# SAMPLING ON 20 FEBRUARY 2019 EPA LICENCE NUMBER 6061

Part				62-	64 Menangle S				1	I	1	Г	
Marchane   Part	Pollutant		Monitoring	Trigger value	Water Bore BA1 NE	Water Pond NE Corner	Creek Upstream	Creek Downstream	Water Pond SE Corner		Ground Water Up Gradient Bore BA6	Ground Water Down Gradient Bore BA7 SE	Creek below landfill drainage line
Marcine   Marc	calcium	milligrams per litre	Yearly	-	not required	not required	not required	not required	not required	not required	not required	not required	not required
	Aluminium	milligrams per litre	Yearly / Quarterly	0.055	not required	not required	0.09	less than 0.05	not required	0.83	not required	not required	less than 0.05
Barram   Righters per list   Welly   Califord   2		milligrams per litre	Quarterly	0.9	54	0.15	0.07	0.07	0.96	0.02	0.06	0.13	0.06
Battern   Milgrams per line   Yearly   Causer   Name   Causer	Arsenic	milligrams per litre	Yearly / Quarterly	0.010 / 0.024	not required	not required			not required	0.007	not required	not required	
Part	Barium	milligrams per litre	Yearly / Quarterly	2	not required	not required			not required	0.12	not required	not required	
Demonstration   Demonstratio	Benzene	milligrams per litre	Yearly	0.001 / 0.950	not required	not required	not required	not required	not required	not required	not required	not required	not required
Cacision		milligrams per litre	Quarterly	-	not required	less than 5	less than 5	less than 5	less than 5	less than 5	not required	not required	less than 5
Chemical Oxygen   Chemical O	Cadmium	milligrams per litre	Yearly / Quarterly	0.0002	not required	not required			not required	0.0008	not required	not required	
Demand (DOS)	Calcium	milligrams per litre	Yearly	1000	not required	not required	not required	not required	not required	not required	not required	not required	not required
Companies   Comp	Demand (COD)	milligrams per litre	Quarterly	-	not required	not required	less than 25	less than 25	110	not required		not required	34
L'Assistation de la miligrame per late (Verly Countre) (2001) not required (2001) not		milligrams per litre	Yearly	350	not required	not required	not required	not required	not required	not required	not required	not required	not required
Chromotune (Team) in Infigerate part life   Verarly   Counterly   0.0033   not required   not	Volatile Compounds	milligrams per litre	Yearly	-	not required	not required	not required	not required	not required	not required	not required	not required	not required
Cobatt (implame per lite Vestly Clasterly) 0.0014 or longuised on tenguned 0.001 or longuised 0.001 in required 0.001 in	(hexavalent)							0.005		0.005		,	0.005
Copper miligrams per titre Verly/ Clusterly 0.0014 not required contreguered on required most requir							0.001	0.001				-	0.001
Ethylbenzene milligams per litre Vestry 0.08 not required rot required							0.001	0.001				-	0.001
Fluoride milligams per litre Vearly 0.00014 not required												-	
Lead milligrams per litre Vestry / Quarterly 0.0034 not required not r							-						
Magnesium miligrams per litre Vestry / Cuarterly 0.0006 not required not not required not requir										·			
Manganese miligrams per litre   Yearly / Quarterly   0.2 / 1.9   not required   n				0.0034		-	0.001	0.001				-	0.001
Mercury miligrams per litre Vearly/ Quarterly 0.00006 not required not required not required 0.0001 not required 0.0001 not required 0.0001 not required 0.0001 not required 1.80 not required not required 0.0001 not required 1.80 not required not required not required 1.80 not required not r			-	02/10			-	-				-	
Nitrate (as Nitrogen) milligrams per litre   Vearly   Quarterly   2.40   not required   not requ												-	
Organochtorine Perflurocotanois (PGAH)  Perflurocotanois (PGAH)  Sum of Perflurocotanois (PFGAH)  S	Nitrate (as		, ,										
Perfluoroctane sufforst and Perfluoroctane suffors and require miligrams per litre (POS)  Sum of Perfluoroctane sufforst and perfluce (POS)  Polassium miligrams per litre (Quarterly 0.0001)  Perfluoroctane sufforst and perfluoroctane sufforst and perflue (POS)  Perfluoroctane sufforst and perfluoroctane suffo		milligrams per litre	Yearly / Quarterly	0.9	not required	not required	less than 0.02	less than 0.02	not required	less than 0.02	not required	not required	less than 0.02
s Pesticides (OPP) Polycyclic Aromatic Hydrocarbons (PAH)  Perfluorooctanoic acid (PFOA)  Pullicy and preflute operations willing ams per litre  Quarterly  Quarterly		milligrams per litre	Yearly	Limit of reporting	not required	not required	not required	not required	not required	not required	not required	not required	not required
Aromatic Hydrocarbons (PAH)  Perfluorocatane sulfonate (PFOS)  micrograms per litre   Quarterly   0.133   0.52   0.07   less than 0.01   0.05   0.21   0.28   less than 0.01   l	s Pesticides (OPP)		Yearly	Limit of reporting	not required	not required	not required	not required	not required	not required	not required	not required	not required
Perfluoroctanoic acid (PFOA)  Sum of Perfluoroctane sulfonate and Perfluoroctane (PFOS+PFHxS)  Potassium milligrams per litre  Yearly  Limit of reporting  Sodium milligrams per litre  Yearly  Limit of reporting  Sodium not required  Toluene milligrams per litre  Yearly  Ouarterly  Ouar	Aromatic Hydrocarbons	milligrams per litre	Yearly	0.00001	not required	not required	not required	not required	not required	not required	not required	not required	not required
Sum of Perfluoroctane sulfonate and Professivam milligrams per litre    Quarterly    Quarterly			Quarterly	0.13³	0.52	0.07	less than 0.01	0.05	0.21	0.28	less than 0.01	less than 0.01	0.01
Perfluorooctane sulfonate and Perfluorohexane sulfonate (PFOS+PFHxS)  Potassium milligrams per litre  Yearly  Limit of reporting not required not re			Quarterly	0.562 / 2203	0.92	0.37	less than 0.01	0.16	0.51	0.64	less than 0.01	less than 0.01	less than 0.01
Semi-volatile Organic Compounds (SVOCs)  Sodium milligrams per litre Yearly Limit of reporting not required n	Perfluorooctane sulfonate and Perfluorohexane sulfonate		Quarterly	0.07²	2.72	0.56	less than 0.01	0.28	0.39	0.57	less than 0.01	less than 0.01	0.02
Organic Compounds (SVOCs)  Sodium milligrams per litre Yearly Limit of reporting not required no	Potassium	milligrams per litre	Yearly	-	not required	not required	not required	not required	not required	not required	not required	not required	not required
Sulphate (as SO4) milligrams per litre Yearly 1000 not required not re	Organic Compounds	milligrams per litre	Yearly	Limit of reporting	not required	not required	not required	not required	not required	not required	not required	not required	not required
Toluene milligrams per litre Yearly 0.18 not required not	Sodium	milligrams per litre	Yearly	230	not required	not required	not required	not required	not required	not required	not required	not required	not required
Total Disolved   milligrams per litro   Quarterly   2000   1200   290   02   940   620   1200   250   64   1200	Sulphate (as SO4)	milligrams per litre	Yearly	1000	not required	not required	not required	not required	not required	not required	not required	not required	not required
	Toluene	milligrams per litre	Yearly	0.18	not required	not required	not required	not required	not required	not required	not required	not required	not required
		milligrams per litre	Quarterly	2000	1200	380	93	840	620	1200	250	64	1200
Total Iron milligrams per litre Yearly 0.2 not required n	Total Iron	milligrams per litre	Yearly	0.2	not required	not required	not required	not required	not required	not required	not required	not required	not required

