

SCHEDULE 5 Notification

Part B

Permit Number:	BL7108IM
Name of Operator:	Tata Steel UK Ltd
Location of Facility:	Port Talbot Works
Part A details	S5N/22/35A

Any more accurate information on the matters notified under Part A	A period of high cyanide (CN) was observed at the Long Sea Outfall (LSO), causing the following breaches (measured value enclosed below): • CY Week 17 (24/04/22 – 30/04/22): 0.16 mg/l • CY Week 18 (01/05/22 – 07/05/22): 0.22 mg/l • CY Week 19 (08/05/22 – 14/05/22): 0.12 mg/l • CY Week 20 (15/05/22 – 21/05/22): 0.15 mg/l Investigations identified Sump No.1 as the main contributor of the CN. Over the time period, the blast furnaces suffered a period of instability as a result of furnace recovery. High top temperatures were observed on the furnaces, which pushes CN through to the gas wash system and infiltrates the effluent system via the DORR ponds. CN is formed low down in the furnaces but breaks down again as the gas ascends through the furnace. However, if all furnace isotherms are elevated (including higher top temperatures) CN formation will continue higher up in the furnace, and therefore is more likely to increase the amount of CN leaving the top of the furnace. Moreover, if the furnace process is unstable there are gas surges from low down in the furnace, which may be more likely to carry higher CN concentrations with them. Additionally, failures at the Morfa Coke Ovens Biological Effluent Treatment Plant caused increased CN output. Moving from Aerator 1 to Aerator 2 in August 2020 caused CNS, CN and phenol removal rates to decline. In July 2022 Aerator 1 was brought back online, and the removal rates of CN have increased back up to ~90% (please see figure 2 below).
Measures taken, or intended to be taken, to prevent a recurrence of the incident	• Process has since stabilised and CN formation from the furnaces has reduced. This is seen from both daily Sump 1 sampling (please see figure 1 above), and weekly DORR pond sampling for CN. • CN concentration and process stability monitoring to be continued to ensure that issues are identified quickly. • Continue to use Aerator 1 at the Coke Ovens Biological Effluent Treatment Plant as a more efficient remover of CN and other analytes. • Aerators 1 and 2 are to be run in parallel to identify operational issues with Aerator 2. This will allow the business to bring Aerator 2 up to standard, allowing for redundancy should Aerator 1 need to be taken off for maintenance etc.
Measures to be taken, or intended to be	• Chemical treatment to sump no.1 to prevent cyanide from

taken, to rectify, limit or prevent any pollution of the environment or harm which has been or may be caused by the emission	reaching no.2 sump/the LSO.	
The dates of any Part A notifications in the previous 24 months	Please see attached notification tracker	

Name*	Ellie Harrison
Post	Environmental Engineer
Signature	
Date	02/09/2022
Reference	S5N/22/35B

