



CONTROL OF MAJOR ACCIDENT HAZARDS INVOLVING DANGEROUS SUBSTANCES REGULATIONS

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1. Scope of this Guide.

This guide provides an introduction to the main requirements of the European Communities (Control of Major Accident Hazards Involving Dangerous Substances) Regulations, S.I. No. 476 of 2000, which were signed by the Minister for Enterprise, Trade and Employment on 21st December 2000.

2. Introduction.

The Regulations implement European Council Directive 96/82/EC on the control of major accident hazards involving dangerous substances (also known as the “Seveso 2” Directive). They replace the European Communities (Major Accident Hazards of Certain Industrial Activities) Regulations 1986 to 1992. The purpose of these Regulations is to ensure at establishments where dangerous substances are handled, a high level of protection for people, property and the environment, through measures aimed at:

- (i) the prevention of a major accident,
- (ii) the use of any necessary measures to limit the consequences of such an accident, should it occur.

A major accident is defined in the Regulations as “an occurrence such as a major emission, fire or explosion resulting from uncontrolled developments in the course of the operation of any establishment, leading to a serious danger - (a) to human health, or (b) to the environment, whether immediate or delayed, inside or outside the establishment, and involving one or more dangerous substances”.

This guide considers the Regulations in respect of :

- Application of the Regulations
- General duties of an establishment operator.
- Submission of Notifications by establishments.
- Preparation of a Major Accident Prevention Policy (MAPP).
- Safety reports for particular establishments.
- Emergency planning.
- Domino effects



- Review of modifications.
- Functions of competent authorities
- Land-use planning.
- Public access to information
- Charge for services.

The National Authority for Occupational Safety and Health, also known as the Health and Safety Authority (HSA), has been designated as the Central Competent Authority for enforcement of the Regulations.

There is provision to appoint public authorities, such as the local authorities, health boards, police and harbour authorities, as local competent authorities for the purposes of emergency planning.

3. Application of the Regulations

The Regulations apply to establishments that present a major accident hazard by virtue of the presence of dangerous substances. Two key terms must be considered in establishing whether the Regulations apply to a particular activity, namely “establishment” and “dangerous substance”.

The term “establishment” means the whole area under the control of an operator where dangerous substances are present in one or more installations or locations. This includes not only those installations or storage areas where dangerous substances are present, but also all other activities at that place. This is a crucial concept in that it recognises that all aspects of the establishment can be affected by or indeed contribute to a major accident.

An “operator” is defined as one who operates or holds an establishment/installation or has been given, by or under any enactment, decisive economic power in the technical operation thereof.

A “dangerous substance” is a substance, mixture or preparation which is either (a) listed in Part 1 of the First Schedule to the Regulations or (b) generally considered to fulfil any of the categories laid down in Part 2 of the First Schedule (Appendix 1 of this Guide). As indicated by the definition of “presence of dangerous substances” in the Regulations, a dangerous substance may be present as a raw material, product or preparation, by-product, residue or intermediate. It also may be generated during loss of control of an industrial chemical process.

In determining the categories of dangerous substances as laid out in Part 2 of the first schedule, classification of the substances or preparations present at an establishment should be established in accordance with the relevant European Directives and their current



“Adaptations to Technical Progress” (ATP). Information on the classification of a particular substance should be available from the supplier. However, substances or preparations manufactured or formulated on site, for which such information may not be available, need to be self-classified (provisional classification) by the site operator, using the principles laid down in the Directives. Where substances/preparations are exempt from the classification and labelling requirements of these Directives but possess equivalent properties in terms of major accident potential, the procedures for self/provisional classification also apply. Areas where this may be relevant include medicinal and cosmetic products.

A change in the classification of a substance due to changes in the classification and labelling Directives can result in establishments becoming subject to the Regulations, even though they have not altered their activities.

In establishing whether the Regulations apply to a particular establishment the primary criterion is therefore whether dangerous substances are present in quantities equal to or in excess of those listed in the First Schedule to the Regulations (Appendix 1). Certain categories are aggregated together to calculate the quantity of substances relevant for the application of the Regulations. If the inventory equals or is greater than that of column 2 but less than column 3 of Appendix 1 the establishment is termed “lower tier”, if equal to or above that of column 3 it becomes “upper tier”.

The likely maximum quantities on site at any one time must be taken into account when estimating the establishment’s inventory. Quantities up to and including 2% of the qualifying threshold can be ignored if their location is such that they cannot act as an initiator of a major accident elsewhere on site.

Except for the exclusions outlined in 3.1 below these Regulations apply to any establishment, not just traditional industrial situations, once it’s inventory meets the criteria for the presence of dangerous substances as laid down in the First Schedule to the Regulations.

3.1 Exclusions from Application of the Regulations:

There are certain exclusions in respect of the type of establishment, namely

1. Property occupied by the Defence Forces
2. Hazards created by ionising radiation
3. The occurrence outside an establishment of
 - [a] transport of dangerous goods
 - [b] intermediate temporary storage associated with [a]
 - [c] handling of dangerous substances at docks, wharves or marshalling yards
 - [d] pipelines



4. Activities of the extractive industries associated with exploration for, and exploitation of, minerals in mines and quarries or by means of boreholes.

The hazards created by ionising radiation are dealt with in specific specialised legislation, and the remaining exemptions reflect the fact that, although each may present major accident potential, they do not fall easily within the framework of the legislation given their special needs or special hazards. However the Regulations do apply to a jetty or a railway siding where it is within an establishment.

The term “intermediate temporary storage” relates to those situations where goods are temporarily stored as part of a transport activity as happens at docks, marshalling yards, etc. Also it can be applied to locations where goods vehicles park for rest breaks or overnight stops or where loads are deposited for a short period as part of a multistage transport operation. The term should not be applied to situations where loads are deliberately reorganised into different loads or accumulated into larger loads so that there is a presence of dangerous substances, above the application thresholds, over an extended period at the establishment.

