

Compliance Assessment Report CAR_NRW0042786

Permit being assessed: BL7108IM.

For: Port Talbot Steel Works , **held by:** Tata Steel UK Limited

At: Tata Steel Strip Products UK , PORT TALBOT, PORT TALBOT, WEST GLAMORGAN, SA13 2NG.

Type of assessment: Site Inspection,

Reason: Routine.

On: 27/09/2023 between 09:00 and 15:00.

Parts of permit assessed: Site Inspection - Sinter Plant .

NRW Lead Officer: Rhodri Morgan, accompanied by Kirsty Thomas, Benjamin Taylor.

Report sent to: Nathan Ace , Head of Environment TSUK Operations, on 27/11/2023.

1. Summary of our findings (full details in section 4)

Part of permitted activity assessed (compliance criteria)	Assessment result	Permit condition
IR1A - Management - General management	Assessed (A)	
IR2E - Operations - Improvement programme	Assessed (A)	
IR3A - Emissions and monitoring - Emissions to water, air or land	Assessed (A)	
IR1A - Management - General management	Action only (X)	
IR1A - Management - General management	Action only (X)	

Result types are explained in more detail in the 'Important Information' section below.

Total non-compliances recorded	Total non-compliance score
0	0

How we use the non-compliance score to calculate your annual fee is explained in the 'Important Information' section below.

2. What action is required?

Criteria	Action needed	Complete by
IR1A	Action 042786/01 – TSUK to provide updated action plan, reflecting proposed amendments to Workstream 2.	29/02/2024
IR1A	Action 042786/02 – TSUK to provide update on the progress	29/02/2024

Criteria	Action needed	Complete by
	of revert trials and impact on the efficiency of the ESPs.	

Compliance criteria codes are listed in the 'Important information' section below.

3. What will happen next?

Any non-compliance we have identified and recorded on this form is an offence. It can result in criminal prosecution and/or suspension or revocation of your permit.

You are non-compliant with your permit.

We are currently considering taking enforcement action against you for the non-compliance recorded above. We will contact you in due course.

4. Details of our assessment

Tata Steel UK Limited (TSUK) operates the Port Talbot Steelworks in accordance with Permit BL7108IM. The Steelworks has several identifiable processes which are conducted sequentially across the site to convert raw iron ores and coal to semi-finished (slab) and finished steel products.

Three other companies – Tarmac, Harsco and Runtech – are contracted to undertake their own permitted activities at the steelworks on TSUK's behalf.

Background

In July 2018, NRW issued a EPR Regulation 61 (Statutory) Information Notice to TSUK in response to ongoing non-compliant particulate matter (PM) emissions from emission point A1 (Sinter Plant Main Stack). The notice required TSUK to submit an action plan detailing the steps that would be taken to achieve compliance with the 40.00 mg/Nm³ as a daily mean emission limit.

An action plan was submitted by TSUK in August 2018 which focused on improving the performance of the existing Electrostatic Precipitators (ESPs); the primary emissions abatement measure used at the emission Point. The plan included five key work streams, with the aim of reaching full sustainable compliance with the emission limit by September 2021.

The environmental performance of the emission point has improved since the implantation of the action plan in 2018; with the number of recorded breaches steadily decreasing. However, full sustainable compliance has yet to be achieved; resulting in NRW requesting an updated action plan in July 2021 (CAR_NRW0038595).

A site inspection was undertaken in January 2023 to allow for discussion between NRW and TSUK regarding the updated action plan. The visit also provided the opportunity for TSUK to detail the Sinter Plant (waste gas system) maintenance regime for 2023 (CAR_NRW0041341).

Introduction

This site inspection was arranged to review the progress of the revised action plan and the 2023 Sinter Plant maintenance programme. The morning session focused on the revised action plan and included discussions

with members of the Sustainability & Environment Team along with the key workstream leaders.

In the afternoon, an inspection of the Sinter Plant was undertaken; specifically looking at the activities undertaken as part of the 2023 maintenance programme. The visit coincided with a major shut down; providing the regulating officers with an opportunity to observe internal areas of the plant, along with a selection of the ongoing maintenance activities.

