

TABLE 2: LITHGOW SOLID WASTE FACILITY - RESULTS OF LABORATORY ANALYSIS
MAY 2019

GROUNDWATER



Group	Analyte	LOR	Units	Sample ID Criteria Date	MB5	MB9	MB10	MB12	MB14	MB6B
					7/05/2019	7/05/2019	7/05/2019	7/05/2019	7/05/2019	10/07/2019
					PS	PS	PS	PS	PS	PS
Physical Parameters	pH (Lab)	0	No unit	6.0 - 8.5	6.2	6.2	6.2	5.1	7.1	6.4
	Electrical Conductivity (Lab)	2	µS/cm	4478	1200	580	240	1100	770	1200
	Total Dissolved Solids	10	mg/L	-	660	290	120	680	440	740
	Chemical Oxygen Demand	10	mg/L	-	17	10	< 10	19	< 10	23
Alkalinity	Bicarbonate Alkalinity as CaCO3	5	mg/L	-	190	170	59	37	310	410
	Total Alkalinity as CaCO3	5	mg/L	350	190	170	59	37	310	410
Anions	Chloride	1	mg/L	350	220	61	24	240	33	200
	Fluoride	0.1	mg/L	1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
	Sulfate (SO4)	1	mg/L	-	21	14	14	97	44	39
Cations	Calcium (Ca)	0.2	mg/L	1000	58	31	12	28	95	80
	Magnesium (Mg)	0.1	mg/L	-	20	14	8.8	22	28	63
	Potassium (K)	0.1	mg/L	-	44	13	3.6	8.6	8.4	14
	Sodium (Na)	0.5	mg/L	230	89	27	11	76	16	64
Forms of Carbon	Total Organic Carbon	0.2	mg/L	-	5.1	5.2	1.8	5	3.5	6
Nutrients	Ammonia (NH3) as N	0.01	mg/L	-	6.1	4.5	1.2	3.5	0.21	0.93
	Nitrate (NO3) as N	0.005	mg/L	-	3.9	0.034	0.72	< 0.005	0.016	0.11
	Total Phosphorus	0.02	mg/L	0.05	0.11	0.08	0.07	< 0.02	0.05	< 0.02
Trace Metals	Hexavalent Chromium (Cr-VI)	0.004	mg/L	0.1	< 0.004	< 0.004	< 0.004	< 0.004	< 0.004	< 0.004
	Chromium (Cr)	1	µg/L	-	< 1	< 1	< 1	< 1	< 1	< 1
	Aluminium (Al)	5	µg/L	5000	< 5	< 5	< 5	890	< 5	< 5
	Iron (Fe)	5	µg/L	200	44	14000	390	4000	700	1800
	Manganese (Mn)	1	µg/L	200	700	1400	71	1600	70	3500
	Phenolics	Total Phenols	0.01	mg/L	-	< 0.01	0.01	< 0.01	0.02	< 0.01
OC Pesticides	Aldrin	0.1	µg/L	-	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
	Alpha BHC	0.1	µg/L	-	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
	Alpha Chlordane	0.1	µg/L	-	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
	Alpha Endosulfan	0.1	µg/L	-	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
	Beta BHC	0.1	µg/L	-	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
	Beta Endosulfan	0.1	µg/L	-	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
	Delta BHC	0.1	µg/L	-	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
	Dieldrin	0.1	µg/L	-	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
	Endosulfan sulphate	0.1	µg/L	-	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
	Endrin	0.1	µg/L	-	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
	Endrin aldehyde	0.1	µg/L	-	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
	Endrin ketone	0.1	µg/L	-	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
	Heptachlor	0.1	µg/L	-	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
	Heptachlor epoxide	0.1	µg/L	-	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
	Hexachlorobenzene (HCB)	0.1	µg/L	-	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
	Lindane (gamma BHC)	0.1	µg/L	-	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
	Methoxychlor	0.1	µg/L	-	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
	p,p'-DDD	0.1	µg/L	-	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
	p,p'-DDE	0.1	µg/L	-	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
	p,p'-DDT	0.1	µg/L	-	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
	o,p'-DDD	0.1	µg/L	-	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
	o,p'-DDT	0.1	µg/L	-	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
	o,p'-DDE	0.1	µg/L	-	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
	Gamma Chlordane	0.1	µg/L	-	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
	trans-Nonachlor	0.1	µg/L	-	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
	Isodrin	0.1	µg/L	-	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
	Mirex	0.1	µg/L	-	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
OP Pesticides	Azinphos-methyl	0.2	µg/L	-	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2
	Bromophos Ethyl	0.2	µg/L	-	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2
	Chlorpyrifos (Chlorpyrifos Ethyl)	0.2	µg/L	-	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2
	Diazinon (Dimpylate)	0.5	µg/L	-	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
	Dichlorvos	0.5	µg/L	-	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
	Dimethoate	0.5	µg/L	-	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
	Ethion	0.2	µg/L	-	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2
	Fenitrothion	0.2	µg/L	-	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2
	Malathion	0.2	µg/L	-	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2
	Parathion-ethyl (Parathion)	0.2	µg/L	-	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2
	Methidathion	0.5	µg/L	-	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
	Total Petroleum Hydrocarbons	TRH C6-C9	40	µg/L	-	< 40	< 40	< 40	< 40	< 40
TRH C10-C14		50	µg/L	-	< 50	< 50	< 50	< 50	< 50	< 50
TRH C15-C28		200	µg/L	-	< 200	< 200	< 200	< 200	< 200	< 200
TRH C29-C36		200	µg/L	-	< 200	< 200	< 200	< 200	< 200	< 200
TRH C10-C36		450	µg/L	-	< 450	< 450	< 450	< 450	< 450	< 450
TRH C37-C40		200	µg/L	-	< 200	< 200	< 200	< 200	< 200	< 200
Total Recoverable Hydrocarbons	TRH C6-C10	50	µg/L	-	< 50	< 50	< 50	< 50	< 50	< 50
	TRH C6-C10 minus BTEX (F1)	50	µg/L	-	< 50	< 50	< 50	< 50	< 50	< 50
	TRH >C10-C16	60	µg/L	-	< 60	< 60	< 60	< 60	< 60	< 60
	TRH >C16-C34 (F3)	500	µg/L	-	< 500	< 500	< 500	< 500	< 500	< 500
	TRH >C34-C40 (F4)	500	µg/L	-	< 500	< 500	< 500	< 500	< 500	< 500
BTEXN Analytes	TRH C10-C40	650	µg/L	-	< 650	< 650	< 650	< 650	< 650	< 650
	Benzene (F0)	0.5	µg/L	-	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5

