# SR2023 No 1: Capture, treatment, and storage of biogas from lagoons and tanks

The Environmental Permitting (England and Wales) Regulations 2016

## Introductory note

This introductory note does not form a part of these standard rules.

When referred to in an environmental permit, these rules will allow the operator to:

* collect and store biogas from an engineered lagoon storage or tank, or from an existing lagoon, which meets the criteria specified in these rules
* upgrade biogas to biomethane in an engineered system in a static or mobile unit at the place of production
* store upgraded biomethane
* fuel vehicles at the site of production
* inject biomethane to the national grid at the place of production
* flare excess biogas or biomethane in an emergency, or to protect life and equipment, or during maintenance

This permit does not allow combustion of biogas or biomethane in a spark engine for the generation of heat and power.

There are no permitted discharges to surface water.

Words and expressions used in this introductory note and these standard rules shall have the meanings given in section 4.4, as appropriate.

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, so far as is reasonably practicable, including those risks arising from operations, maintenance, accidents, incidents, non-conformances 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 rule 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 or the permit shall have convenient access to a copy of the permit and the rules.

1.1.4 The operator shall comply with the requirements of an approved competence scheme.

## 2. Operations

### 2.1 Permitted activities

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

2.1.2 The activities will be undertaken in accordance with appropriate measures.

2.1.3 All process plant and equipment shall be commissioned, operated, and maintained in accordance with the manufacturer’s recommendations and shall be fully documented and recorded.

#### Table 2.1

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| --- | --- | --- |
| **Activity reference** | **Description of specified activity** | **Limits of specified activity** |
| **Collection of biogas from lagoons and tanks** | The recovery of biogas and storage in a covered lagoon Under WFD Annex II operations  R3 – Recycling and reclaiming organic substances which are not used as solvents. | Restricted to collection of biogas from lagoons and tanks which store manure and slurry or digestate produced from anaerobic digestion  Limited to collection capacity of less than 10 tonnes of biogas prior to gas treatment |
| **Treating biogas and biomethane** | Under WFD Annex II operations  R3 – recycling and reclaiming organic substances which are not used as solvents. | Gas drying, cleaning, and upgrading to biomethane by biological, physical or chemical scrubbing in a static unit or mobile unit.  Less than 10 tonnes combined of biogas and biomethane Injecting upgraded biomethane to the national grid.  Use in vehicles at the place or production or designated refuelling facility. |
| **Using auxiliary standby flares** | Under WFD Annex I operations  D10 – incineration on land | This activity is limited to using auxiliary standby flares burning excess biogas in emergency conditions or during maintenance. |
| **Storage** | Under WFD Annex II operations  R13 – storage of waste pending any of the operations numbered R1 to R12 (excluding temporary storage, pending collection, on the site where it is produced). | Waste listed in this rule 2.3 in a lagoon or tank with a capacity not exceeding 5,000 cubic meters of slurry or digestate at any one time.  Digestate, whole or liquid fraction of digestate in covered tanks or lagoons. |
| **Slurry and digestate treatment** | This activity relates to treating slurry and digestate. | Physical chemical treatment of slurry, manure and digestate to reduce sulphur. |
| **Storage of raw material and waste generated on site** | This activity relates to storing waste generated on site and raw materials | Chemicals  Lubrication oil  Antifreeze  Diesel  Activated carbon and other spent air abatement media |

### 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) 150 metres of a European site (within the meaning of Regulation 8 of the Conservation of Habitats and Species Regulations 2017) or a Site of Special Scientific Interest, including candidate or proposed sites or a marine conservation zone

(b) a groundwater source protection zone 1 or 2, or if a source protection zone has not been defined for the site within 50 metres of any well, spring or borehole used for the supply of water for human consumption (including private water supplies)

(c) 10 metres of any watercourse

(d) 50 metres of a Local Nature Reserve, Local Wildlife Site, Ancient Woodland or Scheduled Monument

