

North West Biomass Ltd, Unit B&C, Tir Llwyd Enterprise Park, Kinmel Bay, Conway LL18 5JH

Part B Installation Small Waste Incineration Plant and Specified Generator

Environmental Permit ref: PAN-005139

1. Introduction

- 1.1. The recently granted Environmental Permit (PAN-005139) for the above installation includes a Pre-Operational Measure (PO1) requiring the submission of a report detailing the methodology to be employed at the facility for undertaking the monitoring of dark smoke.
- 1.2. The following details the methodology as required under PO1 and as specified in Table S3.1; the relevant section of which is reproduced below.

Schedule 3 – Emissions and Monitoring

Table S3.1: Point source emission to air – emission limits and monitoring requirements for plants rated a thermal input of 5 MWth or more but less than 3 tonnes per hour input						
Emission point as referred to in table S1.1	Source	Parameter	Limit (including unit)	Reference period	Monitoring frequency	Monitoring standard or method
Biomass CHP Plant Exhaust NGR: SH 98602 78872	Sch1 Ch5 5.1 Part B and Sch 25B Specified Generator	Dark smoke	No visible dark smoke	Daily when in operation	Daily when in operation	Ringelmann Chart Shade 1. Methodology as approved in accordance with pre-operational measure PO1

Only relevant section of Table S3.1 reproduced

- 1.3. The aim of the monitoring is to ensure the absence of persistent 'dark smoke'¹ from the CHP plant exhaust as required under the Permit and supporting statutory Technical Guidance².

2. Monitoring

- 2.1. Visual inspections will be undertaken by suitably trained staff of the CHP Plant Exhaust to determine the presence of any visible emissions, other than condensed water vapour. The monitoring will be undertaken on a daily basis during normal operations. The monitoring will not be undertaken during start-up or shut-down.
- 2.2. The monitoring will be undertaken using the miniature Ringelmann Chart as described in British Standard BS 2742:2009³.
- 2.3. In undertaking the monitoring the following points will be noted:
- the chart will be mounted so as to be held firmly without creases or bending;
 - the chart will be used under daylight conditions, where possible under conditions of uniform general illumination;
 - where observations are made with the sun shining or the sky bright on one side, the bright source of illumination should be at right angles to the line of vision and not in front or behind the observer;
 - where possible the chart should be in line with the top of the chimney and placed so the chart and smoke have a similar sky background;
 - the angle of view of the chart and smoke should be as low as possible;

¹ Where 'dark smoke' is as defined in Section 3(1) of the Clean Air Act 1993

² Environmental Permitting Technical Note 5/1(18), Final Draft, dated 15/08/18

³ BSI Standards Publication: BS 2742:2009 Use of the Ringelmann and miniature smoke charts, 31 May 2009

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- the chart should be held at a distance of 1.5m from the observer's eye, or if necessary at arms' length.
- 2.4. The darkness of the smoke at the point where it leaves the chimney will be compared to the shades of the chart, the number of the shade which appears to most closely match the darkness of the smoke determined and the time of the duration of this darkness of smoke noted.
- 2.5. Where visible smoke emissions exceed Chart Shade 1 (i.e. are Shade 2 or above) during normal operation then further inspection will be undertaken to identify the cause and take corrective action without delay.
- 2.6. The chart will be discarded if it becomes appreciably soiled or discoloured.
3. Records and Record Keeping
- 3.1. Records will be made of all inspections as required under Section 4.1 of the Environmental Permit in the site log book (or otherwise as applicable). The records will be maintained for at least 6 years.
- 3.2. Where any 'dark smoke' is recorded additional records will be maintained of the cause and remedial action taken along with information on the prevailing weather conditions (indicative wind direction and strength) at the time.