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Food & Rural Affairs

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Industrial emissions Directive EPR Guidance on Part A installations

February 2013

For existing IPPC installations, this will completely replace the current guidance (Version 3, March 2010) from 7 January 2014. It applies to new installations from the date of its publication



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Welsh Government

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Any enquiries regarding this document/publication should be sent to us at:

Richard Vincent, 5F, Industrial Pollution, Ergon House, Horseferry Road, London SW1P 2AL

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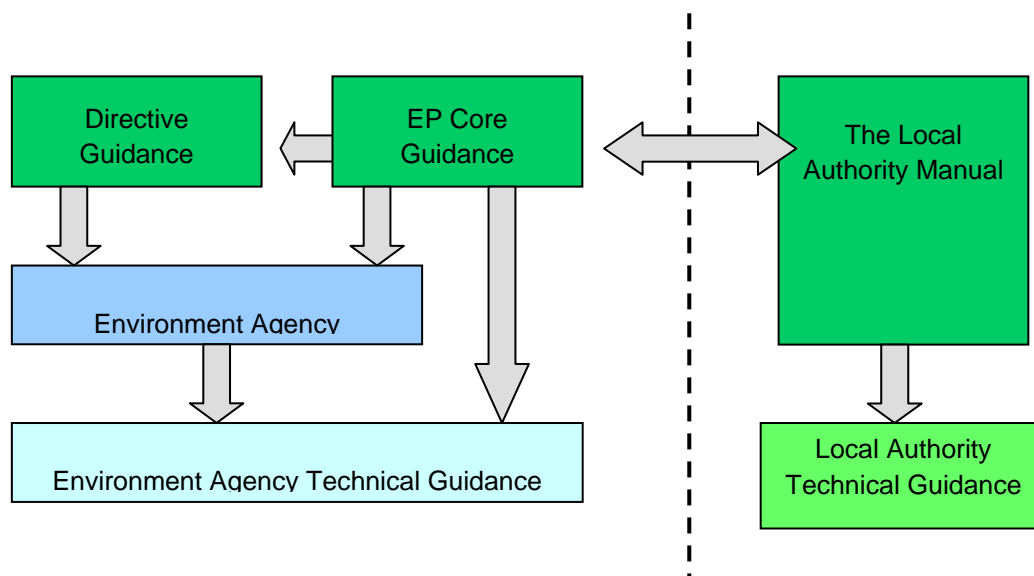
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1. About this guidance

- 1.1. This guidance is aimed at helping readers understand Directive 2010/75/EU on industrial emissions, insofar as it relates to installations in England and Wales. Separate Regulations apply the IPPC Directive in Scotland and Northern Ireland and to the offshore oil and gas industries.
- 1.2. This guidance is being published to help those regulating and operating Part A(1) installations, but it will also be of interest to others concerned with these installations and mobile plant. This guidance sets out the views of the Secretary of State for Environment, Food and Rural Affairs (Defra) and the Welsh Assembly Government (WAG) on how, in particular, Chapter II of the Directive should be applied and how particular terms should be interpreted. However, only the national or European Courts can give a definitive interpretation of the legislation.

Figure 1. Illustration of guidance relationships.



- 1.3. This guidance is part of a series of documents which accompany the Environmental Permitting (England and Wales) Regulations 2010 SI 2010 No. 675 (the Regulations)¹.
- 1.4. The series consists of the Environmental Permitting Core Guidance², which describes the general permitting and compliance requirements, and guidance on each of the European Directives implemented through the regime³. Separate guidance is available for local authority regulation under the regime⁴. This is illustrated in Figure 1.

¹ Available at www.defra.gov.uk/environment/policy/permits/guidance.htm

² *Ibid.*

³ Available at www.defra.gov.uk/environment/policy/permits/guidance.htm

⁴ Available at www.defra.gov.uk/environment/quality/pollution/ppc/localauth/pubs/guidance/manuals.htm

- 1.5. This guide should be read in conjunction with the Environmental Permitting Core Guidance. Where other directives apply, then reference should be made to the relevant guidance⁵.
- 1.6. Regulatory and technical guidance prepared by the Environment Agency is also available⁶.
- 1.7. The scope of this document is limited to Part A(1) installations as defined in the Regulations. However, it is directly relevant to local authority regulators on the regulation of Part A(2) installations and will be incorporated in the General Guidance Manual on Policy and Procedures for A2 and B Installations (the General Guidance Manual)⁷.
- 1.8. To ensure this guidance is current and up to date, from time to time this guidance will be updated. Where made, revisions can be found in the 'Revision of Guidance' section at the front of the document.
- 1.9. This guidance document is compliant with the Code of Practice on Guidance on Regulation⁸. If you feel this guidance breaches the code, or notice any inaccuracies within the guidance, please contact the EPP team at:
eppadministrator@defra.gsi.gov.uk

2. Introduction

- 2.1. Chapter II of the industrial emissions Directive applies an integrated environmental approach to the regulation of certain industrial activities. This means that emissions to air, water (including discharges to sewer) and land, plus a range of other environmental effects, must be considered together. Regulators must set permit conditions so as to achieve a high level of protection for the environment as a whole, based on the use of the best available techniques (BAT), which balances the costs to the operator against the benefits to the environment.
- 2.2. The website of the European Commission contains⁹ general background information on the industrial emissions Directive. Guidance from the Commission on the interpretation and implementation of the Directive on integrated pollution prevention and control (IPPC) is also on its website¹⁰ and remains relevant to Chapter II of the industrial emissions Directive until such time as it is updated.

⁵ See footnote 1.

⁶ Available at: www.environment-agency.gov.uk/epr

⁷ Available at: www.defra.gov.uk/environment/quality/pollution/ppc/localauth/pubs/guidance/manuals.htm

⁸ See Environmental Permitting Guidance and Glossary Chapter 3:

www.defra.gov.uk/environment/policy/permits/guidance.htm

⁹ At <http://ec.europa.eu/environment/air/pollutants/stationary/ied/implementation.htm> .

¹⁰ At http://ec.europa.eu/environment/air/pollutants/stationary/ippc/key_impl.htm .

- 2.3. Chapter 3 of this guidance sets out the scope of the industrial emissions Directive regulation of Part A activities by defining Part A installations. Chapter 4 describes the permitting requirements of the industrial emissions Directive which will be delivered through environmental permits for Part A installations. Chapter 5 describes other industrial emissions Directive requirements relevant to the regulation of installations.
- 2.4. The relevant parts of the industrial emissions Directive, Chapters I and II and Annexes I to IV, are at Annex 1 to this Guidance

Interface with other legislation

- 2.5. Part A installations may also be subject to other European Directives or to additional requirements within the industrial emissions Directive. Replacing separate Directives, the industrial emissions Directive includes provisions relating to large combustion plants (Directive Chapter III), waste incineration (Directive Chapter IV), solvent emissions (Directive Chapter V) and titanium dioxide production (Directive Chapter VI).
- 2.6. With one exception¹¹, all Part A combustion activities – that is to say, with a rated thermal input of 50 MW or more - are subject also to the **requirements in Chapter III** of the industrial emissions Directive. Chapter III requires that ELVs for nitrogen oxides, sulphur dioxide and dusts must be at least as stringent as those set out Annex V of the Directive, although although application of the BAT-based Chapter II (IPPC) requirements may require more stringent ELVs to be set in particular cases.
- All Part A waste incineration or waste co-incineration activities will be subject to the requirements in **Chapter IV** of the industrial emissions Directive, unless they involve the incineration or co-incineration of only the wastes listed in Article 42(2) of the Directive. Chapter IV requires that ELVs for a range substances emitted to air and water must be at least as stringent as those set out Annex VI of the Directive, although although application of the BAT-based Chapter II (IPPC) requirements may require more stringent ELVs to be set in particular cases. Chapter IV also has the effect of requiring certain operating conditions to be set in permits.

¹¹ The exception may possibly arise if an installation, although above 50 MW rated thermal input when all the combustion units in are aggregated, is less than that figure when individual units of less than 15 MW are discounted, as required by the aggregation rule for Chapter III in Article 29(3).

- 2.7. Part A activities may involve the conduct of activities using solvents which are covered by Chapter V of the industrial emissions Directive. Those activities are set out in Part 1 of Annex VII of the Directive and are subject to at least the emission limit values set out in Part 2 of that Annex, although application of the BAT-based Chapter II (IPPC) requirements may require more stringent ELVs to be set. These activity descriptions and ELVs are set out in Schedule 14 to the EPR.
- 2.8. Chapter VI of the industrial emissions Directive refers to only a very small number of installations which will in any case be subject to Chapter II as chemical production activities and the regulator must see that the minimum requirements set out in Annex VIII of the Directive are applied.
- 2.9. Some Part A installations may be subject to the asbestos or petrol vapour Directives. Guidance on the relevant requirements can be found in the General Guidance Manual for these Directives since only local authorities are the competent authorities for them Asbestos and Petrol Vapour Directives.
- 2.10. Some Part A installations may also be subject to EU-derived legislation on the control of major accident hazards. Directive 96/82/EC, as amended by Directive 2003/105/EC, aims to prevent major accidents involving dangerous substances and limit the consequences to people and the environment of any that do occur. The Directives are implemented in Great Britain by the Control of Major Accident Hazards (COMAH) Regulations 1999 (amended in 2005). The Health and Safety Executive and the Environment Agency, who enforce the COMAH Regulations in England and Wales, work closely together to avoid potential conflicts between COMAH and other environmental legislation, such as IPPC.
- 2.11. A number of other European Directives are relevant to Part A installations. Annex 1 to the Environmental Permitting Core Guidance outlines the connections with other legislation.

3. Part A installation

- 3.1. The Environmental Permitting (England and Wales) Regulations 2010 (the “EPR”) use the term regulated facility to describe the types of operation or activity which require an environmental permit (regulation 8). These include an installation.
- 3.2. The existence of an installation is dependent on there being one or more listed activities carried on there. There are certain general exclusions from the activity descriptions. These are set out in Schedule 1, Part 1, paragraph 3. An example is an activity carried on at an installation solely used for research, development or testing of new products and processes.

- 3.3. Each installation is assigned to one of the following categories: Part A(1), Part A(2), Part B or an activity using solvents. This guidance is only applicable to Part A installations and in particular to those regulated by the Environment Agency under Part A(1). Note that Part A(2) and B installations and activities using solvents are regulated by local authorities and guidance on these is available in the General Guidance Manual¹².
- 3.4. A Part A(1) activity means an activity listed under the heading Part A(1) of any section in Schedule 1, Part 2 to the Regulations (Schedule 1, Part 1 paragraph 1).
- 3.5. Activities may also be listed under the heading Part A(2) or Part B in Schedule 1 or in Schedule 14 to the Regulations. Where an activity appears to fall within more than one activity description and these fall within different categories rules are provided for deciding which category should be considered to apply. These rules are contained in Schedule 1, Part 1, paragraph 2.
- 3.6. **Installation** means—
- a stationary technical unit where one or more activities listed in Schedule 1, Part 2 to the Regulations are carried out (listed activities); and
 - any other location on the same site where any other directly associated activities are carried out which have a technical connection with the activities carried out in the stationary technical unit and which could have an effect on pollution.
- 3.7. The following criteria and examples are provided to assist regulators and operators when applying this definition in individual cases. It should be noted that the Commission published informal guidance on the meaning of installation for the purposes of the IPPC Directive which is still relevant¹³. The guidance includes useful advice on the meaning of a number of the elements of both limb (i) and limb (ii) of the definition. These include the meaning of: stationary, technical unit, directly associated activity, technical connection, site and ‘could have an effect on emissions and pollution’.
- 3.8. Two criteria are proposed for the purpose of determining whether plant or machinery satisfy **limb (i) of the definition**:
- (1A) the plant or machinery must be a technical unit where one or more activities listed in Schedule 1, Part 2 to the Regulations (listed activities) are carried out; and

¹² At <http://www.defra.gov.uk/industrial-emissions/las-regulations/guidance/> .

¹³ At http://ec.europa.eu/environment/air/pollutants/stationary/ippc/pdf/installation_guidance.pdf

(1B) the technical unit must be stationary.

3.9. 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. Where, however, there are two or more such units on the same site, those units should be regarded as a single technical unit for these purposes if: they carry out successive steps in one integrated industrial activity; one of the listed activities is a directly associated activity of the other; or both units are served by the same directly associated activity.

3.10. 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 of the definition** 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.

3.11. 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.

3.12. 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:

- input activities concerned with the storage and treatment of inputs into the stationary technical unit;
- 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 sub-unit in the production chain;

- output activities concerned with the treatment of waste (or other emissions, like manure) from the stationary technical unit; or
 - output activities concerned with the finishing, packaging and storage of the product from the stationary technical unit.
- 3.13. 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.
- 3.14. 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.
- 3.15. The examples in Annex 2 illustrate the application of these criteria.

Capacity

- 3.16. In some cases, the question of whether an activity falls within a particular activity description will depend on its capacity. It is for operators to determine the relevant production capacity in each case, in order to establish what regime, if any, they are subject to, and to which regulator they should submit their applications. An operation that exceeds the capacity on which a permit has been based could constitute an offence. Regulators may be able to offer advice on this issue, and indeed on the interpretation of other aspects of the definitions of activities. Regulators may also assess whether an operator's assessment of capacity as set out in an application is reasonable. This may involve considering if, for example, the installation could be run properly at that rate, or alternatively looking at the design capacity. Regulators and operators should also take account of European Commission guidance¹⁴.

¹⁴ At http://ec.europa.eu/environment/air/pollutants/stationary/ippc/pdf/capacity_guidance.pdf .