Total Kjeldahl Nitrogen	milligrams per litre	Quarterly	-	Not tested	Not tested	1.8	1.5	Not tested	1.6	Not tested	Not tested	1.6
Total Nitrogen	milligrams per litre	Quarterly	0.25	Not tested	Not tested	1.8	1.6	Not tested	3.2	Not tested	Not tested	1.8
Total Organic Carbon (TOC)	milligrams per litre	Quarterly	-	66	25	10	17	45	26	21	11	23
Total Petroleum Hydrocarbons (TPH)	milligrams per litre	Yearly	Limit of reporting	not required	not required	not required	not required	not required	not required	not required	not required	not required
Total Phenolics	milligrams per litre	Yearly	0.32	not required	not required	not required	not required	not required	not required	not required	not required	not required
Total Phosphorus	milligrams per litre	Yearly / Quarterly	0.02	not required	not required	less than 0.05	less than 0.05	not required	less than 0.05	not required	not required	less than 0.05
Total Suspended Solids (TSS)	milligrams per litre	Quarterly	50	not required	3.8	1.7	less than 1	75	7.3	not required	not required	1.6
Volatile Organic Compounds (VOCs)	milligrams per litre	Yearly	Limit of reporting	not required	not required	not required	not required	not required	not required	not required	not required	not required
Xylenes	milligrams per litre	Yearly	0.075	not required	not required	not required	not required	not required	not required	not required	not required	not required
Zinc	milligrams per litre	Yearly / Quarterly	0.008	not required	not required	0.009	less than 0.005	not required	0.120	not required	not required	0.007
FIELD MEASUREMENTS												
Standing Water Level	metres below top of casing	Quarterly	-	0.985	-	-	-	-	-	37.64	12.895	-
Electrical Conductivity	milligrams per litre	Quarterly	30-350	2817	1119	154	912	901	1894	574	166	1563
pН	PH Units	Quarterly	6.5-8	7.05	7.93	6.41	8.04	6.72	7.58	6.02	6.61	7.62
Temp	Degree C	Quarterly	-	21.2	25.3	21.2	19.6	20.8	21.2	18.2	17.5	19.9

Table	r	10	tes
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Table notes:

Black text EPL requires quarterly or yearly monitoring of this mandatory parameter

Red text EPL requirements not met

Blue text Additional parameter/location analysed beyond EPL requirements (non-mandatory)

Reported concentration exceeds adopted trigger value - trigger 1 where applicable

Reported concentration exceeds adopted trigger value - trigger 2 where applicable Limit of reporting exceed adopted trigger value

- 1 Micrograms per litre ( $\mu g/L$ ) is 0.001 milligrams per litre (mg/L)
- 2 NEPM 2018, Table 1: Health-based guidance values for use in site investigations in Australia
- 3 NEPM 2018, Table 5: Aquatic ecosystems: freshwater and marine water guideline values (exposure scenario: freshwater 95% species protection slightly to moderately disturbed systems).