(e) 50 metres of a site that has species or habitats of principle importance (as listed in Section 41 of the Natural Environment and Rural Communities Act 2006) that the Environment Agency considers at risk to this activity, these are also often referred to as priority habitats and species

(f) a specified Air Quality Management Area

### 2.3 Waste acceptance

2.3.1 Waste shall only be accepted at the site if all the following apply:

(a) it is within the quantities, codes and descriptions specified table 2.3 and is not an excluded waste

(b) it conforms to the description in the transfer documentation supplied by the producer and holder

(c) the waste is biodegradable

(d) the facility has sufficient waste capacity to store and treat the waste

2.3.2 Records demonstrating compliance with rule 2.3.1 shall be maintained.

#### Waste quantities

2.3.3 The total quantity of waste including solids and liquids accepted at the site:

(a) shall not exceed 50,000 tonnes a year

(b) shall not exceed the 5,000 cubic meters combined at any one time

#### Excluded wastes

Wastes having any of the following characteristics shall not be accepted:

(a) biodegradable waste that is significantly contaminated with non-compostable or digestible contaminants

(b) wastes containing wood-preserving agents or other biocides and post-consumer wood

(c) wastes containing persistent organic pollutants

(d) wastes containing Japanese Knotweed or other invasive plant species listed in as listed in the Invasive Alien Species (Enforcement and Permitting) Order 2019 (formerly the EU Invasive Alien Species legislation)

(e) imported manures, slurries and spoiled bedding and straw from farms where animals have notifiable diseases as stipulated in the Animal By-Products (Enforcement) (England) Regulations 2011

(f) pest infested waste

**Table 2.3 Waste quantities codes and descriptions**

|  |  |
| --- | --- |
| **Waste code** | **Description** |
| 02 01 06 | animal faeces, urine, and manure (including spoiled fully biodegradable animal bedding |
| 02 01 99 | waste otherwise specified – spent mushroom compost from commercial mushroom growing only |
| 02 01 03 | plant-tissue waste, crop, and crop residues |
| 02 03 04 | material unsuitable for consumption or process crop residues |
| 02 05 | waste from the dairy products industry |
| 16 10 02 | milk and dairy waste milk from agricultural premises only |
| 16 10 02 | Liquor or leachate from a composting or anaerobic process that accepts waste input types listed in standard rules permits for composting and anaerobic digestion standard rules only and in compliance with Animal By-Products Regulations |
| 19 06 03 | Liquor from anaerobic treatment of municipal waste (listed in standard rules permits for composting and anaerobic digestion standard rules only) and made up of previously pasteurised and stabilised batches only |
| 19 06 04 | Digestate from anaerobic treatment of municipal waste from a process that accepts wastes listed in standard rules permits for composting and anaerobic digestion standard rules only and made up of previously pasteurised and stabilised batches only |

### 2.4 Operating techniques

2.4.1 The activities shall be operated using the techniques and, in the manner, described in the following sub-paragraphs.

Before starting the activities, the operator shall:

(a) submit a validation report for all critical infrastructure and ensure that these have been designed and built to CIRIA 759 F or parts 1 and 2 or an equivalent approved standard

(b) submit a commissioning plan to the Environment Agency 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 a schedule of planned maintenance as identified by the HAZOP or risk assessment or suppliers, which shall be documented.

#### 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 or pumped directly to a lagoon or tank storage.

(c) all storage lagoons tanks shall be regularly inspected and maintained, and a record maintained

#### Technique 2

(a) The volume of waste in storage must not exceed the design capacity.

(b) all lagoons and tanks shall be fitted with level sensors

(c) there must be capacity for at least 4 months’ storage of slurry or digestate.

#### Technique 3

(a) waste received shall be stored for the minimum time practicable before it is deposited in the lagoon or tank

(b) quarantined and rejected waste shall be stored in closed containers or covered and removed to a regulated facility within 5 days

#### Technique 4

For new operations:

(a) all lagoons and tanks shall be constructed in accordance with CIRIA 759 F or parts 1 and 2 report or equivalent approved standard before operations start

(b) for all storage lagoons and tanks the operator shall maintain a freeboard of at least 750mm

#### Technique 5

The operator shall have a site drainage plan that clearly shows clean and dirty water drainage and detail any discharge points as Technique 6.

