
INTEGRATED PERMITTING IN SWEDEN

LUNDHOLM, MIKAEL

Legal Advisor, Implementation and Enforcement Department, Swedish Environmental Protection Agency, Blekholmsterrassen 36S,106 48 Stockholm, Sweden

SUMMARY

The Swedish Environmental Protection Act, that came into force in 1969, was designed to meet the requirements of that time. Its purpose was to regulate point discharges from industry and similar environmentally hazardous activities. The Act is based on a case-by-case integrated pollution control system and has been of great importance in reducing emissions from industrial and other plants.

The integrated approach in the Act is characterized by the fact that practically all kinds of environmental impact of a planned installation are being assessed by the same authority on the same occasion. This makes it possible to control the transfer of pollution from one media to another and to address potential cross-media conflicts. The purpose is to select the best overall environmental option, i.e., to protect the environment as a whole.

The licensing authority has, within the framework of the regulation, extensive discretionary powers as regards determining what environmental impacts are most severe and what kind of remedial measures the operator should undertake. This is a complex task both from a legal and technical point of view. Therefore the system requires an independent and highly qualified licensing authority. In the case of operations causing the gravest disturbances, it is the National Licensing Board that settles matters of permits. The National Licensing Board is an independent central authority whose way of working is similar to that of a law court.

However, new environmental problems as well as the vision to create an ecologically sustainable society have led to a need for new regulatory instruments. For almost a decade, extensive work has been carried out to reform Swedish environmental legislation. Altogether 15 different environmental laws have been integrated into one Environmental Code. The main purpose of the regulatory reform has been to produce a legislation that is based on the environmental problems as they are known today, and that is closely connected with the way problems are to be tackled in practical terms.

As regards licensing of industrial installations, the scope of the integrated assessment required by the Environmental Code has to be widened, e.g., it has to include energy efficiency requirements and consumption of raw materials etc. The Environmental Code will enter into force on 1 January 1999.

1 THE REGULATORY FRAMEWORK

1.1 The 1969 Environmental Protection Act

During the 1960s, a number of important environmental protection measures were taken in Sweden. Older regulations concerning health care, toxic substances and water pollution were replaced by legislation intended to prevent emissions of all types of pollutants. A new state authority - the Swedish Environmental Protection Agency - was established in 1967 with responsibility for the protection of land, water and air.

The Environmental Protection Act came into force in 1969. The Act triggered cleanups of emissions and discharges from industry and settlements and has enabled authorities to work on sharply reducing discharges from point sources.

The Environmental Protection Act contained an early recognition of both the precautionary principle and the concept of integrated pollution control and has been an extremely important instrument in reducing pollution from industry. Emissions from industries to the air and water have, in many cases, been reduced by between 65 and 95 % since the late 1960s.

1.2 Scope of application

The Environmental Protection Act is intended both to prevent negative impacts on the natural environment and to restore environments that have already been damaged. It applies to all activities conducted on real estate or other permanent plants and where the operations are a source of disturbance in the neighborhood. Water and air pollution, noise, light, vibrations and the like are examples of the types of pollution that fall under the Act. A risk of disturbance is enough for the Act to apply.

Discharges from mobile sources, such as vehicles, ships and aircraft fall outside the Act's sphere of application. On the other hand, the Act applies to roads, harbors and airports, and the disturbance resulting from their use.

An activity to which the act is applicable is called an "environmentally hazardous activity".

In order to ensure that the requirements of the Act are genuinely complied with, certain new installations or those that are to undergo modification or extension are required to obtain prior licences.

The installations are defined and classed in three categories (A, B and C) according to their typical potential impact. For installations that entail a major environmental impact (category A), the proponent must apply for a permit from the National Licensing Board for Environmental Protection. There are approximately 500 class A installations in Sweden.

For activities with less impact on the environment, the county administrative boards are responsible for preparing and issuing licences. Sweden is divided into 21 counties and there are about 7,000 class B installations. Activities with only limited or local disturbances, Category C, do not need a permit but the municipalities must be notified in good time before the action is taken. There are about 16,600 such activities and 288 communities.

The number of competent authorities responsible for permit issuing is therefore normally only one as regards pollution issues: The National Licensing Board or the County Administrative Board.

