NAMMOONA LANDFILL FACILITY MONITORING RESULTS
Environmental Protection
Licence No. 5873
Licensee: Richmond Valley Council

Richmond Valley Council

EPA POINT 3:	Leachate Pond Waters																												
Parameter	**Frequency**	**unit of measure**																											
Date/ Time sampled			**1/09/2020 13:30**	**15/06/2020 13:30**	**4/03/2019 12:30**	**4/12/2019 14:45**	**11/09/2019 13:30**	**18/06/2019 12:30**	**############**	**14/12/2018 10:00**	**19/09/2018 12:45**	**14/06/2018 10:30**	**27/03/2018 14:15**	**12/12/2017 10:35**	**12/09/2017 14:25**	**15/06/2017 10:30**	**8/03/2017 12:48**	**12/12/2016 9:45**	**22/09/2016 10:10**	**30/06/2016 10:15**	**15/03/2016 11:15**	**3/12/2015 11:30**	**9/09/2015 13:30**	**17/07/2015 9:15**	**31/03/2015 14:00**	**19/12/2014 10:05**	**29/08/2014 7:50**	**6/06/2014 8:35**	**5/03/2014 12:55**
Sampled by			Jesse Munro	Mitchell Call	Mitchell Call	Mitchell Call	Mitchell Call	Mitchell Call	Mitchell Call	Jesse Munro	Jesse Munro	Mark Bayley	Jesse Munro	Mark Bayley	Mark Bayley	Mark Bayley	Mark Bayley	Mark Bayley	Jesse Munro	Mark Bayley	Jesse Munro	Mark Bayley	Jesse Munro	Jesse Munro	Mark Bayley	Mark Bayley	Jesse Munro	Jesse Munro	Mark Bayley
Date results received/ Date results published			28/09/2020 8/10/20	26/06/2020 3/07/2020	26/03/2020 30/03/2020	24/1/2020 3/2/2020	15/10/2019 17/10/2019	15/07/2019 17/07/2019	10/04/2019 12/04/2019	8/01/2019 10/1/2019	15/10/2018 26/10/2018	30/07/2018 7/08/2018	2/05/2018 3/05/2018	19/01/2018 25/1/2018	23/10/2017 26/10/2017	5/07/2017 17/7/2018	20/04/2017 15/05/2017	16/01/2017 25/01/2017											
Ammonia	Quarterly	mg/L	32.3	33.7	7.79	164	1.1	12.7	10.6	33.7	42.7	68.2	17.7	10.7	109	15.2	25.1	52.3	50.2	59.6	22.4	42.2	78.4	60.664	24.34	3.233	16.8	84.55	4.65
Arsenic	Quarterly	mg/L	0.014	0.017	0.014	0.075	0.017	0.013	0.012	0.038	0.022	0.01	0.009	0.016	0.014	<0.001	0.025	0.025	0.011	0.009	0.014	0.01	0.007	0.009	0.009	0.035	0.012	0.016	0.025
Bicarbonate	Quarterly	mg/L	895	900	435	1920	540	688	320	930	1150	980	500	560	1140	400	1000	870	780	800	680	810	970	780	690	490	460	910	540
Calcium	Quarterly	mg/L	48	51	38	195	32.9	72	106	40.7	55	66	32	43	88	48	33	77	55	57.1	52	67.6	56	61.3	52.9	24.9	61	78	40
Chloride	Quarterly	mg/L	1238	1440	533	2250	2074	1979	1330	2251	2080	1213	865	875	1300	619	2353	1,605	921	1024	1150	834	892	696	722	1363	811	1015	1308
Chromium (total)	Quarterly	mg/L	0.011	0.01	0.004	0.071	0.019	0.014	0.012	0.023	0.028	0.014	0.008	0.01	0.025	0.004	0.02	0.024	0.014	0.012	0.012	0.014	0.021	0.012	0.009	0.006	0.004	0.011	0.009
Conductivity	Quarterly	uS/cm	4953	4030	2970	9920	7860	6665	6330	9127	8270	5435	3380	4156	7062	2892	7654	7395	4490	4820	5310	4648	4870	3180	3520	4710	2750	4900	5310
Copper	Quarterly	mg/L	0.001	<0.001	0.003	0.009	0.005	0.002	0.008	<0.001	0.002	0.001	0.001	0.001	0.003	0.003	<0.01	0.002	0.001	<0.001	<0.001	0.002	0.005	0.001	0.001	0.002	0.002	0.001	0.003
Dissolved Organic Carbon	Quarterly	mg/L	148	126	74.3	359	282	178	122	297.9	230	202	97	152	250	95.7	246	190	132	164.1	150	125	154	99.5	108	162.9	118	116	153
