

The IPPC challenge for Europe

In 1999 the European Commission introduced the Integrated Pollution Prevention and Control (IPPC) Directive (96/61/EC). Fifteen member states were required to implement legislation in compliance with the IPPC Directive by October 1999 whilst the 10 new EU countries had to implement the legislation by May 2004. According to the Commission, the Directive will be fully implemented in all member states by October 2007. Debbie Willis from Expert Services at Ciba Specialty Chemicals reports on the challenges that implementation brings for companies within Europe.

Introduction

IPPC requires an integrated approach to the environmental protection of air, water and land, through the application of Best Available Techniques (BAT) and establishment of operating conditions within a 'permit' based system. The Directive's aim is to reduce a company's overall impact on the environment. It requires a company to reassess its environmental performance and calls for the prevention, or – where that is not possible – minimisation of polluting emissions – including waste, odour and noise – to all environmental media. The IPPC Directive applies to all types of industry, from the production and processing of metals, minerals and chemicals, to waste management activities, food and drink manufacturing and intensive poultry and pig farming.

The Commission says that there are some good reasons for the IPPC Directive to be implemented: current European production and consumption patterns are not sustainable and environmental protection standards across the EU are in need of improvement. The Directive also introduces an integrated and risk-based approach; in other words, an approach that is modern and aims to protect the environment as a whole.

Diverse implementation and enforcement

Together with the two accession countries (Bulgaria and Romania) and one candidate country (Turkey), the IPPC Directive applies to approximately 50,000 industrial sites in the EU. For many member states, transposition of the Directive has involved amendments to existing legislation, whilst a small number have introduced new legislation. However, what has become apparent is how the law implementing this Directive and, more notably, its enforcement, varies across the EU countries.

Some countries have tried to follow the Directive closely (eg the UK), and yet others (eg Denmark and Sweden) have assumed that IPPC requires little change to business as usual. It is feared that although these latter countries may have some good environmental laws in place, they may not grasp the 'integrated' approach that IPPC brings about.

In Spain, implementation of the Directive seems complicated, and could be quite bureaucratic because the final decisions as to whether facilities can operate lie with the local authorities.



© CIBA

Generally, transposition into national legislation has caused considerable delays; infringement procedures are ongoing against eight member states (including France, Germany and Spain). Progress with the issuing of permits is also slower than might be expected and there is concern that authorities will have difficulties processing applications as the 2007 deadline approaches. Some countries (eg the UK and Poland) are phasing-in the deadlines for permit applications for different industry sectors, principally to ease the administrative burden on the authorities. Other member states are simply requiring applications to be in and authorised by 30 October 2007.

Problems with the fundamentals?

Best Available Techniques (BAT) is the backbone of IPPC. In simple terms, BAT means operating your business following best-practice guidance – but the legislation does not explain it in simple terms. BAT is not just about using the latest abatement technology, it applies to all activities, equipment, and techniques used within the IPPC installation. It is also about how an installation is operated, which is critical to determining the stringency of emission limit values (ELVs) taking into account economic costs and environmental benefits.

Difficulties in interpreting BAT for each country and sector means varied ELVs have been set. ELVs are supposed to be specific to each installation using a risk-based approach, but this approach also means that there are no European-wide emission standards. This results in a lack of clear and common messages to operators and manufacturers of environmental technologies, possibly limiting BAT as a driver for innovation.

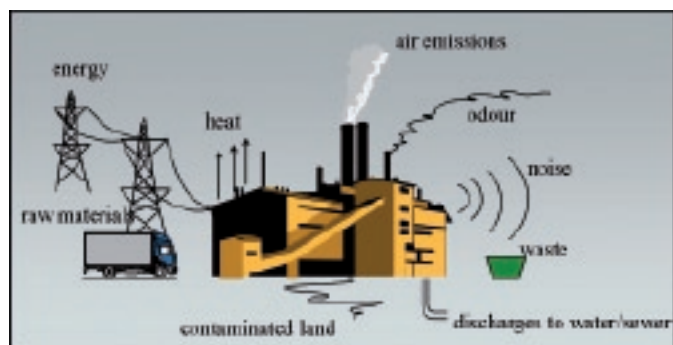
BAT Reference (BREF) documents have been produced by technical working groups which include nominated experts from member states, industry and environmental NGOs. Covering over 30 industrial sectors, BREFs are guides to assist licensing authorities on BAT across industry. They do, however, vary in quality, they are not translated into the main languages of the EU and only two-thirds have been finalised and formally adopted. Fears over commercial confidentiality with production techniques have been a considerable obstacle to identifying BAT in the organic chemicals sector. For one particular sector, there are suggestions that the technical level in the BREF was eroded to 'just above average' by fierce and sustained lobbying by a trade association.

Furthermore, definitions and concepts in the Directive are unclear and open to many interpretations. For example, how much of a facility falls within the remit of IPPC, what constitutes a 'substantial change' when a permit needs to be updated and re-issued and what does the concept of 'integrated' actually mean?

