

Public Safety and Information Obligations for Upper-Tier Establishments

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Abstract. The operation of the upper-tier establishments, which are prone to a major accident hazard, poses a real threat to the public in terms of health and potential environmental pollution. Therefore, the norms of EU directives seek to introduce as much transparency as possible to the operation of upper-tier establishments. The purpose of this article is to give an overview of the rules concerning the issue of information provision by the establishment to both the public and the relevant state and EU authorities. The following part of the article will provide a brief analysis of how the posting of public information on the websites of the upper-tier establishments looks like in practice.

Introduction

The issue of establishments posing a risk of a major industrial accident due to the fact that they possess hazardous substances is an important part of each country's social safety regulations. The idea of unified EU regulations was born after the 1976 industrial disaster in Seveso, Italy. The release of large quantities of dioxin into the air at the time caused an environmental disaster in the area adjacent to the site. In particular, animals suffered as a result of this major industrial accident, dying *en masse* after coming into contact with the poisonous substance [1,2]. The measures taken by the European Community culminated in the enactment of the so-called Seveso I Directive in 1982 [3]. Unfortunately, subsequent tragic industrial disasters that occurred in the following years, such as Bhopal 1984, Chernobyl 1986 and Schweizerhalle 1986, meant that EU regulations needed to be clarified and amended. The result was the Seveso II Directive of 1996 [4], and the one currently in force is the Seveso III Directive of 2012, which regulates in detail the activities of upper-tier establishments. The Directive takes the subject of providing information to the public very seriously. The Seveso III Directive [5] implements the provisions of Council Decision of 17 February 2005 on the conclusion of the Convention on access to information, public participation in decision-making and access to justice in environmental matters [6]. It results in introducing obligations for the operator of a high-risk facility to communicate information to the public.

One of the goals of the Seveso III Directive is to improve the level and quality of information that is made available to the public.



Information obligations for upper-tier establishment

In order to ensure safety, upper-tier establishments are required to provide information on both issues related to the production process, the possession of hazardous substances and the establishment's fulfillment of its organizational responsibilities [7].

Public information relating to the operation of the upper-tier establishments can be divided into three types:

- preventive information regarding actions to prevent the occurrence of a major accident - known as "pre-pre" information,
- information concerning behavior in the event of a major accident - called "pre-post" information,
- information provided after the occurrence of the accident - called "post-post" information [8].

Information on the upper-tier establishment is directed to three audiences:

- the public,
- the relevant authorities (in Poland these will be: The State Fire Service and The Environmental Protection Inspectorate),
- the relevant institutions of the European Union.

Both types of information, the one directly for the public and the one for authorities and institutions, have an impact on public safety.

Information directed to the public

Information that goes directly to the public is regulated in Article 19 and Annex V of the Seveso III Directive. The changes in the Seveso Directive show how the importance of informing the public about the operation of upper-tier establishments has increased over the years. Table 1 shows how the scope of the information obligation has changed over the last 30 years.

Table 1. Changes in the scope of the information obligation between 1982 and 2012 in the Seveso Directives (source: own study based on Seveso Directives)

Year	The legal act	Meaning of the provision
1982	Council Directive 82/501/EEC of 24 June 1982 on the major-accident hazards of certain industrial activities – Seveso I	Art. 8(1) "Member states shall ensure that persons liable to be affected by a major accident originating in a notified industrial activity within the meaning of article 5 are informed in an appropriate manner of the safety measures and of the correct behavior to adopt in the event of an accident".
1988	Council Directive 88/610/EEC of 24 November 1988 amending Directive 82/501/EEC on the major-accident hazards of certain industrial activities [9]	The 1988 amendment to the Seveso I Directive clarified what should be included in public information. A list of information elements is included in Annex VII to the directive - "items of information to be communicated to the public in application of article 8 (1). The information should include the following: <ul style="list-style-type: none"> – the name and address of the enterprise, – who is obliged to provide further information, – confirmation that the establishment is subject to the provisions of the Directive with the notification submitted to the competent authority, – an explanation in simple words of the activities of the establishment,

