

**This form will report compliance with your permit as determined by an NRW officer**

Site	Port Talbot Steelworks	Permit Ref	BL7108IM
Operator/Permit holder	Tata Steel UK limited		
Regime	Installation		
Date of assessment	14 <sup>th</sup> July 2020		
Assessment type	Inspection		
Parts of the permit assessed	Quarter 1 (Jan to March 2020) Monitoring submission and associated schedule 5 submissions		
Lead officer's name	Neil Herbert (NRW)	Accompanied by	
Recipient's name/position	Claire Grainger – Environment Manager (S.H.E. Dept)	Date issued	14 <sup>th</sup> July 2020

### Section 1 – Compliance Assessment Summary

This is based on the requirements of the permit under the Environmental Permitting Regulations. A detailed explanation is captured in "Compliance Assessment Report Detail" (Section 2) and any actions you may need to take are given in the "Action(s)" (Section 4). This summary details where we believe any non-compliance with the permit has occurred, the relevant condition and how the non-compliance has been categorised using our Compliance Classification Scheme (CCS). CCS Scores can be consolidated or suspended where appropriate, to reflect the impact of some non-compliances more accurately. For more details of our CCS scheme, contact your local office.

Permit conditions and compliance summary	CCS Category	Condition(s) breached
A1 - Specified by permit	N	
B1 - Infrastructure - Engineering for prevention and control of emissions	N	
B2 - Infrastructure - Closure and decommissioning	N	
B3 - Infrastructure - Site drainage engineering (clean and foul)	N	
B4 - Infrastructure - Containment of stored materials	N	
B5 - Infrastructure – Plant and equipment	N	
C1 - General Management - Staff competency/training	N	
C2 - General Management - Management system and operating procedures	N	
C3 - General Management - Materials acceptance	N	
C4 - General Management - Storage, handling labelling, labelling and Segregation	N	
D1 - Incident Management - Site security	N	
D2 - Incident Management - accidents, emergency and incident planning	N	
E1 - Emissions - Air	ccs3 x2	3.1.2 x2
E2 - Emissions - Land and groundwater	N	
E3 - Emissions - Surface water	ccs3 x1	3.1.2 x1
E4 - Emissions - Sewer	N	
E5 - Emissions - Waste	N	
F1 - Amenity - Odour	N	
F2 - Amenity - Noise	N	
F3 - Amenity - Dust/ fibres/ particulates/ litter	N	
F4 - Amenity - Pests/birds/scavengers	N	
F5 - Amenity - Deposits on road	N	
G1 - Monitoring and Records, Maintenance and Reporting - Monitoring of emissions and environment	ccs3 x3	3.5.1 x3
G2 - Monitoring and Records, Maintenance and Reporting - Records of activity, site diary/journal/events	N	
G3 - Monitoring and Records, Maintenance and Reporting - Maintenance records	N	
G4 - Monitoring and Records, Maintenance and Reporting - Reporting and notification to Natural Resources Wales		
H1 - Resource Efficiency - Efficient use of raw materials	N	
H2 - Resource Efficiency - Energy efficiency	N	

**KEY:** See Section 4 for breach categories, suspended scores will be indicated as such.

A = Assessed or assessed in part (no evidence of non-compliance), N = Not Assessed, X= Action only

<b>Number of breaches recorded</b>	6	<b>Total compliance score</b> (see section 5 for scoring scheme)	24 (6 x CCS3)
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If the number of breaches recorded is greater than zero, please see Section 3 for our proposed enforcement response

Review of the Quarter 1 2020 monitoring submissions (received 22<sup>nd</sup> April 2020) and schedule 5 submission covering January to March 2020<sup>1</sup>.

Comments/Observations:

**Sinter Plant**

**A1 (Sinter Plant Main Stack) - CEMS results**

- CEMS Results for PM have been submitted for Q1.
- A number of marginal exceedances<sup>2</sup> are noted over the quarter:

Date	Result	Schedule 5 (TATA ref)
06-01-20	43	S5N/20/11A
07-01-20	43	S5N/20/11A
17-01-20	48	S5N/20/11A
13-02-20	57	S5N/20/14A
12-03-20	55	S5N/20/17A
27-03-20	43	S5N/20/17A
28-03-20	43	S5N/20/17A
29-03-20	51	S5N/20/17A

- Schedule 5 notifications have been submitted for the confirmed PM exceedances and are referenced in the above table. Note: NRW has previously agreed to accept a monthly<sup>3</sup> written Schedule 5 notification from Tata in the event of continued breaches of the particulate daily mean ELV at A1.
- **Mitigation:** Tata Steel has submitted an improvement plan in response to an EPR Regulation 61 (Statutory) Information Notice previously issued by NRW. This plan outlines the steps Tata Steel will take to achieve compliance with the relevant ELV for particulates at emission point A1. NRW meet regularly with the operator to monitor progress with the plan. **Action: Tata to continue working through the agreed Sinter Plant improvement plan.**
- **Compliance: The above PM results are above the emission limits set in the permit for the A1 point and contrary to condition 3.1.2. A compliance classification score (ccs) of 3 has been allocated to this breach (e1). In accordance with ccs guidance, the scores for this breach, over this reporting period (Jan to March), have been consolidated into one score.**
- CEMS Results for SO<sub>2</sub> and NO<sub>x</sub> not reported for Q1 – These CEMS have not been commissioned. NRW have been informed that the monitoring and heated lines have been installed, however the commissioning and calibration work has not been completed due to the impact of the Covid 19 pandemic. **Action: Tata are attempting to commission these as soon as possible.**  
Note: Results for spot extractive samples have also been reported for SO<sub>2</sub>, NO<sub>x</sub> and PM. The results of the extractive sampling indicate that SO<sub>2</sub> and NO<sub>x</sub> were below the permit limit during the Q1 period.

