N5SCHEDULE 5 Notification	
Part B	
Permit Number:	BL7108IM
Name of Operator:	Tata Steel UK Ltd
Location of Facility:	Port Talbot Works
Part A details	S5N/22/32A; S5N/22/39A
Date Part A submitted	20/04/2022 (32A); 09/05/2022 (39A);

Any more accurate information on the matters notified under Part A	• This Part B applies to Part A notifications S5N/22/32A and S5N/22/39A. • 10/04/2022 – 16/04/2022 the weekly average for phenols at the LSO was 1.05 mg/l (emission value). • 01/05/2022 – 07/05/2022 the weekly average for phenols at the LSO was 0.73 mg/l (emission value). • Morfa's no.6 sump is tested daily for phenols. The concentration of these pollutants in no.6 sump is dictated by the performance of both the Biological Effluent Treatment (BET) Plant and the Ammonia Stripping Plant. • In August 2020 aerator 1 was taken out of service and switched over to Aerator 2 for work to be carried out on Aerator 1. On switching over to aerator 2, the performance of the bacteria removal decreased so that the outlet concentration was similar to the initial inlet concentration. • Phenol concentrations in effluent are reduced by bacteria in the aerator as the bacteria consume these pollutants as a food source. These bacteria are sensitive to the aerator environment: dissolved oxygen, temperature, pH, composition etc. therefore their performance can be inhibited if certain conditions aren't met, leading to higher concentrations downstream. Measurements taken from aerator 2 suggest that the dissolved oxygen levels are too low to support healthy bacteria in the aerator, and as a consequence solids concentrations in the aerator (a proxy for biomass) have dropped below the recommended 10,000 – 20,000 ppm level. Aerator 1 is thought to perform better in terms of providing oxygen to the effluent due to the paddle operation and effluent levels in the basin. Table 1 below displays the dissolved oxygen concentrations in Aerator 2 since the start of the year.

	Dissolved oxygen readings, mg/L — Sample 1 (Weir) — Sample 2 (Paddle) 05/01/2022 — 2.9 — 3.1 02/03/2022 — 1.9 — 1.9 09/03/2022 — 1.7 — 1.8 05/05/2022 — 8.2 — 8.4 10/05/2022 — 2.4 — 2.7 • 12/05/2022 — 1.2 — 1.5
Measures taken, or intended to be taken, to prevent a recurrence of the incident	• A3 tracker in place to track improvements needed to the MCO BET Plant and weekly governance meetings held to discuss progress against this. • Aerator 1 to be brought back online and run in parallel with Aerator 2 for several weeks, until conditions in Aerator 1 are stable and to allow the bacteria to acclimatise to the aerator. Inlet effluent pipework has now been fixed; the sludge return pipework to Aerator 1 now needs to be fixed to allow it to be brought back to operation. • Aerator 1 has been fully scanned; once operations are swapped back to Aerator 1 Aerator 2 will be drained and scanned, to understand why it performs differently to Aerator 1 and draw up learning from events. • Creation of standard settings and standard operating procedure for aerators
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	• Please see above.
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	16/05/2022
Reference	S5N/22/32B