# WORKPLACE SAFETY AND HEALTH ACT (CHAPTER 354A)

## WORKPLACE SAFETY AND HEALTH (MAJOR HAZARD INSTALLATIONS) REGULATIONS 2016

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In exercise of the powers conferred by section 65 of the Workplace Safety and Health Act, the Minister for Manpower hereby makes the following Regulations:

#### PART 1

#### **PRELIMINARY**

#### **Citation and Commencement**

**1.** These Regulations may be cited as the Workplace Safety and Health (Major Hazard Installations) Regulations 2016 and come into operation on 1st July 2017.

#### **Definitions**

- 2.—(1) In these Regulations, unless the context otherwise requires
  - "dangerous substance" means any substance, mixture or preparation
    - (a) specified in Part 1 of the Second Schedule; or
    - (b) within a category specified in Part 2 of the Second Schedule, and present as a raw material, product, by-product or intermediate;
  - "emergency response plan" has the same meaning as in section 21 of the Fire Safety Act (Cap. 109A);
  - "major accident" means any occurrence (including a major emission, fire, or explosion) resulting from uncontrolled developments in the course of the operation of any major hazard installation, leading to serious danger to

- human health (whether immediate or delayed) inside or outside the major hazard installation;
- "major accident prevention policy" means a document setting out the policy with respect to the prevention of major accidents referred to in paragraph 1 of Part 2 of the Third Schedule;
- "process-related incident" refers to any incident in connection with any production, distribution, storage of dangerous substances within a major hazard installation, but does not include incident of loss of containment from ancillary equipment not connected to the process;
- "major hazard installation" means any premises which is specified in the First Schedule;
- "reportable incident" means any incident specified in the Fifth Schedule;
- "registered major hazard installation" means any premises registered as a major hazard installation under regulation 5;
- "safety and health management system" means a safety and health management system referred to under the Workplace Safety and Health (Safety and Health Management System and Auditing) Regulations 2009;
- "safety case" means a document prepared for the purposes described in Part 1 of the Third Schedule and comprise at least the information specified in Part 2 of the Schedule as is relevant for that purpose;
- "significant risk" means risk that is capable of causing a major accident or escalating the consequences of a major accident.
- (2) For the purpose of these Regulations
  - (a) where after the coming into force of these Regulations a factory becomes subject to these Regulations by reason of any increase in the quantity of dangerous substances present, any reference in these Regulations to the start of operation of a major hazard installation, is a reference to the time when the factory first becomes so subject;
  - (b) any reference in these Regulations to an existing major hazard installation is a reference to a factory whose operation commenced before the coming into force of these Regulations and which, on the coming into force of these Regulations, is a factory to which these Regulations apply; and
  - (c) any change made under regulation 12 or any modification made under regulation 13 shall be deemed to have significant repercussion with respect to the prevention of any major accident or limitation of consequences of any major accident if the change or modification
    - (i) introduces a new major accident hazard;

- (ii) changes the consequences or severity of an existing hazard;
- (iii) affects the control or mitigation measures put in place to ensure that the risks remains as low as reasonably practicable; or
- (iv) has implication for the initiation or escalation of other major accident hazards.

## Application

**3**. These Regulations apply in relation to all major hazard installations.

#### PART 2

#### REGISTRATION OF MAJOR HAZARD INSTALLATIONS

## Register of major hazard installations

- **4**.—(1) The Commissioner shall cause a register of major hazard installations to be kept and maintained in such form as the Commissioner may determine.
- (2) The register shall contain the building names (if any) and addresses of all major hazard installations registered under regulation 5 and such other particulars of such registered major hazard installations as the Commissioner may determine.

