



Standard rules SR2022

No 01 On-farm anaerobic digestion facility using farm wastes only, including use of the resultant biogas

Introductory note

This introductory note does not form part of these standard rules

These rules are limited to premises used for agriculture and to wastes arising from on-farm, including dairies and are available to operators with an anaerobic digestion capacity of over 100 tonnes of waste or a combination of waste and non-waste – both solid and liquid - on any one day. For anaerobic digesters operating below this threshold, standard rules for waste recovery operations are available.

These Standard Rules cover the implementations of the Medium Combustion Plant Directive and Specified Generators Regulations for a new Medium Combustion Plant (MCP) and Tranche B Generator without secondary abatement.

The operations must comply with best available techniques (BAT) conclusions and BAT Associated Emissions Limits (AEL). These are laid out in the Best Available Techniques Reference Document (BREF) for Waste Treatment; Industrial Emission Directive 2010/75/EU) Integrated pollution Prevention and control) 2018. Chapter 6 stipulates the BAT conclusions for waste operations in general, and specifically for biological treatment of waste.

Sites permitted before August 2018 are required to comply with BAT conclusions and AEL by 17 August 2022.

When referred to in an environmental permit, these rules will allow the operator to carry out the anaerobic digestion of wastes and the combustion of the resultant biogas in gas engines with an aggregate rated thermal input of up to 5 megawatts. The rules also allow use of gas turbines, boilers, fuel cells and treatment and/or upgrading the biogas to biomethane.

Permitted wastes do not include hazardous wastes. The total quantity of waste or a combination of waste and non waste including both solid and liquids must not exceed 100,000 tonnes per year. Any wastes controlled by the Animal By-Products Regulations must be treated and handled in accordance with any requirements imposed by those Regulations.

These standard rules do not allow any emission into surface waters or groundwater except clean water from roofs and parts of the site not used for waste activity including storage of wastes. However, under the emissions of substances not controlled by emission limits rule, biogas condensate, treated digestate and waste waters may be discharged to a sewer subject to a consent issued by the local water company.

These rules do not apply to installations with more than one operator.

End of Introductory Note

Rules

1 - Management

1.1 General management

- 1.1.1 The operator shall manage and operate the activities:
- (a) in accordance with a written management system that identifies and minimises risks of pollution, including those arising from operations, maintenance, accidents, incidents, nonconformances closure and those drawn to the attention of the operator as a result of complaints; and
 - (b) using sufficient competent persons and resources.
- 1.1.2 Records demonstrating compliance with condition 1.1.1 shall be maintained.
- 1.1.3 Any person having duties that are or may be affected by the matters set out in these standard rules shall have convenient access to a copy of them kept at or near the place where those duties are carried out.
- 1.1.4 The operator shall comply with the requirements of an approved competence scheme.

1.2 Energy efficiency

- 1.2.1 The operator shall:
- (a) take appropriate measures to ensure that energy is used efficiently in the activities;
 - (b) review and record at least every 4 years whether there are suitable opportunities to improve the energy efficiency of the activities; and
 - (c) take any further appropriate measures identified by a review.

1.3 Efficient use of raw materials

- 1.3.1 The operator shall:
- (a) take appropriate measures to ensure that raw materials and water are used efficiently in the activities;
 - (b) maintain records of raw materials and water used in the activities;
 - (c) review and record at least every 4 years whether there are suitable alternative materials that could reduce environmental impact or opportunities to improve the efficiency of raw material and water use; and
 - (d) take any further appropriate measures identified by a review.

1.4 Avoidance, recovery and disposal of wastes produced by the activities

- 1.4.1 The operator shall take appropriate measures to ensure that:
- (a) the waste hierarchy referred to in Article 4 of the Waste Framework Directive is applied to the generation of waste by the activities; and
 - (b) any waste generated by the activities is treated in accordance with the waste hierarchy referred to in Article 4 of the Waste Framework Directive; and

(c) where disposal is necessary, this is undertaken in a manner which minimises its impact on the environment.

1.4.2 The operator shall review and record at least every four years whether changes to those measures should be made and take any further appropriate measures identified by a review.

2 - Operations

2.1 Permitted activities

2.1.1 The operator is only authorised to carry out the activities specified in table 2.1 below ("the activities").

2.1.2 The activities shall be undertaken in accordance with best available techniques.

Table 2.1 Activities	
Description of activities	Limits of activities
<p>Section 5.4 Part A(1) (b) (i) and Section 6.8 Part A(1)(c) of the Environmental Permitting Regulations – Recovery of Waste</p> <p>R1: Use principally as a fuel or other means to generate energy</p> <p>R3: Recycling or reclamation of organic substances that are not used as solvents</p> <p>R13: Storage of wastes pending the operations numbered R1 and R3</p> <p>D10: Incineration on land</p> <p>New Medium Combustion Plant and / or Specified Generator</p>	<p>All activities must be carried out on premises used for Agriculture</p> <p>Anaerobic digestion of waste and the following associated activities:</p> <ul style="list-style-type: none"> • Physical treatment of waste including shredding, sorting, screening, compaction, bailing, mixing and maceration • Waste pasteurisation and chemical addition • Gas cleaning and upgrading to biomethane • Gas storage and drying • Treatment of digestate including screening to remove plastic residues, centrifuge or pressing, addition of thickening agents (polymers) or drying (other than for the purpose of use as a fuel) • Maturation of digestate • The use of combustible gases produced as a by-product of the anaerobic digestion process as fuel • Burning of biogas in gas engines, gas turbines, boilers and use in fuel cells • Use of an auxiliary flare required only for short periods of breakdown or maintenance of the facility