# SAMPLING ON 13 MAY 2019 EPA LICENCE NUMBER 6061

			62-	64 Menangle S			ı		1	1		
Pollutant	SAMPLING Unit of Measure	Monitoring Frequency	Trigger value	Ground Water Bore BA1 NE Corner	Surface Water Pond NE Corner BA3	Dog Trap Creek Upstream BA4	Dog Trap Creek Downstream BA5	Surface Water Pond SE Corner BA8	Drainage Line BA9	Ground Water Up Gradient Bore BA6 SW Corner	Ground Water Down Gradient Bore BA7 SE Corner	DTC  Dog Trap Creek below landfill drainage line BA10
Alkalinity (as calcium carbonate)	milligrams per litre	Yearly	-	not required	not required	not required	not required	not required	not required	not required	not required	not required
Aluminium	milligrams per litre	Yearly / Quarterly	0.055	not required	not required	Dry creek	less than 0.05	not required	less than 0.05	not required	not required	less than 0.05
Ammonia (as nitrogen)	milligrams per litre	Quarterly	0.9	42	0.40	Dry creek	0.07	Dry pond	less than 0.01	0.16	0.12	0.05
Arsenic	milligrams per litre	Yearly / Quarterly	0.010 / 0.024	not required	not required	Dry creek	less than 0.001	not required	less than 0.001	not required	not required	less than 0.001
Barium	milligrams per litre	Yearly / Quarterly	2	not required	not required	Dry creek	0.08	not required	0.10	not required	not required	0.11
Benzene	milligrams per litre	Yearly	0.001 / 0.950	not required	not required	not required	not required	not required	not required	not required	not required	not required
Biological Oxygen Demand (BOD)	milligrams per litre	Quarterly	-	not required	less than 5	Dry creek	less than 5	Dry pond	not required	not required	not required	less than 5
Cadmium	milligrams per litre	Yearly / Quarterly	0.0002	not required	not required	Dry creek	less than 0.0002	not required	less than 0.0002	not required	not required	less than 0.0002
Calcium	milligrams per litre	Yearly	1000	not required	not required	not required	not required	not required	not required	not required	not required	not required
Chemical Oxygen Demand (COD)	milligrams per litre	Quarterly	-	not required	not required	Dry creek	50	Dry pond	not required	not required	not required	38
Chloride (CI) Chlorinated	milligrams per litre	Yearly	350	not required	not required	not required	not required	not required	not required	not required	not required	not required
Volatile Compounds (CVCs)	milligrams per litre	Yearly	-	not required	not required	not required	not required	not required	not required	not required	not required	not required
Chromium (hexavalent)	milligrams per litre	Yearly / Quarterly	0.001	not required	not required	Dry creek	less than 0.005	not required	less than 0.005	not required	not required	less than 0.005
Chromium (total)	milligrams per litre	Yearly / Quarterly	0.0033	not required	not required	Dry creek	less than 0.001	not required	less than 0.001	not required	not required	less than 0.001
Cobalt	milligrams per litre	Yearly / Quarterly	0.0014	not required	not required	Dry creek	less than 0.001	not required	less than 0.001	not required	not required	less than 0.001
Copper	milligrams per litre	Yearly / Quarterly	0.0014	not required	not required	Dry creek	less than 0.001	not required	less than 0.001	not required	not required	less than 0.001
Ethylbenzene	milligrams per litre	Yearly	0.08	not required	not required	not required	not required	not required	not required	not required	not required	not required
Fluoride	milligrams per litre	Yearly	1	not required	not required	not required	not required less than	not required	not required less than	not required	not required	not required less than
Lead Magnesium	milligrams per litre milligrams per litre	Yearly / Quarterly Yearly	0.0034	not required	not required	Dry creek not required	0.001 not required	not required	0.001 not required	not required	not required	0.001 not required
Manganese	milligrams per litre	Yearly / Quarterly	0.2 / 1.9	not required	not required	Dry creek	0.009	not required	0.800	not required	not required	0.029
Mercury	milligrams per litre	Yearly / Quarterly	0.00006	not required	not required	Dry creek	less than	not required	less than 0.00001	not required	not required	less than 0.00001
Nitrate (as Nitrogen)	milligrams per litre	Yearly / Quarterly	2.40	not required	not required	Dry creek	0.00001	not required	4.00	not required	not required	0.00001
Nitrite (as Nitrogen)	milligrams per litre	Yearly / Quarterly	0.9	not required	not required	Dry creek	less than 0.02	not required	less than 0.02	not required	not required	less than 0.02
Organochlorine Pesticides (OCP)	milligrams per litre	Yearly	Limit of reporting	not required	not required	not required	not required	not required	not required	not required	not required	not required
Organophosphoru s Pesticides (OPP)	milligrams per litre	Yearly	Limit of reporting	not required	not required	not required	not required	not required	not required	not required	not required	not required
Polycyclic Aromatic Hydrocarbons (PAH)	milligrams per litre	Yearly	0.00001	not required	not required	not required	not required	not required	not required	not required	not required	not required
Perfluorooctane sulfonate (PFOS)	micrograms per litre <sup>1</sup>	Quarterly	0.13³	0.28	0.05	Dry creek	0.05	Dry pond	0.22	not tested	less than 0.01	0.12
Perfluorooctanoic acid (PFOA)	micrograms per litre <sup>1</sup>	Quarterly	0.56² / 220³	0.71	0.29	Dry creek	0.17	Dry pond	0.35	not tested	less than 0.01	0.31
Sum of Perfluorooctane sulfonate and Perfluorohexane sulfonate (PFOS+PFHxS)	micrograms per litre <sup>1</sup>	Quarterly	0.07²	1.78	0.38	Dry creek	0.27	Dry pond	0.48	not tested	less than 0.01	0.35
Potassium	milligrams per litre	Yearly	-	not required	not required	not required	not required	not required	not required	not required	not required	not required
Semi-volatile Organic Compounds (SVOCs)	milligrams per litre	Yearly	Limit of reporting	not required	not required	not required	not required	not required	not required	not required	not required	not required
Sodium	milligrams per litre	Yearly	230	not required	not required	not required	not required	not required	not required	not required	not required	not required
Sulphate (as SO4)	milligrams per litre	Yearly	1000	not required	not required	not required	not required	not required	not required	not required	not required	not required
Toluene	milligrams per litre	Yearly	0.18	not required	not required	not required	not required	not required	not required	not required	not required	not required
Total Disolved Solids (TDS)	milligrams per litre	Quarterly	2000	1500	690	Dry creek	660	Dry pond	1100	330	120	1000
Total Iron	milligrams per litre	Yearly	0.2	not required	not required	not required	not required	not required	not required	not required	not required	not required

