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## **Ordinance on Protection against Major Accidents (Major Accidents Ordinance, MAO)**

of 27 February 1991 (Status as of 1 August 2019)

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*The Swiss Federal Council,*

on the basis of Articles 10 paragraph 4 and 39 paragraph 1 of the Federal Act of 7 October 1983<sup>1</sup> on the Protection of the Environment (EPA) and Article 47 paragraph 1 of the Waters Protection Act of 24 January 1991<sup>2,3</sup>  
*ordains:*

### **Section 1    General Provisions**

#### **Art. 1            Purpose and scope**

<sup>1</sup> The purpose of this Ordinance is to protect the public and the environment against serious harm or damage resulting from major accidents.

<sup>2</sup> It applies to:

- a.<sup>4</sup> establishments where the threshold quantities for substances, preparations or special wastes specified in Annex 1.1 are exceeded;
- b.<sup>5</sup> establishments where an activity involving genetically modified or pathogenic organisms or alien microorganisms subject to compulsory containment is carried out which is to be assigned to Class 3 or Class 4 in accordance with the Containment Ordinance of 9 May 2012<sup>6</sup>;
- c.<sup>7</sup> railway installations in accordance with Annex 1.2a;

AS 1991 748

<sup>1</sup> SR 814.01

<sup>2</sup> SR 814.20

<sup>3</sup> Amended by No I of the O of 13 Feb. 2013, in force since 1 April 2013 (AS 2013 749).

<sup>4</sup> Amended by No II 8 of the O of 18 May 2005 on the Repeal and Amendment of Ordinances in connection with the Commencement of the Chemicals Act, in force since 1 Aug. 2005 (AS 2005 2695).

<sup>5</sup> Amended by No I of the O of 29 April 2015, in force since 1 June 2015 (AS 2015 1337).

<sup>6</sup> SR 814.912

<sup>7</sup> Amended by No I of the O of 29 April 2015, in force since 1 June 2015 (AS 2015 1337).

- d. transit roads, as defined in the Ordinance of 6 June 1983<sup>8</sup> on Transit Roads, where dangerous goods are transported or transhipped in accordance with the Ordinance of 17 April 1985<sup>9</sup> on the Carriage of Dangerous Goods by Road (SDR) or the relevant international agreements;
- e. the Rhine, where dangerous goods are transported or transhipped in accordance with the Ordinance of 29 April 1970<sup>10</sup> on the Carriage of Dangerous Goods on the Rhine (ADNR);
- f.<sup>11</sup> pipeline installations as defined in the Pipelines Ordinance of 26 June 2019<sup>12</sup> which meet the criteria specified in Annex 1.3.

<sup>2bis</sup> The enforcement authority may exempt establishments under paragraph 2 letter b from the scope of this Ordinance that:

- a. only carry out Class 3 activities with organisms in accordance with Annex 1.4 which, due to their properties, cannot spread uncontrollably among the public and in the environment; and
- b. due to their hazard potential, cannot seriously harm the public or the environment.<sup>13</sup>

<sup>3</sup> In individual cases, the enforcement authority may make the following establishments, transport routes or pipeline installations subject to this Ordinance if, on account of their hazard potential, they could cause serious harm to the public or damage to the environment:<sup>14</sup>

- a.<sup>15</sup> establishments handling substances, preparations or special wastes;
- b.<sup>16</sup> establishments where an activity involving genetically modified or pathogenic organisms or alien microorganisms subject to compulsory containment is carried out which is to be assigned to Class 2 in accordance with the Containment Ordinance, in consultation with the Swiss Expert Committee for Biosafety;
- c. transport routes outside establishments, where dangerous goods are transported or transhipped in accordance with paragraph 2;

<sup>8</sup> [AS 1983 678, AS 1992 341 Art. 7]. Now: Transit Roads Ordinance of 18 Dec. 1991 (SR 741.272).

<sup>9</sup> [AS 1985 620, 1989 2482, 1994 3006, 1995 4425 Annex 1 No II 11 4866, 1997 422 No II, 1998 1796 Art. 1 No 18 and Art. 6, 1999 751 No II, 2002 419 1183, AS 2002 4212 Art. 29 para. 1]. Now: the O of 29 Nov. 2002 (SR 741.621).