	<ul style="list-style-type: none"> • Use of pressure release valves to protect the integrity of the plant. Such systems should not be used routinely to vent unburnt biogas <p>The total quantity of waste or a combination of waste and non-waste including solids and liquids accepted at the site shall not exceed 100,000 tonnes a year.</p> <p>Except for the auxiliary flare, the aggregate rated thermal input of all appliances used to burn biogas shall be less than 5 megawatts.</p> <p>The MCP and / or generator must not have secondary abatement</p> <p>The MCP and / or generator must not be mobile</p>
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2.1.2 All process plant and equipment shall be commissioned, operated and maintained, and shall be fully documented and recorded, in accordance with the manufacturers recommendations.

2.2 The site

2.2.1 The activities shall not extend beyond the site, being the land shown edged in green on the site plan attached to the permit.

2.2.2 The activities shall not be carried out within:

- (a) 10 metres of any watercourse;
- (b) a groundwater source protection zone 1, or if a source protection zone has not been defined then within 50 metres of any well, spring or borehole used for the supply of water for human consumption.

2.2.3 The gas engine stack must be a minimum of 3 metres in height and must not be located within:

- (a) 500 metres of a European Site or a Site of Special Scientific Interest (excluding any site designated solely for geological features);
- (b) 200 metres from the nearest sensitive receptor in cases where the stack does not have an "effective" stack height of 3 metres or more, or the stack is less than 7 metres in height.

2.3 Waste acceptance

2.3.1 Waste shall only be accepted if:

- (a) it is of a type and quantity listed in tables 2.1 and 2.3 of these rules;
- (b) it conforms to the description in the documentation supplied by the producer and holder;
- (c) the waste is biodegradable; and
- (d) wastes that are animal by-products or contain animal by-products must be handled and processed in accordance with any requirements and restrictions imposed by the animal by-products legislation.

2.3.2 Records demonstrating compliance with rule 2.3.1 shall be maintained.

Table 2.3 Waste Types	
Waste codes	Description
02	WASTES FROM AGRICULTURE, HORTICULTURE, AQUACULTURE, FORESTRY, AND HUNTING, FISHING, FOOD PREPARATION AND PROCESSING
02 01	wastes from agriculture, horticulture, aquaculture, forestry, hunting and fishing
02 01 01	sludges from washing and cleaning – vegetables, fruit and other crops
02 01 03	plant tissue waste
02 01 06	animal faeces, urine, manure (including spoiled straw) only
02 05	wastes from the dairy products industry
02 05 01	materials unsuitable for consumption or processing
02 05 02	sludges from dairies effluent treatment

2.4 Operating techniques

2.4.1 The activities shall be operated using the techniques and in the manner described in Table 2.4 below.

Table 2.4 Operating Techniques	
Description	
1) All waste solids, liquids and sludges shall be securely stored. In the event of a leak, spill or failure, material can be contained and recovered.	
2) All storage and process tanks shall be fit for purpose and shall be regularly inspected and maintained in accordance with rule 2.1.2. In the event of a leak, spill or failure, material can be contained and recovered.	
3) Digestate shall be stored within containers or lagoons and should be of a design and capacity fit for purpose. The lagoon shall have a free board of 750 mm.	
4) Gas engine stack height shall be no less than 3 metres.	
5) Periods of start-up and shut down of the MCP and generator must be kept as short as possible	
6) There is no persistent emission of 'dark smoke' as defined in section 3(1) of the Clean Air Act 1993	
7) The stack(s) must be vertical and unimpeded by cowls or caps	
8) All biogas condensate shall be discharged into a sealed drainage system or recirculated back to the digester.	
9) Emissions of unburned biogas and the operation of the auxiliary flare shall be minimised. Any significant emissions of unburned biogas (including the operation of the pressure relief valves) and the operation of the auxiliary flare shall be recorded.	

For new operators, before starting the activities, the Operator shall

- (a) submit a validation report for all critical infrastructure (primary and secondary containment) and ensure that these have been designed and built to CIRIA 736 report recommendations or an equivalent approved standard
- (b) submit a commissioning plan to Natural Resources Wales which details a validated engineer report and the commissioning of any plant including where appropriate any air management and abatement systems. Following commissioning, a scheme of inspection and maintenance shall be incorporated in the management system
- (c) undertake a Hazard and Operability Study (HAZOP) or similar risk identification technique and document any actions
- (d) produce and submit a schedule of planned maintenance as identified by the HAZOP or risk assessment or suppliers, which shall be documented

All sites permitted after August 2018 and any new operations must be compliant with all relevant BAT conclusions and BAT AELs

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Technique 1

- (a) all waste solids, liquids and sludges shall be securely stored
- (b) the acceptance, storage and physical treatment of wastes shall take place only on an impermeable surface with sealed drainage system that meets the recommendations of a CIRIA 736 report or an equivalent approved standard
- (c) all process and storage tanks shall be regularly inspected and maintained, and a record maintained
- (d) all tanks shall be fitted with level sensors

Technique 2

The volume of waste in storage and in digesters must not exceed the design capacity.

