24-00-1113-0006	E24-00-1113-0007	E24-00-1113-0008	E24-00-1113-0009	E24-00-1113-0010
Parameter	Unit	Method Reference	LOR						
pH	---	APHA 4500-H+ B	---	---	6.91	6.48	8.64	8.49	7.13
Electrical Conductivity	dS/m	APHA 2510-B	<0.01	---	4.74	8.74	1.00	0.643	2.22
Total Dissolved Salts (Calculation EC x 680)	mg/L	APHA 2510-B	<7	---	3225	5945	681	437	1510
Dissolved Oxygen	mg/L	** APHA 4500-O-G (Onsite method preferable)	<1	---	2.22	3.06	3.17	2.77	2.62
Temperature	Celsius	** Inhouse W40	---	---	19.9	20.6	22.3	24.2	22.0
Redox Potential	---	Redox	---	---	-16	11	40	75	102
Biochemical Oxygen Demand (BOD5)	mg/L	APHA 5210-B	<1	---	3.50	5.10	< 1	6.20	1.00
Nitrate	mg/L N	APHA 4500 NO3-F	<0.005	---	0.210	0.018	< 0.005	2.50	0.060
Nitrite	mg/L N	APHA 4500 NO2-I	<0.005	---	0.050	0.050	0.050	0.660	0.068
Ammonia	mg/L N	APHA 4500 NH3-H	<0.005	---	3.16	4.30	0.300	0.195	0.143
Total Nitrogen	mg/L N	Inhouse W4	<0.01	---	3.03	4.03	0.518	4.09	0.349

Certificate of Analysis

Request ID: EAL/E24-00-1113 Report ID: E24-00-1113_EALP3_1 Issue date: 02 December 2024

				Client Sample ID:	MW13	MW15	MW16	MW17	MW18
				EAL Sample ID:	E24-00-1113-0006	E24-00-1113-0007	E24-00-1113-0008	E24-00-1113-0009	E24-00-1113-0010
Parameter	Unit	Method Reference	LOR						
Total Phosphorus	mg/L P	Inhouse W4	<0.01	---	0.842	0.281	0.235	0.159	0.463
Dissolved Organic Carbon	mg/L	** APHA 5310-B	<1	11.0	14.8	3.45	9.20	1.99	
SGS Report No.	---	** Subcontracted SGS Laboratories Australia	---	SE274568	SE274568	SE274568	SE274568	SE274568	SE274568
TRH C6-C9	µg/L	** Subcontracted SGS Laboratories Australia	---	<40	<40	<40	<40	<40	<40
Benzene (F0)	µg/L	** Subcontracted SGS Laboratories Australia	---	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
TRH C6-C10	µg/L	** Subcontracted SGS Laboratories Australia	---	<50	<50	<50	<50	<50	<50
TRH C6-C10 minus BTEX (F1)	µg/L	** Subcontracted SGS Laboratories Australia	---	<50	<50	<50	<50	<50	<50
LLTRH C10-C14	µg/L	** Subcontracted SGS Laboratories Australia	---	<50	<50	<50	<50	<50	<50
LLTRH C15-C28	µg/L	** Subcontracted SGS Laboratories Australia	---	130	180	<100	<100	340	
LLTRH C29-C36	µg/L	** Subcontracted SGS Laboratories Australia	---	<50	70	<50	<50	540	
LLTRH >C10-C16	µg/L	** Subcontracted SGS Laboratories Australia	---	<50	<50	<50	<50	<50	<50
LLTRH >C16-C34 (F3)	µg/L	** Subcontracted SGS Laboratories Australia	---	140	220	<100	<100	730	
LLTRH >C34-C40 (F4)	µg/L	** Subcontracted SGS Laboratories Australia	---	<100	<100	<100	<100	270	
TRH Sum C10-C36	µg/L	** Subcontracted SGS Laboratories Australia	---	190	260	<100	<100	890	
LLTRH C37-C40	µg/L	** Subcontracted SGS Laboratories Australia	---	<100	<100	<100	<100	130	
GW Level	---	Ground Water Level	---	1.26	2.52	1.94	1.64	3.08	
Turbidity	NTU	APHA 2130	<1	95	310	2.5	24	57	

				Client Sample ID:	MW19	MW20	MW21	MW22	MW23
				EAL Sample ID:	E24-00-1113-0011	E24-00-1113-0012	E24-00-1113-0013	E24-00-1113-0014	E24-00-1113-0015
Parameter	Unit	Method Reference	LOR						
pH	---	APHA 4500-H+ B	---	6.44	6.36	6.23	6.45	7.20	
Electrical Conductivity	dS/m	APHA 2510-B	<0.01	0.132	3.83	3.66	11.3	3.45	
Total Dissolved Salts (Calculation EC x 680)	mg/L	APHA 2510-B	<7	90	2607	2490	7670	2345	
Dissolved Oxygen	mg/L	** APHA 4500-O-G (Onsite method preferable)	<1	2.69	2.17	3.33	2.71	2.68	
Temperature	Celsius	** Inhouse W40	---	21.6	20.5	20.6	21.8	21.7	
Redox Potential	---	Redox	---	92	55	75	22	33	
Biochemical Oxygen Demand (BOD5)	mg/L	APHA 5210-B	<1	1.35	3.70	5.65	2.45	6.90	
Nitrate	mg/L N	APHA 4500 NO3-F	<0.005	0.038	< 0.005	< 0.005	0.013	0.056	
Nitrite	mg/L N	APHA 4500 NO2-I	<0.005	0.061	0.070	0.062	0.050	0.056	
Ammonia	mg/L N	APHA 4500 NH3-H	<0.005	0.052	6.15	6.63	2.71	3.38	
Total Nitrogen	mg/L N	Inhouse W4	<0.01	1.00	4.60	5.92	2.41	3.37	
Total Phosphorus	mg/L P	Inhouse W4	<0.01	0.304	1.87	1.44	0.601	1.89	
Dissolved Organic Carbon	mg/L	** APHA 5310-B	<1	13.3	3.11	2.01	25.3	4.65	
SGS Report No.	---	** Subcontracted SGS Laboratories Australia	---	SE274568	SE274568	SE274568	SE274568	SE274568	SE274568
TRH C6-C9	µg/L	** Subcontracted SGS Laboratories Australia	---	<40	<40	<40	<40	<40	<40
Benzene (F0)	µg/L	** Subcontracted SGS Laboratories Australia	---	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
TRH C6-C10	µg/L	** Subcontracted SGS Laboratories Australia	---	<50	<50	<50	<50	<50	<50
TRH C6-C10 minus BTEX (F1)	µg/L	** Subcontracted SGS Laboratories Australia	---	<50	<50	<50	<50	<50	<50
LLTRH C10-C14	µg/L	** Subcontracted SGS Laboratories Australia	---	<50	<50	<50	<50	<50	<50

