

Environmental Permitting Regulations (England and Wales) 2010

enhancing... improving... cleaning... restoring...
changing... tackling... protecting... reducing...
creating a better place... influencing...
inspiring... advising... managing... adapting...

Regulatory Guidance Series, No RGN 2

Understanding the meaning of regulated facility

Appendix 1 – Interpretation of Schedule 1 to the
Regulations

Appendix 2 – Defining the scope of the installation

Record of changes

Version	Date	Change
1.0	March 2008	Issued for launch of Environmental Permitting Regulations
Draft	January 2010	Divided the guidance to separate the Annexes. Corrections to text reproduced from Schedule 1 of the Regulations. Updated commentary: Note 4.8 on biopharmaceuticals Note 6.8.6 on anaerobic digestion Note 6.9.1 defining poultry and pigs Issued for informal consultation.
2.0	April 2010	No comments received, so issued with minor changes.
2.1	February 2012	Updated general notes: revised guidance on deciding the most apt activity description for the burning of waste and whether a plant is a co-incineration plant. Updated commentary: new section 6.10 on carbon capture and storage
3.0	March 2013	Updated for the Industrial Emissions Directive (IED) changes introduced by EPR amendment SI 2013 No. 390
3.1	May 2015	Updated to incorporate: <ul style="list-style-type: none"> - Amendments to Schedule 1 (activities, installations and mobile plant) introduced by regulation 11 of SI 2014 No.255 in February 2014. - Amendments to the interpretation of Schedule 1, sections 1.1, 1.2, 5.2, 5.3, 5.4, and 6.8.
4.0	April 2019	Updated Note 1.1.7 to take account of the Medium Combustion Plant Directive (MCPD).

Published by:

Environment Agency
Horizon House, Deanery Road
Bristol BS1 5AH
Tel: 03708 506506
Email: enquiries@environment-agency.gov.uk
www.environment-agency.gov.uk

© Environment Agency 2015

All rights reserved. This document may be reproduced with prior permission of the Environment Agency.

SUMMARY

The main text of RGN 2 explains what regulated facilities are and that activities listed in Schedule 1 of the Regulations form the basis of installations.

Appendix 1 provides interpretative guidance on Schedule 1. The activities are listed in Part 2 of Schedule 1 and can be summarised as follows:

Chapter 1: **Energy**: combustion, gasification, liquification and refining activities.

Chapter 2: **Metals**: ferrous metals, non-ferrous metals, surface treating metals and plastic materials.

Chapter 3: **Minerals**: production of cement and lime, activities involving asbestos, manufacture of glass and glass fibre, other minerals, ceramics.

Chapter 4: **Chemicals**: organic, inorganic, fertiliser production, plant health products and biocides, pharmaceutical production, explosives production, manufacturing involving ammonia, storage in bulk.

Chapter 5: **Waste management**: incineration and co-incineration of waste, landfills, other forms of disposal of waste, recovery of waste, production of fuel from waste, temporary or underground storage of hazardous waste and treatment of waste water.

Chapter 6: **Other**: paper, pulp and board manufacture, carbon, tar and bitumen, coating activities, printing and textile treatments, dyestuffs, timber, rubber, food industries, intensive farming, carbon capture and storage.

Appendix 2 gives guidance on how to identify what other operations at a site are sufficiently linked with the activities listed in Part 2 of Schedule 1 to make them part of the installation. It is particularly important to get the scope of the installation correct – it incurs obligations.

Appendix 3 (a separate document) gives more detailed guidance for intensive farming.

Contents

Appendix 1 – Interpretation of Schedule 1 to the Regulations	1
1. Derivation of Schedule 1	1
2. General notes	2
1. What is the capacity?	2
2. Exceptions based on "may result in release" and similar phrases	6
3. 'Most apt' rules for deciding an activity description	6
4. Definition of 'manufacturing'	12
5. Solvent Emissions Activities	13
3. Commentary on Schedule 1	14
Part 1	14
Part 2	20
Chapter 1 Energy activities	20
Chapter 2 Production and processing of metals	28
Chapter 3 Mineral industries	36
Chapter 4 The Chemical Industry	41
Chapter 5 Waste Management	52
Chapter 6 Other activities	61
Appendix 2 – Defining scope of the installation	76
Limb (i) stationary technical unit	76
Limb (ii) directly associated activities	80

Appendix 1 Interpretation of Schedule 1 to the Regulations

1. Derivation of Schedule 1

- A1.1 Schedule 1 to the Regulations lists all the activities in Annex 1 to the Industrial Emissions Directive (IED) (Directive 2010/75/EU) as Part A activities. Most of these activities were previously listed in the IPPC Directive (Directive 2008/1/EC) (which originally came into force in 1996 and was repealed in January 2014).
- A1.2 There are a small number of additional Part A activities that are not listed in the IED, but for which Defra and the Welsh Government have decided it is appropriate to apply IED requirements in England and Wales. Some are activities previously regulated under Part I of the Environmental Protection Act 1990 (EPA 90) (former IPC “prescribed processes”).
- A1.3 The Part A activities are split into:
- 1.3.1 Part A(1) activities which we regulate. We regulated most of these under both Part I EPA 90 and the PPC Regulations 2000 (PPCR).
 - 1.3.2 Part A(2) activities regulated by local authorities. Most of these were originally Part B prescribed processes regulated since 1991 by local authorities for emissions to air only. They were required by the IPPC Directive to be regulated for emissions to air, water and land and were designated as Part A(2) activities in the PPCR so that they would continue to be regulated by the local authorities, rather than being transferred to us.
- A1.4 The Part B activities listed in Schedule 1 are regulated by the local authorities for emissions to air only. Most of these were previously regulated as Part B activities under Part I EPA 90 and the PPCR.
- A1.5 In cases where there appears to be overlap between, or uncertainty over the meaning of listed activity descriptions, there are rules in Part 1 of Schedule 1; but it may also be helpful to consider the derivation of a listed activity, as well as any relevant interpretative advice given in this document.
- A1.6 This guidance is written primarily for our staff, but we make it available to help customers too.

2. General notes

1. What is the capacity?

A2.1 Schedule 1 activity descriptions refer frequently to “capacity” (or equivalent terms). The European Commission has provided guidance on Interpretation and Determination of Capacity under the IPPC Directive¹ and this guidance is still relevant to the IED. This Section sets out general advice, while Section 3 gives detailed advice on the specific activities listed in Schedule 1. In all cases, capacity refers to **potential** capacity and not historical or actual production levels or throughput. This means that the design capacity of the installation will usually be the key issue, although the existence of a regulatory or other limit can also be considered, as explained below.

A2.2 We decide on capacity on a case-by-case basis, starting with the operator’s description of the installation.

References to rate

A2.3 Any reference to a capacity which is defined in terms of a rate, whether by cubic capacity, weight per hour or heat input rate, should be taken to mean the maximum rate at which the installation **can** operate. This may be different to the rate at which the installation **actually** operates (which may be considerably lower).

A2.4 An activity may fall outside the scope of Schedule 1 because it has a physical or technical restriction limiting output or capacity to below design capacity. Clearly, in order to be considered sufficient such a restriction must be secure and stable, and not easily overridden or removed by the operator.

A2.5 Legal restrictions **may** be sufficient to reduce the activity’s capacity, provided that they are specific and enforceable. Another type of permit or permission may limit the operation of an activity to a capacity below the Schedule 1 threshold, for example, another environmental permit or planning permission. We do not however regard private contractual obligations as sufficient.

A2.6 For batch processes which take more than a day to complete, and where the listed activity specifies a daily rate, the rate should be taken as the amount of material handled divided by the number of days or parts of days over which treatment (i.e. for the batch) takes place.

Specific Capacity Thresholds in Schedule 1

A2.7 Table 1 gives our advice on how to interpret capacity terms in Schedule 1.

¹ Available at: http://ec.europa.eu/environment/ippc/pdf/capacity_guidance.pdf

Table 1: How to interpret capacity terms used in Schedule 1

Boiler Plant (Section 1.1):

Installed capacity normally would include all boilers, even those designated as standby plant. However, if fuel could not be provided to all boilers simultaneously, then capacity should be based on the maximum at any one time.

Holding capacity for production and processing of metals (Chapter 2)

The "design holding capacity" means the maximum amount of metal that the furnace is designed to hold. In the case of a batch melting furnace, bath, or holding vessel this will be the same as the maximum amount of molten metal that it is designed to hold. However, in the case of a continuous melting furnace such as a shaft furnace (which has little or no holding capacity for molten metal) it should be interpreted as the maximum amount of metal, liquid or solid, that may be present in the furnace. The densest metal or alloy melted should be used for the calculation. The holding capacity should include that of any holding tanks being used to keep the metal in a molten state. Equipment used from the melting up to and including the holding vessels forms a single technical unit and all volume of such equipment should be included along with the volume in molten form of the product. It is reasonable to exclude some ullage (a small amount of unused space to allow handling) when considering the capacity of a vessel unless it is specifically designed to be operated filled to the brim.

Baths or holding vessels for non-ferrous metals (Section 2.2)

Normally, a "bath or holding vessel" is not itself used for melting. However, a bath or holding vessel which forms an integral part of a stationary technical unit where a melting activity is carried out is considered to be "used in the plant for the melting", and therefore subject to the furnace size criterion, even if direct melting is not carried out in the bath or holding vessel in question. See Appendix 2 of this guidance, on what constitutes a stationary technical unit.

Melting non-ferrous metals (Section 2.2 A(1)(b))

"20 tonnes per day for all other metals" (i.e. non-ferrous metals other than lead or cadmium) is the quantity of metals in aggregate.

Ceramic production (Section 3.6 A(1)(a)(ii))

"Kiln capacity" in a tunnel kiln is the volume of the firing zone.

Incinerators (Section 5.1 of Schedule 1)

Capacity is the total for all the incineration furnaces. The name plate capacity should be confirmed by the operator as based on the design and construction, and expressed as the quantity of waste incinerated per hour.

Biological Treatment of Waste (Section 5.3 and 5.4)

*As the biological treatment of waste usually takes place over more than one day, the **physical daily capacity** can be calculated by dividing the maximum quantity of waste the biological treatment activity could treat at any one time divided by the minimum residence time.*

For an anaerobic digestion facility with a number of biological treatment tanks in series, this will be the total working capacity of the treatment tanks (includes secondary digester tanks)

divided by the minimum hydraulic retention time (HRT) from the first to the last tank. If the tanks are in parallel, then treat as separate processes and calculate using the individual minimum HRTs applied to each tank, and then add the individual totals together. A similar approach can be taken for composting that takes place in a series of stages (e.g. an in-vessel stage followed by an outdoor windrowing stage). For outdoor windrow composting the maximum quantity of waste that could be composted at any one time can be calculated from the pad area used for active composting, the size of the windrows and the density of the composting waste. The minimum residence time is the minimum time taken to produce sanitised and stabilised compost.]

Textile plant (Section 6.4)

The threshold for textile treatment is the treatment capacity, for example for washing or dyeing. Textiles normally must be dried once treated. If the output is limited by the physical limits of a textile drying process then this is the capacity.

Tanning treatment (Section 6.8 A(1)(a))

This is calculated in terms of finished leather, either as leather fit for making up consumer goods but not necessarily coated or coloured, and/or 'wet-blue'. Where any finished product is wet leather its weight should be converted to dry weight for calculation of capacity.

Intensive livestock rearing (Section 6.9 A(1))

Capacity of intensive livestock installations is defined in terms of 'places'. Calculating the places is easy where animals are kept in separate small groups, for example laying hens in cages. For open plan buildings, the maximum number of places can be estimated from the welfare code requirements for stocking density for the livestock. The operator may have other limits to the capacity of the installation, such as the physical capacity of feeding stations for loose-housed sows. In such a case he would need to demonstrate that this physically prevents the operation working at a stocking density taking across the Schedule 1 threshold. A verbal or written undertaking is not sufficient. Note that capacity is the maximum number of animals that can be housed at the outset of a rearing activity, and is not affected by any attrition that might result in fewer animals surviving to the end of the rearing.

Aggregation of capacities at the same installation

A2.8 Paragraph 4 of Part 1 of Schedule 1 requires aggregation of the capacities of separate activities, where they are carried out at the same installation (even by different operators), for determining whether as a result each of the separate activities is to be deemed to have a capacity above an activity threshold. The rule applies not only where the word "capacity" is used, but also where capacity is expressed by an analogous term more specific to the activity in question. Thus, for example, if there were two intensive poultry units operated on the same site by the same operator, each with a maximum 30,000 places for poultry, the aggregate capacity of 60,000 places would exceed the relevant Section 6.9 activity threshold of 40,000 places. (Whereas previously the aggregation rule applied only to determining whether a Part A(1) or Part A(2) activity was being carried on, this limitation has now been removed.)

Except design holding capacity

A2.9 Note that the aggregation rule does not apply where the capacity is expressed as design holding capacity. This is only the case in Sections 2.1 and 2.2 of Chapter 2 of Schedule 1 (production and processing of metals). The specific reference to design holding capacity used here is intended to achieve a precise boundary between Part A(1) and A(2) activities, which would be undermined if the aggregation rule applied. In all other aspects of Chapter 2 of Schedule 1 (and indeed throughout the rest of the Schedule) the aggregation rule will apply. Thus, for example, where the capacity is expressed by reference to the amount of metal produced (e.g. Section 2.1 Part A(1) (c)), this will include the aggregate of all the metals that can be processed in the installation.

2. Exceptions based on “may result in release” and similar phrases

A2.10 There are a number of activity descriptions in Schedule 1 where the actual level of emissions determines whether there is a listed activity. For example, Section 4.2 Part A(1)(d) covers the use of lead, or use or recovery of its compounds (or those of 10 other elements), only where that “may result in the release into air of [say, lead or its compounds] or the release into water of any substance listed in paragraph 7 of Part 1 of this Schedule”. This type of Part A(1) activity description derives from previous UK legislation, not the IED. In such cases, the use of the word “may” suggests that there must be a reasonable likelihood that the substance (i.e. lead in this example) will be released in amounts that might cause material harm. Small levels of releases would not make a listed activity, provided they were a predictable characteristic of the activity (including abnormal situations with a significant probability of occurrence but excluding major but very infrequent events such as stock-tank failure), and the emissions must not rely on abatement to render them essentially harmless.

3. ‘Most apt’ rules for deciding an activity description

General Rules

A2.12 Paragraph 2 of Part 1 of Schedule 1 provides rules to allocate activities which appear to be covered by more than one section in Parts A(1), A(2) and/or B. If an activity appears to be described in both Part A(1) and A(2), the “most apt” description must be chosen, which is a matter of judgement. If, on the other hand, the choice is between Part A(1) and Part B, or Part A(2) and Part B, the Part A activity descriptions always overrule the Part B, even if the Part B description is arguably more apt.

A2.13 You should consider whether one of the descriptions is more specific or narrow. For example, disposal of animal carcasses or animal waste, by rendering at a rate of greater than 50 tonnes per day, fits into both the narrow description at Section 6.8 Part A(2)(a), which fits precisely, and into the more general description of disposing of non-hazardous waste at Section 5.4 Part A(1) (a) (ii). The Section 6.8 description, being more specific, is therefore the most apt in this case.

A2.14 The allocation of an activity to the most apt description should be undertaken objectively. Where the test is applied the classification may determine not only who regulates, but also the charges for an application. But these are not relevant factors in the decision.

A2.15 In some cases two activity descriptions may seem similarly apt. Where this occurs, IED descriptions should generally be given precedence over ex-IPPC Directive or ex-IPC descriptions. Thus, in Chapter 4, any activity

which meets one of the IED descriptions in Sections 4.1(a), 4.2(a), 4.3(a), 4.4(a), 4.5(a) or 4.6(a) should be given preference over any other Chapter 4 activity description which seems similarly apt. For example, the manufacture of ammonium salts under s4.2 (a)(iv) would be more appropriate than under s4.7(b), even if ammonia is used in their manufacture.

Allocating the burning of waste

A2.16 You must consider whether the substance that is being burned is a waste at the point that it is burned, using current case law. If you are in any doubt, please consult Legal Services.

A2.17 Where the primary purpose of the plant is disposal of waste, the activity will – depending on its capacity - fall within either Section 5.1 and/or Schedule 13 or 13A as waste incineration plant.

Co-incineration

A2.18 For the purposes of the IED, waste co-incineration is where the main purpose of the plant is **generation of energy or production of material products**, and waste is fed as a regular or additional fuel, or in which waste is thermally treated for disposal purposes. Under the Regulations waste co-incineration plant (as defined in regulation 2) will fall within section 5.1 (“incineration and co-incineration of waste”) or another section - most probably section 1.1 (combustion) or section 3.1 (cement or lime manufacture). However, smaller co-incinerators may be below the capacity thresholds in sections 1.1 and 5.1, and will therefore be “small waste incineration plant” (SWIP) (defined in regulation 2). Unless they burn only the wastes listed in section 5.1 Part B, SWIPs will be regulated only under EPR schedule 13A (IED Chapter IV), will not be subject to Chapter II IED (ex-IPPC, including BAT) and the regulator will be the Local Authority. If SWIPs burn only the wastes listed in section 5.1 Part B and their capacity is above 50kg/hr, they will not be subject to Schedule 13A and they will be Part B activities regulated by the local authority. If SWIPs burn only the wastes listed in section 5.1 Part B and their capacity is below 50kg/hr, they will not be subject to Schedule 1 at all, they will not be subject to Schedule 13A and they will be waste operations regulated by the Environment Agency. More detail is provided in Government guidance on Waste Incineration² but note that European case law and Commission positions continue to develop on the distinction between the incineration of waste and the use of waste as a fuel for energy for the purposes of the Waste Framework Directive.

A2.19 Co-incineration plants constitute a particular form of incineration plant and table 2 can be used to help decide when a plant should be considered a co-incineration plant, based on a set of criteria that establish the primary purpose of the plant. Assessment of the primary purpose of a plant is

² See <https://www.gov.uk/government/publications/environmental-permitting-guidance-the-waste-incineration-directive>

made on the basis of the facts existing at the time at which the assessment is carried out. The primary purpose of the plant can therefore be re-assessed at a later date should the facts change. Table 2 poses typical scenarios which should be assessed sequentially as shown in the flow chart in Figure 1. For each scenario, select which of the two descriptions most aptly fits the plant under consideration. Where a conclusion can be drawn from a particular scenario, it is not necessary to consider the succeeding scenarios.