Technique 3

Incidental, non-compostable and digestible fractions shall be removed from the waste prior to processing to a low as practicable level.

Technique 4

- (a) waste shall be stored for the minimum time practicable before treatment
- (b) quarantined and rejected waste shall be stored in closed containers or covered and removed to a regulated facility within 5 days

Technique 5

- (a) digestate shall be stored within covered containers or covered lagoons
- (b) for new operations all lagoons shall be constructed in accordance with a CIRIA 736 report or equivalent approved standard before operations start
- (c) for all storage lagoons and tanks the operator shall maintain a freeboard of at least 750mm

Technique 6

The operator shall have a site drainage plan that clearly shows clean and dirty water drainage and detail any discharge points as Technique 7.

Technique 7

Discharges to groundwater or surface watercourses shall consist of clean water only.

Technique 8

The operator shall have an inspection, maintenance and repair schedule of the facility's critical infrastructure, including the impermeable surfacing and drainage system and shall implement the same.

Technique 9

(a) all storage and process tanks shall be located on an impermeable surface (a hydraulic permeability of not greater than 1×10^{-9} m/s) with sealed construction joints within a bunded area (secondary containment). The bunded area or secondary containment shall have a capacity at least 110% of the largest vessel or 25% of the total tankage volume, whichever is the greater

(b) the bund or secondary containment area shall be regularly inspected to ensure they are regularly emptied of rainwater

(c) connections and fill points shall be within the bund or secondary containment

(d) no pipework should penetrate the bund wall or secondary containment unless the construction is compliant with CIRIA 736 report

Technique 10

(a) underground tanks shall have 100% secondary containment capacity and appropriate leak detection. 95% of that capacity must be maintained at all times

(b) for new operations all tanks and containers shall have secondary containment that complies with a CIRIA 736 report or an equivalent approved standard

Technique 11

(a) all air extraction and abatement systems shall be designed and built specifically for the facility by a suitably qualified engineer. These shall be inspected and maintained, and a record kept

Technique 12

(a) all tankers loading and discharging shall be supervised

(b) transfer areas shall be monitored to ensure valves are sealed when not transferring

(c) where required waste shall be accompanied by a washout certificate

Technique 13

(a) an auxiliary standby flare shall be available to combust unburnt surplus biogas or bio methane

(b) the operator shall only use the auxiliary standby flare in the event of an emergency and during maintenance to protect the integrity of the plant

(c) flare operation shall be recorded

Technique 14

(a) pressure systems shall be designed to accommodate the routine variation in gas flow, production and pressure events

(b) gas pressures shall be monitored and recorded

(c) the pressure relief and vacuum systems shall be inspected to ensure they are correctly seated

(d) the operator shall document and undertake a written scheme of inspection and maintenance in line with an industry standard

(e) emissions of unburnt biogas shall be minimised

Technique 15

(a) each combustion plant shall be operated and maintained in accordance with its manufacturer's instructions

(b) records shall be made and retained to demonstrate this

(c) periods of start-up and shut-down must be kept as short as possible

(d) there shall be no persistent emission of 'dark smoke' as defined in section 3(1) of the Clean Air Act 1993

Technique 16

All combustion stacks are at least 7 metres high with an effective stack height of greater than 3 metres and shall be vertical and unimpeded by cowls or caps.

Technique 17

All biogas condensate shall be discharged into a sealed drainage system or recirculated back to the digester.

Technique 18

Drying separated digestate fibre can only be undertaken in a suitably designed closed system from which all emissions shall be extracted and treated in a suitably engineered and maintained abatement system.

Technique 19

Composting of digestate fibre shall be undertaken to promote aerobic conditions in one of the following ways:

(a) in closed buildings with a suitably designed abatement system

(b) in the open with suitably designed and abated negative aeration or covers

Technique 20

(a) operators shall have procedures and contingency measures in place for when gas grid demand is reduced. Venting and flaring of gas for disposal purposes is not permitted

(b) Operators shall have procedures and contingency plans in place for digestate management when the ability to move their digestate or compost or the demand for the digestate or compost by end users is reduced

Technique 21

Methane leak detection and programmed routine maintenance inspections and repair shall be carried out and a record maintained.

Improvement conditions

Operators of existing facilities (permits issued before 20 December 2021) shall:

1. Undertake an inspection and works programme to ensure that all primary and secondary containment is fit for purpose and shall include:

(a) an assessment and inspection of all primary containment, using a Written Scheme of Examination devised and undertaken by an appropriately qualified certified engineer

(b) an assessment and inspection of all secondary containment against the standards set out in CIRIA 736 by a chartered structural engineer

(c) written reports of the findings of a) and b) (improvement condition 1) shall be submitted to Natural Resources Wales. Where the reports do not demonstrate that critical primary and secondary containment is fit for purpose, the reports shall contain detailed proposals to bring the containment up to the required standards including timescales for the implementation of individual measures ('the measures'), or shall propose alternative appropriate measures to ensure all polluting materials will be contained on site

(d) where it contains proposals for works, the report recommendations shall be implemented by the operator in accordance with Natural Resources Wales's written approval

2. Produce and submit a schedule of planned improvement and maintenance as identified by a HAZOP or risk assessment and, or suppliers.

3. Submit to the Natural Resources Wales a register of all combustion plant on-site in the format detailed in Appendix A to these rules.

