Reporting of Emission to Surface Water for the period from 1st January 2021 to 30th June 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		100.0 µg/l		23/02/2021	Sampling Station / Testing ALS	
	Antimony, Dissolved		3.7 µg/l				
	Arsenic Dissolved		28.0 µg/l				
	Boron, Dissolved		8100 µg/l				
	Cadmium, Dissolved		<0.07 µg/l				
	Calcium, Dissolved		760 mg/l				
	Chromium, Dissolved		<0.51 µg/l				
	Copper, Dissolved		<1.8 µg/l				
	Magnesium, Dissolved		63 mg/l				
	Manganese, Dissolved		1500 µg/l				
	Molybdenum, Dissolved		2800 µg/l				
	Nickel, Dissolved		1.2 µg/l				
	Selenium Dissolved		20.0 µg/l				
	Vanadium, Dissolved		7.9 µg/l				
	Mercury, Dissolved		0.02 µg/l				
	Alkalinity to pH 4.5 as CaCO3		262 mg/l				
	Conductivity at 20C		11700 µS/cm				
	Potassium, Dissolved		136 mg/l				
	Sodium, Dissolved		2060 mg/l				
	Sulphate, Dissolved as SO4		1130 mg/l				
	Nitrogen : Total Oxidised as N		3.7 mg/l				
	Chloride		3560 mg/l				
	Fluoride		0.2 mg/l				
	Ammoniacal Nitrogen as N		14.70 mg/l				
	Carbon, Organic : Total as C :- {TOC}		3.0 mg/l				
	pH		7.5 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		29.0 µg/l		18/06/2021	Sampling Station / Testing ALS	
	Antimony, Dissolved		16.0 µg/l				
	Arsenic Dissolved		15.0 µg/l				
	Boron, Dissolved		12000 µg/l				
	Cadmium, Dissolved		0.7 µg/l				
	Calcium, Dissolved		1100 mg/l				
	Chromium, Dissolved		0.5 µg/l				
	Copper, Dissolved		1.8 µg/l				
	Magnesium, Dissolved		84 mg/l				
	Manganese, Dissolved		830 µg/l				
	Molybdenum, Dissolved		4400 µg/l				
	Nickel, Dissolved		1.1 µg/l				
	Selenium Dissolved		45.0 µg/l				
	Vanadium, Dissolved		17.0 µg/l				
	Mercury, Dissolved		<0.01 µg/l				
	Alkalinity to pH 4.5 as CaCO3		77 mg/l				
	Conductivity at 20C		17500 uS/cm				
	Potassium, Dissolved		254 mg/l				
	Sodium, Dissolved		3300 mg/l				
	Sulphate, Dissolved as SO4		1700 mg/l				
	Nitrogen : Total Oxidised as N		10.1 mg/l				
	Chloride		6050 mg/l				
	Fluoride		0.1 mg/l				
	Ammoniacal Nitrogen as N		<0.06 mg/l				
	Carbon, Organic : Total as C :- {TOC}		5.6 mg/l				
	pH		7.2 pH Units				

Emission point	Substance/ Parameter	Emission Limit Value	Result [1]	Test Method [2]	Sample Date and Times [3]	Accreditation/ Certification [4]	Uncertainty [5]
Eastern Perimeter Drain	Aluminium, Dissolved		30.0 µg/l		23/02/2021	Sampling Station / Testing ALS	
	Antimony, Dissolved		<1.6 µg/l				
	Arsenic Dissolved		1.8 µg/l				
	Boron, Dissolved		1800 µg/l				
	Cadmium, Dissolved		<0.07 µg/l				
	Calcium, Dissolved		180 mg/l				
	Chromium, Dissolved		<0.51 µg/l				
	Copper, Dissolved		<1.8 µg/l				
	Magnesium, Dissolved		16 mg/l				
	Manganese, Dissolved		160 µg/l				
	Molybdenum, Dissolved		290 µg/l				
	Nickel, Dissolved		<1 µg/l				