4. Duties of Establishment Operators.

The extent of an operator’s duties is determined by the inventory of dangerous substances that results in an establishment being classed as either lower or upper tier. The time allowed for implementation is determined by whether an establishment is defined as a “new” establishment, an “existing” establishment or an “other” establishment.

An establishment is defined as “new” if :

- a) it began construction or operation after 21st.December, 2000 (the commencement date of these Regulations), or
- b) in respect of which there has been a modification after the commencement of these Regulations which makes it a upper tier site
- c) it becomes an establishment subject to these Regulations by virtue of a modification taking place after the commencement date of these Regulations.

An establishment is defined as “existing” if it was subject to the European Communities (Major Accident Hazards of Certain Industrial Activities) Regulations, 1986 to 1992, either as a lower or upper tier site. [S.I. Nos. 292 of 1986, 194 of 1989 and 21 of 1992].

It is defined as “other” if prior to these Regulations it was not subject to the 1986 to 1992 Regulations.



4.1 Duties of Operators of Lower Tier Establishments.

Lower tier establishments are subject to requirements under:

- General Duties
- Notification to the HSA and the local planning authority
- Preparation and implementation of a major accident prevention policy
- Action in the event of a major accident
- Register of notifiable incidents.

4.1.1 General Duties

The operator of an establishment must take all necessary measures to prevent the occurrence of a major accident and to limit the consequences of any accident for people and the environment.

There is a requirement to:

- identify all major accident hazards and assess the consequences of any accident that could occur,
- provide and maintain:
 - safe plant,
 - safe systems of work,
 - safe means of access to/exit from all parts of the establishment,
- make arrangements for the safe handling of dangerous substances,
- provide the necessary information, instruction, equipment, training and supervision to ensure the occupational health and safety of people working at the establishment,
- use best practicable means to both prevent a major emission into the environment and to render harmless and inoffensive any substances that might be released,
- provide documentation in respect of any accident or dangerous occurrence,
- inform the Central Competent Authority as soon as an accident occurs,
- provide documentary proof that the requirements of the Regulations have been met.



4.1.2 Notification to the Health and Safety Authority and the local planning authority:.

4.1.2.1 Notification to the Health and Safety Authority:

This notification requirement is to enable the Authority to manage its inspection programmes more effectively, identify possible domino effects, monitor implementation by operators and provide information in respect of land-use planning considerations.

Operators of establishments are required to notify the Authority (H.S.A) of their existence, providing the following information, as laid down in the 3rd Schedule to the Regulations:

- a) the name or trade name of the operator and the full address of the establishment concerned;
- b) the registered place of business of the operator, with the full address;
- c) the name or position of the person in charge of the establishment, if different from (a);
- d) information sufficient to identify the dangerous substances or category of substances involved;
- e) the quantity and physical form of the dangerous substance or substances involved and their location(s), with such locations indicated on a scaled map of the establishment;
- f) the activity or proposed activity of the installation or storage facility;
- g) the immediate environment of the establishment (elements liable to cause a major accident or to aggravate the consequences thereof);
- h) the name of any establishment in proximity where the likelihood and the possibility or consequences of a major accident may be increased because of its location and inventory of dangerous substances.
- i) A map at a scale of not less than 1:5000 and clearly showing the location and the boundary of the establishment and the immediate environment as set out in paragraph (g) above.

The HSA is to be immediately informed in writing, in the event of any significant increase in the quantity, or a significant change in the nature or physical form, of a dangerous substance present, or any change in the processes employing it.

4.1.2.2 Notification to Planning Authority



The operator is required to send to the planning authority the details outlined in paragraphs (a),(d),(e),(g),(i) above, including confirmation that the establishment is subject to the Regulations.

4.1.2.3 Notification of Closure

In the event of permanent closure of an establishment, the operator must notify the HSA of the fact in writing.

4.1.3. Major Accident Prevention Policy [MAPP].

The operator must prepare and implement, through a safety management system, a written policy to deal with major accidents. This policy (MAPP) must take account of the elements identified below which are set out in greater detail in the 2nd Schedule of the Regulations;

- (a) the operator's overall aims and principles of action with respect to the control of major-accident hazards;
- (b) the part of the general management system which includes the organisational structure, responsibilities, practices, procedures, processes and resources for determining and implementing the major-accident prevention policy;
- (c) the following issues shall be addressed in respect of major hazards, by the safety management system:
 - (i) organisation and personnel;
 - (ii) identification and evaluation of major hazards;
 - (iii) operational control;
 - (iv) management of change;
 - (v) planning for emergencies;
 - (vi) monitoring performance;
 - (vii) audit and review.

The importance of the MAPP can be recognised in the fact that an analysis of the major accidents reported in the European Community to date indicates that, in the majority (90%) of cases, management error was the underlying cause. This error can manifest itself as deficiencies of organization, inadequate training, or simply failing to take into account the possibility of human error.

The MAPP is a policy document and must be sufficiently detailed to show that appropriate mechanisms are in place to service the above requirements, e.g. by reference to procedures, systems etc., but it does not need to contain in depth information such as the results of hazard studies or audits.



The E.U. Commission has published guidelines on preparing a MAPP and this can be copied from the E.U. Major Accidents Hazard Bureau Website at (<http://mahbsrv.jrc.it/>). A further useful support document to the preparation of a MAPP is the Health and Safety Authority 's publication on Workplace Health & Safety Management which provides guidelines on the implementation and maintenance of an occupational health, safety and welfare management system.

The Regulations require the MAPP to be available and implemented but it does not have to be forwarded to the HSA unless it forms part of a Safety Report for an upper tier site (see Section 4.2).

