Cyfoeth Naturiol Cymru Natural Resources Wales

Compliance Assessment Report

Report ID: CAR_NRW0032992

This form will report compliance with your permit as determined by an NRW officer					
Site	Port Talbot Steel Works	Permit Ref	BL7108IM		
Operator/Permit holder	Tata Steel UK Limited				
Regime	Installations				
Date of assessment	04/08/2017	Time in	10:30	Out	16:30
Assessment type	Audit				
Parts of the permit assessed	1 Management; 2 Operations; 3 Emissions and Monitoring; 4 Information				
Lead officer's name	Cowie, Douglas				
Accompanied by	Broom, Mark				
Recipient's name/position	Claire Grainger/ Environment Manager	Date issued	20/06/2018		

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 - Specified by permit	A	
B1 - Infrastructure - Engineering for prevention and control of emissions	A	
B4 - Infrastructure - Containment of stored materials	X	
C1 - General Management - Staff competency/training	A	
C2 - General Management - Management system and operating procedures	A	
G1 - Monitoring and Records, Maintenance and Reporting - Monitoring of emissions and environment	A	
G2 - Monitoring and Records, Maintenance and Reporting - Records of activity, site diary/journal/events	A	
G3 - Monitoring and Records, Maintenance and Reporting - Maintenance records	A	
G4 - Monitoring and Records, Maintenance and Reporting - Reporting and notification to Natural Resources Wales	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

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 Steel) 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). Tata Steel has several defined industrial 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 steel). The permit also covers coke making and the reception, stockpiling and blending of raw iron making materials. Four other companies – Cambrian Stone, Harsco Metals, Runtech and ICL – are contracted to undertake their own permitted activities at the steelworks on Tata Steel's behalf.

Purpose of visit/assessment

This intervention focused on the Sinter Plant, Coke Ovens and fugitive dust management and control at Port Talbot steelworks. NRW has initiated a targeted programme of compliance interventions in 2017/18 focusing on these issues.

A site inspection was undertaken at the ferrous stock houses serving both No.4 and No.5 Blast Furnaces.

NRW has received an increasing number of complaints about dust and emissions from the steelworks during 2017. Tata Steel continues to notify us about breaches of the permitted emission limit values (ELVs) for dust at the Sinter Plant main stack (A1) and fugitive (visible) dust emissions from Coke Oven Doors and Tops (A54). These ongoing ELV breaches and potential fugitive dust emissions from raw material storage and handling are of concern to NRW.

Tata personnel also 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 Conclusions (BATc) for the Iron and Steel industry sector.

Finally, we discussed steelworks ambient air quality monitoring and we carried out a site inspection at the Million Gallon Tank (MGT) used to store recovered oils.

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, 4.1, 4.2, 4.3 and 4.4 of Tata's permit.

Person(s) present

Tata Steel
Fiona Abbott
Claire Grainger
Andrew Townsend
Tom Watson (Sinter Plant only)

Wayne Hoffrock (Coke Ovens only)
Joshua Cockings (Coke Ovens only)
Andrew McGregor (Ironmaking only)
John Lord (Ironmaking only)
Vince Lewis (Ironmaking only)

NRW
Mark Broom
Doug Cowie

Sinter plant

The Sinter Plant prepares, blends and heats raw materials for use in the blast furnaces. It has three permitted emission points:

1. Sinter plant main stack (A1)
2. Sinter plant secondary de-dust stack (A2)
3. Sinter plant mixing and rolling drum stack (A3)

This programme of targeted inspections has focused on emission points A1 and A2 and ongoing non-compliance with the ELV for dust (particulates) at emission point A1.

During this intervention the following topics and issues were considered:

A1 Sinter main stack

- CAPEX project update
- 'Double-dome' valve performance and dust abrasion damage
- Optimisation of Electrostatic Precipitator (ESP) dust rapping system
- Influence of different iron ore types on waste gas system performance
- Low sinter stock levels and operating regime constraints
- Wind main refurbishment and repair
- Urea injection system: supply disruption
- Waste gas system dust monitors (CEMS): data mining and analysis
- Lignite-lime injection system: HAZOP, trial and commissioning timescale
- March 2017 'special cause' event resolution and learning
- Dates of future planned maintenance stops
- Compliance with permitted ELV (40.00mg/m3)
- Content of future Schedule 5 Part A & Part B notifications

