

## Compliance Assessment Report CAR\_NRW0038745

**Permit being assessed:** AB3790ZB.

For: Barry Energy Production Facility, held by Biomass UK No. 2 Ltd

At: Woodham Rd, Barry, CF63 4JE.

**Type of assessment carried out:** Site Inspection, Reason: Routine.

On 06/08/2021 between 10:00 and 13:00.

Parts of permit assessed: Emissions control, monitoring, and reporting.

**NRW Lead Officer:** Antony Leakey.

**Report sent to:** Chris Lewis, Site Manager on 17/09/2021.

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

Part of permitted activity assessed (criteria)	Assessment result	Permit condition
B1 - Infrastructure - Engineering for prevention and control of emissions	Assessed (A)	
B5 - Infrastructure - Plant and equipment	Assessed (A)	
C2 - General Management - Management system and operating procedures	Assessed (A)	
G1 - Monitoring and Records, Maintenance and Reporting - Monitoring of emissions and environment	Assessed (A)	

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

Total number of non-compliances recorded	Total non-compliance score
0	0

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?

No action required.

### 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.

**At this time, we do not intend to take any further action.**

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

### Pre-performance testing resumption inspection Site Visit Report - 6/8/21

#### Introduction

Biomass UK No. 2 Ltd operations team notified NRW of intent to resume operations and performance testing of the plant from 9 August 2021.

As the plant has not operated since April 2020 NRW undertook a site inspection to review management actions to ensure plant condition is suitable for resuming operations.

#### Aspects examined

- Start-up procedures with reference to expected periods of steam venting to stabilise steam quality.
- Support burners servicing to ensure minimal smoke when restarted.
- Removal and replacement of abatement reagents which will have deteriorated if left in the storage silos, lime and urea will cake and may not feed reliably, lime will absorb atmospheric carbon dioxide and may not be as reactive as fresh material.
- APCR may have caked in the storage silo if not emptied.
- Modifications to the bed cooling and tramp material handling systems.
- Main power breaker UPS battery vulnerability.
- Continuous emissions monitoring condition and reporting set up.

#### Documentation seen

- Plant preservation schedule
- Shift reports covering period April-June 2021
- SOP 17-Start Up Procedure - GB-EFW-BAR-SOP-SOP-LP0017
- Bag house filter specification
- Electrical distribution HV single line diagram
- Continuous emissions monitor (CEM) QAL3 (ongoing performance) report

#### Findings

Start-up procedures are as expected for a plant of this type. No issues were identified with significant potential for offsite noise nuisance or emissions.

Support burners servicing undertaken as part of the preservation programme included planned maintenance, purging of lines and cleaning of burner lances.

A review of plant preservation procedures and records did not identify any vulnerabilities. Most activities were focused on exercising of rotating machinery and valves. Boiler preservation was achieved through nitrogen blanketing. Flue gas path was not inspected, including the bag filter plant for deterioration, condensation and internal corrosion. However, the main fans were run periodically to purge fresh air through the gas path and the natural draft due to the chimney is expected to maintain a sweep of air through the system. The bag filter specification indicates that the materials of construction are of a type that is resistant to

deterioration due to moisture and chemical attack.

It is noted that, while ash and APCR inventories have been removed, lime stocks have been retained in the silo. However, hydrated lime in the silo was emptied to allow the installation of an isolation valve and re-filled 3 months prior to the planned restart. The abatement control system will increase dosing should the performance of the lime change to maintain compliance with ELVs.

During the plant walkover condition was, unsurprisingly, seen to be good and housekeeping tidy despite ongoing modification works associated with the bed cooling system. The bed cooling surfaces have been modified to increase the spacing from the chute wall to prevent blockage with tramp material. An example of a cooling section and the new cooling air fan was seen, the latter installed in a half completed acoustic enclosure.

The inspection regime for the main power breaker UPS battery checks were discussed briefly due to an incident at another incinerator site where back up power was lost due to undetected discharge of the breaker system batteries. It was explained that the system at Barry was configured such that the battery charger supply would always be live, and the same situation would not arise. Examination of the HV Single Line Diagram for the plant indicated that this is the case.

CEMs maintenance and aspects of how the emissions reports are generated and processed were examined. A QAL3 report was generated for the main CEM and reviewed against requirements in the EN 14181 standard:

- Warning and alarm limits are appropriate being ~30-50% Maximum Permitted Uncertainty and are as recommended in TGN M20.
- Peripheral control charts are produced for oxygen only. Again, warning and alarm limits were appropriate. For water vapour alarms should be set up to detect when water vapour results are unrealistic. This was not confirmed.
- There was a break in the zero and span checks between July/October 2020 and July this year. The plant was off during this period, so checks were carried out manually to save wasting span gas. The variability in the charts suggests that more time could have been allowed to determine stability. However, the main issues were detected and rectified (see next point).
- There is some variability in the data, the VOC span has failed with a potentially failing trend on the VOC zero and the SO<sub>2</sub> span exceeding the warning limit. The VOC failure was caused by oil contamination, and the analyser has been stripped, cleaned and recalibrated and no further QAL3 failures have occurred.

The CEM data acquisition and handling system (DAHS) has been set up to trigger data capture for reporting following start up and shut down by waste wood feed ON/OFF signals.

### Conclusions

Based on the aspects examined the plant and emissions monitoring system appears to be in a suitable condition for resumption of operations and no improvement actions have been identified at this stage.

A follow up inspection will take place after a period of stable operation.

END

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.

### **What are suspended scores?**

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 and Waste action criteria (used in section 1 and 2):**

#### **A: Permitted activities**

- A1 Specified by permit

#### **B: Infrastructure**

- B1 Infrastructure – Engineering for prevention and control of emissions
- B2 Infrastructure – Closure and decommissioning
- B3 Infrastructure – Site drainage engineering (clean and foul)
- B4 Infrastructure – Containment of stored materials
- B5 Infrastructure – Plant and equipment

#### **C: General management**

- C1 General management – Staff competency/training
- C2 General management – Management system and operating procedures
- C3 General management – Materials acceptance
- C4 General management – Storage, handling, labelling and segregation

#### **D: Incident management**

- D1 Incident management – Site security
- D2 Incident management – Accidents, emergency and incident planning

#### **E: Emissions**

- E1 Emissions – Air
- E2 Emissions – Land and groundwater
- E3 Emissions – Surface water
- E4 Emissions – Sewer
- E5 Emissions – Waste

#### **F: Amenity**

- F1 Amenity – Odour
- F2 Amenity – Noise
- F3 Amenity – Dust/fibres/particulates and litter
- F4 Amenity – Pests/birds and scavengers
- F5 Amenity – Deposits on road

#### **G: Monitoring and records, maintenance and reporting**

- G1 Monitoring and records, maintenance and reporting – Monitoring of emissions and environment
- G2 Monitoring and records, maintenance and reporting – Records of activity, site diary/journal/events
- G3 Monitoring and records, maintenance and reporting – Maintenance records
- G4 Monitoring and records, maintenance and reporting – Reporting and notification to Natural Resources Wales

#### **H: Resources efficiency**

- H1 Resource efficiency – Efficient use of raw materials
- H2 Resource efficiency – Energy efficiency

## Enforcement response

Any permit condition non-compliance 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 20 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 – 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.