

**GOVERNMENT NOTICES • GOEWERMENTSKENNISGEWINGS****DEPARTMENT OF EMPLOYMENT AND LABOUR**

NO. R. 2989

31 January 2023

**OCCUPATIONAL HEALTH AND SAFETY ACT (ACT No. 85 OF 1993), as  
amended****PROMULGATION OF MAJOR HAZARD INSTALLATION REGULATIONS, 2022**

I, Thembelani Waltermade Nxesi, Minister of Employment and Labour, hereto, after consultation with the Advisory Council of Occupational Health and Safety, promulgates the new regulation relating to Major Hazard Installations; in terms of section 43(1)(c) of the Occupational Health and Safety Act, 1993 (Act no. 85 of 1993).



**MR TW NXESI, MP**  
**MINISTER OF EMPLOYMENT AND LABOUR**  
DATE: 13/1/2022

**OCCUPATIONAL HEALTH AND SAFETY ACT, 1993**  
**MAJOR HAZARD INSTALLATION REGULATIONS 20XX**

The Minister of Employment and Labour intends, after consultation with the Advisory Council for Occupational Health and Safety, in terms of section 43 of the Occupational Health and Safety Act, 1993 (Act No. 85 of 1993), to make the Regulations in the Schedule.

## SCHEDULE

### Definitions

1. In these Regulations, a word or expression to which a meaning has been assigned in the Act has the meaning so assigned and, unless the context otherwise indicates—

**"affected or interested party"** means a person, group of persons or organisations interested in or affected by an establishment and an organ of state that has jurisdiction over an establishment;

**"change"** means—

- (a) a modification in the methods, equipment or procedures in use or the handling or processing of dangerous substances in the establishment that may increase the establishment's risk profile;
- (b) an increase or decrease in the quantity of dangerous substances contemplated in Chapters 1 and 2 that results in the establishment being classified as a major hazard installation where—
  - (i) a low hazard establishment becomes a medium hazard establishment or vice versa;
  - (ii) a medium hazard establishment becomes a high hazard establishment or vice versa;
  - (iii) a low hazard establishment becomes a high hazard establishment or vice versa; or
  - (iv) an installation below the low hazard establishment threshold becomes a low, medium or high hazard establishment;
- (c) when an emergency plan is brought into action for a major incident;

**"dangerous substances"** means substances or mixtures used or present at the workplace that could, if not properly controlled, cause harm to people, the environment and property as a result of loss of containment, fire or explosion;

**"direction"** means a notice, or a recommendation or instruction served by an inspector in writing;

**"duty holder"** means an employer, a self-employed person, a user or a pipeline operator who is in control of an establishment;

**"establishment"** means a major hazard installation under the control of a duty holder where Chapter 1, 2 or 3 dangerous substances are present;

**"emergency plan"** means a plan contemplated in regulation 15;

**"existing establishment"** means an establishment where dangerous substances are present in quantities listed in Chapter 1, 2 or 3;

**"high hazard establishment"** means—

- (a) an establishment where Chapter 1 or 2 dangerous substances are present in quantities equal to or in excess of the quantities listed in column 3 of Chapter 1 or 2; and
- (b) pipelines contemplated in Chapter 3;

**"impact zone"** means the zone where other installations or neighbours could be affected due to a major incident;

**"installation"** means a technical unit within an establishment, above or below ground level, in which substances are produced, used and stored and which includes all the equipment, structures, pipework, machinery, tools, railway sidings and quays, warehouses and similar structures necessary for the operation of that installation;

**"low hazard establishment"** means an establishment where Chapter 1 or 2 dangerous substances are present and the quantity is equal to or exceeds the quantity in column 1 but is less than quantities listed in column 2 of Chapter 1 or 2;

**"licence to operate"** means a licence contemplated in regulation 13;

**"major incident prevention policy"** means a policy contemplated in regulation 11;

**"medium hazard establishment"** means an establishment where Chapter 1 or 2 dangerous substances are present and the quantity is equal to or exceeds the quantity in column 2, but is less than the quantity in column 3 of Chapter 1 or 2;