**A1 (Sinter Plant Main Stack)-Extractive (spot) results**

- PAH & PCCD/F – results not due until end of Q2
- Mercury – results not due until end of Q4

**A2 (Sinter Plant De-duster Stack) -CEMS results**

- Monthly Maximum CEMS Results for PM have been submitted for Q1.
- Two marginal exceedances<sup>1</sup> were initially reported but when the monitoring uncertainty is applied the results were below the current emission limit.

**Investigation and Mitigation:**

TATA reported: *On both days [2<sup>nd</sup> and 6<sup>th</sup> February] Process instability (lumps in blend, low ore bunkers) and some breakdowns on plant resulting in several stops and restarts. There was also an issue with No.2 cooler fan during the*

<sup>1</sup> See tables at the end of this CAR report to identify which S5 were considered in this review.

<sup>2</sup> Following the application of the uncertainty value ±30% reported by the operator.

<sup>3</sup> Tata are required to notify NRW within 24hrs of detection breaches greater than twice the permitted emission limit.

period which may have increased the dust loading on the dedust. Dedust water sprays were increased to maximum. Breakdowns were repaired and maintenance carried out. No.2 Cooler fan was brought back into operation towards the end of the 06<sup>th</sup>

- Schedule 5 notifications were submitted in accordance with the permit.

### Morfa Coke Ovens

#### **A54 (Morfa Coke Oven batteries) – Extractive (spot) results**

- Monthly monitoring results for DLCF (doors) and TLCF (tops) emissions have been submitted for Q1. The results are below the limits specified in the permit.
- Charging has been reported to the regulator by (monthly) email<sup>4</sup> and the results are below the limit specified in the permit

#### **A55 (Morfa Main Stack) – CEMS for measurement of visible smoke (Ringelmann)**

- No results submitted for Q1. **Action: Operator to clarify**

Note: there is an acknowledged issue with incomplete permit condition(s) applying to this monitoring requirement. Current permit is missing legacy condition 2.10.4 which confirms its calibration according to the Ringelmann scale. Also, a legacy regulatory position in which we agreed to assess compliance against a weekly mean limit has not carried forwards to the current permit. This will be corrected as part of the forthcoming variation due in 2020. The current reporting form accurately reflects the previously agreed positions in respect of calibration (Ringelmann 1 = CEMS is calibrated to 25% opacity) and weekly mean % opacity reporting. Operator to continue using this form.

#### **A55 (Morfa Main Stack) – Extractive (spot) results**

- SO<sub>2</sub> & NO<sub>x</sub> results not due until Q2.
- PM results not due until end of Q4

#### **A55 (Morfa Main Stack) – Annual mass limit (TableS3.9A)**

- In January 2020 NRW received a schedule 5<sup>5</sup> part B relating to the breach of the **2018** SO<sub>2</sub> limit, at the A55 location. The breach was originally notified (part A) in April 2019.

The investigations (part B) concludes:

*The amount of sulphur dioxide emitted from Morfa Main Stack during 2018 was calculated to be 634 tonnes, against a permit limit of 600 tonnes.*

*This figure was derived during the completion of the annual Pollution Inventory, based on COG and BFG H<sub>2</sub>S content and a total gas input.*

*An analysis of previous years data shows that a higher proportion of COG was used for under firing the Coke Oven batteries than in years where the annual emission was below the permit limit. For example, in 2018 12% of the under-firing fuel was COG, compared to 6% in 2013.*

*Where conditions allow, the preferred fuel for under firing is BFG, however during 2018 there was a period of rolling boiler outages for maintenance and restricted BFG supply during the BF5 reline. This may have further restricted options for beneficial use of COG resulting in a higher proportion of use in under firing the Coke Ovens batteries throughout the year than if all COG end-users were operational, resulting in higher than normal emissions of SO<sub>2</sub> from A55 Morfa Main Stack*

- This breach has already been compliance assessed in a separate compliance report (CAR\_NRW0034619).

#### **A56 (Minister Stein) – Extractive (spot) results**

- No PM results submitted for Q1 due to unavailability of Minister Stein hood.
- Minister Stein % availability and no. of ovens pushed with/without hood reported.

<sup>4</sup> Email dates: 4 Feb 2020; 4 March 2020 & 6 April 2020

<sup>5</sup> S5N/19/18

#### **A57 (Ammonia incinerator) – Extractive (spot) results**

- SO<sub>2</sub> & NO<sub>x</sub> results for Q1 submitted. Whilst results for both parameters were below the permit's emission limit, the SO<sub>2</sub> level was elevated and needs investigating – see comment below.

#### **A57 (Ammonia incinerator) – Annual mass limit (TableS3.9A)**

- In April 2020 NRW were notified (Schedule 5 submission) that the SO<sub>2</sub> annual emission limit (750,000 kg) was exceeded in 2019 (751,913 kg).

**Action: Tata to provide clarification for the cause behind the breach and measures taken (or planned to be taken to address the issue).**

### **Blast Furnaces**

#### **A6 (BF4 – Hot Blast Stove Stacks)-Extractive (spot) results**

- SO<sub>2</sub>, NO<sub>x</sub> & PM were sampled within Q1 and the results have been submitted. The results reported were below the emission limit.

#### **A8A (BF4 – Casthouse fume extraction North)-CEMS results**

- Monthly Maximum CEMS Results for PM have been submitted for Q1. The reported results were below the limits specified in the permit.

