

# Tetiana Sayenko, Oksana Nagorniuk

---

## The problem of environmental certification of industrial facilities in Ukraine

---

Edukacja - Technika - Informatyka 5/1, 368-372

---

2014

Artykuł został opracowany do udostępnienia w internecie przez Muzeum Historii Polski w ramach prac podejmowanych na rzecz zapewnienia otwartego, powszechnego i trwałego dostępu do polskiego dorobku naukowego i kulturalnego. Artykuł jest umieszczony w kolekcji cyfrowej [bazhum.muzhp.pl](http://bazhum.muzhp.pl), gromadzącej zawartość polskich czasopism humanistycznych i społecznych.

Tekst jest udostępniony do wykorzystania w ramach dozwolonego użytku.

**Tetiana SAYENKO**

National Aviation University, Ukraine

**Oksana NAGORNIUK**

National University of Life and Environmental Sciences of Ukraine, Ukraine

## **The problem of environmental certification of industrial facilities in Ukraine**

### **1. Problem**

The lack of systemic, systematic, sometimes qualified national environmental certification makes it impossible for the experts to predict, to prevent, to eliminate the potential hazard, to guarantee of ecological safety areas. Environmental passports of industrial facilities can effectively monitor the status and dynamics of industrial activity, to predict its negative impact on the environment, to identify those responsible for the violation of the regulations, to have of sufficient information to make effective management decisions [Belyavskiy, Tymochko 2009: 41–46; *Environmental audit...* 2000]. Therefore, an important and timely for today is to develop typical environmental passports for energy facilities, industry, agriculture, transport, territory and waters, in the long run – to form their bank for each natural and industrial facilities.

### **2. Analysis of research and publications**

The deterioration of the environment, its degradation caused primarily not reasonable, not the rational use of natural resources, of the lack of integrated, balanced driving economic activity. Extremely aggravated the problem of quality, clean water needs of municipal and agriculture, and other industries [Bondar, Belyavskiy, Satalkin, Pylypczuk 2011: 42–51].

The main causes of pollution should be considered a resource-and energy-intensive, morally and physically obsolete technology and environmental equipment and in some cases – the lack of treatment facilities, effective control over the activities of particularly hazardous industries, low technological discipline, an acute shortage of funds to ensure the normal operation of treatment facilities [Belyavskiy, Tymochko 2009: 41–46; Bondar, Belyavskiy, Satalkin, Pylypczuk 2011: 42–51].

Currently under ecologization understand the process of sequential introduction of technological, managerial solutions to increase the efficiency of natural resources to maintain quality of the environment – is the main requirement of modernity in a global environmental crisis. In socio-economic terms, it is based

on environmentally housekeeping, in technically – on the “green” technologies of production [Bondar, Belyavskiy, Satakin, Pylypczuk 2011: 42–51].

Greening production – a purposeful process of continuous environmental awareness and culture, training management and production personnel, the introduction of environmental approaches: engineering and economic methods and mechanisms for planning, management, environmental management systems, auditing, harmonizing the interaction of industrial and ecological systems. In particular, the clearing of emissions and discharges from pollutants, upgrading technologies, including trapping emissions, discharges, use of solid waste as secondary raw materials, the introduction of environmental legal, methodological, legal and administrative regulations, the production of modern cleaning equipment should receive priority position [*Environmental audit...* 2000].

**Aim of the study** is grounding of the environmental certification of industrial facilities and its improvements to enhance environmental monitoring and control. An important step in achieving this goal would be the adoption of the Law of Ukraine “On environmental certification” with the expansion and renewal of the Law of Ukraine “On Environmental Audits” (2004).

### 3. The main material

Ecological (environmental) Passport – a comprehensive document containing description of the relationship of any natural or industrial facility with the environment. It contains general information about the facility, the raw materials used: type, scope, its environmental friendliness, energy consumption, occupied area, number of employees, the technological scheme of production, products, environmental means: treatment plant for emissions, discharges, places of storage of waste, its toxicity, quantity, disposal.

The aim of the ecological certification is to establish of quantitative and qualitative characteristics of the nature user: raw materials, fuel, energy, and quantitative and qualitative characteristics of environmental pollution emissions, discharges (effluents), solid waste, artificial radiation, receiving specific indicators of use the natural resources, the contamination by enterprise of environment, that allow to analyze of production technology, its equipment compared with the best national and foreign enterprises, and also the information about damage to the environment of production.

Content of ecological passport should reflect:

- The transition from studying the effects of environmental pollution to extensive, differentiated assessment of each object-pollutant or related groups of the objects that have a negative impact on the environment;
- The transition from the consideration of the total emissions to specific rates per unit of production, which is compared with the best international performance in this area.

Ecological passport coordinate with local offices Nature Conservation and its departments (protection of air, water, land, flora and fauna). Passport approved by the head of the company which is responsible for its design and reliability of the data contained in it. Ecopassport has the information intended for the following purposes:

- Environmental impact assessment of emissions, discharges, solid waste of companies and determine of the payments for nature use;
- Establishment of MPE, MPD, MPL, MPI and other environmental parameters (noise, vibration, electromagnetic, radioactive radiation, heat etc.);
- Planning of environmental measures and analysis of its effectiveness;
- Efficient the use of material resources, including energy, raw materials etc.;
- Realization of the environmental expertise and the environmental audits (scheduled, unscheduled, special);
- Monitoring of compliance with the applicable environmental legislation, environmental standards and regulations.

