

Compliance Assessment Report

Report ID:
CAR_NRW0026923

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

Site	Port Talbot Steel Works EPR/BL7108IM	Permit Ref	BL7108IM		
Operator/Permit holder	Tata Steel UK Limited				
Regime	Installations				
Date of assessment	10/01/2017	Time in	14:00	Out	16:30
Assessment type	Audit				
Parts of the permit assessed	1 Management; 2 Operations; 3 Emissions and Monitoring				
Lead officer's name	Cowie, Douglas				
Accompanied by	Broom, Mark, Gibson, Paul				
Recipient's name/position	Fiona Abbott/ Environment Manager	Date issued	10/02/2017		

Section 1 – Compliance Assessment Summary

This is based on the requirements of the permit under the Environmental Permitting Regulations or the licence under the Water Resources Act 1991 as amended by the Water Act 2003. 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 - Infrastructure - Specified by permit	A	
B1 - Infrastructure - Engineering for prevention and control of emissions	A	
C2 - Infrastructure - Management system and operating procedures	A	
E1 - Infrastructure - Air	A	
E3 - Infrastructure - Surface water	A	
E5 - Infrastructure - Waste	A	
G1 - Infrastructure - Monitoring of emissions and environment	A	
H1 - Infrastructure - Efficient use of raw materials	A	
H2 - Infrastructure - Energy efficiency	A	

KEY: See Section 5 for breach categories, suspended scores will be indicated as such.

A = Assessed or assessed in part (no evidence of non-compliance), **X** = Action only,

O = Ongoing non-compliance, not scored.

Number of breaches recorded	0	Total compliance score (see section 5 for scoring scheme)	0
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If the Number of breaches recorded is greater than zero, please see Section 3 for our proposed enforcement response

Section 2 – Compliance Assessment Report Detail

This section contains a report of our findings and will usually include information on:

- The part(s) of the permit that were assessed (eg. Maintenance, training, combustion plant, etc)
- Where the type of assessment was 'Data Review' details of the report/results triggering the assessment
- Any non-compliances identified
- Any non-compliances with directly applicable legislation
- Details of any multiple non-compliances
- Information on the compliance score accrued inc.
- Details of advice given
- Any other areas of concern
- Any actions requested
- Any examples of good practice
- A reference to photos taken

Site description

Tata Steel UK Ltd (Tata) operates an integrated iron and steel works at Port Talbot, Neath Port Talbot. The site is permitted as an installation under the Environmental Permitting Regulations (EPR). The steelworks has several identifiable permitted processes which are carried out sequentially across the installation to convert raw iron ores and coal to semi finished (slab) and finished steel products (such as hot rolled, pickled and oiled, cold rolled and annealed). The permit also covers coke making and the reception, stockpiling and blending of raw iron making materials. Three other companies, Cambrian Stone, Harsco Metals and ICL, undertake separately-permitted slag handling, iron plating and cold mill effluent treatment activities at the steelworks on Tata's behalf.

Purpose of visit/assessment

Tata personnel provided a quarterly update on the Capital Expenditure (CAPEX) environmental improvement projects which are ongoing at Port Talbot steelworks. Some of these projects have introduced or are introducing plant improvements and upgrades which are necessary to comply with the Industrial Emissions Directive and the Best Available Techniques (BAT) Conclusions for the Iron and Steel industry sector.

Other matters in relation to an expected permit variation, air quality monitoring, site drainage and waste minimisation and recycling were also discussed during this intervention.

The relevant permit conditions are listed under Sections 1.1, 1.2, 1.3, 1.4, 2.1, 2.3, 3.1, 3.2, 3.5, 3.6 and 3.7 of Tata's permit.

Person(s) present

Tata Steel

Fiona Abbott
Jason Heatman
Claire Grainger
Chris Court (BOS plant)
Jeff Lugg (Sinter plant)

NRW

Paul Gibson
Mark Broom
Doug Cowie

CAPEX update

The CAPEX work required to meet the IED standards is largely coming the end of its implementation phase at the sinter plant and at the BOS plant. Tata has recently made a corporate announcement about future capital expenditure which is discussed in more detail below.

Basic Oxygen Steelmaking (BOS) plant

The detailed engineering work for the Secondary Fume Extraction Plant (FEP) is now complete

and the AAF (contractor) equipment has been installed at the BOS plant. Efficiency testing has found some ducting alignment issues on the new travelling hood at the hot metal pouring (HMP) bays, which is restricting use of the hood to one HMP bay only. The drives and motors for Fan 5 and Fan 6 have also been installed. The bag filter fitted to Fan 3A is currently offline for maintenance, pulse cleaning and solenoid replacement.

