NAMMOONA LANDFILL FACILITY MONITORING RESULTS

Environmental Protection
Licence No. 5872
Licensee: Richmond Valley Council

Richmond Valley Council

EPA POINT 3:	Leachate Pond Waters																						
Parameter	Frequency	unit of measure																					
Date/ Time sampled			12/03/2024 12:30	4/12/2023 15:30	6/09/2023 10:00	13/06/2023 15:30	28/02/2023 15:30	6/12/2022 13:00	8/09/2022 12:45	23/05/2022 13:10	21/03/2022 14:00	3/12/2021 12:00	14/09/2021 12:00	1/06/2021 14:15	18/03/2021 14:30	2/12/2020 14:30	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	21/03/2019 15:00
Sampled by			Will Dean	Will Dean	Adrian Leader	Adrian Leader	Adrian Leader	Adrian Leader	Adrian Leader	Adrian Leader	Adrian Leader	Adrian Leader	Adrian Leader	Adrian Leader	Adrian Leader	Jesse Munro	Jesse Munro	Mitchell Call	Mitchell Call	Mitchell Call	Mitchell Call	Mitchell Call	Mitchell Call
Date results received/ Date results published			8/4/2024 10/42024	21/12/2023 4/1/2024	27/9/2023 28/9/2023	6/7/2023 17/7/2023	28/3/2023 18/4/2023	22/12/2022 23/12/2022	20/10/2022 27/10/2022	24/06/2022 30/06/2022	03/05/2022 09/05/2022	23/12/2021 23/12/2021(Total Dissolved Solids Received & published 17/01/2022)	27/10/2021 28/10/2021	07/07/2021 12/07/2021	28/04/2021 29/04/2021 (Dissolved Oxygen Published 5/5/2021)	10/02/2020 11/02/2020	28/09/2020 8/10/2020	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
Ammonia	Quarterly	mg/L	242	290	332	298	387	41.8	118	81.8	30.6	5.5	115	133	33.3	7	32.3	33.7	7.79	164	1.1	12.7	10.6
Arsenic	Quarterly	mg/L	0.024	0.078	0.109	0.221	0.038	0.009	0.007	0.006	0.003	0.015	0.015	0.008	0.006	0.034	0.014	0.017	0.014	0.075	0.017	0.013	0.012
Bicarbonate	Quarterly	mg/L	587	1966	2239	828	2333	847	1,065	817	413	613	1344	1096	652	1022	895	900	435	1920	540	688	320
Calcium	Quarterly	mg/L	81	104	107	146	59.5	63.2	64.1	60.1	48.9	33.8	55.7	72.6	62.2	25.1	48	51	38	195	32.9	72	106
Chloride	Quarterly	mg/L	1005	1353	1449	1360	1520	59.5	732	439	220	44.3	1263	753	575	3719	1238	1440	533	2250	2074	1979	1330
Chromium (total)	Quarterly	mg/L	0.017	0.025	0.051	0.04	0.046	0.008	0.013	0.008	0.004	0.011	0.025	0.013	0.004	0.023	0.011	0.01	0.004	0.071	0.019	0.014	0.012
Conductivity	Quarterly	µS/cm	5760	6717	7445	6890	8001	4240	4400	2494	1580	3610	6000	4820	2645	11700	4953	4030	2970	9920	7860	6665	6330
Copper	Quarterly	mg/L	0.002	0.002	0.005	0.002	0.005	<0.001	0.001	0.001	0.001	0.001	0.001	0.002	0.001	0.002	0.001	<0.001	0.003	0.009	0.005	0.002	0.008
Dissolved Organic Carbon	Quarterly	mg/L	136	405	236	211	233	106	112	60.4	28.5	105.0	202	113	71	127	148	126	74.3	359	282	178	122
Dissolved Oxygen	Quarterly	mg/L	1.5	0.35	5.14	1.07	4.21	12.26	10.95	7.92	7.98	9.48	9.67	12.11	7.8	13.2	14.46	10.17	19.2	7.2	15.7	0.99	--
Magnesium	Quarterly	mg/L	93.5	115	125	113	104	72.9	72.9	45.9	30.2	58.1	111	80.6	59.7	139	108	94	69	176	92.3	106	104
Nitrogen (total)	Quarterly	mg/L	242	293	347	309	424	53.9	186	98.2	43.4	41.4	155	154	37.7	41.5	53.8	46.7	23.7	272	52	42.1	43.8