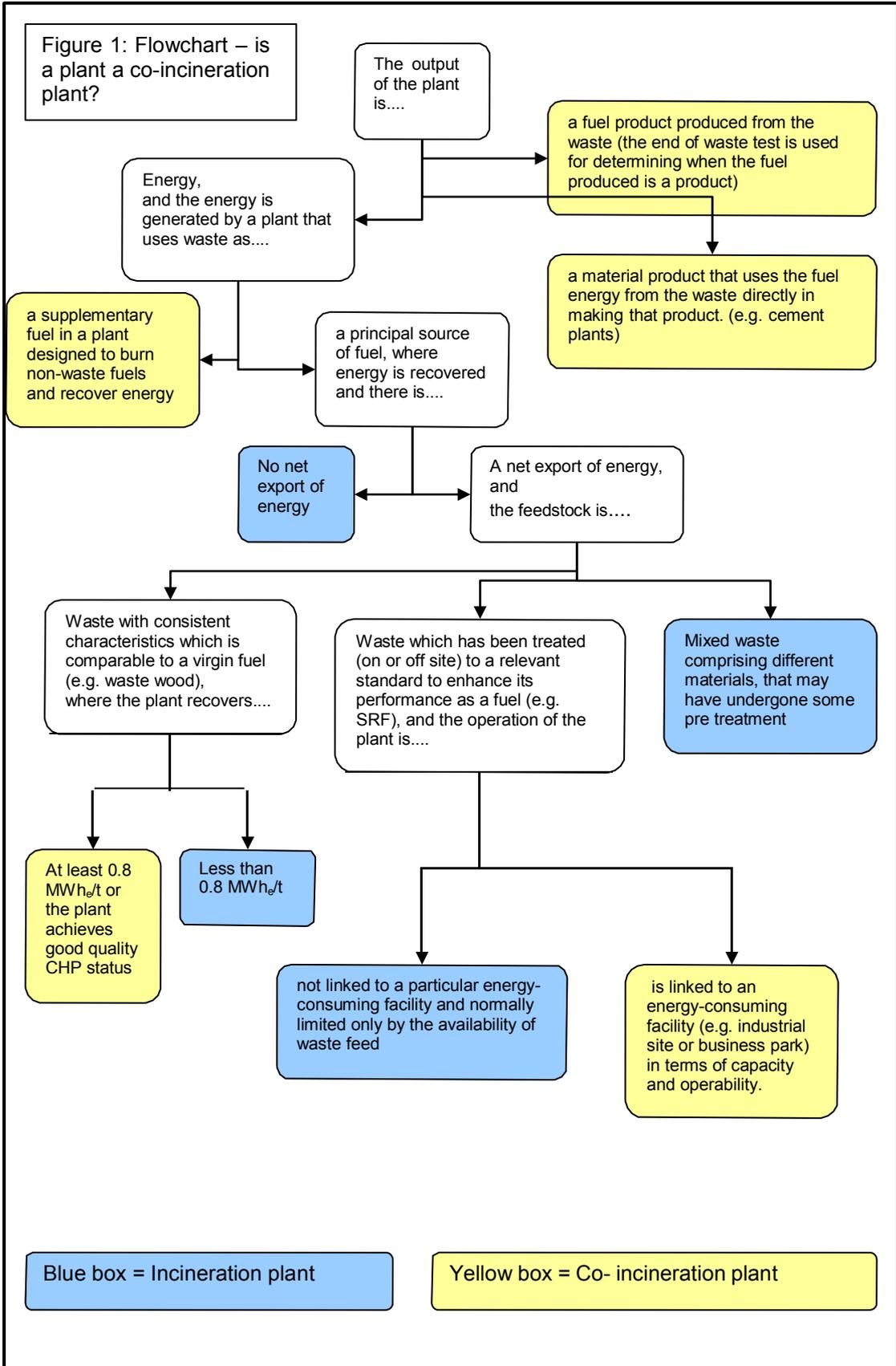
Table 2: Is a plant is a co-incineration plant?	
1. Does the plant produce Material Outputs?	
No The plant only produces energy (electricity and / or heat). Proceed to Question 2	Or Yes e.g. the plant produces a fuel product ³ from waste or uses the fuel energy from the waste directly in making a product. (e.g. Cement plants). The Plant is a Co-Incineration Plant – end of assessment.
2. Is energy recovered from the waste burning plant?	
No The Plant is an Incineration Plant – end of assessment.	Or Yes There is a net export of energy (as electricity or heat) to other plant in the installation or users outside the installation. Proceed to Question 3
3. Is the waste the principal source of fuel?	
Yes Waste is burnt as the principal source of fuel. (i.e. the plant operates on non-waste fuels only occasionally, or not at all) Proceed to Question 4	Or No The waste is a supplementary fuel in a plant designed to burn fuels which are not waste. The Plant is a Co-Incineration Plant – end of assessment.
4. Is the waste being burnt mixed waste comprising different materials?	
Yes The waste being burnt comprises different materials (e.g. mixed municipal waste, RDF). Proceed to Question 5	Or No The waste has consistent characteristics and can be compared to a virgin fuel (e.g. waste wood) Proceed to Question 6

³ The gas/liquid/solid produced by a gasification or pyrolysis plant is only considered a product where it has passed an [end of waste test](#) and is no longer considered a waste

5. Has the waste been treated to improve its fuel quality?	
No	Or Yes
The waste being burnt does not undergo any significant pre-treatment to enhance its performance as a fuel.	All the waste has been treated (on or off site) to a relevant standard to enhance its performance as a fuel (e.g. SRF has CEN TS 15359)
The Plant is an Incineration Plant	Proceed to Question 7
6. What level of Energy Recovery is achieved?	
Energy recovery is below 0.8 MWh _e /tonne waste	Or Energy recovery is at least 0.8 MWh _e /tonne ⁴ waste or the plant achieves good quality CHP status ⁵ .
The Plant is an Incineration Plant	The Plant is a Co-Incineration Plant
7. How is the plant operation managed?	
The plant operation is not linked to a particular energy-consuming facility and is normally limited only by the availability of waste feed (e.g. The principal output is electricity which is mainly supplied to the national grid).	Or The plant operation is linked to an energy-consuming facility (e.g. industrial site, business park) in terms of capacity and operability. When the consuming facility is not operating (other than short-duration maintenance), the producing plant stops operating.
The Plant is an Incineration Plant	The Plant is a Co-Incineration Plant

⁴ This figure has been derived from the BREF (BAT point 66). It is only relevant to this assessment and does not define an acceptable level of energy recovery. Energy recovery and energy efficiency are to be assessed in detail during permit determination.

⁵ See 'The CHPQA Standard' for details about good quality CHP status



A2.20 Burning tyres (or other waste) in a cement kiln is co-incineration under Section 3.1. Burning tyres alone, for disposal, will most probably be incineration, even where this also generates energy, as the main purpose of the plant burning the tyres is the thermal treatment of waste for disposal, and such plant would be likely to fall under Section 5.1, depending upon its capacity.

A2.21 As a general principle, co-incineration plant which falls into any specific Part A(1) activity outside of Section 5.1 will be permitted under that activity but subject to the schedule 13 requirements (IED chapter IV), as co-incineration plant. So, cement kilns using wastes as fuel will be permitted under Section 3.1, while a combustion unit above 50mW using wastes as fuel would probably be permitted under Section 1.1.

A2.22 Table gives further examples of the general Schedule 1 Part A(1) activity descriptions which would tend normally to be most apt. Individual decisions will need to be made on a case-by-case basis.

Table 3: Examples of most apt regulatory control under EPR

Type of plant	Thermal input or plant capacity	Waste type and/or throughput	Schedule 1 Reference or other control
Incineration plant		Hazardous waste >10 te/day	5.1 A(1) (a)
Incineration plant		Non hazardous waste >3 te/hr	5.1 A(1) (b)
Co-incineration plant (generating energy)	>50MW	Non-waste fuel*	1.1 A (1) (a)
Co-incineration plant (generating energy)	<50MW but >3 te/hr	Non-waste fuel*	5.1 A(1) (b)
Co-incineration plant (generating energy)	>10 te/day	If burning hazardous waste only	5.1 A(1) (b)
Co-incineration plant (generating energy)	>3 te/hr	If burning non hazardous waste only	5.1 A(1) (b)
Co-incineration plant (cement and lime kilns)	Cement production in rotary kilns >500 tpd or in other kilns >50 tpd	Waste, whether or not subject to Schedule 13A (IED Chapter IV)	3.1 A(1) (a)
Co-incineration plant (cement and lime kilns)	Production of lime or magnesium	Waste, whether or not subject to Schedule 13A (IED Chapter IV)	3.1 A(1) (b)

	oxide in kilns >50 tpd		
Incineration plant burning only: Vegetable wastes (specific types); Cork waste; Wood waste (untreated); or Animal carcasses		≥ 50 Kgs/hr and below the Pt A(1) thresholds (Haz waste 10 te/day, Non haz waste 3 te/hr)	5.1 B (a)
Incineration plant		<50kg/hr of waste not subject to Schedule 13A	Waste operation or waste exemption
Incineration plant or co- incineration plant not described in any of the rows above			Small Waste Incineration plant (SWIP)
Activities involving the pyrolysis, gasification, partial oxidation or other heat treatment of wastes where none of the products are destined for incineration		Waste, whether or not subject to Schedule 13A (IED Chapter IV)	1.2 A(1) (j)
*Non-waste fuel' means any fuel not covered by schedule 13A. This includes conventional fuels such as coal, oil of gas and the materials excluded by article 42(2) of the IED such as: vegetable wastes (specific types); cork waste; wood waste (untreated); and animal carcasses.			

4. Definition of 'Manufacturing'

A2.26 Some listed manufacturing activities do not contain thresholds. Specific guidance on manufacturing in the chemical sector is provided later against Chapter 4. Outside Chapter 4, manufacturing should be taken to mean more than just making something; manufacture has to be carried out for a financial return, whether directly or indirectly, and would normally be expected to involve the creation of a product from raw materials and would therefore exclude simple packaging or re-packaging activities. Note that certain laboratory fume cupboard activities are excluded from Schedule 1 - see paragraph 3(b) of Part 1.

5. Solvent Emissions Activities

A2.27 Solvent emission activities are covered in Schedule 14 to the Regulations which implement chapter V of the IED. These requirements were previously specified in the Solvent Emissions Directive (SED) which will be repealed in January 2014.

A2.28 The IED limits the emissions of volatile organic compounds (VOCs) from certain activities, where the solvent consumption exceeds given thresholds. The IED defines limits on the VOC emissions that these activities can release, requiring specific additional controls for activities that use VOCs with certain risk phrase classifications.

A2.29 Schedule 14 to the Regulations lists all the solvent emission activities. Most of the activities brought into Regulations are placed in Part B, but where they form part of Part A(1) installations they will be regulated by the Agency and will have to fulfil the technical requirements of Chapter 5 of the IED. The manufacture of pharmaceutical products is listed in both Schedule 14 and in Section 4.5 A(1)(a) of Part 2 to Schedule 1, which makes this limited part of the chemical industry sector subject to both solvent emission activity requirements and Best Available Techniques (BAT) from the outset. In some circumstances there may be a complex interaction between solvent emission activities and Part A installations subject to Integrated Pollution Prevention and Control.

3. COMMENTARY ON SCHEDULE 1

Schedule 1 is reproduced below with our commentary notes in *italics* against Part 2.

PART 1

Interpretation and application: general

Interpretation

1. In this Schedule—

“activity” means, subject to this Part, an activity listed in Part 2 of this Schedule;

“background quantity” means, in relation to the release of a substance resulting from an activity, such quantity of that substance as is present in—

(a) water supplied to the site where the activity is carried on,

(b) water abstracted for use in the activity, and

(c) precipitation onto the site on which the activity is carried on;

“controlled waters” has the meaning given in section 104 of the 1991 Act;

“directly associated activity” means an operation which—

(a) has a technical connection with the activity,

(b) is carried on on the same site as the activity, and

(c) could have an effect on pollution;

“installation” means

(a) a stationary technical unit where one or more activities are carried on, and

(b) any other location on the same site where any other directly associated activities are carried on,

and references to an installation include references to part of an installation;

“net rated thermal input” means the rate at which fuel can be burned at the maximum continuous rating of the appliance multiplied by the net calorific value of the fuel and expressed as megawatts thermal;

“Part A activity” means a Part A(1) activity or a Part A(2) activity;

“Part A(1) activity” means an activity falling within Part A(1) of any Section in Part 2 of this Schedule;

“Part A(2) activity” means an activity falling within Part A(2) of any Section in Part 2 of this Schedule;

“Part A installation” means a Part A(1) installation or a Part A(2) installation;

“Part A(1) installation” means an installation where a Part A(1) activity is carried on either alone or in combination with any or all of the following—

(a) an A(2) activity;

(b) a Part B activity;

(c) the operation of a small waste incineration plant;

(d) a solvent emission activity.

“Part A(2) installation” means an installation where a Part A (2) activity is carried on either alone or in combination with any or all of the following—

- (a) a Part B activity;
- (b) the operation of a small waste incineration plant;
- (c) a solvent emission activity.

“Part B activity” means an activity falling within Part B of any Section in Part 2 of this Schedule;

“Part B installation” means, subject to Sections 2.2, 5.1 and 6.4 of Part 2 of this Schedule, an installation, not being a Part A installation, where a Part B activity is carried on either alone or in combination with either or both of the following—

- (a) the operation of a small waste incineration plant;
- (b) a solvent emission activity; and

“Part B mobile plant” means plant that is designed to move or be moved whether on roads or other land and that is used to carry on a Part B activity.

Activities falling within more than one Part description

2.—(1) Where, in Part 2 of this Schedule, an activity falls within a description in Part A(1) and a description in Part A(2) that activity must be regarded as falling only within that description which fits it most aptly.

(2) Where, in Part 2 of this Schedule, an activity falls within a description in Part A(1) and a description in Part B that activity must be regarded as falling only within the description in Part A(1).

(3) Where, in Part 2 of this Schedule, an activity falls within a description in Part A(2) and a description in Part B that activity must be regarded as falling only within the description in Part A(2).

Application of activities falling within Part 2

3. - An activity is not to be taken to be an activity falling within Part 2 of this Schedule if it is—

- (a) carried on in a working museum to demonstrate an industrial activity of historic interest;
- (b) carried on for educational purposes in a school as defined in section 4(1) of the Education Act 1996⁽⁶⁾;
- (c) carried on at an installation, other than a waste incineration plant or waste co-incineration plant, or by means of Part B mobile plant, where the installation or plant is used solely for research, development or testing of new products or processes;
- (d) the running on or within an aircraft, hovercraft, mechanically propelled road vehicle, railway locomotive or ship or other vessel of an engine which propels or provides electricity for it;

(6) 1996 c. 56; section 4(1) was substituted by the Education Act 1997 (c. 44), section 51.

- (e) the running of an engine in order to test it before it is installed or in the course of its development;
- (f) carried on as a domestic activity in connection with a private dwelling; or
- (g) carried on at a waste incineration plant or waste co-incineration plant used for research, development and testing in order to improve the incineration process and which treats less than 50 tonnes of waste per year.

Application of thresholds for Part A activities

4.—For the purposes of assessing whether an activity is above any of the thresholds for any Part A activity, where several activities falling under the same description of activity containing a threshold are operated in the same installation, the capacities of those activities must be added together.

Operation below thresholds: effect on the installation

5. Where an operator is authorised by an environmental permit to operate an installation at which Part A(1) activities, Part A(2) activities or Part B activities which are described in Part 2 of this Schedule by reference to a threshold (whether in terms of capacity or otherwise) are carried on, the installation does not cease to be a Part A(1) installation, a Part A(2) installation or a Part B installation, as the case may be, by virtue of the installation being operated below the relevant threshold unless the permit ceases to have effect in accordance with these Regulations.

Application of Part B activities: releases into the air

6.—(1) Subject to sub-paragraph (2), an activity is not to be taken to be a Part B activity within Part 2 of this Schedule if it cannot result in the release into the air of a substance listed in sub-paragraph (3) or there is no likelihood that it will result in the release into the air of any such substance except in a quantity which is so trivial that it is incapable of causing pollution or its capacity to cause pollution is insignificant.

(2) Sub-paragraph (1) does not apply to—

- (a) an activity which may give rise to an offensive smell noticeable outside the site where the activity is carried on.

(3) References to, or to the release into the air of, a substance listed in this paragraph are to any of the following substances—

- (a) oxides of sulphur and other sulphur compounds;
- (b) oxides of nitrogen and other nitrogen compounds;
- (c) oxides of carbon;
- (d) organic compounds and partial oxidation products;
- (e) metals, metalloids and their compounds;
- (f) asbestos (suspended particulate matter and fibres), glass fibres and mineral fibres;
- (g) halogens and their compounds;

- (h) phosphorus and its compounds;
- (i) particulate matter.

References to releases into water

7. References in Part 2 of this Schedule to a substance, or to the release into water of a substance, listed in this paragraph or to its release in a quantity which, in any 12-month period, is greater than the background quantity by an amount specified in this paragraph are references to the following substances and amounts—

Table

<i>Substance</i>	<i>Amount greater than the background quantity (in grammes) in any 12-month period</i>
Mercury and its compounds	200 (expressed as metal)
Cadmium and its compounds	1,000 (expressed as metal)
All isomers of hexachlorocyclohexane	20
All isomers of DDT	5
Pentachlorophenol and its compounds	350 (expressed as PCP)
Hexachlorobenzene	5
Hexachlorobutadiene	20
Aldrin	2
Dieldrin	2
Endrin	1
Polychlorinated Biphenyls	1
Dichlorvos	0.2
1, 2—Dichloroethane	2,000
All isomers of trichlorobenzene	75
Atrazine	350*
Simazine	350*
Tributyltin compounds	4 (expressed as TBT)
Triphenyltin compounds	4 (expressed as TPT)
Trifluralin	20
Fenitrothion	2
Azinphos-methyl	2
Malathion	2
Endosulfan	0.5

* Where both Atrazine and Simazine are released, the figure for both substances in aggregate is 350 grammes.

References to certain substances

8.—(1) References in Part 2 of this Schedule to a substance listed in this paragraph are to any of the following substances—

- (a) alkali metals and their oxides and alkaline earth metals and their oxides;
- (b) organic solvents;
- (c) azides;
- (d) halogens and their covalent compounds;
- (e) metal carbonyls;
- (f) organo-metallic compounds;
- (g) oxidising agents;
- (h) polychlorinated dibenzofuran and any congener thereof;

- (i) polychlorinated dibenzo-p-dioxin and any congener thereof;
 - (j) polyhalogenated biphenyls, terphenyls and naphthalenes;
 - (k) phosphorus;
 - (l) pesticides.
- (2) In this paragraph, “pesticide” means any chemical substance or preparation prepared or used for destroying any pest, including those used for—
- (a) protecting plants or wood or other plant products from harmful organisms;
 - (b) regulating the growth of plants;
 - (c) giving protection against harmful creatures or rendering such creatures harmless;
 - (d) controlling organisms with harmful or unwanted effects on water systems, buildings or other structures, or on manufactured products; or
 - (e) protecting animals against ectoparasites.

Part 2

Activities

CHAPTER 1

Energy activities

SECTION 1.1

Combustion activities

Interpretation of Section 1.1

1. In this Section-

-anaerobic digestion means the mesophilic and thermophilic biological decomposition and stabilisation of biodegradable materials which-

(a) is carried on under controlled anaerobic conditions

(b) produces a methane rich gas mixture, and

(c) results in stable sanitised material that can be applied to land for the benefit of agriculture or to improve the soil structure or nutrients in land; and

- "recovered oil" means waste oil which has been processed but which has not ceased to be waste.

Part A(1)

(a) Burning any fuel in an appliance with a rated thermal input of 50 or more megawatts.

(b) *Activities deleted by EPR amendment SI 2013 No. 390.*

Note 1.1.1: "Appliance" is not defined in the Regulations or Part A guidance. "Appliance" includes direct fired ovens, gas turbines or reciprocating engines, whether compression or spark ignition.

Note 1.1.2: The reference to "rated thermal input" shall be taken to refer to net, not gross, input.

Note 1.1.3: A flare for burning landfill gas is also an appliance. However, flares are abatement systems and therefore the gas is being burnt for disposal and not as a fuel so Section 1.1 does not apply.

Note 1.1.4: Where waste or waste-derived fuel is used see A2.18 to A2.22 regarding whether an activity is covered by this Section or by Section 5.1.

Note 1.1.5: A section 1.1 A(1)(a) activity is ALWAYS an Industrial Emissions Directive (IED) Chapter II activity and CAN ALSO be a Chapter III combustion activity (formerly a Large Combustion Plant Directive, LCPD, plant), see section 1.1.10.

Interpretation and application of Part A(1)

1. For the purpose of paragraph (a), where two or more appliances with an aggregate rated thermal input of 50 megawatts or more are operated on the same site by the same operator those appliances must be treated as a single appliance with a rated thermal input of 50 megawatts or more.

Note 1.1.6: This aggregation rule, specific to Section 1.1 Part A(1)(a), is slightly different to the general aggregation rule in para. 4 of Part 1 of Schedule 1 (see General Note 1). The effect of this specific rule is not only to aggregate the capacities of the separate combustion units, but also to treat them as a single appliance and thus as part of the same installation. In contrast, the general aggregation rule provides that the aggregate capacity is to be attributed to each part or unit, but does not require that the various units are considered to be part of the same installation. In most cases, however, similar units operated on the same site by the same operator will share common directly associated activities, which will make them part of the same installation in any case.

Note 1.1.7: Any appliance with a rated thermal input of less than 50 MW should be included in the aggregation for the purposes of this specific rule. This creates the possibility of a Section 1.1 A(1) combustion activity existing at a relatively large installation with multiple, but individually small-scale, combustion units.

Note 1.1.8: Temporary Combustion Plant.

Only units which are permanently situated and operated on the site should be included in the aggregation. Equipment brought in during shutdowns, compression ignition generator sets, air compressors, reciprocating engine vehicles etc would not be included in the aggregation, nor would heaters brought in during cold spells or to temporarily replace units under repair.

Note 1.1.9: Interpretation of Capacity.

Installed capacity normally would include all combustion units, even those designated as standby plant. However, the following should be taken into account when considering capacity;

a) *Physical Constraints*

If fuel cannot be provided to all combustion units simultaneously, then capacity should be based on the maximum that can be fired at any one time. The physical constraint must be 'permanent' i.e. not easily reversible. In order to demonstrate that the unit/s cannot be operated at >50MWth input, they must be recertified by the manufacturer / installer and documentary evidence provided.

b) *Software Constraints*

If high level software interlocks are used to restrict fuel consumption, then the capacity should be based on the maximum that can be fired at any one time. Software interlocks must be protected to restrict access and be able to generate audit logs identifying any changes made. The software constraint must offer a clear and unambiguous demonstration that the

unit/s cannot be operated at >50MWth input. The unit/s must be recertified by the manufacturer / installer and documentary evidence provided.

c) Data Centre emergency backup generation plant (EBGP)

The capacity is based on the maximum thermal input of units which can be fired at any one time, irrespective of the reason for firing. The limiting constraints are those listed in (a) and (b) above. Full power ratings can be quoted as continuous rating or standby duty rating. Standby duty units can run up to 110% of the continuous rating. For the purpose of determining the capacity it is the 'maximum' thermal input rating that can be achieved irrespective of whether the unit would not normally run at that level. In this case, 110% of the continuous rating shall be used.

d) Combustion plant used for drying purpose

Combustion plant used for direct/indirect drying is counted towards the listed activity capacity but is not counted for the purposes of Chapter III of IED (see below).