Certificate of Analysis

Request ID: EAL/E24-00-1113 Report ID: E24-00-1113_EALP3_1 Issue date: 02 December 2024

				Client Sample ID:	MW19	MW20	MW21	MW22	MW23
				EAL Sample ID:	E24-00-1113-0011	E24-00-1113-0012	E24-00-1113-0013	E24-00-1113-0014	E24-00-1113-0015
Parameter	Unit	Method Reference	LOR						
LLTRH C15-C28	µg/L	** Subcontracted SGS Laboratories Australia	---	<100	<100	<100	230	<100	
LLTRH C29-C36	µg/L	** Subcontracted SGS Laboratories Australia	---	<50	<50	<50	110	<50	
LLTRH >C10-C16	µg/L	** Subcontracted SGS Laboratories Australia	---	<50	<50	<50	<50	<50	
LLTRH >C16-C34 (F3)	µg/L	** Subcontracted SGS Laboratories Australia	---	<100	<100	<100	290	<100	
LLTRH >C34-C40 (F4)	µg/L	** Subcontracted SGS Laboratories Australia	---	<100	<100	<100	<100	<100	
TRH Sum C10-C36	µg/L	** Subcontracted SGS Laboratories Australia	---	<100	<100	<100	350	<100	
LLTRH C37-C40	µg/L	** Subcontracted SGS Laboratories Australia	---	<100	<100	<100	<100	<100	
GW Level	---	Ground Water Level	---	2.87	1.17	0.82	3.05	3.93	
Turbidity	NTU	APHA 2130	<1	23	720	16	470	12	

				Client Sample ID:	MW25
				EAL Sample ID:	E24-00-1113-0016
Parameter	Unit	Method Reference	LOR		
pH	---	APHA 4500-H+ B	---	6.66	
Electrical Conductivity	dS/m	APHA 2510-B	<0.01	3.68	
Total Dissolved Salts (Calculation EC x 680)	mg/L	APHA 2510-B	<7	2499	
Dissolved Oxygen	mg/L	** APHA 4500-O-G (Onsite method preferable)	<1	2.26	
Temperature	Celsius	** Inhouse W40	---	22.0	
Redox Potential	---	Redox	---	60	
Biochemical Oxygen Demand (BOD5)	mg/L	APHA 5210-B	<1	1.00	
Nitrate	mg/L N	APHA 4500 NO3-F	<0.005	< 0.005	
Nitrite	mg/L N	APHA 4500 NO2-I	<0.005	0.050	
Ammonia	mg/L N	APHA 4500 NH3-H	<0.005	0.050	
Total Nitrogen	mg/L N	Inhouse W4	<0.01	6.65	
Total Phosphorus	mg/L P	Inhouse W4	<0.01	1.21	
Dissolved Organic Carbon	mg/L	** APHA 5310-B	<1	2.59	
SGS Report No.	---	** Subcontracted SGS Laboratories Australia	---	SE274568	
TRH C6-C9	µg/L	** Subcontracted SGS Laboratories Australia	---	<40	
Benzene (F0)	µg/L	** Subcontracted SGS Laboratories Australia	---	<0.5	
TRH C6-C10	µg/L	** Subcontracted SGS Laboratories Australia	---	<50	
TRH C6-C10 minus BTEX (F1)	µg/L	** Subcontracted SGS Laboratories Australia	---	<50	
LLTRH C10-C14	µg/L	** Subcontracted SGS Laboratories Australia	---	<50	
LLTRH C15-C28	µg/L	** Subcontracted SGS Laboratories Australia	---	<100	
LLTRH C29-C36	µg/L	** Subcontracted SGS Laboratories Australia	---	<50	
LLTRH >C10-C16	µg/L	** Subcontracted SGS Laboratories Australia	---	<50	
LLTRH >C16-C34 (F3)	µg/L	** Subcontracted SGS Laboratories Australia	---	110	
LLTRH >C34-C40 (F4)	µg/L	** Subcontracted SGS Laboratories Australia	---	<100	
TRH Sum C10-C36	µg/L	** Subcontracted SGS Laboratories Australia	---	140	
LLTRH C37-C40	µg/L	** Subcontracted SGS Laboratories Australia	---	<100	
GW Level	---	Ground Water Level	---	3.60	

Certificate of Analysis

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			Client Sample ID:	MW25
			EAL Sample ID:	E24-00-1113-0016
Parameter	Unit	Method Reference	LOR	---
Turbidity	NTU	APHA 2130	<1	4.4