Reporting of Emission to Surface Water for the period of January 2024

Operator: CCR Energy Ltd **Form: Water1**

Location: Aberthaw Ash Disposal Site

Permit/Variation Number: DP3432SW

Emission Point	Substance / Parameter	Emission Limit Value	Result [1]	Test Method [2]	Sample Date and Times [3]	Accreditation/ Certification [4]	Uncertainty [5]
S1 (Group Five Spring)	Aluminium, Dissolved		<10 µg/L		12/01/2024	Sampling WSP / Testing ALS	
	Antimony, Dissolved		4.73 µg/L				
	Arsenic, Dissolved		16.4 µg/L				
	Boron, Dissolved		5710 µg/L				
	Cadmium, Dissolved		0.447 µg/L				
	Calcium, Dissolved		558000 µg/L				
	Chromium, Dissolved		<1 µg/L				
	Copper, Dissolved		<0.3 µg/L				
	Manganese. Dissolved		237 µg/L				
	Molybdenum, Dissolved		1980 µg/L				
	Nickel, Dissolved		<0.4 µg/L				
	Selenium Dissolved		25.2 µg/L				
	Vanadium, Dissolved		13.2 µg/L				
	Mercury, Dissolved		<0.01 µg/L				
	Alkalinity to pH 4.5 as $CaCO_3$		193000 µg/L				
	Potassium, Dissolved		108000 µg/L				
	Sodium, Dissolved		1380000 µg/L				
	Sulphate, Dissolved as SO_4		0.944 g/L				
	Nitrogen: Total Oxidised as N		8340 µg/L				
	Chloride		2580000 µg/L				
	Fluoride		<500 µg/L				
	Ammoniacal Nitrogen as NH_3		4920 µg/L				
	Carbon, Organic: Total as C		4240 µg/L				
	Electrical conductivity		26060 µS/cm	Field measurements			
	Temperature		10.3 °C				
	Dissolved oxygen		1.73 mg/L				

Emission Point	Substance / Parameter	Emission Limit Value	Result [1]	Test Method [2]	Sample Date and Times [3]	Accreditation/ Certification [4]	Uncertainty [5]
	pH		6.42				
	Oxidation reduction potential		-57 mV				

Emission Point	Substance / Parameter	Emission Limit Value	Result [1]	Test Method [2]	Sample Date and Times [3]	Accreditation/ Certification [4]	Uncertainty [5]
Eastern Perimeter Drain	Aluminium, Dissolved		<10 µg/L		12/01/2024	Sampling WSP / Testing ALS	
	Antimony, Dissolved		<1 µg/L				
	Arsenic, Dissolved		1.27 µg/L				
	Boron, Dissolved		1230 µg/L				
	Cadmium, Dissolved		<0.08 µg/L				
	Calcium, Dissolved		152000 µg/L				
	Chromium, Dissolved		4.3 µg/L				
	Copper, Dissolved		0.821 µg/L				
	Manganese. Dissolved		107 µg/L				
	Molybdenum, Dissolved		201 µg/L				
	Nickel, Dissolved		3.95 µg/L				
	Selenium Dissolved		3.1 µg/L				
	Vanadium, Dissolved		1.51 µg/L				
	Mercury, Dissolved		<0.01 µg/L				
	Alkalinity to pH 4.5 as $CaCO_3$		296000 µg/L				
	Potassium, Dissolved		13300 µg/L				
	Sodium, Dissolved		70500 µg/L				
	Sulphate, Dissolved as SO_4		0.15 g/L				
	Nitrogen: Total Oxidised as N		2660 µg/L				
	Chloride		111000 µg/L				
	Fluoride		<500 µg/L				
	Ammoniacal Nitrogen as NH_3		<200 µg/L				
	Carbon, Organic: Total as C		<3000 µg/L				
	Electrical conductivity		1168 µS/cm	Field measurements			
	Temperature		8.3 °C				
	Dissolved oxygen		10.26 mg/L				

Emission Point	Substance / Parameter	Emission Limit Value	Result [1]	Test Method [2]	Sample Date and Times [3]	Accreditation/ Certification [4]	Uncertainty [5]
	pH		7.82				
	Oxidation reduction potential		36 mV				