4. Operators at existing facilities shall submit a report setting out progress to achieving the BAT conclusions and BAT-AEL's where BAT is currently not achieved but will be achieved.

The report shall include, but not be limited to, the following:

(a) current performance against the BAT conclusions and BAT-AELs

(b) associated targets and timelines for reaching compliance.

3 Emissions and monitoring

3.1 Emissions to air, water or land

3.1.1 There shall be no point source emissions to air, water or land, except from the sources and emission points listed in table 3.1

3.1.2 The limits given in table 3.1 shall not be exceeded.

3.1.3 Periodic monitoring shall be carried out at least once every 5 years for groundwater and 10 years for soil, unless such monitoring is based on a systematic appraisal of the risk of contamination.

Table 3.1 Point source emissions to air - emission limits and monitoring requirements

Emission point and source	Parameter	Limit (including units)	Monitoring frequency and standard or method
Stacks on engines operational before 20 Dec 2018	Oxides of Nitrogen (NO and NO2 expressed as NO2)	500 mg/m3	Annual monitoring Monitoring equipment, techniques, personnel and organisations employed for the engine stack emissions monitoring programme (including the measurement of exhaust gas temperature) shall have either MCERTS
	Carbon monoxide	1400 mg/m3	
	Sulphur dioxide	350 mg/m3	

	Total volatile organic compounds including methane	1000 mg/m ³	<p>certification or MCERTS accreditation (as appropriate)</p> <p>Emission levels at Normal Temperature and Pressure and 5%O₂, unless otherwise agreed in writing by Natural Resources Wales</p> <p>Uncertainty allowance as stated in EA guidance LFTGN08 v2 2010</p> <p>To ensure effective plume breakaway, minimum stack gas exit velocity shall be no less than 15 m/s or 12 m/s where stack volume flow is less than 0.5 m³/s; OR The gas exit temperature shall be no less than 200°C</p>
Stacks on new engines put in operation after 20 Dec 2018	Oxides of Nitrogen (NO and NO ₂ expressed as NO ₂)	500 mg/m ³	<p>Annual monitoring</p> <p>Monitoring equipment, techniques, personnel and organisations employed for the engine stack emissions monitoring programme (including the measurement of exhaust gas temperature) shall have either MCERTS certification or MCERTS accreditation (as appropriate)</p> <p>All limits are defined at a temperature of 273.15 K, a pressure of 101.3 kPa and after correction for the water vapour content of the waste gases at a standardised O₂ content of 5%.</p> <p>Uncertainty allowance as stated in EA guidance LFTGN08 v2 2010</p> <p>To ensure effective plume breakaway, minimum stack gas exit velocity shall be no less than 15 m/s or 12 m/s where stack volume flow is less than 0.5 m³/s; OR The gas exit temperature shall be no less than 200°C</p>
	Carbon monoxide	1400 mg/m ³	
	Sulphur dioxide	107 mg/m ³	
	Total volatile organic compounds including methane	1000 mg/m ³	
	Dust	No limit set	
Stacks on boilers burning biogas	Oxides of Nitrogen (NO and NO ₂ expressed as NO ₂)	No limit set	None specified.
Stacks or vents on biogas upgrading plant	No parameter set	No limit set	None specified.

Stacks or vents on biofilter and/or scrubbing system	No parameter set	No limit set	Biofilter and/or scrubbing system shall be regularly checked and maintained to ensure that they remain effective
Auxiliary flare	Operating Hours	No limit set	None specified. (Record to be submitted annually)
Pressure relief valves	Biogas	No limit set	Weekly visual or remote monitoring to ensure valves are correctly seated.
Emissions of pollutants into the environment through any kind of duct, pipe or stack. Either the BAT-AEL for NH ₃ or the BAT-AEL for the odour concentration applies	Ammonia (NH ₃)	20 mg/Nm ³	Periodic over minimum 1-hour period. The monitoring frequency is once every 6 months. EN ISO 21877 to be used for stacks
	Odour concentration	1,000 ouE/Nm ³	BS EN 13725 Open biofilters methodology as agreed with Natural Resources Wales

3.2 Emissions of substances not controlled by emission limits

- 3.2.1 Emissions of substances not controlled by emission limits (excluding odour) shall not cause pollution. The operator shall not be taken to have breached this rule if appropriate measures, including, but not limited to, those specified in any approved emissions management plan, have been taken to prevent or where that is not practicable, to minimise, those emissions.
- 3.2.2 The operator shall:
- (a) if notified by Natural Resources Wales that the activities are giving rise to pollution, submit to Natural Resources Wales for approval within the period specified, an emissions management plan;
 - (b) implement the approved emissions management plan, from the date of approval, unless otherwise agreed in writing by Natural Resources Wales.
- 3.2.3 All liquids in containers, whose emission to water or land could cause pollution, shall be provided with secondary containment, unless the operator has used other appropriate measures to prevent or where that is not practicable, to minimise leakage and spillage from the primary container.
- 3.2.4 The operator will implement a leak detection and repair (LDAR) programme to detect and mitigate release of volatile organic compounds, including methane. The operator shall undertake a minimum of annual inspections and provide a summary report as set out in rule 4.2.1

3.3 Odour

- 3.3.1 Emissions from the activities shall be free from odour at levels likely to cause pollution outside the site, as perceived by an authorised officer of Natural Resources Wales, unless the operator has used appropriate measures, including, but not limited to, those specified in any approved odour management plan, to prevent or where that is not practicable, to minimise, the odour.
- 3.3.2 The operator shall:

- (a) maintain and implement an odour management plan;
- (b) if notified by Natural Resources Wales that the activities are giving rise to pollution outside the site due to odour, submit to Natural Resources Wales for approval within the specified period, a revised odour management plan;
- (c) implement any approved revised odour management plan from the date of approval, unless otherwise agreed in writing by Natural Resources Wales.