Concerning certain big installations that are intrusive from the environmental viewpoint the Government is to assess the permissibility according to directives in the Natural Resources Act. One precondition of the Government's permission is normally that the local council concerned has given its approval. The government's decision is followed by a decision according to the Environmental Protection Act in which the National Licensing Board determines the conditions. The Board may not overrule the government's decision.

1.3 Substantial requirements

According to Section 5 of the Act, anyone performing or intending to perform an "environmentally hazardous activity" must accept restrictions and take precautionary measures to prevent or remedy disturbances caused by the activity. The wording in the Act is very general and it stipulates neither effluent limitations nor ambient environmental quality standards.

Thus, the law provides flexibility as regards determining what environmental impacts are most severe and what kind of remedial measures the operator should undertake. The obligation is, however, limited to such measures "as may reasonably be demanded". The decision making method for assessing what is reasonable in a certain case, is based on what is regarded to be technically achievable, economically feasible and environmentally justified, taking both public and private interests into consideration. The decision making could be compared to determining "Best Available Techniques" in the specific case.

It is a dynamic regulation in which the substantial requirements change over time with technological advances and changes in scientific knowledge.

Another characteristic feature of the Environmental Protection Act is the case-by-case approach where the special circumstances in each individual case are of great importance. Concrete local environmental conditions as well as actual impacts are taken into consideration. In practice the regulation has also encouraged operators to suggest their own solutions of environmental problems. This means that different plants - even in the same sector - can have different solutions of the same problem. Thus, in-process measures rather than end-of-pipe abatement has been encouraged.

Certain statements have been made in bills and other work preparatory to legislation in order to serve as a guide for the purpose of implementing the provisions of section 5 of the Environmental Protection Act. Practice has also established over the nearly 30 years during which the rules have been in force. There are also a lot of non-binding guidelines and recommendations but only a few legally binding norms and standards.

1.3.1 Significance of siting

According to the Environmental Protection Act, the site chosen by the operator is one of the items that should be assessed by the permit authority. Sometimes, several places may be suitable for an activity. When choosing between these places, such a place must be chosen whereby the purpose may be attained with the least intrusion and nuisance to human health and the environment. The Act explicitly requires selection of the best site from an environmental point of view - within reasonable costs. In this way the question of location of an installation forms an important part of the integrated assessment.

In the Act it is also stated that a permit may not be granted in contravention of a detailed plan, or so called area regulations issued by the planning authority. It should be noted however that even if the detailed plan states that the area should be used for a certain industrial installation, the proposed allocation still has to be assessed under the Environmental Protection Act.

1.3.2 Permit conditions

The permit conditions should reflect the substantial requirements of the Act and ensure that the operator obligations are met.

Conditions in a permit may be of many types. They may for example stipulate process- or cleansing-technique to be used, emission limit values, allowed or not allowed use of chemicals or further investigations to be carried out. Emission limit values are often supplemented and in some cases replaced by comparable technical measures such as requirements for closed process systems, floating roofs, catalytic combustion etc.

The permit conditions remain in force until they are reviewed. According to the provisions of the Act it is always possible to review the conditions after ten years. However, they may be revised at an earlier date in the event, for example, of unforeseen disturbances arising

or a substantial alteration in the local situation. In the event of new technology making considerable improvements feasible or as a consequence of EC legislation the conditions can also be reviewed.

It is the task of the Swedish Environmental Protection Agency to initiate a review of permit conditions of category A installations. This is done by way of an application to the National Licensing Board. However, even though the Environmental Protection Act states that the operator is obliged to provide the necessary material and information when reviewing permit conditions, the number of cases concerning reviews has been few over the years. It has inter alia been found that a lot of time and resources are required to fulfil this task.

In many cases a review is being made anyway in connection with changes in the operation, which often requires a completely new permit for the installation.

1.4 The integrated assessment

The integrated permitting system in Sweden implies that practically all kinds of environmental impact of a planned installation are being assessed by the same authority at the same time. As mentioned above, even the proposed allocation as such is being examined. The purpose is in principle to obtain the best overall solution from an environmental point of view, i.e. to protect the environment as a whole.

In order to achieve an optimal decision in terms of environmental impact, abatement measures taken at industrial processing plants to reduce a given type of emission may need to be given priority at the expense of reductions of other emissions or discharges. The integrated approach makes it for instance possible to accept a minor increased emission to air in favor of a major reduction of discharge of waste water - if that is the best overall environmental option. The integrated approach has, for example, made it possible for the pulp industry to recycle waste water despite the fact that it might lead to minor increased emissions to air.