- 3.17. Finished product production capacity, when referring to production of food products as used in Schedule 1, Part 2, Section 6.8, paragraph (d) to the Regulations should always be assessed on the basis of the overall capacity of the installation to produce any material which can be used as food for human or animal consumption without any further treatment or processing. Where an installation produces materials which are supplied from the installation to serve, through further treatment and processing outside the installation, as ingredients in the preparation of food, the maximum production for that purpose must also be taken into account when assessing the installation's overall capacity.

4. Permitting requirements

- 4.1. This chapter describes the requirements of Chapters I and II of the industrial emissions Directive that must be met through environmental permits and how the Regulations apply these requirements. The requirements of the IPPC Directive apply to existing installations until 7 January 2014 and so Version 3 of this guidance remains valid until then. For these purposes, "existing installation" is an installation carrying out an activity listed in Part A of Part 2 of Schedule 1 of the "principal Regulations" (that so to say, the EPR as they were before the transposing amendment Regulations came into force), which is in operation before 7th January 2013 or in respect of which a duly made application for a permit is submitted before that date and which is permitted and put into operation on or before 7th January 2014.
- 4.2. The Regulations require the regulator to exercise its functions under the Regulations to achieve the basic purpose set out in Article 1 of the industrial emissions Directive. This purpose is to achieve 'a high level of protection of the environment taken as a whole by, in particular, preventing or, where that is not practicable, reducing emissions into the air, water and land and preventing the generation of waste'.
- 4.3. The Regulations require the regulator to exercise its relevant functions so as to comply with certain provisions of the Directive. The regulator exercises a relevant function (see regulation 9 and see chapters 5, 6 and 10 of the Environmental Permitting Core Guidance) when it, for example:
- determines an application for the grant of a permit,
 - makes a regulator-initiated variation of permit conditions; or when it
 - exercises enforcement powers in relation to a permit.

Overview of the permitting requirements of the industrial emissions Directive

- 4.4. The **general principles** governing the basic obligations of the operator, set out in Article 11, are that:
- all the appropriate preventive measures are taken against pollution;
 - BAT are applied
 - no significant pollution is caused;
 - the generation of waste is avoided in accordance with the waste Directive (2008/98/EC);
 - where waste is generated, it is, in order of priority and in accordance with the waste Directive, prepared for re-use, recycled, recovered or, where that is technically and economically impossible, it is disposed of while avoiding or reducing any impact on the environment;
 - energy is used efficiently;
 - the necessary measures are taken to prevent accidents and limit their consequences;
 - the necessary measures are taken upon definitive cessation of activities to avoid any pollution risk and return the site of operation to a satisfactory state defined in accordance with Article 22.
- 4.5. These general principles are embodied in the Article 14 requirements that **permits should include all measures necessary for compliance with Articles 11 and 18**. In particular, permit conditions must:
- aim to minimise long distance and transboundary pollution (Article 14(1)(g));
 - ensure the protection of soil and groundwater and make sure the operator manages waste properly (Article 14(1)(b) and (e));
 - protect the environment when the installation is not operating normally, for example during start-up, malfunction, leaks or temporary stoppages (Article 14(1)(f));
 - require the operator to take appropriate steps before and after operation which may include site monitoring and remediation (Article 11(h));
 - require reporting, at least annually, of emissions monitoring (Article 14(1)(d));
 - set conditions for assessing compliance with ELVs (Article 14(1)(h));

- set out how the operator should monitor emissions, specifying the methodology, frequency and evaluation procedures, and requiring the operator to submit reports to the regulator, to check compliance with the permit (Articles 14(1)(c) and 16);
 - require the operator to inform the regulator without delay of any incident or accident that may cause pollution or breach of permit conditions and to take measures to limit the environmental consequences of incidents or accidents (Articles 7 and 8); and
 - where Article 18 applies, ensure that any relevant environmental quality standard(s) (according to the meaning given in Article 3(6), which restricts it to those in EU legislation) is not breached on account of the installation.
- 4.6. Regulators must ensure that there is a permit condition requiring operators to notify the regulator of any proposed **change in operation**. If the change could result in a breach of the existing permit conditions, or if the regulator is likely to want to review the conditions in the light of the proposal, the operator should apply for a variation under regulation 20. Guidance on the meaning of change in operation is provided in Chapter 5 of this guidance.
- 4.7. The regulator must take account, in granting a permit of information obtained or relevant conclusions arrived at under Articles 5, 6, 7 and 9 of the **EIA Directive**¹⁵, to the extent this information is available at the relevant time.
- 4.8. Articles 6 and 17 of the industrial emissions Directive allows requirements for certain categories of installation to be made in **general binding rules**, provided an equivalent high level of protection of the environment is secured, and the rules are based on BAT. The EPR provisions (in regulations 26 to 30) regarding the making of standard rules enable the regulator to do this. Paragraph 5(1) of EPR Schedule 5 as amended removes the need for public participation in the consideration of applications for standard rules concerning Part A activities, on the grounds that there will have been full public participation in the making of the standard rules in the first place, as required by regulation 26.

Energy efficiency

- 4.9. Through being required to exercise its functions so as to ensure compliance with Article 9 of the Directive, the regulator has the option of not applying **energy efficiency requirements** to EU-ETS installations.

¹⁵ Codified as 2011/92/EU. At <http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:2012:026:0001:0021:EN:PDF> .

4.10. Article 11 of the industrial emissions Directive applies to the industrial activities listed in the Directive's Annex 1. It states that:

'Member States shall take the necessary measures to provide that installations [at which any of the Annex I activities are carried out] are operated in accordance with the following principles...(b) the best available techniques are applied;.... (f) energy is used efficiently.'

4.11. Article 9(2) states that:

'for activities listed in Annex I to Directive 2003/87/EC [establishing a scheme for greenhouse gas emission allowance trading], Member States may choose not to impose requirements relating to energy efficiency in respect of combustion units or other units emitting carbon dioxide on the site.'

4.12. The Regulations transposing the industrial emissions Directive in England and Wales require the regulator to 'exercise its relevant functions so as to ensure compliance with' the provisions of Article 9. Regulators therefore have the option, provided by Article 9(2), not to impose energy efficiency requirements in the circumstances covered by Article 9(2).

4.13. In the case of any installation generating energy from fossil fuels – which by definition will be covered by Article 9(2) – Defra and the WG expect the regulator to set permit conditions so as to ensure that:

- the [thermal] efficiency of energy generation at the permitted installation is maximised;

the operator regularly records the efficiency of generation at the permitted installation and on the scope for further improvement (which may include CHP); and

- other relevant basic energy efficiency measures are applied.

4.14. Furthermore, in the case of any such installation which will be permitted for the first time after 7 January 2013, Defra and the WG expect the regulator to consider, in discussion with the operator, the suitability of the installation for CHP and, where appropriate, to set permit conditions such that the installation is constructed either to be CHP ready or with CHP from the outset of its operation.

4.15. For any other existing or new installation covered by Article 9(2), Defra and the WG expect permit conditions to be set so as to apply basic energy efficiency measures as appropriate to the installation. Existing installations should already be permitted in that way, but the need for any adjustment should be assessed in the periodic reconsideration of permits which the regulator is obliged to carry out.

4.16. Defra and the WG expect the regulators, led by the Environment Agency, to characterise "basic energy efficiency measures". But these measures should address no more than installation design, operation and maintenance procedures

which could reasonably be expected to be in place in any installation, irrespective of the activities carried out there.

- 4.17. For all other installations carrying out any activity listed in Annex I to the Directive, Defra and the WG require the regulator to set permit conditions in respect not only of basic energy efficiency measures but also of energy efficiency measures which reflect the regulator's consideration of all the relevant BAT. Relevant BAT will in particular (but not necessarily only) be those included in the conclusions on BAT set out in the relevant BAT reference document(s) (BREF(s)). In these cases also, existing installations should already be permitted in that way, but the need for any adjustment should be periodically re-assessed, particularly in the permit reconsideration which, under Article 21(3), must follow the publication of relevant adopted BAT conclusions.
- 4.18. In setting or reconsidering permit conditions in respect of energy efficiency for any of these other installations, the regulator should take into account other factors which have a demonstrable bearing upon the efficiency of energy use in the installation. In particular, the regulator should take account of the likelihood that a combination of a requirement for basic energy efficiency measures and participation in a Climate Change Agreement will substantially deliver the requirements of the Directive.

Determination and use of best available techniques (BAT)

- 4.19. Article 14(3) of the Directive states that BAT Conclusions shall be the reference for setting permit conditions. Permit conditions stricter than BAT may be set but only where this is necessary to ensure that no significant pollution is caused in accordance with the general principle in article 11, or in accordance with article 18 where an environmental quality standard requires this.

- 4.20. Under the industrial emissions Directive, it is expected that BAT conclusions will be adopted for each of the sectors covered by a BAT reference document (BREF) as defined in Article 3(11). The process of adopting BAT conclusions, begun in late 2011, is likely to take several years¹⁶. Article 13(5) of the Directive states that decisions on BAT Conclusions shall be adopted through the regulatory procedure set out in Article 75(2). That procedure involves the “Article 75” Committee which is convened by the European Commission and comprises representatives of each Member State. When the Committee has adopted a decision that, in effect, BAT Conclusions are soundly based, the Commission is obliged to make the BAT Conclusions publicly available in all the languages of the EU. Until BAT Conclusions are available, relevant conclusions from existing BREFs apply.
- 4.21. The regulator must follow **developments in BAT and the publication of BAT Conclusions**. Moreover, Defra and the Welsh Government expect the Environment Agency to co-ordinate UK input to the information exchange process under Article 13 of the industrial emissions Directive through which BREFs are produced. In particular, the Environment Agency should ensure that there is a UK lead on each of the BREFs. That lead person must in turn endeavour to obtain soundly based technical information from operators in a form which is consistent with the European Commission’s guidance¹⁷ on the preparation of BREFs.
- 4.22. Article 27 requires Member States, where appropriate, **to encourage the development and application of emerging techniques**, in particular for those emerging techniques identified in BAT reference documents. ‘Emerging technique’ is defined in Article 3(14) as meaning:

a novel technique for an industrial activity that, if commercially developed, could provide either a higher general level of protection of the environment or at least the same level of protection of the environment and higher cost savings than existing best available techniques.

¹⁶ For details of the process, see the Commission Implementing Decision at the link in the following footnote.

¹⁷ At <http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:2012:063:0001:0039:EN:PDF> .

4.23. The Regulations require regulators, where appropriate, to exercise their functions so as to encourage the application of emerging techniques. Regulators can do this primarily through their dealings with operators who seek either new or varied permits for an activity in which an emerging technique is to be employed. As with all matters concerning BAT, it is for the regulator, guided but not bound by BREFs, to take a view on whether a technique has emerged to the point where it must be regarded as BAT for a particular installation or class of installation. When that stage is reached, the regulator must have regard to Article 14(5) of the industrial emissions Directive.

Setting emission limit values (ELVs) - introduction

4.24. Emission limit values (ELVs) must be set for polluting substances listed in Annex II of the Directive and for other polluting substances likely to be emitted in significant quantities, having regard to their nature and potential to transfer between environmental media. ELVs may be supplemented or replaced by equivalent parameters or technical measures ensuring an equivalent level of environmental protection. This provision for supplementing or replacing ELVs enables the regulator to set permit conditions in the way it considers most effective and appropriate for the installation.

4.25. Except in the case of installations subject to the EU ETS, for which, under Article 9(1), no ELV for carbon dioxide can be set unless necessary to protect the local environment, the environmental assessment must consider direct and indirect emissions of carbon dioxide that result from the industrial activity in question. The assessment must take into account that trade-offs between carbon dioxide and other pollutant emissions will sometimes have to be made.

4.26. The industrial emissions Directive is also concerned with emissions of heat, vibrations and noise. As with substances, however, a detailed assessment is only needed if a preliminary assessment indicates that significant effects may occur.

4.27. ELVs may be supplemented or replaced by equivalent parameters or technical measures ensuring an equivalent level of environmental protection, ELVs, whether supplemented or replaced in that way, have to be based on the application of BAT without prescribing the use of any technique or specific technology.

- 4.28. Whilst regulators themselves therefore cannot directly compel the operator to use a specific technique or specific technology, the ELVs and supplementary or replacement permit conditions can of course be written in such a way as to accord with the operator's choice, so long as the resulting environmental performance is sufficient to meet the industrial emissions Directive's requirements. So, for example, if an operator chooses to use a trademarked piece of apparatus, there is no objection to that being named in the permit if the regulator considers that will improve the permit's clarity (and potentially the enforceability).
- 4.29. Under Article 15(1) of the Directive, ELVs have to apply at the point where the emission leaves the installation. Dilution prior to that point must be disregarded except in the case of indirect releases to water where the effect of water treatment plant may be taken into account provided an equivalent level of protection of the environment is guaranteed and it does not lead to higher levels of pollution.

Setting emission limit values (ELVs) on the basis of BAT

- 4.30. The availability and status of conclusions reached on BAT in BREFs dictates distinct ways in which ELVs have to be based on BAT.
- 4.31. Where there is **no BREF relevant** to an activity or a type of production process carried out within an installation, or where a BREF's conclusions on BAT do not address all the potential environmental effects of the activity or process, Article 14(6) of the Directive requires the regulator, after prior consultations with the operator, to set ELVs (and other permit conditions) on the basis of its own determination of BAT which has to give special consideration to the criteria listed in Annex III of the industrial emissions Directive.
- 4.32. Similarly, where there is a relevant BREF, but the regulator determines – perhaps as an outcome of its duty to encourage emerging techniques (see above) – as **BAT a technique which is not included in the BREF's conclusions on BAT**, Article 14(5) of the industrial emissions Directive requires that the regulator's determination has to give special consideration to the criteria listed in Annex III of the Directive, to comply with the requirements of Article 15, and to result in a level of environmental performance which ensures a level of environmental protection equivalent to the techniques which are described in the BAT conclusions.
- 4.33. Where there is a choice, the technique that is best overall will be BAT unless it is not an available technique. There are two key aspects to the availability test:
- what is the balance of costs and advantages? This means that a technique may be rejected as BAT if its costs would far outweigh its environmental benefits; and

- can the operator obtain the technique? This does not mean that the technique has to be in general use. It would only need to have been developed or proven as a pilot, provided that the industry could then confidently introduce it. Nor does there need to be a competitive market for it. It does not matter whether the technique is from outside the UK or even the EU.