#### **A8B (BF4 – Casthouse fume extraction South)-CEMS results**

- Monthly Maximum CEMS Results for PM have been submitted for Q1. A number of exceedances were identified over every month in Q1.
- **Compliance: The above elevated PM results are above the emission limits set in the permit for the A8B point and contrary to condition 3.1.2. A compliance classification score (ccs) of 3 has been allocated to these exceedances (e1). In accordance with ccs guidance, the scores for these breaches (over this reporting period (Jan to March)) have been consolidated into one score.**
- We have been unable to locate any corresponding Schedule 5 notifications. **Action: Tata to clarify why Schedule 5 notifications have not been submitted for PM exceedances at the A8B emission point.**

#### **A65 (BF4 – Ferrous stock house filter plant stack)-Extractive (spot) results (Annual monitoring)**

- Not due until end of Q4

#### **A7 (BF5 – Hot Blast Stove Stacks)-Extractive (spot) results**

- SO<sub>2</sub>, NO<sub>x</sub> & PM were sampled within Q1 and the results have been submitted. The results reported were below the emission limit.

#### **A9 (BF5 – Casthouse fume extraction) - CEMS results**

- Monthly Maximum summaries for the CEMS PM Results have been submitted for Q1. The reported results were below the limits specified in the permit.

#### **A37 (Fluidised bed dryer 1 bag filter plant stack Ferrous stock house filter plant stack) - Extractive (spot) - (Annual monitoring) –**

- Not due until end of Q4

#### **A38 (Fluidised bed dryer 2 bag filter plant stack Ferrous stock house filter plant stack) - Extractive (spot) - (Annual monitoring)**

- Not due until end of Q4

#### **A39 (Number 1 New Mill Stack (GCI)) - Extractive (spot) results (Six Monthly monitoring)**

- Not due until end of Q2.

#### **A4A & A5A (Blast furnace 4 and 5 bleeders)**

- During January and February 2020 there were 5 bleeder releases from the blast furnaces. See pages 9 and 10 for separate assessment.

## Basic Oxygen Steelmaking and casting

### **A10 (Iron desulphurisation/hot metal pouring extraction plant stack – Casthouse fume extraction) - CEMS results**

- Monthly Maximum summaries for the CEMS PM results have been submitted for Q1. The reported results were below the limits specified in the permit.

### **A10A (hot metal fume extraction number 2 – Casthouse fume extraction) - CEMS results**

- Monthly Maximum summaries for the CEMS PM results have been submitted for Q1. The reported results for February and March were below the limits specified in the permit. However, the results for January were elevated (Max. value reported was 97.7mg/m<sup>3</sup>).
- A schedule 5 notification was submitted <sup>6</sup> and the subsequent submissions indicates that:  
  
the monitor on the hot metal fume extraction system (A10A) failed. This failure was due to the internal shutter of the monitor not working correctly. The defective equipment was replaced on the 21<sup>st</sup> January 2020.
- **Compliance: The failure to monitor PM continuously from the A10A monitoring point over this reporting period is contrary to condition 3.5.1. A compliance classification score (ccs) of 3 has been allocated to these exceedances (g1). In accordance with ccs guidance, the scores for these breaches (over this reporting period (Jan to March)) have been consolidated into one score.**

### **A11 (lime plant dust extraction plant) - Extractive (spot) - (Annual monitoring)**

- Not due until end of Q4

### **A14 (Secondary fume extraction north) - CEMS results**

- Monthly Maximum summaries for the CEMS PM results have been submitted for Q1. The reported results were below the limits specified in the permit.
- On the 26<sup>th</sup> and 27<sup>th</sup> of January there was a loss of the CEMS systems used for this emission point. This was due to problems with the power supply to this CEMS unit (and the other two CEMS serving the A15 and A16 emission points).
- Schedule 5 notifications were submitted <sup>7</sup>. Tata have since modified the power supply to ensure a more stable electrical source.
- **Compliance: The failure to monitor PM continuously from the A14, A15 & A16 monitoring points (due to an issue with the power supply), over this reporting period is contrary to condition 3.5.1. A compliance classification score (ccs) of 3 has been allocated to these exceedances (g1).**

### **A15 (Secondary fume extraction center) - CEMS results**

- Monthly Maximum summaries for the CEMS PM results have been submitted for Q1. The reported results were below the limits specified in the permit.

### **A16 (Secondary fume extraction south) - CEMS results**

- Monthly Maximum summaries for the CEMS PM results have been submitted for Q1. The reported results were below the limits specified in the permit.

### **A63 (CAS/OB/ Desulp fume extraction plant) - CEMS results**

- The submission noted that “inconsistent data during period to be investigated”.
- **Compliance: The failure to monitor PM continuously from the A63 monitoring point over this reporting period is contrary to condition 3.5.1. A compliance classification score (ccs) of 3 has been allocated to these exceedances (g1). In accordance with ccs guidance, the scores for these breaches (over this reporting period (Jan to March)) have been consolidated into one score.**
- A schedule 5 notification<sup>8</sup> received on the 6<sup>th</sup> of February indicated that the monitor for this emission point had failed on the 3<sup>rd</sup> of January and it appears that the system remained defective throughout the Q1 monitoring period.  
**Action: Operator to provide explanation (Part B) into the cause and mitigation of these failures.**

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<sup>6</sup> S5N\_20\_03

<sup>7</sup> S5N\_20\_05 & S5N\_20\_06

<sup>8</sup> S5N\_20\_09A

## Hot Mills

### **A34A (Reheat furnace duct north) - Extractive (spot) results**

- SO<sub>2</sub> & NO<sub>x</sub> – Results for Q1 have been submitted. The results reported were below the emission limit.

### **A34A (Reheat furnace duct north) - Extractive (spot) - (annual)**

- Not due until end of Q4

### **A34B (Reheat furnace duct south) - Extractive (spot) results**

- SO<sub>2</sub> & NO<sub>x</sub> – Results for Q1 have been submitted. The results reported were below the emission limit.

### **A34B (Reheat furnace duct south) - Extractive (spot) - (annual)**

- Not due until end of Q4

### **A21 (Pickle Line Scrubber Fume Extraction) - Extractive (spot) results**

- Chlorides as HCL – The Q1 results were submitted. The results were below the limits specified in the permit.