**"near miss"** means an event (causing damage to property, a negative impact on the environment or loss of human life) or operational interruption that could plausibly have resulted if the circumstances had been slightly different;

**"new establishment"** means an establishment which, after the date of entry into force of these Regulations, is erected or declared to be an establishment;

**"prescribed quantity"**, in relation to a given dangerous substance or a category or categories, means a quantity equal to the value set out in Annexure A;

**"process safety management system"** means a system contemplated in regulation 11(3)(h);

**"responsible person"** means a person designated, in writing, by a duty holder to be responsible, in a full-time capacity, for the premises on which an establishment is operated;

**"risk assessment"** means the process contemplated in regulation 10;

**"the Act"** means the Occupational Health and Safety Act, 1993 (Act No. 85 of 1993);

**"transit"** means a time or place in which dangerous substances are transported by rail, road, waterways or airways, which may be between planned points of departure and arrival;

**"Safety Data Sheet"** means a document aligned to globally harmonised systems, that provides information on the hazard classification, properties of hazardous chemicals and procedures for the handling of, or working with, hazardous chemicals in a safe manner and how hazardous chemicals affect health and safety in the workplace;

**"safety report"** means a report contemplated in regulation 12;

**"SANS 1461"** means South African National Standard: Major Hazard Installation – Risk Assessments, as amended from time to time;

**"SANS 1514"** means South African National Standard: Major Hazard Installation: Emergency Response Planning, as amended from time to time;

**"UN number"** means the dangerous substance four-figure identification number in the United Nations Transport of Dangerous Goods – Model Regulations, as amended from time to time;

**"UN Trough Test"** means Part III of the United Nations classification procedures, tests methods and criteria relating to class 2, class 3 and class 4, division 5.1, class 8 and class 9, as amended from time to time;

**"United Nations Recommendations on the Transport of Dangerous Goods"** means guidance documents developed by the United Nations to harmonise dangerous goods transport regulations, as amended from time to time, commonly known as the UN Orange Book.

### **Scope of application**

2. (1) These Regulations apply to—
  - (a) major hazard installations;
  - (b) establishments with the prescribed quantity of substances listed in Chapter 1 or 2; and
  - (c) major pipeline establishments.
- (2) These Regulations, excluding regulations 11, 12 and 13, apply to low hazard establishments.

- (3) These Regulations, excluding regulations 12 and 13, apply to medium hazard establishments.
- (4) Regulations 14 and 15 apply to local government.
- (5) Regulations 21 and 22 apply to an approved inspection authority.
- (6) These Regulations do not apply to nuclear installations registered in terms of the Nuclear Energy Act, 1993 (Act No. 131 of 1993).

### **Management of establishment**

3. (1) In order to ensure that the provisions of the Act and these Regulations in relation to major hazard installation are complied with, the duty holder must designate a responsible person in writing and in full-time capacity in respect of every premises where an establishment is operated.
- (2) Subject to subregulation (1), the chief inspector may require that any high hazard establishment be operated by a designated responsible person who holds a relevant qualification.
- (3) A duty holder may appoint, in writing, one or more deputies to assist the responsible person designated in terms of subregulation (1), and must clearly define the duties of such deputies without exempting the responsible person designated in subregulation (1) to properly discharge their duties.
- (4) If, in the opinion of the chief inspector, circumstances require the appointment of one or more deputies as contemplated in subregulation (3), the chief inspector may instruct the duty holder to appoint a specified number of deputies.
- (5) Every duty holder must on a regular basis consult with the neighbouring establishments and counterparts within the potential impact zone—
  - (a) to discuss any associated major incident associated with the type of establishment;
  - (b) to share any changes made to the establishment that alters the risk profile; and
  - (c) to share alert systems in a case of emergency.
- (6) The duty holder must keep a record of all consultations contemplated in subregulation (5).