Once back online Fan 3A should augment the existing fume extraction plant capability with an associated further reduction in BOS plant fugitive releases. Performance testing will be repeated to compare fan and bag filter performance before and after the CAPEX improvements. In time Fan 3A may be replaced as it nears the end of its lifespan; the Steel & Slab works area co-ordinate the Planned Preventative Maintenance (PPM) programme for this asset and they will lead on any fan replacement project.

The next CAPEX meeting planned for April 2017 will be a good opportunity to physically inspect the completed BOS plant improvements.

Sinter plant

The last part of the sinter plant improvement work is planned for the next major stop in spring 2017. The main areas of focus are the two large electrostatic precipitators (ESPs) which filter gases from the main sinter plant waste gas system. Two large bore fans draw air through the sinter strand and propel waste sinter gases along two huge wind main pipes to the ESPs.

Each ESP has a number of electrical fields which attract particulates suspended in the waste sinter gases. The attracted particulates stick to electrodes within the ESP power fields which are periodically 'rapped' to dislodge the material and cause it to fall into hoppers feeding the chain conveyors below each ESP. Rapping is most effective when the power is turned off as this removes the electrical attraction and causes more solids to fall into the hoppers. This is known as 'power-off rapping'.

The ESP fields can be split to maximise the effectiveness and efficiency of the rapping process. Tata believe it will take around 2 weeks to split the fields on each ESP for power-off rapping. The current plan is to have a one week complete stop sandwiched between a total of three weeks of one-fan operation (reduced sintering). This level of interruption will need over 100kT of sinter stock to be prepared in advance to cover the period of maintenance and installation work and to keep the blast furnaces running as 'normal'. Tata's plan can be summarised as follows:

ESP	Start	End
1	20/03/17	10/04/17
2	24/04/17	08/05/17

It is not yet clear which ESP will be worked on first but Tata will update NRW as March 2017 approaches. The North ESP currently has 6 full fields and the South ESP has 8. Tata will introduce half field control and install a standard hardware solution for all fields across both ESPs. After installation there will be a period of optimisation, calibration and testing which may take weeks if not months before each ESP is in stable and continuous operation.

The sinter plant ESP and wind main refurbishment work is all designed to ensure that lignite-lime injection can be used to reduce complex releases of organic micro-pollutants from the sinter plant main stack. There are a number of criteria that need to be met before lignite-lime can be injected into the waste gas stream. These include the particulate loading of the ESPs (<50 mg/m³), the oxygen content of the waste gases (<17% O₂), the volatile content of the sinter blend (<3%) and the maximum temperature of the waste gases (180°C).

All of the above identified criteria will change the current operational envelope of the sinter plant. They will also affect how the sinter plant is maintained as air ingress into the wind main will be key to meeting the <17% oxygen content. Tata has a plan to replace sections of the wind main over the next few years. Wear-resistant steel has been used but some areas of the wind main are

more prone to abrasion and corrosion than others. The areas of worst wear are typically subject to high suction, high waste gas particulate levels and increased moisture. Going forward Tata has a plan to replace around 10% of wind main components every year. Areas of high wear will be prioritised using an inspection-based testing and maintenance regime.

Oxygen ingress into the conveyors is being addressed and a specific maintenance contract for conveyor systems is being introduced. There will also be a rolling program of changing out the double-dome valves underneath the ESPs during planned maintenance stops to ensure that the valves remain airtight and operational.

Tata's approach at the sinter plant is welcomed and changes the maintenance strategy from a 'make do and mend' to a planned preventative maintenance (PPM) and replacement approach.

The existing lignite-lime system was installed a few years ago and has been mothballed while the work on the sinter plant ESPs and wind main has been carried out. Tata are carrying out a series of pre-commissioning studies and reviews to prepare this 'old' system for use. The lignite-lime system has statutory management status on Tata's SAP system which elevates its importance in the context of the wider steelworks plant inventory. SAP tasks for statutory management items cannot easily be delayed and are subject to hard deadlines.

As mentioned above, a post-commissioning plan of plant optimisation is being developed. Once the work on the sinter plant has been completed there will need to be a period of optimisation which will lead to setting a defined envelope for the sinter plant operation as a whole. It is likely that after optimisation there will be a further change to the defined operational envelope of the sinter plant. Tata Group Environment will support steelworks personnel with this work. NRW is happy to offer comments on any draft post-commissioning plan or proposal for the sinter plant.