## Energy

### **A50 (Service Boiler 4 & 5 stack) -CEMS results**

- PM, NO<sub>x</sub> & SO<sub>2</sub> (Monthly)- Results for Q1 submitted. These results were below the limits set in the permit.
- PM, NO<sub>x</sub> & SO<sub>2</sub> (Annual) – Not due until end of Q4

### **A51 (Boiler 5 (Margam A)) – Extractive (spot) results**

- SO<sub>2</sub> & NO<sub>x</sub> (spot) – the results of a spot sample in q1 were submitted and appear to be below the emission limit.
- There is a daily limit in the permit for NO<sub>x</sub> & SO<sub>2</sub>, but we have not been able to find the submission. **Action: Operator to clarify?**

### **A51 (Boiler 5 (Margam A)) – CEMS results**

- Monthly Maximum summaries for the CEMS PM hourly averages results have been submitted for Q1. The results indicate compliance with the compliance limit.
- There is a daily limit in the permit, but I have not been able to find the submission. **Action: Operator to clarify?**

### **A52A (Boiler 6 (Margam C)) -CEMS results for Quarters and Annual monitoring**

- PM, NO<sub>x</sub> & SO<sub>2</sub> (Monthly)- Results for Q1 submitted. These results were below the limits set in the permit.
- PM, NO<sub>x</sub> & SO<sub>2</sub> (Annual) – Not due until end of Q4

### **A52B (Boiler 7 (Margam C)) - CEMS results for Quarterly and Annual monitoring**

- PM, NO<sub>x</sub> & SO<sub>2</sub> (Monthly)- Results for January and February Q1 submitted. These results were below the limits set in the permit.
- March results were not submitted due to issues with the CEMS. See separate CAR report (CAR\_NRW0036675) for compliance assessment.
- PM, NO<sub>x</sub> & SO<sub>2</sub> (Annual) – Not due until end of Q4

### **A53 (Mitchell Boiler) – Extractive (spot) results**

- SO<sub>2</sub> & NO<sub>x</sub> (spot) – the results of a spot sample in Q1 were submitted and appear to be below the emission limit.
- There is a daily limit in the permit for NO<sub>x</sub> & SO<sub>2</sub>, but we have not been able to find the submission. **Action: Operator to clarify?**

### **A53 (Mitchell Boiler) – CEMS results**

- Monthly Maximum CEMS Results for PM hourly averages have been submitted for Q1 and appear to be below the emission limit.

### **A62 (Boiler 3) -CEMS results for Daily, Monthly and Annual monitoring**

- SO<sub>2</sub> (Monthly)- Monthly Maximum summaries for the CEMS SO<sub>2</sub> results have been submitted for Q1. From the results that were submitted, the results appear compliant with the monthly limit.
- SO<sub>2</sub> (daily) - summaries for the CEMS SO<sub>2</sub> results have been submitted for Q1.

- NOx (Monthly)- Monthly Maximum summaries for the CEMS NOx results have been submitted for Q1. From the results that were submitted, these appear compliant with the monthly limit.
- NOx (daily) - summaries for the CEMS NOx results have been submitted for Q1. From the results that were submitted, these appear compliant with the daily limit.
- PM (Monthly)- Monthly Maximum summaries for the CEMS PM results have been submitted for Q1. From the results that were submitted, these appear compliant with the daily limit.
- PM (daily) - summaries for the CEMS PM results have been submitted for Q1.
- CO results were not submitted even though the Q1 submission suggests that Natural Gas was used. **Action: Operator to clarify.**
- PM, SO<sub>2</sub> & NOx (Annual) – Not due until Q4 submission.

### **All large combustion plant which are included within the UK Transitional National Plan (TNP)**

- Monthly mass emissions (tonnes) for SO<sub>2</sub>, NOx and PM in Q1 2020 have been submitted using form RTA1 for emission points A50, A51, A52A, A52B and A53 in line with the requirements of the TNP and the relevant conditions included in Tata Steel's permit.

### **Effluent**

#### **W1 (Long Sea Outfall) – CEMS results for Q1**

- CEMS results for flow have been submitted for Q1.
- The submitted results are below the permitted limit.
- The results for lead analysis indicate that the emission limit was exceeded during the following weeks:
  - 1 January to 6 January
  - 19 January to 31 January
- **Compliance: The above effluent results for the lead parameter, are above the emission limits set in the permit for the W1 point and contrary to condition 3.1.2. A compliance classification score (ccs) of 3 has been allocated to these exceedances (e3). In accordance with ccs guidance, the scores for these breaches, (over this reporting period (Jan to March)) have been consolidated into one score.**
- Weekly monitoring appears to be missing for the following periods
  - 25 January to 31<sup>st</sup> January
  - 25 February to 29 February
  - 25 March to 31 March (partial)
- **Action: Operator to submit missing data.**
- No results have been submitted over Q1 for BOD, COD, Sulphides and Chromium. **Action: Operator to submit missing data.**
- It also appears that the following parameters have not been monitored consistently over the Q1 period: PAH, Oil, Phenols. **Action: Operator to submit missing data.**
- Unexplained use of asterisks for suspended solids. oil (total hydrocarbons). Sum of ammonia & Nitrogen etc. and Thiocyanate on some or all of the submissions. **Action: Tata to clarify**

Note for operator: The suspended solids ELV expressed incorrectly on MONTHLY form (should be 150mg/l), this will be corrected as part of the next permit variation.

