

## **Bridgend Waste Facility**

**EPR Ref: PP3430UL**

### **Report for 2019**

#### **Introduction**

Condition 4.2.2 and 4.2.3 of the above permit requires the following:

4.2.2 *For the following activities referenced in schedule 1, table S1.1 (A1 to A8 inclusive). A report or reports on the performance of the activities over the previous year shall be submitted to the Environment Agency by 31 January (or other date agreed in writing by the Environment Agency) each year. The reports shall include as a minimum:*

- (a) *a review of the results of the monitoring and assessment carried out in accordance with the permit including an interpretive review of that data;*
- (b) *the annual production /treatment data set out in schedule 5 table S5.2; and*
- (c) *the performance parameters set out in schedule 5 table S5.3 using the forms specified in table S5.4 of that schedule.*

4.2.3 *Within 28 days of the end of the reporting period the operator shall, unless otherwise agreed in writing by the Environment Agency, submit reports on the monitoring and assessment carried out in accordance with the conditions of this permit, as follows:*

- (a) *In respect of the parameters and emission points specified in schedule 4 table S4.1*
- (b) *For the reporting periods specified in schedule 4 table S4.1 and using the forms specified in schedule 4 table S4.4 : and*
- (c) *Giving the information form such results and assessments as may be required by the forms specified in those tables.*

#### **A. Review of the results of the monitoring and assessment**

##### **Efficacy Tests**

<b>Number of Spore strips tested within Year</b>	<b>Number of Spore Strips that pass within Year</b>	<b>Pass Rate</b>
63	62	98.5%

The parameters from the 2019 validation were entered into the PLC system for the facility. The PLC automatically controls the processing conditions to those defined. Where conditions fall outside of these parameters the plant automatically ceases processing until the required temperatures are achieved again.

As a double check of the operating conditions thermal indicator strips are also introduced into the process as part of the efficacy monitoring process. This data continues to support that the plant is operating at the parameters specified within the validation report and that these parameters continue to be effective in meeting the required sterilisation levels. Copies of these monitoring records are available at the facility.

## Commissioning Report

The re-validation was carried out at the facility in December. The operating parameters were consistent with those identified in previous years. The validation report concluded that:

*“ The Stericycle Hot Oil Auger clinical waste treatment unit at Bridgend has proven to be capable of achieving and surpassing the required level of bacterial inactivation of shredded clinical waste when tested to EPR 5.07 protocols under normal operating conditions.*

*The required level of bacterial inactivation (>4log10) inactivation of B atrophaeus spores equating to STAATT level III inactivation) was met in 100% of tests. >6 log10 inactivation of B atrophaeus spores was demonstrated in 100% of individual tests”*

## Annual air emission environmental

Minor technical change request submitted to EA on the 4th March 2013 to consolidate the monitoring requirements of Table S3.1 and Table S3.4 in-line with Annex 3 of sector guidance EPR 05.07, as both are designed to demonstrate that process effectiveness in minimising potential pf aerosols/body fluid splashes containing pathogenic organisms during the treatment process.

Inspector D Cowie issued “Further to our conversation earlier this morning, I confirm we would be willing to consider your proposed changes to the air emissions monitoring at SRCL Bridgend under a Minor Operational Change. We will not insist you undertake the quarterly point source emission monitoring at Bridgend whilst this is processed....

*I have attached a proforma designed to help capture the information we need to process your change. Once we have this information I can advise how we can adjust the monitoring requirements in your permit. I think condition 3.3 and its sub-conditions does provide us with scope to agree and document your proposed change without having to vary the actual permit conditions and tables”.*

Required documentation submitted and discussed during site visits on the 18/02/13 and 28/08/2013, with confirmation of agreement from Inspector D Cowie to be formalised into CAR report.

CAR reference NRW0034971 on the 11/04/2019 acknowledges the change in monitoring stating “NRW to request for the permit to be varied to reflect the benchmark and monitoring methods specified in EPR5.07.

A summary of the 2019 results are included below. The samples were taken prior to the processing of seeded waste (control/reference samples), during the processing of the seeded waste and over two successive one-hour periods after the seeded waste had been processed.

Monitoring Location	Limit (cfu/m <sup>2</sup> hr)	Pre dose (cfu/m <sup>2</sup> hr)	1 <sup>st</sup> hour post dose (cfu/m <sup>2</sup> hr)	2 <sup>nd</sup> hour post dose (cfu/m <sup>2</sup> hr)	3 <sup>rd</sup> hour post dose (cfu/m <sup>2</sup> hr)
Air – sample points <10m from the treatment plant	1000	All results below <4 *Please note this includes	All results below <4 *Please note this includes	All results below <4 *Please note this includes	All results below <4 *Please note this includes

		<i>the HEPA exhaust duct.</i>	<i>the HEPA exhaust duct.</i>	<i>the HEPA exhaust duct.</i>	<i>the HEPA exhaust duct.</i>
<i>Air – sample points &gt;10m from the treatment plant</i>	<i>300</i>	<i>All results below &lt;4</i>	<i>All results below &lt;4</i>	<i>All results below &lt;4</i>	<i>All results below &lt;4</i>
<i>Surface – sample points &lt;10m from the treatment plant</i>	<i>20000</i>	<i>All results below &lt;175</i>	<i>All results below &lt;115</i>	<i>All results below &lt;211</i>	<i>All results below &lt;169</i>
<i>Surface – sample points &gt;10m from the treatment plant</i>	<i>5000</i>	<i>Heavy rain prevented outside sampling</i>	<i>Heavy rain prevented outside sampling</i>	<i>Heavy rain prevented outside sampling</i>	<i>Heavy rain prevented outside sampling</i>

The Environmental monitoring continued to demonstrate that the Microbial counts were well within the Environmental Agency Benchmarks.

## B. Annual production/treatment data

The performance parameters for the facility were as follows:

S4.2 Annual production/treatment		
Amount of waste treated in the heat disinfection unit	8466	Tonnes

## C. Annual performance parameters

### Energy Usage

Energy Source	Primary Energy (MWh)	CO2 produced
Electricity*	138	0.02
Natural Gas	820	0.097
TOTAL	958	

### Water Usage

	Usage (m3)	Specific Usage (m3/t)
Mains water	2384	0.3

### Discharge to Sewer

Point Emission	Substance / Parameter	Emission Limit Value	Result [1] m3	Test Method [2]	Sample Date and Times [3]	Accreditation/Certification [4]	Uncertainty[5]
S1	Flow	N/A	0.3	m3/per tonne of treated waste	-	calculation	n/a