#### Technique 6

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

#### Technique 7

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

#### Technique 8

(a) all storage tanks shall be located on an impermeable surface (a hydraulic permeability of not greater than 1x 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) any 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 9

(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 lagoons, tanks and containers shall have secondary containment that complies with a CIRIA 736 report or an equivalent approved standard

#### Technique 10

(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 11

(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 12

(a) gas upgrade systems mut be installed by a qualified engineer and maintained as specified in the design of the plant

(b) mobile units must be inspected and maintained, and a record will be maintained

(c) the compressed fugitive methane is either used on site as tractor fuel or removed from site as a vehicle fuel or heating fuel

(d) the treatment of slurry, manure and digestate to improve gas quality

#### Technique 13

(a) all flare 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.

(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

#### Technique 14

(a) operators shall have procedures and contingency measures in place for when gas grid demand is reduced. Venting and flaring of gas other than specified 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 15

(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 16

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

## 3. Emissions and monitoring

### 3.1 Emissions to air

3.1.1 There shall be no point source emissions to air, water, or land, except from the sources and emission points listed under ‘Point source emissions to air – emission limits and monitoring requirements’.

3.1.2 Point source emissions shall be identified on a site plan.

3.1.3 The limits given in table 3.1 in this rule shall not be exceeded.

#### Point source emission to air - emission limits and monitoring requirements

#### Table 3.1 monitoring channelled emissions to air

The reference period is periodic over minimum 1-hour period.

The monitoring frequency is once every 12 months

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| --- | --- | --- |
| **Parameter** | **Limit** | **Monitoring standard or method** |
| **Ammonia (NH₃)** | 20 mg/Nm3 | Emissions of pollutants into the environment through any kind of duct, pipe, or stack – includes emissions from open top biofilters  EN ISO 21877 to be used for stacks or as agreed with the Environment Agency in the odour management plan |
| **Odour concentration** | 1,000 ouE/Nm3 | BS EN 13725 |

### 3.2 Monitoring

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 the Environment Agency that the activities are giving rise to pollution or are likely to do so, submit to the Environment Agency for approval within the period specified, an emissions management plan which identifies, prevents, and minimises the risks of pollution from emissions of substances not controlled by emission limits

(b) implement the approved emissions management plan, from the date of approval, unless otherwise agreed in writing by the Environment Agency

3.2.3 Where not already subject to a specific rule all liquids in containers, whose emission to water or land could cause pollution, shall be provided with secondary containment.

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 the Environment Agency, 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) if notified by the Environment Agency that the activities are giving rise to pollution outside the site due to odour, submit to the Environment Agency for approval within the period specified, a revised odour management plan which identifies and minimises the risks of pollution from odour

(b) implement the approved revised odour management plan, from the date of approval, unless otherwise agreed in writing by the Environment Agency.

### 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 the Environment Agency, 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 the Environment Agency that the activities are giving rise to pollution outside the site due to noise and vibration, submit to the Environment Agency for approval within the period specified, a noise and vibration management plan which identifies and minimises the risks of pollution from noise and vibration

(b) implement the approved noise and vibration management plan, from the date of approval, unless otherwise agreed in writing by the Environment Agency

### 3.5 Monitoring

3.5.1 The operator shall, unless otherwise agreed in writing by the Environment Agency, undertake the monitoring specified in rule 3.1.1 and table 3.3.

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, tests and surveys and any assessment or evaluation made on the basis of such data.

3.5.3 Permanent means of access shall be provided to enable sampling and monitoring to be carried out in relation to the emission points specified in rules 3.1 and 3.5 and unless otherwise agreed in writing by the Environment Agency.

