

**INTEGRATED PREVENTION AND POLLUTION CONTROL
AS AN IMPORTANT TOOL OF ENVIRONMENTAL POLICY
IN SLOVAK REPUBLIC**

Miroslav RUSKO ¹, Ivana TUREKOVÁ ², Dominika OČENÁŠOVÁ ³

Abstract

The concept of “integrated environmental protection” takes into consideration all sectors of environment impacts (air, water, waste) like a complex, instead of a separated view on each sector. The reason of this concept is that the substances and emissions outflow from one environmental sector can cause transport to another environmental sector.

New attitude in integrated process represents a change which can be applied within the segment system of assessment and permitting installations to the integrated permitting. It is a new aspect with which we do not have any practical experience with and poses demands on both sides involved in this process. Integrated permit does not mean increased responsibilities, but allows operators to be actively connected to the permitting and transposing their own ideas in communication between the competent authority and operator, what the existing practice does not allow.

Key words

IPPC, integrated permit, competent authority, installation, operator

Introduction

Integrated prevention and industrial pollution protection is a set of measures aimed at pollution prevention, reduction of emissions to air, water and soil, reduction of waste

¹ Miroslav Rusko, PhD. - Institute of Safety and Environmental Engineering, Faculty of Materials Science and Technology in Trnava, Slovak University of Technology Bratislava, Botanická 49, SK-917 24 Trnava, Slovak Republic, e-mail: >miroslavrusko@centrum.sk<

² Ivana Tureková, Assoc. Professor, PhD. - Institute of Safety and Environmental Engineering, Faculty of Materials Science and Technology in Trnava, Slovak University of Technology Bratislava, Botanická 49, 917 24 Trnava, Slovak Republic, e-mail: ivana.turekova@stuba.sk

³ Dominika Očenášová, MSc. Eng. - Slovak Inspectorate of Environment, Department of Integrated Prevention and Pollution Control - Headquarter, Karloveska 2, 842 22 Bratislava, e-mail: dominika.ocenasova@gmail.com

generation, and at waste recovery and disposal, in order to achieve a high level protection of the environment taken as a whole, whereas focusing on industrial sphere.

Integrated pollution and prevention control presents a shift from keeping each environmental sector (air, water, waste) to industrial activities. The field of IPPC activity is consequently divided according to the industrial activities.

The purpose of Directive 2008/1/EC of the European Parliament and of the Council of 15 January 2008 concerning integrated pollution prevention and control is to achieve integrated prevention and control of pollution arising from the activities listed in Annex I. It lays down measures designed to prevent or, where not practicable, to reduce emissions in the air, water and land from the abovementioned activities, including measures concerning waste, in order to achieve a high level of protection of the environment taken as a whole, without prejudice to Directive 85/337/EEC and other relevant Community provisions.

Environment is a necessary condition of our existence and life. It is the only environment for life which we have. It is logically necessary to protect and develop this environment. The real guarantee of preserving and improving the present situation of environment are laws and their efficient enforcement.

A very important tool for upholding the environmental laws to the practice are the competent authorities which may give sanctions. The main executive body in Slovakia is the Slovak Inspectorate of Environment, which has been established by the Slovak Ministry of Environment.

The Slovak Inspectorate of Environment (SIE) is an experienced controlling authority providing the state supervision and giving sanctions to keep the environment in good conditions and make the state control in integrated prevention and pollution control section [1].

For activities which SIE initiated immediately after the IPPC law come into force, it was necessary to establish the new department and build it personally, materially and also technically. At the same time, five local departments of integrated prevention and pollution control in Inspectorates in Bratislava, Nitra, Banská Bystrica, Žilina and in Košice were established [2].

Headquarters coordinate the SIE work in the national and international range. It works like a second degree – appeal authority to first degree decisions of local Inspectorates.

Legislative scope

Within the approximation process in the conditions of Slovakia, the Council Directive 96/61/EC of 24 September 1996 on integrated prevention and pollution control (IPPC Directive) was implemented by approving the Act No. 245/2003 of the Coll. on integrated prevention and pollution control (IPPC) and Regulation No. 391/2003 of the Coll., which regulate IPPC via implementation of the Act No. 245/2003. Gradually, later amendments of this Act, such as 205/2004, 220/2004, 572/2004 and 587/2004, were implemented.