Total Kjeldahl Nitrogen	milligrams per litre	Quarterly	-	Not tested	Not tested	Dry creek	1.6	Not tested	2.0	Not tested	Not tested	1.7
Total Nitrogen	milligrams per litre	Quarterly	0.25	Not tested	Not tested	Dry creek	1.6	Not tested	6.0	Not tested	Not tested	2.0
Total Organic Carbon (TOC)	milligrams per litre	Quarterly	-	94	28	Dry creek	18	Dry pond	42	30	11	32
Total Petroleum Hydrocarbons (TPH)	milligrams per litre	Yearly	Limit of reporting	not required	not required	not required	not required	not required	not required	not required	not required	not required
Total Phenolics	milligrams per litre	Yearly	0.32	not required	not required	not required	not required	not required	not required	not required	not required	not required
Total Phosphorus	milligrams per litre	Yearly / Quarterly	0.02	not required	not required	Dry creek	0.02	not required	0.02	not required	not required	not required
Total Suspended Solids (TSS)	milligrams per litre	Quarterly	50	not required	6.6	Dry creek	less than 1	Dry pond	not required	not required	not required	2.3
Volatile Organic Compounds (VOCs)	milligrams per litre	Yearly	Limit of reporting	not required	not required	not required	not required	not required	not required	not required	not required	not required
Xylenes	milligrams per litre	Yearly	0.075	not required	not required	not required	not required	not required	not required	not required	not required	not required
Zinc	milligrams per litre	Yearly / Quarterly	0.008	not required	not required	Dry creek	less than 0.005	not required	0.12	not required	not required	less than 0.005
FIELD MEASUREMENTS												
Standing Water Level	metres below top of casing	Quarterly	-	1.05	not required	Dry creek	not required	Dry pond	not required	37.99	14.085	not required
Electrical Conductivity	milligrams per litre	Quarterly	30-350	2616	868	Dry creek	809	Dry pond	1490	581	207	1200
pН	PH Units	Quarterly	6.5-8	6.88	8.59	Dry creek	8.27	Dry pond	7.87	5.71	5.52	7.90
Temp	Degree C	Quarterly	-	18.3	12.8	Dry creek	10.7	Dry pond	16.7	17.3	17.6	10.8

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EPL requires quarterly or yearly monitoring of this mandatory parameter

EPL requirements not met

Additional parameter/location analysed beyond EPL requirements (non-mandatory)

Reported concentration exceeds adopted trigger value - trigger 1 where applicable

Reported concentration exceeds adopted trigger value - trigger 2 where applicable Limit of reporting exceed adopted trigger value

- 1 Micrograms per litre ( $\mu g/L$ ) is 0.001 milligrams per litre (mg/L)
- 2 NEPM 2018, Table 1: Health-based guidance values for use in site investigations in Australia
- 3 NEPM 2018, Table 5: Aquatic ecosystems: freshwater and marine water guideline values (exposure scenario: freshwater 95% species protection slightly to moderately disturbed systems).

