

**Environment, Health and Safety Committee**  
**Note on:**  
**INTEGRATED POLLUTION PREVENTION**  
**AND CONTROL (IPPC)**

**Foreword**

This Note replaces the RSC 'Professional Brief' on 'Integrated Pollution Control' (IPC) which was published in 1994. It outlines the principles of the 'Integrated Pollution Prevention and Control' (IPPC) regime which has superseded IPC.

IPPC aims to prevent, or where this is not practicable, to reduce emissions to air, water and land from industrial activities, including elimination or reduction of waste, to protect the environment as a whole. This integrated approach is carried through from the initial permitting of the installation to restoration of sites when industrial activities cease.

Whilst this note describes the principles of IPPC, those who require more detail, for example in order to draw up applications for permits, are strongly advised to obtain copies of the legislation and the accompanying guidance documents which list the environmental standards required of installations and give detailed advice on best available techniques (BAT) for emissions control.

**Historical Perspective**

The requirements of IPPC are now incorporated into the Environmental Permitting (England and Wales) Regulations (EPR) 2007, SI 2007 No. 3538. Similar legislation exists for Northern Ireland. This legislation has replaced the PPC Regulations and consolidates the permitting requirements of IPPC with the permitting requirements of certain other legislation, requiring the operators of an installation to obtain a single Environmental Permit covering all relevant legislation, including IPPC. It must be noted that the PPC Regulations are still in force in Scotland, i.e. the Pollution Prevention and Control (Scotland) Regulations 2000 (SSI 2000/323) (as amended).

IPPC replaced IPC which was established by EU Directive 96/61/EC. It was incorporated into UK legislation by the Pollution Prevention and Control Act 1999. The detailed requirements for implementing the act in England and Wales were contained in the Pollution Prevention and Control (England and Wales) Regulations 2000, SI 2000 No. 1973 (the PPC Regulations).

IPC was originally incorporated into UK legislation via Part 1 of the Environmental Protection Act 1990. At that time the industrial control regime was detailed in the Environmental Protection (Prescribed Processes and Substances) Regulations 1991 No. 472, which were subsequently amended as information was fed back on various processes. Essentially, most major industrial processes were covered by the schedule of prescribed processes, including fuel and power, metal and mineral production, chemicals, waste disposal and animal rendering plants.

**Division of Authority for IPPC in the UK**

The Environmental Permitting Regulations list the industrial activities covered by the regulations in the schedules. This is similar to that in the

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previous IPC and PPC Regulations. The main areas covered are the energy industry, the production and processing of metals, the mineral industry, the chemical industry, waste management and certain aspects of other industries such as pulp and paper industries, the food industry and intensive farming. There are, essentially, three size or risk classifications for each of these areas, Part A (1), Part A (2) and Part B. A major distinction between these three classifications is the scale of operation occurring at the installation. The environmental permitting system does not apply in Scotland to installation classifications. The Scottish Environment Protection Agency (SEPA) regulates all Part A and Part B installations. Scottish Local Authorities PPC powers were transferred to SEPA in 1996.

- Part A(1) installations, whether fixed or mobile plant, may be considered to be major pollution risk operations and are controlled by the Environment Agency (England and Wales) or the Scottish Environmental Protection Agency (Scotland). Sources of pollution to air, water and soil have to be considered for these installations.
- Part A(2) installations or mobile plant are those of a lower general pollution potential than A(1) installations but are still considered to be potential sources of pollution to air, water and soil. Part A(2) installations and mobile plant are controlled by local authorities.
- Part B installations and mobile plant are those that are considered to have potential for atmospheric pollution only and are controlled by local authorities.

The key features of IPPC are:

- Operators of installations or mobile plant carrying out any of the processes listed in the legislation (Part A1, Part A2 or Part B processes) are required to obtain a permit to show how they comply with the legislation.
- The substances to be eliminated or controlled include any chemical (with the exception of radioactive substances) and genetically modified micro-organisms or organisms within the scope of Directive 90/219/EEC and Directive 90/220/EEC.
- IPPC requires operators to carry out detailed environmental impact assessments including effects on-site.
- Emissions to air, land and water (including discharge to sewer), as well as energy consumption are considered within the permit.
- Permit conditions are based on the use of 'Best Available Techniques' (BAT). Here 'Best' means the most effective techniques for achieving a high level of protection for the environment as a whole. 'Available Techniques' means techniques developed on a scale which allows them to be used in the relevant industrial sector under economically and technically viable conditions (they do not have to be produced in the UK as long as they are reasonably accessible). 'Techniques' includes both technology and the way the installation is designed, built, maintained, operated and decommissioned.
- Determining BAT involves comparing the techniques that prevent or reduce emissions and identifying the best in terms of those which have the lowest overall impact on the environment by means of an environmental assessment. BAT is considered as the option that minimises the impact from the installation unless economic considerations render it unavailable. Thus BAT balances the benefits to the environment against costs to the operator.
- Where Environmental Quality Standards (EQS) exist for activities, the controls in place must demonstrably meet them.
- Noise is included as an environmental pollutant as well as its designation under the Environmental Protection Act as a Statutory Nuisance.
- Energy consumption is also considered as an environmental impact.
- IPPC provides increased powers to EA and SEPA to prevent land contamination. In particular, when an installation ceases to operate measures must be put in place to avoid any pollution risk and return the site to a satisfactory state.
- Operators are required to consider measures to minimise the effect of accidents.

### **The Environmental Permit**

In order to obtain an Environmental Permit covering the IPPC requirements, full details of the installation and its mode of operation must be submitted to the appropriate authority. The proposed technology and/or techniques to prevent or failing this, reduce emissions from the installation must be detailed. The submission should outline the nature and quantities of foreseeable emissions to each medium and identify significant effects on the environment. Measures to prevent or recover waste from the installation must be

detailed together with measures to monitor emissions to the environment. An environmental management system must be in operation to guarantee the operator's competence to maintain the requirements and conditions of the permit. The conditions of the permit may place Emission Limit Values (ELVs) on substances identified in the regulations as significant pollutants.

### **Other requirements under the Environmental Permitting Regulations**

As well as IPPC, several other legislative requirements now fall under the EPR so that the permit for a site needs to consider these requirements as well. The main additional requirements relate to:

- The Waste Framework Directive
- The Landfill Directive
- Waste Motor Vehicles (the End of Life Vehicles Directive)
- The Waste Incineration Directive
- The Solvents Emission Directive
- The Large Combustion Plants Directive
- The Asbestos Directive.
- The Titanium Dioxide Directive
- The Petrol Vapour Recovery Directive
- Control of Major Accident Hazard (COMAH) Regulations

Where a facility is subject to more than one directive, to both IPPC and for example, the Waste Framework Directive, both sets of directive requirements must be met for a permit to be issued. For sites that are required to produce documentation to comply with COMAH Regulations, this documentation may be attached to the permit application to fulfil the relevant requirements of IPPC.

### **Further Reading and Information**

Environmental Permitting Core Guidance for the Environmental Permitting (England and Wales) Regulations 2007. Defra and the Welsh Assembly Government. Available from <http://www.defra.gov.uk/environment/epp/guidance.htm>.

Environmental Permitting Guidance. The IPPC Directive. Part A(1) Installations and Part A(1) Mobile Plant. For the Environmental Permitting (England and Wales) Regulations 2007. Defra and the Welsh Assembly Government. Available from <http://www.defra.gov.uk/environment/epp/guidance.htm>.

Environmental Permitting. Defra Website: <http://www.defra.gov.uk/environment/epp/index.htm>.

Environmental Permitting Guidance. Environment Agency Website: <http://www.environment-agency.gov.uk/business/topics/permitting/32320.aspx>.

European IPPC Bureau Website: <http://eippcb.jrc.ec.europa.eu/>.

EHSC Note on 'Individual Legal and Ethical Responsibilities for Environmental Safety', Royal Society of Chemistry, 2006.

EHSC Note on 'Environmental Management Systems', Royal Society of Chemistry, 2006.

EHSC Note on 'Environmental Risk Assessment', Royal Society of Chemistry, 2008.

EHSC Note on 'Contaminated Land', Royal Society of Chemistry, 2009.

EHSC Note on 'Life Cycle Assessment', Royal Society of Chemistry, 2005.

Pollution Prevention and Control (Scotland) Regulations 2000 (SSI 2000/323) (as amended): [http://www.sepa.org.uk/air/process\\_industry\\_regulation/pollution\\_prevention\\_control/legislation.aspx](http://www.sepa.org.uk/air/process_industry_regulation/pollution_prevention_control/legislation.aspx)

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