### **Notification of establishment**

4. (1) A duty holder must notify the chief inspector, the relevant chief director: provincial operations and the local government on Form A, 90 days–
- (a) before the erection of an establishment; or
  - (b) when there is an anticipated change to an existing establishment.
- (2) A duty holder, after the entry into force of these Regulations, must update the notification of an existing establishment and send it to the chief inspector, the relevant chief director: provincial operations and the local government on a prescribed form A, within 24 months.
- (3) The notification referred to in subregulation (1) or (2) must be accompanied by–
- (a) proof of permission or approval from the relevant local government on land use indicating the exact location of the site;
  - (b) a letter of designation contemplated in regulation 3(2) and the responsible person's competency profile;
  - (c) an inventory list and safety data sheets of all the dangerous substances that resulted in the installation being classified as an establishment;
  - (d) a statement containing the envisaged maximum quantity of all the substances that may be present at the establishment at any one time;
  - (e) the most recent risk assessment report contemplated in regulation 10;
  - (f) a site map showing the establishment location and indicating developments around the vicinity of the establishment;
  - (g) a substance location plan drawn to a scale of not less than 1 to 2 500 which identifies the area on the site where the dangerous substances will be stored, handled, used or processed, showing the location of the major items of plant used in such activities;
  - (h) information regarding the neighbours or other establishments within the impact zone, including–
    - (i) sites that are likely to be affected by a major incident and their exact distances from the establishment;
    - (ii) known future development that might increase the risk or consequences of a major incident; and
    - (iii) other establishments and their exact distances;
  - (i) proof of the publication of the advertisement contemplated in subregulation (4); and

- (j) where applicable, the latest version of the major incident prevention policy.
- (4) A duty holder who erects an establishment or updates a risk assessment or converts an existing installation into an establishment must—
  - (a) place an advertisement, in English and the predominant language in the area, in at least one newspaper serving the communities in the vicinity of the establishment; and
  - (b) post notices within those communities, containing at least the—
    - (i) name and location of the establishment;
    - (ii) name, title and telephone number of the contact person from whom further information can be obtained;
    - (iii) nature of the dangerous substances and the major incidents that may occur; and
    - (iv) time and place where a risk assessment report will be explained and may be viewed.
- (5) Any affected or interested party may make representations, in writing, to the relevant local government and the chief inspector, within 60 days after the publication of an advertisement referred to in subregulation (4), if the establishment is not acceptable and poses a risk to that party.

### **Registration of establishment**

- 5.** (1) After considering the notification referred to in regulation 4(1) or (2), the chief inspector may on payment of the appropriate registration fee specified in Annexure B—
- (a) register the premises as a major hazard installation subject to such conditions as the chief inspector deems fit to impose;
  - (b) enter into the register, particulars pertaining to the name of the major hazard installation, the premises address and other details as the chief inspector deems fit; and
  - (c) issue to the duty holder a certificate of registration within 60 days; or
  - (d) refuse to register the major hazard installation.
- (2) Where the chief inspector refuses to register the major hazard installation in respect of which a notification has been made, the chief inspector must notify the duty holder of the reasons for the refusal.



(3) The duty holder must conspicuously display the latest registration certificate received in terms of subregulation (1)(c).

#### **Duration of registration and renewal**

6. (1) Subject to regulation 5(1), the registration is valid for a period of five years or for such other period as the chief inspector may determine in a particular case, unless the registration is earlier suspended or revoked in accordance with the Regulations.

(2) The chief inspector shall renew the registration upon the updating of a risk assessment and documents as may be required and on payment of the appropriate renewal fee specified.

#### **Alteration to particulars of registered establishment**

7. The duty holder must, where there is an alteration in any of the particulars of a major hazard installation, furnish the alterations to the chief inspector, relevant chief director: provincial operations and relevant local government not later than 14 days after such alteration occurs.