#### **W1 (Long Sea Outfall) – 2019 annual mass release.**

- In March 2020 NRW were notified (Schedule 5 submission) that the Ammoniacal Nitrogen annual emission limit (400,000 kg) was exceeded in 2019 (441,000 kg). **Action: Tata have implemented improvements to the BET plant that should prevent reoccurrence of this limit failure.**

#### **W3 (Abbey Beach Outfall) – composite results for Q1**

- It is not clear from the submission if weekly monitoring for suspended solids and oil & grease has been carried out in accordance with the permit requirements.

Action: Operator to clarify.

- The results that have been submitted were below the emission limits set in the permit.

#### W4 (Iron Ore Stockyard into Afan Estuary) – composite results for Q1

- The March result for total iron is elevated. Further commentary/investigation is required as this could be contrary to condition 3.2.1. Action: Tata to submit further information into the cause of the elevated level.
- No data for temperature and flow have been submitted. Action: Operator to clarify.

#### W5 (Cooling Water discharge into PT Dock) – CEMS results for Q1

- There is no data for flow rates. The report indicates that *Data unavailable Investigation being carried out.*
- However, no schedule 5 has been submitted. Action: Operator to clarify.
- The submitted results for temperature are below the permitted limits.

#### W5 (Cooling Water discharge into PT Dock) – Composite results for Q1

- The submitted results for TSS are below the permitted limits.
- The results for oil & grease have not been submitted. Action: Operator to clarify.
- Not clear if weekly monitoring for suspended solids has been carried out in accordance with the permit requirements. Action: Operator to clarify.

#### W6 – W8 (Works Area Effluent Sumps) – CEMS and Extractive (spot) results

- No data – not assessed.

#### W1 (Long Sea Outfall) – calculated mass balance results for Q1

- The results submit appear to be compliant for the parameters analysed ( Phenol, Soluble Chromium. Soluble Lead. Soluble iron, Free cyanide and PAH)

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### 2019 Annual Mass Releases

- It would be helpful if Tata could clarify whether the results for all the following have been submitted for the 2019 monitoring period:

Table S3.9A Annual limits		
Substance	Medium	Limit (including unit)
Oxides of nitrogen	Air	A55 – 3000 tonnes
Sulphur dioxide	Air	A55 – 600 tonnes
Particulate matter	Air	A55 – 100 tonnes
Particulate matter	Air	A56 – 25 tonnes
Oxides of nitrogen	Air	A57 – 140 tonnes
Sulphur dioxide	Air	A57 – 750 tonnes
Particulate matter	Air	A58 – 10 tonnes
Suspended solids	Water	2,250,000 kg
Oil and grease	Water	360,000 kg
Free cyanide	Water	2700 kg
Ammoniacal nitrogen	Water	400,000 kg
Phenol	Water	18,000 kg

Action: Tata requested to clarify the results for 2019 annual mass releases as set out in Table S3.9A

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#### Compliance and Enforcement – Q1 returns

For the ccs scored breaches, identified in this report TATA have been issued a warning. A compliance summary is found in section 4. Note: not all potential breaches have been scored.

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## Q1 2020 bleeder releases – assessment

- During Q1 2020 (January to March) there were 5 reported Blast Furnace bleeder release events (1 from BF5 and 4 from BF4). TATA have also submitted the Schedule 5 Part A and B notifications for these events.

NRW general comments and observations:

- For each event the investigation reports conclude that the bleeder valves functioned properly and as designed (which is to provide an emergency means to relieve furnace pressure).
- It also appears that once the bleeder valves had been automatically activated, the control room operatives took immediate steps to reduce furnace pressure (i.e. by opening of the snort valves) and allowing the bleeder valves to close.
- TATA have also identified the (suspected) cause/s behind each of these events. In almost all cases there are a combination of factors which collectively trigger furnace instability and cause the valves to open. Tata have specified a number of actions to reduce the frequency of events in future. Case specific comments:

NRW's event specific comments:

### 22<sup>nd</sup> January 2020 - BF4 (S5N-20-4)

The cause for this (9 second) release has been investigated by the operator and Tata have identified that the initiation event was a deterioration in the stability of the process, which was caused by an unplanned shutdown of the furnace.

Tata have identified the following action:

- Tata will undertake an analysis of the cause/s of the low heat gain events within the blast furnace (currently being undertaken with Blast Furnace Technical and Boston Consultancy Group).  
**Action: Tata to provide update on progress with this project (i.e. Analysis of the cause/s of the low heat gain events within the blast furnace (currently being undertaken with Blast Furnace Technical and Boston Consultancy Group)).**

### 2<sup>nd</sup> February 2020 - BF4 (S5N-20-8)

On the 2<sup>nd</sup> of February there were two bleeder release events at BF 4. The first at 16:46 (lasting 7 seconds) and the second at 17:58 (lasting 9 seconds).

The cause of both releases has been investigated by the operator and Tata have identified that there was likely to be several factors that led to the releases. These include an unplanned shutdown and the loss of oxygen enrichment during the furnace recovery phase (which destabilised the furnace and prolonged the furnace recovery). There is also evidence that some of the raw material for the BF may have been contaminated thus further influencing process stability.

Tata's Blast Furnace Technical team have been tasked to undertake an investigation to identify any measure/s that can be taken in future to reduce this circumstance occurring again. **Action: Tata to provide findings of this investigation to NRW.**

### 6<sup>th</sup> February 2020 – BF5 (S5N-20-10)

On the 6<sup>th</sup> of February there was a bleeder release at BF 5, lasting 16 seconds.

The cause of the event has been investigated by the operator and Tata have identified the following as contributory cause/s: The furnace was in recovery (following a planned maintenance stop, albeit the stop had to be unexpectedly extended). Tata report that this furnace recovery was more challenging (due to the unplanned extension to the stop). A furnace check was initiated during the recovery phase by the BF operatives, however this led to a blow through of gas resulting in the bleeder event.