4.34. In determining BAT, regulators must also give special consideration to the criteria listed in Annex III of the Directive, which include the following.

- Consumption and nature of raw materials. Consideration should be given to options that use fewer resources, or those that use materials that are less likely to produce hazards or pollution risks. For example, the use of a purer raw material could lead to lower releases of pollutants. Similarly, water is a raw material, and the assessment should consider how much each option needs where appropriate, and the environmental consequences of any abstraction.
- Energy efficiency. Consideration should be given to the effect different options would have on energy consumption and efficiency. Care should be taken that pollution abatement systems do not use excessive energy compared with the emission reductions they achieve, but there may have to be trade-offs between direct or indirect emissions of carbon dioxide and other pollutants in the interests of overall environmental protection.
- Waste issues. The assessment of options should cover the amount of waste produced and the possibility of preventing waste, recovering it or disposing of it safely. It may be preferable to permit a slightly higher level of releases if this greatly reduces the volume of waste, especially if the waste is particularly hazardous. However, this should not simply transfer pollution from one medium to another, which is precisely what the industrial emissions Directive is meant to avoid. The main goal should be to identify techniques that minimise all types of waste and releases at source.
- Accidents . Consideration should be given to the environmental hazards posed by possible accidents and their associated risks. This should include the practicality of measures to reduce risks and hazards and to respond to any accidents. In comparing the effectiveness of techniques to prevent emissions, consideration should not be limited to looking at normal operations, but also at the possibility of unintentional releases.
- Site restoration. Consideration should be given to whether options risk polluting the site. This should include planning ahead for decommissioning and restoring the site upon closure. For example, installing pipelines and storage tanks above-ground rather than underground would make leaks easier to detect and removal of pollution risks more straightforward.

Setting ELVs where Article 15(3) applies

- 4.35. The requirements of Article 15(3) apply **only** where BAT Conclusions have (i) been adopted and published by the European Commission under Articles 13(5) and (6), and (ii) those Conclusions contain BAT-associated emission levels. In such cases, the regulator should then set ELVs such that, under normal operating conditions, emissions do not exceed the relevant BAT-AEL. Where the BAT AELs are expressed as a range, the ELV should be set on the basis of the top of the relevant BAT-AEL range – that is to say, at the highest associated emission level - unless the installation is demonstrably capable of compliance with a substantially lower ELV, based on the BAT proposed by the operator, or exceptional environmental considerations compel a tighter ELV.
- 4.36. If the ELVs set by the regulator apply different values or reference conditions to those set in the BAT Conclusions, the regulator must assess the results of emissions monitoring at least annually to ensure that emissions under normal operating conditions do not exceed the BAT AELs.
- 4.37. Article 15(4) of the Directive provides a **derogation** from Article 15(3) and so may need to be invoked **only** when Article 15(3) itself is applicable as explained above. In all cases, it will be for the operator to identify the need for a derogation to be considered and to propose justification for it.
- 4.38. The justification must start from a clear understanding of the ELV – based on the higher end of the relevant range of emission levels if a range is given in the BAT-AEL - which would be applicable under the terms of Article 15(3) , and of the monitoring and compliance assessment conditions which would apply to that ELV. The operator will need to set out the ELV and associated conditions which it considers the installation could meet. The difference between the two will enable the “excess” pollutant load which would result from the derogation to be estimated.
- 4.39. The justification will then need to address the criteria set out in Article 15(4). These are that meeting the BAT AEL would lead to disproportionately higher costs compared to the environmental benefits due to:-
- the geographical location of the installation;
 - the local environmental conditions of the installation; or
 - the technical characteristics of the installation.

4.40. The extra costs – both capital and operating – of meeting the Article 15(3) ELVs (that is to say, of preventing the “excess” pollutant emission) must be estimated as accurately as possible in a transparent way which shows how those costs are driven by the technical characteristics, geographical location or local environmental conditions of the plant. It will be for the operator to demonstrate how these extra costs are disproportionate to the environmental benefits they would bring. In doing so, the operator may be encouraged to use such standardised methodologies as the regulator has already established, but both operator and regulator must recognise methodological limitations and be prepared to adapt accordingly, bearing in the mind the need for a robust, documented assessment.

4.41. Technical characteristics which may be particularly relevant include:

- the recent history of pollution control investment in the installation in respect of the pollutant(s) for which the derogation is sought;
- the general investment cycle for a particular type of installation;
- the configuration of the plant on a given site, making it more technically difficult and costly to comply;
- the practicability (particularly bearing in mind Health & Safety and other relevant legal obligations) of interrupting the activity so as to install improved emission control upon the pollutant(s)
- the effect of reducing the excess emission(s) upon other pollutant emissions, energy efficiency, water use or waste arisings from the installation as a whole; and
- the intended remaining operational lifetime of the installation as a whole or of the part of it giving rise to the emission of the pollutant(s), where the operator is prepared to commit to a timetable for closure.

4.42. The geographical location of the installation may have a bearing on costs: for example, construction or energy supply costs may be higher than would normally be encountered if the installation is in a remote location. The local environmental conditions may also influence the costs: for example, there may be added costs if the installation is in a built-up location. Conversely a particularly remote location could mean the environmental benefits of meeting the BAT-AEL would be disproportionate to the costs.

- 4.43. Although operators should attempt to place a monetary value on the environmental benefits which would result from preventing the excess emission, it is recognised that, with the exception of a small range of air pollutants, methodology for doing so is lacking. It will therefore be for operators to assess the effect of the excess emission on the levels of the pollutant already in, or discharged to, air, water and land in the locality. For air pollutants, this will involve consideration of concentrations in ambient air; for water pollutants the effect upon receiving waters – perhaps after passage through a wastewater treatment works – will need to be considered. In all cases, the results of monitoring undertaken at all relevant sites in the locality must be taken into account.
- 4.44. It is then for the regulator to assess whether a derogation can be applied and, if so, with what conditions. In reaching its decision, the regulator must take account of its duty, under the Directive, to ‘ensure that no significant pollution is caused and that a high level of protection of the environment is achieved’. In cases where a derogation is sought for an installation and a pollutant covered by any of the chapters of the Directive dealing with large combustion plants, waste incineration, solvent activities or titanium dioxide production, the derogation must of course be consistent with the relevant ELV set in the Annex associated with the relevant chapter.
- 4.45. Where a derogation is applied, it will need to include ELVs and associated monitoring and compliance assessment conditions, expressed in the same way as they would be if there were no derogation. They may be complemented by a condition stating the total mass of the pollutant(s) which may not be exceeded within a stated period (for example, the remaining lifetime of the installation). The regulator may attach conditions requiring immediate reduction or cessation of the relevant activity at the installation if environmental monitoring at designated points in the locality shows pollutant levels above stated limits. The derogation may also be conditional upon the completion by the specified date of improvements, or upon closure by a specified date of the installation as a whole or the part of it which gives rise to the need for the derogation.
- 4.46. The regulator must set out in an annex to the permit the reasons for the derogation, including the results of its assessment and its justification of the resulting permit conditions. The derogation must be re-assessed at the time of any periodic review carried out in accordance with Article 21..
- 4.47. In relation to the testing and use of emerging techniques, regulators may also grant a temporary derogation under article 15(5). The derogation must not last longer than 9 months. If the activity is allowed to continue after that time, ELVs set in accordance with the rest of Article 15 must be applied. .

Setting (ELVs) where Article 18 applies

- 4.48. The main basis for setting ELVs under the Regulations will be the application of BAT. However, ELVs must also satisfy **Article 18** of the industrial emissions Directive, among other provisions. Article 18 states that where an environmental quality standard (EQS) (as set out in EC legislation) requires stricter ELVs than those achievable under BAT, the regulator must impose those stricter limits. Under Article 14 (2) the stricter ELVs may be supplemented or replaced by equivalent parameters or technical measures.
- 4.49. The term “environmental quality standard” includes several numerical standards that specify maximum concentrations of named pollutants for air and water. In addition to such numerical EQSs there are also qualitative European Community EQSs which may require stricter ELVs. If a Community EQS changes or new ones are introduced, the regulator may need to vary the environmental permit conditions.
- 4.50. In setting environmental permit conditions, the regulator must first consider whether any Community EQS is being or may be breached. If so, the regulator will have to set ELVs accordingly, based on how far the installation is responsible for the breach and the likelihood of remedial action elsewhere. This may require ELVs which are even tighter than those which the use of BAT can generally meet.
- 4.51. Regulators are expected to co-operate so that they use their powers in the most effective way. They should aim to improve areas of poor environmental quality so that Community EQSs are met. However, they should not impose a disproportionate burden on installations compared to other pollution sources.
- 4.52. For a new installation (or a substantial change to an existing installation, where the effect of the change bears significantly on a Community EQS), if environmental quality before the installation begins to operate meets the requirements of a Community EQS, then this must remain so after the installation comes into operation. If the necessary ELVs cannot be met then the permit must be refused. However, there may be ways to reduce emissions from other sources in such a circumstance, thus rendering ELVs and other permit conditions for the installation viably achievable. Where a new installation would only make a minor contribution to a breach of a Community EQS, it will normally be more desirable for regulators to work together to control the other, main sources of pollution, thus ensuring the EQS is met.

- 4.53. If a Community EQS is already being breached in a particular area, then a permit should not be issued to any new installation that would cause anything beyond an increase which, taking into account all the relevant local circumstances, is negligible.. Again, however, if it is clear that a combination of controls on the proposed installation and measures to reduce emissions from other sources will achieve compliance with the EQS, then the installation may be permitted.
- 4.54. Where an existing installation is the main or only cause of a breach of a Community EQS the regulator must set ELVs accordingly. If those are clearly not viably achievable, the regulator should refuse the permit. If a permit has already been issued when the breach is detected (or arises if a new EQS is set) the regulator should review or revoke the environmental permit.
- 4.55. Where an existing installation is a significant contributor to a breach of a Community EQS, but other sources such as traffic also make major contributions, regulators should explore all options for securing compliance with that EQS. It may be right for them to restrict releases from the other sources rather than tighten the permit limits. How far a regulator can do this will depend on its powers to control the other sources. Alternatively, the regulator may find that there are other things it can do to rectify the breach, such as draw up an action plan for an air quality management area (AQMA) under Part IV of the Environment Act 1995. However, if the regulator does not have powers to control the other sources, and does not believe that other means will bring about compliance with the EQS, it must impose stricter permit conditions, but it should involve the operator in that consideration so that the operator has the opportunity to suggest solutions. A combination of controls on all sources must ensure that Community EQSs are met.
- 4.56. Where an existing installation makes only a minor contribution to a breach of a Community EQS that is caused mainly by other, non-IPPC sources, ELVs for the installation should reflect that and would generally be expected not to differ significantly from those which would apply regardless of the applicability of the Community EQS. It will be much more important for the regulator to use whatever other powers it has to control the main sources of the breach.
- 4.57. A breach of a Community EQS could result from the combined effects of a number of installations. This could occur in an industrial area with elevated concentrations of air pollutants, or in an estuary where high levels of pollutants have accumulated due to releases up-river. In such cases it may be appropriate to review several permits in the area to set slightly stricter ELVs for each installation, rather than simply imposing the entire burden of compliance on the last applicant.

ELVs and national environmental quality standards

- 4.58. Many domestic EQSs are the same as EC EQSs, and should be treated in exactly the same way. However, some domestic standards are stricter than or additional to EC EQSs. Examples include the standards and objectives established in connection with the Air Quality Strategy under the Environment Act 1995. Domestic EQSs such as these do not have the same legal status as EC EQSs, since they are not explicitly referred to in the Regulations. Hence there is no absolute legal obligation under the Regulations to impose any stricter conditions beyond BAT where this would be required to comply with a domestic EQS.
- 4.59. Nevertheless, domestic standards should still be considered as a major factor in determining emission limits and BAT for an installation, following the basic principle of using EQSs as a reference level for harm. Therefore, domestic EQSs should inform a judgment on whether the installation should be permitted, and if so, what control options should be selected based on the balance of costs and advantages. Any significant contribution to a breach of a domestic EQS should be considered on a case-by-case basis, taking account of the costs and advantages of measures to reduce or prevent the breach.
- 4.60. Regulators and operators will also need to bear in mind that, in any case, Article 21(5) of the Directive requires permits to be reviewed where the pollution caused by an installation is of such significance that the existing ELVs need to be revised, whether or not BAT have developed.
- 4.61. Some national EQSs such as operational water quality EQS should always be observed to adequately protect the aquatic environment and prevent a significant deterioration in water quality. These include:
- river quality objectives approved by Government ;
 - Environment Agency national standards to protect the quality of water and aquatic life; and
 - Environment Agency local standards to control specific sources of substances that may harm water quality and aquatic life.
- 4.62. The Environment Agency should ensure that environmental permits contain conditions to safeguard these standards

5. Other requirements

- 5.1. This chapter describes industrial emissions Directive requirements relating to aspects other than permitting which are additional to the requirements applicable to all regulated facilities and described in chapters 5, 9 and 10 of the Environmental Permitting Core Guidance. These are:
- application forms – Article 12;

- reviewing permits – Article 21;
 - public participation in permit applications – Article 24
 - site closure – Article 22;
 - environmental inspections – Article 23;
 - consultation with other member states – Article 26.,
- 5.2. Regulators must ensure that the **application form** for an environmental permit for a Part A(1) installation requires the applicant to provide the information specified in Article 12 (applications for permits) of the industrial emissions Directive.
- 5.3. Submitted application forms which do not include this information may be regarded by the regulator as not duly made (see chapter 5 of the Environmental Permitting Core Guidance).
- 5.4. Article 12 of the industrial emissions Directive requires applications to contain descriptions of the following:
- the installation and its activities;
 - the raw and auxiliary materials, other substances and the energy used in or generated by the installation;
 - the sources of emissions from the installation;
 - the conditions of the site of the installation;
 - where applicable, a baseline report in accordance with Article 22;
 - the nature and quantities of foreseeable emissions from the installation into each medium as well as identification of significant effects of the emissions on the environment;
 - the proposed technology and other techniques for preventing or, where this not possible, reducing emissions from the installation;
 - measures for the prevention, preparation for re-use, recycling and recovery of waste generated by the installation;
 - further measures planned to comply with the general principles of the basic obligations of the operator as provided for in Article 11;
 - measures planned to monitor emissions into the environment;

- the main alternatives to the proposed technology, techniques and measures studied by the applicant in outline;
- a non-technical summary of the details referred to in the above indents.