4.1.4 Action in the event of a major accident.

If a major accident occurs, the operator must -

- (a) immediately inform the HSA of that occurrence,
- (b) provide the HSA with the following information as soon as it becomes available -
 - (i) the circumstances of the accident,
 - (ii) the dangerous substances involved,
 - (iii) the data available for assessing the effects of the accident on man and the environment, and
 - (iv) the emergency measures taken,
- (c) inform the HSA of the steps envisaged to alleviate any medium-term or long-term effects of the accident and to prevent any recurrence of such an accident,
- (d) update the information provided if further investigation reveals additional facts which alter that information or the conclusions drawn.

The scene of a major accident must not be disturbed except to administer medical aid, extinguish fires, secure the safety of people/ place or prevent damage to the environment. Incidents of the type listed in the seventh and eighth schedules to the Regulations are immediately notifiable to the HSA.

4.1.5 Register of Notifiable Incidents:

The operator must maintain a register of notifiable incidents with entries to be kept for a minimum period of 10 years.



4.2. Duties of Operators of Upper Tier Establishments:

The obligations on upper tier establishments include those for lower tier, as outlined above plus :

- Production of a Safety Report
- Preparation of an internal emergency plan
- Provision of information to those responsible for off-site emergency plans
- Provision of information for the safety of the public.

Also, in relation to notification requirements for new upper tier sites, the notification to the HSA does not have to include information already contained in the Safety Report.

4.2.1 Safety Report:

4.2.1.1 General

The requirement to prepare a safety report applies to all establishments where dangerous substances are present in quantities equal to or greater than the thresholds specified in column 3 of Parts 1 and 2 of the First Schedule of the Regulations (Appendix 1). For newly built establishments there is a requirement for a pre-construction and a pre-operation Safety Report.

The safety report must provide sufficient information to the Central Competent Authority (the HSA) to enable decisions to be made in terms of the siting of new activities or developments around existing establishments.

The safety report should particularly demonstrate that the operator has identified the major accident hazards and assessed the risks associated with the installations and other activities in the establishment. The safety report should present the results of the hazard analysis and risk assessment performed by the operator, the extent of which should be commensurate to the risk. In general the hazard analysis should document the identification of hazard sources, the likelihood of major accidents and their consequences.

Ongoing review of safety systems is encouraged by the requirement to carry out internal safety audits and to review the safety report at least every five years, or more often where justified by new facts or technical knowledge about safety matters (e.g. arising from accident or 'near-misses' analysis) or developments in knowledge concerning the assessment of hazards.

An updated inventory of the dangerous substances present in the establishment is also required.



A flexible presentation of the report is allowed to take into account that certain information is likely to be common to a number of establishments owned by the same operator, or may have been prepared in response to other legislation.

The Safety Report in written form must be supplied in triplicate to the HSA at least 6 months prior to the construction and the operation of a new upper tier establishment, and neither construction nor operation may begin until the operator has received the conclusions of the HSA's examination. The HSA is allowed to permit a shorter timeframe but must do so in writing. Whilst there is no prescribed format it is recommended that the easy revision of sections be facilitated.

If a site becomes an upper tier establishment by virtue of a change in the classification/provisional classification the operator has one year to submit the required Safety Report.

Content of the Safety Report

A Safety Report must meet the requirements of the fourth schedule of the Regulations and address the following issues:

- I. Information on the management system and on the organisation of the establishment with a view to major accident prevention
- II. Presentation of the environment of the establishment
 - A. description of the site and its environment including the geographical location, meteorological, geological, hydrographic conditions and, if necessary, its history;
 - B. identification of installations and other activities of the establishment which could present a major-accident hazard;
 - C. description of areas where a major accident may occur.
- III. Description of the installation
 - A. description of the main activities and products of the parts of the establishment which are important from the point of view of safety, sources of major-accident risks and conditions under which such a major accident could happen, together with a description of proposed preventive measures;
 - B. description of processes, in particular the operating methods;
 - C. description of dangerous substances:
 1. inventory of dangerous substances including
 - the identification of dangerous substances: chemical name, CAS number, name according to IUPAC nomenclature,
 - the maximum quantity of dangerous substances present or likely to be present;
 2. physical, chemical, toxicological characteristics and indication of the hazards, both immediate and delayed for man and the environment;



3. physical and chemical behaviour under normal conditions of use or under foreseeable accidental conditions.

IV. Identification and accidental risks analysis and prevention methods

- A. detailed description of the possible major-accident scenarios and their probability or the conditions under which they occur including a summary of the events which may play a role in triggering each of these scenarios, the causes being internal or external to the installation;
- B. assessment of the extent and severity of the consequences of identified major accidents;
- C. description of technical parameters and equipment used for the safety of installations.

V. Measures of protection and intervention to limit the consequences of an accident

- A. description of the equipment installed in the plant to limit the consequences of major accidents;
- B. organisation of alert and intervention;
- C. description of mobilisable resources, internal or external;
- D. summary of elements described in A, B, and C above necessary for drawing up the internal emergency plan prepared in compliance with Article 11.

Safety Reports and Environmental Information:

Following is a non-exhaustive list of the types of environmental factors to be considered in the Safety Report including potential impact. Relevant government departments where information can be obtained in are in italics.

- Areas of scientific / ecological interest, national nature reserves, marine nature reserves (land/water), Natura 200 site, Ramsar sites (land/water), other designated land, scarce habitat (land/water), widespread habitat (land/water), protected or particular species, freshwater and estuarine habitats and the marine environment. - *Duchas (National Parks and Wildlife), Department of Arts, Heritage, Gaeltacht & the Islands and the Marine Institute*
- Aquifers or groundwater. - *Geological Survey of Ireland*
- Architectural and built environment.- *Architectural Protection Section of the Department of Arts, Heritage, Gaeltacht and the Islands*
- Water abstraction points for drinking water and bathing waters. - *Water and Sanitary Services Section of Local Authorities, and the Water and Sanitary Services Section of the Department of Environment and Local Government*
- Water quality and river catchment systems. - *Environment or Sanitary Services Section of Local Authorities, Water Quality Section of Department of Environment and Local Government and Environmental Protection Agency*
- Soil or sediment. - *Teagasc*
- Fish and shellfish waters. - *Department of the Marine and Natural Resources*



The Environmental Protection Agency has a number of publications and summaries of data covering many of the above issues in general (www.epa.ie). Additional information can be found with a number of non-government organisations that are listed on ENFO information sheets or the Enfo web site <http://www.enfo.ie>.

