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

Operator : RWE Generation UK plc **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		<75 µg/l		01/09/2021	Sampling Station / Testing ALS	
	Antimony, Dissolved		<16 µg/l				
	Arsenic Dissolved		11.0 µg/l				
	Boron, Dissolved		12000 µg/l				
	Cadmium, Dissolved		<0.7 µg/l				
	Calcium, Dissolved		1300 mg/l				
	Chromium, Dissolved		<5.1 µg/l				
	Copper, Dissolved		<18 µg/l				
	Magnesium, Dissolved		89 mg/l				
	Manganese, Dissolved		920 µg/l				
	Molybdenum, Dissolved		2500 µg/l				
	Nickel, Dissolved		<10 µg/l				
	Selenium Dissolved		<6 µg/l				
	Vanadium, Dissolved		6.5 µg/l				
	Mercury, Dissolved		<0.01 µg/l				
	Alkalinity to pH 4.5 as CaCO3		74 mg/l				
	Conductivity at 20C		18900 µS/cm				
	Potassium, Dissolved		295 mg/l				
	Sodium, Dissolved		4150 mg/l				
	Sulphate, Dissolved as SO4		<0.6 mg/l				
	Nitrogen : Total Oxidised as N		<0.7 mg/l				
	Chloride		6010 mg/l				
	Fluoride		<0.1 mg/l				
	Ammoniacal Nitrogen as N		0.3 mg/l				
	Carbon, Organic : Total as C :- {TOC}		6.8 mg/l				
	pH		6.9 pH Units				

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		10.0 µg/l		16/11/2021	Sampling Station / Testing ALS	
	Antimony, Dissolved		<16 µg/l				
	Arsenic Dissolved		7.7 µg/l				
	Boron, Dissolved		8100 µg/l				
	Cadmium, Dissolved		<0.07 µg/l				
	Calcium, Dissolved		950 mg/l				
	Chromium, Dissolved		<0.51 µg/l				
	Copper, Dissolved		<1.8 µg/l				
	Magnesium, Dissolved		92 mg/l				
	Manganese, Dissolved		3100 µg/l				
	Molybdenum, Dissolved		280 µg/l				
	Nickel, Dissolved		1.4 µg/l				
	Selenium Dissolved		<0.6 µg/l				
	Vanadium, Dissolved		1.5 µg/l				
	Mercury, Dissolved		<0.01 µg/l				
	Alkalinity to pH 4.5 as CaCO3		213 mg/l				
	Conductivity at 20C		13600 uS/cm				
	Potassium, Dissolved		152 mg/l				
	Sodium, Dissolved		2420 mg/l				
	Sulphate, Dissolved as SO4		<0.6 mg/l				
	Nitrogen : Total Oxidised as N		<0.7 mg/l				
	Chloride		4470 mg/l				
	Fluoride		0.2 mg/l				
	Ammoniacal Nitrogen as N		<0.06 mg/l				
	Carbon, Organic : Total as C :- {TOC}		8.9 mg/l				
	pH		7.1 pH Units				

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		1300.0 µg/l		01/09/2021	Sampling Station / Testing ALS	
	Antimony, Dissolved		<1.6 µg/l				
	Arsenic Dissolved		5.0 µg/l				
	Boron, Dissolved		2800 µg/l				
	Cadmium, Dissolved		<0.07 µg/l				
	Calcium, Dissolved		230 mg/l				
	Chromium, Dissolved		2.1 µg/l				
	Copper, Dissolved		4.4 µg/l				
	Magnesium, Dissolved		19 mg/l				
	Manganese, Dissolved		1200 µg/l				
	Molybdenum, Dissolved		830 µg/l				
	Nickel, Dissolved		5.6 µg/l				
	Selenium Dissolved		3.7 µg/l				
	Vanadium, Dissolved		6.7 µg/l				
	Mercury, Dissolved		<0.01 µg/l				
	Alkalinity to pH 4.5 as CaCO3		243 mg/l				
	Conductivity at 20C		2360 uS/cm				
	Potassium, Dissolved		24 mg/l				
	Sodium, Dissolved		221 mg/l				
	Sulphate, Dissolved as SO4		<0.6 mg/l				
	Nitrogen : Total Oxidised as N		1.6 mg/l				
	Chloride		446 mg/l				
	Fluoride		0.2 mg/l				
	Ammoniacal Nitrogen as N		<0.06 mg/l				
	Carbon, Organic : Total as C :- {TOC}		2.3 mg/l				
	pH		8.3 pH Units				