Periodic review of permits

- 5.5. Regulators are required to **review permits periodically** (see chapter 10 of Environmental Permitting Core Guidance). In addition, the regulator is required to review permits in any of the circumstances described in Article 21 (3) to (5) of the Directive. This means a permit review is required:
- If the installation causes such significant pollution that revised or additional ELVs are needed;
 - if operators must switch to other techniques for safety reasons;
 - where necessary to comply with new or revised EQSs under Article 18;
 - within four years of publication of BAT Conclusions; or
 - where an installation is not covered by BAT Conclusions and developments in BAT allow for the significant reduction of emissions;
- 5.6. The first of these circumstances might arise if new evidence emerges that at least one emission from a particular installation, although compliant with the ELV in the permit, is nevertheless causing significant pollution. Or the evidence may relate to an emission which is not subject to an ELV in the permit. This evidence may come from improved scientific understanding, from environmental monitoring or from the regulator's investigation of complaints by the public, but whatever the source it will be for the regulator to judge whether it is sufficiently significant for the relevant conditions of the permit to be reviewed. The scope of permit reviews in these circumstances should be limited to the pollutant(s) of concern and to the features of the installation giving rise to the pollution.
- 5.7. The regulator, in conducting a periodic review, must use relevant information from monitoring and inspections and may require the operator to supply additional information to enable the operation of the installation to be compared with BAT as described in the BAT Conclusions.

- 5.8. Under Article 21(3) of the industrial emissions Directive, permit reviews prompted by the publication of revised or new BAT Conclusions have to be completed such that any necessary update is completed and the installation is complying with those updated conditions within four years. The precise timing of these reviews within that four year period will be for the regulator to determine, although it will obviously not be appropriate in any circumstances to delay it much beyond three years from publication. Regulators, in consultation with operators, may decide in some circumstances that much swifter initiation and completion would be preferable in the interests of regulatory certainty.
- 5.9. Article 21(3) mentions specifically the requirements of Articles 15(3) and 15(4), thus plainly requiring that, where the BAT Conclusions contain BAT-AELs, the updated permit must contain ELVs which are set in accordance with those relevant BAT-AELs. If the operator considers that the ELVs set on that basis will be unattainable, it is open to the operator to seek derogations as described in paragraphs 4.37ff above. Derogations may be sought on a tightly time-limited basis corresponding to the time needed to complete upgrades to the installation. In considering whether such a derogation is justified, the regulator will need to include in its consideration the investment history and the practicality of upgrade work (for example, the availability of specialist contractors) at the installation. Or derogations may, more exceptionally, be sought on a longer term basis if the operator considers that can be justified.

Baseline reports and permit surrender

- 5.10. Where the activity involves the use, production or release of relevant hazardous substances, and having regard to the possibility of soil and groundwater contamination at the site of the installation, under Article 22(2) the regulator must require the operator to submit a **baseline report**. Hazardous substances are those defined in Article 3 of Regulation (EC) No. 1272/2008 on classification, labelling and packaging of substances and mixtures. `Relevant' here means relevant to soil or groundwater pollution.
- 5.11. For new installations, meaning those not in operation before 7 January 2013, the report will normally be submitted as part of the permit application. If the permit has already been granted the report should be submitted prior to operation and regulators may issue an information notice for this purpose if necessary. Existing installations already in operation on 7 January 2013 should already have a baseline report which satisfies the requirements. If not, one will be needed at the time of the first periodic review after 7 January 2014.

- 5.12. A baseline report must contain the information necessary to determine the state of soil and groundwater contamination so as to enable a quantified comparison to be made at the time of surrender of the permit. Reports must contain information on the present use and, where available, also the past uses of the site and existing soil and groundwater measurements. Where existing measurements are not available new measurements, having regard to the possibility of soil and groundwater contamination by those hazardous to be used, produced or released by the installation concerned, must be included.
- 5.13. Operators must bear in mind that, since the permit conditions and subsistence charges will remain in place until the regulator is satisfied, by reference to the baseline report, that no deterioration in site condition has occurred, it is in their interest to have a robust baseline report.
- 5.14. When an operator wishes to surrender a permit, the state of soil and groundwater contamination by relevant hazardous substances used, produced or released by the installation, must be assessed. If it is found that significant pollution has been caused compared to the state established by the baseline report, the operator must demonstrate in the surrender application that the measures necessary to return the site to that state have been taken. The technical feasibility of such measures may be taken into account. Provided the regulator considers this demonstration is sound, it will be satisfied that the requirements of paragraph 14(1) of Part 1 of Schedule 5 to the EPR have been met.
- 5.15. Where a baseline report is not available (for example, in the case of some existing installations in operation before 7 January 2013 or where a report is not required), the operator must take the necessary actions to remove, control, contain or reduce relevant hazardous substances so that the site ceases to pose any significant risk to human health of the environment. The conditions of the site established in the application for a permit under the IPPC Directive and the current or approved future use of the site should be taken into account. Provided the regulator considers this has been done, it will be satisfied that the requirements of paragraph 14(1) of Part 1 of Schedule 5 to the EPR have been met.

Environmental inspections

- 5.16. The regulator must ensure that all installations are covered by an **environmental inspection plan** at national, regional or local level and the plan must be regularly reviewed.. Each plan must include:
- a general assessment of relevant significant environmental issues;
 - specification of the geographical area covered by the inspection plan;

- a register of the installations covered by the plan;
- procedures for drawing up programmes for routine environmental inspections;
- procedures for non-routine environmental inspections; and
- where necessary, provisions on the cooperation between different inspection authorities

5.17. Based on the plans the regulator must draw up programmes for regular inspections including different frequencies for different types of installation. The period between visits must be determined on the basis of risk and must not be less than annually for higher risk installations or every three years for lower risk ones. Risk must be assessed at least on the basis of:

- the potential and actual impacts of the installations concerned on human health and the environment taking into account the levels and types of emissions, the sensitivity of the local environment and the risk of accidents;
- the record of compliance with permit conditions; and
- the participation of the operator in the EU eco-management and audit scheme (EMAS - Regulation (EC) No 1221/2009).

5.18. If significant non-compliance is identified a further site visit must be carried out within six months. Non routine inspections must also be carried out as appropriate.

5.19. Reports of sites visits must be prepared, notified to the operator within two months of the visit and made publically available within four months. Regulators must ensure all actions identified in reports are carried out by operators within a reasonable period.

Public participation

5.20. The regulator must ensure that **public participation** in respect of Part A installations meets the requirements of Article 24 and Annex IV (access to information and public participation in the permit procedure) of the industrial emissions Directive.

5.21. The public must be given early and effective opportunities to participate in the permitting process. This applies to:

- permits for new installations (except where standard rules are applied for);
- any substantial change in the operation of an installation (see paragraph 5.20);
- the granting or updating of a permit for an installation where a derogation under Article 15(4) is proposed;

- the updating of permit conditions for an installation where this is necessary due to significant pollution caused by the installation.

5.22. The procedure for public participation in decision-making set out in Annex IV of the Directive applies for the purposes of such participation. The procedure provides that the public shall be informed (by public notices or other appropriate means such as electronic media where available) of the following matters early in the procedure for the taking of a decision or, at the latest, as soon as the information can reasonably be provided:

- the application for a permit or, as the case may be, the proposal for the updating of a permit or of permit conditions;
- where applicable, the fact that a decision is subject to a national or transboundary environmental impact assessment or to consultations between Member States;
- details of the Agency as the body responsible for taking the decision, and other bodies from whom relevant information can be obtained, those to which comments or questions can be submitted, and details of the time schedule for transmitting comments or questions;
- the nature of possible decisions or, where there is one, the draft decision;
- where applicable, the details relating to a proposal for the updating of a permit or of permit conditions;
- an indication of the times and places where, or means by which, the relevant information will be made available; and
- details of the arrangements for public participation and consultation made.

5.23. The procedure also requires that, within appropriate time-frames, the following are made available to the public concerned:

- the main reports and advice issued to the regulator at the time when the public concerned are first consulted as above;
- in accordance with the Directive 2003/4/EC of the European Parliament and of the Council of 28 January 2003 on public access to environmental information, any other information which is relevant for the decision and which only becomes available after the time the public concerned are first consulted.

- 5.24. The Regulations require the Environment Agency to prepare a statement of its policies on Public Participation (regulation 59) . This will describe how the Environment Agency intends to ensure that, for Part A(1) installations, public participation is carried out in accordance with these requirements.
- 5.25. Public participation in general is dealt with in chapter 9 of the Environmental Permitting Core Guidance.
- 5.26. **Other EU Member States whose territory may be adversely affected** have to be consulted on the relevant application (see Schedule 5, paragraph 10). This applies for applications to obtain an environmental permit for a Part A installation and applications for a substantial variation of a permit for a Part A installation.
- 5.27. As England and Wales do not share any land borders with other Member States, transboundary consultation is likely to be rare. Should the need for it arise, the Secretary of State for England and Welsh Ministers with regard to Wales will send a copy of the application to the relevant Member State at the same time as the application is advertised, or as soon after as possible. The Secretary of State and Welsh Ministers may act independently, on a regulator's advice or following a request from another Member State

Substantial changes

- 5.28. Applications for changes in operation which are **substantial changes** must be made subject to public participation under the Regulations. Substantial change means 'a change in operation which, in the regulator's opinion, may have significant negative effects on human beings or the environment' (Schedule 5, paragraph 5(5)) . A change in operation means 'a change in the nature or functioning, or an extension, of an installation, which may have consequences for the environment'. A change in operation therefore could entail either technical alterations or modifications in operational or management practices.
- 5.29. Substantial changes include any change in operation which in itself meets the thresholds, if any, set out in Schedule 1, Part 2, and any change in operation of an incineration or co-incineration plant for non-hazardous waste, which would involve the incineration or co-incineration of hazardous waste.

5.30. Whether any particular change proposed by an operator would constitute a substantial change is something that can sometimes only be determined given the facts of the case. This requires consideration of all impacts of any proposed change rather than just the net environmental effect. Therefore, the potential impacts of proposals on all possible receptors should be examined to inform a judgement on whether, either in combination or in any individual case, there may be a significant negative effect. Such judgements should take account of not only releases of polluting substances, but also other pollutants (heat, noise and vibrations) as well as alternative types of potential impacts such as increased waste production, energy consumption or the risk of accidents.

5.31. Some changes bringing about net benefits may have some constituent negative effects. For example, changing a fuel may lead to reductions in some releases but increases in others. If any potential negative effect is identified, the regulator must consider whether it judges this significant. Regulators should make this judgement by considering whether the effect is of such significance that it justifies requiring the operator to submit proposals that will be subject to consultation with the public. This should be assessed having regard to:

- the extent of the potential impact (including geographical area and size of the affected population);
- any effects on specifically protected areas, species or other assets of particular significance;
- the transboundary nature of the impact;
- the magnitude and complexity of the impact;
- the probability of the impact; and
- the duration, frequency and reversibility of the impact.

5.32. The industrial emissions Directive is concerned with a range of environmental impacts, all of which must be considered in determining whether there may be a substantial change. However, changes of releases in polluting substances are the most likely causes of substantial changes. In this regard, regulators should consider changes in the following:

- The substances released. If a new substance were to be released, consideration should be given to whether this would have a significant negative effect. However, if this new release were to be accompanied by a reduction in releases of another substance, then it would be appropriate to consider any similarity of effects between the two substances. If the effect of the new substance would be broadly similar to that now reduced from the old substance, then the change would not be substantial.
- The level of releases of any particular substances. An increase in releases would give rise to a substantial change only if it would significantly increase the negative environmental effect. The test of significance should not be based on the relative increase in releases from the site but on the absolute effect those releases will have on the environment. For example, a small factory might seek to increase its capacity by two or three times, yet this would constitute a substantial change only if the resulting increase in releases may cause a significant negative effect. The absolute increase in substances to be released would not in itself be considered significant.
- The nature of releases of any particular substance. Beyond increases in levels of releases, other changes could include changes in temperature, pressure, viscosity, appearance, phase, size and shape of particle, colour and density. The possibility of such changes having a significant negative effect should be considered. For example, a change in particle size which does not enter a different environmental pathway is unlikely to be a substantial change, unless it becomes so ultra-fine that it starts to have a different uptake.

5.33. Finally, it is important to stress that whether or not a change is substantial is a judgement for the regulator to make. Regulators should be able to demonstrate that their decisions are reasonable based on the facts of the case and the standard of common sense.