The Major Accident Hazards Bureau of the E.U. Commission has published a guidance document on the preparation of a safety report to meet the requirements of Council Directive 96/82/EC (Seveso II) under ISBN 92-828-1451-3 from the Office for Official Publications of the European Communities. This and other publications relevant to the Directive can be copied from the MAHB Website (<http://mahbsrv.jrc.it/>).

4.2.1.2 Revision of Safety Reports:

Safety Reports must be reviewed with revised details submitted to the HSA:

- Within 5 years of the last submitted report
- Prior to a modification to the establishment which could have significant repercussions for the prevention of major accidents
- When justified by new circumstances or new technical knowledge
- When requested by the H.S.A

The H.S.A. shall also be informed in writing if the 5-year periodic review does not lead to a revision of the Safety Report.

4.2.1.3 Limitation of information in safety reports

Where it can be demonstrated to the satisfaction of the H.S.A that particular substances present at the establishment are in a state incapable of creating a major accident hazard, then the Authority may limit the information required in the safety report to those matters which are relevant to the prevention of residual major accident hazards and the limitation of their consequences for man and the environment. A list of the establishments for which a limited safety report has been accepted by the HSA must be provided to the European Commission together with the reasons for granting the limitation.

Such limitation must be in accordance with harmonised criteria established by the E.U. Commission Decision of 26th June, 1998, as shown below.

1. Physical form of substance

Substances in solid form, such that, under both normal conditions and any abnormal conditions which can reasonably be foreseen, a release, of matter or of energy, which could create a major accident hazard, is not possible.



2. Containment and quantities

Substances packaged or contained in such a fashion and in such quantities that the maximum release possible under any circumstances cannot create a major accident hazard.

3. Location and quantities

Substances present in such quantities and at such distances from other dangerous substances (at the establishment or elsewhere) that they can neither create a major accident hazard by themselves nor initiate a major accident involving other dangerous substances.

4. Classification

Substances, which are defined as dangerous substances by virtue of their generic classification in Annex I, Part 2 to Directive 96/82/EC, but which cannot create a major accident hazard, and for which therefore the generic classification is inappropriate for this purpose.

4.2.2 Internal Emergency Plans:

An operator must prepare an internal emergency plan in the case of new establishments prior to the start of operation.

The objective of the emergency plan is:

- to contain and control incidents so as to minimise the effects, and to limit damage to man, the environment and property;
- to implement the measures necessary to protect man and the environment from the effects of major accidents;
- to communicate the necessary information to the public and to the services or authorities concerned in the area;
- to provide for the restoration and clean-up of the environment following a major accident.

The plan should be prepared following consultation with employees, contractors, local competent authorities and others as may be appropriate e.g. material suppliers. It should be reviewed and tested at intervals not exceeding 3 years. The plan should contain the following information, as set out in the Fifth Schedule to the Regulations:



- (a) Names or positions of persons authorised to set emergency procedures in motion and the person in charge of and co-ordinating the on-site mitigatory action.
- (b) Name or position of the person with responsibility for liaising with the authority responsible for the external emergency plan.
- (c) For foreseeable conditions or events which could be significant in bringing about a major accident, a description of the action which should be taken to control the conditions or events and to limit their consequences, including a description of the safety equipment and the resources available.
- (d) Arrangements for limiting the risks to persons on site including how warnings are to be given and the actions persons are expected to take on receipt of a warning.
- (d) Arrangements for providing early warning of the incident to the authority responsible for setting the external emergency plan in motion, the type of information which should be contained in an initial warning and the arrangements for the provision of more detailed information as it becomes available.
- (f) Arrangements for training staff in the duties they will be expected to perform, and where necessary co-ordinating this with off-site emergency services.
- (g) Arrangements for providing assistance with off-site mitigatory action.

4.2.3 Provision of information for the external emergency plan:

The operator of an establishment must provide the relevant local competent authority with the information necessary for that authority to prepare or amend an external emergency plan for the establishment. This information should include the nature, extent and likely effects of possible major accidents, both inside and outside the relevant establishment, and must be supplied in sufficient time and in such form as the authority requests to allow it to meet its obligations.

The HSA may determine that there is no need for an external emergency plan, on the basis of the information provided by the operator. This, in practice, prevents the preparation of unnecessary external emergency plans and ensures that the resources of the competent authorities are thereby released for other work. The HSA must however give reasons for its decision. A procedure to



confirm decisions taken under this provision using E.U. overview arrangements prevents the procedure being used inconsistently across the European Community.

4.2.4 Information in relation to emergency plans to be communicated to the public:

The operator must supply information, on the appropriate safety measures and the steps to be taken in the event of an accident to members of the general public who are habitually in an area (known as the “specified area”) likely to be affected by a major accident originating in an “upper-tier” establishment. This information must be provided without a member of the public having to request it.

The extent of the specified area shall be determined by the operator with the agreement of the HSA or by the HSA alone in the absence of agreement. The calculation of the specified area may relate to potential consequences or be risk based such as an individual risk of 1 in a million of serious injury (1 in 3 million for sensitive developments e.g. hospitals) arising from the worst credible scenarios. Such scenarios are not the worst possible but rather a more likely outcome in the event of a serious mishap.

The Regulations provide for an operator to enter into agreement with a local competent authority for the supply of this information.