Note 1.1.10: Interpretation of Capacity for the purposes of Chapter III of IED.

a) Combustion Plant <15MWTh

Article 29(3) of the IED states that:

For the purpose of calculating the total rated thermal input of a combination of combustion plants referred to in paragraphs 1 and 2, individual combustion plants with a rated thermal input below 15MW shall not be considered.

This aggregation rule differs from that for Chapter II in that there is a cut off, <15MWth, below which the rated thermal input is not considered. Moreover, Article 29(1) states:

Where the waste gases of two or more separate combustion plants are discharged through a common structure the combination formed by such plants shall be considered as a single combustion plant and their capacities added for the purpose of calculating the total rated thermal input.

Therefore, if the aggregated input of units, >15MWth, discharging through a common stack is >50MWth, it will constitute a Chapter III IED activity. By definition, this would also be a Chapter II IED activity.

Note. Chapter III does not apply to combustion plants which use any solid or liquid waste other than waste referred to in point (b) of point 31 of Article 3 (Chapter III exempt wastes). Combustion plant using non-exempt waste fall under Chapter V of the IED

b) Stand-by Generators

If stand-by generators (SBG) or supplementary firing apparatus (SFA) are only used in the case of an emergency or breakdown of other equipment and in all cases are substituting existing units, their rated thermal input will not be counted towards the calculation of the total. However, if the SBGs or SFAs are used to boost performance in certain cases (as well as at times substituting), they need to be counted towards the total calculation of the rated thermal input. Note, the exclusion of SBGs and SFAs from the above aggregation is unique to IED Chapter III combustion plants. It DOES NOT apply to IED Chapter II combustion activities.

In most cases, SBGs or SFAs will be required to come on-line as a result of taking off-line the primary unit in a planned manner i.e. for planned preventative maintenance. In such events it is possible for the SBG or SFA to be fired simultaneously with the primary unit as the load is taken up by the SBG or SFA. Notwithstanding this, any such period of 'overlap' shall not be considered as 'boosting' the performance of the primary unit. Therefore, standby combustion plant means identified plant substituting thermal capacity for periods of plant maintenance, resilience or breakdown. Standby plant shall not be used to expand the primary operational thermal capacity of the installation.

2. Nothing in this Part of this Section applies to burning fuels in an appliance installed on an offshore platform situated on, above or below those parts of the sea adjacent to England and Wales from the low water mark to the seaward baseline of the United Kingdom territorial sea.

3. In paragraph 2, "offshore platform" means any fixed or floating structure which—

- (a) is used for the purposes of or in connection with the production of petroleum; and
- (b) in the case of a floating structure, is maintained on a station during the course of production,

but does not include any structure where the principal purpose of the use of the structure is the establishment of the existence of petroleum or the appraisal of its characteristics, quality or quantity or the extent of any reservoir in which it occurs.

4. In paragraph 3, "petroleum" includes any mineral oil or relative hydrocarbon and natural gas existing in its natural condition in strata but does not include coal or bituminous shales or other stratified deposits from which oil can be extracted by destructive distillation.

5. Deleted by EPR amendment SI 2013 No. 390.

6. Nothing in this Part of this Section applies to burning fuels in an appliance installed on a storage or unloading platform as defined in regulation 2 of the Offshore Combustion Installations (Prevention and Control of Pollution) Regulations 2001(a).

Part B

Unless falling within Part A(1)(a) of this Section—

(a) Burning any fuel in—

(i) a boiler;

(ii) a furnace;

(iii) a gas turbine; or

(iv) a compression ignition engine,

with a net rated thermal input of 20 or more megawatts, but a rated thermal input of less than 50 megawatts.

(b) Burning any—

(i) waste oil;

(ii) *Activities deleted by EPR amendment SI 2014 No. 255.*

(iii) *Activities deleted by EPR amendment SI 2014 No. 255.*

in an appliance with a rated thermal input of less than 3 megawatts.

(c) *Activities deleted by EPR amendment SI 2014 No. 255.*

(d) *Activities deleted by EPR amendment SI 2014 No. 255.*

Interpretation and application of Part B

1. Part B does not apply to any activity falling within Part A(1) of Section 5.1.

SECTION 1.2

Gasification, Liquefaction and Refining Activities

Part A(1)

(a) Refining gas where this is likely to involve the use of 1,000 or more tonnes of gas in any 12-month period.

Note 1.2.1: "Gas" in this Section means only mineral gases, obtained by mining or similar activities .

Note 1.2.2: “Refining” means any activity undertaken to purify substances and separate them into their component parts. However, removing water and dust so that a gas can be used immediately as fuel, and using filters to protect machines from dust, would not be considered refining. The activity of refining gas also does not include the separation of oxygen and other gases from air. The reference to “use ... of gas” means refining such gas as feedstock and not gas burnt for ancillary purposes.

- (b) *Activities deleted by EPR amendment SI 2013 No. 390.*
- (c) Operating coke ovens.
- (d) gasification or liquefaction of-
 - (i) coal, or
 - (ii) other fuels in installations with a total rated thermal input of 20 megawatts or more
- (e) *Activities deleted by EPR amendment SI 2013 No. 390.*
- (f) *Activities deleted by EPR amendment SI 2013 No. 390.*
- (g) Refining mineral oils

Note 1.2.3: gasification and liquefaction of “other fuels” must involve changes to the chemical composition of the material. The description does not cover phase changes resulting from changes to temperature or pressure such as the conversion of natural gas to liquefied natural gas (LNG).

Note 1.2.3: Some activities will both refine petroleum products and produce organic chemicals. If the chemicals are produced by the continuous separation of petroleum products by distillation or other refining processes or by the reformation of such product to produce other hydrocarbons principally for use in fuels, the activity should be treated under the “most apt” rule as falling within Section 1.2. An activity should be regarded as falling under Section 4.2 if it does not result from one of the above processes or where other reagents are added to the chemical process, which are not present in either petroleum or the immediate products of distillation. For this purpose reagents should be taken to include solvents that are added to enable a reaction to proceed.

- (h) loading, unloading, handling or storage of, or the physical, chemical or thermal treatment of—
 - (i) crude oil; or
 - (ii) stabilised crude petroleum
 - (iii) *Activities deleted by EPR amendment SI 2013 No. 390.*
 - (iv) *Activities deleted by EPR amendment SI 2013 No. 390.*
 - (v) *Activities deleted by EPR amendment SI 2013 No. 390.*
- (i) *Activities deleted by EPR amendment SI 2013 No. 390.*
- (j) Activities involving the pyrolysis, carbonisation, distillation, liquefaction, gasification, partial oxidation, or other heat treatment of—
 - (i) coal (other than the drying of coal);

- (ii) lignite;
- (iii) oil;
- (iv) other carbonaceous material; or
- (v) mixtures thereof, otherwise than with a view to making charcoal.

(ja) Activities involving the liquefaction or gasification of other carbonaceous material.

(k) *Activities deleted by EPR amendment SI 2013 No. 390.*

Note 1.2.4: Pyrolysis is the application of heat to materials in the absence of air to break them down into other components. It is sometimes described as "dry distillation" and "carbonisation". The terms are applied both generally and specifically in relation to certain industries. Pyrolysis is used to produce charcoal, carbon black and coke.

Note 1.2.5: "Carbonisation" includes manufacture of carbon black.

Interpretation and application of Part A(1)

1. Part A(1)(j) does not include—

- (a) the use of any substance as a fuel;
- (b) the incineration in a waste incineration plant or co-incineration plant of any substance as a waste;
- (c) any activity for the treatment of sewage or sewage sludge;
- (d) the anaerobic digestion of biodegradable material, whether or not containing or comprising waste.

Note 1.2.6: The reference to the treatment of sewage in this interpretation rule is taken to mean that 1.2 A(1) (j) does not apply to any treatment of raw sewage or sewage sludge within a sewage treatment works.

Note 1.2.7: Paragraph (j), rather than any description listed in 5.1, applies only where a waste is subject to Chapter IV of the IED and the purpose of the activity is to produce a product, or products, which is/are not subsequently burned. Therefore, if a gasification/pyrolysis plant produces a number of products, any of which is subsequently burned, then Chapter IV of the IED applies to the whole gasification/pyrolysis plant and it will fall to be permitted under Section 5.1, provided that the relevant thresholds are exceeded. This is also the case where the product(s) are burned separately from the gasification/ pyrolysis plant (in remote units, whether owned by the same person or not). In such cases, Chapter IV of the IED will apply both to the plants initially producing, as well as subsequently using, these products.

2. In paragraph (j), the heat treatment of oil, other than distillation, does not include the heat treatment of waste oil or waste emulsions containing oil in order to recover the oil from aqueous emulsions.

3. In Part A(1)- "anaerobic digestion" means the mesophilic and thermophilic biological decomposition and stabilisation of biodegradable materials which-

(a) is carried on under controlled anaerobic conditions,

- (b) produces a methane-rich gas mixture, and
- (c) results in stable sanitised material that can be applied to land for the benefit of agriculture or to improve the soil structure or nutrients in land; and

“carbonaceous material” includes such materials as charcoal, coke, peat, rubber and wood, but does not include wood which has not been chemically treated or sewage.

Note 1.2.8: See Section 5.4, note 5.4.4. for further guidance on anaerobic digestion.

Part A(2)

- (a) Refining gas where this activity does not fall within Part A(1)(a) of this Section.

Part B

- (a) Blending odorant for use with natural gas or liquefied petroleum gas.
- (b) The storage of petrol in stationary storage tanks at a terminal, or the loading or unloading at a terminal of petrol into or from road tankers, rail tankers or inland waterway vessels.
- (c) The unloading of petrol into stationary storage tanks at a service station, if the total quantity of petrol unloaded into such tanks at the service station in any 12-month period is likely to be 500m³ or more.
- (d) Motor vehicle refuelling activities at an existing service station after the prescribed date, if the throughput of petrol at that service station in any 12 month period is, or is likely to be, in excess of 3000m³.
- (e) Motor vehicle refuelling activities at a new service station, if the throughput of petrol at that service station in any 12 month period is, or is intended to be in excess of 500m³.
- (f) Motor vehicle refuelling activities at a new service station if the throughput of petrol at that service station in any 12 month period is, or is likely to be in excess of 100 m³ and it is situated under permanent living quarters or working areas
- (g) Any service station which undergoes a major refurbishment must be treated as a new service station.

Interpretation of Part B

1. In Part B —

“existing service station” means a service station—

- (a) which is put into operation; or
- (b) for which planning permission under the Town and Country Planning Act 1990(a) was granted, before 1st January 2010;

(a) 1990 c.8

“inland waterway vessel” means a vessel, other than a sea-going vessel, having a total dead weight of 15 or more tonnes;

“new service station” means, in relation to service stations to which paragraph (e) of Part B applies, those which are put into operation on or after 1st January 2010, and in relation to service stations to which paragraph (f) of Part B applies, those which are put into operation on or after 1st January 2012;

“petrol” means any petroleum derivative (other than liquefied petroleum gas), with or without additives, having a Reid vapour pressure of 27.6 or more kilopascals, which is intended for use as a fuel for motor vehicles;

“prescribed date” means 31st December 2011 if the throughput is in excess of 3500m³ and 31st December 2018 if the throughput is in excess of 3000m³;

“service station” means any premises where petrol is dispensed to motor vehicle fuel tanks from stationary storage tanks but does not include any service station exclusively used in association with the construction and delivery of new motor vehicles;

“terminal” means any premises which are used for the storage and loading of petrol into road tankers, rail tankers or inland waterway vessels.

2. Any other expressions used in Part B which, in relation to paragraphs (b) and (c), are also used in Directive 94/63/EC on the control of volatile organic compound (VOC) emissions resulting from the storage of petrol and its distribution from terminals to service stations(b), or in relation to paragraphs (d) to (g), are also used in Directive 2009/126/EC on Stage II petrol vapour recovery during refuelling of motor vehicles at service stations(c) have the same meaning as in those Directives.

CHAPTER 2

Production and Processing of Metals

SECTION 2.1

Ferrous Metals

Interpretation of Section 2.1

1. In this Section, “ferrous alloy” means an alloy of which iron is the largest constituent, or equal to the largest constituent, by weight, whether or not that alloy also has a non-ferrous metal content greater than any percentage specified in Section 2.2.

Part A(1)

(a) Roasting or sintering metal ore, including sulphide ore, or any mixture of iron ore with or without other materials.

Note 2.1.1: “Ore” means naturally occurring material which is extracted from the land or the sea bed.

(b) OJ No. L 365, 31.10.1994, p24, as amended by Regulation (EC) No 1882/2003 (OJ No L 284, 31.10.2003, p1)

(c) OJ No L 285, 31.10.2009, p36..

- (b) Producing, melting or refining iron or steel or any ferrous alloy, including continuous casting, except where the only furnaces used are—
 - (i) electric arc furnaces with a designed holding capacity of less than 7 tonnes, or
 - (ii) cupola, crucible, reverberatory, rotary, induction, vacuum, electro-slag or resistance furnaces.

Note 2.1.2: "Scarfig" and similar activities should normally be considered as associated activities within the installation of an integrated iron and steel works.

- (c) Processing ferrous metals and their alloys by using hot-rolling mills with a production capacity of more than 20 tonnes of crude steel per hour.
- (d) Loading, unloading or otherwise handling or storing more than 500,000 tonnes in total in any 12-month period of iron ore, except in the course of mining operations, or burnt pyrites.

Part A(2)

- (a) Unless falling within Part A(1)(b) of this Section producing pig iron or steel, including continuous casting, in a plant with a production capacity of more than 2.5 tonnes per hour.
- (b) Operating hammers in a forge, the energy of which is more than 50 kilojoules per hammer, where the calorific power used is more than 20 megawatts.

Note 2.1.3: The reference to calorific power should be taken to refer to the power available to heat the work-piece in addition to any energy supplied to the hammering system.

- (c) Applying protective fused metal coatings with an input of more than 2 tonnes of crude steel per hour.

Note 2.1.4: "Fused metal coatings" includes hot dip galvanising.

- (d) Casting ferrous metal at a foundry with a production capacity of more than 20 tonnes per day.

Part B

- (a) Unless falling within Part A(1)(b) of this Section, producing pig iron or steel, including continuous casting, in a plant with a production capacity of 2.5 or less tonnes per hour.
- (b) Unless falling within Part A(2)(a) or (d) of this Section, producing, melting or refining iron or steel or any ferrous alloy (other than producing pig iron or steel, including continuous casting) using—

- (i) one or more electric arc furnaces, none of which has a designed holding capacity of 7 or more tonnes; or
 - (ii) a cupola, crucible, reverberatory, rotary, induction, electro-slag or resistance furnace.
- (c) Desulphurising iron, steel or any ferrous alloy.
- (d) Heating iron, steel or any ferrous alloy (whether in a furnace or other appliance) to remove grease, oil or any other non-metallic contaminant (including such operations as the removal by heat of plastic or rubber covering from scrap cable) unless—
- (i) it is carried on in one or more furnaces or other appliances the primary combustion chambers of which have in aggregate a rated thermal input of less than 0.2 megawatts;
 - (ii) it does not involve the removal by heat of plastic or rubber covering from scrap cable or of any asbestos contaminant; and
 - (iii) it is not related to any other activity falling within this Part of this Section.
- (e) Unless falling within Part A(1) or Part A(2) of this Section, casting iron, steel or any ferrous alloy from deliveries of 50 or more tonnes of molten metal.

SECTION 2.2

Non-Ferrous Metals

Interpretation and application of Section 2.2

1. In this Section “non-ferrous metal alloy” means an alloy which is not a ferrous alloy, as defined in Section 2.1.
2. Part A(1)(a), (b) and (f) and Part B do not apply to hand soldering, flow soldering or wave soldering.

Part A(1)

- (a) Unless falling within Part A(2) of this Section, producing non-ferrous metals from ore, concentrates or secondary raw materials by metallurgical, chemical or electrolytic activities.

Note 2.2.1: Certain activities could be taken to be both "producing non-ferrous metals" under this activity description, and "melting non-ferrous metals" under 2.2 A(1) (b), 2.2 A(2) (a) or 2.2 B (a) (depending on the melting and holding capacities). In such cases it will be necessary to decide which description will apply for regulatory purposes. In this sense melting is a physical process involving a change in the state of the metal (and is defined to including "making alloys"), whereas producing involves bringing something into being that did not exist before. So when 2.2 A(1) (a) speaks of "producing non-ferrous metals", the implication is that the product is clearly non-ferrous metal in a way that the raw material is not. The relationship between the "producing" and "melting" activity descriptions for non-ferrous metals in general, where both could apply, is therefore as outlined in (i) - (iii) below. For lead and cadmium, however, there are additional considerations by virtue of 2.2 A(1) (d) and 2.2 A(1) (f) respectively - see Notes 2.2.4 and 2.2.6 below.

- (i) 2.2 A(1) (a) and 2.2 A(1) (b): The distinction here is somewhat academic since an activity will fall under Part A(1) either way, and both activity descriptions have the same relevant period. The choice should simply be made on the basis of whichever description is the more apt - see General Note 4. The 2.2 A(1) (a) description will therefore be more apt where the principal purpose of a melting activity is to "produce" a non-ferrous metal. This could include production via the melting of secondary raw material (as defined in Note 2.2.2 below) where that material is not recognisably non-ferrous metal to start with, such that any melting and associated treatment is most aptly considered to be an operation that produces new metal. Conversely, the 2.2 A(1) (b) activity description will be more apt where the starting material is recognisably non-ferrous metal and the purpose of the melting is simply to refine it, cast it or otherwise change its physical but not substantially its chemical properties.
- (ii) 2.2 A(1) (a) and 2.2 A(2) (a): The 2.2 A(1) (a) activity description begins within the words "Unless falling within Part A(2) of this Section ...", and so any single production activity that involves melting, within the relevant capacity thresholds, will fall into the A(2) rather than the A(1) description. This can be assessed by considering whether, if the 2.2 A(1) (a) description did not exist, it would be reasonable to assign an activity to the 2.2 A(2) (a) description. If it would, then even if the 2.2 A(1) (a) description were arguably more apt, the 2.2 A(2) (a) description will prevail.
- (iii) 2.2 A(1) (a) and 2.2 B (a): The 2.2 A(1) (a) description will prevail over the 2.2 B (a) description where both apply, even if the Part B description is arguably more apt. Thus melting that falls below the relevant 2.2 B (a) capacity threshold will nevertheless fall into 2.2 A(1) (a) if it can clearly be considered to be "producing". As described above, this requires the product to be in some way fundamentally different from the raw materials. A particular issue here concerns the melting of secondary raw materials (as defined in Note 2.2.2 below), which may or may not constitute "production" under 2.2 A(1) (a) depending on the nature of those materials, and would otherwise fall under 2.2 B (a). If a reasonable person were to be shown the secondary raw material to be placed in the furnace and asked whether it is non-ferrous metal, and the answer would be "no" or "partly", then the activity can be considered to be "production" under 2.2 A(1) (a). If the answer would be "yes" then the activity is not "production" and so remains as "melting" under 2.2 B (a). This means that melting grossly visibly contaminated scrap should be considered "production", i.e. scrap that obviously contains significant quantities of plastic, rubber, paint and other non-metallic material.

Note 2.2.2: "Secondary raw materials" is not defined in the Regulations. However, the BREF for the Non-Ferrous Metals Industries and the Agency's Technical Guidance Note IPPC S2.03 make it clear that it encompasses all raw materials derived from previous use, i.e. any material arising from the production or use of metals, metal compounds, or products comprising or containing metallic components. This includes drosses, slags and scrap metal. Nevertheless, the simple fact that secondary raw materials are used does not automatically place an activity into 2.2 A(1) (a). The tests for inclusion in 2.2 A(1) (a) are, firstly, whether the activity is "producing" non ferrous metals by metallurgical, chemical or electrolytic activities and, secondly, whether it more appropriately falls into one of the other activity descriptions (e.g. 2.2 A(2) (a)) - see Note 2.2.1 above.

Note 2.2.3: How to determine whether metals are produced: If the result of an activity is a non-ferrous metal that is usable in a metallurgical sense, then that activity is taken to have produced non-ferrous metal even where processing raw materials which would not of

themselves be described as non-ferrous metal. If such an activity produces an intermediate product, e.g. a non ferrous metal concentrate, which needs considerable further processing to produce non-ferrous metal that is usable in a metallurgical sense then that activity has not “produced a non-ferrous metal”. The production instead occurs at the point where the non-ferrous metal is produced from the intermediate product.

