Reporting of Emission to Groundwater for the period from 1st July 2022 to 31st December 2022.

Operator : RWE Generation UK plc **Form:** Groundwater1

Location: Aberthaw Power Station

Permit/Variation Number: RP3133LD

Emission point	Substance/ Parameter	Emission Limit Value	Result [1]	Test Method [2]	Sample Date and Times [3]	Accreditation/ Certification [4]	Uncertainty [5]
BH12	Aluminium, Dissolved		<3.5 µg/l		19/07/2022	Sampling Amec / Testing ALS	
	Antimony, Dissolved		<1.3 µg/l				
	Arsenic Dissolved		0.4 µg/l				
	Boron, Dissolved		154 µg/l				
	Cadmium, Dissolved		0.02 µg/l				
	Calcium, Dissolved		73 mg/l				
	Chromium, Dissolved		<0.20 µg/l				
	Copper, Dissolved		<4.0 µg/l				
	Magnesium, Dissolved		24 mg/l				
	Manganese, Dissolved		7.9 µg/l				
	Molybdenum, Dissolved		5.2 µg/l				
	Nickel, Dissolved		<1.0 µg/l				
	Selenium Dissolved		n/t µg/l				
	Vanadium, Dissolved		0.8 µg/l				
	Zinc, Dissolved		<5.0 µg/l				
	Mercury, Dissolved		<0.01 µg/l				
	Alkalinity to pH 4.5 as CaCO3		897 mg/l				
	Conductivity at 20C		1100 uS/cm				
	Potassium, Dissolved		6.6 mg/l				
	Sodium, Dissolved		150 mg/l				
	Sulphate, Dissolved as SO4		96 mg/l				
	Nitrogen : Total Oxidised as N		1.1 mg/l				
	Chloride		156 mg/l				
	Fluoride		0.30 mg/l				
	Ammoniacal Nitrogen as N		<0.06 mg/l				
	Carbon, Organic : Total as C :- {TOC}		1.7 mg/l				
	pH		7.40 pH Units				

Emission point	Substance/ Parameter	Emission Limit Value	Result [1]	Test Method [2]	Sample Date and Times [3]	Accreditation/ Certification [4]	Uncertainty [5]
BH12	Aluminium, Dissolved		<3.5 µg/l		11/10/2022	Sampling Amec / Testing ALS	
	Antimony, Dissolved		<1.3 µg/l				
	Arsenic Dissolved		0.4 µg/l				
	Boron, Dissolved		162 µg/l				
	Cadmium, Dissolved		<0.02 µg/l				
	Calcium, Dissolved		90 mg/l				
	Chromium, Dissolved		<0.20 µg/l				
	Copper, Dissolved		<4.0 µg/l				
	Magnesium, Dissolved		37 mg/l				
	Manganese, Dissolved		5.3 µg/l				
	Molybdenum, Dissolved		<2.50 µg/l				
	Nickel, Dissolved		<1.0 µg/l				
	Selenium Dissolved		n/t µg/l				
	Vanadium, Dissolved		0.5 µg/l				
	Zinc, Dissolved		<5.0 µg/l				
	Mercury, Dissolved		<0.01 µg/l				
	Alkalinity to pH 4.5 as CaCO3		386 mg/l				
	Conductivity at 20C		1400 uS/cm				
	Potassium, Dissolved		7.0 mg/l				
	Sodium, Dissolved		210 mg/l				
	Sulphate, Dissolved as SO4		123 mg/l				
	Nitrogen : Total Oxidised as N		<0.7 mg/l				
	Chloride		253 mg/l				
	Fluoride		0.30 mg/l				
	Ammoniacal Nitrogen as N		<0.06 mg/l				
	Carbon, Organic : Total as C :- {TOC}		2.8 mg/l				
	pH		7.50 pH Units				

Emission point	Substance/ Parameter	Emission Limit Value	Result [1]	Test Method [2]	Sample Date and Times [3]	Accreditation/ Certification [4]	Uncertainty [5]
BH13	Aluminium, Dissolved		<3.5 µg/l		19/07/2022	Sampling Amec / Testing ALS	
	Antimony, Dissolved		<1.3 µg/l				
	Arsenic Dissolved		0.5 µg/l				
	Boron, Dissolved		434 µg/l				
	Cadmium, Dissolved		0.06 µg/l				
	Calcium, Dissolved		345 mg/l				
	Chromium, Dissolved		<0.20 µg/l				
	Copper, Dissolved		<4.0 µg/l				
	Magnesium, Dissolved		119 mg/l				
	Manganese, Dissolved		18.0 µg/l				
	Molybdenum, Dissolved		4.0 µg/l				
	Nickel, Dissolved		1.0 µg/l				
	Selenium Dissolved		n/t µg/l				
	Vanadium, Dissolved		1.0 µg/l				
	Zinc, Dissolved		22.0 µg/l				
	Mercury, Dissolved		<0.01 µg/l				
	Alkalinity to pH 4.5 as CaCO3		259 mg/l				
	Conductivity at 20C		5890 uS/cm				
	Potassium, Dissolved		24.0 mg/l				
	Sodium, Dissolved		910 mg/l				
	Sulphate, Dissolved as SO4		295 mg/l				
	Nitrogen : Total Oxidised as N		1.80 mg/l				
	Chloride		1890 mg/l				
	Fluoride		0.20 mg/l				
	Ammoniacal Nitrogen as N		<0.06 mg/l				
	Carbon, Organic : Total as C :- {TOC}		2.0 mg/l				
	pH		7.10 pH Units				

Emission point	Substance/ Parameter	Emission Limit Value	Result [1]	Test Method [2]	Sample Date and Times [3]	Accreditation/ Certification [4]	Uncertainty [5]
BH13	Aluminium, Dissolved		<3.5 µg/l		11/10/2022	Sampling Amec / Testing ALS	
	Antimony, Dissolved		<1.3 µg/l				
	Arsenic Dissolved		0.5 µg/l				
	Boron, Dissolved		749 µg/l				
	Cadmium, Dissolved		0.15 µg/l				
	Calcium, Dissolved		477 mg/l				
	Chromium, Dissolved		<0.20 µg/l				
	Copper, Dissolved		<4.0 µg/l				
	Magnesium, Dissolved		300 mg/l				
	Manganese, Dissolved		5.8 µg/l				
	Molybdenum, Dissolved		3.8 µg/l				
	Nickel, Dissolved		1.2 µg/l				
	Selenium Dissolved		n/t µg/l				
	Vanadium, Dissolved		0.8 µg/l				
	Zinc, Dissolved		21.0 µg/l				
	Mercury, Dissolved		<0.01 µg/l				
	Alkalinity to pH 4.5 as CaCO3		250 mg/l				
	Conductivity at 20C		12000 uS/cm				
	Potassium, Dissolved		64.0 mg/l				
	Sodium, Dissolved		2100 mg/l				
	Sulphate, Dissolved as SO4		596 mg/l				
	Nitrogen : Total Oxidised as N		<0.7 mg/l				
	Chloride		4110 mg/l				
	Fluoride		0.30 mg/l				
	Ammoniacal Nitrogen as N		0.25 mg/l				
	Carbon, Organic : Total as C :- {TOC}		2.5 mg/l				
	pH		7.10 pH Units				

[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.

[6] The emission limit values for all substances is expressed as a maximum individual value, unless otherwise stated.

Signed ……. S. Camps …… Date 24/02/2023 (authorised to sign as representative of the Operator)