

Reporting of Emission to Surface Water for the period from 1st July to 31st December 2019.

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		190 µg/l		10/09/2019	Sampling Station/Testing EA NLS	
	Antimony, Dissolved		<10 µg/l				
	Arsenic Dissolved		14.00 µg/l				
	Boron, Dissolved		12000 µg/l				
	Cadmium, Dissolved		0.520 µg/l				
	Calcium, Dissolved		990 mg/l				
	Chromium, Dissolved		2 µg/l				
	Copper, Dissolved		0.880 µg/l				
	Magnesium, Dissolved		60.0 mg/l				
	Manganese, Dissolved		370.0 µg/l				
	Molybdenum, Dissolved		3500 µg/l				
	Nickel, Dissolved		1.30 µg/l				
	Selenium Dissolved		26.00 µg/l				
	Vanadium, Dissolved		<20 µg/l				
	Mercury, Dissolved		0 µg/l				
	Alkalinity to pH 4.5 as CaCO3		75 mg/l				
	Conductivity at 20C		16000 µS/cm				
	Potassium, Dissolved		220 mg/l				
	Sodium, Dissolved		2800 mg/l				
	Sulphate, Dissolved as SO4		1500 mg/l				
	Nitrogen : Total Oxidised as N		4.60 mg/l				
	Chloride		5700 mg/l				
	Fluoride		0.080 mg/l				
Ammoniacal Nitrogen as N		1.300 mg/l					
Carbon, Organic : Total as C :- {TOC}		5.70 mg/l					
pH		7.20 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		<40 µg/l		10/12/2019	Sampling Station/Testing EA NLS	
	Antimony, Dissolved		<10 µg/l				
	Arsenic Dissolved		24.00 µg/l				
	Boron, Dissolved		9300 µg/l				
	Cadmium, Dissolved		0.45 µg/l				
	Calcium, Dissolved		790 mg/l				
	Chromium, Dissolved		<0.5 µg/l				
	Copper, Dissolved		0.390 µg/l				
	Magnesium, Dissolved		61 mg/l				
	Manganese, Dissolved		660.0 µg/l				
	Molybdenum, Dissolved		3600 µg/l				
	Nickel, Dissolved		0.51 µg/l				
	Selenium Dissolved		37 µg/l				
	Vanadium, Dissolved		28 µg/l				
	Mercury, Dissolved		<0.01 µg/l				
	Alkalinity to pH 4.5 as CaCO3		180.00 mg/l				
	Conductivity at 20C		13000 uS/cm				
	Potassium, Dissolved		170 mg/l				
	Sodium, Dissolved		2300 mg/l				
	Sulphate, Dissolved as SO4		1200 mg/l				
	Nitrogen : Total Oxidised as N		11.00 mg/l				
	Chloride		4000 mg/l				
	Fluoride		0.07 mg/l				
Ammoniacal Nitrogen as N		9.800 mg/l					
Carbon, Organic : Total as C :- {TOC}		4.70 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]
Eastern Perimeter Drain	Aluminium, Dissolved		66 µg/l		10/09/2019	Sampling Station/Testing EA NLS	
	Antimony, Dissolved		<10 µg/l				
	Arsenic Dissolved		1.50 µg/l				
	Boron, Dissolved		3100 µg/l				
	Cadmium, Dissolved		0.094 µg/l				
	Calcium, Dissolved		180 mg/l				
	Chromium, Dissolved		<0.5 µg/l				
	Copper, Dissolved		0.790 µg/l				
	Magnesium, Dissolved		17.0 mg/l				
	Manganese, Dissolved		72.0 µg/l				
	Molybdenum, Dissolved		600 µg/l				
	Nickel, Dissolved		0.95 µg/l				
	Selenium Dissolved		2.30 µg/l				
	Vanadium, Dissolved		<20 µg/l				
	Mercury, Dissolved		<0.01 µg/l				
	Alkalinity to pH 4.5 as CaCO3		254 mg/l				
	Conductivity at 20C		1800 uS/cm				
	Potassium, Dissolved		25 mg/l				
	Sodium, Dissolved		200 mg/l				
	Sulphate, Dissolved as SO4		320 mg/l				
	Nitrogen : Total Oxidised as N		1.60 mg/l				
	Chloride		290 mg/l				
	Fluoride		0.120 mg/l				
Ammoniacal Nitrogen as N		<0.010 mg/l					
Carbon, Organic : Total as C :- {TOC}		2.90 mg/l					
pH			8.40 pH Units				