A2 Sinter secondary de-dust stack

- CAPEX project update
- ESP efficiency monitoring and analysis
- Installation of replacement bag filter
- Ducting, screen house and diffuser repair work
- Optimisation of ESP power fields and dust rapping system
- Reliability of ESP power fields
- Continuous Emissions Monitoring System (CEMS) failure and replacement
- Dates of future planned maintenance stops
- Compliance with permitted ELV (30.00mg/m3)
- Content of future Schedule 5 Part A & Part B notifications

Sinter cooler

- Cooler repair and refurbishment work programme: update

- Cooler performance and influence on sinter quality
- Testing of flexible, resilient 'brush' seals to maximise cooler air flow

We have consolidated our findings and compliance assessments from four targeted sinter plant interventions in 2017/18 in report **CAR_NRW0032996**.

Coke Ovens

Morfa Coke Ovens heats coking coals in the absence of oxygen to produce high-quality coke which is used at the sinter plant and the blast furnaces. Coke Oven Gas (COG) generated within the ovens is purified and used as a fuel across the steelworks.

At Port Talbot there are two batteries of 42 ovens and ten permitted emission points:

1. Morfa Coke Oven batteries (A54)
2. Morfa main stack (A55)
3. Ministerstein coke-side fume hood (A56)
4. Ammonia incinerator (A57)
5. Secondary coal crusher stack (A58)
6. Coke Oven Gas (COG) triple flare stack (A59)
7. Coke quench tower (old) (A60B)
8. Coke quench tower (new) (A60B)
9. COG collecting main bleeder valves (A61)
10. COG flare stack (A67)

This programme of targeted inspections has focused on emission point A54 and ongoing non-compliance with the ELVs for fugitive (visible) emissions from coke oven doors and tops. We also considered emissions from charging ovens with coal.

During this intervention the following topics and issues were considered:

<u>Coke oven doors</u>

- CAPEX and Morfa Coke Ovens Life Extension project update
- Door seal jetting (cleaning) techniques and improvements
- Small (leveller) door jetting and cleaning options
- Refurbishment and upgrade of oven pressure controllers
- Consideration of COG pressure control techniques employed at other ovens with dual gas collection mains
- Dates of future planned maintenance stops
- Compliance with permitted ELV (10% leakage / 90% no leakage)
- Content of future Schedule 5 Part A & Part B notifications

<u>Coke oven tops</u>

- CAPEX and Morfa Coke Ovens Life Extension project update
- Sealing and re-sealing of ascension pipe and spigot joints
- Performance of sealants
- Ongoing renewal of ascension pipes
- Compliance with permitted ELV (1% leakage / 99% no leakage)
- Content of future Schedule 5 Part A & Part B notifications

<u>Coke oven charging</u>

- CAPEX and Morfa Coke Ovens Life Extension project update
- Replacement and upgrade of the four charging 'telescope' nozzles

- Re-seating of oven charge holes across both battery tops
- Renewal of charging 'lid-lifters'
- Compliance with permitted ELV (<30 seconds visible dust per charge)
- Requirement to notify NRW about breaches of the charging ELV
- Content of future Schedule 5 Part A & Part B notifications

We have consolidated our findings and compliance assessments from four targeted coke ovens interventions in 2017/18 in report **CAR_NRW0032996**.

Fugitive dust management: Ferrous stock houses

During this targeted inspection we examined the techniques and controls employed at the ferrous stockhouses. Ironmaking raw materials such as coke, ore pellets, sinter and fluxes are screened, stored, weighed and batched in a prescribed order before being delivered continuously to the charging system at the top of the furnace.

During this intervention the following topics and issues were considered:

- Fugitive dust (foam) suppression system: biofouling of metal pipework, valves and filters
- Fugitive dust (foam) suppression system: ongoing plastic pipework upgrades
- Fugitive dust (foam) suppression system: application of hypochlorite biocide
- Fugitive dust (foam) suppression system: extra foam application points
- Fugitive dust (foam) suppression system: electronic link to Tata's PI system
- Fugitive dust (foam) suppression system: visual feedback link to control room
- Fugitive dust (foam) suppression system: electronic alerts to highlight faults
- Progression from reactive/fault-finding maintenance regime towards proactive checks and increased automation
- Retention of pre-fabricated spare pipe and valve sections on site
- Trial using atomised water spray instead of foam on conveyor 1027
- Feasibility study for fume/dust extraction system above ferrous stock houses
- Inspection of active foam application points at BF4 and BF5 ferrous stock house screens

The photos below show one of the ferrous stock house screens (with foam application) and a section of replacement (plastic) foam system pipe and valves.