	Selenium Dissolved		5.1 µg/l				
	Vanadium, Dissolved		2.5 µg/l				
	Mercury, Dissolved		<0.01 µg/l				
	Alkalinity to pH 4.5 as CaCO3		278 mg/l				
	Conductivity at 20C		1330 uS/cm				
	Potassium, Dissolved		16 mg/l				
	Sodium, Dissolved		110 mg/l				
	Sulphate, Dissolved as SO4		220 mg/l				
	Nitrogen : Total Oxidised as N		2.2 mg/l				
	Chloride		180 mg/l				
	Fluoride		0.2 mg/l				
	Ammoniacal Nitrogen as N		<0.06 mg/l				
	Carbon, Organic : Total as C :- {TOC}		1.8 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]
Eastern Perimeter Drain	Aluminium, Dissolved		23.0 µg/l		18/06/2021	Sampling Station / Testing ALS	
	Antimony, Dissolved		<16 µg/l				
	Arsenic Dissolved		1.3 µg/l				
	Boron, Dissolved		3700 µg/l				
	Cadmium, Dissolved		<0.7 µg/l				
	Calcium, Dissolved		270 mg/l				
	Chromium, Dissolved		<0.51 µg/l				
	Copper, Dissolved		<1.8 µg/l				
	Magnesium, Dissolved		25 mg/l				
	Manganese, Dissolved		34 µg/l				
	Molybdenum, Dissolved		720 µg/l				
	Nickel, Dissolved		<1 µg/l				
	Selenium Dissolved		4.2 µg/l				
	Vanadium, Dissolved		1.4 µg/l				
	Mercury, Dissolved		<0.01 µg/l				
	Alkalinity to pH 4.5 as CaCO3		257 mg/l				
	Conductivity at 20C		2440 uS/cm				
	Potassium, Dissolved		27 mg/l				
	Sodium, Dissolved		281 mg/l				
	Sulphate, Dissolved as SO4		489 mg/l				
	Nitrogen : Total Oxidised as N		1.1 mg/l				
	Chloride		481 mg/l				
	Fluoride		0.2 mg/l				
	Ammoniacal Nitrogen as N		<0.06 mg/l				
	Carbon, Organic : Total as C :- {TOC}		2.2 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		160.0 µg/l		23/02/2021	Sampling Station / Testing ALS	
	Antimony, Dissolved		<1.6 µg/l				
	Arsenic Dissolved		0.5 µg/l				
	Boron, Dissolved		<60 µg/l				
	Cadmium, Dissolved		<0.07 µg/l				
	Calcium, Dissolved		110 mg/l				
	Chromium, Dissolved		0.6 µg/l				
	Copper, Dissolved		<1.8 µg/l				
	Magnesium, Dissolved		12 mg/l				
	Manganese, Dissolved		19 µg/l				
	Molybdenum, Dissolved		7 µg/l				
	Nickel, Dissolved		1.0 µg/l				
	Selenium Dissolved		0.8 µg/l				
	Vanadium, Dissolved		0.6 µg/l				
	Mercury, Dissolved		<0.01 µg/l				
	Alkalinity to pH 4.5 as CaCO3		279 mg/l				
	Conductivity at 20C		602 uS/cm				
	Potassium, Dissolved		3 mg/l				
	Sodium, Dissolved		20 mg/l				
	Sulphate, Dissolved as SO4		22 mg/l				
	Nitrogen : Total Oxidised as N		3.4 mg/l				
	Chloride		30 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]
S3 (River Thaw)	Aluminium, Dissolved		63.0 µg/l		18/06/2021	Sampling Station / Testing ALS	
	Antimony, Dissolved		<1.6 µg/l				
	Arsenic Dissolved		0.5 µg/l				
	Boron, Dissolved		<60 µg/l				
	Cadmium, Dissolved		<0.07 µg/l				
	Calcium, Dissolved		110 mg/l				
	Chromium, Dissolved		<0.51 µg/l				
	Copper, Dissolved		<1.8 µg/l				
	Magnesium, Dissolved		16 mg/l				