# SAMPLING ON 30th AUGUST 2019 EPA LICENCE NUMBER 6061

	SAMPLING	LOCATIONS		EPA Point 1	EPA Point 2	EPA Point 3	EPA Point 4	EPA Point 5	EPA Point 6	EPA Point 7	EPA Point 8	DTC
Pollutant	Unit of Measure	Monitoring Frequency	Trigger value	Ground Water Bore BA1 NE Corner	Surface Water Pond NE Corner BA3	Dog Trap Creek Upstream BA4	Dog Trap Creek Downstream BA5	Surface Water Pond SE Corner BA8	Drainage Line BA9	Ground Water Up Gradient Bore BA6 SW Corner	Ground Water Down Gradient Bore BA7 SE Corner	Dog Trap Creek below landfill drainage line BA10
Alkalinity (as calcium carbonate)	milligrams per litre	Yearly	-	1500	130	not required	not required	not required	380	less than 20	less than 20	Dry creek
Aluminium	milligrams per litre	Yearly / Quarterly	0.055	1.2	0.23	0.33	0.23	not required	0.50	less than 0.05	20	Dry creek
Ammonia (as nitrogen)	milligrams per litre	Quarterly	0.9	88	0.03	less than 0.01	0.06	0.04	0.10	0.14	0.09	Dry creek
Arsenic	milligrams per litre	Yearly / Quarterly	0.010 / 0.024	0.005	0.002	less than 0.001	less than 0.001	not required	0.001	0.007	less than 0.005	Dry creek
Barium	milligrams per litre	Yearly / Quarterly	2	0.55	less than 0.02	less than 0.02	0.02	not required	0.09	0.52	0.54	Dry creek
Benzene	milligrams per litre	Yearly	0.001 / 0.950	less than 0.001	less than 0.001	not required	not required	not required	less than 0.001	less than 0.001	less than 0.001	Dry creek
Biological Oxygen Demand (BOD)	milligrams per litre	Quarterly	-	not required	less than 5	less than 5	8.1	less than 5	not required	not required	not required	Dry creek
Cadmium	milligrams per litre	Yearly / Quarterly	0.0002	0.0003	less than 0.0002	less than 0.0002	less than 0.0002	not required	less than 0.0002	less than 0.0002	less than 0.0001	Dry creek
Calcium	milligrams per litre	Yearly	1000	210	22	not required	not required	not required	160	5.1	12	Dry creek
Chemical Oxygen Demand (COD)	milligrams per litre	Quarterly	-	not required	not required	69	74	120	not required	not required	not required	Dry creek
Chloride (CI)	milligrams per litre	Yearly	350	280	130	not required	not required	not required	190	370	540	Dry creek
Chlorinated Volatile Compounds (CVCs)	milligrams per litre	Yearly	-	not tested (note 4)	not tested (note 4)	not tested (note 4)	not tested (note 4)	not tested (note 4)	not tested (note 4)	not tested (note 4)	not tested (note 4)	Dry creek
Chromium (hexavalent)	milligrams per litre	Yearly / Quarterly	0.001	less than 0.005	less than 0.005	less than 0.005	less than 0.005	not required	less than 0.005	less than 0.005	less than 0.005	Dry creek
Chromium (total)	milligrams per litre	Yearly / Quarterly	0.0033	0.009	0.001	less than 0.001	0.001	not required	0.002	less than 0.001	less than 0.005	Dry creek
Cobalt	milligrams per litre	Yearly / Quarterly	0.0014	0.003	less than 0.001	less than 0.001	less than 0.001	not required	less than 0.001	0.098	0.066	Dry creek
Copper	milligrams per litre	Yearly / Quarterly	0.0014	0.013	less than 0.001	0.001	0.002	not required	0.003	0.012	0.017	Dry creek
Ethylbenzene	milligrams per litre	Yearly	0.08	less than 0.001	less than 0.001	not required	not required	not required	less than 0.001	less than 0.001	less than 0.001	Dry creek
Fluoride	milligrams per litre	Yearly	1	less than 0.5	less than 0.5	not required	not required	not required	less than 0.5	less than 0.5	less than 0.5	Dry creek
Lead	milligrams per litre	Yearly / Quarterly	0.0034	0.013	0.001	less than 0.001	less than 0.001	not required	0.002	less than 0.001	0.140	Dry creek
Magnesium	milligrams per litre	Yearly	-	69	47	not required	not required	not required	40	34	28	Dry creek
Manganese	milligrams per litre	Yearly / Quarterly	0.2 / 1.9	0.410 less than	0.031 less than	0.029 less than	0.030 less than	not required	0.120 less than	3.10 less than	5.60 less than	Dry creek
Mercury	milligrams per litre	Yearly / Quarterly	0.00006	0.0001	0.0001	0.0001	0.0001	not required	0.0001	0.0001	0.0005	Dry creek
Nitrate (as Nitrogen)	milligrams per litre	Yearly / Quarterly	2.40	0.07	not required	0.03	0.44	not required	1.80	less than 0.02	14	Dry creek
Nitrite (as Nitrogen)	milligrams per litre	Yearly / Quarterly	0.9	0.03	not required	less than 0.02	less than 0.02	not required	less than 0.02	less than 0.02	less than 0.02	Dry creek
Organochlorine Pesticides (OCP)	milligrams per litre	Yearly	Limit of reporting	not tested (note 4)	less than limit of reporting	not tested (note 4)	not tested (note 4)	not tested (note 4)	not tested (note 4)	not tested (note 4)	not tested (note 4)	Dry creek
Organophosphoru s Pesticides (OPP)	milligrams per litre	Yearly	Limit of reporting	less than limit of reporting	less than limit of reporting	not required	not required	not required	less than limit of reporting	less than limit of reporting	less than limit of reporting	Dry creek
Polycyclic Aromatic Hydrocarbons (PAH)	milligrams per litre	Yearly	0.00001	less than limit of reporting	not tested (note 4)	not tested (note 4)	not tested (note 4)	not tested (note 4)	less than limit of reporting	less than limit of reporting	less than limit of reporting	Dry creek
Perfluorooctane sulfonate (PFOS)	micrograms per litre <sup>1</sup>	Quarterly	0.13³	0.50	0.08	less than 0.01	0.06	0.09	0.55	less than 0.01	less than 0.01	Dry creek
Perfluorooctanoic acid (PFOA)	micrograms per litre <sup>1</sup>	Quarterly	0.56² / 220³	0.81	0.28	less than 0.01	0.08	0.03	0.45	less than 0.01	less than 0.01	Dry creek
Sum of Perfluorooctane sulfonate and Perfluorohexane sulfonate (PFOS+PFHxS)	micrograms per litre <sup>1</sup>	Quarterly	0.07²	2.30	0.53	less than 0.01	0.15	0.11	0.97	less than 0.01	less than 0.01	Dry creek
Potassium	milligrams per litre	Yearly	-	98	33	not required	not required	not required	49	2.9	4.0	Dry creek
Semi-volatile Organic Compounds (SVOCs)	milligrams per litre	Yearly	Limit of reporting	less than limit of reporting	not required	not required	not required	not required	less than limit of reporting	less than limit of reporting	less than limit of reporting	Dry creek
Sodium	milligrams per litre	Yearly	230	210	110	not required	not required	not required	120	140	200	Dry creek
Sulphate (as SO4)	milligrams per litre	Yearly	1000	less than 5	210	not required	not required	not required	210	less than 5	17	Dry creek
Toluene	milligrams per litre	Yearly	0.18	less than 0.001	less than 0.001	not required	not required	not required	less than 0.001	less than 0.001	less than 0.001	Dry creek
Total Disolved Solids (TDS)	milligrams per litre	Quarterly	2000	1700	690	48	260	300	1100	760	1000	Dry creek
Total Iron	milligrams per litre	Yearly	0.2	not required	0.23	not required	not required	not required	not required	not required	not required	Dry creek

