

Compliance Assessment Report

Report ID:
CAR_NRW0032730

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	22/06/2017	Time in	10:00	Out	12:30
Assessment type	Audit				
Parts of the permit assessed	1 Management; 2 Operations; 3 Emissions and Monitoring; 4 Information				
Lead officer's name	Broom, Mark				
Accompanied by	Cowie, Douglas				
Recipient's name/position	Fiona Abbott/ Environment Manager	Date issued	01/02/2018		

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
B3 - Infrastructure - Site drainage engineering (clean and foul)	A	
B4 - Infrastructure - Containment of stored materials	X	
B5 - Infrastructure - Plant and equipment	A	
C2 - General Management - Management system and operating procedures	A	
D2 - Incident Management - Accidents, emergency and incident planning	A	
E3 - Emissions - Surface water	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	X	

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 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

On 10 May 2017, a fire occurred in the tar area of Tata Steel's Coke Ovens By-Products (COBP) plant which prompted a localised shutdown of systems and assets. The fire was quickly brought under control and extinguished using firefighting foam. The Coke Ovens and COBP plant were returned to normal production later that day.

The primary aims of this intervention were:

- a) to carry out a joint initial investigation into the events of 10 May 2017;
- b) to establish the cause(s) of the fire;
- c) to determine if the event is a major accident under the Control of Major Accident Hazards (COMAH) Regulations; and
- d) to decide if there are any regulatory implications under the Environmental Permitting Regulations (EPR).

Both the EC Industrial Emissions Directive (IED) and Seveso III Directive require regulators such as Natural Resources Wales (NRW) and the Health & Safety Executive (HSE) to work together. NRW's Regulator's Code also requires this approach to be taken to avoid duplication of regulation. This joint initial investigation aims to decide which regulator should lead on this issue.

The relevant permit conditions are listed under Sections 1.1, 2.3, 3.1, 3.2, 4.1, 4.3 and 4.4 of Tata Steel's permit.

Person(s) present

Tata Steel	
Scott McKinnon	Head of Health, Safety and Environment
Dean Vincent	Coke Ovens Plant Area Manager
Fiona Abbott	Environment Manager
Steve Chilcott	Process Safety Manager

John Dennis	Occupational Safety Manager
Lee Puckey	Works Production Manager Coke Ovens
Winson Cheung	Contracts Manager
COMAH Competent Authority (CA)	
Alan Strawbridge (HSE)	HM Inspector of Health and Safety
Mark Broom (NRW)	Technical Specialist
Doug Cowie (NRW)	PPC Officer

Background

At approximately 0915hrs on 10 May 2017, a fire occurred in the tar area of Tata Steel's Coke Ovens By-Products (COBP) plant. Because of the fire and as a precaution, Tata Steel initiated a localised shutdown of systems and assets. Tata Steel's internal fire team brought the fire under control and extinguished it with the assistance of Mid & West Wales Fire and Rescue Service (MWWFRS). Firefighting foam was used to cool and suppress any hidden fires inside the tar area's trenches and tunnels. The emergency response was stood down around midday and the coke oven batteries and COBP plant were then returned to full production.

Firefighting water was contained within the COBP plant by closing the sluice gates. Tata Steel has gradually treated this 'firewater' within the coke ovens effluent treatment system. All affected operations were restored within 24 hours of the event. There were no reported injuries and all staff and contractors were accounted for. An EPR (Schedule 5 Part A) notification was emailed to NRW and the operator also telephoned the HSE.

Tata Steel took the decision not to activate the Internal Emergency Plan (IEP) for the steelworks in response to this event.

