

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/22/23A; S5N/22/27A
Date Part A submitted	14/03/2022 (23A); 29/03/2022 (27A)

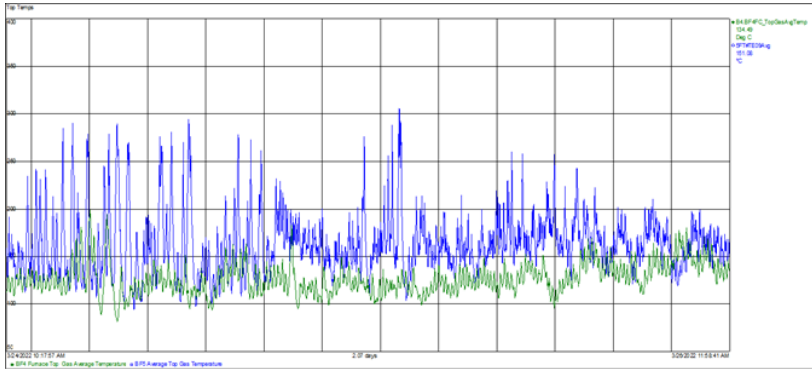
Any more accurate information on the matters notified under Part A

- This Part B notification applies to Part A notifications S5N_22_23A and S5N_22_27A.
- 06/03/2022 – 12/03/2022 the weekly average for cyanide at the Long Sea Outfall (LSO) was 0.18 mg/l (measured value). The results enclosed below show that the breach was a result of 2 x elevated days across the week.

06/03/2022	0.01
07/03/2022	0.05
08/03/2022	0.645
09/03/2022	0.505
10/03/2022	0.03
11/03/2022	0.009
12/03/2022	0.01

- On the 8th March, there were high top temperatures at the furnaces as a result of a switch to all coke production. This corresponds with high CN readings in Sump 1 across the 8th and 9th March.
- CN is formed low down in the furnaces but breaks down again as the gas ascends through the furnace. However, if all the 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. Furthermore, 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. An increase in top temperatures is usually caused by charging delays, so losing stockline levels or an unstable process where the burden descent is not regular, which results in gas surges throughout the furnace. The cyanide then enters the gas wash system and infiltrates the effluent system via the DORR ponds. A sample was taken of both DORR ponds on a day when top temp levels were relatively low, and found that the cyanide levels were still relatively high (7.46ppm on Blast Furnace 4, and 7.52ppm on Blast Furnace 5).
- 20/03/2022 – 26/03/2022 the weekly average for cyanide at the LSO was 0.15 mg/l (measured value). The results enclosed below show that the breach was a result of 2 x elevated days across the week.

20/03/2022	0.05
21/03/2022	0.03
22/03/2022	0.009
23/03/2022	0.09
24/03/2022	0.09
25/03/2022	0.503

	26/03/2022	0.28	The process was unstable on the 24th March nightshift leading to an all coke burden. There were higher top temps on the 24th March with some burden slips, which may explain why the results were high on the 25th March. The top temperatures are enclosed below in Figure 1.  Figure 1: Top Temperatures on the Blast Furnaces 24th - 26th March.
Measures taken, or intended to be taken, to prevent a recurrence of the incident			- Arrange for additional water samples on DORR ponds and slag pools to be taken when top temperatures are high to identify whether there is a correlation between high CN levels and high top temps in the furnaces. - Blast Furnace team are to hold problem solving session to understand what operations feed into Sump 1 and root causes. - Blast Furnace team are to hold problem solving session to understand process stability issues.
Measures to be taken, or intended to be taken, to rectify, limit or prevent any pollution of the environment or harm which has been or may be caused by the emission			Investigations ongoing into whether any treatment chemicals could be dosed to Sump 1 or the DORR ponds to neutralise CN.
The dates of any Part A notifications in the previous 24 months	Please see attached Excel sheet.		

Name*	Ellie Harrison
Post	Environmental Engineer
Signature	
Date	12/05/2022
Reference	S5N 22 23B