Dissolved Oxygen	Quarterly	mg/L	14.46	10.17	19.2	7.2	15.7	0.99	--	5.65	--	21.9	11.2	4.8	14.5	9.6	16.5	19.2	10.7	5.2	6.61	2.65	6.9	8.9	7.8	10.5	5.98	6.85	7.65
Magnesium	Quarterly	mg/L	108	94	69	176	92.3	106	104	124	166	95	60	69	123	51	114	118	75	79	89	79.2	80	70.8	68.1	102	60	100	98
Nitrogen (total)	Quarterly	mg/L	53.8	46.7	23.7	272	52	42.1	43.8	67.8	64.6	94.9	36.3	28.8	117	36.1	67.9	93.6	59.4	74.6	41.3	58.7	90.9	89.68	47.18	30.7	31.8	94.8	43.62
Organochlorine Pesticides	Quarterly	mg/L	<0.0002	<0.1	<0.0001	0.0001	<0.0001	<0.0001	<0.0002	<0.0002	<0.0001	<0.0001	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.2	<0.2	<0.2	<0.2	0	0	0	0	<0.2	<0.2	<0.2
Organophosphate Pesticides	Quarterly	mg/L	<0.0002	<0.2	<0.0005	<0.0005	<0.0002	<0.0005	<0.0002	<0.0002	<0.0001	<0.0001	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.2	<0.2	<0.2	<0.2	0	0	0	0	<0.2	<0.2	<0.2
pH	Quarterly	pH	8.89	8.52	8.78	6.76	9.89	8.94	9.14	8.48	8.72	8.75	8.78	8.59	7.69	8.23	8.94	8.73	8.61	8.46	8.46	8.03	8.58	8.97	8.32	9.99	8.61	7.33	8.7
Phenols	Quarterly	mg/L	0.0055	<0.0005	<0.0005	0.096	0.0007	0.0007	<0.0005	14	<0.005	<0.0005	<0.010	<0.002	..	<0.002	<0.001	<0.002	0.2	0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Phosphorus	Quarterly	mg/L	0.95	0.53	0.98	5.73	3.68	2.61	0.54	1.65	0.63	1.41	0.65	1.0	0.8	0.67	1.66	2.2	0.53	0.389	0.42	0.4	0.34	2.48	0.59	1.07	1	1.672	2.62
Potassium	Quarterly	mg/L	158	132	78	275	229	209	181	279	302	158	106	133	218	90	254	241	140	141	178	129	145	112	116	188	1.36	100	152
Semi-volotile organic carbons	Quarterly	mg/L	<0.05	ND	<0.05	0.25	<0.0005	<0.0005	<0.0005	<0.05	<0.05	<0.0005	<0.010	<0.002	<1	<5	<1	10	<10	<10	<20	<10	none detected	none detected	nil	none detected	ND	Not detected	none detected
Sodium	Quarterly	mg/L	920	794	482	1400	1451	1218	983	1574	1580	822	547	667	995	428	1321	1,145	628	669	771	604	689	512	449	886	481	675	881
Sulphate	Quarterly	mg/L	96	35	164	65	27	225	690	52	54	<1	42	34	42	61	79	160	22	44	52	53	41	3	18	21	60	51	27
Total dissolved solids	Quarterly	mg/L	3225	2750	1640	4950	4510	4271	4090	5940	4930	3280	2000	2470	3510	1530	4690	4,010	2465	3275	3611	2397	3312	2591	1900	3090	1745	2640	2810
Total petroleum hydrocarbons	Quarterly	mg/L	3.85	2.47	1.9	0.93	3.09	7.07	3.1	3.71	2.87	3	<0.050	0.227	0.524	<0.1	4.02	4.61	2070	1730	1290	1560	0.005	2970	1900	3650	5390	4680	4.07
Volatile organic compounds	Quarterly	mg/L	<0.01	ND	<0.01	<0.01	<0.01	<0.010	<0.01	<0.01	<0.010	171.2	<0.010	<0.001	<0.01	<0.01	<0.001	<0.001	<10	<1	<1	none detected	none detected	none detected	nil	none detected	none detected	none detected	none detected

EPA POINT 8	Monitoring Bore MB1																												
Parameter	**Frequency**	**Trigger level**	**unit of measure**																										
Date/ Time sampled				**1/09/2020**	**4/03/2020**	**11/09/2019**	**21/03/2019**	**19/09/2018**	**27/03/2018**	**12/09/2017 12:30**	**8/03/2017 12:30**	**22/09/2016**	**15/03/2016 10:42**	**9/09/2015**	**31/03/2015 13:05**	**19/12/2014 9:05**	**3/09/2014 7:00**	**5/03/2014 11:40**											