Sequence of events on 10 May 2017

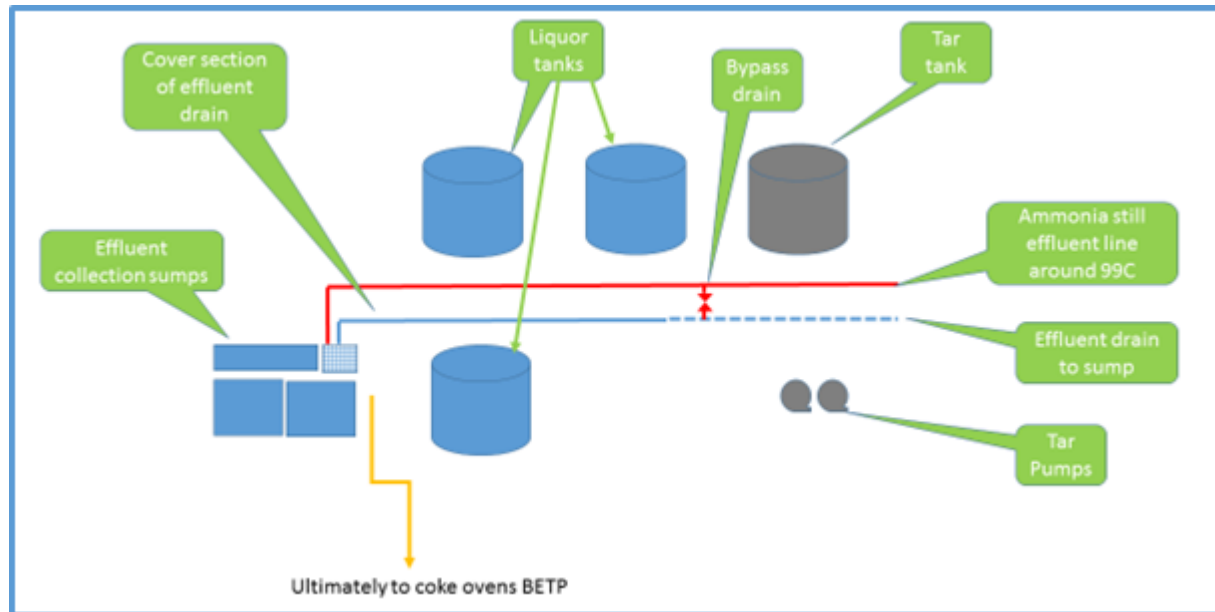
- 0915: fire reported at tar area and alarm sounded
- 0920: coke pushing suspended and Tata Steel fire team in attendance
- 0930: all personnel accounted for. Firefighting under way using foam
- 0945: COBP plant operations stabilised and fire under control
- 1015: Fire extinguished. MWWFRS in attendance. Additional foam applied
- 1115: Affected tar area secured and SHE Team investigation commenced
- 1215: Coke Ovens and COBP plant status reviewed. MWWFRS stood down
- 1230: Coke Ovens and COBP plant restarted following risk assessment

Investigation

The diagram below shows the tar area and effluent drains within the COBP plant. Effluent is channelled along a partially covered drain into a series of collection sumps. The primary collection sump is open and the others are covered. Effluent from these sumps is decanted to remove residual tar, reprocessed within the COBP plant and then passes to the coke ovens biological effluent treatment plant (BETP). Treated effluent from the BETP is discharged to sea at the Abbey Beach Outfall (permitted emission point W3).

Hot effluent from the COBP plant's ammonia stills normally flows directly into the collection sump along its own effluent line, but this route can be bypassed by channelling it directly into the uncovered, parallel section of drain. The bypass valve is used when monitoring is needed at the uncovered primary sump. These uncovered areas were previously not identified as a zone that could contain Volatile Organic Compounds (VOCs) and was therefore not classified under

DSEAR – the Dangerous Substances and Explosive Atmospheres Regulations 2002. Other parts of the Coke Ovens and COBP plant are classified as DSEAR zones.



On 9 May 2017, some maintenance work was being carried out on one of the tar pumps which had a faulty seal. This work required use of an angle grinder under a hot work permit. This work was undertaken successfully.

On 10 May 2017, a new hot work permit was issued to cover some additional minor welding required at the tar pumps. The fire started shortly after this welding work commenced.

Tata Steel's internal investigation of this event has concluded that the maintenance work at the tar pumps had washed some tar residue into the effluent drain. The bypass valve had been opened allowing hot effluent to enter the drain. This increased the temperature of the residual tar and generated VOCs which accumulated inside the covered section of the drain. Ultimately this produced a flammable atmosphere which ignited when the welding work was carried out.

The ignition of the VOCs flashed towards the primary collection sump and the residual tar present here and within the covered area of the drain caught fire.

The purpose of the hot work (welding) on 10 May 2017 was clarified. Tata Steel confirmed that the welding was undertaken to repair some metalwork at the tar pumps, and was not critical to the operation of the pumps themselves. The pumps do require periodic maintenance to ensure they continue to operate as designed. There are plans to move the pumps from their current location under Tata Steel's Morfa Coke Ovens Life Extension Project.

The COMAH CA requested further clarity regarding the environmental impact of the event. Tata Steel confirmed that final effluent quality from the BETP had remained relatively stable following the event and the treatment plant had coped with a controlled input of foam and firewater into the effluent system.