Organochlorine Pesticides	Quarterly	mg/L	<0.0001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.0002	<0.0001	<0.0002	<0.0002	<0.0002	<0.0002	<0.1	<0.0001	0.0001	<0.0001	<0.0001	<0.0002
Organphosphate Pesticides	Quarterly	mg/L	<0.0005	<0.001	<0.001	<0.0005	<0.001	<0.0005	0.0016	<0.0017	<0.0017	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.2	<0.0005	<0.0005	<0.0002	<0.0005	<0.0002
pH	Quarterly	pH	8.09	7.59	7.81	7.21	8.18	8.5	8.45	8.45	8.33	8.71	8.46	8.29	8.19	9.47	8.89	8.52	8.78	6.76	9.89	8.94	9.14
Phenols	Quarterly	mg/L	<0.002	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.5	<0.0005	<0.0005	<0.5	0.011	0.0055	<0.0005	<0.0005	0.096	0.0007	0.0007	<0.0005
Phosphorus	Quarterly	mg/L	0.28	0.74	1.28	0.76	0.95	0.34	0.35	0.36	0.019	0.32	0.65	0.75	0.25	2.07	0.95	0.53	0.98	5.73	3.68	2.61	0.54
Potassium	Quarterly	mg/L	124	136	201	158	220	115	122	80.4	45	116	193	116	80.6	378	158	132	78	275	229	209	181
Semi-volotile organic carbons	Quarterly	mg/L	<0.01	0.007	<0.01	<0.05	<0.005	<0.005	<0.0005	<0.01	<0.01	<0.01	<0.01	<0.0005	71	<0.01	<0.05	ND	<0.05	0.25	<0.0005	<0.0005	<0.0005
Sodium	Quarterly	mg/L	753	825	1086	880	1021	601	618	346	205	601	1005	599	376	2326	920	794	482	1400	1451	1218	983
Sulphate	Quarterly	mg/L	213	109	28	22	32	17	14	15	21	19	23	77	42	58	96	35	164	65	27	225	690
Total dissolved solids	Quarterly	mg/L	2812	4160	4350	3341	4174	2709	2,279	1412	892	2,287	3834	2488	1799	7950	3225	2750	1640	4950	4510	4271	4090
Total petroleum hydrocarbons	Quarterly	mg/L	5	12.48	0.472	4.1	3.3	0.92	0.57	0.421	1.04	1.06	1.49	2.27	1.75	8.78	3.85	2.47	1.9	0.93	3.09	7.07	3.1
Volatile organic compounds	Quarterly	mg/L	<0.01	0.16	<0.01	<0.01	<0.01	<0.01	0.0092	<0.01	<0.01	<0.01	<0.01	<0.01	<10	<0.01	<0.01	ND	<0.01	<0.01	<0.01	<0.010	<0.01

EPA POINT 8	Monitoring Bore MB1																
Parameter	Frequency	Trigger level	unit of measure														
Date/ Time sampled				12/03/2024 12:05	6/09/2023 10:15	16/03/2023 11:30	22/02/2023 14:45	6/12/2022 15:00	26/10/2022 10:45	29/09/2022 14:30	21/03/2022 14:30	14/09/2021 0:00	28/03/2021 15:00	1/09/2020	4/03/2020	11/09/2019	21/03/2019
Sampled by				Will Dale	Adrian Leader	Adrian Leader	Adrian Leader	Adrian Leader	Adrian Leader	Adrian Leader	Adrian Leader	Adrian Leader	Adrian Leader	Jesse Munro	Mitchell Call	Mitchell Call	Mitchell Call
Date results received/ Date results published				8/4/2023 10/4/2023	NA	17/4/2023 21/4/2023	28/3/2023 18/4/2023	20/12/2022 23/12/2022	21/11/2022 29/11/2022	20/10/2022 27/10/2022	03/05/2022 09/05/2022	27/10/2021 28/10/2021	28/04/2021 29/04/2021	28/09/2020 8/10/2020	26/03/2020 30/03/2020	15/10/2019 17/10/2019	10/04/2019 12/04/2019
SWL (mAHD)	6 Months		mAHD			34.5	36.49	36.24	41.3	40.43	39.35						
Ammonia	6 Months	2.09	mg/L			1.008	2.26		0.266	0.33	0.059		0.124	dry bore	dry bore	dry bore	dry bore
Dissolved Organic Carbon	6 Months	69.6	mg/L			16	19.8	30	95.5	43.6	17.3		28.3	dry bore	dry bore	dry bore	dry bore
Nitrogen (total)	6 Months	4.2	mg/L			1.41	20.9	6.06	32.3	9.32	1.44		1.22	dry bore	dry bore	dry bore	dry bore