3.4 Noise and vibration

3.4.1 Emissions from the activities shall be free from noise and vibration at levels likely to cause pollution outside the site, as perceived by an authorised officer of Natural Resources Wales, unless the operator has used appropriate measures, including, but not limited to, those specified in any approved noise and vibration management plan, to prevent or where that is not practicable, to minimise, the noise and vibration.

3.4.2 The operator shall:

- (a) if notified by Natural Resources Wales that the activities are giving rise to pollution outside the site due to noise and vibration, submit to Natural Resources Wales for approval within the period specified, a noise and vibration management plan;
- (b) implement the approved noise and vibration management plan, from the date of approval, unless otherwise agreed in writing by Natural Resources Wales.

3.5 Monitoring

3.5.1 The operator shall, unless otherwise agreed in writing by Natural Resources Wales, undertake the monitoring specified in table 3.1.

3.5.2 The operator shall maintain records of all monitoring required by these standard rules including records of the taking and analysis of samples, instrument measurements (periodic and continual), calibrations, examinations, test and surveys and any assessment or evaluation made on the basis of such data. These records shall be submitted to Natural Resources Wales annually in the form of a report.

Table 3.5 Process monitoring requirements		
Description	Requirement	Frequency
Monitoring meteorological conditions	i) wind speed (ii) air temperature (iii) wind direction	The operator shall monitor these parameters continuously
Monitoring digester process and gas production	(i) digester stability (ii) gas volume and quality (iii) gas pressure The operator shall: (iv) record to a supervisory control and data acquisition (SCADA) system (v) carry out digester process and gas production measurements	The operator shall monitor these parameters continuously

	within 4 months of the date the permit is issued, or the date when the medium combustion plant or grid injection is first put into operation, whichever is later		
Monitoring primary containment and tank integrity	<p>(i) maintain daily operational records of capacity and storage</p> <p>(ii) inspect tank integrity in accordance with the design specification</p> <p>(iii) assess sediment build up and remove sediment as appropriate</p> <p>(iv) from the date of commission inspect the tank and carry out a non-destructive pressure testing integrity assessment 5 yearly or as specified by the manufacturers technical specification, whichever is more frequent</p>		
Process monitoring air abatement and gas upgrade abatement systems			
Parameter	Limit	Monitoring standard or method	Other specifications
Surface conditions (signs of vegetation and channelling or bypass)	Daily	Visual assessment	In accordance with Odour Management Plan
Inlet and outlet temperature	Continuous	Temperature probe	Requirements as for surface conditions
Gas flow rate inlet and outlet	Continuous	Gas flow meter	Requirements as for surface conditions
Moisture	Daily	Grab test or oven drying	Requirements as for surface conditions
Thatching and compaction	Weekly	Back pressure	Requirements as for surface conditions
pH	Weekly	pH meter or litmus paper	Requirements as for surface conditions
Efficiency assessment	Annually	Emission removal efficiency	Annual report detailing the removal efficiency of all abatement systems and planned maintenance
Air abatement system shall be monitored in accordance with its design specifications and records will be made available on request			

Emission assessment may be more frequent to ensure optimum emission abatement			
Monitoring equipment, techniques, personnel and organisations employed for the emissions monitoring programme (including the measurement of exhaust gas temperature) shall be UKAS accredited			
Monitoring fugitive emissions			
Parameter	Limit	Monitoring standard or method	Other specifications
Volatile organic compounds, including methane	As agreed with Natural Resources Wales	Leak detection and repair	<ul style="list-style-type: none"> - EN 15446 - Monitoring points as specified in a DSEAR risk assessment and LDAR programme - Limit as agreed with Natural Resources Wales as a percentage of the overall gas production
Auxiliary flare usage	Continuous	SCADA	Operational record including date, time and duration of use shall be recorded
Pressure relief valves and vacuum systems - gas pressure	Continuous	SCADA	Continuous gas pressure shall be monitored
Reseating	Minimum weekly	Visual	Ensure that valves are re-seated after release in accordance with the manufacturers design
Inspection, maintenance, calibration, repair and validation	Following foaming or over topping or at 3 yearly intervals whichever is sooner	Written scheme of examination	<ul style="list-style-type: none"> - After a foaming event or sticking, build-up of debris, obstructions or damage - Operators must ensure that PRV function remains within designed operation gas pressure in accordance with the manufacturer's design by suitably trained and qualified personnel

Inspection, calibration and validation report	In accordance with design and construction specifications or after over topping or foaming event	Written scheme of examination	Requirements as for maintenance
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4 Information

4.1 Records

All records required to be made by these standard rules shall:

- (a) be legible;
- (b) be made as soon as reasonably practicable;
- (c) if amended, be amended in such a way that the original and any subsequent amendments remain legible or are capable of retrieval; and
- (d) be retained, unless otherwise agreed by Natural Resources Wales, for at least 6 years from the date when the records were made, or in the case of the following records until permit surrender:
 - (i) off-site environmental effects; and
 - (ii) matters which affect the condition of land and groundwater.