### 3.6 Process monitoring requirements

#### Monitoring meteorological conditions

3.6.1 The operator shall monitor these parameters continuously and keep a record of:

(a) wind speed

(b) air temperature

(c) wind direction

#### Monitoring gas production

3.6.2 The operator shall monitor these parameters and in accordance with Table 3.2 continuously:

(a) gas volume and quality

(b) gas pressure

The operator shall:

(c) record to a supervisory control and data acquisition (SCADA) system

#### Monitoring primary lagoon containment and tank integrity

3.6.3 The operator shall:

(a) maintain daily operational records of capacity and storage

(b) inspect tank integrity in accordance with the design specification

(c) assess sediment build up and remove sediment as appropriate

(d) 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

#### Process monitoring

#### Table 3.2 air abatement and gas upgrade abatement systems

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| --- | --- | --- | --- |
| **Parameter** | **Limit** | **Monitoring standard or method** | **Other specifications** |
| **Gas flow rate inlet and outlet** | As agreed with the Environment Agency | Gas flow meter | As per design specification. |

3.6.7 The operator shall meet these other specifications:

(a) the gas management and clean up system shall be monitored in accordance with its design specifications and records will be made available on request

(b) emission assessment may be more frequent to ensure optimum emission abatement

(c) monitoring equipment, techniques, personnel and organisations employed for the emissions monitoring programme (including the measurement of exhaust gas temperature) shall be UKAS accredited

#### Table 3.3 monitoring fugitive emissions

|  |  |  |  |
| --- | --- | --- | --- |
| **Parameter** | **Limit** | **Monitoring standard or method** | **Other specifications** |
| **Volatile organic compounds, including methane** | As agreed with the Environment Agency | Leak detection and repair | EN 15446 Monitoring points as specified in a DSEAR risk assessment and LDAR programme  Limit as agreed with the Environment Agency 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 | 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 |

**Monitoring lagoons and storage tanks**

3.6.8 The operator shall monitor and record the volume stored daily using a visual or flow meter measurement and maintain a record.

### 3.7 Pests

3.7.1 The activities shall not give rise to the presence of pests which are likely to cause pollution, hazard, or annoyance outside the boundary of the site. The operator shall not be taken to have breached this rule if appropriate measures, including, but not limited to, those specified in any approved pest’s management plan, have been taken to prevent or where that is not practicable, to minimise the presence of pests on the site.

3.7.2 The operator shall:

(a) only use approved products for pest control

(b) treat pest infestations promptly

(c) if notified by the Environment Agency, submit to the Environment Agency for approval within the period specified, a pests management plan which identifies and minimises risks of pollution, hazard, or annoyance from pests

(d) implement the pest’s management plan, from the date of approval, unless otherwise agreed in writing by the Environment Agency

### 3.8 Fire prevention

3.8.1 The operator shall take all appropriate measures to prevent fires and accidents on site and minimise the risk of pollution from them including, but not limited to, those specified in any approved fire prevention plan.

3.8.1 The operator shall:

(a) if notified by the Environment Agency that the activities are giving rise to a risk of fire, submit to the Environment Agency for approval within the period specified, a fire prevention plan which prevents fires and minimises the risk of pollution from fires

(b) implement the fire prevention plan, from the date of approval, unless otherwise agreed in writing by the Environment Agency

3.8.2 The operator will undertake a DSEAR assessment and maintain an accident management plan in accordance with rule 1.1.1.

## 4. Information

### 4.1 Records

4.1.1 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 in writing by the Environment Agency, 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

(ii) matters which affect the condition of the land and groundwater

4.1.2 The operator shall maintain convenient access, in either electronic or hard copy, to the records, plans and management system required to be maintained by these rules.

4.1.3 The operator shall maintain a record of the type and quantity of fuel used and the total annual hours for each combustible plant.

4.1.4 The operator shall 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 the Environment Agency using the contact details supplied in writing by the Environment Agency in accordance with table 4.1.

4.2.2 Within one month of the end of each quarter, the operator shall submit to the Environment Agency 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.