The information required is contained in the Sixth Schedule and is reproduced below:

1. Name of operator and address of the establishment.
2. Identification, by position held, of the person giving the information.
3. Confirmation that the establishment is subject to the Regulations and/or administrative provisions implementing this Directive and that the notification referred to in Article 6 (3) or the safety report referred to in Article 9 (1) has been submitted to the competent authority.
4. An explanation in simple terms of the activity or activities undertaken at the establishment.
5. The common names or, in the case of dangerous substances covered by Part 2 of Annex 1, the generic names or the general danger classification of the substances and preparations involved at the establishment which could give rise to a major accident, with an indication of their principal dangerous characteristics.
6. General information relating to the nature of the major-accident hazards, including their potential effects on the population and the environment.
7. Adequate information on how the population concerned will be warned and kept informed in the event of a major accident.



8. Adequate information on the actions the population concerned should take, and on the behaviour they should adopt, in the event of a major accident.
9. Confirmation that the operator is required to make adequate arrangements on site, in particular liaison with the emergency services, to deal with major accidents and to minimise their effects.
10. A reference to the external emergency plan drawn up to cope with any off-site effects from an accident. This should include advice to cooperate with any instructions or requests from the emergency services at the time of an accident.
11. Details of where further relevant information can be obtained, subject to the requirements of confidentiality laid down in national legislation.

This information must be supplied before the operation of a new establishment or in the case of an existing or other establishment not later than the time set down for the submission of a safety report. It must be reviewed by the operator every three years and, where necessary, repeated and updated, at least if there is any modification having significant repercussions on major accident hazards. The maximum period between the repetition of the information to the public must be in any case no longer than five years. The information must be made permanently available to the public.

5. Domino Effect Establishments.

The Central Competent Authority (HSA) is required to identify establishments or groups of establishments where the likelihood and the possibility or consequence of a major accident may be increased due to the proximity of such establishments to each other (domino effect).

The Regulations require that:

- (a) suitable information is exchanged in an appropriate manner to enable these establishments to take account of the nature and extent of the overall danger of a major accident in their major accident prevention policies, management and security systems, safety reports (where required) and internal emergency plans;
- (b) upper-tier establishments co-operate with each other with regard to provision of safety information to the public, preparation of internal emergency plans and provision of information to the local competent authorities for the preparation of external emergency plans.

Note that these co-operation provisions are only applicable between operators of sites who are already subject to the Regulations and do not apply to relations between “Seveso” and non-“Seveso” companies.



6. Modifications.

Because of the potential for plant or process modifications to increase the risk of a major accident, an operator is required, in the event of the modification of an installation, establishment, storage facility, or process or of the nature or quantity of dangerous substances,

- To review, and where necessary revise, the MAPP and the associated management systems and procedures;
- to review, and where necessary revise, the safety report and inform the HSA of the details of the revision in advance of initiation of the modification.

The HSA shall be immediately informed of any significant increase or significant change in the nature of a dangerous substance present or any change in the processes employing it.

7. External Emergency Plans/Functions of Local Competent Authorities:

The local competent authorities must prepare an emergency plan (referred to as an ‘external emergency plan’) for action outside an upper-tier establishment in relation to possible major accidents at that location. Such plans must be prepared following notification by the HSA that -

- (a) an establishment is proposed to be located or is already in operation in its functional area, or
- (b) an establishment is in operation or is likely to be in operation outside its functional area which, in the opinion of the HSA could cause a major accident within its functional area. This establishment may be within the State and its internal waters or may be in another jurisdiction.

Preparation of a plan will involve consultation with:

- other local competent authorities
- the establishment operator
- the H.S.A
- others such as the general public.

The plan will contain the following information as set out in the Fifth Schedule to the Regulations:



- (a) Names or positions of persons authorised to set emergency procedures in motion and of persons authorised to take charge of and co-ordinate off-site action.
- (b) Arrangements for receiving early warning of incidents, and alert and call-out procedures.
- (b) Arrangements for co-ordinating resources necessary to implement the external emergency plan.
- (d) Arrangements for providing assistance with on-site mitigatory action.
- (e) Arrangements for off-site mitigatory action.
- (f) Arrangements for providing the public with specific information relating to the accident and the behaviour which it should adopt.
- (g) Arrangements for the provision of information to the emergency services of other Member States in the event of a major accident with possible transboundary consequences.

The plan must be specific to the particular establishments that created the duty in the first instance.

The Regulations require that an external emergency plan should be prepared by the relevant local competent authority using such information as it has available -

- (a) prior to start of operation of the establishment,
- (b) within the period of four months after being notified by the HSA of the operation of an establishment or the proposed operation of an establishment,

Emergency plans shall be reviewed, revised where necessary and tested at intervals not exceeding 3 years.

The HSA may decide, by virtue of the information contained in a safety report that the requirement for a local competent authority to prepare an external emergency plan shall not apply. In this case, the HSA will provide the reason for its decision in writing to the local competent authority (see also Section 4.2.3).

8. Functions of the Central Competent Authority- The Health and Safety Authority



The Health and Safety Authority, as Central Competent Authority under the Regulations, is obliged to carry out certain duties as detailed in Directive 96/82/EC. These include the organisation of a system of inspections or other measures of control appropriate to the type of establishment involved and the examination of Safety Reports and their updates. The inspection or other control measures must be sufficient for a planned and systematic examination of the systems being employed at the establishment, whether of a technical, organisational or managerial nature, so as to ensure, in particular,

- that the operator can demonstrate that he has taken appropriate measures, in connection with the various activities involved in the establishment, to prevent major accidents;
- that the operator can demonstrate that he has provided appropriate means for limiting the consequences of major accidents, on site and off site;
- that the data and information contained in the safety report, or any other report submitted, adequately reflects the conditions in the establishment;
- that information in respect of safety measures and the requisite behaviour in the event of an accident has been supplied to the public.