## Registration of major hazard installations

- **5.**—(1) Any person who desires to occupy or use any premises as a major hazard installation must register the premises as a major hazard installation.
- (2) An application under paragraph (1) to register any premises as a major hazard installation must
  - (a) be in such form and manner as the Commissioner may require;
  - (b) be accompanied by such particulars, information, statements and documents as the Commissioner may require; and
  - (c) be made at least 6 months before the major hazard installation starts operations or such shorter period as the Commissioner may allow in any particular case.
  - (3) On receipt of an application under paragraph (1), the Commissioner may
    - (a) register the premises as a major hazard installation, subject to such conditions as the Commissioner thinks fit, and enter in the register of major hazard installations such other relevant particulars pertaining to the applicant or the major hazard installation as the Commissioner thinks fit, and on payment of the fee specified in the Sixth Schedule, issue to the applicant a certificate of registration subject to such conditions as the Commissioner may think fit to impose; or

- (b) refuse to register the premises.
- (4) Where the Commissioner refuses to register the premises in respect of which an application under paragraph (1) has been made, the Commissioner shall give the applicant notice in writing of the reasons for his refusal.
- (5) A certificate of registration that is issued under paragraph (3)(a) in respect of any major hazard installation
  - (a) shall be valid for a period of 5 years, or for such other period as the Commissioner may determine in a particular case, unless it is earlier revoked in accordance with these Regulations; and
  - (*b*) may, on
    - (i) payment of the appropriate fee specified in the Sixth Schedule; and
    - (ii) submission, at least 6 months before the expiry of the certificate of registration, of such particulars, information, statements and documents as the Commissioner may require,

be renewed by the Commissioner for 5 years or such other period as the Commissioner may determine in a particular case, from the date immediately following that on which, but for its renewal, the certificate of registration would have expired.

- (6) Where a certificate of registration is revoked under regulation 8 or expires, the premises to which the certificate of registration relates must immediately cease to be registered as a major hazard installation under these Regulations.
- (7) Where a certificate of registration is suspended under regulation 8, the premises to which the certificate of registration relates must, during the period of suspension, cease to be registered as a major hazard installation under these Regulations.

## Power to require registration of major hazard installation in certain circumstances

- **6.**—(1) Notwithstanding regulation 5 but subject to paragraph (2), where the Commissioner is satisfied that any process or work involving any dangerous substance of quantities which is less than the threshold specified in Part 1 of the Second Schedule is being carried on in a factory in such a manner as to pose or be likely to pose a significant risk to the safety and health of persons, the Commissioner may by notice in writing, direct the occupier of the factory, within such time as may be specified in the notice, to apply to the Commissioner to register the factory as a major hazard installation under regulation 5 notwithstanding that the premises do not fall within the definition of a major hazard installation.
- (2) The Commissioner shall not exercise his powers under paragraph (1) unless the Commissioner has given the occupier of the factory concerned an opportunity to

show cause as to why the occupier should not be required to register the factory as a major hazard installation.

(3) Regulation 5(2)(a) and (b) and (3) to (7) shall apply to an application to register a major hazard installation made pursuant to paragraph (1).

## Change in relation to occupation, use or operation of major hazard installation

- 7.—(1) The occupier of a registered major hazard installation must notify the Commissioner thereof in such form and manner as the Commissioner may require
  - (a) if the occupier intends to permanently decrease the quantities of the dangerous substances present in the major hazard installation to quantities below the threshold specified in Part 1 of the Second Schedule, not less than 14 days before so decreasing the quantities of the dangerous substances; or
  - (b) if the occupier intends to cease the occupation or use of the major hazard installation, not less than 14 days before so ceasing.
- (2) Any person who contravenes paragraph (1)(a) or (b) shall be guilty of an offence and shall be liable on conviction to a fine not exceeding \$2,000.

## **Revocation and suspension of registration**

- **8.**—(1) If any registered major hazard installation becomes unfit for occupation or use as a major hazard installation by reason of failure to ensure that the major hazard installation is operated safely and competently, the Commissioner may, by notice in writing, direct the occupier of the registered major hazard installation to comply with such requirements as may be specified in the notice.
- (2) Where the occupier of the registered major hazard installation to whom any notice under paragraph (1) is given fails to comply with the notice, the Commissioner may
  - (a) suspend the certificate of registration of the major hazard installation for such period as the Commissioner thinks fit; or
  - (b) revoke the certificate of registration of the major hazard installation.
- (3) Where the Commissioner is satisfied that there has been a contravention of any condition of a certificate of registration, the Commissioner may
  - (a) suspend the certificate of registration of the major hazard installation for such period as the Commissioner thinks fit; or
  - (b) revoke the certificate of registration of the major hazard installation.
  - (4) The Commissioner may —

- (a) on the application of the occupier of a registered major hazard installation; or
- (b) on being satisfied that the occupier of a registered major hazard installation has ceased to occupy the premises,

revoke the certificate of registration of the major hazard installation.