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		33.0 µg/l		16/11/2021	Sampling Station / Testing ALS	
	Antimony, Dissolved		<16 µg/l				
	Arsenic Dissolved		1.7 µg/l				
	Boron, Dissolved		3700 µg/l				
	Cadmium, Dissolved		<0.07 µg/l				
	Calcium, Dissolved		250 mg/l				
	Chromium, Dissolved		<0.51 µg/l				
	Copper, Dissolved		<1.8 µg/l				
	Magnesium, Dissolved		23 mg/l				
	Manganese, Dissolved		110 µg/l				
	Molybdenum, Dissolved		670 µg/l				
	Nickel, Dissolved		<1 µg/l				
	Selenium Dissolved		2.4 µg/l				
	Vanadium, Dissolved		1.4 µg/l				
	Mercury, Dissolved		<0.01 µg/l				
	Alkalinity to pH 4.5 as CaCO3		259 mg/l				
	Conductivity at 20C		2110 uS/cm				
	Potassium, Dissolved		27 mg/l				
	Sodium, Dissolved		236 mg/l				
	Sulphate, Dissolved as SO4		<0.6 mg/l				
	Nitrogen : Total Oxidised as N		1.1 mg/l				
	Chloride		368 mg/l				
	Fluoride		0.2 mg/l				
	Ammoniacal Nitrogen as N		<0.06 mg/l				
	Carbon, Organic : Total as C :- {TOC}		2.1 mg/l				
	pH		8.1 pH Units				

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		69.0 µg/l		01/09/2021	Sampling Station / Testing ALS	
	Antimony, Dissolved		<1.6 µg/l				
	Arsenic Dissolved		0.7 µg/l				
	Boron, Dissolved		<60 µg/l				
	Cadmium, Dissolved		<0.07 µg/l				
	Calcium, Dissolved		100 mg/l				
	Chromium, Dissolved		0.8 µg/l				
	Copper, Dissolved		9.5 µg/l				
	Magnesium, Dissolved		15 mg/l				
	Manganese, Dissolved		14 µg/l				
	Molybdenum, Dissolved		21 µg/l				
	Nickel, Dissolved		<1 µg/l				
	Selenium Dissolved		<0.6 µg/l				
	Vanadium, Dissolved		0.6 µg/l				
	Mercury, Dissolved		<0.01 µg/l				
	Alkalinity to pH 4.5 as CaCO3		280 mg/l				
	Conductivity at 20C		723 uS/cm				
	Potassium, Dissolved		4 mg/l				
	Sodium, Dissolved		34 mg/l				
	Sulphate, Dissolved as SO4		<0.6 mg/l				
	Nitrogen : Total Oxidised as N		3.2 mg/l				
	Chloride		65 mg/l				
	Fluoride		0.1 mg/l				
	Ammoniacal Nitrogen as N		<0.06 mg/l				
	Carbon, Organic : Total as C :- {TOC}		1.7 mg/l				
	pH		8.3 pH Units				