Nitrate	6 Months		mg/L				17.4	-	0.087	<0.05	0.022						
Nitrite	6 Months		mg/L				0.033	-	0.03	<0.05	0.011						
pH	6 Months	5.35-9.26	pH			6.78	6.36	-	7.09	6.93	6.01		5.65	dry bore	dry bore	dry bore	dry bore
Potassium	6 Months	36.9	mg/L	dry bore	dry bore	8.12	4.13	-	5.24	1.89	0.38	Bore Dry	0.6	dry bore	dry bore	dry bore	dry bore
Total petroleum hydrocarbons C10-C36 Fraction	6 Months	300	µg/L			1700	900	<100	890	640	62						
Total petroleum hydrocarbons C15-C28 Fraction	6 Months	125.8	µg/L			470	-	-	-	-	-		<100	dry bore	dry bore	dry bore	dry bore
Total petroleum hydrocarbons C29-C36 Fraction	6 Months	125.8	µg/L			330	-	-	-	-	-		<50	dry bore	dry bore	dry bore	dry bore
SWL (BGL)	6 Months		m			7.1	5.11	5.36	0.3	0.47	2.35		0.45	dry bore	dry bore	dry bore	dry bore

EPA POINT 9	Monitoring Bore MB2													
Parameter	Frequency	Trigger level	unit of measure											
Time sampled				12/03/2024 13:10	6/09/2023 10:30	22/02/2023 14:00	8/09/2022 11:45	21/03/2022 13:30	14/09/2021 11:15	18/03/2021 14:25	1/09/2019 13:55	4/03/2019 14:30	11/09/2019 12:30	21/03/2019 13:20
Sampled by				Will Dale	Adrian Leader	Adrian Leader	Adrian Leader	Adrian Leader	Adrian Leader	Adrian Leader	Jesse Munro	Mitchell Call	Mitchell Call	Mitchell Call
Date results received/ Date results published				8/4/2023 10/4/2023	27/9/2023 28/9/2023	28/3/2023 18/4/2023	20/10/2022 27/10/2022	03/05/2022 09/05/2022	27/10/2021 28/10/2021	28/04/2021 29/04/2021	28/09/2020 8/10/2020	26/03/2020 30/03/2020	15/10/2019 17/10/2019	10/04/2019 12/04/2019
SWL (mAHD)	6 Months		mAHD	29.45	29.27	29.48	29.79	29.82	29.05					
Ammonia	6 Months	2.09	mg/L	0.155	0.069	0.117	0.13	0.065	0.312	0.171	0.079	0.162	0.147	0.2
Dissolved Organic Carbon	6 Months	63.4	mg/L	3.1	5.5	2.9	6.44	9.7	5.8	13	3.6	2.9	3.8	3.2
Nitrogen (total)	6 Months	3.3	mg/L	0.18	0.18	0.314	0.253	0.78	0.43	1.36	0.27	0.19	0.25	0.24
Nitrate	6 Months		mg/L	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005					
Nitrite	6 Months		mg/L	<0.005	<0.005	<0.005	0.007	<0.005	<0.005					
pH	6 Months	5.11-9.5	pH	6.36	6.34	6.3	6.39	4.29	6.48	7.09	6.35	6.33	6.42	6.41
Potassium	6 Months	9.1	mg/L	4.2	4	4.38	3.99	1.61	4.5	4.5	4.6	3.41	4.3	4.2
Total petroleum hydrocarbons C10-C36 Fraction	6 Months	300	µg/L	<100	<150	<100	<100	120	<100					
Total petroleum hydrocarbons C15-C28 Fraction	6 Months	139.8	µg/L	<100	<100	-	-	-	-	<100	<100	<100	<100	<100
Total petroleum hydrocarbons C29-C36 Fraction	6 Months	139.8	µg/L	<50	<50	-	-	-	-	<50	<50	<50	<50	<50
SWL (BGL)	6 Months		m	3.02	3.2	2.99	2.7	2.65	3.42	3.39	3.69	3.79	3.89	3.89

EPA POINT 10	Monitoring Bore MB3														
Parameter	Frequency	Trigger level	unit of measure												
Date/ Time sampled					12/03/2024 14:10:00 AM	6/09/2023 13:00 PM	22/02/2023	8/09/2022 10:45	21/03/2022 15:20	14/09/2021 12:30	18/03/2021 13:55	1/09/2019 14:35	4/03/2019 12:00	11/09/2019 14:20	21/03/2019 15:20
Sampled by				Will Dale	Will Dale	Adrian Leader	Adrian Leader	Adrian Leader	Adran Leader	Adrian Leader	Adrian Leader	Jesse Munro	Mitchell Call	Mitchell Call	Mitchell Call