1. Annex 1

Relevant extracts from the industrial emissions Directive

Directive 2010/75/EU of the European Parliament and of the Council of 24 November 2010 on industrial emissions (integrated pollution prevention and control) Text with EEA relevance

Official Journal L 334 , 17/12/2010 P. 0017 - 0119

Directive 2010/75/EU of the European Parliament and of the Council of 24 November 2010

on industrial emissions (integrated pollution prevention and control)

(Recast)

(Text with EEA relevance)

THE EUROPEAN PARLIAMENT AND THE COUNCIL OF THE EUROPEAN UNION,

Having regard to the Treaty on the Functioning of the European Union, and in particular Article 192(1) thereof,

Having regard to the proposal from the European Commission,

Having regard to the opinion of the European Economic and Social Committee [1],

Having regard to the opinion of the Committee of the Regions [2],

Acting in accordance with the ordinary legislative procedure [3],.....

HAVE ADOPTED THIS DIRECTIVE:

CHAPTER I

COMMON PROVISIONS

Article 1

Subject matter

This Directive lays down rules on integrated prevention and control of pollution arising from industrial activities.

It also lays down rules designed to prevent or, where that is not practicable, to reduce emissions into air, water and land and to prevent the generation of waste, in order to achieve a high level of protection of the environment taken as a whole.

Article 2

Scope

1. This Directive shall apply to the industrial activities giving rise to pollution referred to in Chapters II to VI.
2. This Directive shall not apply to research activities, development activities or the testing of new products and processes.

Article 3

Definitions

For the purposes of this Directive the following definitions shall apply:

- (1) "substance" means any chemical element and its compounds, with the exception of the following substances:
 - (a) radioactive substances as defined in Article 1 of Council Directive 96/29/Euratom of 13 May 1996 laying down basic safety standards for the protection of the health of workers and the general public against the dangers arising from ionising radiation [20];
 - (b) genetically modified micro-organisms as defined in Article 2(b) of Directive 2009/41/EC of the European Parliament and the Council of 6 May 2009 on the contained use of genetically modified micro-organisms [21];
 - (c) genetically modified organisms as defined in point 2 of Article 2 of Directive 2001/18/EC of the European Parliament and of the Council of 12 March 2001 on the deliberate release into the environment of genetically modified organisms [22];
- (2) "pollution" means the direct or indirect introduction, as a result of human activity, of substances, vibrations, heat or noise into air, water or land which may be harmful to human health or the quality of the environment, result in damage to material property, or impair or interfere with amenities and other legitimate uses of the environment;
- (3) "installation" means a stationary technical unit within which one or more activities listed in Annex I or in Part 1 of Annex VII are carried out, and any other directly associated activities on the same site which have a technical connection with the activities listed in those Annexes and which could have an effect on emissions and pollution;
- (4) "emission" means the direct or indirect release of substances, vibrations, heat or noise from individual or diffuse sources in the installation into air, water or land;
- (5) "emission limit value" means the mass, expressed in terms of certain specific parameters, concentration and/or level of an emission, which may not be exceeded during one or more periods of time;

(6) "environmental quality standard" means the set of requirements which must be fulfilled at a given time by a given environment or particular part thereof, as set out in Union law;

(7) "permit" means a written authorisation to operate all or part of an installation or combustion plant, waste incineration plant or waste co-incineration plant;

(8) "general binding rules" means emission limit values or other conditions, at least at sector level, that are adopted with the intention of being used directly to set permit conditions;

(9) "substantial change" means a change in the nature or functioning, or an extension, of an installation or combustion plant, waste incineration plant or waste co-incineration plant which may have significant negative effects on human health or the environment;

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

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

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

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

(11) "BAT reference document" means a document, resulting from the exchange of information organised pursuant to Article 13, drawn up for defined activities and describing, in particular, applied techniques, present emissions and consumption levels, techniques considered for the determination of best available techniques as well as BAT conclusions and any emerging techniques, giving special consideration to the criteria listed in Annex III;

(12) "BAT conclusions" means a document containing the parts of a BAT reference document laying down the conclusions on best available techniques, their description, information to assess their applicability, the emission levels associated with the best available techniques, associated monitoring, associated consumption levels and, where appropriate, relevant site remediation measures;

(13) "emission levels associated with the best available techniques" means the range of emission levels obtained under normal operating conditions using a best available technique or a combination of best available techniques, as described in BAT conclusions, expressed as an average over a given period of time, under specified reference conditions;

(14) "emerging technique" means a novel technique for an industrial activity that, if commercially developed, could provide either a higher general level of protection of

the environment or at least the same level of protection of the environment and higher cost savings than existing best available techniques;

(15) "operator" means any natural or legal person who operates or controls in whole or in part the installation or combustion plant, waste incineration plant or waste co-incineration plant or, where this is provided for in national law, to whom decisive economic power over the technical functioning of the installation or plant has been delegated;

(16) "the public" means one or more natural or legal persons and, in accordance with national law or practice, their associations, organisations or groups;

(17) "the public concerned" means the public affected or likely to be affected by, or having an interest in, the taking of a decision on the granting or the updating of a permit or of permit conditions; for the purposes of this definition, non-governmental organisations promoting environmental protection and meeting any requirements under national law shall be deemed to have an interest;

(18) "hazardous substances" means substances or mixtures as defined in Article 3 of Regulation (EC) No 1272/2008 of the European Parliament and of the Council of 16 December 2008 on classification, labelling and packaging of substances and mixtures [23];

(19) "baseline report" means information on the state of soil and groundwater contamination by relevant hazardous substances;

(20) "groundwater" means groundwater as defined in point 2 of Article 2 of Directive 2000/60/EC of the European Parliament and of the Council of 23 October 2000 establishing a framework for Community action in the field of water policy [24];

(21) "soil" means the top layer of the Earth's crust situated between the bedrock and the surface. The soil is composed of mineral particles, organic matter, water, air and living organisms;

(22) "environmental inspection" means all actions, including site visits, monitoring of emissions and checks of internal reports and follow-up documents, verification of self-monitoring, checking of the techniques used and adequacy of the environment management of the installation, undertaken by or on behalf of the competent authority to check and promote compliance of installations with their permit conditions and, where necessary, to monitor their environmental impact;

(23) "poultry" means poultry as defined in point 1 of Article 2 of Council Directive 90/539/EEC of 15 October 1990 on animal health conditions governing intra-Community trade in, and imports from third countries of, poultry and hatching eggs [25];

(24) "fuel" means any solid, liquid or gaseous combustible material;

(25) "combustion plant" means any technical apparatus in which fuels are oxidised in order to use the heat thus generated;

(26) "stack" means a structure containing one or more flues providing a passage for waste gases in order to discharge them into the air;

(27) "operating hours" means the time, expressed in hours, during which a combustion plant, in whole or in part, is operating and discharging emissions into the air, excluding start-up and shut-down periods;

(28) "rate of desulphurisation" means the ratio over a given period of time of the quantity of sulphur which is not emitted into air by a combustion plant to the quantity of sulphur contained in the solid fuel which is introduced into the combustion plant facilities and which is used in the plant over the same period of time;

(29) "indigenous solid fuel" means a naturally occurring solid fuel fired in a combustion plant specifically designed for that fuel and extracted locally;

(30) "determinative fuel" means the fuel which, amongst all fuels used in a multi-fuel firing combustion plant using the distillation and conversion residues from the refining of crude-oil for own consumption, alone or with other fuels, has the highest emission limit value as set out in Part 1 of Annex V, or, in the case of several fuels having the same emission limit value, the fuel having the highest thermal input amongst those fuels;

(31) "biomass" means any of the following:

(a) products consisting of any vegetable matter from agriculture or forestry which can be used as a fuel for the purpose of recovering its energy content;

(b) 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 coating and which includes, in particular, such wood waste originating from construction and demolition waste;

(32) "multi-fuel firing combustion plant" means any combustion plant which may be fired simultaneously or alternately by two or more types of fuel;

(33) "gas turbine" means any rotating machine which converts thermal energy into mechanical work, consisting mainly of a compressor, a thermal device in which fuel is oxidised in order to heat the working fluid, and a turbine;

(34) "gas engine" means an internal combustion engine which operates according to the Otto cycle and uses spark ignition or, in case of dual fuel engines, compression ignition to burn fuel;

(35) "diesel engine" means an internal combustion engine which operates according to the diesel cycle and uses compression ignition to burn fuel;

- (36) "small isolated system" means a small isolated system as defined in point 26 of Article 2 of Directive 2003/54/EC of the European Parliament and of the Council of 26 June 2003 concerning common rules for the internal market in electricity [26];
- (37) "waste" means waste as defined in point 1 of Article 3 of Directive 2008/98/EC of the European Parliament and of the Council of 19 November 2008 on waste [27];
- (38) "hazardous waste" means hazardous waste as defined in point 2 of Article 3 of Directive 2008/98/EC;
- (39) "mixed municipal waste" means waste from households as well as commercial, industrial and institutional waste which, because of its nature and composition, is similar to waste from households, but excluding fractions indicated under heading 20 01 of the Annex to Decision 2000/532/EC [28] that are collected separately at source and excluding the other waste indicated under heading 20 02 of that Annex;
- (40) "waste incineration plant" means any 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 process, if the substances resulting from the treatment are subsequently incinerated;
- (41) "waste co-incineration plant" means any stationary or mobile technical unit whose main purpose is the generation of energy or production of material products and which uses waste as a regular or additional fuel or in which waste is thermally treated for the purpose of disposal through the incineration by oxidation of waste as well as other thermal treatment processes, such as pyrolysis, gasification or plasma process, if the substances resulting from the treatment are subsequently incinerated;
- (42) "nominal capacity" means the sum of the incineration capacities of the furnaces of which a waste incineration plant or a waste co-incineration plant is composed, as specified by the constructor and confirmed by the operator, with due account being taken of the calorific value of the waste, expressed as the quantity of waste incinerated per hour;
- (43) "dioxins and furans" means all polychlorinated dibenzo-p-dioxins and dibenzofurans listed in Part 2 of Annex VI;
- (44) "organic compound" means any compound containing at least the element carbon and one or more of hydrogen, halogens, oxygen, sulphur, phosphorus, silicon or nitrogen, with the exception of carbon oxides and inorganic carbonates and bicarbonates;
- (45) "volatile organic compound" means any organic compound as well as the fraction of creosote, having at 293,15 K a vapour pressure of 0,01 kPa or more, or having a corresponding volatility under the particular conditions of use;
- (46) "organic solvent" means any volatile organic compound which is used for any of the following:
- (a) alone or in combination with other agents, and without undergoing a chemical change, to dissolve raw materials, products or waste materials;
 - (b) as a cleaning agent to dissolve contaminants;

- (c) as a dissolver;
- (d) as a dispersion medium;
- (e) as a viscosity adjuster;
- (f) as a surface tension adjuster;
- (g) as a plasticiser;
- (h) as a preservative;

(47) "coating" means coating as defined in point 8 of Article 2 of Directive 2004/42/EC of the European Parliament and of the Council of 21 April 2004 on the limitation of emissions of volatile organic compounds due to the use of organic solvents in certain paints and varnishes and vehicle refinishing products [29].

Article 4

Obligation to hold a permit

1. Member States shall take the necessary measures to ensure that no installation or combustion plant, waste incineration plant or waste co-incineration plant is operated without a permit.

By way of derogation from the first subparagraph, Member States may set a procedure for the registration of installations covered only by Chapter V.

The procedure for registration shall be specified in a binding act and include at least a notification to the competent authority by the operator of the intention to operate an installation.

2. Member States may opt to provide that a permit cover two or more installations or parts of installations operated by the same operator on the same site.

Where a permit covers two or more installations, it shall contain conditions to ensure that each installation complies with the requirements of this Directive.

3. Member States may opt to provide that a permit cover several parts of an installation operated by different operators. In such cases, the permit shall specify the responsibilities of each operator.

Article 5

Granting of a permit

1. Without prejudice to other requirements laid down in national or Union law, the competent authority shall grant a permit if the installation complies with the requirements of this Directive.

2. Member States shall take the measures necessary to ensure that the conditions of, and the procedures for the granting of, the permit are fully coordinated where more than one competent authority or more than one operator is involved or more than one permit is granted, in order to guarantee an effective integrated approach by all authorities competent for this procedure.

3. In the case of a new installation or a substantial change where Article 4 of Directive 85/337/EEC applies, any relevant information obtained or conclusion arrived at pursuant to Articles 5, 6, 7 and 9 of that Directive shall be examined and used for the purposes of granting the permit.

Article 6

General binding rules

Without prejudice to the obligation to hold a permit, Member States may include requirements for certain categories of installations, combustion plants, waste incineration plants or waste co-incineration plants in general binding rules.

Where general binding rules are adopted, the permit may simply include a reference to such rules.

Article 7

Incidents and accidents

Without prejudice to Directive 2004/35/EC of the European Parliament and of the Council of 21 April 2004 on environmental liability with regard to the prevention and remedying of environmental damage [30], in the event of any incident or accident significantly affecting the environment, Member States shall take the necessary measures to ensure that:

- (a) the operator informs the competent authority immediately;
- (b) the operator immediately takes the measures to limit the environmental consequences and to prevent further possible incidents or accidents;
- (c) the competent authority requires the operator to take any appropriate complementary measures that the competent authority considers necessary to limit the environmental consequences and to prevent further possible incidents or accidents.

Article 8

Non-compliance

1. Member States shall take the necessary measures to ensure that the permit conditions are complied with.
2. In the event of a breach of the permit conditions, Member States shall ensure that:
 - (a) the operator immediately informs the competent authority;
 - (b) the operator immediately takes the measures necessary to ensure that compliance is restored within the shortest possible time;
 - (c) the competent authority requires the operator to take any appropriate complementary measures that the competent authority considers necessary to restore compliance.