mg/L milligrams per litre
µg/L micrograms per litre
µS/cm microsiemens per centimetre
LOR limit of reporting
PS primary sample
Criteria Criteria adopted from Australian and New Zealand Environment and Conservation Council (ANZECC) Agriculture and Resource Management Council of Australia and New Zealand (ARMCANZ) Australian and New Zealand Guidelines for Fresh and Marine Water Quality - 'Primary Industries: Water quality for irrigation and general water use', 2000

within criteria
criteria exceeded



TABLE 3: LITHGOW SOLID WASTE FACILITY - RESULTS OF LABORATORY ANALYSIS
JULY 2019

LEACHATE



				Sample ID	LW1
				Sample Date	10/07/2019
Group	Analyte	LOR	Units	Criteria	PS
Physical Parameters	pH (Lab)	0	No unit	6.0 - 8.5	6.9
	Electrical Conductivity (Lab)	2	µS/cm	4478	960
	Total Dissolved Solids	10	mg/L	-	540
	Total Suspended Solids	5	mg/L	-	< 5
	Chemical Oxygen Demand	10	mg/L	-	15
Alkalinity	Bicarbonate Alkalinity as CaCO ₃	5	mg/L	-	140
	Carbonate Alkalinity as CaCO ₃	1	mg/L	-	< 1
	Hydroxide Alkalinity as CaCO ₃	5	mg/L	-	< 5
	Total Alkalinity as CaCO ₃	5	mg/L	350	140
Anions	Chloride	1	mg/L	350	210
	Fluoride	0.1	mg/L	1	< 0.1
	Sulfate (SO ₄)	1	mg/L	-	36
Cations	Calcium (Ca)	0.2	mg/L	1000	66
	Magnesium (Mg)	0.1	mg/L	-	19
	Potassium (K)	0.1	mg/L	-	26
	Sodium (Na)	0.5	mg/L	230	75
Forms of Carbon	Total Organic Carbon	0.2	mg/L	-	4.1
Nutrients	Ammonia (NH ₃) as N	0.005	mg/L	-	0.44
	Nitrate (NO ₃) as N	0.005	mg/L	-	3.4
	Total Kjeldahl Nitrogen	0.05	mg/L	-	0.37
Trace Metals	Iron (Fe)	5	µg/L	200	8
	Manganese (Mn)	1	µg/L	200	450
Phenolics	Total Phenols	0.01	mg/L	-	< 0.01

mg/L milligrams per litre
 µg/L micrograms per litre
 µS/cm microsiemens per centimetre
 LOR limit of reporting
 PS primary sample
 Criteria Criteria adopted from *Australian and New Zealand Environment and Conservation Council (ANZECC) Agriculture and Resource Management Council of Australia and New Zealand (ARMCANZ) Australian and New Zealand Guidelines for Fresh and Marine Water Quality - 'Primary Industries: Water quality for irrigation and general water use', 2000*

 within criteria
 criteria exceeded