Attendees

TSUK

Sustainability & Environment

- Nathan Ace – Head of Environment TSUK Operations
- Nicola Parnell – Environment Lead UK ETS & Air Quality
- Matthew Thomas – Environment Lead Governance
- Freya Ashton – Environmental Higher Apprentice, UK ETS

Process & Engineering

- Jamie Barrett – Environmental Process Specialist
- Muazzam Khan – Environmental Process Engineer
- Christopher Arul Raj – Environmental Process Specialist

Sinter Plant

- David Morgan – Production Manager
- Rachel Lloyd – Maintenance Manager
- Tariq Al-Haji – Section Technical Manager

NRW

- Kirsty Thomas – Lead Specialist – Industry & Waste Regulation
- Rhodri Morgan – Senior Officer – Industry & Waste Regulation
- Ben Taylor – Senior Officer – Industry & Waste Regulation

Sinter Plant (A1) Emission Reduction – Updated Action Plan

TSUK provided NRW officers with an update on the revised action plan, including the progress of each work stream:

1. Raw Material Chloride Monitoring
2. Revert Material Chloride Washing
3. ESP Efficiency Modelling & Improvement
4. Sinter Plant Operational Stability & Improvements
5. Essential Replacement/Capital Improvement Pre-Engineering

Sustained progress has been made in the majority of workstreams; particularly Work Stream 5 where each action has been completed. Workstream 5 focused on the development of maintenance plans for key sections of the plant. The maintenance plans have now been implemented throughout the Sinter Plant and are expected to lead to more stable sinter plant operations.

Additional trials are required on the impact of high chloride reverts within the sinter blend before progress can be made towards the completion of Work Stream 2.

Reverts contain valuable materials as carbon- and iron-bearing materials, which can offer cost savings and process efficiencies throughout the plant. However, they can contain high concentrations of alkali metal and other metal chlorides which causes issues for dust capture and removal, reducing the efficiency of the ESPs, and therefore increasing the emission of particulates.

Controlled trials have been planned where specific revert materials will be isolated from the sinter blend. The trials will be repeated for each revert material used within the Sinter Plant – including Blast Furnace dust. The results of the trials will determine the final design of the revert washing system.

NRW raised concerns over the delay in the installation of the revert washing system. The workstream has previously been identified by TSUK as a key project in delivering full sustainable compliance with the emission limit. The revert trials should now be prioritised to allow for the impact on the efficiency of the ESPs be reviewed.

Action 042786/01 – TSUK to provide updated action plan, reflecting proposed amendments to Workstream 2.

Action 042786/02 – TSUK to provide update on the progress of revert trials and impact on the efficiency of the ESPs.

Maintenance Programme 2023

An overview of the 2023 maintenance programme was provided; with over £9 million invested throughout the Sinter Plant. The planned 19-day major stoppage in June was delayed until September to align with other planned maintenance programmes throughout the Site.

The following projects formed part of the 2023 maintenance programme:

- North Windmain Replacement
- Windbox Component Replacement
- Strand Rail Replacement
- Strand Rail Maintenance
- Cooler Maintenance
- Electrostatic Precipitator Maintenance
- 1066 Pan Conveyor Change 884/886
- Junction House Replacement

The most significant maintenance project undertaken throughout 2023 was the replacement of seven sections of the North Windmain; approximately 64m of pipework. This follows on from the replacement of

the South Windmain which was completed throughout 2022. During the replacement of the North Windmain; sections of the connecting apparatus such as the windboxes were also replaced.

The replacement of the North Windmain presented specific engineering challenges and required substantial preparatory work. A supporting structure was erected, and a section of the Sinter Plant façade removed to facilitate the lifting of the pipework (Figure 1).



Figure 1 - North Windmain Replacement

Maintenance activities have continued within the north and south electrostatic precipitators. These works have been associated with Workstream 3 and aim to improve the efficiency of the ESPs. The following activities were completed throughout the major stoppage in September:

- Internal inspection of fields
- Collector rapping hammers repositioned
- Penthouse vent filters cleaned
- Support insulators and discharge rapping rods checked for damage and cleaned
- Solenoid rapping assemblies checked for damage
- Outlet flare inspections, thickness testing and weld repairs

The proposed maintenance schedule for 2024 was discussed, which includes a period of single fan operations in February 2024. The following maintenance programmes are planned:

- Waste gas fan maintenance
- Precipitator maintenance strategy
- DDV & DCV maintenance
- Waste Gas VSD PLC upgrade

These activities will be the subject of the next visit to the Sinter plant in 2024.

Recent announcements from TSUK surrounding the decarbonisation pathway of Port Talbot Steelworks refer to the potential restructuring of the heavy end assets.

The costs associated with the maintenance of the Sinter Plant are significant, but necessary if the plant is to achieve full sustainable compliance with the emission limit. It is vital that this investment is sustained while the Sinter Plant remains operational.

If you have any queries about this report, or to discuss completion of any actions, please contact the NRW Officer named above.

Important information

Legal status of this report

Your permit is issued to you under the Environmental Permitting Regulations. You have a responsibility to comply with the conditions of your permit and prevent pollution/harm of the environment. You must also ensure that you comply with any other relevant legislation that may apply to your site's operations.