#### **Revocation or suspension of registration**

8. (1) The inspector may issue a direction instructing the duty holder immediately to comply with the requirements specified in the direction, if the premises of the registered major hazard installation become unfit for occupation or use because of a–

- (a) failure by the duty holder to ensure that work is carried out safely; or
- (b) change effected on the establishment without notifying the chief inspector, the chief director: provincial operations and the local government; or
- (c) new hazardous fact or circumstance that was not present when the establishment was registered.

(2) The chief inspector may revoke the registration if–

- (a) the duty holder fails to comply with the issued direction;
- (b) the chief inspector has established that the duty holder has contravened a condition of registration; or
- (c) the inspector has proven that the duty holder has ceased occupation or use of the premises as an establishment.

- (3) An inspector must, before advising the chief inspector to revoke or suspend the registration of an establishment as contemplated in subregulations (2) and (3)–
- (a) issue to the duty holder a direction, in writing, of the intention to revoke or suspend the registration; and
  - (b) give the duty holder a reasonable opportunity to submit reasons as to why the registration should not be revoked or suspended.
- (4) The revocation or suspension of registration does not take effect–
- (a) until the expiration of 21 days after the date on which direction of the chief inspector's intention to revoke or suspend the registration was given to the duty holder as contemplated in subregulation (4)(a); or
  - (b) where an appeal against the decision of the chief inspector is made to the Labour Court in terms of section 35 of the Act, until the appeal has been determined or withdrawn.
- (5) An inspector may advise the chief inspector at any time, and for a valid reason, to shorten the period for which the registration is suspended.

### **Sharing of information with adjacent establishments**

9. The chief inspector may designate one or more registered major hazard installations in a certain location as a group of establishments, and require such establishments to share information, including the–

- (a) basic particulars of the establishment;
- (b) responsible person for that establishment;
- (c) description of major incidents associated with that type of establishment, and consequences of such incidents; and
- (d) information on how affected neighbours will be alerted in the event of a major incident.

### **Risk assessment**

10. (1) A duty holder must, after consultation with the relevant health and safety representative or health and safety committee, ensure that an approved inspection authority carries out a risk assessment in accordance with SANS 1461 at intervals not exceeding five years or when there is a change in the establishment.

- (2) Every duty holder must–

- (a) inform the relevant health and safety representative or health and safety committee, in writing, of the arrangements made to carry out a risk assessment contemplated in subregulation (1); and
  - (b) ensure that the results of the risk assessment are made available to the relevant health and safety representative or committee, who may comment thereon.
- (3) Where a risk assessment has been reviewed or revised, without a change to the establishment, the duty holder must submit an updated copy of the risk assessment report to the chief inspector, the relevant chief director: provincial operations and the relevant local government within 60 days.
- (4) Every duty holder must ensure that a copy of the most recent risk assessment report is available on site for inspection by an inspector or a local government.
- (5) Subregulation (1) shall not apply in the case of rolling stock in transit: Provided that the operator of a railway shall ensure—
- (a) that a risk assessment applicable to rolling stock in transit is carried out and made available for inspection at the request of an inspector or a local government or both that inspector and that local government, as the case may be; and
  - (b) that, in the interest of the health and safety of the public, the necessary precautions are taken.
- (6) A duty holder shall ensure that the risk assessments contemplated in subregulations (1) and (3) be made available for scrutiny by any affected or interested person that may be affected by the activities of the establishment, at a time and place and in a manner agreed upon between the parties.