Year	The legal act	Meaning of the provision
		<ul style="list-style-type: none"> – the common names of the hazardous substances and preparations on the site with an indication of their main characteristics, – general information on major accident hazards and their potential consequences, – information on how to warn and inform the population in the event of a major accident, – Information on actions and behavior that the population should take in case of an accident, – Confirmation that the plant is obliged to cooperate with emergency services to cope with accidents and minimize their effects, – information on the off-site emergency plan, – information on where the further relevant information can be obtained.
1996	Council Directive 96/82/EC of 9 December 1996 on the control of major-accident hazards involving dangerous substances – Seveso II	<p>In the Seveso II Directive, the issues related to informing the interested public were included in Article 13. It added an obligation to verify the information provided to the public at least once every 3 years. The list of elements that public information should contain is included in Annex V of the directive. The only difference from the previous version was the change of name from the off-site emergency plan to the external emergency plan.</p>
2012	Directive 2012/18/Eu Of The European Parliament And Of The Council of 4 July 2012 on the control of major-accident hazards involving dangerous substances, amending and subsequently repealing Council Directive 96/82/EC – Seveso III	<p>In the Seveso III Directive, issues of public information are included in Article 14 and its elements in Annex V. According to Article 14, information prepared under Annex V should be available electronically at all times. In addition, the safety report and the inventory of hazardous substances should be available upon request, subject to information covered by company confidentiality. The list of information contained in Annex V is divided into two parts, the first of which applies to all establishments covered by the provisions of the Seveso III Directive, while the second refers to the upper-tier establishments. Information common to all establishments should include:</p> <ul style="list-style-type: none"> – the data of the operator of the establishment or the name of the establishment, – confirmation that the establishment is subject to the directive, – an explanation in simple terms of the plant's activities, – providing the names of hazardous substances present on the site, – general information on how the population should behave in the event of a major accident, – information about the date of the inspection that will be carried out by the relevant authority, <p>and where additional information can be obtained.</p>

Year	The legal act	Meaning of the provision
		Upper-tier establishments additionally inform about: <ul style="list-style-type: none"> – the general nature of major accidents and their potential danger to people and the environment, along with scenarios for the course of the accident, – confirmation of cooperation with emergency services to minimize the effects of the accident, – the relevant information from the external emergency plan – the possibility of transboundary effects of major accidents if the plant is located near the border with another country.

The first Seveso Directive stated that an establishment that may pose a risk of a major accident should inform those exposed about safety measures and how to proceed in the event of an accident. This provision provided very general guidelines in this regard. The breakthrough came in 1988, when the amendment resulted in an annex to the directive that included items of information. The Seveso II Directive clarified certain terms and indicated the obligation to update the data contained in the information. On the other hand, the Seveso III Directive introduced the division of establishments into the lower-tier and upper-tier establishments and assigned corresponding information obligations to them.

In addition, the Seveso III Directive regulates issues related to: providing information on documentation stored by the upper-tier establishment, access to the safety report, external emergency plan or inventory of hazardous substances [10].

Information for the Authorities

Another duty for the upper-tier establishment is to provide relevant information to the services and the authorities related to the site where the establishment operates. The operator of the upper-tier establishment is obliged to:

1. report the fact of meeting the criterion of an upper-tier establishment to the relevant authority of the State Fire Service. This information should include the following data:
 - information on the operator of the establishment with the address of residence or registered office,
 - the address of the establishment and its website
 - legal title data of the establishment,
 - information about the nature of the establishment's activities and the type of installation and safety systems on site,
 - the nature, quantity and the characteristics of the dangerous substances, including the dangerous substance stored, taken into consideration for the classification of the establishment as an upper-tier establishment,
 - a description of the terrain in the immediate vicinity of the establishment (of particular relevance if there are factors which could increase the risk of an industrial accident).
2. provide information on major accidents, including:
 - produce immediate notification of the fact of a major accident to the competent authority of the State Fire Service and the provincial inspector for environmental protection,
 - inform the above-mentioned authorities without undue delay, and updating it as the situation changes:
 - produce information on the circumstances of the industrial accident and the hazardous substances involved,

- publish data making it possible to assess the human, material and environmental consequences of the accident,
- produce information on all actions taken to limit the effects of the industrial accident and prevent its recurrence.