Notwithstanding these concerns, we must not forget that BREFs assist member states in the effective implementation of the Directive and even better, encourage an international exchange of information and views – something that should never be discouraged. It seems that the success of BAT in terms of being a driver for innovation not only relies heavily on the regular review and update of BREFs, but also with the transfer of valuable information across boundaries, including between competing industries.

Living with IPPC

Many companies are beginning to describe their early experiences of IPPC. Generally, the smaller and often lower profit-making companies have struggled with compliance and the costs of reaching the BAT 'level', and consequently have a long list of required improvements and other conditions attached to their permits. But if the Commission had not introduced IPPC, would these companies have improved their environmental standards on their own?



By contrast, many of the larger companies and those in the manufacturing sectors with higher profit margins, already have a lot of the IPPC requirements in place, they are nearer the BAT compliance standard and find implementation easier.

There are extra burdens on industries regulated under the IPPC regime; these include improvement programmes and operating conditions, an increase in reporting to the authorities, and more monitoring of potential pollutants; but, many companies, especially the small and medium sized organisations, are reporting benefits from IPPC compliance. The majority of these benefits have been found from implementing reductions in energy and water use and the minimisation of waste. Increases in monitoring of resource use, wastes and emissions, which has to accompany IPPC implementation, has helped companies reduce their environmental burden enormously. The concept of IPPC as a strategy for resource efficiency and the overall increase in environmental performance within organisations is beginning to create an impact across industry and within regulating authorities.



© CIBA

Review of IPPC is launched

Recently the EC announced a major review of the Directive as part of an evaluation of the regulatory framework for industrial emissions. Some might think the review is a little premature given that not all companies in the EU have implemented the Directive yet, but in view of the current situation and with the daunting task ahead of permitting authorities in many EU countries, maybe it isn't. An advisory group has been set up to enable consultation and dialogue with member states and other stakeholders. The review will include the use of the European Pollutant Emission Register to identify the main producers of certain pollutants and check on their permit status. During 2006, a public hearing will be organised, with a presentation of the review's results in 2007 and if appropriate, new legislative proposals. The Commission is concerned about the 'slow pace' of implementation but it is not clear how exactly this review will speed things up, or if it will start to address the huge differences in implementation and policing of the Directive across the member states.

The review will also assess the impact of competitiveness and how tax relief, for example, should be used to encourage operators to go 'beyond regulatory compliance'. The Commission

EMA in Practice

has reiterated that by the 2007 deadline "it is not sufficient to simply issue a permit... all installations should operate according to operating conditions fixed in a permit based on BAT". In contrast, UK authorities have taken the view that a site is in compliance when a permit containing an improvement programme with deadlines to comply with BAT has been issued.

Understanding and implementing the IPPC concept

A site with a formal environmental management system (EMS) in place will find demonstration of BAT compliance easier than one without. This could be because systems and procedures were in place for recording environmental data, and controlling and minimising pollution. Acquiring knowledge of an operation's environmental impact through EMS implementation may also help. What is certain is that once a site has an IPPC permit, the management of the permit can be more straightforward if a formal EMS is in place.

Ciba Specialty Chemicals has not only implemented IPPC within its own manufacturing plants, but has also assisted many other manufacturing companies across Europe with IPPC implementation, compliance and the appraisal of BAT. The Expert Services unit within Ciba has found that advising on and implementing the IPPC 'concept' has improved optimisation and increased the efficiency of production processes. Using fewer raw materials and less energy in production can potentially bring

with it a reduction in emissions. Most importantly, in all cases this has led to significant savings in operating costs.

IPPC has ambitious goals, however Ciba has found that even companies outside Europe are becoming interested in IPPC and the benefits an IPPC approach can bring to production. IPPC is here to stay, and by putting aside the inherent problems that introducing a new legislative regime in 25 different countries will always bring, it is an approach that all companies should consider for a sustainable future.

*Debbie Willis, AIEMA
Environmental Advisor for Expert Services
Ciba Specialty Chemicals Plc
Tel: 01274 417012
debbie.willis@cibasc.com
www.cibasc.com/expertservices*



To advertise in 'the environmentalist' and on www.iema.net contact:

Andy Lees or Richard Eves on:
tel: **01663 734 444**
or email: r.eves@spacehouse.co.uk

Standards for greenhouse gases. Specification with guidance ...

BS ISO 14064-1:2006
– at the organization level for quantification and reporting of greenhouse gas emissions and removals.

BS ISO 14064-2:2006
– at the project level for quantification, monitoring and reporting of greenhouse gas emission reductions or removal enhancements.

BS ISO 14064-3:2006
– for the validation and verification of greenhouse gas assertions.



IEMA is an official BSI distributor for environmental standards in the UK.

For **discounts** go to:
www.iema.net/shop