Emission Point	Substance / Parameter	Emission Limit Value	Result [1]	Test Method [2]	Sample Date and Times [3]	Accreditation/ Certification [4]	Uncertainty [5]
S3 (River Thaw)	Aluminium, Dissolved		<10 µg/L		11/01/2024	Sampling WSP / Testing ALS	
	Antimony, Dissolved		<1 µg/L				
	Arsenic, Dissolved		0.536 µg/L				
	Boron, Dissolved		46.3 µg/L				
	Cadmium, Dissolved		<0.08 µg/L				
	Calcium, Dissolved		109000 µg/L				
	Chromium, Dissolved		<1 µg/L				
	Copper, Dissolved		0.885 µg/L				
	Manganese. Dissolved		14.5 µg/L				
	Molybdenum, Dissolved		7.57 µg/L				
	Nickel, Dissolved		0.806 µg/L				
	Selenium Dissolved		<1 µg/L				
	Vanadium, Dissolved		<1 µg/L				
	Mercury, Dissolved		<0.01 µg/L				
	Alkalinity to pH 4.5 as $CaCO_3$		283000 µg/L				
	Potassium, Dissolved		2930 µg/L				
	Sodium, Dissolved		16400 µg/L				
	Sulphate, Dissolved as SO_4		0.0233 g/L				
	Nitrogen: Total Oxidised as N		4200 µg/L				
	Chloride		27900 µg/L				
	Fluoride		<500 µg/L				
	Ammoniacal Nitrogen as NH_3		<200 µg/L				
	Carbon, Organic: Total as C		3270 µg/L				
	Electrical conductivity		664.9 µS/cm	Field measurements			
	Temperature		7.5 °C				
	Dissolved oxygen		0.42 mg/L				
	pH		7.84				
	Oxidation reduction potential		89 mV				

Emission Point	Substance / Parameter	Emission Limit Value	Result [1]	Test Method [2]	Sample Date and Times [3]	Accreditation/ Certification [4]	Uncertainty [5]
Brackish Lagoon	Aluminium, Dissolved		<10 µg/L		12/01/2024	Sampling WSP / Testing ALS	
	Antimony, Dissolved		<1 µg/L				
	Arsenic, Dissolved		1.64 µg/L				
	Boron, Dissolved		1500 µg/L				
	Cadmium, Dissolved		0.0871 µg/L				
	Calcium, Dissolved		156000 µg/L				
	Chromium, Dissolved		<1 µg/L				
	Copper, Dissolved		<0.3 µg/L				
	Manganese. Dissolved		17.6 µg/L				
	Molybdenum, Dissolved		237 µg/L				
	Nickel, Dissolved		0.562 µg/L				
	Selenium Dissolved		1.69 µg/L				
	Vanadium, Dissolved		1.05 µg/L				
	Mercury, Dissolved		<0.01 µg/L				
	Alkalinity to pH 4.5 as $CaCO_3$		273000 µg/L				
	Potassium, Dissolved		35500 µg/L				
	Sodium, Dissolved		614000 µg/L				
	Sulphate, Dissolved as SO_4		0.275 g/L				
	Nitrogen: Total Oxidised as N		3080 µg/L				
	Chloride		1120000 µg/L				
	Fluoride		<500 µg/L				
	Ammoniacal Nitrogen as NH_3		<200 µg/L				
	Carbon, Organic: Total as C		3740 µg/L				
	Electrical conductivity		19194 µS/cm	Field measurements			
	Temperature		11.4 °C				
	Dissolved oxygen		3.81 mg/L				
	pH		7.49				
	Oxidation reduction potential		-122 mV				

[1] The result given is the maximum value (or the minimum value in the case of a limit that is expressed as a minimum) obtained during the reporting period, expressed in the same terms as the emission limit value. Where the emission limit value is expressed as a range, the result is given as the 'minimum – maximum' measured values.
[2] Where an internationally recognised standard test method is used the reference number is given. Where another method that has been formally agreed with the Agency is used, then the appropriate identifier is given. In other cases the principal technique is stated, e.g. colorimetry.
[3] For non-continuous measurements the date and time of the sample that produced the result is given. For continuous measurements, or flow/time proportional samples, the percentage of the process operating time covered by the monitoring is given.
[4] The accreditation status of the equipment and/or the monitoring organisation, as appropriate, for the methods used for both sampling and analysis.
[5] The uncertainty associated with the quoted result at the 95% confidence interval, unless otherwise stated.

Signed ……. Date……16/02/2024……..
(authorised to sign as representative of the Operator)