This report explains the findings of our assessment and any action you are required to take. We categorise non-compliance using our guidance for assessing non-compliance at regulated sites.

When we find potential non-compliance/s we will normally give you advice on how to maintain compliance.

To correct non-compliance, we may:

- require you to take specific actions
- issue a notice
- review the conditions of your permit.

Any advice and guidance we give will be without prejudice to any other enforcement response that we consider may be required.

Assessment results and non-compliance categories (used in section 1):

Assessment result	Description
Assessed (A)	Assessed or assessed in part, no evidence of non-compliance found
Action only (X)	Action only relating to the activity assessment
Ongoing (O)	Ongoing non-compliance, not scored

Non-compliance category	Description	Score
C1 Major	Potential to have a major, serious, persistent and/or extensive impact or effect on the environment, people and/or property	60
C2 Significant	Potential to have a significant impact or effect on the environment, people and/or property	31
C3 Minor	Potential to have a minor or minimal impact or effect on the environment, people and/or property	4
C4 No environmental impact	Non-compliance at a regulated site that cannot foreseeably have any impact on the environment, people and/or property	0.1

How we use assessment scores

The number and severity of non-compliances recorded in a year will affect your annual subsistence fee the following year. A non-compliance factor is added to your site's Operator

Performance Risk Appraisal (OPRA) score when we calculate your fee to reflect the additional resource we use to assess permit compliance.

If your assessment result in Section 1 is suspended, what does this mean?

In line with our guidance, we may suspend scores for up to six months to allow time for remedial action to be taken. Suspended scores will be re-instated if the action is not completed.

Full list of Industry compliance criteria (used in section 1 and 2):

1. Management

- IR1A – General management
- IR1B – Finance (only applicable to Landfill)
- IR1C – Energy efficiency
- IR1D - Efficient use of raw materials
- IR1E - Avoidance, recovery and disposal of wastes produced by the activities
- IR1F - Multiple operator installations

2. Operations

- IR2A – Permitted activities
- IR2B – The site
- IR2C – Operating techniques
- IR2D – Technical requirements
- IR2E – Improvement programme
- IR2F – Pre-operational conditions
- IR2G – Landfill engineering (only applicable to Landfill)
- IR2H – Waste acceptance (only applicable to Landfill)
- IR2I – Leachate levels (only applicable to Landfill)
- IR2J – Closure and aftercare (only applicable to Landfill)
- IR2K – Landfill gas management (only applicable to Landfill)

3. Emission and Monitoring

- IR3A – Emissions to water, air or land
- IR3B – Emissions of substances not controlled by emission limits
- IR3C – Odour
- IR3D – Noise and vibration
- IR3E – Monitoring
- IR3F – Pests
- IR3G – Air quality management plans
- IR3H – Monitoring for the purposes of the Industrial Emissions Directive (this heading includes Large Combustion Plants)
- IR3I – Fire

4. Information

- IR4A – Records
- IR4B – Reporting
- IR4C – Notification

Enforcement response

Any non-compliance with a permit condition is an offence and we may take legal action against you. Action we take can include prosecution, serving a notice on you and/or

suspension or revocation of your permit. See our Enforcement and Sanctions Guidance for further information.

Data protection notice

You should make sure that anyone named in this report knows that the information it contains will be processed by Natural Resources Wales to fulfil its regulatory and monitoring functions and to maintain the relevant public register(s).

We may also use and/or disclose the report in connection with:

- offering or providing you with our literature or 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 our service
- Freedom of Information Act or Environmental Information Regulations requests.

We may also pass it on to our agents or representatives to do these things on our behalf.

Disclosure of information – this report will be available to view on-line

If you think this report contains commercially confidential information that should not be placed on our public register, you must contact your local Natural Resources Wales office within **fifteen working days** of receiving this report, using the contact details in the accompanying email or letter. You must give a full explanation of why it should not be added to our public register, including specifying which information is commercially confidential. We will assess your request and respond to you within twenty working days to let you know if we agree to your request.

What do I do if I disagree with the report or have a complaint?

If you disagree with this compliance assessment report, you should contact the lead officer without delay to discuss your concerns.

If you are unable to resolve the issue with the lead officer or their line manager you should contact our Customer Contact team on 0300 065 3000 (Monday to Friday 08:00 to 18:00), or email enquiries@naturalresourceswales.gov.uk for details of how to raise your dispute further through our Complaints and Commendations procedure.

If you are dissatisfied with our response, you can contact the Public Services Ombudsman for Wales by phone on 0300 7900203 or by email at ask@ombudsman.wales

Welsh Language Standards

We are committed to establishing Natural Resources Wales as a naturally bilingual organisation. We will provide compliance reports in your preferred language.