

Standard rules

Chapter 4, The Environmental Permitting
(England and Wales) Regulations 2016



Standard rules SR2012 No13

Treatment of Incinerator Bottom Ash (IBA)

Part A Installation - treatment capacity more than 75 tonnes per day

Introductory note

This introductory note does not form part of these standard rules

When referred to in an environmental permit, these rules will allow the operator to operate a Part A installation (falling within the scope of the Industrial Emissions Directive) for the treatment of Incinerator Bottom Ash (IBA) inside a building at a specified location.

Permitted wastes shall include only incinerator bottom ash and slag other than those mentioned in waste code 19 01 11. The total quantity of waste that can be accepted at a site under these rules must be less than 75,000 tonnes a year. These rules are for facilities that have the capacity to treat more than 75 tonnes waste in any one day. The purpose of treatment is to improve ash quality in order to generate a material that has the potential for recovery (e.g. for use as a secondary aggregate material in road construction) and mechanically separate and collect the ferrous and non-ferrous metal fractions for further recycling.

These rules do not allow any point source emission into surface waters or groundwater. However, under the emissions of substances not controlled by emission limits rule:

- liquids may be discharged into a sewer subject to a consent issued by the local water company;
- liquids may be taken off-site in a tanker for disposal or recovery;
- clean surface water from roofs, or from areas of the site that are not being used in connection with storing and treating waste, may be discharged directly to surface waters, or to groundwater by seepage through the soil via a soakaway;

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, non-conformances, 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 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 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").

Table 2.1 activities			
Activity reference	Activity listed in Schedule 1 of the EP Regulations	Description of specified activity and WFD Annex I and II operations	Limits of specified activity and waste types
A1	S5.4 A(1) (b) (iii)	R5: Recycling/reclamation of other inorganic materials R4: Recycling/reclamation of metals and metal compounds	Treatment of non-hazardous incinerator bottom ash of the types listed in Table 2.2 The ash separation and screening process shall take place inside a building. The purpose of treatment is to improve ash quality in order to generate a material that has the potential for recovery (e.g. for use as a secondary aggregate material in road construction) and mechanically separate and collect the ferrous and non-ferrous metal fractions for further recycling.
Directly Associated Activity			
A2	Storage	R13: Storage of wastes pending any of the operations numbered R1 to R12 (excluding temporary storage, pending collection, on the site where it is produced)	Secure storage of wastes listed in table 2.2. The receipt, handling and storage of non-hazardous incinerator bottom ash of the types of waste listed in table 2.2

2.2 Waste acceptance

2.2.1 Waste shall only be accepted if:

- (a) it is of a type and quantity listed in table 2.2 below; and
- (b) it conforms to the description in the documentation supplied by the producer and holder.

Table 2.2 Waste types and quantities	
Maximum Quantities	
The total quantity of waste accepted at the site shall be less than 75,000 tonnes a year	
Exclusions	
Wastes having any of the following characteristics shall not be accepted:	
<ul style="list-style-type: none"> • Hazardous wastes • Wastes that are in a form which is either sludge or liquid 	
Waste Code	Description
19	WASTES FROM WASTE MANAGEMENT FACILITIES, OFF-SITE WASTE WATER TREATMENT PLANTS AND PREPARATION OF WATER INTENDED FOR HUMAN CONSUMPTION/INDUSTRIAL USE
19 01	Wastes from incineration of pyrolysis of waste
19 01 12	Bottom ash and slag other than those mentioned in 19 01 11.