Total Kjeldahl Nitrogen	milligrams per litre	Quarterly	-	Not tested	Not tested	0.7	0.7	Not tested	0.9	Not tested	Not tested	Dry creek
Total Nitrogen	milligrams per litre	Quarterly	0.25	Not tested	Not tested	0.7	1.2	Not tested	2.7	Not tested	Not tested	Dry creek
Total Organic Carbon (TOC)	milligrams per litre	Quarterly	-	200	33	24	26	14	26	160	15	Dry creek
Total Petroleum Hydrocarbons (TPH)	milligrams per litre	Yearly	Limit of reporting	0.2	less than limit of reporting	not required	not required	not required	0.1	0.2	0.4	Dry creek
Total Phenolics	milligrams per litre	Yearly	0.32	less than 0.05	less than 0.05	not required	not required	not required	less than 0.05	less than 0.05	less than 0.05	Dry creek
Total Phosphorus	milligrams per litre	Yearly / Quarterly	0.02	not required	not tested (note 5)	0.03	0.04	not required	0.02	not required	not required	Dry creek
Total Suspended Solids (TSS)	milligrams per litre	Quarterly	50	not required	27	5.9	11	200	not required	not required	not required	Dry creek
Volatile Organic Compounds (VOCs)	milligrams per litre	Yearly	Limit of reporting	0.026	not required	not required	not required	not required	0.019	0.020	0.020	Dry creek
Xylenes	milligrams per litre	Yearly	0.075	less than 0.003	less than 0.003	not required	not required	not required	less than 0.003	less than 0.003	less than 0.003	Dry creek
Zinc	milligrams per litre	Yearly / Quarterly	0.008	0.730	0.007	0.009	0.024	not required	0.072	0.550	0.190	Dry creek
FIELD MEASUREMENTS												
Standing Water Level	metres below top of casing	Quarterly	-	1.04	-	-	-	-	-	39.45	16.92	Dry creek
Electrical Conductivity	milligrams per litre	Quarterly	30-350	2614	835	53	244	248	1236	1191	1597	Dry creek
pН	PH Units	Quarterly	6.5-8	7.06	8.94	6.43	8.16	7.61	6.29	4.77	4.02	Dry creek
Temp	Degree C	Quarterly		15.5	11.8	11.0	9.7	10.5	10.7	17.2	17.1	Dry creek

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EPL requires quarterly or yearly monitoring of this mandatory parameter
EPL requirements not met
Additional parameter/location analysed beyond EPL requirements (non-mandatory)
Reported concentration exceeds adopted trigger value - trigger 1 where applicable
Reported concentration exceeds adopted trigger value - trigger 2 where applicable Limit of reporting exceed adopted trigger value

- 1 Micrograms per litre ( $\mu g/L$ ) is 0.001 milligrams per litre (mg/L)
- 2 NEPM 2018, Table 1: Health-based guidance values for use in site investigations in Australia
- 3 NEPM 2018, Table 5: Aquatic ecosystems: freshwater and marine water guideline values (exposure scenario: freshwater 95% species protection slightly to moderately disturbed systems).