- (5) The Commissioner must, before suspending or revoking any certificate of registration of a major hazard installation under paragraph (2), (3) or (4)(b), give to the occupier of the registered major hazard installation
  - (a) notice of his intention to suspend or revoke the certificate of registration; and
  - (b) a reasonable opportunity to submit reasons as to why the certificate of registration should not be suspended or revoked.
- (7) The suspension or revocation of the certificate of registration of a major hazard installation under paragraph (2), (3) or (4)(b) shall not take effect until the expiration of 21 days from the date on which the Commissioner's decision to suspend or revoke the certificate of registration was communicated to the occupier of the major hazard installation or, where an appeal against the decision is made to the Minister under regulation 9, until the appeal has been determined or withdrawn.
- (8) Where the certificate of registration of a major hazard installation has been suspended or revoked, the occupier of the major hazard installation must surrender the certificate of registration to the Commissioner within such time as the Commissioner may specify.
- (9) Any person who contravenes paragraph (8) shall be guilty of an offence and shall be liable on conviction to a fine not exceeding \$1,000.
- (10) The Commissioner may at any time, and for such reason as the Commissioner considers sufficient, reduce the period for which a certificate of registration has been suspended.

## **Appeals to Minister**

- **9.**—(1) Any applicant who is aggrieved by the Commissioner's decision with regards to
  - (a) registration of any premises as a major hazard installation; or
  - (b) renewal of the registration of any premise as a major hazard installation,

may, within 21 days after the date the applicant is notified of the decision, appeal in writing to the Minister against the decision in such form and manner as the Commissioner may determine.

- (2) Any occupier of a registered major hazard installation who is aggrieved by the Commissioner's decision to suspend or revoke the certificate of registration of that major hazard installation under regulation 8(2), (3) or (4)(b) may, within 21 days after the date the occupier is notified of the suspension or revocation, appeal in writing to the Minister against the decision in such form and manner as the Commissioner may determine.
- (3) Any occupier of a major hazard installation who is aggrieved by any direction of the Commissioner under regulation 5(5) and 6(1) may, within 7 days after the date the occupier receives the notice containing the direction, appeal to the Minister in writing against the direction in such form and manner as the Commissioner may determine.
- (4) Where an appeal is lodged under paragraph (1)(b), the registration of the major hazard installation concerned shall continue to remain in force until the appeal has been determined or withdrawn, as the case may be.
- (5) Where an appeal is lodged under paragraph (3), the direction appealed against shall not take effect until the appeal has been determined or withdrawn, as the case may be.
- (6) The Minister may determine an appeal under this regulation by confirming the refusal, decision or direction of the Commissioner or substituting that refusal, decision or direction with his decision in the appeal.
  - (7) The decision of the Minister in any appeal under this regulation shall be final.

#### Power to waive or refund fees

10. The Commissioner may, as the Commissioner thinks fit, waive or refund the whole or any part of the fees that are payable or that have been paid under these Regulations.

#### PART 3

#### **SAFETY CASE**

## Requirements of safety case prior to operation of major hazard installation

- 11.—(1) Subject to paragraph (3), any person who desires to occupy or use any premises as a major hazard installation must submit a safety case to the Commissioner at least 6 months before the start of the operation of the major hazard installation or such shorter period as the Commissioner may allow.
- (2) Upon the submission of the safety case under paragraph (1), the person must not start the operation of the major hazard installation until the person has received from the Commissioner the conclusion of the examination of the safety case.