	Manganese, Dissolved		12 µg/l				
	Molybdenum, Dissolved		23 µg/l				
	Nickel, Dissolved		<1 µg/l				
	Selenium Dissolved		0.7 µg/l				
	Vanadium, Dissolved		0.5 µg/l				
	Mercury, Dissolved		<0.01 µg/l				
	Alkalinity to pH 4.5 as CaCO3		286 mg/l				
	Conductivity at 20C		630 uS/cm				
	Potassium, Dissolved		4 mg/l				
	Sodium, Dissolved		25 mg/l				
	Sulphate, Dissolved as SO4		32 mg/l				
	Nitrogen : Total Oxidised as N		3.8 mg/l				
	Chloride		40 mg/l				
	Fluoride		0.2 mg/l				
	Ammoniacal Nitrogen as N		<0.06 mg/l				
	Carbon, Organic : Total as C :- {TOC}		1.8 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]
Brackish Lagoon	Aluminium, Dissolved		<75 µg/l		23/02/2021	Sampling Station / Testing ALS	
	Antimony, Dissolved		<1.6 µg/l				
	Arsenic Dissolved		2.0 µg/l				
	Boron, Dissolved		2200 µg/l				
	Cadmium, Dissolved		<0.07 µg/l				
	Calcium, Dissolved		180 mg/l				
	Chromium, Dissolved		<0.51 µg/l				
	Copper, Dissolved		<1.8 µg/l				
	Magnesium, Dissolved		68 mg/l				
	Manganese, Dissolved		96 µg/l				
	Molybdenum, Dissolved		310 µg/l				
	Nickel, Dissolved		<1 µg/l				
	Selenium Dissolved		4.7 µg/l				
	Vanadium, Dissolved		2.2 µg/l				
	Mercury, Dissolved		<0.01 µg/l				
	Alkalinity to pH 4.5 as CaCO3		264 mg/l				
	Conductivity at 20C		3720 uS/cm				
	Potassium, Dissolved		33 mg/l				
	Sodium, Dissolved		601 mg/l				
	Sulphate, Dissolved as SO4		328 mg/l				
	Nitrogen : Total Oxidised as N		2.4 mg/l				
	Chloride		924 mg/l				
	Fluoride		0.2 mg/l				
	Ammoniacal Nitrogen as N		<0.06 mg/l				
	Carbon, Organic : Total as C :- {TOC}		2.2 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]
Brackish Lagoon	Aluminium, Dissolved		80.0 µg/l		18/06/2021	Sampling Station / Testing ALS	
	Antimony, Dissolved		<160 µg/l				
	Arsenic Dissolved		4.8 µg/l				
	Boron, Dissolved		7000 µg/l				
	Cadmium, Dissolved		<7 µg/l				
	Calcium, Dissolved		390 mg/l				
	Chromium, Dissolved		0.7 µg/l				
	Copper, Dissolved		<1.8 µg/l				
	Magnesium, Dissolved		654 mg/l				
	Manganese, Dissolved		110 µg/l				
	Molybdenum, Dissolved		910 µg/l				
	Nickel, Dissolved		<1 µg/l				
	Selenium Dissolved		11.0 µg/l				
	Vanadium, Dissolved		3.8 µg/l				
	Mercury, Dissolved		<0.01 µg/l				
	Alkalinity to pH 4.5 as CaCO3		128 mg/l				
	Conductivity at 20C		27900 uS/cm				
	Potassium, Dissolved		259 mg/l				
	Sodium, Dissolved		6300 mg/l				
	Sulphate, Dissolved as SO4		1650 mg/l				
	Nitrogen : Total Oxidised as N		<0.7 mg/l				
	Chloride		10000 mg/l				
	Fluoride		0.6 mg/l				
	Ammoniacal Nitrogen as N		0.17 mg/l				
	Carbon, Organic : Total as C :- {TOC}		6.8 mg/l				
	pH		8.5 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 17/09/2021 (authorised to sign as representative of the Operator)