Note 2.2.4: "Metallurgical activities" are limited to those involving heat. The cold processing of drosses and slags by crushing, milling, magnetic separation and screening to produce non-ferrous metals for further processing is, therefore, a Section 3.5 Part B (a) mineral activity (that may also require a waste management licence). If it is carried out as part of a Part A activity, such as melting, then it would be an associated activity of the Part A activity.

The pressing of hot dross, which is carried out immediately after dross removal, is an intrinsic part of the melting activity and not a separate activity. (Dross pressing excludes air, preventing the metal from being lost by oxidation and thereby increasing recycling efficiency).

- (b) Melting, including making alloys, of non-ferrous metals, including recovered products and the operation of non-ferrous metal foundries where—
 - (i) the plant has a melting capacity of more than 4 tonnes per day for lead or cadmium or 20 tonnes per day for all other metals; and
 - (ii) any furnace (other than a vacuum furnace), bath or other holding vessel used in the plant for the melting has a design holding capacity of 5 or more tonnes.
- (c) Activities deleted by EPR amendment SI 2013 No. 390.
- (d) Activities deleted by EPR amendment SI 2013 No. 390.
- (e) Activities deleted by EPR amendment SI 2013 No. 390.
- (f) Producing, melting or recovering (whether by chemical means or by electrolysis or by the use of heat) cadmium or mercury or any alloy containing more than 0.05 per cent by weight of either of those metals or both in aggregate
- (g) Activities deleted by EPR amendment SI 2013 No. 390.
- (h) Activities deleted by EPR amendment SI 2013 No. 390.
- (i) Activities deleted by EPR amendment SI 2013 No. 390.

*Note 2.2.5: In interpreting the meaning of S 2.2 A(1) (b) it is important to note that subparagraphs (i) **AND** (ii) have to apply for the section to apply. Sub-para (i) specifies a daily capacity depending on the metal being melted and sub-para (ii) specifies that at least one of the furnaces used has to have a holding capacity of 5 or more tonnes for this definition to become relevant.*

Note 2.2.6: Though the description in 2.2 A(1) (f) refers explicitly to cadmium, and otherwise only to mercury but not to any other non-ferrous metals, it will still generally be more apt to place the melting of cadmium in 2.2 A(1) (b) or 2.2 A(2) (a) where relevant.

This is because these activity descriptions not only also mention cadmium explicitly, but additionally they clearly establish an intended A(1)/A(2) division based on the holding capacity (see Table 1). However, the effect of the activity description in 2.2 A(1) (f) is that there is no size threshold for the application of IPPC to the melting of cadmium. Subject to any exclusions provided for by the interpretation rules in Part 2 of Schedule 1 (which allow e.g. exclusion of working museums), melting cadmium will always be a Part A activity, under either 2.2 A(1) (b) or 2.2 A(2) (a) if the melting capacity exceeds 4 tonnes (depending on the holding capacity), or under 2.2 A(1) (f) if the melting capacity is 4 tonnes or less. (In consequence, activity description 2.2 B (a) appears redundant in relation to melting cadmium).

Part A(2)

- (a) Melting, including making alloys, of non-ferrous metals, including recovered products and the operation of non-ferrous metal foundries where the plant has a melting capacity of more than 4 tonnes per day for lead or cadmium or 20 tonnes per day for all other metals, and
 - (i) no furnace (other than a vacuum furnace), bath or other holding vessel used in the plant for the melting has a design holding capacity of 5 or more tonnes; or
 - (ii) the plant uses a vacuum furnace of any design holding capacity.

Part B

- (a) Melting, including making alloys, of non-ferrous metals (other than tin or any alloy which in molten form contains 50 per cent or more by weight of tin), including recovered products (such as refining, foundry casting) in plant with a melting capacity of 4 tonnes or less per day for lead or cadmium or 20 tonnes or less per day for all other metals.
- (b) The heating in a furnace or any other appliance of any non-ferrous metal or non-ferrous metal alloy for the purpose of removing grease, oil or any other non-metallic contaminant, including such operations as the removal by heat of plastic or rubber covering from scrap cable, if not related to another activity described in this Part of this Section; but an activity does not fall within this paragraph if—
 - (i) it involves the use of one or more furnaces or other appliances the primary combustion chambers of which have in aggregate a net rated thermal input of less than 0.2 megawatts; and
 - (ii) it does not involve the removal by heat of plastic or rubber covering from scrap cable or of any asbestos contaminant.
- (c) Melting zinc or a zinc alloy in conjunction with a galvanising activity at a rate of 20 or less tonnes per day.
- (d) Melting zinc, aluminium or magnesium or an alloy of one or more of these metals in conjunction with a die-casting activity at a rate of 20 or less tonnes per day.

- (e) Unless falling within Part A(1) or Part A(2) of this Section, the separation of copper, aluminium, magnesium or zinc from mixed scrap by differential melting.

Interpretation and application of Part B

1. When determining the extent of an installation carrying on an activity within paragraph (e), any location where the associated storage or handling of scrap which is to be heated as part of that activity is carried on, other than a location where scrap is loaded into a furnace, is to be ignored.

SECTION 2.3

Surface Treating Metals and Plastic Materials

Part A(1)

- (a) Unless falling within Part A(2) of this Section, surface treating metals and plastic materials using an electrolytic or chemical process where the aggregated volume of the treatment vats is more than 30m³.

Note 2.3.1: "Surface treating ...using an electrolytic or chemical process" means treatment in which there is a chemical reaction at the surface and the surface is altered chemically. Thus anodising (in which the aluminium surface is oxidised electrolytically) is surface treatment in this context, whilst electrolytic alkaline cleaning of a steel surface is not. This is because, although there an electrolytic reaction that produces hydrogen or oxygen gas, the surface is cleaned of grease or deposits by the physical scouring action of the bubbles; the surface itself is not altered chemically (Though this may not be the case if the polarity is reversed). Similarly electrophoretic painting is not included within this activity description because it is based on an electrostatic transport mechanism which does not chemically or electrolytically alter the surface of the metal or plastic.

Note 2.3.2: "Surface" means the base surface or any coating which is chemically bonded to it. An oxide coat is regarded as the surface, while paint is not. Thus oxide coat removal by pickling is regarded as surface treatment, while paint removal by immersion is not.

Note 2.3.3: "Treatment vats" means vats in which treatment by immersion takes place. Where the treatment – for example the application of a chemical to a surface – takes place by means such as spraying, and a vat is used simply to collect the residue from the activity, the vat is not a treatment vat.

Note 2.3.4: Surface treatment may use a number of vats in sequence for processes such as cleaning, plating and rinsing. All process steps that involve altering the surface as a result of an electrolytic or chemical process should be considered as "treating". Processes that do not involve chemical or electrolytic action do not fall under this definition. Thus the volume of the treatment vats should be calculated only as the total volume of vats used for process steps that involve alteration of the surface. Note that the 30m³ threshold is for aggregation across all activities undertaken on site by the same operator so unconnected vats which undertake any surface treatment that meets the definition will all be included.

Note 2.3.5: The following list summarises the types of immersion activity which do meet the description of "treatment" (ie. cause chemical change to the surface) and so contribute to the aggregation total for comparison with the 30m³ threshold

- Electroplating, electroless (autocatalytic) plating, anodising, passivation, electro-polishing, pickling, activation, chromating, phosphating, bright dipping, chemical blacking, decorative oxidation, stripping (removal of plated metal), post-anodising sealing (both hot water and cold, eg. with nickel acetate solutions), and surface etching (but not "chemical milling" see Note 2.3.7, below); and
- Electrolytic cleaning may meet the description if voltage conditions are changed such that metal is removed as ions instead of scale being eroded by hydrogen liberation.

The following do not meet the description of "treatment":

- Rinsing, subsequent weak acid or alkaline dips to remove residual alkalinity or acidity, respectively, from previous treatment stages, alkaline soak cleaning of steel (and other metals that are unreactive under alkaline conditions), electrolytic alkaline soak (except where the polarity is reversible and/or conditions favour metal corrosion), bacterial cleaning, colour dying, and electrophoretic lacquering or painting.

Note 2.3.6: The volume of the vat(s) determine whether an activity is listed, not the volume of the liquors used. The vat volume is considered to be the volume that can be contained up to the point of overflow.

Note 2.3.7: Chemical milling is carried out not to treat the surface of the materials but to reduce the dimensions. Therefore it is not a listed activity under this description. However, if the chemical milling activity uses acids of hydrogen fluoride or hydrogen chloride or other hydrogen halides as the etchant it may meet the activity description in section 4.2 Part A(1) (b)

Note 2.3.8: Cadmium platers using vats or vessels below 30m³ will still be covered by Section 4.2 Part A(1) (f) below but above this threshold applying the most apt rule (see General Note 4 above) cadmium plating would normally fit under the Section 2.3 A(1) (a) surface treatment activity description above. Where there are both cadmium plating and non-Cd surface treatment activities, and the total volume of vats and vessels is greater than 30m³ then both will be regulated as surface treatment activities under 2.3 A(1) (a) . Where there are both cadmium plating and non-Cd surface treatment activities, and the total volume of vats and vessels is 30m³ or less, then the cadmium plating will be regulated under Section 4.2 Part A (1) (f) and the non-Cd surface treatment activities will not be regulated.

Note 2.3.9: Activities meeting this listed description are not confined to plating, anodising or similar installations. Pickling operations before galvanising or cold-rolling of steel, for example, involve the same type of surface treatment as the pickling stage in plating shops, and should be regulated as such. Similarly, phosphating prior to painting is regarded as surface treatment.

2.3.10: If a surface cleaning activity, as defined in Section 7 of Schedule 1 (as introduced by the Solvent Emissions Regulations), is linked to other activities within this section and the consumption threshold is exceeded it may be subject to the control requirements of the Solvent Emissions Directive/Solvent Emissions Regulations

2.3.11: Nitriding can be carried out by placing items in a furnace containing ammonia gas that is cracked to produce the required nitrogen. This technique is generally used for larger items. Alternatively it can be carried out by dipping items into molten salts or coating with salts and heating in a furnace, a technique generally used for smaller items. Neither process is analogous to immersion in vats containing solutions of treatment chemicals and therefore nitriding does not meet the listed description of surface treatment.

Part A(2)

- (a) Surface treating metals and plastic materials using an electrolytic or chemical process where the aggregated volume of the treatment vats is more than 30m³ and where the activity is carried on at the same installation as one or more activities falling within—
- (i) Part A(2) or Part B of Section 2.1;
 - (ii) Part A(2) or Part B of Section 2.2; or
 - (iii) Part A(2) or Part B of Section 6.4.

Part B

- (a) Any process for the surface treatment of metal which is likely to result in the release into air of any acid-forming oxide of nitrogen and which does not fall within Part A(1) or Part A(2) of this Section.

CHAPTER 3

Mineral Industries

SECTION 3.1

Production of Cement and Lime

Part A(1)

- (a) Producing cement clinker in rotary kilns with a production capacity exceeding 500 tonnes per day or in other kilns with a production capacity exceeding 50 tonnes per day.
- (b) Producing lime or magnesium oxide in kilns with a production capacity of more than 50 tonnes per day.

Part A(2)

- (a) Grinding cement clinker
- (b) *Activities deleted by EPR amendment SI 2013 No. 390.*

Part B

- (a) Storing, loading or unloading cement or cement clinker in bulk prior to further transportation in bulk.
- (b) Blending cement in bulk or using cement in bulk other than at a construction site, including the bagging of cement and cement mixtures, the batching of ready-mixed concrete and the manufacture of concrete blocks and other cement products.
- (c) Slaking lime for the purpose of making calcium hydroxide or calcium magnesium hydroxide.
- (d) Producing lime or magnesium oxide where the activity does not involve the heating of more than 50 tonnes per day of calcium carbonate or calcium magnesium carbonate or both in aggregate.

SECTION 3.2

Activities Involving Asbestos

Interpretation of Section 3.2

1. In this Section “asbestos” means any of the following fibrous silicates: actinolite, amosite, anthophyllite, chrysotile, crocidolite and tremolite.

Part A(1)

- (a) Producing asbestos or manufacturing products based on or containing asbestos.
- (b) Stripping asbestos from railway vehicles except—
 - (i) in the course of the repair or maintenance of the vehicle;
 - (ii) in the course of recovery operations following an accident; or
 - (iii) where the asbestos is permanently bonded in cement or in any other material (including plastic, rubber or resin).
- (c) *Activities deleted by EPR amendment SI 2013 No. 390.*

Part B

- (a) Unless related to an activity falling within Part A(1) of this Section, the industrial finishing of—
 - (i) asbestos cement;
 - (ii) asbestos cement products;
 - (iii) asbestos fillers;
 - (iv) asbestos filters;
 - (v) asbestos floor coverings;
 - (vi) asbestos friction products;
 - (vii) asbestos insulating board;
 - (viii) asbestos jointing, packaging or reinforcement material;

- (ix) asbestos packing;
- (x) asbestos paper or card; or
- (xi) asbestos textiles.

SECTION 3.3

Manufacturing Glass and Glass Fibre

Part A(1)

- (a) Manufacturing glass fibre in plant with a melting capacity exceeding 20 tonnes per day.
- (b) *Activities deleted by EPR amendment SI 2013 No. 390.*

Part A(2)

- (a) Manufacturing glass, unless falling within Part A(1) of this Section, where the melting capacity of the plant is more than 20 tonnes per day.

Part B

Unless falling within Part A(1) or Part A(2) of this Section—

- (a) Manufacturing glass at any location with the capacity to make 5,000 or more tonnes of glass in any 12-month period, and any activity involving the use of glass which is carried on at any such location in conjunction with its manufacture.
- (b) Manufacturing glass where the use of lead or any lead compound is involved.
- (c) Manufacturing any glass product where lead or any lead compound has been used in the manufacture of the glass except—
 - (i) making products from lead glass blanks; or
 - (ii) melting, or mixing with another substance, glass manufactured elsewhere to produce articles such as ornaments or road paint.
- (d) Polishing or etching glass or glass products in the course of any manufacturing activity if—
 - (i) hydrofluoric acid is used; or
 - (ii) hydrogen fluoride may be released into the air.
- (e) Manufacturing glass frit or enamel frit and its use in any activity where that activity is related to its manufacture.

SECTION 3.4

Production of Other Mineral Fibres

Part A(1)

- (a) Melting mineral substances including the production of mineral fibres in plants with a melting capacity exceeding 20 tonnes per day.
- (b) Activities deleted by *EPR amendment SI 2013 No. 390*.

SECTION 3.5

Other Mineral Activities

Part A(2)

- (a) Manufacturing cellulose fibre reinforced calcium silicate board using unbleached pulp.

Part B

- (a) Unless falling within Part A(1) or Part A(2) of any Section, the crushing, grinding or other size reduction, other than the cutting of stone, or the grading, screening or heating of any designated mineral or mineral product except where the operation of the activity is unlikely to result in the release into the air of particulate matter.
- (b) Any of the following activities unless carried on at an exempt location—
 - (i) crushing, grinding or otherwise breaking up coal, coke or any other coal product;
 - (ii) screening, grading or mixing coal, coke or any other coal product;
 - (iii) loading or unloading petroleum coke, coal, coke or any other coal product except unloading on retail sale.
- (c) The crushing, grinding or other size reduction, with machinery designed for that purpose, of bricks, tiles or concrete.
- (d) Screening the product of any activity described in paragraph (c).
- (e) Coating road stone with tar or bitumen.
- (f) Loading, unloading, or storing pulverised fuel ash in bulk prior to further transportation in bulk.
- (g) The fusion of calcined bauxite for the production of artificial corundum.

Interpretation and application of Part B

1. In Part B—

“coal” includes lignite;

“designated mineral or mineral product” means—

- (a) clay, sand or any other naturally occurring mineral other than coal;

- (b) metallurgical slag;
- (c) boiler or furnace ash produced from the burning of coal, coke or any other coal product;
- (d) gypsum which is a by-product of any activity;

“exempt location” means—

- (a) any premises used for the sale of petroleum coke, coal, coke or any coal product where the throughput of such substances at those premises in any 12-month period is in aggregate likely to be less than 10,000 tonnes; or
- (b) any premises to which petroleum coke, coal, coke or any coal product is supplied only for use there;

“retail sale” means sale to the final customer.

2. Part B does not apply to any activity carried on underground.

SECTION 3.6

Ceramic Production

Part A(1)

- (a) Manufacturing ceramic products (including roofing tiles, bricks, refractory bricks, tiles, stoneware or porcelain) by firing in kilns, where—
 - (i) the kiln production capacity is more than 75 tonnes per day; or
 - (ii) the kiln capacity is more than 4m³ and the setting density is more than 300 kg/m³, and a reducing atmosphere is used other than for the purposes of colouration.

Note 3.6.1: For this purpose ceramic products includes fired heavy clay goods, fired refractory materials and calcined clays.

Part A(2)

- (a) Unless falling within Part A(1) of this Section, manufacturing ceramic products (including roofing tiles, bricks, refractory bricks, tiles, stoneware or porcelain) by firing in kilns, where—
 - (i) the kiln production capacity is more than 75 tonnes per day; or
 - (ii) the kiln capacity is more than 4m³ and the setting density is more than 300 kg/m³.

Part B

- (a) Unless falling within Part A(1) or A(2) of this Section, firing heavy clay goods or refractory materials (other than heavy clay goods) in a kiln.
- (b) Vapour glazing earthenware or clay with salts.

Interpretation of Part B

1. In Part B—

“clay” includes a blend of clay with ash, sand or other materials;

“refractory material” means material (such as fireclay, silica, magnesite, chrome-magnesite, sillimanite, sintered alumina, beryllia and boron nitride) which is able to withstand high temperatures and to function as a furnace lining or in other similar high temperature applications.

CHAPTER 4

The Chemical Industry

Interpretation of Chapter 4

1. In Part A(1) of the Sections of this Chapter, “producing” means the production on an industrial scale by chemical or biological processing of substances or groups of substances listed in the relevant Sections.

Note 4.0: All three of the tests in Notes 4.1, 4.2 and 4.3 must be met for an activity to meet the requirement to be “producing”.

Note 4.1: Chemical Processing:

“Chemical Processing” should be taken to mean that a chemical reaction takes place as a fundamental part of the activity. Mixing substances which do not chemically react should not be considered as chemical processing, nor should simple adjustment of pH following a formulation operation or mixing operations (often to finish a product) where some minor incidental reactions do occur.

In this context “incidental” means:

- (a) only a small mass or molar proportion of the substances in the mixture are involved in any chemical reaction (after discounting water or other solvent) ; and*
- (b) any products of such a reaction remain in the mixture and are not separated, extracted, or released to the environment;*

Examples of incidental reactions in mixing operations are ones which change the physical characteristics of a formulation, such as viscosity, or adjusting the pH to a consumer-acceptable value.

Mixing slurries, solutions or damp solids and then treating the mixture (e.g. by heating, drying, crystallisation or precipitation) so that the substances in the product have a different molecular (including crystal) structure from their precursors is considered to be chemical processing. Examples include the production of oxide pigments, complex salt crystals or chemicals produced in calcining furnaces. The only exceptions, apart from minor pH adjustment and the “incidental” exceptions above, are where the change is minor, like changes to water of crystallisation, or is easily reversible.

Note 4.2: Chemical Plant

“Chemical Plant” should be taken to mean industrial plant and machinery (i.e. not domestic equipment) which is designed and constructed for the containment and control of the chemical reaction(s) that takes place as part of the chemical process. A reaction vessel would normally constitute “chemical plant” whereas a reaction on an open surface

or within a mould designed to produce a final product shape would not normally constitute "producing in chemical plant". "Industrial" plant and machinery is that which is suitable for commercial production – generally but not necessarily in tonnes per annum quantities - of a particular chemical or closely related range of chemicals. Plant for producing tonnage quantities of individual chemicals per year will clearly be industrial but the production of smaller quantities may also be carried out in "chemical plant". For example, for laboratory or research chemicals, "industrial" plant could be arrays of standard reconfigurable laboratory glass equipment - but such plant would normally be regarded as being of industrial scale only if the total annual output of chemical products is likely to exceed 1 tonne or the production of any single product (or group of related products) is likely to exceed 100 kg in any 12 month period. However, in the pharmaceutical and plant health product sectors, where substances with specific physiological activity are the products, the "active ingredient" products are generally of high value and produced in relatively small volumes so "industrial" plant could be much smaller. For "active ingredient" production, of pharmaceuticals "industrial" plant should generally be taken to mean that associated with single product production likely to exceed 20 kg in any 12 month period. For biopharmaceuticals the scale of active ingredient production can be significantly smaller (in the order of 1kg) and still be carried out in "industrial" plant (this could, for example, be due to the very low yield from the production processes, with associated high waste volumes).