4.1.2 The operator shall keep on site all records, plans and the management system required to be maintained by these standard rules, unless otherwise agreed in writing by Natural Resources Wales.

4.1.3 The operator must maintain a record of the type and quantity of fuel used in the MCPs.

4.1.4 The operator must maintain a record of any events of non-compliance and the measures taken to ensure compliance is restored in the shortest possible time.

4.2 Reporting

4.2.1 The operator shall send all reports and notifications required by these standard rules to Natural Resources Wales using the contact details supplied in writing by Natural Resources Wales in accordance with table 4.2.

4.2.2 Within one month of the end of each quarter, the operator shall submit to Natural Resources Wales using the form made available for the purpose, the information specified on the form relating to the site and the waste accepted and removed from it during the previous quarter.

4.2.3 The operator shall keep records of the material exported from the site as non-waste including the type of material, the tonnage of material, the batch number and the date of export. This information shall be reported to Natural Resources Wales within one month of the end of each quarter and the records shall be maintained for at least 2 years.

Table 4.2 Reporting requirements		
Parameter	Emission or monitoring point (reference)	Report frequency
Emissions from the combustion plant	In accordance with rule 3.1	By 31 January of each year
Efficiency of biofilter and other abatement systems	In accordance with rule 3.5	By 31 January each year detailing the removal efficiency of all abatement systems and planned maintenance (in accordance with rule 3.3.1)
Digester process and gas production process monitoring	In accordance with rule 3.5	Summary reports - quarterly during the first year then yearly thereafter or as agreed with the Natural Resources Wales
Digester tank integrity	In accordance with rule 3.5	5-yearly from the date of commission or as per the manufacturer's recommendation, whichever is sooner
Under and over pressure relief systems	Inspection and calibration maintenance in accordance with rule 3.5	Yearly summary report of over-pressure and under-pressure events detailing mass balance release
Leak detection and repair	Inspection calibration and maintenance	Yearly summary report by 31 January
Use of auxiliary flare burning surplus biogas	In accordance with rule 3.5	Submit a report of flare usage by the 31 January each year. Note: you are not required to report routine maintenance testing of flares for short periods, but they should be clearly documented
Non-compostable contamination removal efficiency	In accordance with rules 2.3 and 2.4	By 31 January each year, submit a report detailing contamination removal efficiency and progress with plastic reduction contamination
Waste returns	In accordance with rule 4.2.2	Within one month of the end of each quarter
Recovered outputs	In accordance with 4.2.3	Within one month of the end of each quarter
Medium combustion plant and generators	In accordance with 4.3.5	Each year on 31 January detailing date commissioned location, serial number and thermal input for each unit as detailed in Appendix A. New plant must be notified in accordance with rule 4.3.7

4.3 Notifications

- 4.3.1 Natural Resources Wales shall be notified without delay following the detection of:
- (a) any malfunction, breakdown or failure of equipment or techniques, accident or emission of a substance not controlled by an emission limit which has caused, is causing or may cause significant pollution;
 - (b) the breach of a limit specified in these standard rules; or
 - (c) any significant adverse environmental effects.
- 4.3.2 Written confirmation of actual or potential pollution incidents and breaches of emission limits shall be submitted within 24 hours.
- 4.3.3 Where Natural Resources Wales has requested in writing that it shall be notified when the operator is to undertake monitoring and/or spot sampling, the operator shall inform Natural Resources Wales when the relevant monitoring and/or spot sampling is to take place. The operator shall provide this information to Natural Resources Wales at least 14 days before the date the monitoring is to be undertaken.
- 4.3.4 Natural Resources Wales shall be notified within 14 days of the occurrence of the following matters except where such disclosure is prohibited by Stock Exchange rules:
- (a) Where the operator is a registered company:
 - any change in the operator's trading name, registered name or registered office address; and
 - any steps taken with a view to the operator going into administration, entering into a company voluntary arrangement or being wound up.
 - (b) Where the operator is a corporate body other than a registered company:
 - any change in the operator's name or address; and
 - any steps taken with a view to the dissolution of the operator.
 - (c) In any other case:
 - the death of any of the named operators (where the operator consists of more than one named individual);
 - any change in the operator's name(s) or address(es); and
 - any steps taken with a view to the operator, or any one of them, going into bankruptcy, entering into a composition or arrangement with creditors, or, in the case them being in a partnership, dissolving the partnership.
- 4.3.5 Without undue delay Natural Resources Wales shall be notified of planned change to the MCP which would affect the applicable ELV.

4.4 Interpretation

- 4.4.1 In these standard rules the expressions listed below shall have the meaning given.
- 4.4.2 In these standard rules references to reports and notifications mean written reports and notifications, except when reference is being made to notification being made "without delay", in which case it may be provided by telephone.

