

Compliance Assessment Report CAR_NRW0042141

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: 31/12/2023.

Parts of permit assessed: Routine Emissions Monitoring & Reporting.

NRW Lead Officer: Stuart Ross.

Report sent to: Vicky Morris - Jones, Technical Manager, on 09/01/2024.

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

Part of permitted activity assessed (compliance criteria)	Assessment result	Permit condition
IR1A - Management - General management	C3 Minor	1.1
IR2C - Operations - Operating techniques	C3 Minor	2.3.4
IR3A - Emissions and monitoring - Emissions to water, air or land	Assessed (A)	
IR4B - Information - Reporting	C4 No impact	4.2.3
IR3E - Emissions and monitoring - Monitoring	Action only (X)	
IR3E - Emissions and monitoring - Monitoring	Action only (X)	

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

Total non-compliances recorded	Total non-compliance score
3	8.1

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	Action 1 - Review and update the relevant boiler operating procedure to ensure the requirements of permit condition	29/02/2024

Criteria	Action needed	Complete by
	2.3.4 are met. Provide a copy of the procedure to NRW.	
IR2C	Refer Action 1	29/02/2024
IR4B	Action 2 - The report includes an incorrect emission limit value for dioxins and furans (I -TEQ) as 0.1 mg/m ³ , it should be 0.1ng/m ³ . Please amend for all future submissions. Ensure future returns are submitted on time.	29/02/2024
IR3E	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.	29/02/2024
IR3E	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.	29/02/2024

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 routine emissions monitoring returns for the period 01/01/23 - 30/09/23. As this period covers three monitoring periods (quarters) these have been assessed individually in accordance with NRW's compliance assessment guidance.

January - March 2023**1. Emissions to Air (Emission Point A20)****A) Continuous Emissions Monitoring Data**

During this period five Schedule 5 notifications were received for CO half hourly emission limit value (ELV) exceedances. These are summarised in the table below;

Date	Time	1/2 Hrly Result (ELV 100 mg/Nm³)	Summary Operator Comments from Schedule 5 Notifications
08/03/23	20:30 - 21:00	103.4	Oxygen analyser fault, boiler waste feed reduced. Gasmet were onsite during the daytime to service the unit.
08/03/23	23:00 - 00:00	146.6	Oxygen analyser reading incorrectly after a service. Since the service there has been intermittent peaks in the O2 in the stack which aren't being viewed within the boiler. CEMS engineer has been instructed to return to site to investigate. Boiler waste feed reduced.
10/03/23	01:00 – 12:30	128.0	Boiler Output reduced drastically after out of consent. Oxygen analyser found to be faulty. CEMS unit questionable readings. Gasmet engineer called to repair Fault. Solid Fuel Taken off Boiler while repairs effected to analyser.
10/03/23	01:30 – 02:00	103.0	Boiler Output reduced drastically after first out of consent. Oxygen CEMS unit found to be faulty. CEMS unit questionable readings. Gasmet engineer called to repair Fault. Solid Fuel Taken off Boiler while repairs effected to analyser.
10/03/23	04:00 – 04:30	107.0	As above. Oxygen analyser changed for Spare. Once the analyser had been repaired. Solid Fuel was introduced. The CO was high for this period.

Based on the evidence supplied by the operator, the above CO ELV exceedances are likely to be as a result of unreliable oxygen data (spikes) used to correct data to the required reference conditions and accordingly non-compliance scores have not been applied. However, the incident raises compliance issues as detailed below.

Permit condition 2.3.4 states that waste shall not be charged or shall cease to be charged if (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'.

The erratic output of the faulty oxygen analyser, also verified by comparison with other

process data available at the time, demonstrated that data from the instrument could not be trusted and the instrument was therefore 'unavailable'.

As the oxygen analyser is required to correct CO, TOC and particulate data to standard reference conditions during periods of abnormal operation (e.g. CEMS failure), the failure of the oxygen analyser does not permit the plant to enter a period of abnormal operation and continue to burn waste until the CEM fault is rectified.

Therefore, upon identification of the faulty oxygen analyser on the 8th March 2023, waste feed should have stopped pending a successful swap to the standby instrument or instrument repair. Whilst the waste feed was substantially reduced after each CO ELV exceedance, the waste feed should have stopped completely.

This is a breach of permit condition 2.3.4 and attracts a C3 non-compliance score.

As discussed with the operator on the 22nd September 2023, procedures for the operation of the boiler did not include the requirement for waste feed cessation in the event of oxygen analyser fault, but did cover the failure of the other CEMS i.e. multi gas analyser, FID and particulate monitor.

This procedural deficiency is a breach of permit condition 1.1 and attracts a C3 non-compliance score.

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 by 29/02/24.

The operator reports that both FIDs were replaced during Q1 2023 and were subject to QAL2 campaigns on the 17th March 2023 with valid calibration functions having been implemented on the 10th July 2023.