Emission point	Substance/ Parameter	Emission Limit Value	Result ^[1]	Test Method ^[2]	Sample Date and Times ^[3]	Accreditation/ Certification ^[4]	Uncertainty ^[5]
Eastern Perimeter Drain	Aluminium, Dissolved		170 µg/l		10/12/2019	Sampling Station/Testing EA NLS	
	Antimony, Dissolved		<10 µg/l				
	Arsenic Dissolved		1.90 µg/l				
	Boron, Dissolved		1800 µg/l				
	Cadmium, Dissolved		0.054 µg/l				
	Calcium, Dissolved		170 mg/l				
	Chromium, Dissolved		<0.5 µg/l				
	Copper, Dissolved		1.200 µg/l				
	Magnesium, Dissolved		15 mg/l				
	Manganese, Dissolved		300.0 µg/l				
	Molybdenum, Dissolved		280 µg/l				
	Nickel, Dissolved		1.10 µg/l				
	Selenium Dissolved		4 µg/l				
	Vanadium, Dissolved		<20 µg/l				
	Mercury, Dissolved		<0.01 µg/l				
	Alkalinity to pH 4.5 as CaCO3		295.00 mg/l				
	Conductivity at 20C		1300 uS/cm				
	Potassium, Dissolved		17 mg/l				
	Sodium, Dissolved		110 mg/l				
	Sulphate, Dissolved as SO4		210 mg/l				
	Nitrogen : Total Oxidised as N		3.10 mg/l				
	Chloride		160 mg/l				
	Fluoride		0.11 mg/l				
Ammoniacal Nitrogen as N		0.04 mg/l					
Carbon, Organic : Total as C :- {TOC}		2.40 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]
S3 (River Thaw)	Aluminium, Dissolved		84 µg/l		10/09/2019	Sampling Station/Testing EA NLS	
	Antimony, Dissolved		<10 µg/l				
	Arsenic Dissolved		<1 µg/l				
	Boron, Dissolved		<700 µg/l				
	Cadmium, Dissolved		<0.03 µg/l				
	Calcium, Dissolved		97 mg/l				
	Chromium, Dissolved		<0.5 µg/l				
	Copper, Dissolved		1.300 µg/l				
	Magnesium, Dissolved		19.0 mg/l				
	Manganese, Dissolved		<20 µg/l				
	Molybdenum, Dissolved		39 µg/l				
	Nickel, Dissolved		0.76 µg/l				
	Selenium Dissolved		<1 µg/l				
	Vanadium, Dissolved		<20 µg/l				
	Mercury, Dissolved		<0.01 µg/l				
	Alkalinity to pH 4.5 as CaCO3		251 mg/l				
	Conductivity at 20C		900 uS/cm				
	Potassium, Dissolved		6 mg/l				
	Sodium, Dissolved		76 mg/l				
	Sulphate, Dissolved as SO4		46 mg/l				
	Nitrogen : Total Oxidised as N		4.00 mg/l				
	Chloride		140 mg/l				
	Fluoride		0.087 mg/l				
Ammoniacal Nitrogen as N		0.014 mg/l					
Carbon, Organic : Total as C :- {TOC}		3.30 mg/l					
pH		8.40 pH Units					