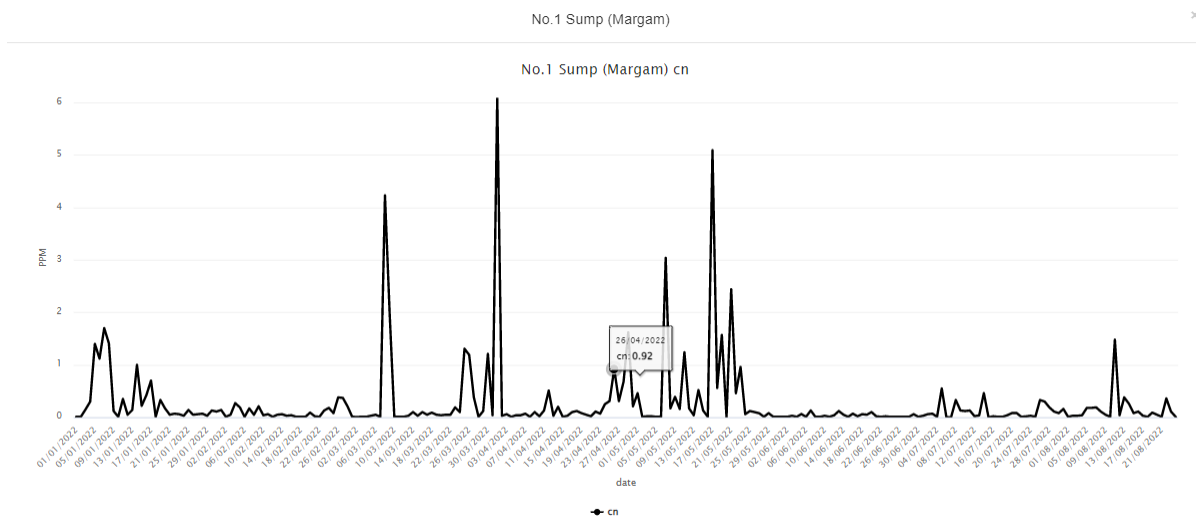


Figure 1: CN Concentrations in Sump 1.

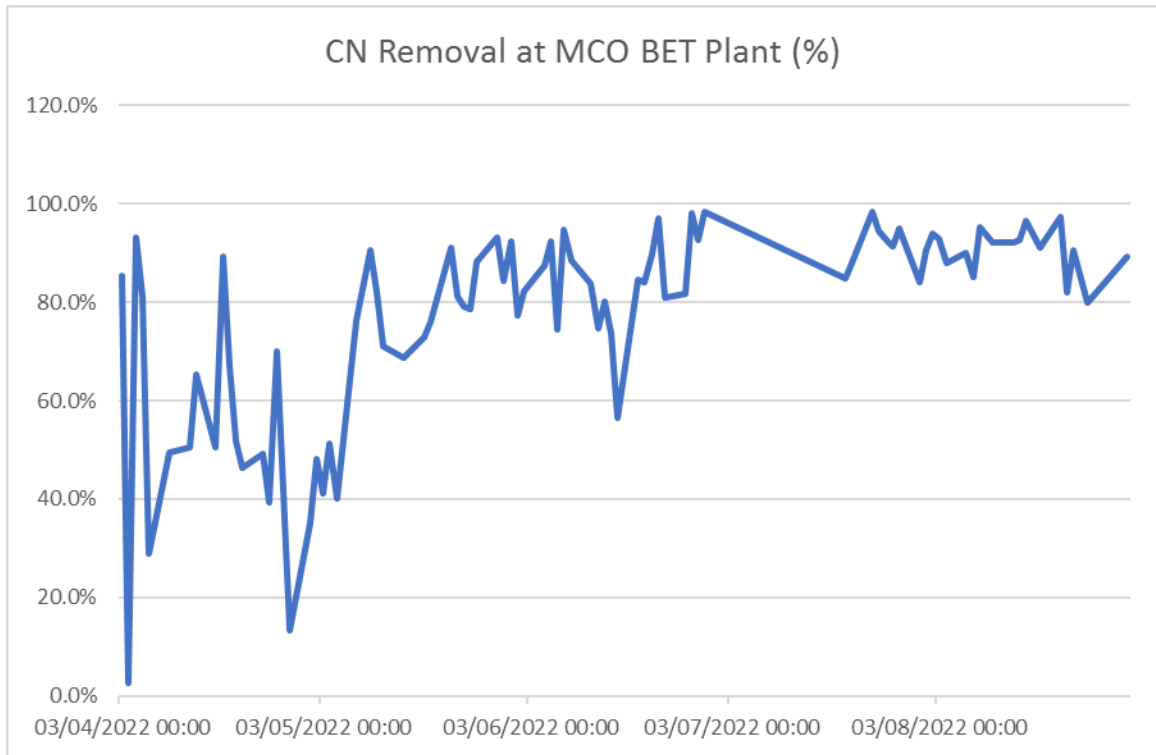


Figure 2: CN removal at MCO BET Plant.