### **Major incident prevention policy**

11. (1) The duty holder must prepare and retain a written major incident prevention policy, as contemplated in Annexure C, on the—
- (a) construction and building of the establishment;
  - (b) change in the establishment; or
  - (c) safe operation of the establishment.
- (2) Every duty holder must, within 36 months after the entry into force of these Regulations, establish and have in record a major incident prevention policy.
- (3) The major incident prevention policy must provide for a high level of protection for employees and the public and must include at least—

- (a) the aims and objectives of the policy;
  - (b) the roles and responsibilities of the establishment's management;
  - (c) process safety performance indicators;
  - (d) commitments towards the maintenance and continual improvement of the policy;
  - (e) the aims and objectives of the—
    - (i) emergency plan;
    - (ii) evacuation plan regarding the—
      - (aa) speedy evacuation of persons;
      - (bb) roll-call after evacuation; and
      - (cc) plant shut down;
  - (f) reasons for revision;
  - (g) mandatory agreements; and
  - (h) the process safety management system with principles specified in Annexure D.
- (4) A duty holder must review the major incident prevention policy, every five years or when there is a change in the establishment which renders the existing policy inadequate: Provided that an updated copy is available for inspection by an inspector and a local government.

### **Safety report**

- 12.** (1) The duty holder of a high hazard establishment must prepare a comprehensive, site-specific, safety report, which must be—
- (a) developed during the design phase and be continually updated until the start date of operations; and
  - (b) maintained for the duration of the life of the establishment.
- (2) The safety report must demonstrate a suitable and sufficiently documented plan to ensure—
- (a) that reliable built-in safety has been incorporated into the—
    - (i) design;
    - (ii) construction;
    - (iii) operation; and
    - (iv) maintenance of any equipment and infrastructure used in the establishment; and

- (b) the application of–
  - (i) the major incident prevention policy;
  - (ii) the process safety management system;
  - (iii) the organisational and necessary measures to prevent major incidents and to limit their consequences;
  - (iv) the on-site emergency plan.
- (3) The safety report must also contain information regarding an off-site emergency plan to take the necessary measures in the event of a major incident.
- (4) The duty holder of a proposed high hazard establishment must submit to the chief inspector a–
  - (a) preliminary safety report at the design stage of that establishment; and
  - (b) final safety report within a reasonable time before the establishment starts operations.
- (5) The duty holder must send a safety report to the chief inspector within 36 months after the entry into force of these Regulations.
- (6) Every duty holder must review the safety report–
  - (a) every five years;
  - (b) prior to any change to the establishment; or
  - (c) whenever there is a change in the process safety management system which could have significant repercussions with respect to the prevention of major incidents or the limitation of the consequences of major incidents:  
Provided that the updated copy of the safety report, revised under this subregulation, is sent to the chief inspector within 60 days.

### **Licence to operate**

- 13.** (1) A duty holder who operates a high hazard establishment must apply for a licence to operate such an establishment.
- (2) An existing duty holder must apply for a licence not later than 36 months after the entry into force of these Regulations.
- (3) The chief inspector, upon receipt of an application in terms of subregulations (1) and (2), with a written proof of occupancy from the local government, may–
  - (a) issue a licence;
  - (b) decide not to issue a licence and give reasons for the decision; or

- (c) issue a licence subject to any condition that the chief inspector deems reasonable and necessary.
- (4) A licence issued under subregulation (3)–
  - (a) may not be transferred to another establishment; and
  - (b) lapses after 12 months if the new installation has not started operations or the establishment has not been operated within 12 months after the issue of the licence.
- (5) The chief inspector may–
  - (a) suspend or withdraw a licence if the conditions subject to which the licence was issued are not complied with; or
  - (b) alter a condition in an existing licence after consultation with the duty holder and the relevant health and safety representative or the relevant health and safety committee.

#### **General duties of local government**

**14.** (1) Without derogating from the provisions of the National Building Regulations and Building Standards Act, 1977 (Act No. 103 of 1977), and the Spatial Planning and Land Use Management Act, 2013 (Act No. 16 of 2013), a local government must not permit the erection of a new establishment or the expansion of an establishment at a separation distance that poses an unacceptable risk in terms of the risk assessment contemplated in regulation 10.