- (3) In the case of an existing major hazard installation, the occupier of the major hazard installation must submit a safety case for the major hazard installation within such period as specified by the Commissioner.
- (4) Notwithstanding paragraph (2), an existing major hazard installation may continue to occupy or use the major hazard installation while waiting for the conclusion of the examination of the safety case from the Commissioner.
- (5) After receiving the notification on the conclusion of examination of the safety case, the occupier of the major hazard installation shall review and if necessary revise the safety case based on the conclusion of the examination of the safety case.
- (6) Where a revision of the safety case was made under paragraph (5), the occupier of the major hazard installation must forward the revised safety case to the Commissioner within such period as specified by the Commissioner.

#### Review of safety case

- **12**.—(1) The occupier of a major hazard installation must ensure that the safety case of the major hazard installation is reviewed at least once every 5 years.
- (2) Notwithstanding paragraph (1), the occupier of the major hazard installation must review the safety case when
  - (a) there is new fact or technical knowledge about safety and health matters relevant to the major hazard installation, including knowledge arising from analysis of accidents or near misses;
  - (b) there is any relevant development in knowledge on the assessment of major hazards; or
  - (c) the occupier makes a change to the safety and health management system which could have significant repercussions with respect to the prevention of major accidents or limitation of consequences of major accidents.
  - (3) The occupier of a major hazard installation must
    - (a) notify in writing to the Commissioner the details of any review of a safety case; and
    - (b) if required by the Commissioner, submit a copy of the updated safety case to the Commissioner.

#### Requirements of safety case prior to modification of major hazard installation

13.—(1) Where the occupier of a major hazard installation proposes to modify any part of a major hazard installation, the process carried on there or the nature or quantity of dangerous substances present there and that modification may have significant repercussion with respect to the prevention of any major accident or the

limitation of consequences of any major accident, the occupier of the major hazard installation must, before making such modification —

- (a) review, and where necessary revise, the safety case prepared in respect of the major hazard installation; and
- (b) submit the revised safety case to the Commissioner;
- (2) Upon the submission of the safety case under paragraph (1), the occupier of the major hazard installation must not operate the modified part of the major hazard installation until the occupier of the major hazard installation has received from the Commissioner the conclusion of the examination of the safety case.

#### PART 4

#### PROVISION OF INFORMATION

#### **Provision of information to workplaces**

- 14.—(1) The Commissioner shall, using the information in the safety cases submitted under these Regulations, designate groups of major hazard installations (called in this regulation the designated group) where the likelihood or consequences of a major accident may be increased because of the location and proximity of any major hazard installations in the designated group and the dangerous substances present there.
- (2) The Commissioner may notify every occupier of a major hazard installation in a designated group of the names and addresses of other major hazard installations within the same designated group.
- (3) The occupier of a major hazard installation in a designated group must pass the updated information specified in the Fourth Schedule to occupiers of other major hazard installation in the designated group to enable them to take account of the nature and extent of the overall hazard of a major accident in their major accident prevention policy documents, safety case and emergency response plan.
- (4) Not withstanding paragraph (3), the Commissioner may direct an occupier of a workplace to pass appropriate information about the workplace to other workplaces within an affected area as specified by the Commissioner, to enable them to take account of the nature and extent of the overall hazard in their emergency response plan.

#### **Review of information**

**15**. The occupier of a major hazard installation must review and where necessary revise the information referred to in regulation 14(3) in the event of any modification made under regulations 13.

#### PART 5

#### NOTIFICATION AND REPORTING OF INCIDENTS

## **Duty to notify and report incidents**

- **16**.—(1) Where any incident under the Fifth Schedule occurs at a major hazard installation, the occupier of the major hazard installation must, as soon as reasonably practicable, notify the Commissioner of the occurrence.
- (2) The occupier of the major hazard installation must thereafter, but no later than 10 days after the occurrence, submit a report to the Commissioner.

#### **Duty to keep records**

- 17.—(1) The occupier of a major hazard installation must keep a record of every notification or report made by the occupier under these Regulations.
- (2) The occupier of the major hazard installation must furnish the Commissioner with such extracts of the records as the Commissioner may from time to time require.

## Form and manner of notification and reporting

**18**. Any notification or reporting required under regulations 16 must be made in such form and manner as required by the Commissioner.