Sampled by				Jesse Munro	Mitchell Call	Mitchell Call	Mitchell Call	Jesse Munro	Jesse Munro	Mark Bayley	Mark Bayley	Jesse Munro	Jesse Munro	Jesse Munro	Mark Bayley	Jesse Munro	Jesse Munro	Mark Bayley											
Date results received/ Date results published				28/09/2020 8/10/2020	26/03/2020 30/03/2020	15/10/2019 17/10/2019	10/04/2019 12/04/2019	15/10/2018 26/10/2018	2/05/2018 3/05/2018	23/10/2017 26/10/2017	20/04/2017 15/05/2017																		
Ammonia	6 Months	0.62	mg/L	dry bore	dry bore	dry bore	dry bore	dry bore	dry bore	dry bore	0.205	dry bore	dry bore	dry bore	0.409	0.271	0.047	0.177											
Dissolved Organic Carbon	6 Months	69.6	mg/L	dry bore	dry bore	dry bore	dry bore	dry bore	dry bore	dry bore	8.3	dry bore	dry bore	dry bore	16.4	14.1	23.4	2.3											
Nitrogen (total)	6 Months	4.2	mg/L	dry bore	dry bore	dry bore	dry bore	dry bore	dry bore	dry bore	0.87	dry bore	dry bore	dry bore	0.46	0.34	0.5	0.32											
pH	6 Months	5.35-9.26	pH	dry bore	dry bore	dry bore	dry bore	dry bore	dry bore	dry bore	6.91	dry bore	dry bore	dry bore	6.45	6.82	5.86	6.9											
Potassium	6 Months	36.9	mg/L	dry bore	dry bore	dry bore	dry bore	dry bore	dry bore	dry bore	6.7	dry bore	dry bore	dry bore	4.6	8.7	0.8	9.2											
Total petroleum hydrocarbons C15-C36 Fraction	6 Months	125.8	µg/L	dry bore	dry bore	dry bore	dry bore	dry bore	dry bore	dry bore	<100	dry bore	dry bore	dry bore	<100	none detected	none detected	none detected											
SWL (BGL), m				dry bore	dry bore	dry bore	dry bore	dry bore	dry bore	dry bore	5.5	dry bore	dry bore	dry bore	5.44			4.8											

EPA POINT 9	Monitoring Bore MB2																												
Parameter	**Frequency**	**Trigger level**	**unit of measure**																										
Date/ Time sampled				**1/09/2019 13:55**	**4/03/2019 14:30**	**11/09/2019 12:30**	**21/03/2019 13:20**	**19/09/2018 12:00**	**27/03/2018 13:45**	**12/09/2017 13:50**	**8/03/2017 15:40**	**22/09/2016 8:45**	**15/03/2016 10:25**	**9/09/2015 13:30**	**31/03/2015 14:30**	**19/12/2014 10:15**	**3/09/2014 8:10**	**5/03/2014 12:30**											
Sampled by				Jesse Munro	Mitchell Call	Mitchell Call	Mitchell Call	Jesse Munro	Jesse Munro	Mark Bayley	Mark Bayley	Jesse Munro	Jesse Munro	Jesse Munro	Mark Bayley	Jesse Munro	Jesse Munro	Mark Bayley											
Date results received/ Date results published				28/09/2020 8/10/2020	26/03/2020 30/03/2020	15/10/2019 17/10/2019	10/04/2019 12/04/2019	15/10/2018 26/10/2018	2/05/2018 3/05/2018	23/10/2017 26/10/2017	20/04/2017 15/05/2017																		
Ammonia	6 Months	0.26	mg/L	0.079	0.162	0.147	0.2	0.246	0.458	0.248	0.185	0.105	0.127	0.167	0.317	0.178	0.15	44.889											
Dissolved Organic Carbon	6 Months	63.4	mg/L	3.6	2.9	3.8	3.2	2.6	3.4	4.5	5.2	4.9	12.3	3.2	12.8	10.6	23.9	9.2											
Nitrogen (total)	6 Months	3.3	mg/L	0.27	0.19	0.25	0.24	0.36	0.54	0.4	0.27	0.26	0.21	0.292	0.5	0.37	0.25	48.24											
pH	6 Months	5.11-9.5	pH	6.35	6.33	6.42	6.41	6.43	6.62	5.5	7.34	6.26	6.02	6.34	6.51	6.39	6.38	6.39											
