

---

## **EXPERIENCES IN ENVIRONMENTAL ENFORCEMENT IN THE UNITED KINGDOM**

CARLYLE, STEFAN

Head, Environmental Assessment and Planning Office, Her Majesty's Inspectorate of Pollution (HMIP), Romney House, 43 Marsham Street, London SW1P 3PY, United Kingdom

### **SUMMARY**

This paper examines ways in which permitting organisations in a number of countries operate in circumstances where environmental quality standards are not complied with, or non-compliance appears likely in the future, and there are multiple emission sources. The study is based on a review carried out for HMIP of mechanisms operating in the Netherlands, France, Denmark, the United Kingdom, and the United States. While not detailed here, the presentation will include reference to a specific case in the South East of England involving HMIP.

### **1 ENVIRONMENTAL QUALITY STANDARDS**

There has been an increasing trend in recent years towards setting Environmental Quality Standards for air, water and land. A typical example is the European Union's introduction of such standards for nitrogen dioxide (1). This in turn has led to a need to ascertain whether or not such EQSs are being breached and for special control strategies to be introduced for multiple sources. These have met with varying degrees of success. Steps to ensure that environmental quality standards (EQSs) are not exceeded may be applied at international, national, regional or local levels. It was for this reason that HMIP commissioned ERM Consultants to carry out a review of different approaches to regulating multiple emission sources. This paper summarises the findings (2), while drawing on recent work carried out by the Inspectorate in this area.

### **2 INTERNATIONAL CONTROLS**

Proposals at the international (global) level to reduce CO<sub>2</sub> emissions aim to share out the burdens of emissions reductions. A similar approach is well established within the European Community for the reduction of SO<sub>2</sub> emissions from large combustion plants. As part of the United Kingdom's programme to reduce SO<sub>2</sub> emissions, both the national power generators have been allocated company 'bubbles', allowing them to trade-off higher emissions at one station with lower emissions from others.

### **3 REGIONAL APPROACHES**

At the regional level, the permitting of multiple emission sources has proved difficult in some EU Member States, for example, when a new facility applies for a permit to operate in an industrialised area where any extra emission might result in EQSs being approached or exceeded. One option would be to require the new facility to ensure that releases do not result in an increase in ambient levels of the particular pollutant(s). This may mean that the conditions imposed on the new facility are more stringent than those applying to the existing facilities. A second option might be to introduce a programme for emissions reduction for all facilities in the area.

Approaches to ensuring compliance with environmental quality standards in industrialised regions include:

- developing emissions reductions programmes for existing facilities by negotiating voluntary agreements with the facility operators;
- tradeable emissions permits;
- imposing emission limits on new facilities which are more stringent than those set in areas where ambient levels are well below EQSs.
- establishing criteria for setting emission limits for new facilities which take account of ambient levels of pollutants in relation to environmental quality standards.
- Voluntary agreements between authorities and facility operators are seen as part of the standard permitting process. The approach in several countries is to persuade facility operators to agree to tighter emissions standards although in some cases, reduction can be imposed by the authorities irrespective of agreements being reached.

#### **4 PERMITS AND CHARGES**

Release limits and/or pollution taxes may be imposed on individual operators to ensure that EQSs are not exceeded. In Europe, individual facilities are permitted and permits are not transferable. The US is undertaking a federal programme using tradeable emission permits to reduce emissions from power stations. In addition, the individual states in the US operate transferable permit systems for the implementation of the federal Clean Air Act. The number of permits issued is calculated to ensure that EQSs are not exceeded. Facilities may sell their excess permit 'capacity' to other plants which require increased emission capacity whilst net emissions remain within the quality 'envelope' or 'bubble'.

Waste water charges are imposed in a number of European countries. In the Netherlands for example, waste water charges were introduced by the Pollution of Surface Waters Act 1970, and in common with other European countries, the aim of the charges was to raise revenue for water treatment, rather than to discourage dischargers. The highest charges, however, appeared to have the effect of reducing discharges.

#### **5 APPROACHES ADOPTED IN EUROPE**

In the European Union, approaches to ensure that ambient levels of pollutants do not exceed EQSs have been adopted in several countries at a regional level.

In the Netherlands, voluntary agreements have been reached for reducing emissions to air in certain industrialised regions, such as Rotterdam. Voluntarily agreed emissions reductions are formalised by amending emissions limits in permits. Formalised criteria are applied in some Provinces for setting limits for new facilities based on existing ambient levels of pollutants.

Emissions reductions achieved in Denmark and France as a result of negotiations between the authorities and facility operators are written into permits and statutory orders respectively.

Statutory water quality objectives planned for England and Wales will be established in relation to the uses to which the water bodies are put. Regional studies of air quality are carried out in areas where breaches of EQSs are likely, for example nitrogen oxide in the East Thames region (2). The results are used in authorising single sources. The statutory EQS was not found to be in danger of being breached. The relative contributions of existing industrial and mobile sources of nitrogen dioxide were placed in context allowing a regional regulatory strategy to be devised.

---

## **6 CONCLUSION**

Specific pollutants, such as nitrogen dioxide, can only be regulated with regional affects in mind. A range of alternative options for tackling pollution on a regional scale are available. Approaches differ form country to country dependent on a number of factors, including the regulatory framework, the scale of the problem, the state of knowledge about the environment and social and political factors. Collaboration at an international level is recommended to identify robust mechanisms for regulating industrial releases on a regional scale.

## **REFERENCES**

1. Council Directive 85/203/EEC, Air Quality for Nitrogen Dioxide.
2. ERM Consultants, Regional Approaches to Multiple Emission Sources, ERM, 1994.
3. HMIP, An Assessment of the Effects of Industrial Releases in the East Thames Corridor, HMSO, 1993.