In addition to the requirement to carry out inspections, the HSA must:

- 1) fully investigate major accidents and ensure that any necessary remedial actions are taken,
- 2) identify and communicate with those establishments where it considers there to be a risk of a “domino” effect,
- 3) examine Safety Reports and communicate its conclusions to operators,
- 4) prohibit the use or bringing into use of any establishment or part of where the measures taken by the operator for the prevention or mitigation of major accidents are seriously deficient,
- 5) notify the local competent authorities that there is an establishment subject to the Regulations operating or proposed to be operating in their functional areas,
- 6) provide advice to planning authorities in respect of the risks arising from establishments,
- 7) notify the European Commission of the occurrence of major accidents,



- 8) inform the European Commission of those establishments where the Authority has agreed to a limitation of information in the Safety Report on the basis that a substance is incapable of creating a major-accident hazard,
- 9) exchange information with the European Commission on the experience acquired with regard to major accidents .

9. Land-Use Planning:

This provision is a new key element in respect of preventing and limiting the consequences of major accidents in that it requires Member States to take into account establishments that are subject to the requirements of Directive 96/82/EC in their land-use policies and/or other relevant policies. The H.S.A is required to provide advice to planning authorities in respect of the risks arising from major accident hazard establishments.

The stated objectives of land-use planning are to be achieved through controls on:

- (a) the siting of new establishments;
- (b) modifications of an existing installation, establishment, storage facility or process, or changes in the nature or quantity of dangerous substances which could have significant repercussions on major accident hazards;
- (c) new developments surrounding existing establishments such as transport links, establishments frequented by the public and residential areas, where the siting or developments are such as to increase the risk or consequences of a major accident.

Land-use policy must take account of the need to maintain appropriate distances between major accident hazard establishments and residential areas, areas of substantial public use and areas of particular natural sensitivity or interest, and, in the case of existing establishments, of the need for additional technical measures so as not to increase the risks to people.

It is important to note that these provisions are to be applied to all establishments subject to the provisions of the Regulations. The HSA will determine a consultation distance for each establishment and communicate this information to the relevant planning authority, which in turn will seek the advice of the H.S.A. if a planning application relates to a development within the consultation distance. Individual applications may not require referral if the H.S.A. has already provided its general advice for the area.

Process changes in establishments will require planning permission if they increase the off-site hazards or risks. Application of the Major Accident Prevention Policy (MAPP) requires operators to systematically identify their major hazards and assess the likelihood and severity of same. This assessment enables the operator to generate a geographical based hazard/risk profile



for its current situation. If a proposed process change increases hazards or risks beyond the current profile then it triggers an application through the normal planning process.

The role of the H.S.A. with respect to land-use planning is advisory, with planning decisions remaining with the statutory planning bodies as heretofore.

10. Public Access to Information:

The operator of a upper tier establishment must make the Safety Report for the site available to any member of the public who requests it and is entitled to levy a reasonable charge for the service. An operator may limit the content of the Safety Report made available to the public for reasons of industrial, commercial or personal confidentiality, public security or national defence but only with the written consent of the HSA.

Information received by the HSA or a local competent authority pursuant to these Regulations will be regarded as coming within the scope of the Access to Information on the Environment Regulations, 1998 (S.I. No. 125 of 1998) as well as the Freedom of Information Act, 1997 (No. 13 of 1997) with the exception of information relating to:

- (a) the confidentiality of the deliberations of the competent authorities and the European Commission or
- (b) the confidentiality of international relations and national defence, or
- (c) public security, or
- (d) the confidentiality of preliminary investigation proceedings or of current legal proceedings, or
- (e) commercial and industrial secrets, including intellectual property, or
- (f) personal data and/or files, or
- (a) data supplied by a third party if that party asks for them to be kept confidential,

11. Charges.

Details of fees for the processing of notifications and safety reports are available from the Health and Safety Authority. Charges by the local competent authorities for the testing of external emergency plans are yet to be determined.



12. Sources of Information:

Queries about this legislation should be addressed to the Process Industries Unit of the HSA, telephone 01-614-7000.

The Regulations can be downloaded from the website of the HSA at www.hsa.ie.

The Major Accident Hazards Bureau (MAHB) of the European Commission maintains a website on the “Seveso “ Directive at <http://mahbsrv.jrc.it>.

APPENDIX 1 - APPLICATION OF THE DIRECTIVE

INTRODUCTION

1. This Annex applies to the presence of dangerous substances at any establishment within the meaning of Article 3 of this Directive and determines the application of the relevant Articles thereof.
2. Mixtures and preparations shall be treated in the same way as pure substances provided they remain within concentration limits set according to their properties under the relevant Directives given in Part 2, Note 1, or their latest adaptation to technical progress, unless a percentage composition or other description is specifically given.
3. The qualifying quantities set out below relate to each establishment.
4. The quantities to be considered for the application of the relevant Articles are the maximum quantities which are present or are likely to be present at any one time. Dangerous substances present at an establishment only in quantities equal to or less than 2 % of the relevant qualifying quantity shall be ignored for the purposes of calculating the total quantity present if their location within an establishment is such that it cannot act as an initiator of a major accident elsewhere on the site.
5. The rules given in Part 2, Note 4 governing the addition of dangerous substances, or categories of dangerous substances, shall apply where appropriate.

PART 1

Named substances

Where a substance or group of substances listed in Part 1 also falls within a category of Part 2, the qualifying quantities set out in Part 1 must be used.