IPPC Directive was recently codified – European Parliament and Council Directive 2008/1/EC of 15 January 2008 on integrated prevention and pollution control.

Regarding the continuous amendments of individual Directives on important industrial emissions, the European Commission admitted the Directive proposal on Industrial emissions on 21 December 2007, processing the seven existing Directives related to industrial emissions into a simple, clear and coherent legislative tool, including the following documents:

- IPPC Directive,
- Large Combustion Plant Directive,
- Waste Incineration Directive,
- Solvents Emissions Directive,
- Three Directives on Titanium Dioxide (disposal, monitoring, pollution reduction programs) [10].

Directive on industrial emissions should facilitate the governmental bodies to specify the conditions of integrated permission. When the Directive comes into force, the BREF documents will be obligatory.

Integrated permitting process

Integrated permitting is the process open to general public. Except for negotiating participants and competent authorities, also civil community of physical people, interest group of juridical people and people connected with integrated permitting process can be involved [2].

A demanding and lengthy process beginning with sending operator a notification and continuing with running negotiating application preceded the publication of the integrated permission. The integrated process itself begins when operator submits an application, then ensues its processing and verifies the information in installation. After oral hearing and each condition of permission is agreed with operator then an integrated permission is issued [5]. To issue the integrated permission lasts 90 days from oral hearing and maximum 6 months from the process beginning – from clear and correctly filled in application.

The system of integrated permission brings different advantages for competent authorities on one hand, and for operators on the other hand. The system contribution can be described as follows:

- *From the operator point of view:* considerable simplification of process because the operators need only one application for most decisions in the environment protection sphere. The example of the application is compiled in an understandable and clear way. In case the installation is new, integrated process is connected also with building permission. These aspects make process easier and speed it up.
- *From the competent authorities point of view:* the advantage of this process is assessing the activities in permitting installation with one competent authority instead of existing permitting by different authorities with often complicated mutual interconnection. For this reason, it is possible to set installation conditions with focus on all environmental impacts mainly in air protection, water protection and waste management area (Fig. 1). This system simplifies the inspection of permits conditions, carried out by one competent authority.
- *For both sides:* different approvals issued up to the present are now concentrated in one well arranged document – integrated permit [11].

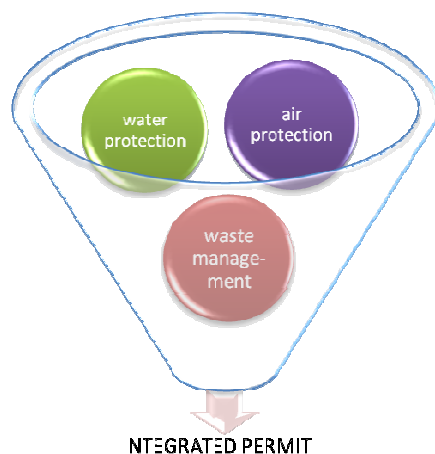


Fig. 1 Integrated process and its simplification

What does IPPC permit allow?

- IPPC permit allows the whole control of the installation and confirms that if the conditions in the permit are fulfilled, the installation will not cause the environment pollution.
- With the IPPC permit, the operator is obligated to use hierarchy of the waste management. The IPPC permit obligates the operator to use energy efficiently.
- IPPC permit obligates the operator to take measures for prevention of failures and reduce its consequences.
- After finishing the installation activities, IPPC permit obligates the operator to take some measures for location remediation and for bringing the environment in a satisfactory condition. With the IPPC permit, the existent installations should be able to meet the required conditions in the specified time.
- IPPC permit obligates the operator to help during the inspection supervision.
- IPPC permit obligates the operator to supervise himself, to report violated regulations and to allow the public access to the obtained data [12].

The deadline for issuing all integrated permits was 30/10/2007 regarding the Act No. 245/2003 on integrated prevention and pollution control (IPPC), and therefore the activities of Inspectorates involved mainly the permissions of installation listed in Annex 1 of Act 245/2003.

Integrated permits were issued in accordance with the schedule developed on following IPPC installations databases. The deadline for issuing all integrated permits for all IPPC installations in Slovakia was fulfilled to 100 %.

