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## **THE SWEDISH SYSTEM FOR COMPLIANCE AND ENVIRONMENTAL ENFORCEMENT**

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### **SUMMARY**

Since the Environment Protection Act came into force on the 1st of July 1969 the disturbances from polluting activities in Sweden have diminished through regulations required in the permits for these activities. The effectiveness of compliance and enforcement programs is becoming more and more important for the success of the environmental protection efforts. A presentation about the Swedish System for Compliance and Enforcement will be given in this paper.

### **1 ADMINISTRATION**

At Government level, responsibility for environmental questions is largely vested in the Ministry of Environment. The Swedish Environmental Protection Agency (EPA) is the central authority in the environmental sector in Sweden. The Agency is expected to execute the decisions of the "Riksdag" and the Government in this field, keep well - informed of new developments and propose necessary measures to the Government. One of the duties of the Agency is to deal with matters falling under the Environment Protection Act from 1969.

The permits for the most polluting activities are given by an independent board, the National Franchise Board for Environment Protection. Permits for other less polluting activities are given by the County Administrative Boards.

EPA is the central supervisory authority that coordinates the supervisory activities of the County and the Local Administrative authorities and if necessary gives assistance. Continuous supervision is carried out by the County Administration for the most polluting activities and by the Local Administration for the rest.

### **2 LEGISLATION**

Legislation of direct environment protection includes the Nature Conservancy Act (1964), the Environment Protection Act (1969, 1981, 1987, 1989) and the Act on Chemical Products (1973, 1985). All three of these acts are vitally important to the protection of the environment.

The Nature Conservancy Act is primarily concerned with the management of natural assets, the Environment Protection Act concerns environment nuisances such as air and water pollution, noise etc. and the Act on Chemical Products regulates the handling of poisons and pesticides, among many other things.

In Sweden the performer of a polluting activity have to apply for an environmental permit. The performer needs a permit when starting up a new facility, when significant modifications are planned or when increasing production is expected. If ten years have passed since a permit was given the Franchise Board may prescribe new or stricter conditions for the activity.

When stipulating the terms for a permit the authorities take into consideration what internal and external measures that are technically and economically feasible in order to prevent and/or minimize the effects in the environment. Environmental permits mostly contain conditions in the form of upper limits for discharges. Permits can also contain conditions for measures to be taken such as an installation of a biological treatment plant. Each industry is given an individual permit. Although the regulations are individual a certain practice has been developed.

### **3 PLANT SUPERVISION**

The Swedish system for monitoring and inspection is based on self-monitoring at source in combination with a decentralized system for inspections carried out by regional and local competent authorities. A self-monitoring program is suggested by the performer and then decided by the regional or local authority. In amendments to the Environment Protection Act 1987 and 1989 the requirements for monitoring have been strengthened. In principle all point sources that have continuous emissions of any significance should have a monitoring program. Guidelines are being developed for monitoring emissions and discharges from different kinds of industrial and domestic sources. Variables to be monitored and methods to be used are stipulated. The self-monitoring program ought to have the following content:

- administrative information
- description of the polluting activity
- list of permits, conditions etc.
- monitoring program for air, water, waste, noise and chemicals used
- frequency of inspections made by private inspectors
- frequency of reports to authorities and content of the reports.

Inspection campaigns are carried out by the authorities in different industrial sectors. Recently a campaign was carried out in the surface treatment industry. A significant portion of all surface treatment plants were inspected. Many discharges above permitted limits were discovered and measures were taken to reduce these. Awareness of routines to reduce discharges was increased, which is an important result in an industry that consists many of small plants. Other inspection campaigns are also carried out, such as:

- iron and steelmaking factories
- bleached sulphate pulp mills
- flow monitoring systems
- special areas that are heavily polluted

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## **4 RECEIVING WATER MONITORING**

### 4.1 Local Recipient Monitoring

According to the Environment Protection Act it is the responsibility of the polluter to ensure that the discharges or the emissions do not effect the environment in an unacceptable way. In practice this has lead to the establishment of local monitoring programs in all recipients where the discharges can not be neglected. For practical reasons the local programs are often coordinated to cover relatively large areas. For example on the Swedish west coast there are two larger coordinated programs, one covering the whole coast of Gothenburg and Bohus county and the other one covering the Oresund. Normally the programs contain measurements of physical and chemical variables in the water, measurements in sediments and in organisms of toxic metals and organic compounds that are discharged, and surveys of flora and fauna.

### 4.2 The National Swedish Environmental Monitoring Program (PMK)

The objectives of this program are to monitor long-term and large-scale changes in the environment, to collect environmental conditions data in relatively unaffected parts for reference purposes and to illuminate how pollutants are transported in the environment. The program contains a wide variety of different investigations and studies, ranging from counts of migratory birds to analyses of dioxins in different organisms. The total amount of sampling stations is well over 200.

## **5 COMPLIANCE AND ENFORCEMENT**

The results from the self-monitoring programs are reported to the supervisory authorities. A central computerized database for follow-up of the monitoring results is introduced. It will be in full operation from 1991 providing data on permit holders and their emissions. Since the 1st of July 1989 every permit-holder has to give in an annual report to the supervisory authorities. The report should be signed by the vice president of the company that runs the polluting activity.

In case of non-compliance a sentence of fines or imprisonment for a maximum term of two years could be condemned. A special fee, the environment protection fee, could be imposed in case of noncompliance if it has resulted in economic gain for the permit holder. The fee should be imposed on the physical or legal person who has carried out the activity causing the infringement. The amount of the fee should equal the economic gain resulting from the infringement. Staffing for inspections made by the authorities has so far been inadequate. Staffing is to be increased at all levels and measures are being taken to provide training and guidelines for the staff doing the field inspections. The increased resources for field inspections are expected to lead to better control over noncompliance. Measures have also been taken to further strengthen the sanctions in case of non-compliance. A special training course for police investigators and prosecutors has been carried out. To improve methods for monitoring emissions a system for accrediting analytical laboratories for water analysis will be introduced from the 1st of July 1991. In the future accreditation will also be considered for control of emissions to air.

To emphasize the importance of compliance and enforcement a new department within EPA, the Supervision Department, come into being from mid -1989. The Ministry of Environment also clearly declares that supervision is one of the major tasks for the environmental authorities in Sweden today.