

## Compliance Assessment Report CAR\_NRW0044196

**Permit being assessed:** BT4885IT.

**For:** Shotton Paper Mill EPR/BT4885IT, **held by:** Shotton Mill Limited

**At:** WEIGHBRIDGE ROAD SHOTTON , DEESIDE, DEESIDE, CLWYD, CH5 2LL.

**Type of assessment:** Report/Data Review,

**Reason:** Routine.

**On:** 07/05/2024.

**Parts of permit assessed:** Boiler 7 Start Up and Shutdown.

**NRW Lead Officer:** Stuart Ross.

**Report sent to:** Technical / Environmental Manager, Technical / Environmental Manager, on 17/05/2024.

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

Part of permitted activity assessed (compliance criteria)	Assessment result	Permit condition
IR1A - Installations - Management - General Management	C3 Minor	1.1

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

Total non-compliances recorded	Total non-compliance score
1	4

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	Refer details section	28/06/2024

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.**

**At this time, we are issuing you with a warning for the non-compliance recorded above. Warnings may influence future enforcement response for continued or further non-compliance.**

This statement does not stop us from taking additional enforcement action if further relevant information comes to light or offences continue.

## 4. Details of our assessment

This Compliance Assessment Report follows a review of Shotton Mill Limited's (SML) response to Actions 1 to 4 as listed in Compliance Assessment Report reference CAR\_NRW0042141. The operator submitted a response to the actions 15/03/24.

**Action 1** - *Review and update the relevant boiler operating procedure to ensure the requirements of permit condition 2.3.4 are met. Provide a copy of the procedure to NRW.*

**Operator Response** – *‘Please refer to attached document ‘NRW Air and Water Discharge Consent Limits and Reporting Requirements’ (RCID 57390) which references the requirements for waste cessation after 30 minutes in the event that any parameter is lost including FTIR, FID or stack O<sub>2</sub>’.*

### NRW Comment

Permit condition 2.3.4 states that;

*Waste shall not be charged, or shall cease to be charged, if:*

*(a) the combustion chamber temperature is below, or falls below, 850 C; or*

*(b) any continuous emission limit value in schedule 3 table S3.1(c) is exceeded; or*

*(c) any continuous emission limit value in schedule 3 table S3.1(b) is exceeded, other than under “abnormal operating conditions” ; or*

*(d) monitoring results required to demonstrate compliance with any continuous emission limit value in schedule 3 table S3.1(b) are unavailable other than under “abnormal operating conditions”*

NRW understands that due to the current CEMS configuration, the boiler cannot enter a period of abnormal operation for an unplanned CEMS failure because a demonstration of compliance with emission limit values in table S3.1(c) cannot be made. i.e., CO, TOC and Particulate with peripheral measurements for correction to standard reference conditions.

The procedure states that if any [CEMS] parameter is lost then ‘automation to investigate within 30 minutes’ and that ‘if repairs are not complete within 30 minutes then waste shall cease to be charged with immediate effect’.

This effectively means that the plant could continue to operate (waste feed on) for 30 minutes following a CEMS fault without being capable of demonstrating compliance with all the emissions monitoring requirements in table S3.1(c).

NRW considers that the procedure does not ensure compliance with permit condition 2.3.4

and is therefore in breach of permit condition 1.1 attracting a non compliance score of C3.

Please note that in your procedure, under 'Abnormal Operating Conditions', item (iii) does not constitute abnormal operating conditions – please review and justify its inclusion.

Also note that only 'abnormal operation' as per the specific definition included in the permit should be recorded and has a 60-hour limit. 'Unplanned downtime' does not necessarily constitute abnormal operation, for example if an unplanned fault occurred on the abatement plant and the waste feed was stopped and the plant shut down then the plant did not enter a period of abnormal operation.

**New Action 1** - We therefore require that procedure 'NRW Air and Water Discharge Consent Limits and Reporting Requirements' (RCID 57390) is reviewed against the requirements of permit condition 2.3.4 and the above comments and resubmitted to NRW by 28/06/24.

**Action 2** – The report includes an incorrect emission limit value for dioxins and furans (ITEQ) as  $0.1\text{mg}/\text{m}^3$ , it should be  $0.1\text{ng}/\text{m}^3$ . Please amend for all future submissions. Ensure future returns are submitted on time.

**Operator Response** – *'The service provider (laboratory) has been notified of this error and timing issue. Corrective actions have been put in place.'*

#### **NRW Comment**

The unit error was present in the reporting form, presumably not the laboratory report. For avoidance of doubt please check your reporting forms.

**Action 3** - *Shotton Mill Limited to provide a written proposal as to how it will ensure CEMS data collected during start up and shutdown is excluded from the calculation of half hourly and daily average emissions values and not reported in routine emissions monitoring returns. Please do so by 29/02/24.*

**Operator Response** – *'Please refer to the attached document 'Start up and Shutdown Philosophy Shotton Millv1' which contains a written proposal as to how SML will ensure CEMS data collected during start up and shutdown is excluded from the calculation of half hourly and daily average emissions values and not reported in routine emissions monitoring returns. We await receipt of a written agreement from Natural Resources Wales prior to implementation within the Shotton Mill DCS.'*

**Action 4** - *Shotton Mill Limited to provide NRW with the current definitions in use to determine Boiler 7 SU and SD. Please do so by 29/02/24.*

**Operator Response** - *They are currently no definitions in place to differentiate SU and SD conditions during operation of B7. All CEMS data is included within normal emissions monitoring. The document 'Start up and Shutdown Philosophy Shotton Millv1', referred to in response to Action 3, contains details of SML's proposal for SU and SD definitions. We await receipt of a written agreement from Natural Resources Wales prior to implementation within the Shotton Mill DCS.*

#### **NRW Comment (Actions 3 and 4)**

NRW has reviewed document '*Start up and Shutdown Philosophy Shotton Millv1*' against the draft Environment Agency guidance (adopted by UK regulators) on deriving start up and shutdown definitions for waste incinerators and co-incinerators. This guidance was previously provided to Shotton Mill Ltd.

