

OP025 - DISCHARGE MONITORING PROCEDURE

1.0 Purpose

Following the publication of the revised Best Available Techniques (BAT) Reference Documents BREF (EU 2018) for Waste Treatment and the subsequent variation of Permit XP3833UB, we have implemented this Discharge Monitoring Procedure in order to evidence compliance with BAT 7 – Monitor Emissions to Water and IPC 17 of our permit.

“BAT is to monitor emissions to water with at least the frequency given within table for the relevant treatment type (Treatment of water-based liquid waste), and in accordance with EN standards. If EN standards are not available, BAT is to use ISO, national or other international standards that ensure the provision of data of an equivalent scientific quality, taking into account the table footnotes.

Information resulting from this improvement condition will be used to assess the relevance of the BAT AELs and monitoring requirements as set in Schedule 3 and 4 of this permit.”

Table S3.2 Point source emissions to sewer, effluent treatment plant or other transfers off-site– emission limits and monitoring requirements						
Emission point ref. & location	Source	Parameter	Limit (incl. Unit)	Reference period	Monitoring frequency	Monitoring standard or method
S1 on site plan in schedule 7 (emission to public foul sewer)	Site effluent treatment plant	Flow	None set	Daily average per calendar month	Continuous	Flow meter
		Adsorbable organically bound halogens (AOX)	1 mg/l	None set	Once every day	EN ISO 9562
		Benzene, toluene, ethylbenzene, xylene (BTEX)	None set		Once every month	EN ISO 15680
		Free cyanide (CN ⁻)	0.1 mg/l		Once every day	Various EN standards available (i.e. EN ISO 14403-1 and -2)
		Hydrocarbon oil index (HOI)	10 mg/l			EN ISO 9377-2
		Arsenic (As)	0.1 mg/l			Various EN standards available (e.g. EN ISO 11885, EN ISO 17294-2, EN ISO 15586)
		Cadmium (Cd)	0.1 mg/l			
		Chromium (Cr)	0.3 mg/l			
		Copper (Cu)	0.5 mg/l			
		Nickel (Ni)	1 mg/l			
		Lead (Pb)	0.3 mg/l			Various EN standards available (i.e. EN ISO 10304-3, EN ISO 23913)
		Zinc (Zn)	2 mg/l			
		Manganese (Mn)	None set			
		Hexavalent chromium (Cr(VI))	0.1 mg/l			
		Mercury (Hg)	10 µg/l			
		PFOA	None set		Once every six months	No EN standard available
		PFOS	None set			

This procedure details the method by which emissions to water are monitored and the actions we will take if levels of elements are found to breach our discharge consent.

N.B. Free Cyanide, Chromium, Chromium VI and Mercury were found not to be relevant and so we will not be required to monitor these parameters.

Most of the remaining relevant substances identified in the inventory were found to be present at very low levels, some near the limit of detection and below the BAT AEL. Note 1 to the table for BAT 7 states that monitoring frequencies may be reduced if the emission levels are proven to be sufficiently stable.

NRW have therefore decided to reduce the monitoring frequencies to monthly for:

- AOX (adsorbable organically bound halogens),
- BTEX (benzene, toluene, ethylbenzene, xylene),
- HOI (hydrocarbon oil index),

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- Arsenic,
- Cadmium,
- Copper,
- Zinc,
- Nickel,
- Lead,
- Manganese

PFOA and PFOS must be monitored every six months.

These monitoring requirements will apply from 1st January 2024 and may be reviewed in 2025.

[Please refer to **CAR_NRW0042709** for full details of this decision].

2.0 **Responsibility**

The Directors are responsible for ensuring the procedure is implemented.

The Site Manager is responsible for internal sampling and testing once per week, to ensure that the elements of discharge remain within the parameters of the DCWW site discharge consent.

DCWW conduct independent external testing twice per month and report back their findings. These findings will be used to monitor the following parameters: Copper, Zinc, Nickel and Lead.

The Site Manager is responsible for providing a sample for external testing once per month, in order to monitor the levels of AOX, BTEX, HOI, Arsenic, Manganese and Cadmium.

The HR & Compliance Manager is responsible for monitoring and reporting discharge-to-sewer readings each quarter, along with the results of external testing.

3.0 **Internal Testing Procedure**

A sample is obtained from Sample Point 1 (S1) [This can be found on the site plan in Schedule 7 of the permit].

The sample is labelled with the date and time taken.

The sample is tested within the site lab for all elements listed within the Welsh Water-issued discharge consent.

4.0 **External Testing Procedure**

On a monthly basis, a sample is obtained from Sample Point 1 (S1) [This can be found on the site plan in Schedule 7 of the permit].

The sample is labelled with the date and time taken.

The sample is sent to an ISO 17025/ MCERTS accredited laboratory for testing of AOX, BTEX, HOI, Arsenic, Manganese and Cadmium. On a 6-monthly basis, the samples are also tested for PFOA and PFOS.

5.0 **Reporting**

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For any internal testing, the results are recorded internally and closely monitored in order to maximise plant performance.

For external testing, the results are recorded internally and at each quarter, the highest recorded result of that quarter is reported to NRW, with the exception of PFOA and PFOS, which is reported every six months.

On an annual basis, we are required to report our performance parameters as specified within Schedule 4(b) of our permit. Forms detailed as follows:

Table S4.3 Reporting forms		
Media/parameter	Reporting format	Date of form
Sewer	Form sewer 1 or other form as agreed in writing by Natural Resources Wales	17/08/2022
Water usage	Form water usage 1 or other form as agreed in writing by Natural Resources Wales	11/03/2021
Energy usage	Form energy 1 or other form as agreed in writing by Natural Resources Wales	11/03/2021
Other performance indicators	Form performance 1 or other form as agreed in writing by Natural Resources Wales	11/03/2021
Waste Subject to Conditions 4.2.5	Waste tonnage return form from the Natural Resources Wales website or other form as agreed in writing by Natural Resources Wales	N/A

6.0 Emission Limit Values (ELV) - Above Specification

Any exceedances of the relevant emission limit values (ELV) specified in Schedule 3 & 4 of the permit (and clarified in **CAR_NRW0042709**) **must** be reported to NRW as soon as we become aware of them. We must do this using the Schedule 5 Notification form. This applies for all testing, whether internal, external or via DCWW.

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