AVONMOUTH BC (13013) IED PERMIT APPLICATION
EPR/ UP3787EA (102520)
FORM C6 – VARY A BESPOKE WATER DISCHARGE ACTIVITY

Application Form C6 – Additional Responses

Question 3b: What is the maximum volume of effluent you will discharge in a day?
27,472m^3/day

Question 3c: What is the maximum rate of discharge in litres per second?
318litres/second

Question 3d: What is the maximum volume of non-rainfall dependent effluent you will discharge in a day?
25,744 m^3/day

Question 3e: What is the maximum rate of rainfall dependent discharge?
20l/s

Question 3f: For each answer in question 3, show how you worked out the figure on a separate sheet

Q3b – The main elements of the effluent generated are the filtrate from the GBTs and centrifuge dewatering liquors (centrate) and site drainage.

- This effluent volume is taken from 2 x MCERT flow meters post the liquor return sump which will include condensate
- Surface water is estimated from the design flowrate for the pumps installed in the surface water pumping station (20 l/s).

Q3c - (27,472/86,400) x 1000 = 318 litres/second

Question 5a: How far away is the nearest foul sewer from the boundary of the premises?
Not applicable – the installation is located within the curtilage of Avonmouth WRC and the installation wastewater emissions discharge back to Avonmouth WRC via dedicated pumping stations and rising mains.

Question 5b2: Discharges from all other premises including trade effluent.
Not applicable.

Question 6a: Do you treat your effluent?
Wastewaters generated by the sludge treatment process are not subject to pre-treatment. All wastewater emissions are returned to the head of Avonmouth WRC to undergo full biological treatment comprising primary and secondary treatment, in order to achieve the permitted wastewater discharge limits. Please see response to Question 6b for details of the treatment carried out on the effluent.

6b.

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Order of treatment	Code number	Description
First	09	Primary Settlement
Second	31	Activated Sludge Plant

Question 6c: No question

Table 1 in form C6 identifies that Question 6c should be answered – it is noted that this question 6c does not exist on the form C6.

Question 7b: Are any of the specific substances listed in 'Risk assessment for treated sewage or trade effluent discharges to surface water or groundwater' added to or present in the effluent as a result of the activities on the site?

See response to question 7e.

Question 7c: Have any of the specific substances listed in 'Risk assessment for treated sewage or trade effluent discharges to surface water or groundwater' been detected in samples of the effluent or in the sewerage catchment upstream of the discharge?

See response to question 7e.

Question 7d: Are there any other harmful or specific substances in your effluent not mentioned in 'Risk assessment for treated sewage or trade effluent discharges to surface water or groundwater'?

See response to question 7e.

Question 7e: If you have answered 'No' to any of questions 7a to 7d provide details on a separate sheet of how you have established that the effluent is not likely to contain specific substances.

There are no direct emissions to surface water or groundwater from this installation therefore monitoring for all substances listed within the referenced risk assessment at the site has not been undertaken so far. There are emissions to sewer, which are all routed into the onsite WRC flow to full biological treatment (see answer to Q6a). These wastewater emissions are limited to the following:

- Filtrate from the GBTs;
- Dewatering liquors from the centrifuges (centrate);
- Condensate from the CHP engine and biogas lines;
- Surface water drainage

The proposed monitoring for wastewater returns to the WRC inlet will be in line with the following:

Surface water pollution risk assessment for your environmental permit - GOV.UK (www.gov.uk)

Freshwaters_specific_pollutants_and_operational_environmental_quality_standards.ods (live.com)
Freshwaters_priority_hazardous_substances__priority_substances_and_other_pollutants_environmental_quality_standards__1_.ods (live.com)

After we have completed the BAT 3 Inventory monitoring and the H1 risk assessment this will inform the analysis requirements for BAT 6 and 7, along with those determinands already stipulated in BAT 7.

Question 8d: Discharges to groundwater
Not applicable – the installation does not discharge to groundwater.

Question 8e: Discharges to freshwater (non-tidal) rivers from an installation, including discharges via sewer.
Not applicable – the installation discharges to Taunton WRC which discharges to a non tidal river.

Question 8f: Environmental Impact Assessment
The Environmental Risk Assessment (H1) will be carried out in line with our answer to Q7e.

Question 9a: What is the national grid reference of the inlet sampling point? (for example, SJ 12345 67890)
Not applicable to this installation.

Question 9b: What is the national grid reference of the effluent sample point?

Name	Waste type	Flow diagram location	Sampling point NGR
Thickening & Dewatering Liquors & Condensate	Gravity Belt Thickeners liquors (filtrate) (exc. SAS GBT filtrate) Centrifuge liquors (centrate) Gas to Grid condensate and process water	S1	ST 53370 79343
SAS Thickening Liquors	SAS Gravity Belt Thickeners liquors (filtrate)	S2	ST 53316 79590

Question 9d: What is the national grid reference of the flow monitoring point?
The grid reference for the flowmeters from the IPS sump are: Foul water flowmeter- ST53485 79429 and tanks drainage flowmeter- ST53556 79241. The flowmeters receive flow from a common sump despite the differing names.

Commented [JB1]: @Shrirunga Bristowe- please update

Question 9e: Does the flow monitor have an MCERTS certificate?
The flow meters measuring liquors from the IPS sump are MCERTS certified. The certificate number is ME20 1802 (Rev 3). Please note there are 3 MCERTS meters at Avonmouth WRC which are

covered by this certificate. The relevant MCERTS meter for this application is referred to as foul water/tanks drainage.

Question 9f: Do you have a UV disinfection efficacy monitoring point?
No.

Question 9h: You should clearly mark on the plan the locations of any of the above that apply to this effluent
Refer to Avonmouth Additional Submission Information - Sampling Plan

Question 9i: Do you intend to do your own effluent monitoring?
Yes.

Question 10a: Where will the effluent discharge to?
The discharge is to a tidal river, via Avonmouth WRC (Appendix 4)

Question 10b: Is this effluent discharged through more than one outlet?
No

Question 10c: Conditional from answer to Question 10b?
Not applicable

Appendix 4 – Discharges to tidal river, tidal stream, estuary or coastal waters
There are no direct emissions to water from the sludge treatment activities. The wastewater streams are returned to the co-located Avonmouth Water Recycling Centre for full biological treatment before being discharged indirectly to the River Severn (tidal). The information included in this appendix therefore relates to the Environmental Permit (102107) for Avonmouth WRC.

4.1 – Discharge Point Name
Avonmouth WRC discharge point

4.2 National Grid Reference of Discharge Point
ST51922 80709

4.3 Name of the Tidal River
River Severn

4.4 The discharge is into
Tidal River

4.5 Does the discharge reach the watercourse by flowing through a surface water sewer?
No

4.6 Is the discharge point above the mean low water spring tide mark?
No

4.7 How is the effluent dispersed?
Tidal flap

4.9 Is the discharge made to a roadside drain or ditch?
No