- Example 1: A soap manufacturer producing hundreds of tonnes of soap per year would clearly be using industrial plant and machinery whereas a craft soap-producer making soap in domestic outhouses or lock-up premises with domestic equipment normally would not be.
- Example 2: A laboratory chemicals producer manufacturing a total of 1.5 tonnes per year of numerous catalogued chemicals, mainly in conventional small-scale laboratory glassware, and a small specialist chemical producer making 150 kg per year of a single product would both need Permits. On the other hand, an operator who has plant and equipment which is unlikely to make in a 12 month period more than 100 kg of a single (or closely related group of) chemical product(s) and unlikely to exceed an output of 1 tonne/annum in total, should not be regarded as having "industrial" plant.
- Example 3: A "research laboratory" capable of producing within a few months, two or three 10 kg batches of a single potential pharmaceutical active ingredient for a pharmaceutical company should be regarded as utilising "industrial" plant.
- Example 4: A biopharmaceutical manufacturing facility which has the potential to produce 1.5kg of active ingredient per annum, and generates some 500 kg of waste per week, should be regarded as "industrial" plant..

Owing to the very wide variety of installations across the small-scale organic and inorganic chemical sectors, it may not always be clear from the examples above if a particular plant is "industrial plant". Where there is doubt, the matter should be referred to National Compliance & Technical Services.

NB: Once an operation has been determined to meet the three Chapter 4 criteria above and the boundaries of the installation are agreed, all emissions to the environment from any activities undertaken using plant or equipment considered to be part of the installation will be emissions from the installation. For example, releases of solvent from testing or experimental activities will be subject to the Conditions of the Permit if undertaken within the installation.

Note 4.3: Commercial Purposes

“Commercial purposes” means conducting an activity, alone or with another activity, to meet a demand from another organisation or person for the chemical produced and receiving financial payment for it. An exception arises where the demand comes from market testing in which case, even though there may be no direct financial payment for it, the production activity is regarded as constituting “commercial purposes” since there is a clear intention to proceed to commercial sales subject only to the outcome of the test.

- Example 1: Producing a pharmaceutical active ingredient in-house for the purposes of pre-clinical or Phase 1 or 2 clinical trials to check its toxicity or its basic therapeutic properties is not regarded as “producing” because at this stage it is still not clear if the product will become commercial. Only after Phase 3 (optimisation of dose) trials are complete is the pharmaceutical likely to be put into commercial production. Phase 3 is equivalent to market testing for a conventional effect chemical, and the point at which production is considered to move to a “commercial purpose” instead of being for research purposes.
- Example 2: Producing a pesticide in multi-kilogram quantities for the purpose of field tests by farmers would be an example of production for market testing and therefore production for “commercial purposes”; producing the same pesticide in-houses in smaller quantities to establish basic efficacy or undesirable effects, would normally be a research activity. In general, when undertaken in-house, only production intended to test or demonstrate the commercial viability of the pesticide (usually through distribution to third parties) would be likely to meet the test for “commercial purposes”.
- Example 3: Making (by chemical reaction) and developing a new surfactant or other effect chemical product is only likely to be considered to have reached the “commercial purposes” stage when the substance is being produced in sufficient quantity for distribution to, and test-used by, a number of identified potential customers. This is analogous to the external field-trial stage for market testing of an agrochemical and would be the last stage before the effect-chemical is expected to be released for general sale.
- Example 4: Producing a novel substance (or even supplying a known compound) for the R&D programme of a separate pharmaceutical company is considered to be producing for “commercial purposes”, whatever the end-use of the substance supplied - but the requirement for a Permit will also depend on whether or not the installation meets the “industrial” and other criteria for “Chemical plant” (Note 4.2).

Note 4.4: “Manufacturing” (used in specific activity descriptions, e.g. 4.2 A(1) (h)) includes a wider range of activities than “producing” and is not limited to those involving a chemical reaction in chemical plant, even where the product can be described as being a “chemical”. However, its meaning should still be taken to include “for commercial purposes”. The most common scenario for the “manufacture of a chemical” is mixing or formulation - but simple dilution of acids, alkalis or salts would not usually be regarded as listed activities.

SECTION 4.1 Organic Chemicals

Interpretation of Section 4.1

1. In this Section, “pre-formulated resin or pre-formulated gel coat” means any resin or gel coat which has been formulated before being introduced into

polymerisation or co-polymerisation activity, whether or not the resin or gel coat contains a colour pigment, activator or catalyst.

Part A(1)

Note 4.1.1: A "chemical": means an individual substance or related substances obtained by, or used in, chemical processing including biochemical and electrochemical processes. A "chemical" will generally have been separated and extracted or concentrated so that it is an identifiable substance in a form which is capable of further physical or chemical processing - but a few may be available for final consumer use with little further processing (e.g. polymerisation of methyl methacrylate to produce whole sheets of transparent Perspex directly, instead of the more usual powder, chips or resin in polymer industries). "Chemicals" include substances in solution as well as solids, liquids and gases. However, chemical substances produced in situ for immediate use (e.g. biocides in cooling towers, plating chemicals in plating vats) are not "chemicals" in the context of Chapter 4.

- *Example 1: The fermentation of sugar products or the growing of bacteria or fungi in fermenters, followed by the separation and extraction of protein or a specific compound (e.g. penicillin or alcohol) is considered production of "a chemical", whereas similar biochemical processes that produce mixtures like vinegar, beer, or cheese or produce whole organisms like yeast, would not be (even if they were not more aptly described as "food").*
- *Example 2: A consumer product which is a mixture of effect chemicals (e.g. a formulated hair shampoo) would not normally be considered "a chemical" because the product is not an identifiable individual substance or related substances.*

(a) Producing organic chemicals such as—

- (i) hydrocarbons (linear or cyclic, saturated or unsaturated, aliphatic or aromatic);
- (ii) organic compounds containing oxygen, (for example alcohols, aldehydes, ketones, carboxylic acids, esters, ethers, peroxides, phenols, epoxy resins);

Note 4.1.2: Biodiesel in which vegetable oil is trans-esterified with methanol or ethanol would appear to fall within this activity description as production of esters. Where such oil is merely filtered regard would have to be had to Chapter 5 section 5.3 activity descriptions although such an activity would normally appear to require an EPR Permit under Schedule 3.

- (iii) organic compounds containing sulphur, (for example sulphides, mercaptans, sulphonic acids, sulphonates, sulphates and sulphones and sulphur heterocyclics);
- (iv) organic compounds containing nitrogen, (for example amines, amides, nitrous-, nitro- or azo-compounds, nitrates, nitriles, nitrogen heterocyclics, cyanates, isocyanates, di-isocyanates and di-isocyanate prepolymers);

Note 4.1.3: Quaternary ammonium salts (i.e. salts in which all 4 H-atoms have been substituted), for the purposes of Regulations Schedule 1 designation, should be taken to be organic compounds as they are almost always prepared solely from organic substances - but note that amine salts or inorganic acids (e.g. dimethylamine hydrochloride) are to be regarded as inorganic salts for the same reason as metal salts of organic acids (See Note 4.2.3).

- (v) organic compounds containing phosphorus, (for example substituted phosphines and phosphate esters);
- (vi) organic compounds containing halogens, (for example halocarbons, halogenated aromatic compounds and acid halides);
- (vii) organometallic compounds, (for example lead alkyls, Grignard reagents and lithium alkyls);
- (viii) plastic materials, (for example polymers, synthetic fibres and cellulose-based fibres);

Note 4.1.4: This sub-section should be used for the production of all macromolecular or polymer substances, other than epoxy resins, synthetic rubbers and di-isocyanate prepolymers. Epoxy resins fall into (ii) above, synthetic rubbers have their own sub-section ((ix) below), and partially polymerised di-isocyanates or di-isocyanate prepolymers, whilst meeting this description (or even that of sub-section (ix)) are probably most appropriately kept in the same section as the manufacture of di-isocyanates themselves (i.e. (iv) above).

Note 4.1.5: This sub-section should include the manufacture of alkyd, polyester and acrylic resins;

- (ix) synthetic rubbers;
- (x) dyes and pigments;
- (xi) surface-active agents.

Note 4.1.6: "Surface-active agents" must have detergent and/or surfactant properties but the compounds need not be in the final consumer form to fit this activity description.

Note 4.1.7: The production of salts of organic acids which have surfactant properties and are primarily made for use in soaps or detergents is included in this sub-section (and not in sub-section 4.2(a)(iv)) .

- (b) Activities deleted by EPR amendment SI 2013 No. 390.
- (c) Activities deleted by EPR amendment SI 2013 No. 390.
- (d) Activities deleted by EPR amendment SI 2013 No. 390.
- (e) Activities deleted by EPR amendment SI 2013 No. 390.
- (f) Activities deleted by EPR amendment SI 2013 No. 390.
- (g) Activities deleted by EPR amendment SI 2013 No. 390.

Part B

- (a) Unless falling within Part A(1) of this Section, any activity where the carrying on of the activity by the person concerned at the location in question is likely to involve the use in any 12-month period of 5 tonnes or more of any di-isocyanate or of any partly polymerised di-isocyanate or, in aggregate, of both.
- (b) The flame bonding or cutting with heated wires of polyurethane foams or polyurethane elastomers.
- (c) Any activity for the polymerisation or co-polymerisation of any pre-formulated resin or pre-formulated gel coat which contains any unsaturated hydrocarbon, where the activity is likely to involve, in any 12-month period, the polymerisation or co-polymerisation of 100 or more tonnes of unsaturated hydrocarbon.
- (d) Unless falling within Part A(1) of this Section, any activity involving the use of toluene di-isocyanate or partly polymerised di-isocyanate if—
 - (i) less than 5 tonnes of toluene di-isocyanate monomer is likely to be used in any 12 month period; and
 - (ii) the activity may result in a release into the air which contains toluene di-isocyanate.

SECTION 4.2

Inorganic Chemicals

Part A(1)

Note 4.2.1: See Note 4.1.1 for the meaning of a "chemical".

- (a) Producing inorganic chemicals such as—
 - (i) gases, (for example ammonia, hydrogen chloride, hydrogen fluoride, hydrogen cyanide, hydrogen sulphide, oxides of carbon, sulphur compounds, oxides of nitrogen, hydrogen, oxides of sulphur, phosgene);

Note 4.2.2: Air separation Units (ASUs). The separation of oxygen, nitrogen, carbon dioxide and other gases from air using cryogenic, membrane or pressure swing adsorption are physical processes where no chemical reaction takes place. ASUs can be found on a variety of installations including food and drink, chemical and metal works. They are usually owned by a third part contractor, sit in a fenced-off compound to which the operator carrying out the main activity has no access, and are operated remotely. They are often highly integrated into the main installation and meet the criteria to be considered as directly associated activities (DAAs) (direct association, technical connection and possible effects on emissions). Previously, we have in some cases included the ASU as a DAA but we will no longer do so provided that

- *The ASU is operated in accordance with the British Compressed Gas Association best practice guidelines on environmental performance.*

- *Relevant operational records are kept for a period of 4 years and they are available to Environment Agency Officers on request.*

Note 4.2.2a: Where hydrogen, CO or CO₂ are produced from hydrocarbons or other organic substances by steam reforming/shift reaction, s4.1(a)(i) [s4.1(a)(a)] is the most apt description - with the explicit exception of natural gas reforming where s1.2(b) applies.

- (ii) acids, (for example chromic acid, hydrofluoric acid, hydrochloric acid, hydrobromic acid, hydroiodic acid, phosphoric acid, nitric acid, sulphuric acid, oleum and chlorosulphonic acid);
- (iii) bases, (for example ammonium hydroxide, potassium hydroxide, sodium hydroxide);

Note 4.2.2b: This section should not be used for calcium hydroxide

- (iv) salts, (for example ammonium chloride, potassium chlorate, potassium carbonate, sodium carbonate, perborate, silver nitrate, cupric acetate, ammonium phosphomolybdate);

Note 4.2.3: The purification of Common Salt for consumption from naturally occurring sources is not a listed activity as it does not involve chemical processing.

Note 4.2.4: This subsection includes the production of all metal salts of organic acids other than those (generally longer-chain molecules) whose primary use is as the surfactant agent in soaps or detergents and are covered by s4.1(a)(xi) [or k].

- (v) non-metals, metal oxides, metal carbonyls or other inorganic compounds (for example calcium carbide, silicon, silicon carbide, titanium dioxide);
- (vi) halogens or interhalogen compounds comprising 2 or more of halogens, or any compound comprising one or more of those halogens and oxygen.

- (b) Unless falling within any other Section, any manufacturing activity which is likely to result in the release into the air of any hydrogen halide (other than the manufacture of glass or the coating, plating or surface treatment of metal) or which is likely to result in the release into the air or water of any halogen or any of the compounds mentioned in paragraph (a)(vi) (other than the treatment of water).

Note 4.2.5: Note that although the firing of brick and tile products may release HF, such activities will not fall into this activity description if they are covered by any activity description in Section 3.6 Parts A(1), (2) or B.

Note 4.2.6: Although the dilution of strong HX acids to make weaker grades can be listed activities under this sub-section, only source acids that are particularly strong or above ambient temperature are likely to release HX vapour in sufficient quantities to be considered significantly harmful. Thus, dilution of 20°C 36% HCl generally will be

considered not to meet this description - unless poor operational techniques cause visible or nuisance emissions of HCl

- (c) *Activities deleted by EPR amendment SI 2013 No. 390.*
- (d) Unless falling within any other Section, any manufacturing activity (other than the application of a glaze or vitreous enamel) involving the use of, or the use or recovery of, any compound of any of the following elements—
 - (i) antimony;
 - (ii) arsenic;
 - (iii) beryllium;
 - (iv) gallium;
 - (v) indium;
 - (vi) lead;
 - (vii) palladium;
 - (viii) platinum;
 - (ix) selenium;
 - (x) tellurium;
 - (xi) thallium,

where the activity may result in the release into the air of any of those elements or compounds or the release into water of any substance listed in paragraph 7 of Part 1.

- (e) Recovering any compound of cadmium or mercury.
- (f) Unless falling within any other Section, any manufacturing activity involving the use of mercury or cadmium or any compound of either element or which may result in the release into air of either of those elements or their compounds.
- (g) *Activities deleted by EPR amendment SI 2013 No. 390.*
- (h) Unless falling within any other Section, any activity (other than the combustion or incineration of carbonaceous material as defined in the Interpretation of Part A(1) of Section 1.2) which is likely to result in the release into the air of any acid-forming oxide of nitrogen
- (i) *Activities deleted by EPR amendment SI 2013 No. 390.*
- (j) *Activities deleted by EPR amendment SI 2013 No. 390.*

Note 4.2.7: In relation to PVC compounding under (d) and (f) above, operators who only use made-up sealed batches of lead, antimony or cadmium additives, and do not open or shear the "bags" prior to melting or capture within a sealed vessel, would not normally fit these descriptions as there is no significant potential for release to air. See General Note 3, above

SECTION 4.3

Chemical Fertiliser Production

Part A(1)

- (a) Producing (including any blending which is related to their production) phosphorus-, nitrogen- or potassium-based fertilisers (simple or compound fertilisers).

Note 4.3.1: Simple blending of fertiliser without chemical reaction is not to be taken as a listed activity. (See also Note 4.1).

Note 4.3.2: This activity includes the manufacture of liquid fertilizers from waste acids, ammoniacal solutions, phosphate salts, etc.

- (b) Activities deleted by EPR amendment SI 2013 No. 390.

SECTION 4.4

Plant Health Products and Biocides

Part A(1)

- (a) Producing plant health products or biocides.

Note 4.4.1: This description applies only to the production of chemical compounds. In accordance with the meaning of "chemical" (see 4.1.1) this should be interpreted as not applying to in situ biocide generation in containment vessels, cooling or heating circuits systems, air-conditioning, etc, even when a chemical reaction is involved.

Note 4.4.2: "Biocides" means a chemical compound, such as a pesticide, intended to kill living things whether plant, animal or fungal.

Note 4.4.3: In accordance with Note 4.1, for an activity to be "producing" plant health products or biocides it must involve production in a chemical plant by chemical (including biochemical) processing. This means that an activity is only a listed activity under 4.4 A(1) (a) if it "produces" in such a manner the active ingredient (in either a crude or pure form) of a plant health product or biocide. Often in the chemical industry, preceding activities involve the production of intermediate products, rather than the active ingredients. In such cases the preceding activities are not producing a plant health product or biocide and should normally be classed as the production of organic or inorganic chemicals as appropriate (see Sections 4.1 and 4.2 above). However, where an activity uses such intermediates to produce an active ingredient in either a crude or pure form, this would constitute production of a plant health product or biocide.

- (b) Activities deleted by EPR amendment SI 2013 No. 390.

SECTION 4.5

Pharmaceutical Production

Part A(1)

(a) Producing pharmaceutical products.

Note 4.5.1: "Pharmaceutical product" means a substance or article (not being an instrument, apparatus or appliance) which is manufactured, sold, supplied, imported or exported for use wholly or mainly in either or both of the following ways, by being:

- (a) administered to human beings or animals for a medicinal purpose;*
- (b) used as an ingredient in the preparation of a substance or article which is to be administered to human beings or animals for a medicinal purpose.*

Note 4.5.2: In accordance with Note 4.1, for an activity to be "producing" pharmaceutical products it must involve production in a chemical plant by chemical (including biochemical) processing. This means that an activity is only a listed activity under 4.5 A(1) (a) if it "produces" in such a manner an active ingredient (in either a crude or pure form) that meets the definition of "pharmaceutical product" given above. Often in the chemical industry, preceding activities involve the production of intermediate products, rather than the active ingredients. In such cases the preceding activities are not producing a "pharmaceutical product" and should normally be classed as the production of organic or inorganic chemicals as appropriate (see Sections 4.1 and 4.2 above). However, where an activity uses such intermediates to produce an active ingredient in either a crude or pure form, this would constitute pharmaceutical production.

Note 4.5.3: Where the production of pharmaceutical active ingredients is undertaken in the Regulations Schedule 1 installation (and, if also produced in the same installation, pharmaceutical intermediate products) and the solvent consumption threshold is exceeded then the activity would be subject to the requirements of the Solvent Emissions Directive/Solvent Emissions Regulations

(b) Activities deleted by EPR amendment SI 2013 No. 390.

Note 4.5.4: The preparation of medicinal/medical products that contain pharmaceutical materials that have already been produced, e.g. a capsule, inhaler or other means of application, is formulation.

Note 4.5.5: Purifying a crude active pharmaceutical ingredient, though neither production nor formulation, may be an associated activity that is part of the same installation as either of these listed activities.

SECTION 4.6

Explosives Production

Part A(1)

- (a) Producing explosives.

Note 4.6.1: "Explosives" means "gunpowder, nitro-glycerine, dynamite, gun-cotton, blasting powders, fulminate of mercury or of other metals, coloured fires, and every other substance, whether similar to those above mentioned or not, used or manufactured with a view to produce a practical effect by explosion or a pyrotechnic effect; and includes fog-signals, fireworks, fuses, rockets, percussion caps, detonators, cartridges, ammunition of all descriptions, and every adaptation or preparation of an explosive as above defined." (see the Explosives Act 1875, section 3). However, the listed activity is only the production by chemical means of the active explosive ingredient (see also Note 4.1).

SECTION 4.7

Manufacturing Activities Involving Ammonia

Part A(1)

- (a) Activities deleted by EPR amendment SI 2013 No. 390.
- (b) Any activity for the manufacture of a chemical which may result in the release of ammonia into the air other than an activity in which ammonia is only used as a refrigerant.

Note 4.7.1: See Note 4.1.1 for the meaning of a "chemical".

Note 4.7.2: Sub-section (b) is only for use where none of the IED chemical sector descriptions (s4.1(a), s4.2(a), s4.3(a), s4.4(a), s4.5(a) and s4.6(a)) apply; i.e. only where the chemical is "manufactured" but not "produced". E.g. ammonium salt manufacture is a s4.2(a)(iv) activity.

SECTION 4.8

The Storage of Chemicals in Bulk

Part B

- (a) The storage in tanks, other than in tanks for the time being forming part of a powered vehicle, of any of the substances listed below except where the total storage capacity of the tanks installed at the location in question in which the relevant substance may be stored is less than the figure specified below in relation to that substance—
- (i) one or more acrylates, 20 tonnes (in aggregate);
 - (ii) acrylonitrile, 20 tonnes;

- (iii) anhydrous ammonia, 100 tonnes;
- (iv) anhydrous hydrogen fluoride, 1 tonne;
- (v) toluene di-isocyanate, 20 tonnes;
- (vi) vinyl chloride monomer, 20 tonnes;
- (vii) ethylene, 8,000 tonnes.

Note 4.8.1: This section is for standalone storage activities. Where chemical activities described in other Sections have product storages or raw material storages for the substances above, the storages should be considered as part of those production activities and not as separate activities.

CHAPTER 5
Waste Management
SECTION 5.1
Incineration and Co-incineration of Waste

Part A(1)

- (a) The incineration of hazardous waste in a waste incineration plant or waste co-incineration plant with a capacity exceeding 10 tonnes per day.
- (b) The incineration of non-hazardous waste in a waste incineration plant or waste co-incineration plant with a capacity exceeding 3 tonnes per hour.
- (c) The incineration, other than incidentally in the course of burning landfill gas or solid or liquid waste, of any gaseous compound containing halogens.