Accordingly, one advantage of integrated permits is that the licensing authority can control the shifting of pollution from one environmental medium to another. It is also possible for the authority to address so called cross-media issues. This competence lies within the framework of the legislation as part of the discretionary powers of the permitting authority. It should however be noted that cross-media evaluations are a very difficult task due to the lack of scientific knowledge, weighting factors and multimedia standards in general. Potential cross-media conflicts are therefore settled by an expert judgement by way of a verbal qualitative comparison of positive and negative effects.

There is no doubt that the Swedish integrated pollution prevention system based on an individual review, has been very successful and has led to significant reductions of emissions from point sources. Another advantage is that the bureaucratic burdens for investors are reduced whereas there is only need for one environmental permit.

On the other hand it is obvious that there are certain risks connected with a dynamic and flexible regulation without detailed prescribed requirements. Especially when far-reaching discretionary powers are given to the authorities. Lack of transparency of decision making and lack of predictability of regulatory requirements are two factors that has to be taken into consideration. There is also a risk that especially local authorities, may value economic considerations higher than ecological interests and impose less stringent permit conditions in certain cases.

1.5 The National Licensing Board

The above mentioned potential problems call for a strong and independent licensing authority. For installations that entail a major environmental impact (category A), the proponent must apply for a permit to the National Licensing Board for Environmental Protection. The National Licensing Board is a central and independent authority whose way of working is similar to that of a law court.

There are four members of the Board. The chairman of the board is a legally qualified and experienced judge. One member must have expert knowledge and experience in technical matters. One member must have experience in matters falling within the sphere of the Swedish Environmental protection Agency's activities. The fourth member of the Board must have experience in industrial operations.

With this composition, the Board has the necessary legal and technical capacity to perform the complex task of integrated permitting. Owing to the court-like proceedings and way of working, the Board's integrity is secured.

2 FORMAL PROCEDURES

2.1 Consultation

According to the Environmental Protection Act the operator should, before applying for a permit, consult any central and local authorities, organizations and individuals who may have an interest in the matter. The purpose with the consultation is to provide information on an early stage, to the public and to the operator about potential resistance to the project.

Even before the consultation the operator should obtain advice and information from the County Administrative Board as to how the obligation of consultation should appropriately be fulfilled. In this context and during the consultation the scope and extent of the environmental impact assessment ought to be discussed with the various authorities.

2.2 The permit application including environmental impact assessment

Permit applications must include the technical information on the installation and its activities required for an assessment of the nature and extent of the planned activity. These descriptions must be at a very high technical level. The application should also include information on proposed abatement techniques and proposals for inspection programs.

Since 1991 an Environmental Impact Assessment (EIA) must be attached to a permit application. The Environmental Protection Act states in this respect that the EIA should make it possible to do an overall assessment of the impact of a planned installation on the environment, health and conservation of natural resources. It could be noted that, in Sweden, EIA is incorporated with the licensing procedures and not a separate system.

2.3 Public announcement

The permitting authority normally provides those who may be affected by the disturbances from the installation an opportunity to express their views by means of a public announcement in a local newspaper.

The National Licensing Board always consults central, regional and local environmental authorities. Other authorities may be consulted if the Licensing Board finds that there is a need for such consultations, e.g. the National Fishery Agency.

2.4 Public hearing and decision

For category A installations there is normally a public hearing and an on-site inspection. The proponent presents the application and the EIA and the authorities and public express their opinions. The procedure is in a way similar to a court trial were the National Licensing Board is the court of justice.

The described open and transparent procedure to issue a permit and set the conditions is of vital importance to get the necessary information for an integrated assessment.

3 THE ENVIRONMENTAL CODE

3.1 Background

The case-by-case pollution control system pursuant to the Environmental Protection Act has been a cornerstone of environmental protection work in Sweden during recent decades. Environmental problems have, however, changed in nature to some extent.

By the end of the 1980s it was recognized that environmental problems had changed in character and that the strategies and instruments applied needed to be reviewed and to be made as effective as possible. It was felt that most of the problems that had been worked on 20 or 25 years earlier were in the process of being solved. Most point source emissions, such as from the industry and the energy system, had been reduced to the levels of the 1940s and 50s, despite multiple production increases.

The environmental problems had shifted from being primarily local in nature to be diffuse and globally disseminated. The environmental problems of the western world were becoming increasingly attributed to emissions from many small sources which have a substantial combined volume.