The EPL requirement to analyse Chlorinated Volatile Compounds, Polycyclic aromatic hydrocarbons (PAHs) and Organochlorine pesticides (OCP) was 4 mandatory by NSW EPA on 6 May 2019. This was not carried out at selected locations during the August 2019 and 2020 yearly monitoring rounds

5 Total phosphorus was not sampled and analysed at EPA2

# SAMPLING ON 25 NOVEMBER 2019 EPA LICENCE NUMBER 6061

	SAMPLING	LOCATIONS		EPA Point 1	EPA Point 2	EPA Point 3	EPA Point 4	EPA Point 5	EPA Point 6	EPA Point 7	EPA Point 8	DTC
Pollutant	Unit of Measure	Monitoring Frequency	Trigger value	Ground Water Bore BA1 NE Corner	Surface Water Pond NE Corner BA3	Dog Trap Creek Upstream BA4	Dog Trap Creek Downstream BA5	Surface Water Pond SE Corner BA8	Drainage Line BA9	Ground Water Up Gradient Bore BA6 SW Corner	Ground Water Down Gradient Bore BA7 SE Corner	Dog Trap Creek below landfill drainage line BA10
Alkalinity (as calcium carbonate)	milligrams per litre	Yearly	-	not required	not required	not required	not required	not required	not required	not required	not required	not required
Aluminium	milligrams per litre	Yearly / Quarterly	0.055	not required	not required	Dry creek	Dry creek	not required	0.33	not required	not required	0.10
Ammonia (as nitrogen)	milligrams per litre	Quarterly	0.9	75	0.09	Dry creek	Dry creek	Dry pond	0.07	0.12	0.10	0.09
Arsenic	milligrams per litre	Yearly / Quarterly	0.010 / 0.024	not required	not required	Dry creek	Dry creek	not required	0.001	not required	not required	0.002
Barium	milligrams per litre	Yearly / Quarterly	2	not required	not required	Dry creek	Dry creek	not required	0.10	not required	not required	0.13
Benzene	milligrams per litre	Yearly	0.001 / 0.950	not required	not required	not required	not required	not required	not required	not required	not required	not required
Biological Oxygen Demand (BOD)	milligrams per litre	Quarterly	-	not required	not tested (missed by laboratory)	Dry creek	Dry creek	Dry pond	not required	not required	not required	5.6
Cadmium	milligrams per litre	Yearly / Quarterly	0.0002	not required	not required	Dry creek	Dry creek	not required	less than 0.0002	not required	not required	less than 0.0002
Calcium	milligrams per litre	Yearly	1000	not required	not required	not required	not required	not required	not required	not required	not required	not required
Chemical Oxygen Demand (COD)	milligrams per litre	Quarterly	-	not required	not required	Dry creek	Dry creek	Dry pond	not required	not required	not required	120
Chloride (CI)	milligrams per litre	Yearly	350	not required	not required	not required	not required	not required	not required	not required	not required	not required
Chlorinated Volatile Compounds (CVCs)	milligrams per litre	Yearly	-	not required	not required	not required	not required	not required	not required	not required	not required	not required
Chromium (hexavalent)	milligrams per litre	Yearly / Quarterly	0.001	not required	not required	Dry creek	Dry creek	not required	less than 0.005	not required	not required	less than 0.005
Chromium (total)	milligrams per litre	Yearly / Quarterly	0.0033	not required	not required	Dry creek	Dry creek	not required	0.002	not required	not required	less than 0.001
Cobalt	milligrams per litre	Yearly / Quarterly	0.0014	not required	not required	Dry creek	Dry creek	not required	less than 0.001	not required	not required	less than 0.001
Copper	milligrams per litre	Yearly / Quarterly	0.0014	not required	not required	Dry creek	Dry creek	not required	0.002	not required	not required	less than 0.001
Ethylbenzene	milligrams per litre	Yearly	0.08	not required	not required	not required	not required	not required	not required	not required	not required	not required
Fluoride	milligrams per litre	Yearly	1	not required	not required	not required	not required	not required	not required	not required	not required	not required
Lead	milligrams per litre	Yearly / Quarterly	0.0034	not required	not required	Dry creek	Dry creek	not required	less than 0.001	not required	not required	less than 0.001
Magnesium	milligrams per litre	Yearly	-	not required	not required	not required	not required	not required	not required	not required	not required	not required
Manganese	milligrams per litre	Yearly / Quarterly	0.2 / 1.9	not required	not required	Dry creek	Dry creek	not required	0.12	not required	not required	0.490
Mercury	milligrams per litre	Yearly / Quarterly	0.00006	not required	not required	Dry creek	Dry creek	not required	less than 0.0001	not required	not required	0.0001
Nitrate (as Nitrogen)	milligrams per litre	Yearly / Quarterly	2.40	not required	not required	Dry creek	Dry creek	not required	0.03	not required	not required	less than 0.02
Nitrite (as Nitrogen)	milligrams per litre	Yearly / Quarterly	0.9	not required	not required	Dry creek	Dry creek	not required	less than 0.02	not required	not required	less than 0.02
Organochlorine Pesticides (OCP)	milligrams per litre	Yearly	Limit of reporting	not required	not required	not required	not required	not required	not required	not required	not required	not required
Organophosphoru s Pesticides (OPP)	milligrams per litre	Yearly	Limit of reporting	not required	not required	not required	not required	not required	not required	not required	not required	not required
Polycyclic Aromatic Hydrocarbons (PAH)	milligrams per litre	Yearly	0.00001	not required	not required	not required	not required	not required	not required	not required	not required	not required
Perfluorooctane sulfonate (PFOS)	micrograms per litre <sup>1</sup>	Quarterly	0.13³	0.56	0.10	Dry creek	Dry creek	Dry pond	0.36	less than 0.01	less than 0.01	0.26
Perfluorooctanoic acid (PFOA)	micrograms per litre <sup>1</sup>	Quarterly	0.562 / 2203	1.10	0.46	Dry creek	Dry creek	Dry pond	0.51	less than 0.01	less than 0.01	0.58
Sum of Perfluorooctane sulfonate and Perfluorohexane sulfonate (PFOS+PFHxS)	micrograms per litre <sup>1</sup>	Quarterly	0.07²	2.56	0.60	Dry creek	Dry creek	Dry pond	0.85	less than 0.01	less than 0.01	0.74
Potassium	milligrams per litre	Yearly	-	not required	not required	not required	not required	not required	not required	not required	not required	not required
Semi-volatile Organic Compounds (SVOCs)	milligrams per litre	Yearly	Limit of reporting	not required	not required	not required	not required	not required	not required	not required	not required	not required
Sodium	milligrams per litre	Yearly	230	not required	not required	not required	not required	not required	not required	not required	not required	not required
Sulphate (as SO4)	milligrams per litre	Yearly	1000	not required	not required	not required	not required	not required	not required	not required	not required	not required
Toluene	milligrams per litre	Yearly	0.18	not required	not required	not required	not required	not required	not required	not required	not required	not required
Total Disolved Solids (TDS)	milligrams per litre	Quarterly	2000	1600	730	Dry creek	Dry creek	Dry pond	970	710	870	1000
Total Iron	milligrams per litre	Yearly	0.2	not required	not required	not required	not required	not required	not required	not required	not required	not required