Date results received/ Date results published				12/4/2023 15/4/2023	2/4/2023 10/4/2023	27/9/2023 28/9/2023	28/3/2023 18/4/2023	20/10/2022 27/10/2022	03/05/2022 09/05/2022	27/10/2021 28/10/2021	28/04/2021 29/04/2021	28/09/2020 8/10/2020	26/03/2020 30/03/2020	15/10/2019 17/10/2019	10/04/2019 12/04/2019
SWL (mAHD)	6 Months		mAHD		28.15	27.42	29.05	29.17	27.92	27.43					
Ammonia	6 Months	2.09	mg/L	0.13	2.5	0.02	0.134	0.103	0.193	<0.05	0.176	0.095	0.168	0.087	0.15
Dissolved Organic Carbon	6 Months	45.8	mg/L		3.6	5.1	0.7	3.6	5.1	5	2.7	3.6	1.7	3.2	5
Nitrogen (total)	6 Months	2.3	mg/L	0.74	3.56	0.42	0.14	0.11	0.48	0.33	0.9	0.33	0.3	0.12	0.16
Nitrate	6 Months		mg/L		0.023	0.211	0.005	<0.005	0.023	0.223					
Nitrite	6 Months		mg/L		0.007	<0.005	<0.005	0.005	<0.005	<0.005					
pH	6 Months	5.54-9.1	pH		7.21	7.74	7.13	7.27	7.37	7.74	7.49	7.3	7.3	7.38	7.32
Potassium	6 Months	6.9	mg/L		4.17	3.5	3.76	3.43	3.23	3.8	3.8	7	2.88	3.7	3.4
Total petroleum hydrocarbons C10-C36 Fraction	6 Months	300	µg/L		260	<150	<100	<100	490	<100					
Total petroleum hydrocarbons C15-C28 Fraction	6 Months	106.9	µg/L		170	<100	-	-		-	110	<100	<100	<100	<100
Total petroleum hydrocarbons C29-C36 Fraction	6 Months	106.9	µg/L		82	<50	-	-	-	-	<50	<50	<50	<50	<50
SWL (BGL)			m		1.37	2.1	0.47	0.35	1.6	2.09	1.84	1.91	2.43	2.67	2.45

EPA POINT 11	Monitoring Bore MB4													
Parameter	Frequency	Trigger level	unit of measure											
Date sampled/ Time				12/03/2024 14:40	6/09/2023 0:00	22/02/2023 15:00	8/09/2022 11:15	21/03/2022 14:50	14/09/2021 0:00	18/03/2021 0:00	1/09/2020 0:00	4/03/2020 11:45	11/09/2019 11:45	21/03/2019 0:00
Time sampled				14:40	13:00	15:00	14:50	14:50	13:00	14:05	14:50	11:45	11:45	12:20
Sampled by				Will Dale	Adrian Leader	Adrian Leader	Adrian Leader	Adrian Leader	Adrian Leader	Adrian Leader	Jesse Munro	Mitchell Call	Mitchell Call	Mitchell Call
Date results received/ Date results published				8/4/2023 10/4/2023	27/9/2023 28/9/2023	28/3/2023 18/4/2023	20/10/2022 27/10/2022	03/05/2022 09/05/2022	27/10/2021 28/10/2021	28/04/2021 29/04/2021	28/09/2020 8/10/2020	26/03/2020 30/03/2020	15/10/2019 17/10/2019	10/04/2019 12/04/2019
WL (mAHD)	6 Months		mAHD	27.59	27.67	27.67	27.67	27.67	26.7					
Ammonia	6 Months	2.09	mg/L	0.083	0.015	0.102	0.063	0.164	0.067	0.175	0.049	0.098	0.034	0.09
Dissolved Organic Carbon	6 Months	92.9	mg/L	0.7	5.1	1.6	4.26	2.7	7.2	4.2	1.5	0.5	3	0.8
Nitrogen (total)	6 Months	1	mg/L	0.09	0.59	0.496	0.07	0.41	0.08	1.49	0.05	0.1	0.05	0.1
Nitrate	6 Months		mg/L	<0.005	0.165	0.272	<0.005	0.215	0.02					
Nitrite	6 Months		mg/L	<0.005	<0.005	<0.005	0.007	0.008	<0.005					
pH	6 Months	4.97-10.3	pH	6.72	7.28	6.84	6.81	6.86	6.95	7.54	6.79	6.72	6.81	6.79
Potassium	6 Months	8.6	mg/L	3.48	3.9	4.04	3.58	3.71	3.9	4.1	3.5	3.05	3.78	3.6
Total petroleum hydrocarbons C10-C36 Fraction	6 Months	300	µg/L	<100	<150	200	<100	260	<100	<100				
Total petroleum hydrocarbons C15-C28 Fraction	6 Months	50	µg/L	<100	<100	-	-	-	-	-	<100	<100	<100	<100