Potassium	6 Months	9.1	mg/L	4.6	3.41	4.3	4.2	4.4	4.2	4.3	4.5	4.5	4.2	3.4	3.6	4	4.2	8.5											
Total petroleum hydrocarbons C15-C36 Fraction	6 Months	139.8	µg/L	<100	<100	<100	<100	<150	<100	<100	<100	<100	<100	<100	<100	none detected	none detected	520											
SWL (BGL), m				3.69	3.79	3.89	3.89	3.57	2.7	3.6	2.1	2.73	3.3	3.45	3.3			2.7											

EPA POINT 10	Monitoring Bore MB3																												
Parameter	**Frequency**	**Trigger level**	**unit of measure**																										
Date/ Time sampled				**1/09/2019 14:35**	**4/03/2019 12:00**	**11/09/2019 14:20**	**21/03/2019 15:20**	**19/09/2018 13:40**	**27/03/2018 13:30**	**12/09/2017 12:55**	**8/03/2017 14:05**	**22/09/2016 10:40**	**15/03/2016 12:08**	**9/09/2015 14:10**	**31/03/2015 15:10**	**19/12/2014 10:40**	**3/09/2014 8:50**	**5/03/2014 13:05**											
Sampled by				Jesse Munro	Mitchell Call	Mitchell Call	Mitchell Call	Jesse Munro	Jesse Munro	Mark Bayley	Mark Bayley	Jesse Munro	Jesse Munro	Jesse Munro	Mark Bayley	Jesse Munro	Jesse Munro	Mark Bayley											
Date results received/ Date results published				7/10/2020 8/10/2020	26/03/2020 30/03/2020	15/10/2019 17/10/2019	10/04/2019 12/04/2019	15/10/2018 26/10/2018	2/05/2018 3/05/2018	23/10/2017 26/10/2017	20/04/2017 15/05/2017																		
Ammonia	6 Months	1.4	mg/L	0.095	0.168	0.087	0.15	4.59	7.449	0.073	0.473	0.147	2.33	0.124	2.37	0.212	0.295	3.58											
Dissolved Organic Carbon	6 Months	45.8	mg/L	3.6	1.7	3.2	5	3.1	1.7	3	6.8	8.7	4	1.7	4.1	6.1	12.2	1.6											
Nitrogen (total)	6 Months	2.3	mg/L	0.33	0.3	0.12	0.16	11.1	7.5	1.6	0.9	0.26	2.04	0.93	2.87	0.27	0.38	4.07											
pH	6 Months	5.54-9.1	pH	7.3	7.3	7.38	7.32	7.8	7.49	4.76	7.34	6.6	7.38	6.73	6.89	6.61	7.09	6.75											
Potassium	6 Months	6.9	mg/L	4.1	2.88	3.7	3.4	4.7	3.9	3.8	4.6	3.6	4.3	2.8	3.2	3.1	4	3.5											
Total petroleum hydrocarbons C15-C36 Fraction	6 Months	106.9	µg/L	<100	<100	<100	<100	<150	<100	<100	<100	<100	<100	<100	<100	none detected	none detected	none detected											
SWL (BGL), m				1.91	2.43	2.67	2.45	1.51	0.17	0.88	0.7	0.7	1.65	1.88	1.7			0.9											

EPA POINT 11	Monitoring Bore MB4																												
Parameter	**Frequency**	**Trigger level**	**unit of measure**																										
Date sampled				**1/09/2020**	**4/03/2020**	**11/09/2019**	**21/03/2019**	**19/09/2018**	**27/03/2018**	**12/09/2017**	**8/03/2017**	**22/09/2016**	**15/03/2016**	**9/09/2015**	**31/03/2015**	**19/12/2014**	**3/09/2014**	**5/03/2014**											
Time sampled				**14:50**	**11:45**	**11:45**	**12:20**	13:55	13:30	13:15	11:38	11:00	12:30	14:45	15:40	11:00	9:30												
Sampled by				Jesse Munro	Mitchell Call	Mitchell Call	Mitchell Call	Jesse Munro	Jesse Munro	Mark Bayley	Mark Bayley	Jesse Munro	Jesse Munro	Jesse Munro	Mark Bayley	Jesse Munro	Jesse Munro	Mark Bayley											
Date results received/ Date results published				28/09/2020 8/10/2020	26/03/2020 30/03/2020	15/10/2019 17/10/2019	10/04/2019 12/04/2019	15/10/2018 26/10/2018	2/05/2018 3/05/2018	23/10/2017 26/10/2017	20/04/2017 15/05/2017																		