Total Kjeldahl Nitrogen	milligrams per litre	Quarterly	-	Not tested	Not tested	Dry creek	Dry creek	Not tested	1.0	Not tested	Not tested	1.7
Total Nitrogen	milligrams per litre	Quarterly	0.25	Not tested	Not tested	Dry creek	Dry creek	Not tested	1.0	Not tested	Not tested	1.7
Total Organic Carbon (TOC)	milligrams per litre	Quarterly	-	47	32	Dry creek	Dry creek	Dry pond	18	15	14	32
Total Petroleum Hydrocarbons (TPH)	milligrams per litre	Yearly	Limit of reporting	not required								
Total Phenolics	milligrams per litre	Yearly	0.32	not required								
Total Phosphorus	milligrams per litre	Yearly / Quarterly	0.02	not required	not required	Dry creek	Dry creek	not required	0.02	not required	not required	not required
Total Suspended Solids (TSS)	milligrams per litre	Quarterly	50	not required	19	Dry creek	Dry creek	Dry pond	not required	not required	not required	12
Volatile Organic Compounds (VOCs)	milligrams per litre	Yearly	Limit of reporting	not required								
Xylenes	milligrams per litre	Yearly	0.075	not required								
Zinc	milligrams per litre	Yearly / Quarterly	0.008	not required	not required	Dry creek	Dry creek	not required	0.029	not required	not required	0.008
FIELD MEASUREMENTS												
Standing Water Level	metres below top of casing	Quarterly	-	1.11	-	Dry creek	Dry creek	Dry pond	-	38.40	17.59	-
Electrical Conductivity	milligrams per litre	Quarterly	30-350	2762	1140	Dry creek	Dry creek	Dry pond	1448	1369	1623	1554
рН	PH Units	Quarterly	6.5-8	6.94	8.82	Dry creek	Dry creek	Dry pond	7.63	5.65	4.00	7.78
Temp	Degree C	Quarterly	-	18.3	22.4	Dry creek	Dry creek	Dry pond	19.0	21.4	18.2	19.0

Table	notes
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EPL requirements not met

Additional parameter/location analysed beyond EPL requirements (non-mandatory)

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Reported concentration exceeds adopted trigger value - trigger 2 where applicable Limit of reporting exceed adopted trigger value

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