The competent authorities of the State Fire Service are obliged to publish all data obtained from the operator of the establishment, in the form of submitted information and documentation, on the website of the Public Information Bulletin. The list of this information is contained in Article 267 of the Environmental Protection Act and these include:

- Information on approved, accepted or positively assessed documents such as safety report, external emergency plans or major accident prevention policy,
- information on notifications of the upper-tier establishments,
- information on planned inspections of the upper-tier establishments,
- information on the possibility for the public to participate in the procedure for drawing up the external emergency plan,
- emergency instructions for the public,
- information on the inventory of dangerous substances contained in the upper-tier establishments.

The inclusion of this information is an additional source of information for the public, concerning the operation of upper-tier establishments.

Information for the European Commission

One of the aims of the Seveso III Directive is to provide the public with the best possible information on the risks to life and limb and to the environment arising from the operation of the upper-tier establishments. To ensure this and to be able to control the correct implementation of the Directive, the European Commission, collects information from the Member States. The information is provided by the Minister for Climate Affairs, who obtains it from the operators of the plant through the authorities of the State Fire Service and the Environmental Inspectorate. The European Commission is informed of:

- industrial accidents, with a description and analysis of their consequences;
- national experiences with accident prevention measures;
- lower-tier and upper-tier establishments;
- the recognition of hazardous substances as not posing an industrial accident hazard.

The Major Accident Hazards Bureau of the Joint Research Centre (JRC) of the European Commission has created the Minerva portal, which contains a collection of technical information and tools to support policy on major accident hazards. This portal also contains two databases:

- eMARS - the Major Accident Reporting System, established by the Seveso I Directive, (currently operating electronically). Its purpose is to facilitate the exchange of lessons learned from accidents and incidents involving dangerous substances. Entry into this database is mandatory for the upper-tier establishments operating in EU Member States [11].
- eSPIRS - is an electronic version of the SPIRS (Seveso Plants Information Retrieval System); the database was created in 2001 by the JRC at the request of the European Commission's Directorate-General for the Environment (DG ENV). The Seveso III Directive required EU Member States to register the upper-tier and lower-tier establishments in this database[12].

Information obligation - Research results

According to Article 261a of the Environmental Law [13], the information made public should include 7 points:

- 1) the designation of the operator of the upper-tier establishment;

- 2) information about the notification of the establishment to the relevant authorities, the communication of the major accident prevention policy to them and information that establishment is subject to Seveso Directive;
- 3) a description of the activity of the establishment;
- 4) a summary of the substances stored, including their names or categories and the hazards they may cause;
- 5) information on how to warn and instruct the public to behave in the event of an accident, which has been agreed with the competent authorities of the State Fire Service;
- 6) information on the preparation of the safety report;
- 7) a list of the main potential industrial accident scenarios with the safety measures that can be taken.

This information should be posted and made permanently available on the websites of the establishments. And they should also be updated in a way that is understandable to the average citizen.

On the basis of those guidelines, 40 websites of establishments with a high risk of a major industrial accident were analyzed, which constitutes 1/5 of all the establishments of that category situated in the territory of Poland.

The websites of all the establishments contained obligatory information. However, a frequent problem was their location in the structure of the website, causing difficulties in finding them. Sometimes it was necessary to use a web browser to find a file with information on the prevention of major accidents. Table 2 shows examples of establishments with the places on the website where the above information was located.

In the absence of legislation standardizing where information on an upper-tier establishment should be located on a website, each establishment approaches this issue differently. The result is that it is difficult for an average citizen to access this information.

Table 2. *The examples of data on the location of the public information on the potential risk posed by the upper-tier establishment (source: own study)*