Total petroleum hydrocarbons C29-C36 Fraction	6 Months	50	µg/L	<50	<50	-	-	-	-	-	<50	<50	<50	<50
SWL (BGL)	6 Months		m	0.08	0	0	0	0	0.97	-	1.17	1.45	1.46	1.28

EPA POINT 13	Monitoring Bore MB5-B													
Parameter	Frequency	Trigger level	unit of measure											
Date sampled					22/02/2023	8/09/2022	21/03/2022	14/09/2021	18/03/2021	1/09/2020	4/03/2020	11/09/2019	21/03/2019	
Time sampled					13:35	12:25	14:00	11:45	14:45	12:15	14:00	13:00	14:40	
Sampled by					Adrian Leader	Adrian Leader	Adrian Leader	Adrian Leader	Adrian Leader	Jesse Munro	Mitchell Call	Mitchell Call	Mitchell Call	
Date results received/ Date results published					28/3/2023 18/4/2023	20/10/2022 27/10/2022	03/05/2022 09/05/2022	27/10/2021 28/10/2021	28/04/2021 29/04/2021	28/09/2020 8/10/2020	26/03/2020 30/03/2020	15/10/2019 17/10/2019	10/04/2019 12/04/2019	
Depth (GL=29.41mAHD)	6 Months		m		27.4	27.74	27.71	2.64						
Ammonia	6 Months	2.09	mg/L		0.061	0.007	0.076	<0.05	0.165	0.031	0.11	0.029	0.08	
Dissolved Organic Carbon	6 Months	27.14	mg/L		2.9	7.5	9.5	8.6	6.5	4.1	5.8	5.2	3.4	
Nitrogen (total)	6 Months	3	mg/L	Decommissioned	0.52	0.204	1.34	0.56	0.28	0.37	0.46	0.27	0.18	
Nitrate	6 Months		mg/L		0.006	<0.005	<0.005	<0.005						
Nitrite	6 Months		mg/L		<0.005	0.006	0.006	<0.005						
pH	6 Months	4.9-8.4	pH		6.44	4.68	4.34	6.48	5.87	6.54	6.61	6.7	6.61	
Potassium	6 Months	8.54	mg/L		3.14	1.20	1.6	4	2.4	3.5	2.79	3.67	3.3	
Total petroleum hydrocarbons C10-C36 Fraction	6 Months	300	µg/L		<100	<100	100	<100						
Total petroleum hydrocarbons C15-C28 Fraction	6 Months	50	µg/L		-	-	-	-	170	<100	<100	<100	<100	
Total petroleum hydrocarbons C29-C36 Fraction	6 Months	50	µg/L		-	-	-	-	120	<50	85	<50	<50	
SWL (BGL)	6 Months		m		2.01	1.67	1.7	2.64	2.29	2.57	2.91	3.02	2.97	

SW01	Surface Waters		50mm Rainfall event in 24hrs	There was Cell 6 construction occurring at the time	33.2mm BOM- Casino Airport	240.2mm BOM- Casino Airport (28th)	122.6mm BOM- Casino Airport	81.0mm BOM- Casino Airport	52.4mm BOM- Casino Airport	70.2mm BOM- Casino Airport	58mm (Onsite) 36.6mm BOM - Casino Airport	91mm (Onsite)	60mm (onsite) 37.4mm BOM - Casino Airport	65mm (onsite) 74.6mm BOM - Casino Airport	162mm (onsite) 152.2mm BOM - Casino Airport	100mm (onsite) 91.0mm BOM - Casino Airport	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				22/12/2023	24/10/2022	27/02/2022	24/02/2022	3/02/2022	21/01/2022	1/12/2021	20/02/2021	18/01/2021	30/12/2020	21/12/2020	15/12/2020	13/12/2021	13/02/2020	7/02/2020	18/01/2020	18/03/2019	16/03/2019
Time sampled				9:30	9:30	9:30	9:50	1:00pm	1:00pm	10:20	10:21	4:30pm	10:42	9:13	8:57	8:47			10:30am	8.30am	8.15am
Sampled by				RVC	RVC	RVC	RVC	RVC	RVC	RVC	J.Moroney-RVC	J.Moroney-RVC	J. Moroney - RVC	J. Moroney - RVC	J. Moroney - RVC	J. Moroney - RVC	J. Moroney - RVC	J. Moroney - RVC	C. Dzendolet - RVC	Kristin Blain- RVC	Kristin Blain - RVC
Date results received				16/01/2024	18/11/2022	3/05/2022	3/05/2022	10/03/2022	10/03/2022	10/03/2022	28/04/2021	28/04/2021	29/01/2021	29/01/2021	29/01/2021	29/01/2021	24/02/2020	20/02/2020	28/01/2020	4/04/2019	4/04/2019