<sup>10</sup> [AS 1971 1957, 1977 768, 1983 486, 1987 1454, 1990 1356]. Now: O of 3 March 2010 (SR 747.224.141).

<sup>11</sup> Inserted by No I of the O of 13 Feb. 2013 (AS 2013 749). Amended by Annex No 2 of the Pipelines Ordinance of 26 June 2019, in force since 1 Aug. 2019 (AS 2019 2205).  
<sup>12</sup> SR 746.11

<sup>13</sup> Inserted by No I of the O of 29 April 2015, in force since 1 June 2015 (AS 2015 1337).

<sup>14</sup> Amended by No I of the O of 13 Feb. 2013, in force since 1 April 2013 (AS 2013 749).

<sup>15</sup> Amended by No II 8 of the O of 18 May 2005 on the Repeal and Amendment of Ordinances in connection with the Commencement of the Chemicals Act, in force since 1 Aug. 2005 (AS 2005 2695).

<sup>16</sup> Amended by No I of the O of 29 April 2015, in force since 1 June 2015 (AS 2015 1337).

d.<sup>17</sup> pipeline installations as defined in the Pipelines Ordinance which do not meet the criteria specified in Annex 1.3.<sup>18</sup>

<sup>4</sup> This Ordinance does not apply to installations and forms of transport which are subject to legislation on nuclear energy and radiological protection, insofar as the associated radiation could cause harm to the public or damage to the environment.<sup>19</sup>

<sup>5</sup> The provisions of Article 10 EPA are directly applicable to establishments or transport routes which, in the case of exceptional events, could cause serious harm to the public or damage to the environment not arising from substances, preparations, special wastes or dangerous goods, or from genetically modified or pathogenic organisms or alien organisms subject to compulsory containment.<sup>20</sup>

## Art. 2 Definitions

<sup>1</sup> An *establishment* comprises installations as defined in Article 7 paragraph 7 EPA which have closely related operations and are in close proximity to each other (operating area).

<sup>2</sup> ...<sup>21</sup>

<sup>3</sup> The *hazard potential* is the sum of the effects which could arise from the quantities and properties of the substances, preparations, special wastes, organisms or dangerous goods in question.<sup>22</sup>

<sup>4</sup> A *major accident* is an exceptional event occurring in an establishment, on a transport route or in a pipeline installation which has significant effects:<sup>23</sup>

- a. outside the operating area;
- b. on or near the transport route;
- c.<sup>24</sup> near the pipeline installation.

<sup>5</sup> The *risk* is determined by the extent of the possible harm to the public or damage to the environment resulting from major accidents and the likelihood of their occurrence.

<sup>17</sup> Inserted by No I of the O of 13 Feb. 2013 (AS **2013** 749). Amended by Annex No 2 of the Pipelines Ordinance of 26 June 2019, in force since 1 Aug. 2019 (AS **2019** 2205).

<sup>18</sup> Amended by Annex 5 No 2 of the Containment O of 25 Aug. 1999, in force since 1 Nov. 1999 (AS **1999** 2783).

<sup>19</sup> Amended by No I of the O of 13 Feb. 2013, in force since 1 April 2013 (AS **2013** 749).

<sup>20</sup> Amended by No I of the O of 29 April 2015, in force since 1 June 2015 (AS **2015** 1337).

<sup>21</sup> Repealed by No I of the O of 29 April 2015, with effect from 1 June 2015 (AS **2015** 1337)

<sup>22</sup> Amended by No I of the O of 29 April 2015, in force since 1 June 2015 (AS **2015** 1337).

<sup>23</sup> Amended by No I of the O of 13 Feb. 2013, in force since 1 April 2013 (AS **2013** 749).

<sup>24</sup> Inserted by No I of the O of 13 Feb. 2013, in force since 1 April 2013 (AS **2013** 749).

## Section 2 Principles of Prevention

### Art. 3 Safety measures<sup>25</sup>

<sup>1</sup> The person responsible for an establishment, a transport route or a pipeline installation shall take all appropriate measures to reduce risk that are available in accordance with the state of the art of safety technology, supplemented by personal experience, and which are economically viable. These shall include measures to reduce the hazard potential, to prevent major accidents and to limit the effects thereof.<sup>26</sup>

<sup>2</sup> When measures are selected, account shall be taken of operational and local factors which could cause major accidents, as well as actions of unauthorised persons.

