

Permit number: EPR/DP3333TA

Operator:

RWE Generation UK plc

Installation: Pembroke Power Station

Form number:

Water 1 (10/11/11)

Quarterly reporting of sampling and analysis of emissions to water (other than sewer) for the period Q1 2020

Emission Point	Pollutant/measure	Emission Limit Value	Reference Period	Result ¹		Test Method ²	Sample Date and Time ₃	Uncertainty ⁴
				Month	Value			
W1	Flow	40 m ³ /sec	Maximum	Month 1	40 m ³ /s	Flow Meter	CW system operational 95% of time. Meters available 99.8% of period.	+/- 8%
				Month 2	40 m ³ /s			
				Month 3	39 m ³ /s			
	Temperature	30.4°C	Absolute maximum	Month 1	18.0°C	Standard Thermocouple	CW system operational 95% of time. Instruments available 100% of period.	+/- 0.3°C
				Month 2	18.9°C			
				Month 3	17.8°C			
		7.6°C above intake temperature	Daily average ⁵	Month 1	7.3°C	Standard Thermocouple	CW system operational 95% of time. Instruments available 100% of period.	+/- 0.3°C
				Month 2	7.2°C			
				Month 3	7.1°C			
	Total residual oxidant (as chlorine)	50µg/l	Daily average ⁶	Month 1	No dosing	DPD Colormetric	CW system operational 95% of time. No dosing throughout period.	+/- 20µg/l
Month 2				No dosing				
Month 3				No dosing				
W1 (continued)	pH	6-9 (inclusive)	-	Month 1	7.7 to 8.1	BS60682.50:1995	CW system operational 95% of time. Instruments available 99.8% of period.	+/- 0.01
				Month 2	7.4 to 8.0			
				Month 3	7.4 to 8.1			
W1 (a)	Flow	7.48 l/s	Annual average ⁷	No Reporting Required		Flow Meter	Annual Average	+/- 8%
	Ammonia	0.297 mg/l		No Reporting Required		BS 6068:2.11	Annual Average	+/- 20%
	Nitrate	12.1 mg/l		No Reporting Required		BS EN ISO 13395:1996	Annual Average	+/- 20%
	Calcium	59.0 mg/l		No Reporting Required		BS EN ISO 11885	Annual Average	+/- 20%
	Phosphate	0.460 mg/l		No Reporting Required			Annual Average	+/- 20%

Emission Point	Pollutant/measure	Emission Limit Value	Reference Period	Result ¹	Test Method ²	Sample Date and Time ₃	Uncertainty ⁴	
	Iron	2.17 mg/l		No Reporting Required		Annual Average	+/- 20%	
	Aluminium	13000 µg/l		No Reporting Required		Annual Average	+/- 20%	
	Antimony	6.65 µg/l		No Reporting Required		Annual Average	+/- 20%	
	Chromium	4.47 µg/l		No Reporting Required		Annual Average	+/- 20%	
	Copper	22.1 µg/l		No Reporting Required		Annual Average	+/- 20%	
	Lead	45.9 µg/l		No Reporting Required		Annual Average	+/- 20%	
	Manganese	151 µg/l		No Reporting Required		Annual Average	+/- 20%	
	Nickel	11.9 µg/l		No Reporting Required		Annual Average	+/- 20%	
	Selenium	6.84 µg/l		No Reporting Required		Annual Average	+/- 30%	
	Zinc	67.0 µg/l		No Reporting Required		Annual Average	+/- 20%	
	Arsenic	4.37 µg/l		No Reporting Required		Annual Average	+/- 20%	
	Cadmium	0.700 µg/l		No Reporting Required			BS EN ISO 11969	Annual Average
	Chloride	121 mg/l		No Reporting Required		BS EN ISO 15682:2001	Annual Average	+/- 20%
	Mercury	0.370 µg/l		No Reporting Required		BS EN ISO 17852:2008	Annual Average	+/- 24%
W1 (b)	Flow	16.8 l/s	Annual average ⁷	No Reporting Required	Flow Meter	Annual Average	+/- 8%	
	Ammonia	0.776 mg/l		No Reporting Required	BS 6068:2.11	Annual Average	+/- 20%	
	Aluminium	10.0 µg/l		No Reporting Required	BS EN ISO 11885	Annual Average	+/- 20%	
	Mercury	0.0100 µg/l		No Reporting Required	BS EN ISO 17852:2008	Annual Average	+/- 24%	
	Nickel	1.00 µg/l		No Reporting Required	BS EN ISO 11885	Annual Average	+/- 20%	
	Iron	5.50 mg/l		No Reporting Required	BS EN ISO 11885	Annual Average	+/- 20%	
	Silicate	3.00 mg/l		No Reporting Required		Annual Average	+/- 20%	
	Sodium & potassium	3.00 mg/l		No Reporting Required		Annual Average	+/- 20%	
W1 (c)	Flow	23m ³ /day	Quarterly Average	8m ³ /day	Pump run time and design data methodology as agreed with NRW.	Quarterly Average	+/- 8%	
	Ammoniacal nitrogen	20mg/l	Quarterly Average ⁹	5mg/l	BS6068:2.1	Quarterly Average	+/- 20%	

Emission Point	Pollutant/measure	Emission Limit Value	Reference Period	Result ¹		Test Method ²	Sample Date and Time ₃	Uncertainty ⁴
	Biochemical oxygen demand	20mg/l	Quarterly Average ⁹	3mg/l		BS EN 1899-1	Quarterly Average	+/- 20%
	Suspended solids	30mg/l	Quarterly Average ⁹	9mg/l		BS EN 872	Quarterly Average	+/- 20%
W2	Oil & Grease	No visible oil	Daily ⁸	Month 1	Absent	Visual Inspection	Daily	Not Applicable
				Month 2	Absent		Daily	
				Month 3	Absent		Daily	

1 Where monthly reporting is specified, the result reported should be the highest value obtained in each calendar month of the quarter against the relevant reference period. Where the emission limit value is expressed as a range, the result reported should be the 'minimum – maximum' measured values.

2 Where an internationally recognised standard test method is used the reference number must be provided. Where another method that has been formally agreed with NRW is used, then the appropriate identifier should be given. In other cases the principal technique should be stated, e.g. gas chromatography.

3 For non-continuous measurements the date and time of the sample that produced the result should be given. For continuous measurements the percentage of the process operating time covered by the result should be given.

4 The uncertainty associated with the quoted result at the 95% confidence interval, unless otherwise stated.

5 The highest daily average should be reported for each month.

6 Based on the mean of all valid samples obtained each day (taken at regular intervals), with a minimum of 20 valid samples to be taken each day). The highest daily average should be reported for each week.

7 Annual average is an annual calendar reporting requirement to be reported only in December returns.

8 The result should be reported as 'Present' or 'Absent' for each month of the quarter.

9 No sample for March due to Covid 19 restrictions – previously communicated to NRW.

Signed on behalf of RWE Generation UK plc, by:



Date of return: 14/04/20