Emission point	Substance/ Parameter	Emission Limit Value	Result ^[1]	Test Method ^[2]	Sample Date and Times ^[3]	Accreditation/ Certification ^[4]	Uncertainty ^[5]
S3 (River Thaw)	Aluminium, Dissolved		150 µg/l		10/12/2019	Sampling Station/Testing EA NLS	
	Antimony, Dissolved		<10 µg/l				
	Arsenic Dissolved		<1 µg/l				
	Boron, Dissolved		<700 µg/l				
	Cadmium, Dissolved		0.03 µg/l				
	Calcium, Dissolved		99 mg/l				
	Chromium, Dissolved		<0.5 µg/l				
	Copper, Dissolved		1.900 µg/l				
	Magnesium, Dissolved		17.0 mg/l				
	Manganese, Dissolved		28.0 µg/l				
	Molybdenum, Dissolved		38 µg/l				
	Nickel, Dissolved		0.95 µg/l				
	Selenium Dissolved		<1 µg/l				
	Vanadium, Dissolved		<20 µg/l				
	Mercury, Dissolved		<0.01 µg/l				
	Alkalinity to pH 4.5 as CaCO3		249 mg/l				
	Conductivity at 20C		860 uS/cm				
	Potassium, Dissolved		5.50 mg/l				
	Sodium, Dissolved		75.0 mg/l				
	Sulphate, Dissolved as SO4		47.0 mg/l				
	Nitrogen : Total Oxidised as N		3.90 mg/l				
	Chloride		<300 mg/l				
	Fluoride		0.086 mg/l				
Ammoniacal Nitrogen as N		0.016 mg/l					
Carbon, Organic : Total as C :- {TOC}		2.80 mg/l					
pH			8.20 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		94 µg/l		10/09/2019	Sampling Station/Testing EA NLS	
	Antimony, Dissolved		<10 µg/l				
	Arsenic Dissolved		2.90 µg/l				
	Boron, Dissolved		4100 µg/l				
	Cadmium, Dissolved		0.067 µg/l				
	Calcium, Dissolved		290 mg/l				
	Chromium, Dissolved		<0.5 µg/l				
	Copper, Dissolved		0.420 µg/l				
	Magnesium, Dissolved		520.0 mg/l				
	Manganese, Dissolved		46.0 µg/l				
	Molybdenum, Dissolved		530 µg/l				
	Nickel, Dissolved		0.52 µg/l				
	Selenium Dissolved		<1 µg/l				
	Vanadium, Dissolved		<20 µg/l				
	Mercury, Dissolved		<0.01 µg/l				
	Alkalinity to pH 4.5 as CaCO3		126 mg/l				
	Conductivity at 20C		25000 uS/cm				
	Potassium, Dissolved		190 mg/l				
	Sodium, Dissolved		4500 mg/l				
	Sulphate, Dissolved as SO4		1400 mg/l				
	Nitrogen : Total Oxidised as N		<0.20 mg/l				
	Chloride		8700 mg/l				
	Fluoride		0.540 mg/l				
Ammoniacal Nitrogen as N		<0.010 mg/l					
Carbon, Organic : Total as C :- {TOC}		4.00 mg/l					
pH		8.40 pH Units					

Emission point	Substance/ Parameter	Emission Limit Value	Result ^[1]	Test Method ^[2]	Sample Date and Times ^[3]	Accreditation/ Certification ^[4]	Uncertainty ^[5]
Brackish Lagoon	Aluminium, Dissolved		84 µg/l		10/12/2019	Sampling Station/Testing EA NLS	
	Antimony, Dissolved		<10 µg/l				
	Arsenic Dissolved		2.40 µg/l				
	Boron, Dissolved		1600 µg/l				
	Cadmium, Dissolved		<0.03 µg/l				
	Calcium, Dissolved		160 mg/l				
	Chromium, Dissolved		<0.5 µg/l				
	Copper, Dissolved		0.640 µg/l				
	Magnesium, Dissolved		81 mg/l				
	Manganese, Dissolved		89.0 µg/l				
	Molybdenum, Dissolved		220 µg/l				
	Nickel, Dissolved		0.47 µg/l				
	Selenium Dissolved		2 µg/l				
	Vanadium, Dissolved		<20 µg/l				
	Mercury, Dissolved		<0.01 µg/l				
	Alkalinity to pH 4.5 as CaCO ₃		260 mg/l				
	Conductivity at 20C		4100 uS/cm				
	Potassium, Dissolved		35 mg/l				
	Sodium, Dissolved		650 mg/l				
	Sulphate, Dissolved as SO ₄		290 mg/l				
	Nitrogen : Total Oxidised as N		2.80 mg/l				
Chloride		1100 mg/l					
Fluoride		0.16 mg/l					
Ammoniacal Nitrogen as N		0.06 mg/l					
Carbon, Organic : Total as C :- {TOC}		3.00 mg/l					
pH		8.20 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.

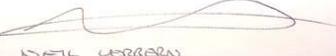
[2] Where an internationally recognised standard test method is used the reference number is given. Where another method that has been formally agreed with the Agency is used, then the appropriate identifier is given. In other cases the principal technique is stated, e.g. colorimetry.

[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 14/02/2020

(authorised to sign as representative of the Operator)

Emission point	Substance/ Parameter	Emission Limit Value	Result ^[1]	Test Method ^[2]	Sample Date and Times ^[3]	Accreditation/ Certification ^[4]	Uncertainty ^[5]
----------------	-------------------------	-------------------------	-----------------------	-------------------------------	---	--	-------------------------------