#### PART 6

#### **GENERAL**

#### **Offences**

19. Except as otherwise provided in these Regulations, it shall be an offence for a person to contravene any provision of these Regulations, and the person shall be liable on conviction to a fine not exceeding \$20,000 or to imprisonment for a term not exceeding 2 years or to both.

#### FIRST SCHEDULE

Regulation 2 and Fourth Schedule

#### WORKPLACES SPECIFIED AS MAJOR HAZARD INSTALLATION

- 1. Any premises where processing, manufacturing or bulk storage by way of trade or for the purpose of gain of any dangerous substances specified in the Second Schedule is carried on which
  - (a) quantity of the individual dangerous substances present or is likely to be present equals or exceeds the prescribed threshold quantities; or

(b) quantities of all dangerous substances present or likely to be present, using the following aggregation formula, equals to or exceeds 1.

$$\frac{q_x}{Q_x} + \frac{q_y}{Q_y} + \dots + \frac{q_n}{Q_n} + \dots \ge 1$$

where:

- (a) x, y, [....] and n are the dangerous substances present or likely to be present;
- (b)  $q_x, q_y, [...]$  and  $q_n$  are the maximum quantity of dangerous substances under categories 'x', 'y', [....] listed in Part 2 of the Second Schedule and every individual dangerous substance 'n', [....] present or likely to be present listed in Part 1 of the Second Schedule, other than a dangerous substance that is present or likely to be present
  - (i) in an isolated quantity equals to or less than 2% of its threshold quantity; and
  - (ii) it cannot act as an initiator of a major accident elsewhere in the major hazard installation;
- (c)  $Q_x$ ,  $Q_y$ , [....] and  $Q_n$  is the individual threshold quantity for each dangerous substance x, y, [....] and n;

#### SECOND SCHEDULE

Regulations 2, 6(1) and 7(1) and First Schedule

#### **DANGEROUS SUBSTANCES**

#### PART 1

#### NAME OF DANGEROUS SUBSTANCES

Na	me of dangerous substances	CAS number	Threshold quantity (tonnes)
1.	2,4-Toulene diisocyanate & 2,6-Toluene diisocyanate	584-84-9 91-08-7	5000
2.	Acetylene	74-86-2	50
3.	Ammonium nitrate	-	5000
4.	Anhydrous Ammonia	7664-41-7	50
5.	Arsenic pentoxide, arsenic (V) acid and/or salts	1303-28-2	10
6.	Arsenic trioxide, arsenious (III) acid and/or salts	1327-53-3	10
7.	Arsine (arsenic trihydride)	7784-42-1	1
8.	Boron trifluoride	7637-07-2	20
9.	Bromine	7726-95-6	100

## For Consultation –

10. Carbonyl dichloride (phosgene)	75-44-5	0.75
11. Chlorine	7782-50-5	25
12. Ethylene oxide	75-21-8	25
13. Ethyleneimine	151-56-4	20
14. Fluorine	7782-41-4	20
15. Formaldehyde (concentration >90%)	50-00-0	50
16. Hydrogen	1333-74-0	25
17. Hydrogen chloride (anhydrous and refrigerated liquid)	7637-01-0	150
18. Hydrogen fluoride (anhydrous)	7664-39-3	15
19. Hydrogen sulphide	7783-06-4	20
20. Liquefied flammable gases, Category 1 or 2 (including LPG)	-	200
21. Methanol	67-56-1	5000
22. Methyl acrylate	96-33-3	2000
23. Methylisocyanate	624-83-9	0.15
24. Oxygen	7782-44-7	2000
<ul> <li>25. Petroleum products and alternative fuels <ul> <li>(a) gasolines and naphthas,</li> <li>(b) kerosenes (including jet fuels),</li> <li>(c) gas oils (including diesel fuels, home heating oils and gas oil blending streams)</li> <li>(d) heavy fuel oils</li> <li>(e) alternative fuels serving the same purposes and with similar properties as regards flammability as the products referred to in points (a) to (d)</li> </ul> </li> </ul>	-	14,000
26. Phosphine (phosphorus trihydride)	7803-51-2	1
27. Potassium nitrate	-	5000
28. Propylamine	107-10-8	2000
29. Propylene oxide	75-56-9	25