In comparison with previous years, year 2008 was much more demanding considering the huge amount of already issued integrated permits. The operators often applied for substantial change (Fig. 2) in installations of functions or for building decisions (like approbation decision).

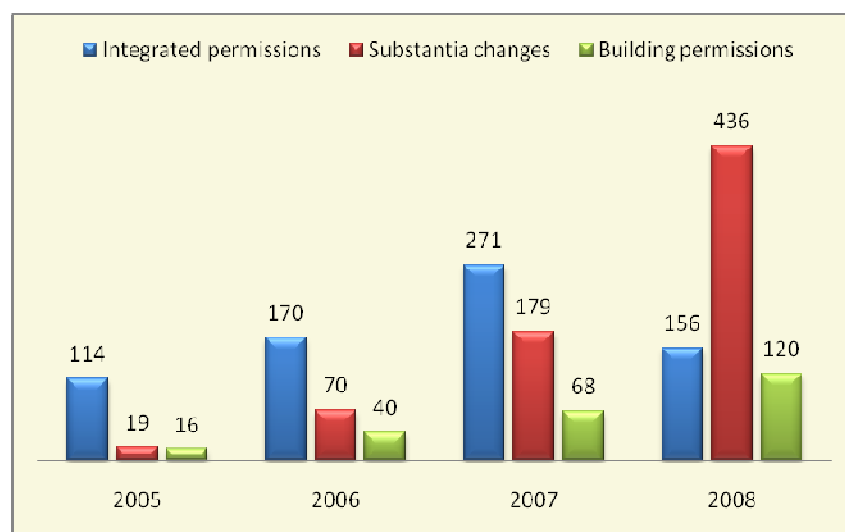


Fig. 2 Integrated permissions, substantial changes and building permissions issued in each Inspectorates in period 2005-2008 [3, 4]

Inspectors act not only as a permission competent authority, but also as an inspection authority. In years 2007/2008, inspectors made much more on-site visits then in the years 2005/2006 as can be seen in Figure 3. The reason was that not many integrated permits were issued in years 2005/2006.

Act 532/2005 came into force on 1 January 2006 and it changed and amended the Act 245/2003 on IPPC – SIE, extending the competencies of the permitting body in the field if the air and water protection, waste management and in building permission process [5].



Fig. 3 Inspections made on each Inspectorates in period 2005-2008 [5,6,7,8]

BAT and BREFs

The main target of integrated prevention is to protect environment as a whole from industrial and agricultural pollution by regulating installations. It is possible to achieve higher degree of environmental protection by using BAT [9].

IPPC Directive for this purpose introduces a new concept known as **BAT** - Best Available Technique. BATs are defined as the most effective and developed degree of development using technologies and the way of their operation. They are made to be set up in an applicable economic branch. The conditions must be economically and technically acceptable with respect to the expenses and contributions. An installation operator can accept the conditions only when they are reasonable and at the same time most effective in the protection of environment as a whole.

The outcome of the formal information exchange has a form of BAT Reference Documents – **BREFs**. They are gradually being published for all activities under IPPC. BREFs summarized and recommended (but not as obligatory) Best Available Technique in a given industrial branch. BREFs are prepared by **TWGs** (Technical working groups) and are used as background papers for integrated permit applications. TWGs consist of the experts from EU countries, EFTA countries (European Free Trade Association) and associated states, representing industrial and non-governmental environmental organizations. These technical working groups prepare BREFs on the base of the obtained information. The information exchange is monitored by the Information Exchange Forum (**IEF**) which meets twice or three times a year and provides official comments to BREFs proposals.

The BREFs target is to provide information about:

- given industrial branch,
- used technologies and processes,
- materials flows,
- emissions limits in EU member states,
- emissions monitored by relevant authorities of EU member states, by installation operator, by European Commission and finally by general public.

The core of each BREF is a row of elements which lead to identification of what can be considered a BAT. It is done on the basis of previous information and specific emissions limits set for an industrial branch. At the end of each BREF, there is information about developing the techniques in a given industrial branch. BREF documents should not contain political views and attitudes.

How to use BREF in the Permit?