Note 5.1.1: The definitions of waste incineration plant and waste co-incineration plant given in regulation 2 are-

“waste incineration plant” means a stationary or mobile technical unit and equipment dedicated to the thermal treatment of waste, with or without recovery of the combustion heat generated, through the incineration by oxidation of waste as well as other thermal treatment processes, such as pyrolysis, gasification or plasma processes, if the substances resulting from the treatment are subsequently incinerated;

“waste co-incineration plant” means a stationary or mobile technical unit whose main purpose is the generation of energy or the production of material products and which uses waste as a regular or additional fuel or in which waste is thermally treated for the purposes of disposal through the incineration by oxidation of waste as well as other thermal treatment processes, such as pyrolysis, gasification or plasma processes, if the substances resulting from the treatment are subsequently incinerated.”

It is important to note that, while an activity that is also covered by Schedule 13/13A will be subject to the Chapter IV IED definitions, which can substantially extend the scope of the installation (to cover – among others - reception, storage and pre-treatment facilities), if the activity is not covered by Schedule 13/13A the extent of the installation will be determined solely on the criteria relevant for Chapter II, that is to say the stationary technical unit and DAAs.

Note 5.1.2: see also Government guidance on Part A installations⁷ and Waste Incineration²

Note 5.1.3: Schedule 13A “Waste Incineration: Industrial Emissions Directive” transposes the requirements of Chapter IV of the IED into the EPR, largely by direct cross-referencing to the relevant Articles of the Directive.

Schedule 13A applies to every small waste incineration plant and all new waste incineration plant and waste co-incineration plant from 7th January 2013.

Schedule 13A will apply to existing waste incineration plant and waste co-incineration plant from 7th January 2014, when the Waste Incineration Directive will be repealed. It will then completely supersede Schedule 13 “Waste incineration”, which transposes the requirements of the Waste Incineration Directive.

Part B

- (a) The incineration in a small waste incineration plant with an aggregate capacity of 50 kilogrammes or more per hour of the following waste—
- (i) vegetable waste from agriculture and forestry;
 - (ii) vegetable waste from the food processing industry, if the heat generated is recovered;
 - (iii) fibrous vegetable waste from virgin pulp production and from production of paper from pulp, if it is co-incinerated at the place of production and the heat generated is recovered;
 - (iv) cork waste
 - (v) wood waste with the exception of wood waste which may contain halogenated organic compounds or heavy metals as a result of treatment with wood preservatives or coatings;
 - (vi) animal carcasses.
- (b) The cremation of human remains.

⁷See <https://www.gov.uk/government/publications/environmental-permitting-regulations-guidance-on-part-a-installations>

Application of Part B

1. When determining the extent of an installation carrying on an activity within Part B, any location of the following description is to be ignored: any location where the associated storage or handling of wastes and residues which are to be incinerated as part of that activity is carried on, other than a location where the associated storage or handling of animal remains intended for burning in an incinerator used wholly or mainly for the incineration of such remains or residues from the burning of such remains in such an incinerator is carried on.

Note 5.1.4: The definition of small waste incineration plant (SWIP) given in regulation 2 is-

“small waste incineration plant” means a waste incineration plant or waste co-incineration plant with a capacity less than or equal to 10 tonnes per day for hazardous waste or 3 tonnes per hour for non-hazardous waste”

There are therefore both upper and lower limits on capacity for this definition, for the purposes of Section 5.1, which has certain regulatory implications.

- *Most SWIP will in practice be regulated by the relevant local authority under Schedule 13A (Chapter IV IED), and not Schedule 1 (Chapter II IED).*
- *However, the burning of certain types of waste is excluded from Schedule 13A. If an SWIP is only burning the excluded wastes it will generally be regulated by the relevant local authority under Section 5.1 Part B for emissions to air only, and neither Chapter II nor Chapter IV IED will apply.*
- *If an SWIP is burning only the Schedule 13A excluded wastes and the plant capacity is below 50kg/hr, it will be regulated by the Environment Agency as a waste operation, outwith both Schedules 1 and 13A, and neither Chapter II nor Chapter IV IED will apply.*

SECTION 5.2

Disposal of Waste by Landfill

Note 5.2.1: Also see Government Guidance on the Landfill Directive².

Note 5.2.2: In establishing the scope of Regulations Schedule 1 with respect to landfill operations, reference should be made to our regulatory guidance note LFD1⁸.

Note 5.2.3: The implementation of Council Directive 1999/31/EC of 26 April 1999 on the landfill of waste (and therefore Schedule 10 to the EPR) has fundamental impact upon this Section.

Part A(1)

- (a) The disposal of waste in a landfill—
- (i) receiving more than 10 tonnes of waste in any day, or
 - (ii) with a total capacity of more than 25,000 tonnes,
- but excluding disposals in a landfill taking only inert waste.

⁸ See <https://www.gov.uk/government/publications/understanding-the-landfill-directive-lfd-1>

Note 5.2.4: Disposal is not expressly defined in this section of Schedule 1 to the Regulations but should be taken in this context to mean the same as for Section 5.3, Part A(1)(a) (see below).

Note 5.2.5: "Landfill" is defined in Regulation 2 as having the meaning in the Landfill Directive. The wide definition of landfill means that certain activities fall under Section 5.2 rather than under Section 5.3. For example, the storage of waste prior to disposal, for a period of more than one year, constitutes a landfill. Also, note that the IED covers only larger landfills.

Note 5.2.6: "Inert" is not defined in the IED or in Schedule 1 to the Regulations. However, it should be taken to mean the same as in the article 2(e) of the Landfill Directive.

Note 5.2.7: "Capacity" is not defined in this Section. If the landfill has a total physical capacity of more than 25,000 tonnes, or the legal and physical capacity to receive more than 10 tonnes of waste per day, and it takes wastes other than inert waste, then it is an activity listed under 5.2. See also general notes on capacity

SECTION 5.3

Disposal or recovery of hazardous waste

Part A (1)

(a) Disposal or recovery of hazardous waste with a capacity exceeding 10 tonnes per day involving one or more of the following activities-

- (i) biological treatment;
- (ii) physico-chemical treatment;
- (iii) blending or mixing prior to submission to any of the other activities listed in this section or section 5.1;
- (iv) repackaging prior to submission to any of the other activities listed in this section or section 5.1;
- (v) solvent reclamation or regeneration;
- (vi) recycling or reclamation of inorganic materials other than metals or metal compounds;
- (vii) regeneration of acids or bases;
- (viii) recovery of components used for pollution abatement;
- (ix) recovery of components from catalysts;
- (x) oil re-refining or other reuses of oil;

- (xi) surface impoundment.

5.3.1: "Disposal" and "recovery" for the purposes of this section are defined in Annex I of the revised Waste Framework Directive.

(i) biological treatment (e.g. Anaerobic Digestion (AD) of ethanol wastes) and (ii) physico-chemical treatment (e.g. pH adjustment/ settlement/ stabilisation of hazardous waste/neutralisation of spent acids/alkalis) are all encompassing but should only be used if there is not a more apt description in the activities listed below:

- (iii) Blending or mixing – where blending or mixing to meet a specification
(iv) Repackaging – where bulking up from one container to another e.g. drum to tank, drum to IBC
(v) solvent reclamation or regeneration – where solvents are generated from the treatment process
(vi) recycling or reclamation of inorganic materials – includes soil remediation activities
(x) oil re-refining or other reuses of oil – activities will result in an oil (non-fuel) product etc. but generally include PFO or RFO.
(xi) surface impoundment – some surface impoundment activities will also be subject to the Landfill Directive where there are long term deposits

5.3.2: "Capacity" is not specifically defined in this Section. If the installation has the legal and physical capacity to undertake these activities, either alone or in aggregation, more than the threshold level of such waste in any one day then this is a listed activity. This activity description is based on input capacity – see also general notes on capacity in Section 2. The treatment capacity is aggregated whether it is for disposal or recovery.

Note 5.3.3: "Hazardous waste" is defined in regulation 2.

Note 5.3.4: "Physico-chemical treatment" means the physical treatment or chemical treatment or a combination of physical and chemical treatment of waste. Some activities do not meet the description and it is not appropriate to regard them as a listed activity, for example:

- The simple handling of waste in a way which does not change the composition of the waste, such as compaction or other re-packing of dry waste (such as cardboard) to reduce air content would not normally be considered to be physico-chemical treatment. However, where compaction does result in a change in the composition of the waste, the activity should be regarded as physico-chemical treatment.
- Manual dismantling of a waste motor vehicle, locomotive, aircraft, boat or ship, or WEEE, including the removal of hazardous materials and components would not be considered to be physico-chemical treatment for the purposes of IED. Manual includes the removal of components or dismantling by hand. This also includes the use of hand held tools including power tools and equipment utilising a suction or flushing process to remove fluids. WEEE and the removal of hazardous materials from WEEE are defined in Article 3 of the WEEE Directive. Waste Motor Vehicle includes all motor vehicles which have become waste within the meaning of Article 3(10) of the Waste Framework Directive.
-

Note 5.3.5: "Impoundment should be taken to mean secure storage on the surface in a lagoon type structure. It is a passive activity with no deliberate enhancement or treatment." Deposit of material for greater than 12 months may constitute a landfill activity."

SECTION 5.4

Disposal, recovery or a mix of disposal and recovery of non-hazardous waste

Part A (1)

(a) Disposal of non-hazardous waste with a capacity exceeding 50 tonnes per day (or 100 tonnes per day if the only waste treatment is anaerobic digestion) involving one or more of the following activities and excluding activities covered by Council directive 91/271/EEC concerning urban waste water treatment -

- (i) biological treatment;
- (ii) physico-chemical treatment;
- (iii) pre-treatment of waste for incineration or co-incineration;
- (iv) treatment of slags and ashes;
- (v) treatment in shredders of metal waste, including waste electrical and electronic equipment and end-of-life vehicles and their components.

Note 5.4.1: "Non-hazardous waste" is defined in regulation 2.

Note 5.4.2: activities listed under (a) (iv) and (v) above are unlikely to be disposal operations.

(b) Recovery or a mix or recovery and disposal of non-hazardous waste with a capacity exceeding 75 tonnes per day (or 100 tonnes per day if the only waste treatment is anaerobic digestion) involving one or more of the following activities and excluding activities covered by Council directive 91/271/EEC by-

- (i) biological treatment;
- (ii) pre-treatment of waste for incineration or co-incineration;
- (iii) treatment of slags and ashes;
- (iv) treatment in shredders of metal waste, including waste electrical and electronic equipment and end-of-life vehicles and their components.

Note 5.4.3: Mixing and blending are considered to be “treatment” for the purposes of section 5.4

Note 5.4.4: Section 1.2, The interpretation and application of Part A(1), 3. Says “anaerobic digestion” means the mesophilic and thermophilic biological decomposition and stabilisation of biodegradable materials which-

- (a) is carried on under controlled anaerobic conditions,*
- (b) produces a methane-rich gas mixture, and*
- (c) results in stable sanitised material that can be applied to land for the benefit of agriculture or to improve the soil structure or nutrients in land;*

The capacity of anaerobic digestion plant should be determined according to section 2 of this document (paragraphs 2.1 to 2.9).

The higher threshold tonnages for anaerobic digestion in 5.4 A(1) (a) and (b) will only apply if the activity satisfies the definition of “anaerobic digestion” given above, otherwise it will be a biological treatment activity and is the only waste activity being undertaken on that site. For example:

- the psychrophilic decomposition of biodegradable materials (carried out at ambient temperature - generally 5 to 15°C) does not meet the definition of “anaerobic digestion”.*
- the production of a material that cannot be applied to land and is therefore subjected to a further disposal operation such as incineration (D10) or landfill (D1) or (D5) or discharge to water bodies, seas or oceans (D6 or D7) does not meet the definition of “anaerobic digestion”.*

Note 5.4.5: Where a waste treatment directly and intentionally improves the quality of the waste as a fuel by changing the composition of the waste in a way that changes one or more of the following 5 parameters:

- a) Calorific (or heating) value;*
- b) Moisture content;*
- c) Ash content;*
- d) Chemical composition;*
- e) Heavy metal content*

Including for example, to fulfil contractual requirements or product standard requirements, then that process is pre-treatment for incineration or co-incineration. Where a waste treatment is carried out for some other purpose and only incidentally improves the quality of the waste as a fuel, then it is not a 5.4 A(1)(b)(ii) activity.

Note 5.4.6: Examples of waste activities which would be considered as pre-treatment for incineration or co-incineration include:

- Drying of waste wood, the residual waste from a materials recycling facility or the sludge from an effluent treatment plant explicitly in order to reduce its moisture content so as to facilitate combustion
- Separation processes to reduce the heavy metals or ash content of waste prior to combustion where that is done in order to improve the fuel quality
- Production of refuse derived fuels and other waste-derived fuels which are not captured by other Schedule 1 activities, where production beneficially changes one or more of the 5 parameters in above

- Treatment of the residual waste from a materials recycling facility to meet a contractual standard for the fuel where treatment beneficially changes one or more of the 5 parameters.

Note 5.4.7: Examples of waste activities which would not be considered to be pre-treatment for incineration or co-incineration even though they generate an output which goes for combustion, include:

- Mechanical biological treatment. This involves biological treatment and is described elsewhere as an installation activity
- Mechanical separation of waste in order to recover the recyclables
- Use of tallow as a fuel from the rendering of animal by-products. However if the tallow requires a further treatment step in order to make the tallow suitable for burning as fuel, then that step would be considered as pre-treatment for incineration or co-incineration
- Size reduction which may assist in the handling of the fuel but is not primarily for the purpose of improving its combustion characteristics
- Baling which may assist in the handling of the fuel but is not primarily for the purpose of improving its combustion characteristics
- Shredding or chipping which may assist in the handling of the fuel but is not primarily for the purpose of improving its combustion characteristics
- Mixing and blending of hazardous waste which is covered as a section 5.3 activity (e.g. preparation of secondary liquid fuels for use in cement kilns)
- Preparation of material at the same location as the combustion process, (particularly where Chapter IV or IED (ex WID) applies), because this is considered part of the incineration process at those sites.

Note 5.4.8 If the combustion facility demonstrates that it meets the R1 Energy Recovery formula then the pre-treatment of non-hazardous waste for the purpose of incineration or co-incineration should be described as activity (b) “recovery or a mix of recovery and disposal”, and the threshold will be 75 tonne per day. If the combustion facility cannot demonstrate that it meets the R1 Energy Recovery formula then the pre-treatment of non-hazardous waste for the purpose of incineration or co-incineration should be described as activity (a) - “disposal”, and the threshold will be 50 tonne per day.

Note 5.4.9 ‘Treatment in shredders’ includes treatment in plant such as hammer mills, chain mills, rotary shears and other similar equipment that is designed to fragment metal into smaller pieces to allow the separation of the metallic and the non metallic fractions. It does not include shearers and guillotines which utilise a range of hydraulic machinery that comprise hard steel blades to cut metals into manageable sizes.

SECTION 5.5

The Production of Fuel from Waste

Part A(1)

- (a) Making solid fuel (other than charcoal) from waste by any process involving the use of heat.

Note 5.5.1: Section 5.5 is a former Part I EPA 1990 (IPC) description that applied to processes that produced pelletised fuel from municipal waste. This description applies only to processes whose purpose is to make waste-derived solid fuel and which use heat specifically in the fuel manufacturing step. This description does not cover activities such as autoclaves that use heat to sanitise and separate wastes, with some of the residual wastes then being used a fuel.

SECTION 5.6

Temporary or underground storage of hazardous waste

Part A(1)

- (a) Temporary storage of hazardous waste with a total capacity exceeding 50 tonnes pending any of the activities listed in Sections 5.1, 5.2, 5.3, and paragraph (b) of this Section, except-
 - (i) temporary storage, pending collection, on the site where the waste is generated, or
 - (ii) activities falling within Section 5.2
- (b) Underground storage of hazardous waste with a total capacity exceeding 50 tonnes.

SECTION 5.7

Treatment of waste water

Part A(1)

- (a) Independently operated treatment of waste water not covered by Directive 91/271/EEC and discharged by an installation carrying out any other Part A(1) or A(2) activity.

Note 5.7.1 This is a new activity description introduced by the IED. It will apply to any new plants from January 2013 and existing plants from July 2015.

CHAPTER 6
Other Activities
SECTION 6.1

Paper, Pulp and Board Manufacturing Activities

Part A(1)

- (a) Producing, in industrial plant, pulp from timber or other fibrous materials.

Note 6.1.1: "Industrial plant" for these purposes should be taken to include plant where paper and pulp can be produced in commercial quantities. See also Note 4.3 in Chapter 4 on commercial purposes.

- (b) Producing, in industrial plant, paper and board where the plant has a production capacity of more than 20 tonnes per day.

Note 6.1.2: "Board" in (b) above is taken to mean paperboard (i.e. heavy grammage paper, typically over 220 g/m²). Producing certain other types of boards will be a listed activity under Part A(2) (a) below.

Note 6.1.3: If the installation includes a coating activity, as defined in Schedule 14 (which transposes Chapter V and annex VII of the IED), and the relevant solvent consumption is exceeded it may be subject to the control requirements of Schedule 14.

- (c) *Activities deleted by EPR amendment SI 2013 No. 390.*

Part A(2)

- (a) Producing, in an industrial plant, one or more of the following wood-based panels with a production capacity exceeding 600m³ per day: oriented strand board, particleboard or fibreboard.

SECTION 6.2
Carbon Activities

Part A(1)

- (a) Producing carbon or hard-burnt coal or electro-graphite by means of incineration or graphitisation.

SECTION 6.3

Tar and Bitumen Activities

Part A(1)

(a) The following activities—

- (i) distilling tar or bitumen in connection with any process of manufacture, or
- (ii) heating tar for the manufacture of electrodes or carbon-based refractory materials,

where the activity is likely to involve the use in any 12-month period of 5 or more tonnes of tar or of bitumen or both in aggregate.

Part B

(a) Any activity not falling within Part A(1) of this Section or of Section 6.2 involving—

- (i) heating, but not distilling, tar or bitumen in connection with any manufacturing activity, or
- (ii) oxidising bitumen by blowing air through it, at plant where no other activities described in any Section in this Schedule are carried on,

where the carrying on of the activity is likely to involve the use in any 12-month period of 5 or more tonnes of tar or bitumen or both in aggregate.

Interpretation of Part B

1. In Part B, “tar” and “bitumen” include pitch.

SECTION 6.4

Coating Activities, Printing and Textile Treatments

Note 6.4.1: If the installation includes a coating activity, as defined in Schedule 14 (which transposes Chapter V and annex VII of the IED), and the relevant solvent consumption is exceeded it may be subject to the control requirements of Schedule 14.

Part A(1)

(a) *Activities deleted by EPR amendment SI 2013 No. 390.*

- (b) Pre-treating (by operations such as washing, bleaching or mercerization) or dyeing fibres or textiles in plant with a treatment capacity of more than 10 tonnes per day.

Note 6.4.2: This should not be taken to include washing, laundering or dry-cleaning of garments or household linens that have been used and which it is intended will be used again on their own.

Note 6.4.3: Textile remains textile for this purpose even when made into garments.

(c) Activities deleted by EPR amendment SI 2013 No. 390.

Part A(2)

- (a) Unless falling within Part A(1) of this Section, surface treating substances, objects or products using organic solvents, in particular for dressing, printing, coating, degreasing, waterproofing, sizing, painting, cleaning or impregnating, in plant with a consumption capacity of more than 150 kg per hour or more than 200 tonnes per year.

Part B

- (a) Unless falling within Part A(1) or Part A(2) of this Section or Part A(2)(c) of Section 2.1, any process (other than for the re-painting or re-spraying of or of parts of aircraft or road or railway vehicles) for applying to a substrate, or drying or curing after such application, printing ink or paint or any other coating material as, or in the course of, a manufacturing activity, where the process may result in the release into the air of particulate matter or of any volatile organic compound and is likely to involve the use in any 12-month period of—
- (i) 20 or more tonnes of printing ink, paint or other coating material which is applied in solid form,
 - (ii) 20 or more tonnes of any metal coating which is sprayed on in molten form,
 - (iii) 25 or more tonnes of organic solvents in respect of any cold set web offset printing activity or any sheet fed offset litho printing activity, or
 - (iv) 5 or more tonnes of organic solvents in respect of any activity not mentioned in sub-paragraph (iii).
- (b) Unless falling within Part A(2) of this Section, re-painting or re-spraying road vehicles or parts of them if the activity may result in the release into the air of particulate matter or of any volatile organic compound and the carrying on of the activity is likely to involve the use of 1 or more tonne of organic solvents in any 12-month period.
- (c) Re-painting or re-spraying aircraft or railway vehicles or parts of them if the activity may result in the release into the air of particulate matter or of any volatile organic compound and the carrying on of the activity is likely to involve the use in any 12-month period of—
- (i) 20 or more tonnes of any paint or other coating material which is applied in solid form,
 - (ii) 20 or more tonnes of any metal coatings which are sprayed on in molten form, or

- (iii) 5 or more tonnes of organic solvents.