NRW considers that the absence of any start up and shutdown definition incorporated and implemented through a procedure is unacceptable and in breach of permit condition 1.1 attracting a non-compliance score of C3.

### **Proposed SU and SD Definitions**

As previously stated, Boiler 7 has not been subject to the Waste Incineration BAT Conclusions review. This process will be triggered by the forthcoming substantial permit variation for the installation, as part of the review Boiler 7 will require an OTNOC Management Plan.

In the interim, and in response to the actions detailed above, aspects of OTNOC guidance on the defining plant start up and shutdown is the most appropriate in this situation.

Start up and shutdown definitions should be written by operators in the format set out in Section 5 of the UK Regulators' Waste Incineration and Co-incineration OTNOC Management Plan Template (attached), this includes tables used to justify each of the parameters chosen.

For existing plants (such as Boiler 7), we expect operators to review their current definitions and justify them against their historic emissions profiles as detailed in Section 3 of the guidance. This justification has not been provided in your response.

In your response you have included 'Primary Factors' (Waste Feed, Support Burners & Oxygen Content)

- The oxygen content thresholds proposed for both start up and shutdown requires justification on the basis of emissions profiles showing the corrected values of various pollutants. We would normally expect the oxygen concentration to be somewhere around 15% dry. Also, to satisfy this requirement, regulators have proposed a default definition which requires the oxygen content to be consistently below the site-specific threshold for 30 minutes (1800 seconds), but alternative durations can be justified where necessary.
- The use of fuel screws, i.e. 'waste feed on' or 'waste feed off', is an acceptable factor. However, connected to this in your proposal is a requirement that there is >25% level in both fuel pockets. The fuel level in the pockets does not appear to be a factor in determining whether combustion conditions are stable and therefore a suitable parameter for determining start up and shutdown. Fuel pockets should be sufficiently full as part of your pre-start checks. We therefore suggest that this fuel pocket requirement is removed unless you can provide a suitable justification for its inclusion.

You have also included 'Secondary Factors' (time delays, steam flow and others)

As stated in the guidance, the preference is for secondary factors only to be included if absolutely necessary, this is because the primary factors should be sufficient in most cases, and secondary factors have the potential to unnecessarily delay the end of the start up or lead to an early start of shut down.

Justification must be provided for using secondary factors for start up and shutdown including.

- main steam pressure (also the use of pressure rather than flow)
- the time delays included for start up and shutdown at 3600 and 300 seconds respectively.
- 'LL' Limit on Residence time (>2.25 Seconds)
- For start up, the current proposal states that 'any' of the conditions listed are exceeded over 300 seconds 'Boiler Reading OFF' will stop CEMS recording. Please note (as per the introductory note of your procedure) that CEMS should always be recording during start up and shutdown but the data is not reportable. The wording of this section should be amended accordingly.
- For start up, and with reference to the written description in your procedure, NRW would consider that 'Solid Fuel Screws' should be off AND another parameter met, for example the oxygen content exceeds the agreed level. It would not be acceptable for the boiler to enter shutdown if the solid fuel screws were still operational, shutdown must include a clear intent to stop the waste incineration process. However, the process logic tree for shut down does appear to show that the solid fuel screws OFF and all other parameters must be met.

### **Other Considerations**

The proposed procedure states that *'To establish the point at which steady state conditions have been achieved, a combination of plant data and Operator Confirmation are required'* and that *'by means of a system time function the failure by the control room operator to confirm steady state conditions within one hour (3600 seconds) of all plant data requirements being satisfied will automatically activate the 'Boiler Reading On' output and commence the automatic reporting of CEMS data'*.

In the context of the proposed logic tree, NRW challenges why it deemed necessary to include Operator confirmation. As detailed above, secondary factors including any form of time delay should only be included if absolutely necessary.

The procedure states that *'Annual calibrations of oxygen content analysers 42QIZ-0180, 42QIX-0181 and 42QIZ-2380 to be conducted to ensure accuracy of analysers.* This statement possibly indicates that oxygen content will be measured using analysers other than the MCERTS certified CEMS.

For the purposes of defining SU and SD, NRW would expect oxygen content to normally be measured at the stack using the MCERTS certified CEMS, calibrated in accordance with EN14181 unless justified otherwise.

**New Action 2** – Review procedure *'Start up and Shutdown Philosophy Shotton Millv1'* against the draft Environment Agency guidance (adopted by UK regulators) on deriving start up and shutdown definitions for waste incinerators and co-incinerators, including the

comments above, and resubmit to NRW by 28/06/24.

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](mailto: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](mailto: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.