Tata's Blast Furnace Technical team have been tasked to review the company's procedure for recoveries from extended planned maintenance stops. **Action: Tata to provide copy of the updated procedure to NRW.**

### 8<sup>th</sup> February 2020 – BF4 (S5N-20-12)

On the 8<sup>th</sup> of February there was a bleeder release at BF 4, lasting 11 seconds.

The cause of the event has been investigated by the operator and Tata have identified problems with casting from the furnace affected burden descent. A subsequent burden check resulted in the gas surge causing the bleeder event.

Tata's Blast Furnace Engineering team have been investigating the cause behind the floor movements in the casthouse (that led to the casting problems). **Action: Tata to provide findings of this investigation to NRW.**

**Conclusions (Q1 bleeder events):**

Blast furnace bleeder valves are a necessary emergency feature present in all blast furnaces. It is understood that all steelworks operators wish to avoid and minimise bleeder events, not only from an environmental and nuisance perspective, but also as it negatively affects process stability which reduces molten metal yield and profitability. The reports (Part B) submitted by Tata indicate that the bleeder valves did function correctly and as designed.

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**Summary of Schedule 5 notifications submitted during this quarter and considered as part of this CAR report**

Tata Ref:	Description	Part A date	Part B date
S5N_20_01	A2 - Sinter Dedust Stack PM exceedance	07/01/2020	12/05/2020
S5N_20_03	Hot metal Fume extraction (A10A) Monitoring Failure	20/01/2020	31/01/2020
S5N_20_05	Connection failure for Secondary fume extraction stack North, Centre and South. (A14, A15, A16)	27/01/2020	19/03/2020
S5N_20_06	Connection failure for Secondary fume extraction stack North, Centre and South. (A14, A15, A16)	28/01/2020	19/03/2020
S5N_20_09	Monitor Failure for CAS-OB/ Desulph fume extraction plant (A63)	06/02/2020	Not submitted yet
S5N_20_11	A1 Sinter Main PM	07/02/2020	06/04/2020
S5N_20_13	A1 Sinter Main PM	17/02/2020	06/04/2020
S5N_20_14	A1 Sinter Main PM	04/03/2020	06/04/2020
S5N_20_16	W1 Long Sea Outfall – 2019 Annual Limit	26/03/2020	26/03/2020
S5N_20_08	Bleeder opening on two separate occasions.	03/02/2020	19/04/2020
S5N_20_10	Blast Furnace A5A Bleeder Opening	07/02/2020	19/04/2020
S5N_20_12	Blast Furnace A5A Bleeder Opening	10/02/2020	19/04/2020
S5N_20_04	Blast Furnace A4A Bleeder Opening	23/01/2020	19/04/2020

**Schedule 5 notifications submitted during this quarter but to be considered in separate assessments.**

Tata Ref:	Description	Part A date	Part B date	Assessed
S5N_20_02	BOS gas release	15/01/2020		To be examined separately <sup>9</sup>
S5N_20_07	PCDD/F A1 Sinter Main stack	31/01/2020	28/04/2020	CAR_NRW0036667 15 <sup>th</sup> June 2020
S5N_20_15	UREA Abatement Failure A1 Sinter Main	06/03/2020		

End of section 2

<sup>9</sup> At a later date.

**This form will report compliance with your permit as determined by an NRW officer**

Site	Port Talbot Steelworks	Permit Ref	BL7108IM
Operator/Permit holder	Tata Steel UK limited	Date	14 <sup>th</sup> July 2020

**Section 3 – Enforcement Response**

**Only one box should be ticked**

You must take immediate action to rectify any non-compliance and prevent repetition. Non-compliance with your permit conditions constitutes an offence and can result in criminal prosecutions and/or suspension or revocation of a permit. Please read the detailed assessment in Section 2 and the steps you need to take in Section 4 below.

Other than the provision of advice and guidance, at present we do not intend to take further enforcement action in respect of the non-compliance identified above. This does not preclude us from taking enforcement action if further relevant information comes to light or advice isn't followed.	
In respect of the above non-compliance you have been issued with a warning. At present we do not intend to take further enforcement action. This does not preclude us from taking additional enforcement action if further relevant information comes to light or offences continue.	x
We will now consider what enforcement action is appropriate and notify you, referencing this form.	

**Section 4 – Action(s)**

This section summarises the actions identified during the assessment along with the timescales for when they will need to be completed.

Criteria Ref.	CCS Category	Action required/ advised	Due Date
See Section 1 above			
e1	CCS3 (3.1.2)	<b>36730.1.A1 Sinter Plant</b> <ul style="list-style-type: none"> <li>Tata to implement measures set out in the agreed Sinter Plant improvement plan</li> </ul>	Ongoing
e1	CCS3 (3.1.2)	<b>36730.2.A8B (BF4 – Casthouse fume extraction South)-CEMS results</b> <ul style="list-style-type: none"> <li>Tata to provide explanation for apparent emission limit exceedances and measures taken to mitigate the failure</li> <li>Tata to also clarify the reasons for the apparent failure to submit Schedule 5 notification.</li> </ul>	5 <sup>th</sup> August 2020 (unless otherwise agreed with NRW)
g1	CCS3 (3.5.1)	<b>36730.3.(hot metal fume extraction No.2 Casthouse fume extraction)</b> <ul style="list-style-type: none"> <li>Replace defective CEMS</li> </ul>	Completed
g1	CCS3 (3.5.1)	<b>36730.4.A14, A15 &amp; A16 (Secondary fume extraction)</b> <ul style="list-style-type: none"> <li>Tata have modified the power supply to ensure a more stable electrical source to the CEMS system.</li> </ul>	Completed
g1	CCS3 (3.5.1)	<b>36730.5.(CAS/OB/ Desulp fume extraction plant) - CEMS results</b> <ul style="list-style-type: none"> <li>Tata to provide report into the cause and mitigation of these failures, including the delay in reporting.</li> </ul>	5 <sup>th</sup> August 2020 (unless otherwise agreed with NRW)
e3	CCS3 (3.1.2)	<b>36730.6. W1 (Long Sea Outfall) – composite results for Q1</b> <ul style="list-style-type: none"> <li>TATA to provide findings into investigations for the, apparent lead limit exceedances noted in the Q1 submission.</li> </ul>	5 <sup>th</sup> August 2020 (unless otherwise agreed with NRW)
		<b>36730.7.A1 Sinter Plant</b> <ul style="list-style-type: none"> <li>Complete installation of CEMS (SO<sub>2</sub> and NO<sub>x</sub> monitoring) at A1</li> </ul>	Awaiting confirmation action has been completed.
		<b>36730.8.A55 (Morfa Main Stack)</b> <ul style="list-style-type: none"> <li>Operator to provide Q1 results for measurement of visible smoke (Ringelmann)</li> </ul>	31 <sup>st</sup> August 2020 (unless otherwise agreed with NRW)
		<b>36730.9.A57 (Ammonia incinerator) – Annual mass limit (TableS3.9A)</b> <ul style="list-style-type: none"> <li>Tata to provide clarification for the cause behind the annual mass limit exceedance and measures taken (or planned to be taken to address the issue).</li> </ul>	31 <sup>st</sup> August 2020 (unless otherwise agreed with NRW)