Where the breach of the permit conditions poses an immediate danger to human health or threatens to cause an immediate significant adverse effect upon the environment, and until compliance is restored in accordance with points (b) and (c) of the first subparagraph, the operation of the installation, combustion plant, waste incineration plant, waste co-incineration plant or relevant part thereof shall be suspended.

Article 9

Emission of greenhouse gases

1. Where emissions of a greenhouse gas from an installation are specified in Annex I to Directive 2003/87/EC in relation to an activity carried out in that installation, the permit shall not include an emission limit value for direct emissions of that gas, unless necessary to ensure that no significant local pollution is caused.
2. For activities listed in Annex I to Directive 2003/87/EC, Member States may choose not to impose requirements relating to energy efficiency in respect of combustion units or other units emitting carbon dioxide on the site.
3. Where necessary, the competent authorities shall amend the permit as appropriate.
4. Paragraphs 1 to 3 shall not apply to installations which are temporarily excluded from the scheme for greenhouse gas emission allowance trading within the Union in accordance with Article 27 of Directive 2003/87/EC.

CHAPTER II

PROVISIONS FOR ACTIVITIES LISTED IN ANNEX I

Article 10

Scope

This Chapter shall apply to the activities set out in Annex I and, where applicable, reaching the capacity thresholds set out in that Annex.

Article 11

General principles governing the basic obligations of the operator

Member States shall take the necessary measures to provide that installations are operated in accordance with the following principles:

- (a) all the appropriate preventive measures are taken against pollution;
- (b) the best available techniques are applied;
- (c) no significant pollution is caused;
- (d) the generation of waste is prevented in accordance with Directive 2008/98/EC;
- (e) where waste is generated, it is, in order of priority and in accordance with Directive 2008/98/EC, prepared for re-use, recycled, recovered or, where that is technically and

economically impossible, it is disposed of while avoiding or reducing any impact on the environment;

(f) energy is used efficiently;

(g) the necessary measures are taken to prevent accidents and limit their consequences;

(h) the necessary measures are taken upon definitive cessation of activities to avoid any risk of pollution and return the site of operation to the satisfactory state defined in accordance with Article 22.

Article 12

Applications for permits

1. Member States shall take the necessary measures to ensure that an application for a permit includes a description of the following:

(a) the installation and its activities;

(b) the raw and auxiliary materials, other substances and the energy used in or generated by the installation;

(c) the sources of emissions from the installation;

(d) the conditions of the site of the installation;

(e) where applicable, a baseline report in accordance with Article 22(2);

(f) the nature and quantities of foreseeable emissions from the installation into each medium as well as identification of significant effects of the emissions on the environment;

(g) the proposed technology and other techniques for preventing or, where this is not possible, reducing emissions from the installation;

(h) measures for the prevention, preparation for re-use, recycling and recovery of waste generated by the installation;

(i) further measures planned to comply with the general principles of the basic obligations of the operator as provided for in Article 11;

(j) measures planned to monitor emissions into the environment;

(k) the main alternatives to the proposed technology, techniques and measures studied by the applicant in outline.

An application for a permit shall also include a non-technical summary of the details referred to in the first subparagraph.

2. Where information supplied in accordance with the requirements provided for in Directive 85/337/EEC or a safety report prepared in accordance with Directive 96/82/EC or other information produced in response to other legislation fulfils any of the requirements of paragraph 1, that information may be included in, or attached to, the application.

Article 13

BAT reference documents and exchange of information

1. In order to draw up, review and, where necessary, update BAT reference documents, the Commission shall organise an exchange of information between Member States, the industries concerned, non-governmental organisations promoting environmental protection and the Commission.

2. The exchange of information shall, in particular, address the following:

(a) the performance of installations and techniques in terms of emissions, expressed as short- and long-term averages, where appropriate, and the associated reference conditions, consumption and nature of raw materials, water consumption, use of energy and generation of waste;

(b) the techniques used, associated monitoring, cross-media effects, economic and technical viability and developments therein;

(c) best available techniques and emerging techniques identified after considering the issues mentioned in points (a) and (b).

3. The Commission shall establish and regularly convene a forum composed of representatives of Member States, the industries concerned and non-governmental organisations promoting environmental protection.

The Commission shall obtain the opinion of the forum on the practical arrangements for the exchange of information and, in particular, on the following:

(a) the rules of procedure of the forum;

(b) the work programme for the exchange of information;

(c) guidance on the collection of data;

(d) guidance on the drawing up of BAT reference documents and on their quality assurance including the suitability of their content and format.

The guidance referred to in points (c) and (d) of the second subparagraph shall take account of the opinion of the forum and shall be adopted in accordance with the regulatory procedure referred to in Article 75(2).

4. The Commission shall obtain and make publicly available the opinion of the forum on the proposed content of the BAT reference documents and shall take into account this opinion for the procedures laid down in paragraph 5.

5. Decisions on the BAT conclusions shall be adopted in accordance with the regulatory procedure referred to in Article 75(2).

6. After the adoption of a decision in accordance with paragraph 5, the Commission shall without delay make the BAT reference document publicly available and ensure that BAT conclusions are made available in all the official languages of the Union.

7. Pending the adoption of a relevant decision in accordance with paragraph 5, the conclusions on best available techniques from BAT reference documents adopted by the Commission prior to the date referred to in Article 83 shall apply as BAT conclusions for the purposes of this Chapter except for Article 15(3) and (4).

Article 14

Permit conditions

1. Member States shall ensure that the permit includes all measures necessary for compliance with the requirements of Articles 11 and 18.

Those measures shall include at least the following:

- (a) emission limit values for polluting substances listed in Annex II, and for other polluting substances, which are likely to be emitted from the installation concerned in significant quantities, having regard to their nature and their potential to transfer pollution from one medium to another;
- (b) appropriate requirements ensuring protection of the soil and groundwater and measures concerning the monitoring and management of waste generated by the installation;
- (c) suitable emission monitoring requirements specifying:
 - (i) measurement methodology, frequency and evaluation procedure; and
 - (ii) where Article 15(3)(b) is applied, that results of emission monitoring are available for the same periods of time and reference conditions as for the emission levels associated with the best available techniques;
- (d) an obligation to supply the competent authority regularly, and at least annually, with:
 - (i) information on the basis of results of emission monitoring referred to in point (c) and other required data that enables the competent authority to verify compliance with the permit conditions; and
 - (ii) where Article 15(3)(b) is applied, a summary of the results of emission monitoring which allows a comparison with the emission levels associated with the best available techniques;
- (e) appropriate requirements for the regular maintenance and surveillance of measures taken to prevent emissions to soil and groundwater pursuant to point (b) and appropriate requirements concerning the periodic monitoring of soil and groundwater in relation to relevant hazardous substances likely to be found on site and having regard to the possibility of soil and groundwater contamination at the site of the installation;
- (f) measures relating to conditions other than normal operating conditions such as start-up and shut-down operations, leaks, malfunctions, momentary stoppages and definitive cessation of operations;
- (g) provisions on the minimisation of long-distance or transboundary pollution;
- (h) conditions for assessing compliance with the emission limit values or a reference to the applicable requirements specified elsewhere.

2. For the purpose of paragraph 1(a), emission limit values may be supplemented or replaced by equivalent parameters or technical measures ensuring an equivalent level of environmental protection.

3. BAT conclusions shall be the reference for setting the permit conditions.

4. Without prejudice to Article 18, the competent authority may set stricter permit conditions than those achievable by the use of the best available techniques as described in the BAT conclusions. Member States may establish rules under which the competent authority may set such stricter conditions.

5. Where the competent authority sets permit conditions on the basis of a best available technique not described in any of the relevant BAT conclusions, it shall ensure that:

(a) that technique is determined by giving special consideration to the criteria listed in Annex III; and

(b) the requirements of Article 15 are complied with.

Where the BAT conclusions referred to in the first subparagraph do not contain emission levels associated with the best available techniques, the competent authority shall ensure that the technique referred to in the first subparagraph ensures a level of environmental protection equivalent to the best available techniques described in the BAT conclusions.

6. Where an activity or a type of production process carried out within an installation is not covered by any of the BAT conclusions or where those conclusions do not address all the potential environmental effects of the activity or process, the competent authority shall, after prior consultations with the operator, set the permit conditions on the basis of the best available techniques that it has determined for the activities or processes concerned, by giving special consideration to the criteria listed in Annex III.

7. For installations referred to in point 6.6 of Annex I, paragraphs 1 to 6 of this Article shall apply without prejudice to the legislation relating to animal welfare.

Article 15

Emission limit values, equivalent parameters and technical measures

1. The emission limit values for polluting substances shall apply at the point where the emissions leave the installation, and any dilution prior to that point shall be disregarded when determining those values.

With regard to indirect releases of polluting substances into water, the effect of a water treatment plant may be taken into account when determining the emission limit values of the installation concerned, provided that an equivalent level of protection of the environment as a whole is guaranteed and provided this does not lead to higher levels of pollution in the environment.

2. Without prejudice to Article 18, the emission limit values and the equivalent parameters and technical measures referred to in Article 14(1) and (2) shall be based on the best available techniques, without prescribing the use of any technique or specific technology.

3. The competent authority shall set emission limit values that ensure that, under normal operating conditions, emissions do not exceed the emission levels associated with the best available techniques as laid down in the decisions on BAT conclusions referred to in Article 13(5) through either of the following:

- (a) setting emission limit values that do not exceed the emission levels associated with the best available techniques. Those emission limit values shall be expressed for the same or shorter periods of time and under the same reference conditions as those emission levels associated with the best available techniques; or
- (b) setting different emission limit values than those referred to under point (a) in terms of values, periods of time and reference conditions.

Where point (b) is applied, the competent authority shall, at least annually, assess the results of emission monitoring in order to ensure that emissions under normal operating conditions have not exceeded the emission levels associated with the best available techniques.

4. By way of derogation from paragraph 3, and without prejudice to Article 18, the competent authority may, in specific cases, set less strict emission limit values. Such a derogation may apply only where an assessment shows that the achievement of emission levels associated with the best available techniques as described in BAT conclusions would lead to disproportionately higher costs compared to the environmental benefits due to:

- (a) the geographical location or the local environmental conditions of the installation concerned; or
- (b) the technical characteristics of the installation concerned.

The competent authority shall document in an annex to the permit conditions the reasons for the application of the first subparagraph including the result of the assessment and the justification for the conditions imposed.

The emission limit values set in accordance with the first subparagraph shall, however, not exceed the emission limit values set out in the Annexes to this Directive, where applicable.

The competent authority shall in any case ensure that no significant pollution is caused and that a high level of protection of the environment as a whole is achieved.

On the basis of information provided by Member States in accordance with Article 72(1), in particular concerning the application of this paragraph, the Commission may, where necessary, assess and further clarify, through guidance, the criteria to be taken into account for the application of this paragraph.

The competent authority shall re-assess the application of the first subparagraph as part of each reconsideration of the permit conditions pursuant to Article 21.

5. The competent authority may grant temporary derogations from the requirements of paragraphs 2 and 3 of this Article and from Article 11(a) and (b) for the testing and use of emerging techniques for a total period of time not exceeding 9 months, provided that after the period specified, either the technique is stopped or the activity achieves at least the emission levels associated with the best available techniques.

Article 16

Monitoring requirements

1. The monitoring requirements referred to in Article 14(1)(c) shall, where applicable, be based on the conclusions on monitoring as described in the BAT conclusions.
2. The frequency of the periodic monitoring referred to in Article 14(1)(e) shall be determined by the competent authority in a permit for each individual installation or in general binding rules.

Without prejudice to the first subparagraph, periodic monitoring shall be carried out at least once every 5 years for groundwater and 10 years for soil, unless such monitoring is based on a systematic appraisal of the risk of contamination.

Article 17

General binding rules for activities listed in Annex I

1. When adopting general binding rules, Member States shall ensure an integrated approach and a high level of environmental protection equivalent to that achievable with individual permit conditions.
2. General binding rules shall be based on the best available techniques, without prescribing the use of any technique or specific technology in order to ensure compliance with Articles 14 and 15.
3. Member States shall ensure that general binding rules are updated to take into account developments in best available techniques and in order to ensure compliance with Article 21.
4. General binding rules adopted in accordance with paragraphs 1 to 3 shall contain a reference to this Directive or be accompanied by such a reference on the occasion of their official publication.

Article 18

Environmental quality standards

Where an environmental quality standard requires stricter conditions than those achievable by the use of the best available techniques, additional measures shall be included in the permit, without prejudice to other measures which may be taken to comply with environmental quality standards.

Article 19

Developments in best available techniques

Member States shall ensure that the competent authority follows or is informed of developments in best available techniques and of the publication of any new or updated BAT conclusions and shall make that information available to the public concerned.

Article 20

Changes by operators to installations

1. Member States shall take the necessary measures to ensure that the operator informs the competent authority of any planned change in the nature or functioning, or an extension of the installation which may have consequences for the environment. Where appropriate, the competent authority shall update the permit.

2. Member States shall take the necessary measures to ensure that no substantial change planned by the operator is made without a permit granted in accordance with this Directive.

The application for a permit and the decision by the competent authority shall cover those parts of the installation and those details listed in Article 12 which may be affected by the substantial change.

3. Any change in the nature or functioning or an extension of an installation shall be deemed to be substantial if the change or extension in itself reaches the capacity thresholds set out in Annex I.

Article 21

Reconsideration and updating of permit conditions by the competent authority

1. Member States shall take the necessary measures to ensure that the competent authority periodically reconsiders in accordance with paragraphs 2 to 5 all permit conditions and, where necessary to ensure compliance with this Directive, updates those conditions.