Through partial reforms in environmental legislation during the 1980s and 90s, e.g. in environmental protection, health protection and chemical legislation, the foundation had been laid for environmental rules which were more in line with the goals of the new environmental policy. Certain principles, e.g. the substitution principle regarding chemicals, was introduced in legislation.

The various environmental Acts were passed at different times and therefore expressed different values. Similar issues were given different solutions in the Acts. Regulations split up in various legislative systems overlapped each other, and the responsible governmental authority was not always obvious. It was therefore felt that coordinated legislation relating to the environment would improve the overall economic performance as well as simplifying bureaucratic procedures.

The primary objective of the regulatory reform, however, was to improve environmental effectiveness. Taking into account the development of environmental policy there were still some deficiencies remaining in the legislation. There was a need for, inter alia, stricter licensing regulations, a system for environmental quality standards and studies and considerations of the relationship between Swedish environmental legislation and international measures.

The idea of combining and making more stringent the various provisions in a single legislative system, an Environmental Code arose in the beginning of the 1990s. In 1992 the Swedish Parliament resolved that the objective underlying Swedish environmental policy should be to protect human health, preserve biological diversity, manage the consumption of natural

resources so that they can be used in a long-term and to protect our natural and cultural landscape. The Parliament at the same time approved the Governments proposal that environmental legislation should be collected in an Environmental Code.

After extensive legislative work the Environmental Code now has been adopted by the Parliament and will enter into force on 1 January 1999.

3.2 The Environmental Code

The rules contained within 15 Acts have been amalgamated in the Environmental Code. The Acts are

- the Nature Conservation Act;
- the Environmental Protection Act;
- the Act on the Prohibition Against Dumping Waste in Water;
- the Act on Sulphur Content of Fuels;
- the Act on the Management of Agricultural Land;
- the Waste Collection and Disposal Act;
- the Health Protection Act;
- the Act on the use of Pesticides on Forests;
- the Chemical Products Act;
- the Environmental Damage Act;
- the Natural Resources Act;
- the Act on Advance testing of Biological Pesticides;
- the Gene Technology Act and
- the Act on Measures concerning Endangered Animals and Plant Species.

The provisions of the Environmental Code are aimed at promoting sustainable development. The basic philosophy behind the Environmental Code is that common rules of care/obligations should apply irrespective of the type of activity concerned. The same requirements should be made, according to the general provisions, with respect to measures which risk similar damage being caused to health and environment. It is irrelevant, for example, whether the activity concerned is performed on land or in water, whether it is carried out by the public at large or an individual or in a commercial context or in some other manner. The governing principle is thus that it is the effect of the measure, and not its nature, which determine the requirements to be imposed.

3.2.1 Substantial requirements in the Environmental Code

The common general rules of care are to be observed by everyone who conducts a business or other activity that falls under the very broad scope of applicability of the Code.

It is first prescribed that a person who conducts activities must acquire the requisite knowledge in order to protect human health and the environment and to promote reuse and recycling of materials and management of land and water. It is further stated that the fact that it cannot definitely be established that an activity is causing disturbance, does not release the individual conducting the activities from the obligation to prevent or restrict the potential risk of disturbance.

As for the other rules of care they are based on, the BAT principle, the precautionary principle, the so-called resource management and eco-cycle principles, the substitution principle and Polluter Pays Principle. With respect to each of the rules of care, they are to be applied to the extent justified on environmental grounds, provided this is not economically unreasonable.

3.3 Impact on integrated assessment

The general rules of care in the Environmental Code is applicable to all measures and activities, including industrial installations. In several ways this implies a major change compared to the current law.

At present, the permit system in principle only applies to emissions and other disturbances made by an installation. A broader assessment will be made under the Environmental Code. Even questions concerning the management of natural resources and use of chemicals will be considered.

As regards e.g. the resource management and eco-cycle principles, the best effects are achieved in conjunction with design and manufacture. The provisions will be applied when considering permits for industrial installations. This clearly extends the ambit of permit considerations compared with today. This means that the integrated assessment will be even more complex and create new trade-off problems. To develop a decision making methodology for these assessments constitutes a great challenge.

Another change, that might be of importance in this context, is that the National Licensing Board will be replaced by environmental courts. The practical consequences, if any, of having courts instead of authorities considering cases on permits for industrial plants still remains to be seen.