



Discharges from Goodwin Dam

Discharging from spillway		SE233270.001	SE233271.001	SE235316.001	SE235632.001	SE235888.01	SE236228.001	SE236964.001	SE236965.001	SE237966.001	SE238370.001	SE238516.001	SE238830.001	SE239425.001	SE239493	SE239895.001	Lowest Value	Average Value	Highest Value	
Analyte Name	Units	EPL	LIMIT																	
Total Aluminium	mg/L	5	0.600	0.390	1.800	0.890	1.000	0.290	0.410	0.410	0.270	0.130	0.190	0.360	0.160	0.110	0.110	0.11	0.47	1.80
Total Arsenic	mg/L	0.5	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Biochemical Oxygen Demand (BOD5)	mg/L	30	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
Total Cadmium	mg/L	0.01	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Chemical Oxygen Demand	mg/L		25	25	37	25	25	22	26	27	25	17	20	23	29	21	25	17	25	37
Total Chromium	mg/L	1	<0.001	<0.001	0.003	0.001	0.003	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Total Cobalt	mg/L	1	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Conductivity @ 25 C	µS/cm	800	350	350	97	230	230	270	250	240	230	240	240	220	220	250	260	97	245	350
Total Copper	mg/L	0.4	0.003	0.002	0.003	0.002	0.003	0.002	0.002	0.003	0.002	0.002	0.002	0.002	0.002	0.002	0.001	0.001	0.002	0.003
Total Cyanide	mg/L		<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004
Fluoride	mg/L	2	0.20	0.23	<0.1	0.21	0.15	0.20	0.19	0.20	0.16	0.17	0.14	0.10	0.19	0.35	0.33	0.10	0.20	0.35
Total Lead	mg/L	0.1	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Total Manganese	mg/L		0.019	0.014	0.011	0.014	0.015	0.008	0.011	0.014	0.009	0.008	0.023	0.016	0.015	0.015	0.022	0.008	0.014	0.023
Total Mercury	mg/L	0.002	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
factants as MBAS (Calc. as LAS MW 288)	mg/L		<0.1	<0.1	<0.1	<0.1	0.3	0.3	0.3	<0.1	<0.1	0.1	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	0.1	0.3
Total Molybdenum	mg/L	0.15	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	0.001	0.001	<0.001	<0.001	<0.001
Total Nickel	mg/L	1	0.001	<0.001	0.002	0.001	0.001	<0.001	<0.001	<0.001	<0.001	0.001	0.001	0.001	<0.001	0.001	<0.001	<0.001	0.001	0.002
Oil and Grease	mg/L	10	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
pH**	pH	6-8.5	7.8	7.4	6.7	7.0	6.6	7.0	7.0	7.2	7.2	7.0	7.6	7.5	7.4	7.6	7.5	6.6	7.2	7.8
Total Selenium	mg/L	0.02	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Sulfate, SO4	mg/L		93	100	12	79	59	77	78	71	67	59	53	42	42	45	45	12	61	100
al Suspended Solids Dried at 103-105°C	mg/L	50	7	<5	7	54	<5	<5	<5	5	<5	<5	<5	<5	<5	<5	<5	<5	18	54
Total Zinc	mg/L	20	<0.005	<0.005	<0.005	<0.005	0.006	<0.005	<0.005	0.006	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	0.006	<0.005	<0.005	<0.005

Groundwater Bore #7

EPL7 Bore Hole						Number of required samples = 4				12th July 2021	Hole	Height
						Number of samples attempted = 4						7 200mm
Sample Date		Dry	Dry	Dry	Dry							8 1060mm
Analyte Name	Units	27/04/2022	26/07/2022	14/10/2022	2/02/2023	Lowest Value	Average Value	Highest Value				9 480mm
Bicarbonate	mg/L	NA	NA	NA	NA	-	#DIV/0!	-	-			10 1020mm
Calcium	mg/L	NA	NA	NA	NA	-	#DIV/0!	-	-	21st July 2021		7 610mm
Chloride	mg/L	NA	NA	NA	NA	-	#DIV/0!	-	-			8 990mm
Copper	mg/L	NA	NA	NA	NA	-	#DIV/0!	-	-			9 580mm
Cyanide (total)	mg/L	NA	NA	NA	NA	-	#DIV/0!	-	-			10 1030mm
Magnesium	mg/L	NA	NA	NA	NA	-	#DIV/0!	-	-	4th August 2021		7 560mm
Methyl Blue Active Substances	mg/L	NA	NA	NA	NA	-	#DIV/0!	-	-			8 1110mm
pH	pH Units	NA	NA	NA	NA	-	#DIV/0!	-	-			9 630mm
Potassium	mg/L	NA	NA	NA	NA	-	#DIV/0!	-	-			10 1350mm
Sodium	mg/L	NA	NA	NA	NA	-	#DIV/0!	-	-	1st September 2021t		7 50mm
Standing Water Level	metre	NA	NA	NA	NA	-	#DIV/0!	-	-			8 1000mm
Sulfate	mg/L	NA	NA	NA	NA	-	#DIV/0!	-	-			9 380mm
Total dissolved Solids	mg/L	NA	NA	NA	NA	-	#DIV/0!	-	-			10 1000mm
Total petroleum hydrocarbons	mg/L	NA	NA	NA	NA	-	#DIV/0!	-	-	#####		7 0mm
Water bore EPL7 purged and refurbished on 12th June 2021												8 1100mm
												9 340mm
Collar pipe height above GL	mm	860										10 980mm
Collar pipe height above bore base	mm	1600								20-Oct-21		7 0mm
GL to bore base	mm	740										8 730mm
Measurement	mm	0	0	0	0							9 960mm
Standing WL	mm	NA	NA	NA	NA					29th November 2021		10 980mm
7/ 1600 inner X 860 out												8 680mm
8/ 2020 inner x 1250 out												9 720mm
9/ 1070 inner x 880 out												10 940mm
10/ 2000 inner x 1180 out												7 0mm
												8 280mm
												9 730mm
												10 870mm
												7 0mm
												8 010mm
												9 0mm
												10 740mm