Actions taken by Tata Steel

Since the fire, Tata Steel has carried out the following actions:

1. The hot effluent bypass valve has been locked off and capped.
2. Tata Steel's written procedure has been changed to require the ammonia still effluent pump to be isolated when any work is carried out on the covered/uncovered effluent drain.
3. Tata Steel's firefighting capabilities have been reviewed including an evaluation of available on-

site foam stocks.

4. Tata Steel's hot work permit system is subject to an ongoing review. One new measure is the introduction of a separate risk assessment requirement prior to a hot work permit being issued. This will be trialled at Morfa Coke Ovens.

The following further actions are planned:

5. Tata Steel will undertake an independent DSEAR review that will consider the presence of tar residues within the effluent drain and the temperature of the effluent. The outcome will dictate if this area needs to be reclassified under DSEAR. Learning from this review will be applied (where relevant) across the wider steelworks.

6. Two new tar pumps and a centrifuge unit are planned under the Morfa Coke Ovens Life Extension Project. The tar centrifuge will improve tar quality and reduce tar carry over. The new tar pumps will be relocated away from the effluent drains. Re-routing of some drains to reduce the potential ingress of volatiles is also being considered.

Site inspection

On inspection of the tar area, the bypass valve was clearly capped.

Although not directly related to this investigation, the condition of one of the nearby liquor tanks (Tank 2) was of concern. There was visual evidence of corrosion and deterioration on the tank's lower exterior panels. Tata Steel confirmed there is a rolling programme to assess and replace its storage tanks using a risk-based approach. NRW recommends the COBP plant liquor tanks are inspected as soon as practicable to assess the risk of tank failure.

EEMUA 231 brings together existing good practice for periodic examination and testing of the mechanical integrity of plant containing hazardous substances. The guide could be used as a framework for Tata Steel's rolling programme.

<https://www.eemua.org/Products/Publications/Digital/EEMUA-Publication-231.aspx>

Reporting under the EPR 2016 and COMAH Regulations 2015

Tata submitted an EPR Schedule 5 Part A notification to NRW on 10 May 2017 (which NRW shared with HSE) and has therefore fulfilled its legal obligation to notify the regulator under EPR. Although this intervention has covered the measures taken by Tata Steel to rectify and prevent a recurrence of the incident, a Schedule 5 Part B notification summarising this information should be submitted as soon as practicable.

This event did involve a COMAH dangerous substance (coal tar) and was classified as an uncontrolled development, but based on the extent of the affected area, the lack of other combustible sources of gas and the limited escalation potential, it appears unlikely that this event would have had serious implications for man and/or the environment. It was therefore a 'COMAH-relevant' event, but did not need to be formally reported to the COMAH CA.

Conclusions

The fire at Port Talbot steelworks on the morning of 10 May 2017 occurred when an accumulation of flammable VOC compounds ignited inside a covered effluent drain at Morfa Coke Ovens COBP plant. Sparks from permitted welding work have been identified as the ignition source. The area where the fire occurred was not previously classified under DSEAR 2002.

Several actions have been identified to reduce the risk of a similar incident re-occurring and prevent the build-up of flammable VOCs within the tar area effluent drain. Learning from this incident will inform the ongoing Morfa Coke Ovens Life Extension Project work.

Tata notified NRW about this event in accordance with its environmental permit (EPR)

requirements. This event was relevant but not reportable under COMAH. A Schedule 5 Part B notification summarising the measures taken to rectify and prevent a recurrence should be submitted as soon as practicable.

NRW is satisfied that no environmental (EPR) permit conditions have been breached because of this event.

Several actions have been identified and the COMAH CA has determined that COMAH is the most appropriate regime to take these forward.

The condition of Liquor Tank 2 is of concern to NRW. We recommend the COBP plant liquor tanks are inspected as soon as practicable to assess the risk of tank failure. EEMUA 231 may provide a framework for the periodic examination and testing of the mechanical integrity of Tata Steel's tanks.

[ENDS]

EPR Compliance Assessment Report

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Operator/Permit holder	Tata Steel UK Limited	Date	22/06/2017

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			
G4	X	A Schedule 5 Part B notification summarising the measures taken to rectify and prevent a recurrence of this event should be submitted as soon as practicable.	30/03/2018
B4	X	NRW recommends the COBP plant liquor tanks are inspected as soon as practicable to assess the risk of tank failure.	01/08/2018

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.