Ammonia	6 Months	0.33	mg/L	0.049	0.098	0.034	0.09	0.07	0.128	0.113	0.063	0.068	0.058	0.035	0.07	0.16	0.031	0.077											
Dissolved Organic Carbon	6 Months	92.9	mg/L	1.5	0.5	3	0.8	1.8	0.2	1.8	1.3	2.9	3.3	0.3	3.3	4.4	12.7	0.8											
Nitrogen (total)	6 Months	1	mg/L	0.05	0.1	0.05	0.1	0.38	0.13	0.09	0.1	0.12	0.06	0.04	0.18	0.16	0.06	0.11											
pH	6 Months	4.97-10.3	pH	6.79	6.72	6.81	6.79	6.9	6.81	5.37	6.97	6.63	5.79	6.61	6.45	6.72	7.41	6.72											
Potassium	6 Months	8.6	mg/L	3.5	3.05	3.78	3.6	3.9	3.6	3.8	3.9	4	3.8	2.9	3.4	3.5	1.7	3.3											
Total petroleum hydrocarbons C15-C36 Fraction	6 Months	50	µg/L	<100	<100	<100	<100	<150	<100	<100	<100	<100	<100	<100	<100	none detected	none detected	none detected											
SWL (BGL), m				1.17	1.45	1.46	1.28	0.71	surface	0.58	0.8	surface	0.09	0.42	0.2			1.6											

EPA POINT 12	Monitoring Bore MB5-A																												
Parameter	**Frequency**	**Trigger level**	**unit of measure**																										
Date sampled				**No longer sampled due to access issues - see MB5-B**	**31/03/2015**	**19/12/2014**	**3/09/2014**	**5/03/2014**	**30/08/2013**	**6/03/2013**	**19/09/2012**	**16/08/2012**	**25/05/2012**	**20/03/2012**														
Time sampled					13:50	9:50	7:40	12:05	10:15	12:40	10:45	9:50	16:00																
Sampled by					Mark Bayley	Jesse Munro	Jesse Munro	Mark Bayley	Mark Bayley	Mark Bayley	Mark Bayley	Mark Bayley	Mark Bayley	RVC															
Date results received																													
Date results published																													
Ammonia	6 Months	0.15	mg/L		0.089	0.014	0.031	0.007	0.02	0.024	0.031	0.1	0.062	ND															
Dissolved Organic Carbon	6 Months	40.3	mg/L		3.7	4.4	12.7	1.5	9.7	1.8	2.5	1.4	3.053	ND															
Nitrogen (total)	6 Months	3	mg/L		0.11	0.18	0.06	0.11	0.09	0.05	0.13	0.35	0.093	ND															
pH	6 Months	4.9-8.4	pH		6.24	5.94	7.41	6.04	6.08	8.25	6.07	6.06	7.29	ND															
Potassium	6 Months	4.95	mg/L		1.6	1.7	1.7	1.5	1.7	1.6	2.4	1.6	3.43	ND															
Total petroleum hydrocarbons C15-C36 Fraction	6 Months	50	µg/L		<100	none detected	none detected	none detected	none detected	<100	none detected	not detected	none detected	ND															
SWL (BGL), m					0.5			0.6	0.5	0.6	0.8	0.7	1																

EPA POINT 13	Monitoring Bore MB5-B																												
Parameter	**Frequency**	**Trigger level**	**unit of measure**																										
Date sampled				**1/09/2020**	**4/03/2020**	**11/09/2019**	**21/03/2019**	**19/09/2018**	**27/03/2018**	**12/09/2017**	**8/03/2017**	**22/09/2016**	**15/03/2016**	**9/09/2015**															
Time sampled				**12:15**	**14:00**	**13:00**	**14:40**	12:30	14:15	13:30	14:50	9:35	11:02	12:45															
Sampled by				Jesse Munro	Mitchell Call	Mitchell Call	Mitchell Call	Jesse Munro	Jesse Munro	Mark Bayley	Mark Bayley	Jesse Munro	Jesse Munro	Jesse Munro															
Date results received/ Date results published				28/09/2020 8/10/2020	26/03/2020 30/03/2020	15/10/2019 17/10/2019	10/04/2019 12/04/2019	15/10/2018 26/10/2018	2/05/2018 3/05/2018	23/10/2017 26/10/2017	20/04/2017 15/05/2017																		