The CEMS invalidation log for this, and the following quarter, logs unplanned CEMS down time. The log should only record invalid half hours and days associated with planned maintenance and calibration. This issue was discussed with the operator on the 22nd September 2023. The operator has subsequently reviewed the log and resubmitted it on a new template as agreed with NRW.

2. Emissions to Surface Water (Emission Point W1)

Emissions compliant

3. Emissions to Sewer (Emission Point E1)

Emissions compliant

4. Other Returns

Form Performance 2 received - nil return

Form Residue 1 received.

April - June 2023

1. Emissions to Air (Emission Point A20)

A) Continuous Emissions Monitoring Data

During this period two Schedule 5 notifications were received for CO half hourly ELV exceedances.

27/04/23 - 115.2 mg/Nm³, the operator reported that the cause was due to '*Re-circulation Fan Sequence not Operating. Automation immediately diagnosed that Pressure Reading was incorrect. Blocked Transmission Line then cleared*'.

14/05/23 - 107.2 mg/Nm³, the operator reported that the 'Boiler had been taken onto Gas Due to Solid Fuel Interruption. When Solid Fuel was introduced, we experienced this out of consent. Air Dampers at Furnace opened to reduce CO. All Following CO within Consent.

Based on process data submitted the above exceedances occurred during plant start up and are not therefore reportable. No non-compliance recorded.

B) 6 Monthly Extractive Monitoring

The extractive monitoring report was not received within the required timescale and later provided following a request from NRW. Failure to submit monitoring data in accordance with the requirements of the permit is a breach of permit condition 4.2.3 and attracts a C4 non-compliance score.

Emissions were compliant.

Action 2 - The report includes an incorrect emission limit value for dioxins and furans (I - TEQ) as 0.1 mg/m³, it should be 0.1ng/m³. Please amend for all future submissions. Ensure future returns are submitted on time.

2. Emissions to Surface Water (Emission Point W1)

Emissions compliant

3. Emissions to Sewer (Emission Point E1)

Emissions compliant

4. Other Returns

Form Performance 2 received - nil return

Form Residue 1 received.

July - September 2023**1. Emissions to Air (Emission Point A20)****A) Continuous Emissions Monitoring Data**

During this period the following Schedule 5 notifications were received for CO ELV exceedances.

03/07/23 - CO half hourly average exceedance - plant in start-up (no non-compliance)

12/08/23 - 14/08/23 CO, TOC and PM exceedances - plant non-operational (no non-compliance).

15/09/23 - 30/09/23, 15 exceedances of the half hourly or daily ELVs for TOC are noted in the data. This was queried with the operator who reported that the boiler was shutdown on the 10th September 2023 until early October, therefore these data should not have been included in the report and there are no ELV exceedances.

2. Emissions to Surface Water (Emission Point W1)

Emissions compliant

3. Emissions to Sewer (Emission Point E1)

Emissions compliant

4. Other Returns

Form Performance 2 received - nil return

Form Residue 1 received.

Boiler 7 CEMS Data Handling & Reporting

Permit condition 3.3.5(b) requires that "valid half-hourly average values shall be determined within the effective operating time (excluding the start-up and shut-down periods)..."

ELVs apply during normal operating conditions (NOC) but not during start-up and shut-down (SU & SD).

Operators must still continuously monitor and record their emissions during SU and SD periods, but the results can be excluded from the calculation of half hourly and daily average emissions values and do not need to be reported to us.

As detailed in this and previous reports, routine emissions monitoring returns frequently include data collected during periods of SU and SD with associated Schedule 5 notifications having been raised unnecessarily.

As recently discussed, this issue needs to be addressed.

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.

SU & SD Definitions

It is important that you have clear SU and SD definitions to allow the monitoring software to correctly exclude or include monitoring data as necessary, and that we scrutinise those definitions to ensure that they are appropriate and justified.

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.

SU & SD - Advice & Guidance

Shotton Mill Ltd is due to submit a substantial permit variation application for the redevelopment of the site which will trigger a review of Boiler 7 against the requirements of the 2019 Waste Incineration BAT Conclusions. Part of this review will require that you implement an 'Other Than Normal Operating Conditions' (OTNOC) Management Plan for Boiler 7.

OTNOC Management Plans require (amongst other points) that SU and SD definitions are included.

Draft Environment Agency guidance (adopted by UK regulators) on deriving SU and SD definitions for waste incinerators and co-incinerators has been written to support Officers and Industry. This guidance is attached to this report but please note it may be subject to change before publication.

In meeting the requirements of Action 3 you may wish to review your existing SU and SD definitions against the draft Environment Agency Guidance and submit revised definitions to NRW for agreement.

Please note that changes to SU and SD definitions must not be implemented unless agreed in writing with Natural Resources Wales.

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 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

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.