

Compliance Assessment Report

Report ID:
CAR_NRW0026473

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	28/10/2016	Time in	N/A	Out	N/A
Assessment type	Report/Data Review				
Parts of the permit assessed	2 Operations				
Lead officer's name	Cowie, Douglas				
Accompanied by					
Recipient's name/position	Yeliz Marshall/ Environmental Engineer	Date issued	20/01/2017		

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
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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

Trostre filter cake

Tata Steel's Trostre tinplate works in Llanelli uses sulphuric acid to pickle or remove scale from steel used in its plating operations. This process generates ferric sulphate solution as a by-product. A proportion of crystallised ferric sulphate solution can be used by the water treatment industry, but the remainder (approx. 6000t/year) is currently neutralised using lime, filter pressed and then landfilled as non-hazardous waste.

The material from the filter press – which has the consistency of a sludge or 'cake' – contains high levels of ferrous (iron-rich) material. Tata Steel working in partnership with Darlow Lloyd have been investigating the potential recycling of this filter cake back into the ironmaking process at Port Talbot by mixing, drying and compressing the material into a pellet.

During 2016 Tata has approached NRW to propose a trial activity at Port Talbot steelworks to produce substitute ferrous pellets. The trial can be split into two distinct activities:

- Treatment of the Trostre filter cake (at the Port Talbot Steelworks) to produce the ferrous pellets;
- Utilizing the ferrous pellets produced in the trial as a substitute material (in the ironmaking process at Port Talbot) and assessing the suitability of this alternative.

Favourable results have been obtained from laboratory tests and Tata and Darlow Lloyd would now like to trial the process at a larger scale using a bespoke treatment unit. If the trial is successful and Tata wish to continue the use of substitute ferrous pellets, it is understood that certain environmental permits or permit variations may be needed to undertake the proposed treatment process going forward.

Pellet process

The filter cake will be put through a mechanical mixing and balling process that will turn the material into a monolithic pellet. The material added to the cake during the mixing stage is a proprietary drying and hardening binder product supplied by a low-carbon cement manufacturer. A combination of pH changes, drying and hydraulic reactions allows the formation of cementitious crystals that bind the cake into a pellet. The strength properties of the pellet can be modified depending on the requirements of the end application.

Ferrous pellets are used as part of the blend of raw materials used to make iron in the blast furnace process. Normally these pellets are small balls of iron ore made using the powder that is generated during the ore extraction process. Substituting pellets manufactured from virgin material for pellets made using Tata and Darlow Lloyd's proposed process may offer environmental benefits and increase the sustainability of the iron and steelmaking operations at Port Talbot.

The substitute pellets will be introduced to the blast furnaces via the direct charge route, alongside other raw materials e.g. small-sized scrap and other iron ore pellets. A 20,000-tonne direct charge bed is constructed on a weekly basis at the raw material & blending stockyards.

NRW assessment and trial decision

Natural Resources Wales supports the proposed recycling of this material in principle. The diversion of this waste stream away from landfill may allow it to be moved up the Waste Hierarchy (as outlined in Article 4 of the EC Waste Framework Directive) towards a more sustainable solution which is better aligned with the objectives of the Welsh Government's overarching waste strategy document for Wales: Towards Zero Waste (June 2010).

Towards Zero Waste reinforces the 'proximity principle' outlined in the EC Waste Framework Directive. This requires member states to establish a network of waste recovery and disposal installations designed to enable them to move towards self-sufficiency in waste management. Wastes must be recovered or disposed of in one of the nearest appropriate installations, although allowance is made for geographical flexibility where there is a need for specialised installations for certain waste types.

While we are mindful of the waste objectives and principles outlined above, NRW must first assess this proposal to ensure there are no adverse impacts on the environment, human health or on amenity from the trial activities. The requirements of applicable environmental and waste management legislation must also be considered.

In February 2016 we wrote to Tata Steel with a number of queries regarding the proposed trial at Port Talbot steelworks. Our queries included (but were not limited to):

- Type and quantity of material to be used in the trial
- Treatment process to be used in the trial
- Duration of the trial
- Location of the trial
- Pollution prevention and control measures to be used
- Monitoring and testing provisions
- Determination of trial success criteria
- Reporting of trial conclusions

In August 2016 Tata Steel submitted further information to NRW in response to these queries. We have assessed this information and we are satisfied that Tata Steel has addressed all outstanding matters. NRW is content for this trial to proceed subject to the following conditions:

1. The trial can run for a maximum of 21 days and must be completed by 31 January 2017.
2. A maximum of 650 tonnes of Trostre filter cake may be used in the trial.
3. The Trostre filter cake must be batch tested before processing and the substitute ferrous pellets must be batch tested after processing to confirm their chemical composition. Records of the test results must be retained by Tata Steel and made available for inspection by NRW at any time.
4. NRW will not allow the use of any hazardous materials in this trial.
5. The waste treatment (substitute pellet manufacturing) and storage activities may only take place at Yard Zero at Port Talbot steelworks. Yard Zero is marked on the plan 'Tata_Port Talbot_HMS_Pellets.ppt' supplied by Tata Steel on 18 October 2016.
6. The substitute ferrous pellets may only be used in the Blast Furnace (ironmaking) process at Port Talbot steelworks.
7. The Trostre filter cake will be segregated from other materials and stored securely by Tata Steel on an impermeable surface with sealed drainage until such time as the filter cake is used in the treatment process at Yard Zero.
8. The substitute ferrous pellets will be segregated from other materials and stored securely by Tata

Steel on an impermeable surface with sealed drainage until such time as the pellets are used in the construction of the direct charge bed at the stockyards.

9. If, during the trial, any adverse impacts on blast furnace stability are detected which can be attributed to the use of the substitute ferrous pellets and which result in increased environmental emissions e.g. bleeder releases, then the trial must cease immediately.
10. The Duty of Care for waste applies to all transfers/movements of the Trostre filter cake material used to make the substitute ferrous pellets.
11. Any unused Trostre filter cake or substitute ferrous pellets left over at the conclusion of the trial must be recovered or disposed of at an appropriately authorised waste management facility.
12. On conclusion of the trial the findings are reported to NRW.

If the boundaries of the trial need to be changed, then further discussions with NRW will be needed to confirm the changes to trial envelope.

Further discussions should be held towards the conclusion of the trial to understand the environmental permitting requirements applying to the pellet manufacturing process going forward and the use of the ferrous pellets in the ironmaking processes at Port Talbot.

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	28/10/2016

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 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.