**Table 4.1 reporting requirements**

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| --- | --- | --- |
| **Parameter** | **Emission or monitoring point (reference)** | **Report frequency** |
| **Efficiency of abatement systems** | In accordance with rule 3.1.4 and 3.6. | By 31 January each year detailing the removal efficiency of all abatement systems and planned maintenance in accordance with rule 3.1.4) |
| **Gas production monitoring** | In accordance with rule 3.6. | Summary reports - quarterly during the first year then yearly thereafter or as agreed with the Environment Agency |
| **Tank integrity** | In accordance with rule 3.6 | 5-yearly from the date of commission or as per the manufacturer’s recommendation, whichever is sooner |
| **Under and over pressure relief systems** | Inspection calibration and maintenance | Yearly summary report by 31 January |
| **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 3.6 | 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 |
| **Waste returns** | In accordance with rule 4.2.2 | Within one month of the end of each quarter |

### 4.3 Notifications

4.3.1 In the event:

(a) that the operation of the activities gives rise to an incident or accident which significantly affects or may significantly affect the environment, the operator must immediately:

(i) inform the Environment Agency

(ii) take the measures necessary to limit the environmental consequences of such an incident or accident, and

(iii) take the measures necessary to prevent further possible incidents or accidents

(b) of a breach of any permit condition the operator must immediately:

(i) inform the Environment Agency, and

(ii) take the measures necessary to ensure that compliance is restored within the shortest possible time

(c) of a breach of permit condition which poses an immediate danger to human health or threatens to cause an immediate significant adverse effect on the environment, the operator must immediately suspend the operation of the activities or the relevant part of it until compliance with the permit conditions has been restored

4.3.2 Written confirmation of actual or potential pollution incidents and breaches of emissions shall be submitted within 24 hours.

4.3.3 Where the Environment Agency has requested in writing that it shall be notified when the operator is to undertake monitoring and, or spot sampling, the operator shall inform the Environment Agency when the relevant monitoring and, or spot sampling is to take place. The operator shall provide this information to the Environment Agency at least 14 days before the date the monitoring is to be undertaken.

4.3.4 Following the detection of an issue listed in 4.2.1, the operator shall review and revise the management system, and implement any changes as necessary to minimise the risk of reoccurrence of the issue.

4.3.5 The Environment Agency 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:

(i) any change in the operator’s trading name, registered name or registered office address, and

(ii) 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:

(i) any change in the operator’s name or address, and

(ii) any steps taken with a view to the dissolution of the operator

(c) In any other case:

(i) the death of any of the named operators (where the operator consists of more than one named individual)

(ii) any change in the operator’s name(s) or address(es), and

(iii) 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 of them being in a partnership, dissolving the partnership

4.3.6 The operator shall notify the Environment Agency, as soon as is practicable, in writing of any change of new combustion plant or generator at the site.

### 4.4 Interpretation

4.4.1 In these standard rules the expressions listed in 4.4.1 shall have the meanings given.

4.4.2 In these standard rules references to reports and notifications mean written reports and notifications, except where reference is made to notification being made ‘immediately’, 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

‘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

‘authorised officer’ means any person authorised by the Environment Agency 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 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 can undergo 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](https://www.gov.uk/government/publications/rgn-2-understanding-the-meaning-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 carbon filters

‘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](https://www.gov.uk/guidance/legal-operator-and-competence-requirements-environmental-permits#record-the-operating-hours-of-your-waste-facility)

‘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

‘emissions to land’ include emissions to groundwater

‘fire prevention plan’ means a written document setting out procedures to prevent and minimise fires and the spread of fires.

‘good habitat’ means rough (especially tussocky) grassland, scrub and woodland

‘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](https://www.gov.uk/government/publications/protect-groundwater-and-prevent-groundwater-pollution/protect-groundwater-and-prevent-groundwater-pollution#sensitive-groundwater-locations) published by the Environment Agency in 2017

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

‘incidental contamination’ means low levels of incidental waste, for example plastic, that may be contained within the feedstock waste

’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

‘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

‘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 cease to be in operation, the person who holds the environmental permit

‘pest’ means birds, vermin, and insects

‘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

‘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

‘year’ means calendar year commencing on 1 January

End of standard rules