'accident' means an accident that may result in pollution

'accident management plan' means a plan that identifies risks and failures which can have an impact on the environment or have environmental consequences. The plan must minimise the potential causes and consequences and identify clearly, the roles, responsibilities and action to be taken to minimise the consequences of accidents. This includes measures to prevent and control fires on site (see fire prevention plan). This must take into account any raw material stored on site and include clearly marked zoning as identified in the DSEAR risk assessment or plan

"agriculture" means as defined in The Agriculture Act 1947 including: -"horticulture, fruit growing, seed growing, dairy farming and livestock breeding and keeping, the use of land as grazing land, meadow land, osier land, market gardens and nursery grounds, and the use of land for woodlands where that use is ancillary to the farming of the land for other agricultural purposes, and 'agriculture' shall be constructed accordingly"

'anaerobic digestion' means a process of controlled decomposition of biodegradable materials under managed conditions where free oxygen is absent, at temperatures suitable for naturally occurring mesophilic or thermophilic anaerobe and facultative anaerobe bacteria species, which convert the inputs to a methane-rich biogas and whole digestate

"animal by-products" are defined in Article 3 of Regulation (EC) 1069/2009 as 'entire bodies or parts of animals, products of animal origin or other products obtained from animals that are not intended for human consumption'. This includes catering waste, used cooking oil, former foodstuffs, butcher and slaughterhouse waste, blood, feathers, wool, hides and skins, fallen stock, pet animals, zoo and circus animals, hunt trophies, manure, ova, embryos and semen not intended for breeding purposes.

"animal by-products legislation" refers to animal by-products which are subject to the requirements and controls in Regulation (EC) 1069/2009 (as amended) and its corresponding implementing Regulation (EC) 142/2011 (as amended). These are enforced through The Animal By-Products (Enforcement) (England) Regulations 2011 and The Animal By-Products (Enforcement) (No2) (Wales) Regulations 2011. You will need to add NI and Scot legislation if QP covers the UK.

'animal waste' means any waste consisting of animal matter that has not been processed into food for human consumption. This does include, blood, feathers, uncooked butchers waste and any other animal waste that is not catering waste or former foodstuffs. This does not include faecal matter from animals

'associated emission levels (AELs)' is the emission limit associated with the best available techniques as set out in the Best Available Techniques Reference Document (BREF) for Waste Treatment

'authorised officer' means any person authorised by Natural Resources Wales under section 108(1) of The Environment Act 1995 to exercise, in accordance with the terms of any such authorisation, any power specified in Section 108(4) of that Act

'auxiliary flares' means flares that are able to burn biogas in the event of emergency or maintenance of the plant and that achieve complete destruction of all volatile compounds. These are also referred to as surplus gas burners

'best available techniques' means the most effective and advanced stage in the development of activities and their methods of operation which indicates the practical suitability of particular techniques for providing the basis for emission limit values and other permit conditions designed to prevent and, where that is not practicable, to reduce emissions and the impact on the environment as a whole:

(a) 'techniques' includes both the technology used and the way in which the installation is designed, built, maintained, operated and decommissioned

(b) 'available techniques' means those developed on a scale which allows implementation in the relevant industrial sector, under economically and technically viable conditions, taking into consideration the costs and advantages, whether or not the techniques are used or produced inside the Member State in question, as long as they are reasonably accessible to the operator

(c) 'best' means most effective in achieving a high general level of protection of the environment as a whole

'biodegradable' means a material is capable of undergoing biological anaerobic or aerobic degradation leading to the production of CO₂, H₂O, methane, biomass, and mineral salts, depending on the environmental conditions of the process

'capacity' means the potential capacity and not historical or actual production levels or throughput. This means that the designed capacity is the maximum rate at which the site can operate. Biological treatment of waste usually takes place over more than one day, so the physical daily capacity can be calculated by dividing the maximum quantity of waste that could be subject to biological treatment at any one time by the minimum residence time. Further guidance '[RGN2: Understanding the meaning of regulated facility Definition of regulated facility](#)' is available

'channelled emissions' means the emissions of pollutants into the environment through any kind of duct, pipe, stack, etc. This also includes emissions from open top biofilters

'combustion plant' means medium combustion plant, specified generator or boiler used in the production of heat or power and burning biogas, biomethane or natural gas

'competent persons and resources' means that a technically competent person accredited to a relevant scheme must attend site and record their attendance, and that all roles and responsibilities are clearly stated in the management systems along with records of operatives' training. See the guidance on the [level of competence and duration of attendance](#)

'compost' means a solid particulate material that is the result of composting, which has been sanitised and stabilised, and which confers beneficial effects when added to soil, used as a component of growing media or used in another way in conjunction with plants

'compostable plastics' means waste containing packaging and, or non-packaging items with a valid certificate of conformity to EN 13432 or an equivalent standard for compostable or digestible items, certified by an independent certification body that it is capable of fully biodegrading by a biological process to create compost or digestate

'composting' means the managed biological decomposition of biodegradable waste organic materials, under conditions that are predominantly aerobic and that allow the development of thermophilic temperatures as a result of biologically produced heat and that result in compost

'composting batch' means an identifiable quantity of material that progresses through the composting system and when fully processed has similar characteristics throughout. For composting systems that operate on a continuous- or plug-flow basis, batches will be taken to mean a series of 'portions of production'

"D" means a disposal operation provided for in Annex IIA to Directive 2006/12/EC of the European Parliament and of the Council of 5 April 2006 on Waste. "digestate" means material resulting from an anaerobic digestion process "domestic purposes" has the same meaning as in section 218 of the Water Industry Act 1991.