		<b>36730.10.A51 (Boiler 5 (Margam A)) – Extractive (spot) results &amp; CEMS for PM</b> <ul style="list-style-type: none"> <li>There is a daily limit in the permit for PM, NO<sub>x</sub> &amp; SO<sub>2</sub>, but appear not have been submitted in Q1. Tata to clarify.</li> </ul>	31st August 2020 (unless otherwise agreed with NRW)																																																								
		<b>36730.11. A53 – Extractive (spot) results</b> <ul style="list-style-type: none"> <li>There is a daily limit in the permit for NO<sub>x</sub> &amp; SO<sub>2</sub> but appear not have been submitted in Q1. Tata to clarify.</li> </ul>	31st August 2020 (unless otherwise agreed with NRW)																																																								
		<b>36730.12. A63</b> <ul style="list-style-type: none"> <li>CO results appear not have been submitted in Q1. Tata to clarify.</li> </ul>	31st August 2020 (unless otherwise agreed with NRW)																																																								
		<b>36730.13. W1 Missing Results</b> <ul style="list-style-type: none"> <li>Tata to submit missing results noted in section 2 of this report.</li> <li>Tata to clarify whether PAH, Oil, Phenols have been sampled in accordance with the permit.</li> <li>Tata to provide commentary on the use of unexplained asterisks in the Q1 reports</li> </ul>	31st August 2020 (unless otherwise agreed with NRW)																																																								
		<b>36730.14. W3</b> <ul style="list-style-type: none"> <li>TATA to clarify whether suspended solids and oil &amp; grease analysis has been carried out in accordance with the permit requirements.</li> </ul>	31st August 2020 (unless otherwise agreed with NRW)																																																								
		<b>36730.15. W4</b> <ul style="list-style-type: none"> <li>Tata to submit further information into the cause of the elevated iron levels in March 2020.</li> <li>Tata to provide data for temperature and flow</li> </ul>	31st August 2020 (unless otherwise agreed with NRW)																																																								
		<b>36730.16. W5</b> <ul style="list-style-type: none"> <li>Tata to provide explanation for missing flow data and if appropriate submit Schedule 5 notice.</li> <li>Tata to submit missing oil &amp; grease results.</li> <li>Tata to clarify whether weekly suspended solids monitoring is being undertaken</li> </ul>	31st August 2020 (unless otherwise agreed with NRW)																																																								
		<b>36730.17. Annual Mass Limits 2019</b> <ul style="list-style-type: none"> <li>NRW request that Tata submit (re-submit) the results for the following mass reassess at the specified monitoring points.</li> </ul>	31st August 2020 (unless otherwise agreed with NRW)																																																								
<table border="1"> <thead> <tr> <th colspan="4">2019 Annual Mass Limits</th> </tr> <tr> <th>Substance</th> <th>Medium</th> <th>Limit (including unit)</th> <th>2019 Results</th> </tr> </thead> <tbody> <tr> <td>Oxides of nitrogen</td> <td>Air</td> <td>A55 – 3000 tonnes</td> <td></td> </tr> <tr> <td>Sulphur dioxide</td> <td>Air</td> <td>A55 – 600 tonnes</td> <td></td> </tr> <tr> <td>Particulate matter</td> <td>Air</td> <td>A55 – 100 tonnes</td> <td></td> </tr> <tr> <td>Particulate matter</td> <td>Air</td> <td>A56 – 25 tonnes</td> <td></td> </tr> <tr> <td>Oxides of nitrogen</td> <td>Air</td> <td>A57 – 140 tonnes</td> <td></td> </tr> <tr> <td>Sulphur dioxide</td> <td>Air</td> <td>A57 – 750 tonnes</td> <td></td> </tr> <tr> <td>Particulate matter</td> <td>Air</td> <td>A58 – 10 tonnes</td> <td></td> </tr> <tr> <td>Suspended solids</td> <td>Water</td> <td>W1 - 2,250,000 kg</td> <td></td> </tr> <tr> <td>Oil and grease</td> <td>Water</td> <td>W1 - 360,000 kg</td> <td></td> </tr> <tr> <td>Free cyanide</td> <td>Water</td> <td>W1 - 2700 kg</td> <td></td> </tr> <tr> <td>Ammoniacal nitrogen</td> <td>Water</td> <td>W1 - 400,000 kg</td> <td></td> </tr> <tr> <td>Phenol</td> <td>Water</td> <td>W1 - 18,000 kg</td> <td></td> </tr> </tbody> </table>				2019 Annual Mass Limits				Substance	Medium	Limit (including unit)	2019 Results	Oxides of nitrogen	Air	A55 – 3000 tonnes		Sulphur dioxide	Air	A55 – 600 tonnes		Particulate matter	Air	A55 – 100 tonnes		Particulate matter	Air	A56 – 25 tonnes		Oxides of nitrogen	Air	A57 – 140 tonnes		Sulphur dioxide	Air	A57 – 750 tonnes		Particulate matter	Air	A58 – 10 tonnes		Suspended solids	Water	W1 - 2,250,000 kg		Oil and grease	Water	W1 - 360,000 kg		Free cyanide	Water	W1 - 2700 kg		Ammoniacal nitrogen	Water	W1 - 400,000 kg		Phenol	Water	W1 - 18,000 kg	
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		<b>36730.18. Bleeder Release 22nd January 2020 - BF4 (S5N-20-4)</b> <ul style="list-style-type: none"> <li>Tata to provide update on progress with project investigating the cause/s of the low heat gain events within the blast furnace (currently being undertaken with Blast Furnace Technical and Boston Consultancy Group)).</li> </ul>	31 <sup>st</sup> August 2020 (unless otherwise agreed with NRW)																																																								