- (2) The local government must–
  - (a) permit a new development only where there is a separation distance which will not pose an unacceptable risk in terms of the risk assessment contemplated in regulation 10; and
  - (b) prohibit any new property development adjacent to an establishment that will result in that new development being declared an establishment.
- (3) The relevant local government must give consent for the on-site emergency plan and participate in the annual emergency test drill as contemplated in regulation 15(4)(e).
- (4) Where a relevant local government does not have the facilities available to control a major incident or to comply with the requirements of these Regulations, that local government must make prior arrangements with a neighbouring local government, the relevant provincial government or the duty holder for assistance.

(5) The relevant local government is responsible for the off-site emergency plan to be followed outside the premises of the establishment.

(6) The relevant local government must prepare an off-site emergency plan in accordance with SANS 1514 and in consultation with the duty holder and interested or affected persons, within 24 months after the entry into force of these Regulations, and thereafter immediately for new establishments, and review the plan when there are significant changes to the hazard profile of the area.

(7) The duty holder must, on written request by, and within the time limits imposed by the local government, furnish the local government with the necessary information needed to prepare the off-site emergency plan.

### **Emergency plan**

**15.** (1) A duty holder must, immediately after submission of the notification contemplated in regulation 4, in consultation with the relevant health and safety representatives or health and safety committee, in writing, appoint an emergency coordinating team consisting of at least–

- (a) the responsible person contemplated in regulation 3(2); or
- (b) a responsible person's deputy contemplated in regulation 3(3); and
- (c) a representative from the health and safety committee.

(2) The duty holder must develop and maintain an on-site emergency plan before the establishment commences operations in consultation with the emergency coordinating team and in accordance with SANS 1514.

(3) The on-site emergency plan for an existing establishment must be aligned and updated to SANS 1514 within 12 months after the entry into force of these Regulations.

(4) A duty holder must–

- (a) ensure that the manner in which employees, visitors and neighbours will be warned of major incidents is included in the plan;
- (b) sign a copy of the on-site emergency plan in the presence of at least two witnesses who have knowledge in emergency planning and who must be satisfied with the content of the emergency plan and attest to the signature of the duty holder;
- (c) obtain approval of the on-site emergency plan from the relevant local government;

- (d) ensure that the on-site emergency plan is readily available at all times for implementation and use;
  - (e) cause the on-site emergency plan to be tested or exercised in practice at least once a year and take the necessary steps to arrange for the local government to participate in such tests; and
  - (f) give an early warning to affected or interested parties in case a major incident is likely to go beyond the borders of the establishment.
- (5) The duty holder and the relevant local government must take reasonable steps to activate the on-site emergency plan in case of an incident which may result in–
- (a) a major incident; or
  - (b) an uncontrolled event which may reasonably be expected to lead to a major incident; or
  - (c) a near miss that could reasonably be expected to have resulted in a major incident.
- (6) The duty holder must review the on-site emergency plan at least once every three years and, if necessary, revise the plan.
- (7) The duty holder and the local government must jointly ensure that all first responders at the scene of a major incident have the necessary skill to deal with the dangerous substances and are dressed in the appropriate emergency personal protective equipment as required in their respective emergency plans.

### **Reporting of risk and emergency occurrences**

- 16.** (1) A duty holder must–
- (a) subject to regulation 8 of the General Administrative Regulations, published under Government Notice R. 929 in *Government Gazette* 25129 of 25 June 2003, within 48 hours, inform the chief inspector by means of telephone, facsimile or similar means of communication of–
    - (i) a major incident; or
    - (ii) an incident that brought the emergency plan into activation;
  - (b) investigate and submit a written preliminary incident report to the chief inspector within seven days after an emergency occurrence and a major incident;
  - (c) submit a final report as soon as reasonably practicable but not later than six months after the incident;



- (d) investigate and record all near misses in a register which must at all times be available for inspection by an inspector and the local government.
- (2) A duty holder must, in the case of an emerging major incident or an emergency occurrence that was or may have been caused by a dangerous substance, inform the supplier of that dangerous substance about the incident.