2. At the request of the competent authority, the operator shall submit all the information necessary for the purpose of reconsidering the permit conditions, including, in particular, results of emission monitoring and other data, that enables a comparison of the operation of the installation with the best available techniques described in the applicable BAT conclusions and with the emission levels associated with the best available techniques.

When reconsidering permit conditions, the competent authority shall use any information resulting from monitoring or inspections.

3. Within 4 years of publication of decisions on BAT conclusions in accordance with Article 13(5) relating to the main activity of an installation, the competent authority shall ensure that:

(a) all the permit conditions for the installation concerned are reconsidered and, if necessary, updated to ensure compliance with this Directive, in particular, with Article 15(3) and (4), where applicable;

(b) the installation complies with those permit conditions.

The reconsideration shall take into account all the new or updated BAT conclusions applicable to the installation and adopted in accordance with Article 13(5) since the permit was granted or last reconsidered.

4. Where an installation is not covered by any of the BAT conclusions, the permit conditions shall be reconsidered and, if necessary, updated where developments in the best available techniques allow for the significant reduction of emissions.

5. The permit conditions shall be reconsidered and, where necessary, updated at least in the following cases:

(a) the pollution caused by the installation is of such significance that the existing emission limit values of the permit need to be revised or new such values need to be included in the permit;

(b) the operational safety requires other techniques to be used;

(c) where it is necessary to comply with a new or revised environmental quality standard in accordance with Article 18.

Article 22

Site closure

1. Without prejudice to Directive 2000/60/EC, Directive 2004/35/EC, Directive 2006/118/EC of the European Parliament and of the Council of 12 December 2006 on the protection of groundwater against pollution and deterioration [31] and to relevant Union law on soil protection, the competent authority shall set permit conditions to ensure compliance with paragraphs 3 and 4 of this Article upon definitive cessation of activities.

2. Where the activity involves the use, production or release of relevant hazardous substances and having regard to the possibility of soil and groundwater contamination at the site of the installation, the operator shall prepare and submit to the competent authority a baseline report before starting operation of an installation or before a permit for an installation is updated for the first time after 7 January 2013.

The baseline report shall contain the information necessary to determine the state of soil and groundwater contamination so as to make a quantified comparison with the state upon definitive cessation of activities provided for under paragraph 3.

The baseline report shall contain at least the following information:

(a) information on the present use and, where available, on past uses of the site;

(b) where available, existing information on soil and groundwater measurements that reflect the state at the time the report is drawn up or, alternatively, new soil and groundwater measurements having regard to the possibility of soil and groundwater contamination by those hazardous substances to be used, produced or released by the installation concerned.

Where information produced pursuant to other national or Union law fulfils the requirements of this paragraph that information may be included in, or attached to, the submitted baseline report.

The Commission shall establish guidance on the content of the baseline report.

3. Upon definitive cessation of the activities, the operator shall assess the state of soil and groundwater contamination by relevant hazardous substances used, produced or released by the installation. Where the installation has caused significant pollution of soil or groundwater by relevant hazardous substances compared to the state established in the baseline report referred to in paragraph 2, the operator shall take the necessary measures to address that pollution so as to return the site to that state.

For that purpose, the technical feasibility of such measures may be taken into account.

Without prejudice to the first subparagraph, upon definitive cessation of the activities, and where the contamination of soil and groundwater at the site poses a significant risk to human health or the environment as a result of the permitted activities carried out by the operator before the permit for the installation is updated for the first time after 7 January 2013 and taking into account the conditions of the site of the installation established in accordance with Article 12(1)(d), the operator shall take the necessary actions aimed at the removal, control, containment or reduction of relevant hazardous substances, so that the site, taking into account its current or approved future use, ceases to pose such a risk.

4. Where the operator is not required to prepare a baseline report referred to in paragraph 2, the operator shall, upon definitive cessation of the activities, take the necessary actions aimed at the removal, control, containment or reduction of relevant hazardous substances, so that the site, taking into account its current or approved future use, ceases to pose any significant risk to human health or the environment due to the contamination of soil and groundwater as a result of the permitted activities and taking into account the conditions of the site of the installation established in accordance with Article 12(1)(d).

Article 23

Environmental inspections

1. Member States shall set up a system of environmental inspections of installations addressing the examination of the full range of relevant environmental effects from the installations concerned.

Member States shall ensure that operators afford the competent authorities all necessary assistance to enable those authorities to carry out any site visits, to take samples and to gather any information necessary for the performance of their duties for the purposes of this Directive.

2. Member States shall ensure that all installations are covered by an environmental inspection plan at national, regional or local level and shall ensure that this plan is regularly reviewed and, where appropriate, updated.

3. Each environmental inspection plan shall include the following:

- (a) a general assessment of relevant significant environmental issues;
- (b) the geographical area covered by the inspection plan;
- (c) a register of the installations covered by the plan;
- (d) procedures for drawing up programmes for routine environmental inspections pursuant to paragraph 4;
- (e) procedures for non-routine environmental inspections pursuant to paragraph 5;
- (f) where necessary, provisions on the cooperation between different inspection authorities.

4. Based on the inspection plans, the competent authority shall regularly draw up programmes for routine environmental inspections, including the frequency of site visits for different types of installations.

The period between two site visits shall be based on a systematic appraisal of the environmental risks of the installations concerned and shall not exceed 1 year for installations posing the highest risks and 3 years for installations posing the lowest risks.

If an inspection has identified an important case of non-compliance with the permit conditions, an additional site visit shall be carried out within 6 months of that inspection.

The systematic appraisal of the environmental risks shall be based on at least the following criteria:

(a) the potential and actual impacts of the installations concerned on human health and the environment taking into account the levels and types of emissions, the sensitivity of the local environment and the risk of accidents;

(b) the record of compliance with permit conditions;

(c) the participation of the operator in the Union eco-management and audit scheme (EMAS), pursuant to Regulation (EC) No 1221/2009 [32].

The Commission may adopt guidance on the criteria for the appraisal of environmental risks.

5. Non-routine environmental inspections shall be carried out to investigate serious environmental complaints, serious environmental accidents, incidents and occurrences of non-compliance as soon as possible and, where appropriate, before the granting, reconsideration or update of a permit.

6. Following each site visit, the competent authority shall prepare a report describing the relevant findings regarding compliance of the installation with the permit conditions and conclusions on whether any further action is necessary.

The report shall be notified to the operator concerned within 2 months of the site visit taking place. The report shall be made publicly available by the competent authority in accordance with Directive 2003/4/EC of the European Parliament and of the Council of 28 January 2003 on public access to environmental information [33] within 4 months of the site visit taking place.

Without prejudice to Article 8(2), the competent authority shall ensure that the operator takes all the necessary actions identified in the report within a reasonable period.

Article 24

Access to information and public participation in the permit procedure

1. Member States shall ensure that the public concerned are given early and effective opportunities to participate in the following procedures:

(a) the granting of a permit for new installations;

(b) the granting of a permit for any substantial change;

(c) the granting or updating of a permit for an installation where the application of Article 15(4) is proposed;

(d) the updating of a permit or permit conditions for an installation in accordance with Article 21(5)(a).

The procedure set out in Annex IV shall apply to such participation.

2. When a decision on granting, reconsideration or updating of a permit has been taken, the competent authority shall make available to the public, including via the Internet in relation to points (a), (b) and (f), the following information:

(a) the content of the decision, including a copy of the permit and any subsequent updates;

(b) the reasons on which the decision is based;

(c) the results of the consultations held before the decision was taken and an explanation of how they were taken into account in that decision;

(d) the title of the BAT reference documents relevant to the installation or activity concerned;

(e) how the permit conditions referred to in Article 14, including the emission limit values, have been determined in relation to the best available techniques and emission levels associated with the best available techniques;

(f) where a derogation is granted in accordance with Article 15(4), the specific reasons for that derogation based on the criteria laid down in that paragraph and the conditions imposed.

3. The competent authority shall also make available to the public, including via the Internet at least in relation to point (a):

(a) relevant information on the measures taken by the operator upon definitive cessation of activities in accordance with Article 22;

(b) the results of emission monitoring as required under the permit conditions and held by the competent authority.

4. Paragraphs 1, 2 and 3 of this Article shall apply subject to the restrictions laid down in Article 4(1) and (2) of Directive 2003/4/EC.

Article 25

Access to justice

1. Member States shall ensure that, in accordance with the relevant national legal system, members of the public concerned have access to a review procedure before a court of law or another independent and impartial body established by law to challenge the substantive or procedural legality of decisions, acts or omissions subject to Article 24 when one of the following conditions is met:

(a) they have a sufficient interest;

(b) they maintain the impairment of a right, where administrative procedural law of a Member State requires this as a precondition.

2. Member States shall determine at what stage the decisions, acts or omissions may be challenged.

3. What constitutes a sufficient interest and impairment of a right shall be determined by Member States, consistently with the objective of giving the public concerned wide access to justice.

To this end, the interest of any non-governmental organisation promoting environmental protection and meeting any requirements under national law shall be deemed sufficient for the purpose of paragraph 1(a).

Such organisations shall also be deemed to have rights capable of being impaired for the purpose of paragraph 1(b).

4. Paragraphs 1, 2 and 3 shall not exclude the possibility of a preliminary review procedure before an administrative authority and shall not affect the requirement of exhaustion of administrative review procedures prior to recourse to judicial review procedures, where such a requirement exists under national law.

Any such procedure shall be fair, equitable, timely and not prohibitively expensive.

5. Member States shall ensure that practical information is made available to the public on access to administrative and judicial review procedures.

Article 26

Transboundary effects

1. Where a Member State is aware that the operation of an installation is likely to have significant negative effects on the environment of another Member State, or where a Member State which is likely to be significantly affected so requests, the Member State in whose territory the application for a permit pursuant to Article 4 or Article 20(2) was submitted shall forward to the other Member State any information required to be given or made available pursuant to Annex IV at the same time as it makes it available to the public.

Such information shall serve as a basis for any consultations necessary in the framework of the bilateral relations between the two Member States on a reciprocal and equivalent basis.

2. Within the framework of their bilateral relations, Member States shall ensure that in the cases referred to in paragraph 1, the applications are also made available for an appropriate period of time to the public of the Member State likely to be affected so that it will have the right to comment on them before the competent authority reaches its decision.

3. The results of any consultations pursuant to paragraphs 1 and 2 shall be taken into consideration when the competent authority reaches a decision on the application.

4. The competent authority shall inform any Member State which has been consulted pursuant to paragraph 1 of the decision reached on the application and shall forward to it the information referred to in Article 24(2). That Member State shall take the measures necessary to ensure that that information is made available in an appropriate manner to the public concerned in its own territory.

Article 27

Emerging techniques

1. Member States shall, where appropriate, encourage the development and application of emerging techniques, in particular for those emerging techniques identified in BAT reference documents.

2. The Commission shall establish guidance to assist Member States in encouraging the development and application of emerging techniques as referred to in paragraph 1.

ANNEX I

Categories of activities referred to in Article 10

The threshold values given below generally refer to production capacities or outputs. Where several activities falling under the same activity description containing a threshold are operated in the same installation, the capacities of such activities are added together. For waste management activities, this calculation shall apply at the level of activities 5.1, 5.3(a) and 5.3(b).

The Commission shall establish guidance on:

(a) the relationship between waste management activities described in this Annex and those described in Annexes I and II to Directive 2008/98/EC; and

(b) the interpretation of the term "industrial scale" regarding the description of chemical industry activities described in this Annex.

1. Energy industries

1.1. Combustion of fuels in installations with a total rated thermal input of 50 MW or more

1.2. Refining of mineral oil and gas

1.3. Production of coke

1.4. Gasification or liquefaction of:

(a) coal;

(b) other fuels in installations with a total rated thermal input of 20 MW or more.

2. Production and processing of metals

2.1. Metal ore (including sulphide ore) roasting or sintering

2.2. Production of pig iron or steel (primary or secondary fusion) including continuous casting, with a capacity exceeding 2,5 tonnes per hour

2.3. Processing of ferrous metals:

(a) operation of hot-rolling mills with a capacity exceeding 20 tonnes of crude steel per hour;

(b) operation of smitheries with hammers the energy of which exceeds 50 kilojoule per hammer, where the calorific power used exceeds 20 MW;

(c) application of protective fused metal coats with an input exceeding 2 tonnes of crude steel per hour.

2.4. Operation of ferrous metal foundries with a production capacity exceeding 20 tonnes per day

2.5. Processing of non-ferrous metals:

(a) production of non-ferrous crude metals from ore, concentrates or secondary raw materials by metallurgical, chemical or electrolytic processes;

(b) melting, including the alloyage, of non-ferrous metals, including recovered products and operation of non-ferrous metal foundries, with a melting capacity exceeding 4 tonnes per day for lead and cadmium or 20 tonnes per day for all other metals.

2.6. Surface treatment of metals or plastic materials using an electrolytic or chemical process where the volume of the treatment vats exceeds 30 m³

3. Mineral industry

3.1. Production of cement, lime and magnesium oxide:

(a) production of 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) production of lime in kilns with a production capacity exceeding 50 tonnes per day;

(c) production of magnesium oxide in kilns with a production capacity exceeding 50 tonnes per day.