	<p><b>36730.19. 2nd February 2020 - BF4 (S5N-20-8)</b></p> <ul style="list-style-type: none"> <li>• Tata's Blast Furnace Technical team have been tasked to undertake and investigation to identify any measure/s that can be taken in future to reduce the circumstances (that led to this release) from occurring again.</li> <li>• <b>Action: Tata to provide findings of this investigation to NRW.</b></li> </ul>	<p>31st August 2020 (unless otherwise agreed with NRW)</p>
	<p><b>36730.20.6th February 2020 – BF5 (S5N-20-10)</b></p> <ul style="list-style-type: none"> <li>• Tata's Blast Furnace Technical team have been tasked to review the company's procedure for recoveries from extended planned maintenance stops.</li> <li>• <b>Action: Tata to provide copy of the updated procedure to NRW.</b></li> </ul>	<p>31st August 2020 (unless otherwise agreed with NRW)</p>
	<p><b>36730.21.8th February 2020 – BF4 (S5N-20-12)</b></p> <ul style="list-style-type: none"> <li>• Tata's Blast Furnace Engineering team have been investigating the cause behind the floor movements in the casthouse (that led to the casting problems).</li> <li>• <b>Action: Tata to provide findings of this investigation to NRW.</b></li> </ul>	<p>31st August 2020 (unless otherwise agreed with NRW)</p>

## Section 5 – Compliance notes for the Operator

To ensure you correct actual or potential non-compliance we may

- Advise on corrective actions verbally or in writing
- Require you to take specific actions verbally or in writing
- Issue a notice
- Require you to review your procedures or management system
- Change some of the conditions of your permit
- Decide to undertake a full review of your permit

Any breach of a permit condition is an offence and we may take legal action against you

- We will normally provide advice and guidance to assist you to come back into compliance either after an offence is committed or where we consider that an offence is likely to be committed. This is without prejudice to any other enforcement response that we consider may be required.
- Enforcement action can include the issue of a formal caution, prosecution, the service of a notice and/or suspension or revocation of the permit.

**See our Enforcement and Civil Sanctions guidance for further information**

This report does not relieve the site operator of the responsibility to

- Ensure you comply with the conditions of the permit at all times and prevent pollution of the environment
- Ensure you comply with other legislative provisions which may apply

### Non-compliance scores and categories

CCS category	Description	Score
C1	A non-compliance that could have a major environmental effect	60
C2	A non-compliance which could have a significant environmental effect	31
C3	A non-compliance which could have a minor environmental effect	4
C4	A non-compliance which has no potential environmental effect	0.1

**Operational Risk Appraisal (Opra)** - Compliance assessment findings may affect your Opra score and/or your charges. This score influences the resource we use to assess permit compliance.

## Section 6 – General information

### Data protection notice

The information on this form will be processed by the Natural Resources Wales (NRW) to fulfil its regulatory and monitoring functions and to maintain the relevant public register(s). The NRW may also use and/or disclose it in connection with:

- Offering/providing you with its literature/services relating to environmental matters
- Consulting with the public, public bodies and other organisations (e.g. Health and Safety Executive, local authorities) on environmental issues
- Carrying out statistical analysis, research and development on environmental issues
- Providing public register information to enquirers
- Investigating possible breaches of environmental law
- Assessing customer service satisfaction and improving its service
- Freedom of Information Act/Environmental Regulations request

The NRW may pass it on to its agents/representatives to do these things on its behalf. You should ensure that any persons named on this form are informed of the contents of this data protection notice.

### Disclosure of information

The NRW will provide a copy of this report to the public register(s). However, if you consider that any information contained in this reports should not be released to the public register(s) on the grounds of commercial confidentiality, you must write to your local area office within twenty working days of receipt of this form indicating which information it concerns and why it should not be released, giving your reasons in full.

### Customer charter

#### What can I do if I disagree with this compliance assessment report?

If you are unable to resolve the issue with your site officer, you should firstly discuss the matter with officer's line managers using the informal appeals procedure. If you wish to raise your dispute further through our official Complaints and Commendations procedure, phone our general enquiry number 0300 065 3000 (Mon to Fri 08.00 – 18.00) and ask for the Customer Contact team or send an email to enquiries@naturalresourceswales.gov.uk. If you are still dissatisfied you can make a complaint to the Public Services Ombudsman for Wales. For advice on how to complain to the Ombudsman phone their helpline on 0845 607 0987.

#### Welsh Language

If you would like this form in Welsh please contact your Regulatory Officer.