<sup>3</sup> When measures are implemented, account shall be taken in particular of the principles laid down in Annex 2, and in particular the measures in accordance with Annexes 2.2–2.5.<sup>27</sup>

### Art. 4<sup>28</sup>

### Art. 5 Summary report

<sup>1</sup> The person responsible for an establishment must submit a summary report to the enforcement authority. It shall include:

- a. a concise description of the establishment, together with a general plan and information on the surrounding area;
- b.<sup>29</sup> a list of the maximum quantities of the substances, preparations or special wastes present in the establishment which exceed the threshold quantities specified in Annex 1.1, together with the applicable threshold quantities;
- c.<sup>30</sup> the risk report specified in Article 8 of the Containment Ordinance of 9 May 2012<sup>31</sup>;
- d. documents drawn up in the preparation of any property and corporate liability insurance policies;
- e. details of safety measures;
- f. an estimate of the extent of possible harm to the public or damage to the environment resulting from major accidents.

<sup>25</sup> Amended by No I of the O of 29 April 2015, in force since 1 June 2015 (AS **2015** 1337).

<sup>26</sup> Amended by No I of the O of 13 Feb. 2013, in force since 1 April 2013 (AS **2013** 749).

<sup>27</sup> Amended by No I of the O of 29 April 2015, in force since 1 June 2015 (AS **2015** 1337).

<sup>28</sup> Repealed by No I of the O of 29 April 2015, with effect from 1 June 2015 (AS **2015** 1337).

<sup>29</sup> Amended by No II 8 of the O of 18 May 2005 on the Repeal and Amendment of Ordinances in connection with the Commencement of the Chemicals Act, in force since 1 Aug. 2005 (AS **2005** 2695).

<sup>30</sup> Amended by Annex 5 No 7 of the Containment O of 9 May 2012, in force since 1 June 2012 (AS **2012** 2777).

<sup>31</sup> SR **814.912**

<sup>2</sup> The person responsible for a transport route shall submit a summary report to the enforcement authority. It shall include:

- a. a concise description of the structural and technical design of the transport route, together with a general plan and information on the surrounding area;
- b. data on the volume and structure of traffic on the transport route and accident statistics;
- c. details of safety measures;
- d. an estimate of the likelihood of a major accident causing serious harm to the public or damage to the environment.

<sup>3</sup> The person responsible for a pipeline installation shall submit a summary report to the enforcement authority. It shall include:

- a. a concise description of the structural and technical design of the pipeline installation, together with a general plan and information on the surrounding area;
- b. data on the type, composition and physical state of the substances and preparations transported, together with the approved operating pressure and accident statistics;
- c. details of safety measures;
- d. an estimate of the likelihood of a major accident causing serious harm to the public or damage to the environment.<sup>32</sup>

<sup>4</sup> ...<sup>33</sup>

<sup>5</sup> The enforcement authority shall exempt the person responsible for a through road from the duty to submit a summary report if, based on the information available, it is able, without a summary report, to assess as valid the assumption that the likelihood of major accidents causing serious harm is sufficiently low.<sup>34</sup>

#### **Art. 6** Assessment of the summary report, risk report

<sup>1</sup> The enforcement authority shall verify that the summary report is complete and correct.

<sup>2</sup> In particular, it shall verify:

- a. in the case of establishments, whether the estimate of the extent of possible harm or damage (Art. 5 para. 1 let. f) is plausible;
- b. in the case of transport routes, whether the estimate of the likelihood of a major accident causing serious harm or damage (Art. 5 para. 2 let. d) is plausible;

<sup>32</sup> Amended by No I of the O of 13 Feb. 2013, in force since 1 April 2013 (AS **2013** 749).

<sup>33</sup> Inserted by No I of the O of 13 Feb. 2013 (AS **2013** 749). Repealed by No I of the O of 29 April 2015, with effect from 1 June 2015 (AS **2015** 1337)

<sup>34</sup> Inserted by No I of the O of 29 April 2015, in force since 1 June 2015 (AS **2015** 1337).