We have consolidated our findings and compliance assessments from four targeted fugitive dust

management interventions in 2017/18 in report **CAR_NRW0032996**.

Air quality and PM_{10}

Ambient PM_{10} monitors have been used at Port Talbot steelworks for many years to assess on-site air quality. The data collected by these monitors has informed local air quality investigations and in-depth PM_{10} source attribution studies.

The overall availability and reliability of Tata Steel's on-site monitors has deteriorated recently. Currently Tata's on-site network has six working monitors, but some links to the steelworks PI system have been disrupted and one monitor was offline at the time of inspection. The current network requires an overhaul and review and the SHE Team has been pursuing funding for additional monitors and recalibration of existing monitors.

NRW supports any opportunities to refine or reconfigure the network to allow more targeted and consistent data collection. Any changes to the on-site network e.g. due to monitor faults do not detract from the use of the data for trend analysis and exceedance day investigation work.

Million Gallon Tank (MGT)

An inspection of the Million Gallon Tank (MGT) was undertaken following Tata Steel's notification to NRW about a possible oil leak (**S5N/17/82A**).

On 28 July 2017 Tata Steel notified NRW about an oil leak detected at the Million Gallon Tank (MGT) located near the centre of the steelworks. The MGT is used to store, separate water from and recover oil generated by various processes across the site.

The tank was almost empty at the time of this inspection with a water heel remaining in place to minimise further loss of oil to ground. Tata Steel were preparing a detailed investigation and clean-up plan in response to the leak. The leak appeared to be confined to the ground immediately surrounding the tank, but Tata Steel could not confirm how much oil had been lost.

Photographs of the tank, its ancillary pipework and the contaminated area are shown below.

At the time of inspection, Tata Steel confirmed they had not detected any evidence of groundwater contamination based on site monitoring (borehole) data. There was no evidence that oil pollution had extended beyond the steelworks permitted boundary. Further intrusive ground investigation by Tata Steel may be necessary to establish the full extent of the contamination. NRW would categorise the environmental impact as low-level (former CICS Category 3), although this may change pending the outcome of further investigations.

Our assessment of Tata Steel's Schedule 5 notification is recorded in **CAR_NRW0031835**.

This oil leak is subject to an ongoing investigation by NRW and Tata Steel. There may be aspects which are relevant under the Control Of Major Accident Hazards (COMAH) Regulations 2015. At the time of writing we de do not consider this to be an EC-reportable event under COMAH. Our final COMAH and EPR compliance assessments will be recorded in a separate CAR form.

NRW understands that the MGT is to be decommissioned and demolished once it has been fully drained, secured and any residual oil spill has been cleaned up.

A Schedule 5 Part B notification summarising the measures taken to rectify and prevent a recurrence of this event should be submitted to NRW as soon as practicable. Alternatively, Tata Steel should inform NRW when it is able to present the results of its investigation.

Conclusions and further actions required

In respect of the following works areas:

- Sinter Plant
- Coke Ovens
- Fugitive Dust Management & Control

We have consolidated our findings and compliance assessments from this visit (1 of 4) and three further targeted sinter plant interventions in 2017/18 in report **CAR_NRW0032996**.

Tata Steel's current on-site ambient PM10 monitoring network requires an overhaul following recent availability and reliability issues. NRW supports any opportunities to refine or reconfigure the network to allow more targeted and consistent data collection.

A Schedule 5 Part B notification should be submitted to NRW in relation to the oil leak from the Million Gallon Tank (MGT). Alternatively, Tata Steel should inform NRW when it is able to present the results of its investigation.

[ENDS]

Cyfoeth Naturiol Cymru Natural Resources Wales	**EPR Compliance Assessment Report**	**Report ID: CAR_NRW0032992**

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

Site	Port Talbot Steel Works	Permit Ref	BL7108IM
Operator/Permit holder	Tata Steel UK Limited	Date	04/08/2017

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			
B4	X	A Schedule 5 Part B notification should be submitted to NRW in relation to the oil leak from the Million Gallon Tank (MGT). Alternatively, Tata Steel should inform NRW when it is able to present the results of its investigation.	31/07/2018

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.