No.	Name of the establishment	Website tab	File name
1.	3M Wrocław Sp. z o. o. ul. Kowalska 143 51-424 Wrocław	Information on security measures	PDF file - Information on safety measures and how to deal with major accidents
2.	ADAMA Manufacturing Poland S.A., ul. Sienkiewicza 4 56-120 Brzeg Dolny	Quality and Environmental > Safety measures	PDF file - Information on safety measures and how to deal with major accidents.
3.	Guotai - Huarong (Poland) Sp. z o.o. ul. Powstańców Śląskich 2-4, 53-333 Wrocław	About us > Upper-Tier Establishment	PDF file – Information of the Upper-Tier Establishment
4	Anwil S.A., ul. Toruńska 222, 87-805 Włocławek	Responsible business > Environmental protection > Accident protection	PDF file Information on hazards occurring, preventive measures applied and actions to be taken in the event of an accident on the premises of ANWIL S.A.
5	Bałtyk-Gaz Sp. z o.o. , 84-230 Rumia, ulica Sobieskiego 5 Magazyn Gazu w Bydgoszczy	Safety measures	nformation on safety measures and how to proceed in the event of a major

	85-461 Bydgoszcz, ul. Ołowiana 41,		industrial accident at the gas storage facility of Bałtyk- Gaz in Bydgoszcz
6	Solino S.A. Inowrocławskie Kopalnie, ul. Świętego Ducha 26a, 88-100 Inowrocław, Województwo kujawsko-pomorskie	About company > Our standards > Process safety	PDF file - Information on safety measures and on how to deal with a major industrial accident at the upper-tier establishment
7	TRANSGAZ S.A. 21- 512 Zalesie Wólka Dobryńska 15	Information on risks	PDF file - Information on safety measures and how to deal with a major industrial accident at the TRANSGAZ S.A. transshipment terminal.
8.	Bialchem Group Sp. z o.o. 15-062 Białystok, ul. Warszawska 39 adres zakładu 21-512 Zalesie Wólka Dobryńska 15	Terminal	PDF file - Information on the existing hazards, the anticipated effects of these hazards, the preventive measures applied and the actions that are being taken in the event of an industrial accident at the Bialchem Group Transshipment Terminal in Wólka Dobryńska.
9.	Grupa Azoty Zakłady Azotowe PUŁAWY S.A., 24-100 Puławy, Al. Tysiąclecia Państwa Polskiego 13	Responsible business > For safety	PDF file Safety in the Azoty Puławy Group
10.	BATERPOL S.A. ul. Obr. Westerplatte 108, 40-335 Katowice,	About company > Upper-Tier Establishment	Text on website – About The Upper-Tier Establishment

Another problem is the arbitrary description of the information file and its form. For the most part, the information is provided by the establishments in a separate PDF file which can be downloaded from the website, but there are also situations in which the information is merely the content of a web page.

As a rule, the data contained in the separate file are carefully prepared and contain detailed and comprehensive information on the functioning of the establishment and on how to warn the public in the event of a major accident. In most cases, they are written in a way that is understandable to the average citizen. On the other hand, there were rare cases of establishments posting only brief information, aiming only to meet the statutory minimum.

Summary

The aim of the provisions of the Seveso III Directive is to prevent a major industrial accident or to minimize the negative effects, should the accident occur. One instrument for achieving this objective is to provide as much information as possible on the risks associated with the operation of the upper-tier establishment. In order to reach all persons concerned, this information must be provided in an accessible form and be available at all times. And although all analyzed websites of the upper-tier establishments contained the mandatory information, it was often very difficult to reach to access it.

The data presented show that establishments take their obligations seriously; unfortunately, the lack of standardization in terms of posting public information on the website means that it is often not accessible to the public. A solution to this problem would be to create uniform rules for the

publication of information related to the safety of citizens and to implement them, at least in the form of recommendations or good practices for the upper-tier establishments.

In the past, public safety has been repeatedly compromised by both the regular operations of businesses and emergency situations. Nowadays, safety systems are much more sophisticated and reliable; however, there is always a risk of accidents. A particular case is represented by relatively small metal processing establishments [14] that, due to the technologies used, handle toxic substances or generate such substances as waste during their operations. Welding facilities [15], surface treatment operations [16], various types of coatings application [17, 18], including special coatings [19, 20], and window manufacturing [21] can be mentioned in this regard. Given the substantial resources involved in the construction and maintenance of protective systems, a thorough identification of hazards is essential. Comparative analyses [22], complexity reduction methods [23], methods supporting analysis of small sample sizes [24, 25], as well as traditional [26-28] or non-classical [29-31] methods of industrial statistics, come to the aid in this regard.

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