Groundwater – Bore # 10

EPL10 Bore Hole						Number of required samples = 4				12th July 2021	Hole	Height
						Number of samples attempted = 4						7 200mm
Sample Date		insf water	SE234883.002	SE237968.003	SE242787.001							8 1060mm
Analyte Name	Units	27/04/2022	26/07/2022	14/10/2022	2/02/2023	Lowest Value	Average Value	Highest Value				9 480mm
Bicarbonate	mg/L	NA	55	67	83	55	68	83	3			10 1020mm
Calcium	mg/L	NA	25	18	44	18	29	44	3	2st July 2021		7 610mm
Chloride	mg/L	NA	3.5	2.2	5.4	2.2	3.7	5.4	3			8 990mm
Copper	mg/L	NA	0.02	0.02	0.031	0.020	0.024	0.031	3			9 580mm
Cyanide (total)	mg/L	NA	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	0			10 1030mm
Magnesium	mg/L	NA	16	11	26	11	18	26	3	4th August 2021		7 560mm
Methyl Blue Active Substances	mg/L	NA	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	0			8 1110mm
pH	pH	NA	6.2	6.4	6.4	6.2	6.3	6.4	3			9 630mm
Potassium	mg/L	NA	3.4	3.1	2.8	2.8	3.1	3.4	3			10 1350mm
Sodium	mg/L	NA	16	14	19	14	16	19	3	1st September 2021t		7 50mm
Standing Water Level	metre	NA	0	0	0.1	0	0	0.1	3			8 1000mm
Sulfate	mg/L	NA	85	46	140	46	90	140	3			9 380mm
Total dissolved Solids	mg/L	NA	200	140	340	140	227	340	3			10 1000mm
Total petroleum hydrocarbons	mg/L	NA	2	<1	<1	<1	1	2	1	#####		7 0mm
												8 1100mm
												9 340mm
Water bore EPL10 purged and refurbished on 12th June 2021												10 980mm
Collar pipe height above GL	mm	1180								20-Oct-21		7 0mm
Collar pipe height above bore base	mm	3180										8 730mm
GL to bore base	mm	820										9 960mm
Measurement	mm	0	890	945	750							10 980mm
Standing WL	mm	820	0	0	70					29th November 2021		7 0mm
												8 680mm
7/ 1600 inner X 860 out												9 720mm
8/ 2020 inner x 1250 out												10 940mm
9/ 1070 inner x 880 out												20th December 2021
10/ 2000 inner x 1180 out												7 0mm
												8 280mm
												9 730mm
												10 870mm
												19th January 2022
												7 0mm
												8 010mm
												9 0mm
												10 740mm

DUST SAMPLES (Sites#11, #12, #13, #14 and #15)

DUST SAMPLING														Lowest Value	Average Value	Highest Value	# of samples required	# of samples collected
	Date	SE231480	SE232358	SE233272	SE235782	SE235885	SE238023	SE238775	SE240154	SE241399	SE242988	SE243993	SE245487					
EPL11	g/m ³ /30 days	1.6	0.4	0.2	0.1	0.2	1.0	1.6	1.1	1.0	0.4	1.3	0.7	0.1	0.8	1.6	12	12
EPL12	g/m ³ /30 days	1.2	1.7	4.4	2.3	0.6	33.0	14.0	5.1	13.0	6.2	7.1	74.0	0.6	13.6	74.0	12	12
EPL13	g/m ³ /30 days	0.1	0.2	0.2	0.2	0.4	22.0	14.0	7.6	0.9	2.6	0.4	4.1	0.1	4.4	22.0	12	12
EPL14	g/m ³ /30 days	0.2	0.1	0.7	1.2	0.2	6.6	28.0	3.8	5.5	4.7	4.9	2.3	0.1	4.9	28.0	12	12
EPL15	g/m ³ /30 days	0.2	0.1	0.2	0.2	0.3	NA	0.8	0.6	5.0	NA	2.7	1.2	0.1	1.1	5.0	12	11
														Total			60	59
		30.0	30.0	30.0	30.0	30.0	30.0	14.0	30.0	30.0	30.0	30.0	30.0					
NB Sample SE242988.005 of 02/02/2023 was broken in transit therefore not tested																		
NB Sample SE238775 and SE238775 both have the sample date of 14/10/2022. Given the sample interval have assumed 22/09/2022 for SE238032																		
NB Sample SE238023.005 of 22/09/2022 fate unknown																		