Date results published				25/01/2024	28/11/2022	9/05/2022	9/05/2022	14/03/2022	14/03/2022	14/03/2022	29/04/2021	29/04/2021	10/02/2020	10/02/2020	10/02/2020	10/02/2020				12/04/2019	12/04/2019
Ammonia	Event based	n/a	mg/L	0.16	0.434	0.11	0.213	0.321	0.052	0.406	[illegible]	[illegible]	0.228	0.704	0.562	0.079	0.111	0.244	0.33	0.073	0.068
Arsenic	Event based	n/a	mg/L	0.032	0.01	0.055	0.034	0.081	0.063	0.150	0.03	0.12	0.034	0.024	0.054	0.121	<0.001	0.121	0.038	0.001	0.001
Calcium	Event based	n/a	mg/L	7.9	30.2	5.45	9.3	15.458	27.079	16.1	33.7	3.84	24.5	41.7	32.5	5.35	6.4	20	9.94	10.3	21
Chloride	Event based	n/a	mg/L	36	84	<10	30	34.407	102.754	36	80	377	87	100	65	27	17	72	99	120	48
Chromium	Event based	n/a	mg/L	0.041	<0.001	0.022	0.031	0.021	0.012	0.109	0.019	0.058	0.01	0.007	0.029	0.088	<0.001	0.054	0.012	0.001	0.003
Conductivity	Event based	n/a	uS/cm	253	231	71	182	238.000	598.000	259	579	0.064	543	774	570	154	111	462	424	1110	324
Copper	Event based	n/a	mg/L	0.054	0.002	0.018	0.016	0.023	0.016	0.057	0.018	0.056	0.023	0.025	0.034	0.049	0.013	0.052	0.018	0.006	0.006
Dissolved organic carbon	Event based	n/a	mg/L	21.8	23.5	11	18.7	26.300	23.600	14.1	29.5	13.3	26	35.2	23.2	12	15.5	19.6	15.9	36.8	22.5
Dissolved Oxygen	Event based	n/a	mg/L	7.5	7.9	9.1	6.5	7.520	7.800	7.6	6.4	8.6	4.6	5.6	7.7	9	8.3	6.5	9.9	3.2	6.5
Magnesium	Event based	n/a	mg/L	4.3	7.84	2.51	4.89	6.564	14.000	7.58	15.1	2.24	12.1	17.6	13.3	3.24	2.5	11	9.02	27.9	6.6
Manganese	Event based	n/a	mg/L	0.061	0.052	0.026	0.034	0.058	0.045	0.049	0.019	0.05	0.015	0.052	0.02	0.02	0.036	0.05	0.045	0.011	0.029
Nitrate	Event based	n/a	mg/L	2.02	0.112	0.143	1.12	0.704	0.165	1.61	1.655	0.1	0.521	2.409	9.12	0.754	1.5	3.67	1.25	44.6	4.85
pH	Event based	n/a	pH	6.46	7.13	6.75	6.92	7.110	7.340	7.04	7.56	6.77	7.24	7.4	7.08	6.86	6.92	7.21	6.7	7.02	7.31
Potassium	Event based	n/a	mg/L	6.3	5.79	2.95	5.91	5.419	8.617	5.73	13.5	4.3	11	14.8	12.5	5.28	6.1	8.7	6.69	0.075	15.4
Redox potential	Event based	n/a	mV	207	223	219		272.000	225.000	231	298	196	292	334	264	264				-52	-57
Sodium	Event based	n/a	mg/L	33.7	17.8	8.38	25	30.361	81.373	29.5	65.3	8.38	71.6	83.6	52.2	18.1	9.5	58	53.6	62.6	25.2
Sulphate	Event based	n/a	mg/L	23	144	11	13	13.918	18.075	13	28	<1	32	68	58	5	6	33	7.7	89	46
Temperature	Event based	n/a	Deg C		-	-	-	-	-	-	-	--	--	--	--	--					
Total suspended solids	Event based	n/a	mg/L	28	19	34	44	47.000	27.333	50	13	44	20	14	22	21	100	24	72	24	28

SW02	Surface Waters		50mm Rainfall event in 24hrs		33.2mm BOM- Casino Airport	240.2mm BOM- Casino Airport (28th)	122.6mm BOM- Casino Airport	81.0mm BOM- Casino Airport	52.4mm BOM- Casino Airport	70.2 BOM- Casino Airport	58mm (Onsite) 36.6mm BOM - Casino Airport	91mm (Onsite)	60mm (onsite) 37.4mm BOM - Casino Airport	65mm (onsite) 74.6mm BOM - Casino Airport	162mm (onsite) 152.2mm BOM - Casino Airport	100mm (onsite) 91.0mm BOM - Casino Airport	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				22/12/2023	24/10/2022	27/02/2022	24/02/2022	3/02/2022	21/01/2022	1/12/2021	20/02/2021	18/01/2021	30/12/2020	21/12/2020	15/12/2020	13/12/2021	13/02/2020	7/02/2020	18/01/2020	18/03/2019	16/03/2019