30. Sulphur trioxide	7446-11-9	75
31. Ter-butyl acrylate	1663-39-4	500

PART 2

CATEGORY OF DANGEROUS SUBSTANCES
NOT SPECIFICALLY NAMED IN PART 1

Categories of dangerous substances with reference to Globally Harmonised System of Classification	Thresholdquantity (tonnes)	
Section 'H' – HEALTH HAZARDS		
H1 ACUTE TOXIC  — Acute Toxic, Category 1, any exposure routes	15	
H2 ACUTE TOXIC  — Acute Toxic, Category 2, any exposure routes  — Acute Toxic, Category 3, inhalation exposure route	200	
H3 STOT SPECIFIC TARGET ORGAN TOXICITY – SINGLE EXPOSURE  — STOT SE, Category 1	200	
Section 'P' - PHYSICAL HAZARDS		
P1a EXPLOSIVES  — Explosives, Unstable explosives or Division 1.1, 1.2, 1.3 or 1.5	50	
P1b EXPLOSIVES — Explosives, Division 1.4, or 1.6	200	
P2 FLAMMABLE GASES  — Flammable gases, Category 1 or 2	25	
P3 AEROSOLS — Aerosols, Category 1 or 2	500 (net)	
P4 OXIDISING GASES  — Oxidising Gases, Category 1	200	
<ul> <li>P5a FLAMMABLE LIQUIDS</li> <li>— Flammable liquids, Category 1</li> <li>— Flammable liquids, Category 2 or 3 maintained at a temperature above their boiling point</li> <li>— Other liquids with a flash point ≤ 60°C, maintained at a temperature above their boiling point</li> </ul>	40	
P5b FLAMMABLE LIQUIDS	150	

<ul> <li>— Flammable liquids Category 2 or 3 where particular processing conditions, such as high pressure or high temperature, may create major accident hazards</li> <li>— Other liquids with a flash point ≤ 60°C where particular processing conditions, such as high pressure or high temperature, may create major accident hazards</li> </ul>		
P5c FLAMMABLE LIQUIDS  — Flammable liquids, Categories 2 or 3 not covered by P5a and P5b	28,000	
P5d FLAMMABLE SOLIDS  — Flammable solids, Category 1 and 2Desensitized explosives when dry are Explosives of Class 1 other than those of compatibility group A, which are wetted with sufficient water, alcohol, or plasticizer to suppress explosive properties	200	
P6a SELF-REACTIVE SUBSTANCES AND MIXTURES and ORGANIC PEROXIDES  — Self-reactive substances and mixtures, Type A or B  — Organic peroxides, Type A or B	50	
P6b SELF-REACTIVE SUBSTANCES AND MIXTURES and ORGANIC PEROXIDES  — Self-reactive substances and mixtures, Type C, D, E or F  — Organic peroxides, Type C, D, E, or F	200	
P7 PYROPHORIC LIQUIDS AND SOLIDS  — Pyrophoric liquids, Category 1  — Pyrophoric solids, Category 1	200	
P8 OXIDISING LIQUIDS AND SOLIDS  — Oxidising Liquids, Category 1, 2 or 3  — Oxidising Solids, Category 1, 2 or 3	200	
Section 'O' - OTHER HAZARDS		
O1 Substances and mixtures which in contact with water emit flammable gases, Category 1	500	

## THIRD SCHEDULE

Regulation 2

PURPOSE AND CONTENTS OF SAFETY CASE

PART 1

#### PURPOSE OF SAFETY CASE

- 1. Demonstrating that a major accident prevention policy and a safety and health management system had been established and implemented.
- 2. Demonstrating that all major accident hazards have been identified and
  - (a) all the risks of a major accident occurring has been eliminated; or
  - (b) where it is not reasonably practicable to eliminate a risk, the risk has been reduced to as low as is reasonably practicable to limit the consequences of the accident.
- 3. Demonstrating that adequate safety and reliability have been incorporated into the
  - (a) design and construction, and
  - (b) operation and maintenance,
  - of any installation and equipment and infrastructure connected with its operation which are linked to major accident hazards within the major hazard installation.
- 4. Demonstrating that an emergency response plan have been drawn up to take the necessary measures in the event of a major accident.