Interpretation and application of Part B

1. In Part B—

“aircraft” includes gliders and missiles;

“coating material” means paint, printing ink, varnish, lacquer, dye, any metal oxide coating, any adhesive coating, any elastomer coating, any metal or plastic coating and any other coating material.

2. The amount of organic solvents used in an activity must be calculated as—

- (a) the total input of organic solvents into the process, including both solvents contained in coating materials and solvents used for cleaning or other purposes; less
- (b) any organic solvents that are removed from the process for re-use or for recovery for re-use.

3. When determining the extent of an installation carrying on an activity within Part B any location where the associated cleaning of used storage drums prior to painting or their incidental handling in connection with such cleaning is carried on is to be ignored, unless that location forms part of a regulated facility at which a solvent emission activity is carried out.

SECTION 6.5

The Manufacture of Dyestuffs, Printing Ink and Coating Materials

Note 6.5: If the installation includes a coating activity, as defined in Schedule 14 (which transposes Chapter V and annex VII of the IED), and the relevant solvent consumption is exceeded it may be subject to the control requirements of Schedule 14.

Part B

- (a) Unless falling within Part A(1) or Part A(2) of any other Section—
 - (i) manufacturing or formulating printing ink or any other coating material containing, or involving the use of, an organic solvent, where the carrying on of the activity is likely to involve the use of 100 or more tonnes of organic solvents in any 12-month period,
 - (ii) manufacturing any powder for use as a coating material where there is the capacity to produce 200 tonnes or more of such powder in any 12-month period.

Interpretation of Part B

1. In Part B, “coating material” has the same meaning as in Section 6.4.

2. The amount of organic solvents used in an activity must be calculated as—

- (a) the total input of organic solvents into the process, including both solvents contained in coating materials and solvents for cleaning or other purposes; less

- (b) any organic solvents, not contained in coating materials, that are removed from the process for re-use or for recovery for re-use.

SECTION 6.6

Timber Activities

Note 6.6: If the installation includes a coating activity, as defined in Schedule 14 (which transposes Chapter V and annex VII of the IED), and the relevant solvent consumption is exceeded it may be subject to the control requirements of Schedule 14.

Part A(1)

- (a). *Activities deleted by EPR amendment SI 2013 No. 390.*

Part A(2)

- (a) Preservation of wood and wood products with chemicals with a production capacity exceeding 75m³ per day other than exclusively treating against sapstain.

Part B

- (a) Unless falling within Part A(2) of Section 6.1, manufacturing products wholly or mainly of wood at any works if the activity involves a relevant activity and the throughput of the works in any 12-month period is likely to be more than—
 - (i) 10,000 cubic metres in the case of works at which wood is only sawed, or wood is sawed and subjected to excluded activities, or
 - (ii) 1,000 cubic metres in any other case.

Interpretation of Part B

1. In Part B—

“excluded activity” means any relevant activity (other than sawing) which, ignoring any sawing carried on at the works, would be unlikely to result in the release into the air of any substance in paragraph 6(3) of Part 1 in a quantity capable of causing significant harm;

“relevant activity” means the sawing, drilling, sanding, shaping, turning, planing, curing or chemical treatment of wood;

“throughput” means the amount of wood which is subjected to a relevant activity, but where wood is subject to 2 or more relevant activities at the same works, the second and any subsequent activity is to be ignored;

“wood” includes any product consisting wholly or mainly of wood; and

“works” includes a sawmill or any other premises where relevant activities are carried on.

SECTION 6.7

Activities Involving Rubber

Note 6.7: If the installation includes a coating activity, as defined in Schedule 14 (which transposes Chapter V and annex VII of the IED), and the relevant solvent consumption is exceeded it may be subject to the control requirements of Schedule 14.

Part A(2)

- (a) Manufacturing new tyres (but not remoulds or retreads) if this involves the use in any 12-month period of 50,000 or more tonnes of one or more of the following—
 - (i) natural rubber,
 - (ii) synthetic organic elastomers,
 - (iii) other substances mixed with them.

Part B

- (a) Unless falling within Part A(1) or Part A(2) of any Section, the mixing, milling or blending of—
 - (i) natural rubber, or
 - (ii) synthetic organic elastomers,if carbon black is used.
- (b) Any activity which converts the product of an activity falling within paragraph (a) into a finished product if related to an activity falling within that paragraph.

SECTION 6.8

The Treatment of Animal and Vegetable Matter and Food Industries

Interpretation of Section 6.8

1. In this Section—

“animal” includes a bird or a fish;

“excluded activity” means—

- (a) any activity carried on on a farm or agricultural holding other than –
 - (i) the manufacture of goods for sale,
 - (ii) the production of compost for growing mushrooms
- (b) the manufacture or preparation of food or drink for human consumption but excluding—
 - (i) the extraction, distillation or purification of animal or vegetable oil or fat otherwise than as an activity incidental to the cooking of food for human consumption,

- (ii) any activity involving the use of green offal or the boiling of blood except the cooking of food (other than tripe) for human consumption,
 - (iii) the cooking of tripe for human consumption elsewhere than on premises on which it is to be consumed,
- (c) the fleshing, cleaning and drying of pelts of fur-bearing mammals,
- (d) any activity carried on in connection with the operation of a collection centre for animal by-products,
 - (e) any activity for the manufacture of soap not falling within Part A(1) of Section 4.1,
 - (f) the storage of vegetable matter not falling within any other Section,
 - (g) the cleaning of shellfish shells,
 - (h) the manufacture of starch,
 - (i) the processing of animal or vegetable matter at premises for feeding a recognised pack of hounds which have been granted an authorisation under the Animal By-Products Regulations 2005⁹ or the Animal By-Products (Wales) Regulations 2006¹⁰,
 - (j) the salting of hides or skins, unless related to any other activity listed in this Schedule,
 - (k) any activity for composting animal or vegetable matter or a combination of both, except where that activity is carried on for the purposes of cultivating mushrooms,
 - (l) any activity for cleaning, and any related activity for drying or dressing, seeds, bulbs, corms or tubers (and “related activity” means an activity being carried on by the same person at the same site),
 - (m) the drying of grain or pulses,
 - (n) any activity for the production of cotton yarn from raw cotton or for the conversion of cotton yarn into cloth;
 - (o) the drying of green crops;
- “food” includes—
- (a) drink,
 - (b) articles and substances of no nutritional value which are used for human consumption, and
 - (c) articles and substances used as ingredients in the preparation of food;

“green crops” means alfalfa (Lucerne), clover, grass, perennial ryegrass, tall fescue and other similar crops;

“green offal” means the stomach and intestines of any animal, other than poultry or fish, and their contents.

⁹ S.I. 2005/2347.

¹⁰ S.I. 2006/1293 (W.127).

Note 6.8.1: The phrase “excluded activity” is only relevant to Part B (a)(ii) in this Section.

Part A(1)

- (a) Tanning hides and skins at a plant with a treatment capacity of more than 12 tonnes of finished products per day.

Note 6.8.2: Finished products are taken to be dry products only.

- (b) Slaughtering animals at a plant with a carcass production capacity of more than 50 tonnes per day.

Note 6.8.3: “Carcass” means the body of a dead animal. It should be noted that the definition given here is intended for application to Schedule 1 to the Regulations only. Where head and offal are removed at point of slaughter (e.g. for mammals and birds), such material is generally excluded from the production capacity calculation. However, where removal is not standard industry practice, the head and offal would be included in the calculation. It should not be concluded that a dead animal only qualifies as a carcass after removal of head and offal. For example, a dead fish with head and offal intact would still constitute a carcass for the purposes of this section.

- (c) Disposing of or recycling animal carcasses or animal waste, other than by rendering or by incineration in a small waste incineration plant, at a plant with a treatment capacity exceeding 10 tonnes per day of animal carcasses or animal waste or both in aggregate.

Note 6.8.4: If the animal waste is being treated by anaerobic digestion in a plant with a capacity exceeding 100 tonnes per day then Section 5.4 may be the most apt description of the activity. (This does not have to be all animal waste – provided there are more than 10 tonnes per day of animal waste the rest could be other wastes). Whether 5.4 or 6.8 is the most apt will depend on the relative proportions of animal waste and other waste feedstock.

Note 6.8.5 For the purposes of this Section, ‘Animal waste’ is taken to mean material that is subject to Animal By-Product legislation with the exception of catering waste, former foodstuffs and animal excreta.

It includes, blood, feathers, uncooked butchers waste and any other animal waste that is not catering waste or former foodstuffs. It does not include faecal matter from animals (e.g. chicken litter or farmyard manure), catering waste, former foodstuffs or animal gut contents (partially digested grass or fodder etc).

Note 6.8.6 Heat treatment activities such as “blood boiling” and hydrolysis of feathers with steam are not considered to be rendering, and will fall under Section 6.8 A(1)(c) if above the threshold. Anaerobic digestion of animal waste will fall under this section providing it is not more accurately described under Section 5.4 A(1)(a) (i) or (b) (i) i.e. biological treatment for disposal/recovery where animal wastes form a minor proportion of the overall waste treated.

- (d) treatment and processing, other than exclusively packaging, of the following raw materials, whether previously processed or unprocessed, intended for the production of food or feed (where the weight of the finished product excludes packaging)-
- (i) only animal raw materials (other than milk only) with a finished product production capacity greater than 75 tonnes per day;
 - (ii) only vegetable raw materials with a finished product production capacity greater than 300 tonnes per day or 600 tonnes per day where the installation operates for a period of no more than 90 consecutive days in any year;
 - (iii) animal and vegetable raw materials (other than milk only), both in combined and separate products, with a finished product production capacity in tonnes per day greater than-
 - (aa) 75 if A is equal to 10 or more; or
 - (bb) $300 - (22.5 \times A)$ in any other case,where 'A' is the proportion of animal material in percent of weight of the finished product production capacity.

Note 6.8.7: Manufacturing starch foodstuff by processing vegetable matter would be an activity under Section 6.8 A(1)(d) (ii) if above the 300 tonne or 600 tonne threshold.

Note 6.8.8 Interpretation of "Treatment and Processing"

For the purpose of the following sections "Treatment and Processing" is considered to be a singular activity.

An activity is considered to be Treatment and Processing when the composition of the finished product materially changes, in a manner that is not readily reversible, when compared with the raw materials.

In assessing whether a particular activity meets this definition, the following should be taken into account:

Note 6.8.8.1 Size reduction i.e. cutting slicing, dicing, grating or mincing is not Treatment and Processing as it does not change the composition of the original material (provided there are no other changes such as the addition of seasonings, marinades, dry rubs etc). De-boning, however, does change the raw material and as it is not readily reversible, it is Treatment and Processing.

Note 6.8.8.2 Whilst chilling, freezing or changing viscosity by heating may temporarily change the composition of the material, the effect is readily reversible and so these activities would not be Treatment and Processing.

Note 6.8.8.3 Animal feed production involving grinding of grain based materials with heat treatment or acid treatment and the introduction of liquid additives (e.g. fats, oils, enzyme digestors, etc) that results in a change in form is Treatment and Processing as the changes produced are not readily reversible.

Simple blending of materials such as grains and pulses, and the addition of liquids such as molasses without a change in form to the ingredients is not Treatment & Processing'

Note 6.8.8.4 Drinks manufacture incorporating pasteurisation, carbonation, mixing of fruit juices and alcohol or dilution of juice / syrup with water is Treatment and Processing (as the changes produced are not readily reversible).

Simple re-packaging of juice or alcohol is not Treatment and Processing provided that this does not involve pasteurisation or addition of preservatives etc.

Note 6.8.8.5 Stand-alone washing activities are not considered to be Treatment and Processing as there is no material change.

Note 6.8.8.6 Grading of vegetables does not result in any material change and so is not Treatment and Processing.

Note 6.8.8.7 Drying for the purposes of storage (e.g. grain) is not Treatment and Processing as the removal of moisture is readily reversible (although not desirable).

Note 6.8.8.8 Assembly using pre-prepared materials (e.g. sandwich making) is Treatment and Processing if there are interactions between the food materials so they cannot then be readily separated e.g. spreads, mayonnaise and chutneys

Note 6.8.9: "Raw Materials" are any materials whether processed or not that are used as ingredients in the activity. Raw materials can include waste material. Accordingly, a food product can be made from a waste.

Note 6.8.10: Packaging (primary and secondary) should not be included in the weight of the finished product.

Note 6.8.11: "Food" includes food intended for animals. Feed milling and pet-food manufacture are therefore covered within Section 6.8 A(1) (d).

Note 6.8.12: Production (or purification) of any mineral not derived from animal, vegetable or milk (e.g. table salt (sodium chloride), baking soda (sodium bicarbonate)) is excluded from this Section of the regulations.

Note 6.8.13 'Finished product production capacity', as used in paragraph (d) of Section 6.8, should always take into account products and by-products destined for human or animal consumption.

Note 6.8.14: Finished product production capacity for an installation treating and processing animal or vegetable raw materials means design capability, or where not readily known, past or proposed future output based on operating 24 hours a day (subject to physical or legal constraints, for example planning constraints, down time for essential cleaning due to legal constraints (such as hygiene standards) and/or plant restrictions such as chilling capacity).

Note 6.8.15 The interpretation published by the European Commission in their Frequently Asked Questions (see link below) says that the reference to "600 tonnes per day where the installation operates for a period of no more than 90 consecutive days in any one year" in the (d)(ii) activity description was to allow a higher threshold value for activities that only operated on a seasonal basis according to the harvesting of a particular vegetable, fruit, grain or fungi. It was taken that an activity which only occurred over one quarter of the year could reasonably be regarded as seasonal activity hence the introduction of the higher threshold for plants operating for less than 90 consecutive days.

The 600 tonnes per day threshold **only** applies where the installation operates for **one** period of less than 90 consecutive days in a year. If the plant goes on to operate for another period in any one year then the 300 tonnes threshold value would apply.

This interpretation prevents an installation that operates all year round, but which never exceeds 90 day continuous operation, avoiding the 300 tonnes per day threshold. It would be an unreasonable result that a plant operating at 599 tonnes per day, 5 days a week, all year, would not need a permit; whereas a plant operating at 301 tonnes for 91 consecutive days only, would require a permit. The above interpretation would also give both provisions of subsection d(ii) more validity by removing the possibility of avoiding the 300 tonnes per day threshold by shutting down at least once every 90 days.

<http://ec.europa.eu/environment/air/pollutants/stationary/ied/faq.htm>

Note 6.8.16: "Animal raw materials" means anything from a living or dead animal and includes minerals derived from an animal source, such as bone.

Note 6.8.17: Honey is classed as an animal raw material.

Note 6.8.18: Pasteurisation and fishmeal processing are classed as activities under Section 6.8 A(1) (d) (i) or (iii) if carried out above the relevant capacity thresholds.

Note 6.8.19: Existing operators currently close to but outside of these activity descriptions may either:

- apply for an EP Permit, therefore enabling greater flexibility to meet customer demands, should recipes subsequently change, or
- not apply for a EP permit, but should recipe demands change, such that either activity description is met, then an EP permit would have to be obtained before the operator could bring this change into effect.

Note 6.8.20: Where a composite mixture is used as an ingredient (for example chocolate) the animal raw material proportion should be established. Only the animal raw material portion of the composite mixture will contribute towards the calculation of 'A' under section 6.8 A(1) (d)(iii) above. See also the distinction between "milk" and "milk products" discussed below in Note 6.8.24.

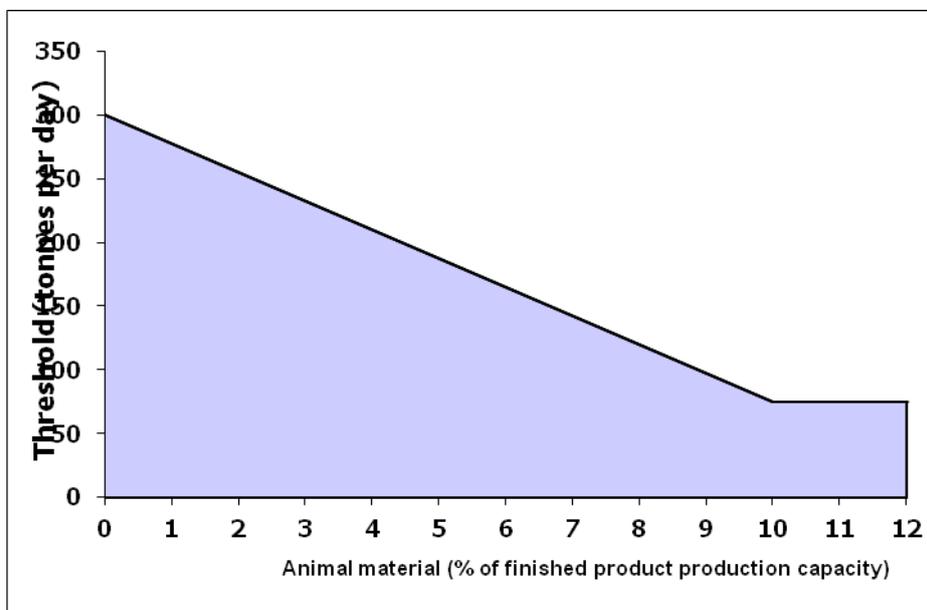
The milk component in a composite ingredient will be viewed as milk and therefore count towards the milk threshold included under Section 6.8 A (1)(e).

Note 6.8.21: The EPR amendment SI 2013 No. 390 introduced a new listed activity (d) (iii) using a mixture of "animal and vegetable raw materials....", in which the capacity threshold varies between 300 and 75 tonnes per day depending on the percentage of animal raw material used 'A'.

[Previously we considered that:

- if the activity used less than 10% animal raw materials it would be classed as using all vegetable raw materials and the 300 tonnes a day threshold would apply,
- if the activity used more than 10% animal raw materials it would be classed as using all animal raw materials and the 75 tonnes a day threshold would apply.]

Graphical representation of the 'sliding scale' rule :



Note 6.8.221: "Vegetable raw material" in this context should be taken to include fruits, grain and fungi.

Note 6.8.23: Many plant health products and pharmaceuticals are enzymes and these are covered by Section 4.4 and 4.5 respectively. Otherwise their production should not generally be included as a listed activity as they are not themselves food products.

(e) Treating and processing milk, the quantity of milk received being more than 200 tonnes per day (average value on an annual basis).

Note 6.8.24: The threshold for milk is based on actual daily input of milk to the plant, averaged over a year. Only days when milk is actually received should be considered.

Note 6.8.25: This description does not depend on the amount or type of product produced. Thus any activity treating and processing milk, which receives milk above the threshold, will be most aptly described here, whether or not the product is best described as milk. For example, the manufacture of milk chocolate or chocolate crumb will fall under this description if it receives more than 200 tonnes of milk per day. The activity description would also cover non-food production activities if they treat and process milk, and receive milk above the threshold.

Note 6.8.26: "Milk" should be taken to mean whole milk, dried milk, skimmed (or partially skimmed) milk, evaporated milk and un-sweetened condensed milk. It should not however, be taken to mean whey, butter, cream, buttermilk, sweetened condensed milk, flavoured milk or cheese which are milk products and classified as animal raw materials. "Milk" to which something has been added constitutes a milk product.

Note 6.8.27: Milk products as ingredients are classified as animal raw materials and therefore contribute to the calculation of 'A' applied to mixed products in (d) (iii) above. Milk by contrast is viewed separately from other animal raw materials in Schedule 1 to the

Regulations and does not therefore contribute to the calculation of 'A' applied to mixed products.

Note 6.8.28: Where dried milk is used the weight should be calculated back to raw "wet milk" equivalent. Where this equivalent figure exceeds 200 tonnes per day the activity is listed. Based on the relevant conversion factors, 200 tonnes of raw milk is equivalent to:

- 25 tonnes of full cream dried milk powder*
- 20 tonnes of semi skimmed dried milk powder*
- 18 tonnes of skimmed dried milk powder*

Conversion factors are not available for evaporated milk and unsweetened condensed milk as these will be dependent on how much water has been driven off by the process. The factor used is therefore dependent on the specification of the evaporated milk/unsweetened condensed milk received.

(f) *Activities deleted by EPR amendment SI 2013 No. 390.*

Part A(2)

- (a) Disposing of or recycling animal carcasses or animal waste by rendering at plant or in small waste incineration plant, where the plant or small waste incineration plant has a treatment capacity exceeding 10 tonnes per day of animal carcasses or animal waste or both in aggregate.

Note 6.8.29: There is no absolute definition of "rendering" but the rendering of animal remains is most commonly interpreted as involving the heating of the remains to melt-out the fat component. The process at "rendering plant" also evaporates off the water content and leaves a solid fraction (greaves) consisting of denatured proteinaceous material and bone residue.