Time sampled				no water to sample	9:30	9:15	9:40	1:00pm	1:00pm	10:10	10:35	4:20pm	10:30	9:04	9:10	8:38			10:20am	8.30am	8.15am
Sampled by				area was dry	RVC	RVC	RVC	RVC	RVC	RVC	J. Moroney-RVC	J. Moroney - RVC	J. Moroney - RVC	J. Moroney - RVC	J. Moroney - RVC	J. Moroney - RVC	J. Moroney - RVC	J. Moroney - RVC	C. Dzendolet - RVC	Kristin Blain- RVC	Kristin Blain - RVC
Date results received					18/11/2022	3/05/2022	3/05/2022	10/03/2022	10/03/2022	10/03/2022	28/04/2021	28/04/2021	29/01/2021	29/01/2021	29/01/2021	29/01/2021	24/02/2020	20/02/2020	28/01/2020	4/04/2019	4/04/2019
Date results published				25/01/2024	28/11/2022	9/05/2022	9/05/2022	14/03/2022	14/03/2022	14/03/2022	29/04/2021	29/04/2021	10/02/2020	10/02/2020	10/02/2020	10/02/2020				12/04/2019	12/04/2019
Ammonia	Event Based	n/a	mg/L		0.333	0.167	0.251	0.202	0.052	0.492	0.675	0.005	0.059	0.509	0.192	0.069	0.133	0.269	0.213	0.074	0.075
Arsenic	Event Based	n/a	mg/L		0.048	0.001	0.034	<0.001	0.002	0.003	0.001	0.002	0.002	0.003	0.001	0.001	<0.001	0.002	0.001	0.064	0.268
Calcium	Event Based	n/a	mg/L	Area	19.5	17.3	16.4	12.629	34.555	30.8	37.4	14.0	39.2	62.7	54.5	25.2	20	53	39	10.3	4.2
Chloride	Event Based	n/a	mg/L		97	12	12	10.000	1.656	20	0.002	199.000	43	48	42	25	14	41	16	61	32
Chromium	Event Based	n/a	mg/L		0.077	0.001	0.001	0.001	0.001	0.003	30	0	0.002	0.002	0.001	0.001	0.001	0.001	0.003	0.018	0.069
Conductivity	Event Based	n/a	uS/cm	Was	259	198	149	118.000	335.000	277	387	0.164	446	653	583	298	198	577	388	332	154
Copper	Event Based	n/a	mg/L		0.024	0.003	0.004	0.003	0.003	0.008	0.005	0.007	0.006	0.006	0.008	0.004	0.007	0.006	0.01	0.029	0.072
Dissolved organic carbon	Event Based	n/a	mg/L		20.2	9.5	16.4	39.000	30.300	14.6	38.6	23.9	47.3	49.9	30.5	13.6	14.6	23.5	11.8	17.9	16.5
Dissolved Oxygen	Event Based	n/a	mg/L	Dry	7.8	8.5	5.7	6.140	7.760	6.5	9.7	6.6	5.6	6.8	7.5	9.3	8.1	6.4	8.6	4.8	5.6
Magnesium	Event Based	n/a	mg/L		7.51	7.11	4.35	3.406	7.564	7.20	11.3	4.0	11.7	17.9	14.8	6.25	5.6	14	8.73	7.6	3.4
Manganese	Event Based	n/a	mg/L		0.029	0.048	0.056	0.075	0.033	0.055	0.085	0.054	0.048	0.45	0.014	0.007	0.052	0.008	0.089	0.028	0.027
Nitrate	Event Based	n/a	mg/L		0.594	0.107	0.678	0.068	0.005	0.673	0.007	0.313	0.005	0.005	5.34	3.54	2.28	3.96	12.4	1.77	0.378
pH	Event Based	n/a	pH		7.21	7.26	6.99	6.670	7.140	7.30	7.56	7.18	7.07	7.54	7.33	7.2	7.35	7.56	7.46	7.07	7.01
Potassium	Event Based	n/a	mg/L		5.3	6.15	7.04	3.324	5.657	6.53	9.88	11.80	9.26	16	18.2	10.8	6.9	15	11.6	7.3	2.4
Redox potential	Event Based	n/a	mV		246	229		260.000	231.000	255	282	219	298	255	291	279				-67	-65
Sodium	Event Based	n/a	mg/L		30.9	20.8	12	8.803	32.525	20.7	31.9	14	42.4	46.5	35.1	20.2	9.9	47	23	38.6	19.6
Sulphate	Event Based	n/a	mg/L		145	9	<9	<9	15.257	20	22	1	32	61	77	21	20	62	30	34	21