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		79.0 µg/l		16/11/2021	Sampling Station / Testing ALS	
	Antimony, Dissolved		<1.6 µg/l				
	Arsenic Dissolved		0.6 µg/l				
	Boron, Dissolved		<100 µg/l				
	Cadmium, Dissolved		<0.07 µg/l				
	Calcium, Dissolved		120 mg/l				
	Chromium, Dissolved		0.5 µg/l				
	Copper, Dissolved		1.8 µg/l				
	Magnesium, Dissolved		14 mg/l				
	Manganese, Dissolved		18 µg/l				
	Molybdenum, Dissolved		16 µg/l				
	Nickel, Dissolved		<1 µg/l				
	Selenium Dissolved		<0.6 µg/l				
	Vanadium, Dissolved		0.5 µg/l				
	Mercury, Dissolved		<0.01 µg/l				
	Alkalinity to pH 4.5 as CaCO3		273 mg/l				
	Conductivity at 20C		663 uS/cm				
	Potassium, Dissolved		4 mg/l				
	Sodium, Dissolved		27 mg/l				
	Sulphate, Dissolved as SO4		<0.6 mg/l				
	Nitrogen : Total Oxidised as N		3.5 mg/l				
	Chloride		44 mg/l				
	Fluoride		0.2 mg/l				
	Ammoniacal Nitrogen as N		<0.06 mg/l				
	Carbon, Organic : Total as C :- {TOC}		2.1 mg/l				
	pH		8.2 pH Units				

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		<750 µg/l		01/09/2021	Sampling Station / Testing ALS	
	Antimony, Dissolved		<160 µg/l				
	Arsenic Dissolved		2.6 µg/l				
	Boron, Dissolved		7000 µg/l				
	Cadmium, Dissolved		<0.7 µg/l				
	Calcium, Dissolved		470 mg/l				
	Chromium, Dissolved		<5.1 µg/l				
	Copper, Dissolved		<18 µg/l				
	Magnesium, Dissolved		824 mg/l				
	Manganese, Dissolved		27 µg/l				
	Molybdenum, Dissolved		1200 µg/l				
	Nickel, Dissolved		<10 µg/l				
	Selenium Dissolved		<60 µg/l				
	Vanadium, Dissolved		2.0 µg/l				
	Mercury, Dissolved		<0.01 µg/l				
	Alkalinity to pH 4.5 as CaCO3		122 mg/l				
	Conductivity at 20C		33200 uS/cm				
	Potassium, Dissolved		302 mg/l				
	Sodium, Dissolved		6670 mg/l				
	Sulphate, Dissolved as SO4		2010 mg/l				
	Nitrogen : Total Oxidised as N		0.7 mg/l				
	Chloride		10900 mg/l				
	Fluoride		0.7 mg/l				
	Ammoniacal Nitrogen as N		0.31 mg/l				
	Carbon, Organic : Total as C :- {TOC}		4.9 mg/l				
	pH		8.4 pH Units				

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		24.0 µg/l		16/11/2021	Sampling Station / Testing ALS	
	Antimony, Dissolved		<160 µg/l				
	Arsenic Dissolved		2.2 µg/l				
	Boron, Dissolved		6300 µg/l				
	Cadmium, Dissolved		<0.07 µg/l				
	Calcium, Dissolved		340 mg/l				
	Chromium, Dissolved		<0.51 µg/l				
	Copper, Dissolved		<1.8 µg/l				
	Magnesium, Dissolved		387 mg/l				
	Manganese, Dissolved		100 µg/l				
	Molybdenum, Dissolved		840 µg/l				
	Nickel, Dissolved		1.0 µg/l				
	Selenium Dissolved		<6 µg/l				
	Vanadium, Dissolved		1.7 µg/l				
	Mercury, Dissolved		<0.01 µg/l				
	Alkalinity to pH 4.5 as CaCO3		183 mg/l				
	Conductivity at 20C		17600 uS/cm				
	Potassium, Dissolved		170 mg/l				
	Sodium, Dissolved		3840 mg/l				
	Sulphate, Dissolved as SO4		<0.6 mg/l				
	Nitrogen : Total Oxidised as N		<0.7 mg/l				
	Chloride		5950 mg/l				
	Fluoride		0.5 mg/l				
	Ammoniacal Nitrogen as N		0.12 mg/l				
	Carbon, Organic : Total as C :- {TOC}		4.7 mg/l				
	pH		8.2 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 …… ……. Date 26/01/2022 (authorised to sign as representative of the Operator)