Structure of environmental passport of an industrial enterprise is described in detail in the literature, as to discuss the improve of environmental certification of industrial objects that shall be in accordance with and subject to the interstate standard GOST 17.0.0.04 – 90 “The Nature Conservancy. Environmental Passport of Industrial Enterprise. Fundamentals” and further developed techniques allowing for the certification of specific objects.

Environmental certification should ensure compliance with legal and regulatory requirements in environmental management, compliance technological regimes, effective use of production capacity, planning, organizing environmental activities and on the basis of the above parameters to analyze the environmental and economic condition. This will allow to identify the causes of negative impact of the object and adjust its effect on the environment, using targeted planning, to improve of necessary environmental events, even with the increase in production (services). It makes sense to create a system of mutually passports for integrated environmental trends in the characteristics of the natural resource potential of specific areas, natural features and marine areas [Bondar, Belyavskiy, Satalkin, Pylypczuk 2011: 42–51].

The International standards for environmental management systems in enterprises and organizations recognized in Ukraine effective tools in the field of environmental protection [International Standardization Organization]. They were submitted with ISO 14000 and published and adopted as a State in 1997. The first in Ukraine was certified according to ISO 14001 Open JSC “Concern Styrene” in 2002, today more than 100 national enterprises certified according to the requirements of this standard. Such certification (registration – in the terminology of ISO) is a prerequisite for marketing products in international markets. Moreover, the EU announced its intention to allow for highly competitive mar-

ket only products certified companies under the European scheme of environmental management and auditing (EMAS).

The aim of the revision of international standards was the clarification of certain items and ensure their compliance with ISO 9001:2000. As a result, replaced three standards ISO 14000 (14010, 14011, 14012) to standard ISO 19011:2003, which extracted concepts, principles, procedures to requirements of environmental audits. Later accepted State Standard of Ukraine ISO 14015:2005 “Environmental management. Environmental assessment of manufacturing facilities and organizations (ISO 14015:2001, IDT)”, which was introduced from January 1, 2007.

In 2004 came into force the Law of Ukraine “On Environmental Audits”, which created the legal framework for the implementation of environmental audits. Unfortunately, they have remained undeveloped due to failure to comply with the final provisions of the Law with respect to its internal harmonization with other Laws of Ukraine, legal acts. The state has not appreciated the importance of environmental audit in the implementation of the national policy of sustainable development and hasn't enhanced environmental requirements for owners of industrial enterprises and corporations. Therefore, the effects of adverse impacts on environment of energy facilities, agrosphere, transportation, mining, manufacturing industries have become much more dangerous. There was an urgent need for environmental certification not only industrial facilities, but also areas, water areas, protected network, tourism and recreation industry [Law of Ukraine...; Shapoval 2010].

The first step in this important process would be the draft Law of Ukraine “On environmental certification” and the typical structure of ecological passports for different objects, including industrial.

## **Conclusions**

National environmental management system should be linked to European environmental policies through coordination and harmonization of the legal and regulatory framework of both parties.

Environmental certification can actively contribute to addressing problematic issues of environmental protection, conservation and restoration of natural systems, ecosystems. Implementation of the system of benefits depends on the environmental audit of it as an important instrument of environmental policy for sustainable development, efficiency methodological approaches, functional tasks of environmental management: corporate, industrial, government, national.

## **Literature**

Belyavskiy G.A., Tymochko T.V. (2009), *Environmental Certification of human activity – an important means of greening the economy and improving national ecological security* / G.A. Belyavskiy, T.V. Tymochko // Proceedings of the Third Ukrainian Ecological

- Congress “Restructuring and greening the economy in the context of Ukraine's transition to sustainable development” – K.: Center Ekol. Educ. and Inform., p. 41–46.
- Bondar A., Belyavskiy G., Satalkin Yu., Pylypczuk M. (2011), *Environmental auditing: international experience and domestic realities* / A. Bondar, G. Belyavskiy, Yu. Satalkin, M. Pylypczuk // “Proceedings of the National Academy of Sciences”, № 4, p. 42–51.
- Environmental audit: Teach. manual* (2000) / V.J. Shevchuk, Y.M. Satalkin, V.M. Nawrocki et al. – K.: “High School”, 344 p.
- International Standardization Organization. – [Electronic resource] – Access to information center: <http://www.iso.org/iso/home.html>
- Law of Ukraine “On the Fundamentals (strategy) of the State Environmental Policy of Ukraine till 2020”.
- Shapoval M.I. (2010), *Fundamentals of standardization, quality control and certification: Tutorial*. – 3rd ed., Revised. and add. – K.: Europe. Univ of Finance inform. systems manage. and Business, 210 p.
- Sobczyk W. (2002), *Substancje obce w żywności: żywność bezpieczna*, Kraków.

### **Abstract**

Consider environmental certification of facilities in Ukraine, which could contribute to addressing problematic issues of environmental protection, conservation and restoration of natural systems, ecosystems. Unfortunately, the state has not appreciated the importance of environmental audit in the implementation of the national policy of sustainable development and enhanced environmental requirements for owners of industrial enterprises and corporations.

**Key words:** ecological Passport, environmental Audit, environmental Management, European Standards Series ISO, environmental Policy.