Part B

- (a) Processing, storing or drying by the application of heat the whole or part of any dead animal or any vegetable matter (other than the treatment of effluent so as to permit its discharge into controlled waters or into a sewer unless the treatment involves the drying of any material with a view to its use as animal feedstuff) if the processing, storing or drying—
- (i) does not fall within another Section, or Part A(1) or Part A(2) of this Section;
 - (ii) is not an excluded activity; and
 - (iii) may result in the release into the air of—
 - (aa) any substance in paragraph 6(3) of Part 1, or
 - (bb) any offensive smell noticeable outside the premises on which the activity is carried on.
- (b) Breeding maggots in any case where 5 or more kg of animal matter, vegetable matter or both in aggregate, are introduced into the process in any week.

SECTION 6.9 *Intensive Farming*

Part A(1)

- (a) Rearing poultry or pigs intensively in an installation with more than—
(i) 40,000 places for poultry;

Note 6.9.1: In the IED "Poultry" means 'fowl, turkeys, guinea fowl, ducks, geese, quails, pigeons, pheasants and partridges reared or kept in captivity for breeding, the production of meat or eggs for consumption or re-stocking supplies of game'. This is a broader definition than the one used in the IPPC Directive, which did not include pheasants and partridges for re-stocking supplies of game. Most game bird farms involve a combination of an exceptionally short season (typically some seven weeks in late spring/early summer), stocking densities that are significantly lower than any covered by animal welfare recommendations, and limited access to housing which is in nearly all cases only temporary in nature, making it unlikely that any significant environmental pollution would result. Consequently we will only regulate those game bird farms which are similar in nature (in terms of length rearing season, stocking density, and nature of housing) to the poultry farms we already regulate as Part A installations.

- (ii) 2,000 places for production pigs (over 30 kg); or

*Note 6.9.2: "Production pigs" are pigs, male or female, that weigh more than 30 kilogrammes. It includes gilts (female pigs) which are intended for breeding stock but **have not** been serviced*

- (iii) 750 places for sows.

*Note 6.9.3 "Sows" are female pigs that have had their first litter. It includes gilts (female pigs) that **have** been serviced but not yet had a litter.*

Note 6.9.4: Free-range poultry are included but pigs reared outdoors are excluded.

SECTION 6.10 *Carbon capture and storage*

Part A(1)

- (a) Capture of carbon dioxide streams from an installation for the purposes of geological storage pursuant to Directive 2009/31/EC of the European Parliament and of the Council on the geological storage of carbon dioxide.¹¹

¹¹ OJ No. L 140, 5.6.2009, p114

*Note 6.10: the activity description **will not** apply to carbon capture and storage (CCS) pilot plants operating “capture and release”, because the carbon dioxide is not being captured “for the purposes of geological storage”. These pilot plants absorb carbon dioxide and desorb it to produce a pure carbon dioxide stream that is released back to atmosphere. The aim is to test the capture stage of CCS, not the transport and storage stages.*

*The activity description **will** apply to CCS demonstration plants because the carbon dioxide will be captured “for the purposes of geological storage”. These demonstration plants will test the capture, transport and storage stages of CCS, by absorbing carbon dioxide, then desorbing it to produce a pure carbon dioxide stream that is pumped to a geological storage site offshore. The activity description **will** apply to full scale CCS plants for the same reason it applies to demonstration plants.*

Appendix 2 Defining the installation

Limb (i) stationary technical unit

A2.1. The Government Part A Guidance (in section 2) provides the following guidelines in relation to Limb (i) of the definition:

‘2.9. Two criteria are proposed for the purpose of determining whether plant or machinery satisfy the first limb of this definition –

(1A) the plant or machinery must be a “technical unit” where one or more activities listed in Part 2 of Schedule 1 to the Environmental Permitting Regulations (“listed activities”) are carried out; and

(1B) the technical unit must be stationary.’

A2.2. The term “technical unit” is not defined in the Regulations, but the Part A Guidance clarifies that it must be some type of plant or machinery. Machinery includes equipment for monitoring for releases, control rooms, and equipment needed to run the plant and move materials around the Installation. Plant may include static items such as tanks concrete pads and lagoons.

The essence of a “technical unit” is that it can carry out the Activity, or Activities, on its own. This means that the technical unit must include enough plant and machinery to allow the Activity to take place in a controlled manner for a sufficient period of time for the operation to reach its designed or intended output.

Example 1: If a furnace at a power station were regulated as a combustion activity¹² the technical unit would consist of the furnace and sufficient plant and machinery to allow fuel to be burnt with a thermal input of 50MW or more. The technical unit would include burners, fuel supply systems, immediate coal bunkers or feed tanks for fuel, and facilities to remove ash from the appliance. The technical unit would not include fuel stores intended for sustained operation lasting several days or weeks or the final ash disposal arrangements by landfill.

Example 2: For a regulated organic chemical production activity¹³, the technical unit would have to include the means to contain and control the reaction for a reasonable period of time, and this would normally be the few hours necessary to allow conditions within the Installation to stabilise. The technical unit would include the plant needed to add raw material and to extract product, but would not normally include plant and machinery needed for sustained operation.

¹² Section 1.1(a) of Part 2 of Schedule 1 to the Regulations

¹³ Section 4.1 of Part 2 of Schedule 1 to the Regulations

A2.3. The meaning of technical unit is also addressed in the Part A Guidance, which states:

'2.10. For the purpose of criterion (1A), "technical unit" can be taken to mean something which is functionally self contained in the sense that the unit – which may consist of one component or a number of components functioning together – can carry out the Schedule 1 activity or activities on its own.'

A2.4. The technical unit must be stationary, and is therefore referred to in this guidance as a stationary technical unit (STU). Vehicles or vessels in motion will generally not be regarded as STUs. However, units that are movable but remain stationary during production e.g. free-range poultry units may be regarded as STUs.

A2.5. If there are two or more STUs on the same site they will be treated as a single STU if they are technically connected and one of the following criteria is met:

- (a) they carry out successive steps in an integrated industrial activity;
- (b) one of the listed activities is a Directly Associated Activity (DAA) of the other; or
- (c) both units are served by the same DAA¹⁴.

A2.6. Any of these conditions may link Part A(1) and/or Part A(2) and/or Part B listed activities together as one STU.

A2.7. Dealing first with the meaning of "technically connected"¹⁵: there are three tests that would indicate the existence of a technical connection, namely:

- i. Inevitability
- ii. Practicality
- iii. Technical Need

A2.8. The **Inevitability** test must be applied to the actual configuration of the existing or proposed Installation. Buffer tanks, or similar facilities, incorporated between stages of processing to absorb expected fluctuations during operation, should be ignored.

For example:

- (a) If a raw material is introduced into connected units and during normal operation it must emerge from those connected units, then they would be regarded as technically connected. Therefore, where coal is added to the hopper of a coal fire power station it will proceed to the combustion stage unless the operator undertakes activities well outside of the normal range of operations.

¹⁴ see also paragraph 3.9 of the Part A Guidance

¹⁵ The technical connection requirement is also an essential part of the DAA test – see paragraph A2.22.

- (b) If two activities cannot readily be separated then they will be regarded as technically connected. For example, where pyrolysis of coal takes place in coke ovens, resulting in the co-production of gas, which is then burned in an appliance with a rated thermal input of >20 MW, these activities will be technically connected because once coal is introduced into a coke-oven it cannot readily be extracted and the gas must inevitably be burnt.

A2.9. The **practicality** test considers whether there is an alternative, practical method for linking two activities which could replace the existing configuration. If there is no such alternative, then the existing link is likely to be regarded as a technical connection. The established practice of each industrial sector may assist in determining this issue. Where there is no common practice within a sector, each case will be considered on its own merits.

For example:

- (a) The deposit of ash from power stations is normally carried by hydraulic conveying systems at a rate of several hundred tonnes per hour to a local landfill. If the hydraulic system fails, the material has to be moved by vehicles either to the usual landfill or elsewhere. This method is costly and would not be practical for a sustained period. Therefore, the usual arrangements will be regarded as a technical connection.
- (b) An activity is dependent on a nearby plant for one of its raw materials, and it always organises its plant overhauls to coincide with those of the supplying activity. This suggests that there is a technical connection between the two activities.

A2.10. The **technical need** test considers whether there is a technical need for one activity to follow another in quick succession.

For example:

- (a) Material for electroplating is normally cleaned, pre-treated, introduced into the electroplating system, rinsed and dried, as quickly as possible, to ensure the quality of the product. Even though the items may be loaded onto suitable frames by hand and manually positioned in the treatment vessels, all the preparative, electroplating, and post-plating operations would normally be regarded as being technically connected.
- (b) Where a particular disposal activity is needed to secure proper environmental protection, for example, a chromate works may use a landfill site to recover hexavalent chrome through leachate treatment, these activities would be regarded as technically connected.
- (c) Process steam is produced at one activity and condensate is returned in large quantities by a user activity. Without this technical connection, the steam producer would have to demineralise equivalent amounts of raw water.

Other issues relating to technical connections

A2.11. **Storage facilities** may be technically connected. For example, many activities have a store of materials that is designed to allow the operation of the Installation to be uninterrupted despite short-term variations in supply. Stores at the same location are normally technically connected, and as their operation can give rise to pollution, either locally or at the Activity, they are likely to be DAAs. However, a technical connection should not normally extend beyond the activities carried out on the site to store the raw material because raw material can arrive at the site from many off-site sources. The technical connection may be broken if the storage facility within a multi-unit site is large enough to allow individual units on the site to operate for sustained periods independently of each other.

A2.12. Storage of product/raw material within a multi-unit site can also break the technical connection if it is large enough to allow individual units on the site to operate for sustained periods independently of each other. A break is normally demonstrated where an intermediate store allows for the export and import of significant proportions of the total mass flow. This will occur where the throughput of the units before and after the intermediate storage are markedly different. This consideration is mainly relevant to the question of whether a group of activities constitutes a single installation or two (or three) separate ones.

For example:

An Operator with the facility to sell significant intermediate product from its complex as part of normal operation will normally be operating two installations (subject to both parts containing listed activities), with the intermediate storage being included within whichever installation seems most appropriate. (Where an intermediate storage is between two units, one of which is neither a listed activity nor meets the criteria for serving the listed activity, there is a break between the two main activities anyway, and EP regulation applies only to one side. The intermediate storage itself may or may not be part of the installation as a DAA, and its inclusion will depend on its meeting the other criteria for DAAs in Part 2 of this Appendix).

A2.13. **Transport** on national or multi-user systems (which include the public road system, the rail system, the National Grid, the public gas supply system, canals, public sewer or private sewer with multiple users which then discharge into the public sewer) would normally break the technical connection between units or activities. However, public roads, rail or canals may not break the connection where frequent movements are conducted by specialist vehicles (such as works vehicles or silage tankers used at farms) over a short distance between units or activities. Where the total amount of material transferred by the system is large compared to the total used or supplied to the unit in question the connection is more likely to be broken.

For example:

- (a) An operator using ethylene, which is supplied to many users through a gas pipe line, should normally be considered as operating a separate Installation which is not linked to the plant that produces the ethylene.
- (b) Where an Activity discharges effluent to a pumping station that is either part of the public sewer (or private sewer with multiple users that discharges to the public sewer) and pumps a mix of the Activity effluent, other trade effluent and domestic sewage. The technical connection would be broken at the point of discharge to the sewer and the pumping station would not be included within the Installation.
- (c) Where an Activity discharges to a dedicated pumping station then the technical connection would not be broken.
- (d) Where an Activity discharges to a sewage treatment works via a dedicated pipeline then the technical connection would not be broken and application of the "principal user" test (see paragraph A2.21) would then determine whether the sewage works is a DAA.

A2.14. The connection to the national electricity or domestic gas supply system would always break the technical connection and would not be included within an Installation.

For example, where a power station is connected through the national gas supply grid to a producer of natural gas the technical connection is broken by the grid.

A2.15. Examples of "successive steps in an integrated industrial activity" are a linear chain from one raw material to a single product, or a closely related, but non-linear, series of Activities linking a number of raw materials to a series of products. A landfill activity would not normally be a successive step in an integrated industrial activity because it would not usually be included in the chain of activities between raw materials and products.

A2.16. Guidance on the general meaning of DAA is set out in Part 2 of this Appendix. It should be noted that the Principal User test¹⁶ will not be applied under condition (c) in paragraph A2.5 except where the DAA serves¹⁷ two or more STUs and also serves non-listed facilities. In such a situation, the listed STUs should be considered collectively and compared to the non-listed activities considered collectively. The "principal user" test should then be applied to decide which collective group is the principal user. Unless one of the other criteria is met, the STUs will only be treated as one STU if they meet the principal user requirement.

¹⁶ See paragraph A2.21.

¹⁷ For guidance on the meaning of "serves" see paragraph A2.20.

Limb (ii) directly associated activities

A2.17. The purpose of the Limb (ii) test is to determine whether any other activities that are being carried out in conjunction with the Activity amount to DAAs. If they do, they will be included within the installation. The Part A Guidance sets out three criteria, (2A), (2B), and (2C), that must all be met before an activity will be regarded as a DAA of the STU:

Limb (ii) of the definition

‘2.12. An installation consists of the stationary technical unit identified under the first limb of the definition plus any location on the same site where activities that satisfy the second limb are carried out. Three criteria are proposed for the purpose of determining whether an activity satisfies the second limb-

(2A) the activity must be directly associated with the stationary technical unit;

(2B) the activity must have a technical connection with the listed activities carried out in or by the stationary technical unit; and

(2C) the activity must be capable of having an effect on emissions.’

A2.18. The Part A Guidance provides the following additional guidance about criterion (2A):

‘2.13. Criterion (2A) requires that the activity serves the stationary technical unit (i.e. there is an asymmetrical relationship whereby the activity serves the stationary technical unit but not vice versa). If an activity, such as operating a landfill, serves a stationary technical unit carrying out a listed activity and some other industrial unit or units on a different site or carrying out non-listed activities, then the activity will only be directly associated with the stationary technical unit if that unit is the principal user of the activity.’

A2.19. In summary, criterion (2A) has two requirements:

- (i) the activity must serve the STU; and
- (ii) where the activity also serves another industrial unit or units, the STU must be the principal user of the activity.

A2.20. The term “**servicing**” indicates an asymmetrical relationship where the DAA serves the STU and the STU is the principal user of the DAA. Therefore, a DAA will normally be something that would not be in place if not for the primary activity, even if the DAA is also an Activity. The aim of the servicing requirement is to prevent activities that are not listed from being regulated unless there is a clear link with the STU.

For example:

(a) An effluent treatment plant used exclusively to treat the effluent from an Activity would serve the Activity if it were constructed, operated, and maintained in a manner that optimised the operation of the Activity.

(b) An incinerator used to burn used coffee residues from a small plant making instant coffee might be an Activity. However, the coffee-making activity would not be a DAA of the incinerator as it does not serve the incinerator in any way. The incinerator would not be there were it not for the presence of the coffee making plant.

A2.21. The term “**principal user**” does not imply that the listed activity must use >50% of the activity in question. This is subject to 2 tests.

(a) Is the activity in question providing different services to 2 or more separate main activities? If it is, (e.g. an intermediate storage acts as the store for the final product of one activity, but for another activity it serves as the raw material feed storage, providing a service with a completely different materials flow), the users cannot be compared, and both can be "principal" users, albeit for different services provided by the associated activity. In these cases, the activity in question will be a DAA of both main activities, whether or not both of the main activities are regulated under the same regime.

(b) For each type of service provided, which is the "principal user"?

The "principal user" term does not imply that among the users of the service in question the listed activity must use >50% of the activity in question. The principal user would be either

- (i) the most dependent user or, where this is not clear,
- (ii) the largest single user in terms of taking output, providing input, etc

Examples for (a) of activities providing a different service to two other activities (both intermediate storage examples) are:

Example 1: A Water Company STW stores the biogas produced by its anaerobic digesters in tanks from which it feeds >3MW gas-engines for electricity generation, the emergency flare-stack and a (non-consuming) digester recycle stream to aid agitation. The listed activity gas-engines are the principal user of the gas storage facility in its raw material/forward-feeding role, and the (non-listed activity) STW is the principal user in the product-storage role - so the gas storage (and the attached emergency flare facility) are DAAs of the listed combustion activity.

Example 2: A closed landfill is served by a leachate storage facility which contains excess leachate flow from the landfill and regulates the flow into the leachate treatment plant (listed activity). The landfill is the principal (indeed sole) user of the leachate storage from the "product" storage point of view but from a feed storage point of view, the leachate plant is the principal (again

sole) user - so the installation must contain the leachate storage facility as a DAA.

An example for (b)(i) of an activity being the most dependent user is:

Example 3: An unlisted activity processes crude raw materials to produce a specialised raw material for a listed chemical activity on the same site. The output of the specialised raw material is only 20% of the total output but the chemical plant is entirely dependent upon this for sustained operation. The rest of the output goes to other recipients, some of which take more than 20% but with a lower degree of dependency as they can, and do, take similar material from other sources. The listed chemical activity is the most dependent user and the unlisted activity is a DAA.

Examples for (b)(ii) where the biggest single user is the "principal" user are:

Example 4: A raw material supply activity where 40% is supplied to listed activity A, 35% to unlisted activity B and 25% to unlisted activity C, all of which are similarly dependent on the raw material supply activity. A is therefore the principal user as it is the biggest user.

Example 5: A Water Company Sewage Treatment Works (STW) receives effluent from a listed activity, via a dedicated pipeline, as well as urban waste water (sewage). Clearly the listed activity and the sewer users collectively are equally dependent so the largest single user test should be applied. This can be assessed according to the relative loads, by comparing the maximum permitted discharge loads from the listed activity compared to the sewage loads at the inlet to the STW. The load test should be applied for both BOD and COD and the test will be regarded as passed for the listed activity if it has the larger input load in either or both of these categories. Thus where a single listed activity makes up more than 50% of the BOD or COD load to the sewage treatment works then it can be regarded as the principal user. However, very careful consideration is required for those cases that are close to the 50% threshold.

A2.22. The Part A Guidance provides the following additional guidance about criterion (2B):

‘2.14. Criterion (2B) gives rise to four types of directly associated activities which may be said to have a technical connection with a stationary technical unit:

(a) input activities concerned with the storage and treatment of inputs into the stationary technical unit;

(b) intermediate activities concerned with the storage and treatment of intermediate products during the carrying on of the listed activities

– this might apply particularly where the stationary technical unit consists of a number of sub-units with the product of one sub-unit being stored or treated prior to being passed on to the next subunit in the production chain;

(c) output activities concerned with the treatment of waste (or other emissions, like manure) from the stationary technical unit; or

(d) output activities concerned with the finishing, packaging and storage of the product from the stationary technical unit.

2.15. These activities have a technical connection in the sense that they are integral parts of the overall listed industrial activity. Often there will also be a physical connection, such as a conveyor belt or pipeline, but this does not have to be the case. The need for input, intermediate and output activities to be an integral part of a listed activity before it is caught by limb (ii) is presented as part of criterion (2B). Note, however, that the requirement for associated activities to be “directly” associated in criterion (2A) also emphasises the need for associated activities to be an integral part of a listed activity before they are treated as part of an installation.’

A2.23. The Part A Guidance stresses that other activities must be “an integral part” of the Activity in order to establish the necessary “technical connection” required before they can be regarded as a DAA. This suggests that the connection must be clear and significant. Further guidance on the meaning of “technical connection” is set out in paragraphs A2.7 to A2.14 above

A2.24. The Part A Guidance provides the following additional guidance about criterion (2C):

‘**2.16.** Criterion (2C) covers both activities which have an effect on emissions and pollution from the listed activities with which they are associated and activities which have such an effect in their own right.’

A2.25. Criterion (2C) reflects the fact that the purpose of including DAAs within the Installation is to ensure that the environment as a whole is protected. It must be clear how a DAA might effect emissions. Where it is very unlikely that a technically connected activity could cause releases then it will not be a DAA.

For example:

- (a) Where the incorrect storage of a product may cause releases either from the product store or from somewhere else in the Installation, then that storage would normally be a DAA.
- (b) The simple storage of broadly stable materials, for example pallets of tinned food, would not normally be a DAA.

A2.26. In addition to meeting criteria (2A), (2B), and (2C), the activity must also take place on the same site as the STU. The term “same site” is not defined in the Directive or the Regulations, and determining whether this additional test is met will be a question of fact in each case. In order to reach a decision, all circumstances will be taken into account, including the degree of integration of operations and the

proximity of the various units. When assessing the degree of integration the presence or absence of the following factors may be considered:

- permanent/historical boundaries
- biosecurity restrictions
- independent/integrated services
- independent/integrated management systems

Two parcels of land do not need to touch physically to form the same site, provided that the parcels are technically connected, so a site would not become two sites merely because two parcels of land were separated by a barrier such as a stream or a road.