The next CAPEX meeting planned for April 2017 may provide an opportunity to physically inspect the completed sinter plant improvements. NRW can be flexible regarding the timing of this visit (or visits) to allow as many improvements as possible to be viewed.

Future CAPEX

Recently Tata Steel announced a consultation within its UK operating companies of a change to the pension arrangements in return for a commitment to a two-furnace operation at Port Talbot and a £1billion investment program across its UK sites. NRW is aware of media speculation over whether this proposal will be accepted.

If the proposal and associated investment plan were to be accepted, NRW would want to discuss the investment strategy for Tata's sites in Wales in more detail.

On-site air quality monitoring

Due to air quality concerns in and around Port Talbot, Tata previously invested in a number of on-site air quality monitors to help investigate and build a better understanding of this problem. Previously the environmental regulator – then Environment Agency Wales – audited Tata's systems and data acquisition and concluded that these on-site monitors do not meet the standards for regulatory purposes. However Tata's monitors do provide useful information to help investigate the wider air quality issue in Port Talbot.

Because Tata's on-site air quality monitors are not a regulatory requirement, any changes to the extent of the company's on-site network e.g. due to monitor faults or extended calibration intervals do not detract from the use of the resulting data for trend analysis and exceedance day investigation work.

Tata's on-site monitors are approaching the end of their useful life. The company is investigating alternative solutions including devices that have the capacity to monitor ambient levels of other pollutants such as Sulphur Dioxide (SO₂), Carbon Monoxide (CO) as well as particulates. This would be useful to help investigate the apparent relationship between high PM₁₀ and other

pollutants that does happen from time to time.

Permit variation V016

Tata needs to submit its variation application for the 'HAA' waste treatment area and the IED derogation extension requests. The sinter plant secondary de-dust ELVs are currently set at the IED BAT levels. Tata needs to review its sinter de-dust performance against these tighter levels from the BAT Conclusions implementation date of October 2016, as there may have been daily mean results above the new ELV that need to be reported to the regulator.

Site drainage issues

Tata has highlighted an issue involving a recently excavated emergency/storm sewer overflow that crosses the steelworks. Following the excavation work, which was carried out by a contractor on behalf of Dwr Cymru Welsh Water (DCWW), a silty discharge onto the beach south of the deep water harbour was identified and notified to NRW (S5N/16/89A). Discussions between NRW, Tata and DCWW have been ongoing to resolve this issue.

The current situation is as follows:

- Overflow pipe at the bottom of the marsh/reed bed is now blocked and the discharge has stopped. Tata staff have been regularly checking the water level in the ditch but it appears to be remaining steady. No overpumping or other contingencies have been necessary so far.
- Discussions between Tata and DCWW management & legal representatives are due to take place soon with the aim of agreeing a long-term solution and corporate responsibilities in respect of the storm/emergency overflow.

DCWW – Tata discussions will continue until agreement is reached in respect of the overflow and its upkeep. It remains inoperable for the time being however.

A second issue has been brought to NRW's attention in respect of possible zinc inputs to the mains sewer that crosses the steelworks through Abbey Sewage Pumping Station (SPS) to Afan Waste Water Treatment Works (WWTW). Tata has started to investigate this zinc issue near Blast Furnace No 4. Tata are looking for any evidence of a pipe misconnection, collapse, leak or overflow between the DCWW sewer and Tata's effluent systems in this area. It is possible that something may have happened underground following the furnace rebuild in 2012/13. Tata will keep NRW updated as this investigation progresses.

If a route to the sewer is found, then the discharge will need to be reported to NRW and a plan developed to either deal with the pathway and stop the discharge, or a variation initiated to legitimise this release. Once the issue has been resolved NRW will then review the problem(s) and any associated root causes and potential permit breaches.

Waste minimisation and recycling

Tata has written to NRW proposing a trial using Trostre filter cake (containing high levels of ferrous material) to make a direct charge pellet for the furnaces. NRW has agreed to a limited trial in NRW_CAR0026473.

Tata has encountered problems with the water content of one filter cake stream that means that the resulting pellets are taking a lot longer to cure than expected. Tata are considering the implications of this problem on their current mode of operation and the currently agreed trial. If more time is needed Tata will write to NRW with a revised end date request.

[ENDS]

EPR Compliance Assessment Report

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Site	Port Talbot Steel Works EPR/BL7108IM	Permit Ref	BL7108IM
Operator/Permit holder	Tata Steel UK Limited	Date	10/01/2017

Section 3 – Enforcement Response

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.

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			

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 (eg. 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 report should not be released to the public register(s) on the grounds of commercial confidentiality, you must write to your local area office within fifteen 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.