2.3 Operating techniques

2.3.1 The activities shall be operated using the techniques and in the manner described in Table 2.3 below.

Table 2.3 Operating techniques

1. The storage, of wastes shall take place on an impermeable surface with sealed drainage system.
2. Where open outdoor storage is used, one or a combination of the following measures should be employed:
 - moistening the surface using water
 - providing undercover storage
3. The application of water to waste materials and surfaces should be controlled in order to minimise the quantity of leachate and surface water that requires management.
4. All ash separation and screening processes shall take place inside a building.
5. All other ash treatment processes should be carried out on an impermeable surface provided with sealed drainage, appropriate measures for the collection and containment of wash waters, leachate and other potentially contaminated waters and measures to prevent and minimise fugitive emissions.
6. The treatment process should demonstrate effective techniques for separating and recovering metals and organics (i.e. unburnt material) and reducing the leachability of the treated material, whilst preventing and reducing emissions and other risks to the environment.
7. The treatment processes employed (e.g. metal separation, ash ageing/carbonation) should be defined with clear treatment objectives (i.e. a defined end point) and reaction chemistry, as appropriate.
8. The Procedures should be in place for sampling and testing the processed IBA to assess and confirm the end of the treatment process (i.e. achievement of established treatment objectives in point 7), ensuring quality control and managing any non-conformance (e.g. reprocessing and re-testing). Relevant test parameters will depend upon end-use specifications.
9. Hydrogen gas is released from the IBA during the ageing process as aluminium reacts with calcium hydroxide and water to form aluminium hydroxide. Areas of the site where flammable or explosive atmospheres may accumulate should be assessed in accordance with the Dangerous Substances and Explosive Atmospheres Regulations 2002 (DSEAR) and appropriate precautions taken to minimise the risk of fire or explosion (e.g. if the ash ageing process is carried out in a building or under cover, adequate ventilation should be provided to ensure that any gas can be dispersed safely). For further guidance on DSEAR and hazardous area classification see the HSE's DSEAR approved code of practice and guidance (L138).
10. Treated and untreated IBA and the different fractions of treated IBA material shall be handled and stored separately to avoid cross-contamination (e.g. using separate contained storage vessels, bays or areas).

2.4 The site

- 2.4.1 The activities shall not extend beyond the site, being the land shown edged in green on the site plan attached to the permit.
- 2.4.2 The activities shall not be carried out within:
 - (a) 10 metres of any watercourse;
 - (b) 500 metres of a European Site or a SSSI;
 - (c) a groundwater source protection zone 2, or if a source protection zone has not been defined then within 250 metres of any well, spring or borehole used for the supply of water for human consumption. This must include private water supplies;
 - (d) 250 metres of the nearest sensitive receptor.

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.
- 3.1.2 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

3.2 Emissions of substances not controlled by emission limits

- 3.2.1 Emissions of substances not controlled by emission limits 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.

3.3 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.

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 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.

4.2 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.

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.

4.3 Notifications

- 4.3.1 (a) In the event 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 Natural Resources Wales,
 - (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) in the event of a breach of any permit condition the operator must immediately
- (i) inform Natural Resources Wales, and
 - (ii) take the measures necessary to ensure that compliance is restored within the shortest possible time;
- (c) in the event 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 Any information provided under standard rule 4.3.1 shall be confirmed in writing 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.

4.4 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.

"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.

"bottom ash" means ash falling through the grate or transported by the grate, or for incinerators which do not have a grate, an installation specific definition of bottom ash.

"building" means a construction that has the objective of providing sheltering cover and minimising emissions of noise, particulate matter, odour and litter.

"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.

"EP Regulations" means The Environmental Permitting (England and Wales) Regulations SI 2016 No.1154 and words and expressions used in this permit which are also used in the Regulations have the same meanings as in those Regulations.

"European Site" means Special Area of Conservation or candidate Special Area of Conservation or Special Protection Area or proposed 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 (Natural Habitats &c) Regulations 1994.

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.

"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" has the meaning given in the document titled "Groundwater protection: Principles and practice" published by the Environment Agency in 2012.

"impermeable surface" means a surface or pavement constructed and maintained to a standard sufficient to prevent the transmission of liquids beyond the pavement surface, and should be read in conjunction with the term "sealed drainage system" (below).

"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 the operators of 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. N.B. The term would apply to dwellings occupied by an operator's family.

"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.

"*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.

"SSSI" means Site of Special Scientific Interest within the meaning of the Wildlife and Countryside Act 1981 (as amended by the Countryside and Rights of Way Act 2000).

"*waste code*" means the six digit code referable to a type of waste in accordance with the List of Wastes (England) Regulations 2005, or List of Wastes (Wales) Regulations 2005, as appropriate, and in relation to hazardous waste, includes the asterisk.

"*year*" means calendar year commencing on 1st January.

End of standard rules