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Ammonia	6 Months	0.15	mg/L	0.031	0.11	0.029	0.08	0.025	0.05	0.141	0.042	0.078	0.07	0.026																
Dissolved Organic Carbon	6 Months	40.3	mg/L	4.1	5.8	5.2	3.4	2.7	3.7	5.6	5.1	9.6	5.4	2.2																
Nitrogen (total)	6 Months	3	mg/L	0.37	0.46	0.27	0.18	0.19	0.2	0.41	1.4	1.63	0.23	0.13																
pH	6 Months	4.9-8.4	pH	6.54	6.61	6.7	6.61	6.39	6.11	5.46	6.52	5.3	8.78	5.89																
Potassium	6 Months	4.95	mg/L	3.5	2.79	3.67	3.3	3.2	2.3	2.7	2.7	2.7	2.8	1.2																
Total petroleum hydrocarbons C15-C36 Fraction	6 Months	50	µg/L	<100	<100	<100	<100	<150	<100	<100	<100	<100	<100	<100																
SWL (BGL), m				2.57	2.91	3.02	2.97	2.57	1.67	2.8	2.5	1.66	2	2.13																
SW01	**Surface Waters**		**50mm Rainfall event in 24hrs**	129.0mm (onsite) 42.6mm BOM - Casino Airport	84.5mm (onsite) No Data BOM - Casino Airport	124.0mm (onsite) 89.0mm BOM - Casino Airport	49.5mm (onsite) 43.2mm BOM - Casino Airport	58.5mm (onsite) 82.8mm BOM - Casino Airport																						
Parameter	**Frequency**	**Trigger level**	**unit of measure**																											
Date sampled				**13/02/2020**	**7/02/2020**	**18/01/2020**	**18/03/2019**	**16/03/2019**	**5/06/2016**	**4/06/2016**	**28/10/2015**	**2/05/2015**	**21/02/2015**	**29/08/2014**	**19/06/2013**	**28/02/2013**	**29/01/2013**	**29/01/2013**												
Time sampled						10:30am	8.30am	8.15am						6.45	10.45															
Sampled by				J. Moroney - RVC	J. Moroney - RVC	C. Dzendolet - RVC	Kristin Blain- RVC	Kristin Blain - RVC	RVC	RVC	RVC	RVC	RVC	Mark Bayley-AWC	Mark Bayley - AWC	RVC	RVC	RVC												
Date results received				24/02/2020	20/02/2020	28/01/2020	4/04/2019	4/04/2019																						
Date results published				30/03/2020	30/03/2020		12/04/2019	12/04/2019																						
Ammonia	Event based	n/a	mg/L	0.111	0.244	0.33	0.073	0.068	4.01	0.051	0.055	1.082	0.013	4.474	0.931	0.374	1.755	0.034												
Arsenic	Event based	n/a	mg/L	<0.001	0.121	0.038	0.001	0.001	0.035	0.001	0.001	0.024	0.002	0.001	0.002	0.086	0.002	0.196												
Calcium	Event based	n/a	mg/L	6.4	20	9.94	10.3	21	43.6	8.83	34.4	27.5	24.8	53.1	67.3	18.9	37.3	6.2												
Chloride	Event based	n/a	mg/L	17	72	99	120	48	93.1	103	109	126	25	62	459	64	56	47												
Chromium	Event based	n/a	mg/L	<0.001	0.054	0.012	0.001	0.003	0.023	0.001	0.006	0.016	0.008	0.001	0.002	0.075	0.008	0.082												
Conductivity	Event based	n/a	uS/cm	111	462	424	1110	324	0.75	0.45	0.86	552	272	780	1.83	430	580	240												
Copper	Event based	n/a	mg/L	0.013	0.052	0.018	0.006	0.006	0.029	0.003	0.003	0.016	0.021	0.009	0.004	0.051	0.008	0.075												
Dissolved organic carbon	Event based	n/a	mg/L	15.5	19.6	15.9	36.8	22.5	96.79	14.75	58.5	8.6	14.9	29.2	37.4	14.2	21.5	13.2												
Dissolved Oxygen	Event based	n/a	mg/L	8.3	6.5	9.9	3.2	6.5	1.97	9.95	10.8	8.6	8.7	10.1	8.3	6.52	6.32	6.89												