When evaluating BAT for the applicant, it is important that the applicant and the authority make reference to the BAT Reference Documents used, and discuss the choice of document, investigating possible substitution for dangerous substances, and then revising technological processes. It shall be described which dangerous substances are used in the production, and what should be done in terms of substitution to reach BAT. It shall be described which processes are used in the production, and what should be done to reach BAT. A subdivision of this paragraph into single processes can be useful for clarification. All new productions shall

apply BAT according to the definition in the IPPC Directive. For existing companies, it should be described:

- whether the process uses BAT and if not - why not,
- which terms in the permit that will ensure that a plan towards BAT will be mandatory for the installation,
- the time limits and why it is necessary to give the installation time to apply BAT [13].

Conclusion

Integrated permitting is process in which conditions for defined industrial activities in installations are being set. New installations are permitted to meet the target – integrated environmental protection and protection of all environmental sectors, to keep the pollution degree in environmental quality standards.

The main target of integrated prevention is to protect environment like a whole before industrial and agricultural pollution by regulating installations. In spite of integrated permitting is still relatively new problematic in markedly lesser extend come to breaking of duties which followed from integrated permits. The operators, which are under the IPPC Directive, are satisfied, that they don't need to ensure so many permits from different competent authorities as in the past. All conditions of installation operation are contained in one integrated permit.

Integrated permit does not mean increased responsibilities; on the contrary, it allows operators to be actively involved in the process of permitting and to foster their own concepts in mutual communication of competent authority and operator, which former practice did not allow.

References:

- [1] Slovak Inspectorate of Environment.[online]. Available on-URL: ><http://www.sizp.sk/>< [in Slovak]
- [2] NITSCHNEIDEROVÁ, H. 2005: The role of SIE like a permitting authority. In *Enviromagazín*. Banská Bystrica: MŽP SR a SAŽP, 2005, p. 6-7. ISSN 1335-1877 [in Slovak]
- [3] Slovak Inspectorate of Environment: An Annual report 2006. [online]. Available on-URL: ><http://www.sizp.sk/>< [in Slovak]
- [4] Slovak Inspectorate of Environment: An Annual report 2007. [online]. Available on-URL: ><http://www.sizp.sk/>< [in Slovak]
- [5] Evaluation of fulfilling the main planed IPPC tasks for 2007. - Slovak Inspectorate of Environment, Bratislava [in Slovak]
- [6] Evaluation of fulfilling the main planed IPPC tasks for 2006. - Slovak Inspectorate of Environment, Bratislava [in Slovak]
- [7] Evaluation of fulfilling the main planed IPPC tasks for 2005. - Slovak Inspectorate of Environment, Bratislava [in Slovak]
- [8] Evaluation of fulfilling the main planed IPPC tasks for 2008. – Slovak Inspectorate of Environment, Bratislava [in Slovak]

- [9] SUCHANEK, Z. 2004: EMS and IPPC. In RUSKO, M., BALOG, K. [Eds.]: *Management of Environment 2003. Proceedings of the International Conference*. Trnava: December 11 - 12, 2003, First Edition, Trnava: Slovak University of Technology in Bratislava, Faculty of Materials Science and Technology, 2004, ISBN 80-227-2005-4 [in Czech]
- [10] The IPPC Directive. [online]. - Available on-URL: <http://ec.europa.eu/environment/air/pollutants/stationary/ippc/index.htm>
- [11] NITSCHNEIDEROVÁ, H. 2007: SIE (Slovak Inspectorate of Environment) successfully deal with European Union tasks in integrated permitting. In *Enviromagazín*, 2007, XII, N°. 6, pp. 4-5. Banská Bystrica, MŽP SR a SAŽP. [in Slovak]
- [12] PETROVSKA, S., ACESKA, N., PETROVSKA, M. Role of IPPC Permit in the Process of Reduction of Pollution Caused by Waste Water in Two Pilot Plants in the Municipality of Prilep [online]. - Available on-URL: http://www.balwois.com/balwois/administration/full_paper/ffp-1438.pdf
- [13] Application of BAT/Clean technologies in industry. [online]. - Available on-URL: <http://www.esmak.ru/infolibrary/FAQ/IPPC/bat.html#6>

Reviewers:

Milan Piatrik, Professor, PhD. – Faculty of Natural Sciences, Matej Bel University, Banská Bystrica

Karol Balog, Professor, PhD. - Institute of Safety and Environmental Engineering, Faculty of Materials Science and Technology in Trnava, Slovak University of Technology Bratislava