Temperature	Event Based	n/a	Deg C		-	-	-	-	-	-	-	--	--	--	--	--					
Total suspended solids	Event Based	n/a	mg/L		28	50	45	39	16	77	9	166	10	11	5	8	98	4	134	38	36

EPA Point 6	Air							
Parameter	Frequency	Limit	unit of measure					
Date sampled				13/06/2023	2/06/2022	1/06/2021	15/06/2020	18/06/2019
Time sampled				13:50-14:20	10:25 - 11:20	14:20 - 15:00	13:30-14:00	13:00-13:30
Sampled by				Adrian Leader	Adrian Leader	Adrian Leader	Mitchell Call	Mitchell Call
Date results received				6/07/2023	24/06/2022	7/07/2021	2/07/2020	4/07/2019
Date results published				17/07/2023	30/06/2022	12/07/2021	3/07/2020	17/07/2019
Methane	Annual	n/a	Percent by volume	Nil detected	Nil detected	Nil detected	Nil detected	Nil detected

EPA Point 7	Air							
Parameter	Frequency	Limit	unit of measure					
Date sampled				13/06/2023	2/06/2022	1/06/2021	15/06/2020	18/06/2019
Time sampled				13:50-14:20	10:25 - 11:20	14:20 - 15:00	13:30-14:00	13:00-13:30
Sampled by				Adrian Leader	Adrian Leader	Adrian Leader	Mitchell Call	Mitchell Call
Date results received				6/07/2023	24/06/2022	7/07/2021	2/07/2020	4/07/2019
Date results published				17/07/2023	30/06/2022	12/07/2021	3/07/2020	17/07/2019
Methane	Annual	n/a	Percent by volume	Nil detected	Nil detected	Nil detected	Nil detected	Nil detected

EPA Point 1	Sediment Pond Discharge																										
Parameter	Frequency	Limit	unit of measure																								
Date sampled				22/05/2024	15/05/2024	8/05/2024	26/04/2024	22/03/2024	20/02/2024	3/02/2024	28/01/2024	24/10/2022	23/05/2022	16/03/2022	24/02/2022	3/02/2022	21/01/2021	7/12/2021	1/12/2021	30/11/2021	29/11/2021	28/11/2021	27/11/2021	26/11/2021	25/11/2021	24/11/2021
Time sampled				10.30am	12:00am	9.30am	8.30am		7:00am	7:45am	8:30am	9:20am	1:15pm	9:00am	1:00pm	1:30pm	1:00pm	10:30am	10:30am	9:00am	8:30am	8:30am	8:30am	8:30am	10:00am	9:45am
Sampled by				Michael Batman	Michael Batman	Michael Batman	Michael Batman	Michael Batman	Michael Batman	Michael Batman	Michael Batman	Michael Batman	Michael Batman	Michael Batman	Michael Batman	Michael Batman	Michael Batman	Michael Batman	Michael Batman	Michael Batman	Michael Batman	Michael Batman	Michael Batman	Michael Batman	Michael Batman	Michael Batman
Date results received				24/05/2024	20/05/2024	14/05/2024	3/05/2024	28/03/2024	26/02/2024	26/02/2024	5/02/2024	18/11/2022	26/05/2022	29/03/2022	9/03/2022	8/02/2022	28/01/2021	10/12/2021	7/12/2021	3/12/2021	3/12/2021	3/12/2021	3/12/2021	3/12/2021	3/12/2021	1/12/2021
Date results published				29/05/2024	22/05/2024	16/05/2024	10/05/2024	3/04/2024	22/03/2024	22/03/2024	20/02/2024	28/11/2022	30/05/2022	10/05/2022	14/03/2022	18/02/2022	31/01/2021	21/12/2021	21/12/2021	21/12/2021	21/12/2021	21/12/2021	21/12/2021	21/12/2021	21/12/2021	20/12/2021
Total Suspended Solids	Event Based	50	mg/L	20	8	39	31	8	182	12	13	22	13	18	57	45	28	11	37	11	12	22	31	14	11	16
pH	Event Based	n/a	pH	7.72	7.69	7.74	7.67	7.27	7.3	7.52	7.17	7.44	7.57	7.74	7.12	7.19	7.11	7.55	7.36	7.77	7.41	7.43	7.43	7.47	7.47	7.33