

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 Q3 2023

Emission Point	Pollutant/ measure	Emission Limit Value	Reference Period	Result ¹		Test Method ²	Sample Date and Time ₃	Uncertainty ⁴
W1	Flow	40 m³/sec	Maximum	Month 1	36 m³/sec	Flow Meter	CW system operational 98% of time. Meters available 97% of period.	+/- 8%
				Month 2	40 m³/sec			
				Month 3	35 m³/sec			
	Temperature	30.4°C	Absolute maximum	Month 1	28°C	Standard Thermocouple	CW system operational 98% of time. Instruments available 100% of period.	+/- 0.3°C
				Month 2	28°C			
				Month 3	28°C			
		7.6°C above intake temperature	Daily average ⁵	Month 1	7.2°C	Standard Thermocouple	CW system operational 98% of time. Instruments available 100% of period.	+/- 0.3°C
				Month 2	7.4°C			
				Month 3	7.0°C			
	Total residual oxidant (as chlorine)	50µg/l	Daily average ⁶	Month 1	3.0	DPD Colormetric	CW system operational 98% of time. Instruments available 95.4% of period	+/- 20µg/l
				Month 2	4.5			
				Month 3	1.8			
W1 (continued)	pH	6-9 (inclusive)	-	Month 1	8.1 to 7.0	BS60682.50:1995	CW system operational 98% of time. Instruments available 99.9% of period.	+/- 0.01
				Month 2	8.2 to 7.1			
				Month 3	8.1 to 7.1			
W1 (a)	Flow	7.48 l/s	Annual average ⁷	No Reporting Required		No Reporting Required	No Reporting Required	No Reporting Required
	Ammonia	0.297 mg/l		No Reporting Required		No Reporting Required	No Reporting Required	No Reporting Required
	Nitrate	12.1 mg/l		No Reporting Required		No Reporting Required	No Reporting Required	No Reporting Required
	Calcium	59.0 mg/l		No Reporting Required		No Reporting Required	No Reporting Required	No Reporting Required
	Phosphate	0.460 mg/l		No Reporting Required		No Reporting Required	No Reporting Required	No Reporting Required

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	No Reporting Required	No Reporting Required	No Reporting Required
	Aluminium	13000 µg/l		No Reporting Required	No Reporting Required	No Reporting Required	No Reporting Required
	Antimony	6.65 µg/l		No Reporting Required	No Reporting Required	No Reporting Required	No Reporting Required
	Chromium	4.47 µg/l		No Reporting Required	No Reporting Required	No Reporting Required	No Reporting Required
	Copper	22.1 µg/l		No Reporting Required	No Reporting Required	No Reporting Required	No Reporting Required
	Lead	45.9 µg/l		No Reporting Required	No Reporting Required	No Reporting Required	No Reporting Required
	Manganese	151 µg/l		No Reporting Required	No Reporting Required	No Reporting Required	No Reporting Required
	Nickel	11.9 µg/l		No Reporting Required	No Reporting Required	No Reporting Required	No Reporting Required
	Selenium	6.84 µg/l		No Reporting Required	No Reporting Required	No Reporting Required	No Reporting Required
	Zinc	67.0 µg/l		No Reporting Required	No Reporting Required	No Reporting Required	No Reporting Required
	Arsenic	4.37 µg/l		No Reporting Required	No Reporting Required	No Reporting Required	No Reporting Required
	Cadmium	0.700 µg/l		No Reporting Required	No Reporting Required	No Reporting Required	No Reporting Required
	Chloride	121 mg/l		No Reporting Required	No Reporting Required	No Reporting Required	No Reporting Required
	Mercury	0.370 µg/l		No Reporting Required	No Reporting Required	No Reporting Required	No Reporting Required
W1 (b)	Flow	16.8 l/s	Annual average ⁷	No Reporting Required	No Reporting Required	No Reporting Required	No Reporting Required
	Ammonia	0.776 mg/l		No Reporting Required	No Reporting Required	No Reporting Required	No Reporting Required
	Aluminium	10.0 µg/l		No Reporting Required	No Reporting Required	No Reporting Required	No Reporting Required
	Mercury	0.0100 µg/l		No Reporting Required	No Reporting Required	No Reporting Required	No Reporting Required
	Nickel	1.00 µg/		No Reporting Required	No Reporting Required	No Reporting Required	No Reporting Required
	Iron	5.50 mg/l		No Reporting Required	No Reporting Required	No Reporting Required	No Reporting Required
	Silicate	3.00 mg/l		No Reporting Required	No Reporting Required	No Reporting Required	No Reporting Required
	Sodium & potassium	3.00 mg/l		No Reporting Required	No Reporting Required	No Reporting Required	No Reporting Required
W1 (c)	Flow	23m ³ /day	Quarterly Average	4m ³ /day	Pump run time and design data methodology as agreed with NRW.	Quarterly Average	+/- 8%
	Ammoniacal nitrogen	20mg/l	Quarterly Average	0.7 mg/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	5.7 mg/l		BS EN 1899-1	Quarterly Average	+/- 20%
	Suspended solids	30mg/l	Quarterly Average	12.7 mg/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.

Signed on behalf of RWE Generation UK plc, by: *D. McDermott*

Date of return: 16/10/2023