3.2. Production of asbestos or the manufacture of asbestos-based products

3.3. Manufacture of glass including glass fibre with a melting capacity exceeding 20 tonnes per day

3.4. Melting mineral substances including the production of mineral fibres with a melting capacity exceeding 20 tonnes per day

3.5. Manufacture of ceramic products by firing, in particular roofing tiles, bricks, refractory bricks, tiles, stoneware or porcelain with a production capacity exceeding 75 tonnes per day and/or with a kiln capacity exceeding 4 m³ and with a setting density per kiln exceeding 300 kg/m³

4. Chemical industry

For the purpose of this section, production within the meaning of the categories of activities contained in this section means the production on an industrial scale by chemical or biological processing of substances or groups of substances listed in points 4.1 to 4.6

4.1. Production of organic chemicals, such as:

(a) simple hydrocarbons (linear or cyclic, saturated or unsaturated, aliphatic or aromatic);

(b) oxygen-containing hydrocarbons such as alcohols, aldehydes, ketones, carboxylic acids, esters and mixtures of esters, acetates, ethers, peroxides and epoxy resins;

(c) sulphurous hydrocarbons;

- (d) nitrogenous hydrocarbons such as amines, amides, nitrous compounds, nitro compounds or nitrate compounds, nitriles, cyanates, isocyanates;
- (e) phosphorus-containing hydrocarbons;
- (f) halogenic hydrocarbons;
- (g) organometallic compounds;
- (h) plastic materials (polymers, synthetic fibres and cellulose-based fibres);
- (i) synthetic rubbers;
- (j) dyes and pigments;
- (k) surface-active agents and surfactants.

4.2. Production of inorganic chemicals, such as:

- (a) gases, such as ammonia, chlorine or hydrogen chloride, fluorine or hydrogen fluoride, carbon oxides, sulphur compounds, nitrogen oxides, hydrogen, sulphur dioxide, carbonyl chloride;
- (b) acids, such as chromic acid, hydrofluoric acid, phosphoric acid, nitric acid, hydrochloric acid, sulphuric acid, oleum, sulphurous acids;
- (c) bases, such as ammonium hydroxide, potassium hydroxide, sodium hydroxide;
- (d) salts, such as ammonium chloride, potassium chlorate, potassium carbonate, sodium carbonate, perborate, silver nitrate;
- (e) non-metals, metal oxides or other inorganic compounds such as calcium carbide, silicon, silicon carbide.

4.3. Production of phosphorous-, nitrogen- or potassium-based fertilisers (simple or compound fertilisers)

4.4. Production of plant protection products or of biocides

4.5. Production of pharmaceutical products including intermediates

4.6. Production of explosives

5. Waste management

5.1. Disposal or recovery of hazardous waste with a capacity exceeding 10 tonnes per day involving one or more of the following activities:

- (a) biological treatment;
- (b) physico-chemical treatment;
- (c) blending or mixing prior to submission to any of the other activities listed in points 5.1 and 5.2;
- (d) repackaging prior to submission to any of the other activities listed in points 5.1 and 5.2;
- (e) solvent reclamation/regeneration;
- (f) recycling/reclamation of inorganic materials other than metals or metal compounds;
- (g) regeneration of acids or bases;
- (h) recovery of components used for pollution abatement;
- (i) recovery of components from catalysts;

(j) oil re-refining or other reuses of oil;

(k) surface impoundment.

5.2. Disposal or recovery of waste in waste incineration plants or in waste co-incineration plants:

(a) for non-hazardous waste with a capacity exceeding 3 tonnes per hour;

(b) for hazardous waste with a capacity exceeding 10 tonnes per day.

5.3. (a) Disposal of non-hazardous waste with a capacity exceeding 50 tonnes per day involving one or more of the following activities, and excluding activities covered by Council Directive 91/271/EEC of 21 May 1991 concerning urban waste-water treatment [1]:

(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.

(b) Recovery, or a mix of recovery and disposal, of non-hazardous waste with a capacity exceeding 75 tonnes per day involving one or more of the following activities, and excluding activities covered by Directive 91/271/EEC:

(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.

When the only waste treatment activity carried out is anaerobic digestion, the capacity threshold for this activity shall be 100 tonnes per day.

5.4. Landfills, as defined in Article 2(g) of Council Directive 1999/31/EC of 26 April 1999 on the landfill of waste [2], receiving more than 10 tonnes of waste per day or with a total capacity exceeding 25000 tonnes, excluding landfills of inert waste

5.5. Temporary storage of hazardous waste not covered under point 5.4 pending any of the activities listed in points 5.1, 5.2, 5.4 and 5.6 with a total capacity exceeding 50 tonnes, excluding temporary storage, pending collection, on the site where the waste is generated

5.6. Underground storage of hazardous waste with a total capacity exceeding 50 tonnes

6. Other activities

6.1. Production in industrial installations of:

(a) pulp from timber or other fibrous materials;

(b) paper or card board with a production capacity exceeding 20 tonnes per day;

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

6.2. Pre-treatment (operations such as washing, bleaching, mercerisation) or dyeing of textile fibres or textiles where the treatment capacity exceeds 10 tonnes per day

6.3. Tanning of hides and skins where the treatment capacity exceeds 12 tonnes of finished products per day

6.4. (a) Operating slaughterhouses with a carcass production capacity greater than 50 tonnes per day

(b) 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 from:

(i) only animal raw materials (other than exclusively milk) 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, both in combined and separate products, with a finished product production capacity in tonnes per day greater than:

- 75 if A is equal to 10 or more; or,

- $[300 - (22,5 \times A)]$ in any other case,

where "A" is the portion of animal material (in percent of weight) of the finished product production capacity.

Packaging shall not be included in the final weight of the product.

This subsection shall not apply where the raw material is milk only.

Threshold (tonnes per day)

Animal material (% of finished product production capacity)

(c) Treatment and processing of milk only, the quantity of milk received being greater than 200 tonnes per day (average value on an annual basis).

6.5. Disposal or recycling of animal carcasses or animal waste with a treatment capacity exceeding 10 tonnes per day

6.6. Intensive rearing of poultry or pigs:

(a) with more than 40000 places for poultry;

(b) with more than 2000 places for production pigs (over 30 kg), or

(c) with more than 750 places for sows.

6.7. Surface treatment of substances, objects or products using organic solvents, in particular for dressing, printing, coating, degreasing, waterproofing, sizing, painting, cleaning or impregnating, with an organic solvent consumption capacity of more than 150 kg per hour or more than 200 tonnes per year

6.8. Production of carbon (hard-burnt coal) or electrographite by means of incineration or graphitisation

6.9. Capture of CO₂ streams from installations covered by this Directive for the purposes of geological storage pursuant to Directive 2009/31/EC

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

6.11. Independently operated treatment of waste water not covered by Directive 91/271/EEC and discharged by an installation covered by Chapter II

[1] OJ L 135, 30.5.1991, p. 40.

[2] OJ L 182, 16.7.1999, p. 1.

ANNEX II

List of polluting substances

AIR

1. Sulphur dioxide and other sulphur compounds
2. Oxides of nitrogen and other nitrogen compounds
3. Carbon monoxide
4. Volatile organic compounds
5. Metals and their compounds
6. Dust including fine particulate matter
7. Asbestos (suspended particulates, fibres)
8. Chlorine and its compounds
9. Fluorine and its compounds
10. Arsenic and its compounds
11. Cyanides
12. Substances and mixtures which have been proved to possess carcinogenic or mutagenic properties or properties which may affect reproduction via the air
13. Polychlorinated dibenzodioxins and polychlorinated dibenzofurans

WATER

1. Organohalogen compounds and substances which may form such compounds in the aquatic environment
2. Organophosphorus compounds
3. Organotin compounds
4. Substances and mixtures which have been proved to possess carcinogenic or mutagenic properties or properties which may affect reproduction in or via the aquatic environment
5. Persistent hydrocarbons and persistent and bioaccumulable organic toxic substances

6. Cyanides
7. Metals and their compounds
8. Arsenic and its compounds
9. Biocides and plant protection products
10. Materials in suspension
11. Substances which contribute to eutrophication (in particular, nitrates and phosphates)
12. Substances which have an unfavourable influence on the oxygen balance (and can be measured using parameters such as BOD, COD, etc.)
13. Substances listed in Annex X to Directive 2000/60/EC

ANNEX III

Criteria for determining best available techniques

1. the use of low-waste technology;
2. the use of less hazardous substances;
3. the furthering of recovery and recycling of substances generated and used in the process and of waste, where appropriate;
4. comparable processes, facilities or methods of operation which have been tried with success on an industrial scale;
5. technological advances and changes in scientific knowledge and understanding;
6. the nature, effects and volume of the emissions concerned;
7. the commissioning dates for new or existing installations;
8. the length of time needed to introduce the best available technique;
9. the consumption and nature of raw materials (including water) used in the process and energy efficiency;
10. the need to prevent or reduce to a minimum the overall impact of the emissions on the environment and the risks to it;
11. the need to prevent accidents and to minimise the consequences for the environment;
12. information published by public international organisations.

ANNEX IV

Public participation in decision-making

1. The public shall be informed (by public notices or other appropriate means such as electronic media where available) of the following matters early in the procedure for the taking of a decision or, at the latest, as soon as the information can reasonably be provided:

- (a) the application for a permit or, as the case may be, the proposal for the updating of a permit or of permit conditions in accordance with Article 21, including the description of the elements listed in Article 12(1);
- (b) where applicable, the fact that a decision is subject to a national or transboundary environmental impact assessment or to consultations between Member States in accordance with Article 26;
- (c) details of the competent authorities responsible for taking the decision, those from which relevant information can be obtained, those to which comments or questions can be submitted, and details of the time schedule for transmitting comments or questions;
- (d) the nature of possible decisions or, where there is one, the draft decision;
- (e) where applicable, the details relating to a proposal for the updating of a permit or of permit conditions;
- (f) an indication of the times and places where, or means by which, the relevant information will be made available;
- (g) details of the arrangements for public participation and consultation made pursuant to point 5.

2. Member States shall ensure that, within appropriate time-frames, the following is made available to the public concerned:

- (a) in accordance with national law, the main reports and advice issued to the competent authority or authorities at the time when the public concerned were informed in accordance with point 1;
- (b) in accordance with Directive 2003/4/EC, information other than that referred to in point 1 which is relevant for the decision in accordance with Article 5 of this Directive and which only becomes available after the time the public concerned was informed in accordance with point 1.

3. The public concerned shall be entitled to express comments and opinions to the competent authority before a decision is taken.

4. The results of the consultations held pursuant to this Annex must be taken into due account in the taking of a decision.

5. The detailed arrangements for informing the public (for example by bill posting within a certain radius or publication in local newspapers) and consulting the public concerned (for example by written submissions or by way of a public inquiry) shall be determined by the Member States. Reasonable time-frames for the different phases shall be provided, allowing sufficient time to inform the public and for the public concerned to prepare and participate effectively in environmental decision-making subject to this Annex.

2. Annex 2

Examples of the meaning of installation

Example 1: A chemical plant served by an effluent treatment works on the same site

Limb (i): In this example the chemical plant is the stationary technical unit.

Limb (ii): The effluent treatment works will satisfy limb (ii) of the definition in relation to the stationary technical unit because it is a directly associated activity (under criterion (2A)) with a technical connection with the stationary technical unit (under criterion (2B)).

Example 2: Two chemical plants served by the same effluent treatment works

Limb (i): Each chemical plant is functionally self contained given that they can both produce chemicals without being attached to an effluent treatment works (criterion (1A)). They will therefore generally be treated as two separate stationary technical units. If, however, the two chemical plants and the effluent treatment works are on the same site then the two chemical installations will be treated as one (integrated) stationary technical unit. That unit (plus the treatment works) will form the installation.

Limb (ii): If the effluent treatment works is not on the same site as either of the chemical installations it will not satisfy limb (ii) because of criterion (2A). It will therefore not be part of the installation.

If the effluent treatment works is on the same site as only one of the installations it will satisfy limb (ii) in relation to that installation if that installation is the principal user of the works.

Example 3: A power station (which is above the Schedule 1 threshold) served by its own landfill (which is below the Schedule 1 threshold for landfills) on the same site

Limb (i): The power station is the stationary technical unit.

Limb (ii): The landfill site will satisfy limb (ii).

Example 4: A power station (which is above the IPPC threshold) served by its own landfill (which is also above the Schedule 1 threshold) on the same site

Limb (i): This constitutes one single technical unit.

Limb (ii): Any associated activities, such as stockpiling and recovering coal, handling ash and treating and releasing cooling water, which are directly associated with the stationary technical unit will also be part of the installation.

Example 5: A power station where coal is stored on site

Limb (i): The power station is the stationary technical unit.

Limb (ii): The storage of coal will satisfy limb (ii) and will thus be a directly associated activity and the storage area will therefore be part of the installation along with the stationary technical unit.

Example 6: An integrated oil refinery

Limb (i): If the oil refinery carries out a number of listed activities using plant that carry out successive steps in one integrated industrial activity, limb (i) will dictate that the whole collection is one stationary technical unit.

Example 7: A cement clinker manufacturing plant with an on-site chalk quarry

Limb (i): The cement clinker plant is the stationary technical unit.

Limb (ii): The chalk quarry will not satisfy limb (ii) because it will not have a technical connection with the stationary technical unit. Quarrying the chalk is one step further removed than the input activities that may be directly associated activities.

Example 8: Combined heat and power (CHP) plant (which is above the Schedule 1 threshold) serving a light industrial estate engaged in non-listed activities

Limb (i): The CHP plant is the stationary technical unit.

Limb (ii): None of the units on the industrial estate will be directly associated activities because they do not meet criterion (2A) in that they do not serve the CHP plant; it is the CHP plant which serves them.

Example 9: An installation for the intensive rearing of pigs or poultry where manure from the installation is spread on adjacent fields

Limb (i): The building or buildings in which the animals are housed will be the stationary technical units. The fields are not part of the stationary technical unit.

Note that all animal houses which are on the same site in which Schedule 1 activities are carried out by the same operator count towards the threshold.

Limb (ii): Directly associated activities such as a slurry handling system will be part of the installation.

Note that conditions will be attached to the permit for these installations governing the handling of manure, but these will not apply to third parties who might take the manure.