Reporting of Emission to Groundwater for the period from ...1st July 2020 to 31st December 2020.

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		28/07/2020	Sampling Amec / Testing ALS	
	Antimony, Dissolved		<1.3 µg/l				
	Arsenic Dissolved		0.3 µg/l				
	Boron, Dissolved		160 µg/l				
	Cadmium, Dissolved		<0.02 µg/l				
	Calcium, Dissolved		116 mg/l				
	Chromium, Dissolved		<0.20 µg/l				
	Copper, Dissolved		<4.0 µg/l				
	Magnesium, Dissolved		51 mg/l				
	Manganese, Dissolved		6.1 µg/l				
	Molybdenum, Dissolved		<2.50 µg/l				
	Nickel, Dissolved		1.3 µg/l				
	Selenium Dissolved		Not tested µg/l				
	Vanadium, Dissolved		0.6 µg/l				
	Zinc, Dissolved		7.7 µg/l				
	Mercury, Dissolved		<0.01 µg/l				
	Alkalinity to pH 4.5 as CaCO3		273 mg/l				
	Conductivity at 20C		1780 uS/cm				
	Potassium, Dissolved		7.0 mg/l				
	Sodium, Dissolved		250 mg/l				
	Sulphate, Dissolved as SO4		140 mg/l				
	Nitrogen : Total Oxidised as N		<0.7 mg/l				
	Chloride		377 mg/l				
	Fluoride		0.30 mg/l				
	Ammoniacal Nitrogen as N		<0.06 mg/l				
	Carbon, Organic : Total as C :- {TOC}		1.3 mg/l				
	pH		8.10 pH Units				

Emission point	Substance/ Parameter	Emission Limit Value	Result [1]	Test Method [2]	Sample Date and Times [3]	Accreditation/ Certification [4]	Uncertainty [5]
BH12	Aluminium, Dissolved		<3.5 µg/l		13/10/2020	Sampling Amec / Testing ALS	
	Antimony, Dissolved		<1.3 µg/l				
	Arsenic Dissolved		0.7 µg/l				
	Boron, Dissolved		714 µg/l				
	Cadmium, Dissolved		<0.02 µg/l				
	Calcium, Dissolved		119 mg/l				
	Chromium, Dissolved		<0.20 µg/l				
	Copper, Dissolved		<4.0 µg/l				
	Magnesium, Dissolved		41 mg/l				
	Manganese, Dissolved		28.0 µg/l				
	Molybdenum, Dissolved		8.5 µg/l				
	Nickel, Dissolved		1.1 µg/l				
	Selenium Dissolved		Not tested µg/l				
	Vanadium, Dissolved		0.9 µg/l				
	Zinc, Dissolved		6.5 µg/l				
	Mercury, Dissolved		<0.01 µg/l				
	Alkalinity to pH 4.5 as CaCO3		321 mg/l				
	Conductivity at 20C		1800 uS/cm				
	Potassium, Dissolved		13.0 mg/l				
	Sodium, Dissolved		320 mg/l				
	Sulphate, Dissolved as SO4		121 mg/l				
	Nitrogen : Total Oxidised as N		1.30 mg/l				
	Chloride		401 mg/l				
	Fluoride		0.30 mg/l				
	Ammoniacal Nitrogen as N		<0.06 mg/l				
	Carbon, Organic : Total as C :- {TOC}		2.1 mg/l				
	pH		7.70 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		4 µg/l		28/07/2020	Sampling Amec / Testing ALS	
	Antimony, Dissolved		<1.3 µg/l				
	Arsenic Dissolved		0.6 µg/l				
	Boron, Dissolved		273 µg/l				
	Cadmium, Dissolved		<0.02 µg/l				
	Calcium, Dissolved		123 mg/l				
	Chromium, Dissolved		<0.20 µg/l				
	Copper, Dissolved		<4.0 µg/l				
	Magnesium, Dissolved		46 mg/l				
	Manganese, Dissolved		30.0 µg/l				
	Molybdenum, Dissolved		2.7 µg/l				
	Nickel, Dissolved		<1.0 µg/l				
	Selenium Dissolved		Not tested µg/l				
	Vanadium, Dissolved		0.8 µg/l				
	Zinc, Dissolved		8.4 µg/l				
	Mercury, Dissolved		<0.01 µg/l				
	Alkalinity to pH 4.5 as CaCO3		317 mg/l				
	Conductivity at 20C		2130 uS/cm				
	Potassium, Dissolved		13.0 mg/l				
	Sodium, Dissolved		310 mg/l				
	Sulphate, Dissolved as SO4		147 mg/l				
	Nitrogen : Total Oxidised as N		<0.7 mg/l				
	Chloride		495 mg/l				
	Fluoride		0.40 mg/l				
	Ammoniacal Nitrogen as N		<0.06 mg/l				
	Carbon, Organic : Total as C :- {TOC}		1.8 mg/l				
	pH		7.90 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		13/10/2020	Sampling Amec / Testing ALS	
	Antimony, Dissolved		<1.3 µg/l				
	Arsenic Dissolved		0.2 µg/l				
	Boron, Dissolved		286 µg/l				
	Cadmium, Dissolved		<0.02 µg/l				
	Calcium, Dissolved		116 mg/l				
	Chromium, Dissolved		<0.20 µg/l				
	Copper, Dissolved		<4.0 µg/l				
	Magnesium, Dissolved		51 mg/l				
	Manganese, Dissolved		5.1 µg/l				
	Molybdenum, Dissolved		<2.50 µg/l				
	Nickel, Dissolved		1.1 µg/l				
	Selenium Dissolved		Not tested 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		407 mg/l				
	Conductivity at 20C		1690 uS/cm				
	Potassium, Dissolved		7.8 mg/l				
	Sodium, Dissolved		280 mg/l				
	Sulphate, Dissolved as SO4		108 mg/l				
	Nitrogen : Total Oxidised as N		<0.7 mg/l				
	Chloride		364 mg/l				
	Fluoride		0.30 mg/l				
	Ammoniacal Nitrogen as N		<0.06 mg/l				
	Carbon, Organic : Total as C :- {TOC}		1.4 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. Cangs …… Date 05/03/2021 (authorised to sign as representative of the Operator)

Please note: the Selenium Parameter appears to have been missed off the analysis parameter list in error by our external contractor. This has been highlighted and should be included in future.