Column 1	Column 2	Column 3
Dangerous substances	Qualifying quantity (tonnes) for the application of	
	Articles 6 and 7	Article 9
Ammonium nitrate	350	2500
Ammonium nitrate	1250	5000
Arsenic pentoxide, arsenic (V) acid and/or salts	1	2
Arsenic trioxide, arsenious (III) acid and/or salts		0,1
Bromine	20	100
Chlorine	10	25
Nickel compounds in inhalable powder form (nickel monoxide, nickel dioxide, nickel sulphide, trinickel disulphide, dinickel trioxide)		1
Ethyleneimine	10	20
Fluorine	10	20
Formaldehyde (concentration \geq 90 %)	5	50
Hydrogen	5	50
Hydrogen chloride (liquefied gas)	25	250
Lead alkyls	5	50
Liquefied extremely flammable gases (including LPG) and natural gas	50	200
Acetylene	5	50
Ethylene oxide	5	50
Propylene oxide	5	50
Methanol	500	5000
4, 4-Methylenebis (2-chloraniline) and/or salts, in powder form		0,01

Column 1	Column 2	Column 3
Dangerous substances	Qualifying quantity (tonnes) for the application of	
	Articles 6 and 7	Article 9
Methylisocyanate		0,15
Oxygen	200	2000
Toluene diisocyanate	10	100
Carbonyl dichloride (phosgene)	0,3	0,75
Arsenic trihydride (arsine)	0,2	1
Phosphorus trihydride (phosphine)	0,2	1
Sulphur dichloride	1	1
Sulphur trioxide	15	75
Polychlorodibenzofurans and polychlorodibenzodioxins (including TCDD), calculated in TCDD equivalent		0,001
The following CARCINOGENS:		
4-Aminobiphenyl and/or its salts, Benzdine and/or salts, Bis(chloromethyl) ether, Chloromethyl methyl ether, Dimethylcarbamoyl chloride, Dimethylnitrosomine, Hexamethylphosphoric triamide, 2-Napthylamine and/or salts, 1,3 Propanesultone and 4-nitrodiphenyl	0,001	0,001
Automotive petrol and other petroleum spirits	5000	50000

NOTES

1. Ammonium nitrate (350 / 2500)

This applies to ammonium nitrate and ammonium nitrate compounds in which the nitrogen content as a result of the ammonium nitrate is more than 28 % by weight (compounds other than those referred to in Note 2) and to aqueous ammonium nitrate solutions in which the concentration of ammonium nitrate is more than 90 % by weight.

2. Ammonium nitrate (1250/5000)

This applies to simple ammonium-nitrate based fertilizers which comply with Directive 80/876/EEC and to composite fertilizers in which the nitrogen content as a result of the ammonium nitrate is more than 28 % in weight (a composite fertilizer contains ammonium nitrate with phosphate and/or potash).

3. Polychlorodibenzofurans and polychlorodibenzodioxins

The quantities of polychlorodibenzofurans and polychlorodibenzodioxins are calculated using the following factors:

Intentional Toxic Equivalent Factors (ITEF) for the congeners of concern (NATO/CCMS)			
2,3,7,8-TCDD	1	2,3,7,8-TCDF	0,1
1,2,3,7,8-PeDD	0,5	2,3,4,7,8-PeCDF	0,5
		1,2,3,7,8-PeCDF	0,05
1,2,3,4,7,8-HxCDD	0,1		
1,2,3,6,7,8-HxCDD	0,1	1,2,3,4,7,8-HxCDF	0,1
1,2,3,7,8,9-HxCDD	0,1	1,2,3,7,8,9-HxCDF	0,1
		1,2,3,6,7,8-HxCDF	0,1
1,2,3,4,6,7,8-HpCDD	0,01	2,3,4,6,7,8-HxCDF	0,1
OCDD	0,001	1,2,3,4,6,7,8-HpCDF	0,1
		1,2,3,4,7,8,9-HpCDF	0,01
		OCDF	0,01



(T = tetra, P = penta, Hx = hexa, HP = hepta, O = octa)

PART 2

Categories of substances and preparations not specifically named in Part 1

Column 1		Column 2	Column 3
Categories of dangerous substances		Qualifying quantity (tonnes) of dangerous substances as delivered in Article 3 (4), for the application of	
		Articles 6 and 7	Article 9
1.	VERY TOXIC	5	20
2.	TOXIC	50	200
3.	OXIDIZING	50	200
4.	EXPLOSIVE (where the substance or preparation falls within the definition given in Note 2 (a))	50	200
5.	EXPLOSIVE (where the substance or preparation falls within the definition given in Note 2 (b))	10	50
6.	FLAMMABLE (where the substance or preparation falls within the definition given in Note 3 (a))	5000	50000
7 a.	HIGHLY FLAMMABLE (where the substance or preparation falls within the definition given in Note 3 (b) (1))	50	200
7 b.	HIGHLY FLAMMABLE liquids (where the substance or preparation falls within the definition given in Note 3 (b) (2))	5000	50000
8.	EXTREMELY FLAMMABLE (where the substance or preparation falls within the definition given in Note 3 (c))	10	50
9.	DANGEROUS FOR THE ENVIRONMENT in combination with risk phrases:		
	(i) R50: 'Very toxic to aquatic organisms'	200	500
	(ii) R51: 'Toxic to aquatic organisms'; and R53: 'May cause long term adverse effects in the aquatic environment'	500	2000
10.	ANY CLASSIFICATION not covered by those given above in combination with risk phrases:		
	(i) R14: 'Reacts violently with water' (including R14/15)	100	500
	(ii) R29: 'in contact with water, liberates toxic gas'	50	200

NOTES

1. Substances and preparations are classified according to the following Directives (as amended) and their current adaptation to technical progress:

- Council Directive 67/548/EEC of 27 June 1967 on the approximation of the laws, Regulations and administrative provisions relating to the classification, packaging and labelling of dangerous substances ,
- Council Directive 88/379/EEC of 7 June 1988 on the approximation of the laws, Regulations and administrative provisions of the Member States relating to the classification, packaging and labelling of dangerous preparations ,



- Council Directive 78/631/EEC of 26 June 1978 on the approximation of the laws of the Member States relating to the classification, packaging and labelling of dangerous preparations (pesticides)¹

In the case of substances and preparations which are not classified as dangerous according to any of the above Directives but which nevertheless are present, or are likely to be present, in an establishment and which possess or are likely to possess, under the conditions found at the establishment, equivalent properties in terms of major-accident potential, the procedures for provisional classification shall be followed according to the relevant Article of the appropriate Directive.

