

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/23/59B
Date Part A submitted	09/10/2023 (59A)

Any more accurate information on the matters notified under Part A

- This Part B, SN5_23_59B applies and is a follow-up to Part A notification S5N/23/59A, for an Iron (Fe) breach at the our permit point W1 Long Sea Outfall (LSO) for Calendar Year week 40 (01/10/2023 – 07/10/2023).
- In week CY week 40 (01/10/2023 – 07/10/2023) the Long Sea Outfall (LSO) iron level was breached with a measured value of 12.85 mg/l for the weekly average, and an emission value of 12.35 mg/l with uncertainty applied. The Iron (Fe) levels at the LSO are captured below in mg/l during the period:

30/09/2023	1.47
01/10/2023	8.97
02/10/2023	37.2
03/10/2023	9.14
04/10/2023	3.56

- Levels were in excess of 5mg/l limit, recorded on the 2nd October 2023 at W1 LSO, with a measured value of 37.2mg/l.
- Investigations found one major source of Fe to the effluent system.
- Sump No. 5 at the BOS plant was elevated in Fe and an extreme result 2nd Oct 2023 at 77.57ppm Total Fe was recorded.
- On the 3rd October sump no.5 was diverted to Nautilus to help drop out the Fe ppm within sump no.5 effluent stream, but the weekly Fe ppm average had already exceeded the average 7 day 5ppm limit even with uncertainty.
- Following an investigation, it was determined either the Gilly's (which pump ground water from BOS area into sump no.5) and the overflow from the DC clarifier systems could have affected sump no.5 Fe ppm level.
- The DC Clarifier Total Suspended Solids (TSS) were investigated during the period and there was an analysis data gap from 30th Sept 2023 to 3rd Oct 2023. However, both before 30th September 2023 the TSS and after 2nd Oct 2023, the TSS were below the 200ppm limit, but the overflow from the DC clarifier systems to sump no.5 as being the source cannot be ruled out.

DC1 System						DC2 System					
Date	Time	Total Hardness (Aim <50)	Calcium Hardness (Aim <30)	pH (Aim 9.5-11)	Conductivity	Suspended Solids (Aim <200)	Total Hardness (Aim <50)	Calcium Hardness (Aim <30)	pH (Aim 9.5-11)	Conductivity	Suspended Solids (Aim <200)
21/09/2023	09:00						109	84	12.40	6920	59
22/09/2023	09:00						90	62	12.01	6050	55
25/09/2023	09:30	918	824	12.42	5050	69	78	69	12.57	7060	53
26/09/2023	09:00	1012	978	12.46	6250	71	149	122	12.52	8430	64
27/09/2023	09:00	833	751	12.54	5910	84	254	222	12.61	7870	85
28/09/2023	08:30	717	560	12.78	6630	67					
29/09/2023	09:00	417	298	12.48	6940	54					
03/10/2023	11:00	348	281	12.34	6660	76	135	105	12.10	6950	87

- Altrad, who operate the sludge removal from the DC clarifier systems for pressing, reported no issues during the period (verbally or in any shift reports).
- The torque on the DC clarifier rakes, which indicate if the DC clarifiers are too full (Torque increases and there then a risk of the suspended solids

	tipping the DC clarifiers affecting sump no.5) were reviewed and gaps were found during the period of week 40.  • Additionally, if the concentrated sludge line from clarifier to holding tank/presses gets blocked, Altrad bubble back argon to release the blockage which raises the TSS in the clarifier (this reduces the rake torque significantly). This process disturbs the settled sludge, which can affect sump no. 5 TSS and Fe ppm. During an Argon bubbling event, Altrad must inform Tata, however, no such event or notification was conducted. After the investigation, all parties determined it would be good to also capture a procedure where BOS plant notify Environment of any Argon Bubbling, and diversion of effluent stream can be conducted to avoid elevated Fe at W1 LSO. • During the event, the BOS gas condensate line downpipe was being flushed by Energy on 23rd/24th Sept 2023. During this process, the water and Fe would have entered the groundwater system and eventually resided at the Gilly's, which on level, transfer to sump no.5. A sample of the contaminated water from the condensate line was analysed and found to be 287ppm total Fe and Energy confirmed the volume would have been less than 10m³, so at this concentration and volume we concluded this would not have caused 77.57ppm total Fe we saw at sump no.5 on the 2nd Oct 2023.	
Measures taken, or intended to be taken, to prevent a recurrence of the incident	• After the investigation, all parties determined it would be good to capture a procedure where BOS plant notify Environment of any Argon Bubbling. Following communication, sump no.5 can be diverted to Nautilus to drop out the TSS and avoid elevated Fe at W1 LSO. • DC water TSS are monitored daily to help understand the risk. • During period of elevated TSS in the DC water and sump no.5 the effluent can and was diverted to Nautilus to help drop out the TSS and reduce the risk of breaches of Fe.	
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*	Neil Rowles
Post	Lead Water & Legionella
Signature	
Date	09/11/2023
Reference	S5N/23/59B