Magnesium	Event based	n/a	mg/L	2.5	11	9.02	27.9	6.6	15.7	7.85	17.1	12.9	6.8	20.6	46.9	10.8	12.8	5.1												
Manganese	Event based	n/a	mg/L	0.036	0.05	0.045	0.011	0.029	0.484	0.026	0.313	0.022	0.164	0.055	0.099	0.332	0.042	0.031												
Nitrate	Event based	n/a	mg/L	1.5	3.67	1.25	44.6	4.85	2.27	0.343	17.999	4.246	0.75	11.513	4.437	0.28	8.358	0.015												
pH	Event based	n/a	pH	6.92	7.21	6.7	7.02	7.31	6.86	6.68	6.33	7.28	7.37	6.8	7.4	7.35	7.24	7.03												
Potassium	Event based	n/a	mg/L	6.1	8.7	6.69	0.075	15.4	17.2	5.71	26.2	10.9	5.7	16.9	21.6	8.7	15.6	4.4												
Redox potential	Event based	n/a	mV				-52	-57	110	123	217	240	254	225	210	150	210	165												
Sodium	Event based	n/a	mg/L	9.5	58	53.6	62.6	25.2	66.1	55.1	81.2	47.8	25.1	66.8	255	52.7	48.6	32.6												
Sulphate	Event based	n/a	mg/L	6	33	7.7	89	46	44.1	2.01	47	4	21	56	40	17	62	6												
Temperature	Event based	n/a	Deg C						19	20					14.61	15.2	18.5	18.3												
Total suspended solids	Event based	n/a	mg/L	100	24	72	24	28	56	15	38	62	487	70	25	71	66	50												
SW02	**Surface Waters**		**50mm Rainfall event in 24hrs**				49.5mm (onsite) 43.2mm BOM - Casino Airport	58.5mm (onsite) 82.8mm BOM - Casino Airport																						
Parameter	**Frequency**	**Trigger level**	**unit of measure**																											
Date sampled				**13/02/2020**	**7/02/2020**	**18/01/2020**	**18/03/2019**	**16/03/2019**	**5/06/2016**	**4/06/2016**	**28/10/2015**	**2/05/2015**	**21/02/2015**	**29/08/2014**	**19/06/2013**	**28/02/2013**	**29/01/2013**	**29/01/2013**												
Time sampled						10:20am	8.30am	8.15am						6:55	10:20															
Sampled by				J. Moroney - RVC	J. Moroney - RVC	C. Dzendolet - RVC	Kristin Blain- RVC	Kristin Blain - RVC	RVC	RVC	RVC	RVC	RVC	Mark Bayley-AWC	Mark Bayley - AWC	RVC	RVC	RVC												
Date results received				24/02/2020	20/02/2020	28/01/2020	4/04/2019	4/04/2019																						
Date results published				30/03/2020	30/03/2020		12/04/2019	12/04/2019																						
Ammonia	Event Based	n/a	mg/L	0.133	0.269	0.213	0.074	0.075	0.44	0.03	0.055	0.42	0.148	0.877	6.38	0.491	0.557	0.118												
Arsenic	Event Based	n/a	mg/L	<0.001	0.002	0.001	0.064	0.268	0.00	0.00	0.001	0.002	0.135	0.002	0.001	0.001	0.001	0.002												
Calcium	Event Based	n/a	mg/L	20	53	39	10.3	4.2	66.10	11.50	34.4	38.1	12.9	119	128	78.4	62.3	27												
Chloride	Event Based	n/a	mg/L	14	41	16	61	32	77.50	14.20	109	70	55	115	122	46	80	32												
Chromium	Event Based	n/a	mg/L	0.001	0.001	0.003	0.018	0.069	0.00	0.00	0.006	0.003	0.059	0.002	0.002	0.002	0.003	0.005												
Conductivity	Event Based	n/a	uS/cm	198	577	388	332	154	0.95	0.19	0.858	497	0.316	1.3	1.48	830	850	410												
Copper	Event Based	n/a	mg/L	0.007	0.006	0.01	0.029	0.072	0.01	0.01	0.003	0.006	0.064	0.013	0.015	0.013	0.009	0.009												
Dissolved organic carbon	Event Based	n/a	mg/L	14.6	23.5	11.8	17.9	16.5	36.89	13.49	58.5	28.8	14.1	43.8	37.1	12	24.1	30.8												