'digestate' means material resulting from an anaerobic digestion process

'DSEAR' means the Dangerous Substances and Explosive Atmospheres Regulations 2002

'effective stack height' means:

- a) if away from buildings actual stack height is no less than 3 metres
- b) if attached to or on top of a building the stack tip must be no less than 3 metres above roof ridge
- c) if there are other buildings within a distance of 5L from the point of discharge, the top of the stack must be no less than 3 metres above the roof ridge of the highest building. L is the lesser of the two measurements of building height and maximum width of the building, measured in metres

'emissions of substances not controlled by emission limits' means emissions of substances to air, water or land from the activities, either from emission points specified in these standard rules or from other localised or diffuse sources, which are not controlled by an emission limit

“European Site” means candidate or Special Area of Conservation and proposed or Special Protection Area in England and Wales, within the meaning of Council Directives 79/409/EEC on the conservation of wild birds and 92/43/EEC on the conservation of natural habitats and of wild flora and fauna and the Conservation of Habitats and Species Regulations 2010. Internationally designated Ramsar sites are dealt with in the same way as European sites as a matter of government policy and for the purpose of these rules will be considered as a European Site.

‘fuel cell’ means a device that converts the energy of a fuel directly to electricity and heat without combustion

‘generator’ means any combustion plant which is used to generate electricity, excluding mobile, unless it is connected to the national grid

‘groundwater’ means all water, which is below the surface of the ground in the saturation zone and in direct contact with the ground or subsoil

‘groundwater source protection zone’ means as defined in the document titled Protect groundwater and prevent groundwater pollution published by the Environment Agency in 2017

‘hazardous waste’ has the meaning given in the Hazardous Waste (England and Wales) Regulations 2005 (as amended)

‘leak detection and repair (LDAR) programme’ means a structured approach to reduce fugitive emissions of organic compounds by detection and subsequent repair or replacement of leaking components. Currently, sniffing (described by EN 15446) and optical gas imaging methods are available for the identification of leaks. As set out in BAT conclusions 14 and 6.6.2 Diffuse emissions of organic compounds to air

‘maturation’ means optional period of treatment or storage of separated fibre digestate under predominantly aerobic conditions

‘MCERTS’ means the Environment Agency’s Monitoring Certification Scheme

‘medium combustion plant (MCP)’ means a combustion plant with a rated thermal input equal or greater than 1 megawatt but less than 50 megawatts

‘nearest sensitive receptor’ means the nearest place to the permitted activities where people are likely to be for prolonged periods. This term would therefore apply to dwellings (including any associated gardens) and to many types of workplaces. We would not normally regard a place where people are likely to be present for less than 6 hours at one time as being a sensitive receptor. The term does not apply to those controlling the permitted facility, their staff when they are at work or to visitors to the facility, as their health is covered by Health and Safety at Work legislation, but would apply to dwellings occupied by the family of those controlling the anaerobic digestion facility

‘new medium combustion plant’ means one that is not existing in accordance with the definition in the Environmental Permitting (England & Wales) Regulations 2016, that is one which was put into operation after 20 December 2018. This includes replacement Medium Combustion Plant Directive MCPs and generators

‘operator’ means in relation to a regulated facility, means:

(a) the person who has control over the operation of the regulated facility

(b) if the regulated facility has not yet been put into operation, the person who will have control over the regulated facility when it is put into operation, or

(c) if a regulated facility authorised by an environmental permit ceases to be in operation, the person who holds the environmental permit

‘pollution’ means emissions as a result of human activity which may:

(a) be harmful to human health or the quality of the environment

(b) cause offence to a human sense

(c) result in damage to material property, or

(d) impair or interfere with amenities and other legitimate uses of the environment

'quarter' means a calendar year quarter commencing on 1 January, 1 April, 1 July or 1 October

"R" means a recovery operation provided for in Annex IIB to Directive 2006/12/EC of the European Parliament and of the Council of 5 April 2006 on Waste.

'representative internal' means representative monitoring at a point internally of the windrows that will give a representative assessment of temperature. Note: Larger windrows will require more bespoke temperature equipment to accurately assess temperature profiles

'sanitisation' means the actively managed and intensive stage of composting, lasting for at least 5 days, characterised by high oxygen demand and temperatures of over 55 degrees C, during which biological processes, together with conditions in the composting mass, eradicate human and animal pathogens or reduce them to acceptably low levels

'sealed drainage system' in relation to an impermeable surface, means a drainage system with impermeable components which does not leak and which will ensure that:

(a) no liquid will run off the surface otherwise than via the system

(b) except where they may lawfully be discharged to foul sewer, all liquids entering the system are collected in a sealed sump

'secondary containment' means a system that is capable of containing loss from all above ground and underground storage tanks and that complies with CIRIA standard 736 or an equivalent standard of design and construction

'secure storage' means storage where waste cannot escape and members of the public do not have access to it

"site" means the location where waste storage and treatment activities can take place.

'stable' or 'stabilised' means the degree of processing and biodegradation at which the rate of biological activity has slowed to an acceptably low and consistent level and will not significantly increase under favourable, altered conditions

'stabilisation stage' means the stage of composting following sanitisation, during which biological processes, together with conditions in the composting mass, give rise to compost that is nominally stable. Soluble carbon is usually not fully used and material is still considered to be in treatment. This stage is a managed process to prevent odours, dust and bioaerosols. There is also a residual risk of reheating and leachate breakout

'specified generator' means a group of generators, other than excluded, between 1 and 50 megawatts or less than 50 megawatts as defined in Schedule 25B(2) of SI 2018 No.110 of the EPR

'year' means calendar year commencing on 1 January

End of standard rules