



Schedule 1

Notification of Unauthorised Release

Operator:	Tata Steel UK Ltd		
Authorisation:	BL7108IM	Location:	Port Talbot Works Port Talbot South Wales SA13 2NG
Date Submitted:	10/10/2023		

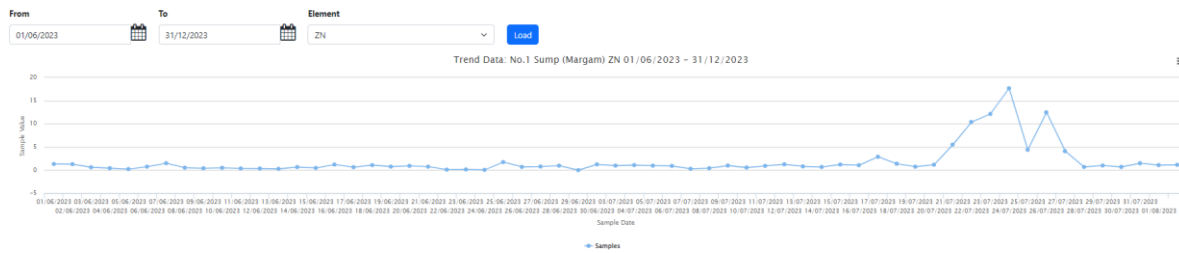
PART B

- **Further details of the release and results of any investigations carried out**

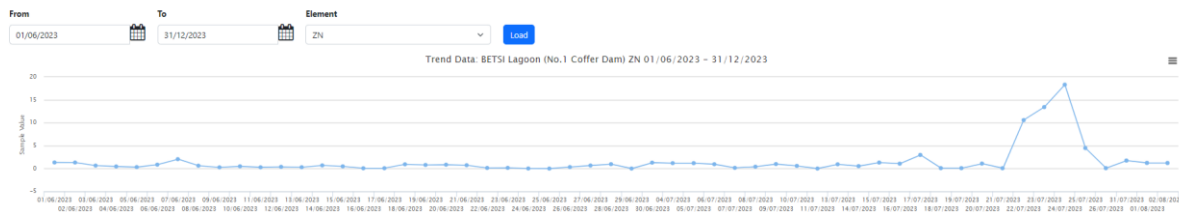
- This Part B, SN5_23_52B is a follow-up to the Part A Notifications, SN5_23_52A, for a breach of permit conditions at Port Talbot W1 consent point.
- The breach was elevated Zinc (Zn) in effluent. Levels were in excess of 2mg/l limit, recorded on the 9th September 2023, with a measured value of 2.56 mg/l. The emission value was 2.36 mg/l after the 0.2 mg/l uncertainty of measurement was subtracted.
- After investigation, the source of the elevated Zn has been identified as an unplanned high heat gain on Blast Furnace 4. Traditionally high heats gains are planned events in order to removes scabs, however this event was not planned.
- As a result of the high heat gain, the scab (concentrated in trace metals such as Zn) fell into the furnace, which initiated waste dust (high in Iron (Fe) and Zn) to be thrust into the Gas Plant.
- The waste dust flows through the gas wash system and is then washed into the Dorr ponds.
- The effluent consisting of suspended solids (i.e. Zn and Fe) settle in the Dorr ponds. The cleaner water weirs over to the cooling tower and then the cooled water goes back to the gas plant and the process repeats.
- The cooling tower constantly overflows to sump 1 (to maintain conductivity and scale/corrosion prevention), so any exceeded analyte in the Gas Plant recirculating water will show in sump 1 and BETSI sump. (Highlighted in the graphs below)
- The sludge in the Dorr ponds gets pumped to BETSI lagoon and the water filters back to the BETSI corner, which on level control, gets pumped to sump no.1. Elevated Zn was seen at BETSI corner during this event.
- The flow at sump no.1 is between 400-500 m³/hr at a time when the flow at LSO is on average 1600 m³/hr, this highlights it is a major contributor to compliance.



Trend Chart - No.1 Sump (Margam) Elements



Trend Chart - BETSI Lagoon (No.1 Coffor Dam) Elements



- Mitigations were put in place on 4th of September, which correlates to the reduction of Zn levels at the LSO (See below table). However, due to initial high level of Zn, the breach could not be avoided.

03/09/2023	0.930
04/09/2023	5.590
05/09/2023	2.380
06/09/2023	2.220
07/09/2023	2.270
08/09/2023	1.820
09/09/2023	2.690

- **Measures taken or intended to be taken to prevent a recurrence of the incident**

Please see below

- **Measures taken, or intended to be taken, to: rectify, limit or prevent any pollution of the environment or harm which has been caused by the emission**

- The Nautilus was utilised during the elevated Zn levels to drop out the Zn. Sump no. 5 was also added to elevate pH levels and aid precipitation of the Zn.
- A procedure has been put in place to avoid future elevated Zn and Fe due to unplanned heat gains. The procedure involves the Blast Furnace Environment department to respond if a heat gain increases by 20 GJ in a 6 hour period. Energy control is to be contacted in this event.



- The dates of any PART A notifications within the previous 24 months

Please see attached excel sheet

Name: Harshika Patel

Position: Energy & Environmental Graduate

Signature:

A handwritten signature in black ink, appearing to be 'Harshika Patel', written over a horizontal line.

[Signed on behalf of Tata Steel UK]