Dissolved Oxygen	Event Based	n/a	mg/L	8.1	6.4	8.6	4.8	5.6	10.32	9.90	10.8	10.3	9.6	10.4	8.3	7.02	6.61	7.15												
Magnesium	Event Based	n/a	mg/L	5.6	14	8.73	7.6	3.4	22.70	3.64	17.1	12.8	7.4	45.4	49.9	25	19.2	7.5												
Manganese	Event Based	n/a	mg/L	0.052	0.008	0.089	0.028	0.027	0.02	0.03	0.313	0.033	0.095	0.038	0.131	0.048	0.033	0.021												
Nitrate	Event Based	n/a	mg/L	2.28	3.96	12.4	1.77	0.378	13.70	1.52	17.999	3.685	0.581	24.031	17.204	4.723	15.889	5.93												
pH	Event Based	n/a	pH	7.35	7.56	7.46	7.07	7.01	7.60	7.31	6.33	7.28	7.26	7029	7.63	7.46	7.23	7.5												
Potassium	Event Based	n/a	mg/L	6.9	15	11.6	7.3	2.4	26.80	9.02	26.2	12.9	5.1	32.3	32.8	18.3	18.7	18.4												
Redox potential	Event Based	n/a	mV				-67	-65	102.00	113.00	217	238	252	224	207	186	330	177												
Sodium	Event Based	n/a	mg/L	9.9	47	23	38.6	19.6	74.20	15.20	81.2	32.5	37.8	130	135	69.5	72.9	37.8												
Sulphate	Event Based	n/a	mg/L	20	62	30	34	21	83.10	11.43	47	12	10	162	104	89	102	18												
Temperature	Event Based	n/a	Deg C						18.00	20.00						15.4	18.9	18.6												
Total suspended solids	Event Based	n/a	mg/L	98	4	134	38	36	13.00	82.00	38	238	196	49	18	41	108	54												
EPA Point 6	**Air**																													
Parameter	**Frequency**	**Limit**	**unit of measure**																											
Date sampled				**15/06/2020**	**18/06/2019**	**2/07/2018**	**29/06/2017**	**30/06/2016**	**25/06/2015**	**3/09/2014**	**26/06/2013**	**26/06/2012**	**13/12/2011**																	
Time sampled				13:30-14:00	13:00-13:30	09:00 - 09:30	10:00-10:30																							
Sampled by				Mitchell Call	Mitchell Call	Mark Bayley	Mark Bayley																							
Date results received				2/07/2020	4/07/2019	30/07/2018	17/07/2017																							
Date results published				3/07/2020	17/07/2019	7/08/2018	17/07/2017																							
Methane	Annual	n/a	Percent by volume	**Nil detected**	**Nil detected**	**Nil detected**	**Nil detected**	**Nil detected**	**Nil detected**	**Nil detected**	**Nil detected**	**Nil detected**	**Nil detected**																	
EPA Point 7	**Air**																													
Parameter	**Frequency**	**Limit**	**unit of measure**																											
Date sampled				**15/06/2020**	**18/06/2019**	**2/07/2018**	**29/06/2017**	**30/06/2016**	**25/06/2015**	**3/09/2014**	**26/06/2013**	**26/06/2012**	**13/12/2011**																	
Time sampled				13:30-14:00	13:00-13:30	09:00 - 09:30	10:00-10:30																							
Sampled by				Mitchell Call	Mitchell Call	Mark Bayley	Mark Bayley																							
Date results received				2/07/2020	4/07/2019	30/07/2018	6/07/2017																							
Date results published				3/07/2020	17/07/2019	7/08/2018	17/07/2017																							
Methane	Annual	n/a	Percent by volume	**Nil detected**	**Nil detected**	**Nil detected**	**Nil detected**	**Nil detected**	**Nil detected**	**Nil detected**	**Nil detected**	**Nil detected**	**Nil detected**																	

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