#### PART 2

#### MINIMUM INFORMATION TO BE INCLUDED IN SAFETY CASE

- 1. A written major accident prevention policy which must
  - (a) be proportionate to the major accident hazards presented by the major hazard installation; and
  - (b) include the occupier's overall aims and principles of action and set out the role and responsibility of management, and its commitment towards continuously improving the control of major accident hazards.
- 2. In relation to major accident prevention, a safety and health management system which include the organisational structure, responsibilities, practices, procedures, processes, communication channels and resources for determining and implementing the major accident prevention policy, in accordance with the generally accepted principles of safe and sound practice, where applicable.
- 3. A presentation of the vicinity of the major hazard installation which
  - (a) describes the site, its vicinity including the geographical location and if necessary, its history;
  - (b) identifies the installations and other activities of the major hazard installation which can present a major accident hazard;
  - (c) identifies the neighbouring workplaces, areas and developments that may be a source or cause an increase in the risk or consequences of a major accident and domino effects; and
  - (d) describes the areas where a major accident may occur.
- 4. A description of the major hazard installation which includes information on
  - (a) the main activities and products of the parts of the major hazard installation 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) the processes, including the operating methods; and
- (c) the dangerous substances used or to be use, including
  - (i) the inventory of dangerous substances including the identification of dangerous substances and the maximum quantity of dangerous substances present;
  - (ii) the physical, chemical, toxicological characteristics and indication of the hazards, both immediate and delayed for human health; and
  - (iii) the physical and chemical behaviour under normal conditions of use or under foreseeable accidental conditions.
- 5. An identification and accidental risks analysis and prevention methods, which includes
  - (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, and the causes (being internal or external to the major hazard installation) which includes
    - (i) operational causes;
    - (ii) external causes such as domino effects or area and developments that could be the source of, or increase the risk or consequences of a major accident; and
    - (iii) natural causes, if any;
  - (b) assessment of the extent and severity of the consequences of identified major accidents including maps, images or, as appropriate, equivalent descriptions, showing areas which are liable to be affected by such accidents arising from the major hazard installation;
  - (c) a review of past accidents and incidents with the same substances and processes used, consideration of lessons learned from these, and explicit reference to specific measures taken to prevent such accidents; and
  - (d) description of technical parameters and equipment used for the safety of major hazard installations.
- 6. Measures of protection and intervention to limit the consequences of an accident, including
  - (a) description of the equipment installed in the major hazard installation to limit the consequences of major accidents;
  - (b) organisation of alert and intervention;
  - (c) description of mobilisable resources, internal or external; and
  - (d) description of any technical and non-technical measures relevant for the reduction of the impact of a major accident.

#### FOURTH SCHEDULE

Regulation 14(3)

#### INFORMATION TO BE SUPPLIED TO MAJOR HAZARD INSTALLATION

1. Name of occupier and address of the major hazard installation.

- 2. Identification, by position held, of the person giving the information.
- 3. Confirmation that the major hazard installation is subject to these Regulations.
- 4. An explanation in simple terms of the activity or activities undertaken at the major hazard installation.
- 5. The common names or, in the case of dangerous substances covered by the First Schedule, the generic names or the general danger classification of the substances 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.
- 7. Adequate information on how the workplaces concerned will be warned and kept informed in the event of a major accident.
- 8. Adequate information on the actions the workplaces concerned should take, and on the behaviour they should adopt, in the event of a major accident.

#### FIFTH SCHEDULE

Regulations 2 and 16(1)

#### REPORTABLE INCIDENTS

- 1. Any process-related incident which led to unintended explosion or fire.
- 2. Any process-related incident that led to sudden, unintentional or uncontrolled release of dangerous substances specified under the Second Schedule.

#### SIXTH SCHEDULE

Regulations 5(3)(a) and 5(5)(b)(i)

**FEES** 

To be confirmed at a later date