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 – NOx	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:

1. 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
2. Metals and salts analysed by Inductively Coupled Plasma - Mass Spectrometry (ICP-MS).
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 (2012) 'Standard Methods for the Examination of Water & Wastewater', 22nd Edition, except where stated otherwise.
6. Analysis conducted between sample arrival date and reporting date.
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11. Results relate only to the samples tested.
12. This report was issued on 11/03/2024.

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checked: .....
Graham Lancaster
Laboratory Manager

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 LD	Sample 2 TWP
	Job No.	*R1070/1*	*R1070/2*
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:

1. 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
2. Metals and salts analysed by Inductively Coupled Plasma - Mass Spectrometry (ICP-MS).
3. 1 mg/L (milligram per litre) = 1 ppm (part per million) = 1000 µg/L (micrograms per litre) = 1000 ppb (part per billion).
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12. This report was issued on 6/03/2024.

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Graham Lancaster
Laboratory Manager