In the case of substances and preparations with properties giving rise to more than one classification, for the purposes of this Directive the lowest thresholds shall apply.

For the purposes of this Directive, a list providing information on substances and preparations shall be established, kept up to date and approved by the procedure set up under Article 22.

2. An 'explosive' means:

- (a) (i) a substance or preparation which creates the risk of an explosion by shock, friction, fire or other sources of ignition (risk phrase R 2),
- (ii) a pyrotechnic substance is a substance (or mixture of substances) designated to produce heat, light, sound, gas or smoke or a combination of such effects through non-detonating self-sustained exothermic chemical reactions, or
- (iii) an explosive or pyrotechnic substance or preparation contained in objects;
- (b) a substance or preparation which creates extreme risks of explosion by shock, friction, fire or other sources of ignition (risk phrase R 3).

3. 'Flammable', 'highly flammable', and 'extremely flammable' in categories 6, 7 and 8 mean:

- (a) flammable liquids:
substances and preparations having a flash point equal to or greater than 21 °C and less than or equal to 55°C (risk phrase R 10), supporting combustion;
- (b) highly flammable liquids:
 - (i) - substances and preparations which may become hot and finally catch fire in contact with air at ambient temperature without any input of energy (risk phrase R 17),
 - substances which have a flash point lower than 55 °C and which remain liquid under pressure, where particular processing conditions, such as high pressure or high temperature, may create major-accident hazards;
 - (ii) substances and preparations having a flash point lower than 21 °C and which are not extremely flammable (risk phrase R 11, second indent);
- (c) extremely flammable gases and liquids:
 - (i) liquid substances and preparations which have a flash point lower than 0 °C and the boiling point (or, in the case of a boiling range, the initial boiling point) of which at normal pressure is less than or equal to 35 °C (risk phrase R 12, first indent), and
 - (ii) gaseous substances and preparations which are flammable in contact with air at ambient temperature and pressure (risk phrase R 12, second indent), whether or not kept in the gaseous or liquid state under pressure, excluding liquefied extremely flammable gases (including LPG) and natural gas referred to in Part 1, and
 - (iii) liquid substances and preparations maintained at a temperature above their boiling point.

4. The addition of dangerous substances to determine the quantity present at an establishment shall be carried out according to the following rule:

if the sum

$$q_1 / Q + q_2 / Q + q_3 / Q + q_4 / Q + q_5 / Q + \dots > 1$$

¹ OJ No L 206, 29.7.1978, p. 13. Directive as last amended by Directive 92/32/EEC (OJ No L 154, 5. 6. 1992, p. 1



where q_x = the quantity of dangerous substances x (or category of dangerous substances) falling within Parts 1 or 2 of this Annex,

Q = the relevant threshold quantity from Parts 1 or 2,

then the establishment is covered by the relevant requirements of this Directive.

This rule will apply for the following circumstances:

- (a) for substances and preparations appearing in Part 1 at quantities less than their individual qualifying quantity present with substances having the same classification from Part 2, and the addition of substances and preparations with the same classification from Part 2;
- (b) for the addition of categories 1, 2 and 9 present at an establishment together;
- (c) for the addition of categories 3, 4, 5, 6, 7a, 7b and 8, present at an establishment together.

Example of use of the AGGREGATION rule

A site with the following potential inventory:

- ✓ 3 tonnes of ethylene oxide (named substance with lower-tier threshold 5 tonnes, upper tier threshold 50 tonnes, classified EXTREMELY FLAMMABLE and TOXIC)
- ✓ 400 tonnes of methanol (named substance with lower-tier threshold 500 tonnes, upper tier threshold 5000 tonnes, classified HIGHLY FLAMMABLE and TOXIC)
- ✓ 3500 tonnes of miscellaneous flammable liquids meeting generic hazard category 6 “FLAMMABLE” (lower-tier threshold 5000 tonnes, upper tier threshold 50000 tonnes)
- ✓ 10 tonnes of LPG (named substance with lower-tier threshold 50 tonnes, upper tier threshold 200 tonnes, classified EXTREMELY FLAMMABLE)
- ✓ 1 tonne of miscellaneous substances meeting generic hazard category 8 “EXTREMELY FLAMMABLE” (lower-tier threshold 10 tonnes, upper tier threshold 50 tonnes)
- ✓ 5 tonnes of miscellaneous toxic substances meeting generic hazard category 2 “TOXIC” (lower-tier threshold 50 tonnes, upper tier threshold 200 tonnes)
- ✓ 15 tonnes of aqueous waste stream classified by operator as R50: “Very toxic to aquatic organisms” and therefore meeting generic hazard category 9 (I) “DANGEROUS FOR THE ENVIRONMENT” (lower-tier threshold 200 tonnes, upper tier threshold 500 tonnes)

Test for Lower-tier with use of the aggregation rule:

Oxidising, explosive and flammable substances group

$$\frac{3}{5} + \frac{400}{500} + \frac{3500}{5000} + \frac{10}{50} + \frac{1}{10} = 0.6 + 0.8 + 0.7 + 0.2 + 0.1 = 2.4$$

As this result is greater than 1, lower-tier requirements of SEVESO II apply but a check against upper-tier criteria is also necessary..



Test for Upper tier with use of the aggregation rule:

Oxidising, explosive and flammable substances group

$$\frac{3}{50} + \frac{400}{5000} + \frac{3500}{50000} + \frac{10}{200} + \frac{1}{50} = 0.06 + 0.08 + 0.07 + 0.05 + 0.02 = 0.28$$

Toxic and dangerous for the environment substances group

$$\frac{3}{50} + \frac{400}{5000} + \frac{5}{200} + \frac{15}{500} = 0.06 + 0.08 + 0.025 + 0.03 = 0.195$$

As neither of these results are greater than 1, the upper tier requirements of SEVESO II do not apply.