Reporting of Emission to Groundwater for the period from 1st July 2021 to 31st December 2021.

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		03/09/2021	Sampling Amec / Testing ALS	
	Antimony, Dissolved		<1.3 µg/l				
	Arsenic Dissolved		0.6 µg/l				
	Boron, Dissolved		854 µg/l				
	Cadmium, Dissolved		<0.02 µg/l				
	Calcium, Dissolved		104 mg/l				
	Chromium, Dissolved		<0.20 µg/l				
	Copper, Dissolved		<4.0 µg/l				
	Magnesium, Dissolved		39 mg/l				
	Manganese, Dissolved		86.0 µg/l				
	Molybdenum, Dissolved		10.8 µg/l				
	Nickel, Dissolved		1.3 µg/l				
	Selenium Dissolved		n/t µg/l				
	Vanadium, Dissolved		0.9 µg/l				
	Zinc, Dissolved		32.0 µg/l				
	Mercury, Dissolved		<0.01 µg/l				
	Alkalinity to pH 4.5 as CaCO3		333 mg/l				
	Conductivity at 20C		1790 uS/cm				
	Potassium, Dissolved		12.0 mg/l				
	Sodium, Dissolved		270 mg/l				
	Sulphate, Dissolved as SO4		139 mg/l				
	Nitrogen : Total Oxidised as N		1.0 mg/l				
	Chloride		368 mg/l				
	Fluoride		0.30 mg/l				
	Ammoniacal Nitrogen as N		0.08 mg/l				
	Carbon, Organic : Total as C :- {TOC}		2.1 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]
BH12	Aluminium, Dissolved		<3.5 µg/l		20/10/2021	Sampling Amec / Testing ALS	
	Antimony, Dissolved		<1.3 µg/l				
	Arsenic Dissolved		1.0 µg/l				
	Boron, Dissolved		535 µg/l				
	Cadmium, Dissolved		<0.02 µg/l				
	Calcium, Dissolved		113 mg/l				
	Chromium, Dissolved		<0.20 µg/l				
	Copper, Dissolved		<4.0 µg/l				
	Magnesium, Dissolved		66 mg/l				
	Manganese, Dissolved		153.0 µg/l				
	Molybdenum, Dissolved		17.5 µg/l				
	Nickel, Dissolved		2.5 µg/l				
	Selenium Dissolved		n/t µg/l				
	Vanadium, Dissolved		1.0 µg/l				
	Zinc, Dissolved		6.9 µg/l				
	Mercury, Dissolved		<0.01 µg/l				
	Alkalinity to pH 4.5 as CaCO3		306 mg/l				
	Conductivity at 20C		2300 uS/cm				
	Potassium, Dissolved		21.0 mg/l				
	Sodium, Dissolved		520 mg/l				
	Sulphate, Dissolved as SO4		138 mg/l				
	Nitrogen : Total Oxidised as N		0.80 mg/l				
	Chloride		570 mg/l				
	Fluoride		0.30 mg/l				
	Ammoniacal Nitrogen as N		<0.06 mg/l				
	Carbon, Organic : Total as C :- {TOC}		3.8 mg/l				
	pH		8.00 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		03/09/2021	Sampling Amec / Testing ALS	
	Antimony, Dissolved		<1.3 µg/l				
	Arsenic Dissolved		0.4 µg/l				
	Boron, Dissolved		433 µg/l				
	Cadmium, Dissolved		<0.02 µg/l				
	Calcium, Dissolved		98 mg/l				
	Chromium, Dissolved		<0.20 µg/l				
	Copper, Dissolved		<4.0 µg/l				
	Magnesium, Dissolved		42 mg/l				
	Manganese, Dissolved		18.0 µg/l				
	Molybdenum, Dissolved		4.9 µg/l				
	Nickel, Dissolved		1.2 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		343 mg/l				
	Conductivity at 20C		1560 uS/cm				
	Potassium, Dissolved		7.0 mg/l				
	Sodium, Dissolved		220 mg/l				
	Sulphate, Dissolved as SO4		128 mg/l				
	Nitrogen : Total Oxidised as N		<0.7 mg/l				
	Chloride		295 mg/l				
	Fluoride		0.30 mg/l				
	Ammoniacal Nitrogen as N		0.17 mg/l				
	Carbon, Organic : Total as C :- {TOC}		1.7 mg/l				
	pH		7.60 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		7 µg/l		20/10/2021	Sampling Amec / Testing ALS	
	Antimony, Dissolved		<1.3 µg/l				
	Arsenic Dissolved		2.0 µg/l				
	Boron, Dissolved		681 µg/l				
	Cadmium, Dissolved		<0.02 µg/l				
	Calcium, Dissolved		111 mg/l				
	Chromium, Dissolved		<0.20 µg/l				
	Copper, Dissolved		<4.0 µg/l				
	Magnesium, Dissolved		44 mg/l				
	Manganese, Dissolved		80.0 µg/l				
	Molybdenum, Dissolved		51.8 µg/l				
	Nickel, Dissolved		1.1 µg/l				
	Selenium Dissolved		n/t µg/l				
	Vanadium, Dissolved		1.1 µg/l				
	Zinc, Dissolved		<5.0 µg/l				
	Mercury, Dissolved		0.01 µg/l				
	Alkalinity to pH 4.5 as CaCO3		458 mg/l				
	Conductivity at 20C		1510 uS/cm				
	Potassium, Dissolved		8.4 mg/l				
	Sodium, Dissolved		220 mg/l				
	Sulphate, Dissolved as SO4		165 mg/l				
	Nitrogen : Total Oxidised as N		<0.7 mg/l				
	Chloride		282 mg/l				
	Fluoride		0.30 mg/l				
	Ammoniacal Nitrogen as N		0.13 mg/l				
	Carbon, Organic : Total as C :- {TOC}		1.8 mg/l				
	pH		7.70 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 26/01/2022 (authorised to sign as representative of the Operator)