### **Information and training**

- 17.** (1) A duty holder must, after consultation with the relevant health and safety representative or health and safety committee, ensure that all employees are adequately trained with regard to–
- (a) the scope of these Regulations;
  - (b) the nature of the establishment;
  - (c) potential major hazards and associated major incidents;
  - (d) potential risks to health and safety caused by the identified major hazards;
  - (e) the practices and control procedures for a major incident;
  - (f) the content of the emergency plan and that visitors also are conversant with such content; and
  - (g) the safety protocols and measures to be followed on-site.
- (2) The duty holder must ensure that all trained employees undergo refresher training whenever there is a change in the establishment or when the risk assessment has been reviewed.
- (3) The duty holder must provide induction orientation about the kept substances, major hazard areas and actions to be followed in case of emergency to all mandatorys, visitors and any person who, in any manner, assists in carrying out or conducting allocated duties, before they enter the establishment.
- (4) The duty holder must ensure the induction orientation as contemplated in subregulation (3) is refreshed in the event of any change to an establishment which significantly alters the risk associated with the establishment: Provided that the induction training will be valid for periods not exceeding 12 months.

### **General duties of suppliers**

- 18.** (1) Every person that supplies a dangerous substance to an establishment must issue a safety data sheet that is supplied with the substance and must also provide basic information for training on the use and handling of the substance.

(2) On receipt of information contemplated in regulation 16(2), a supplier of a dangerous substance involved in an emerging major incident or potential major incident must inform all clients supplied with that substance of the emerging potential dangers surrounding the dangerous substance.

(3) A supplier must, in the event of a major incident with regard to the dangerous substance supplied, provide information and advice that must be readily available on a 24-hour basis to all duty holders, the relevant local government and any other body concerned.

### **Payable fees**

19. (1) A duty holder must pay a prescribed fee each time a notification, a renewal or a revision of a risk assessment is sent to the chief inspector: Provided that the chief inspector may grant an exemption from payment of such fees or may determine any other fee, if necessary.

(2) The chief inspector may waive but not refund the whole or any part of any fee paid or payable under these Regulations.

### **MHI Advisory Committee**

20. (1) The chief inspector may, with the approval of the Advisory Council for Occupational Health and Safety, establish an MHI Advisory Committee to advise on any matter related to major hazard installations, codes, standards and training requirements: Provided that any accredited or approved training must be in accordance with South African Qualifications Authority standards.

(2) The chief inspector shall appoint members of the MHI Advisory Committee for a period that he may determine at the time of appointment: Provided that the members are approved by the Advisory Council for Occupational Health and Safety.

(3) Any person affected by the decision of the MHI Advisory Committee may appeal to the chief inspector within 60 days of such decision becoming known and the chief inspector shall, after considering the grounds of the appeal and the MHI Advisory Committee's reasons for the decision, confirm or set aside or vary the decision or substitute such decision for any other decision which the MHI Advisory Committee in the chief inspector's opinion ought to have taken.

(4) Any person aggrieved by the decision taken by the chief inspector under subregulation (3) may, within 60 days after the chief inspector's decision, appeal against such decision to the Labour Court.

### **Approved inspection authorities**

**21.** (1) An inspection body accredited in terms of the Accreditation for Conformity Assessment, Calibration and Good Laboratory Practice Act, 2006 (Act No. 19 of 2006), or a foreign inspection body must apply for registration to the chief inspector on Form B.

(2) On receipt of the application contemplated in subregulation (1) the chief inspector must, subject to conditions if deemed necessary, approve the application.

(3) In the event of a dispute between an approved inspection authority (AIA) and a duty holder regarding a technical or safety matter, which cannot be reasonably resolved, the disputing parties may refer the case to the chief inspector in writing for arbitration, setting out the full details of the dispute.

(4) The chief inspector must, upon receiving a dispute contemplated in subregulation (3), appoint an arbitrator mutually agreed upon between the South African National Accreditation System and the parties.

(5) The dispute must be investigated and arbitrated within a maximum of 90 days after the submission of a request for arbitration.

(6) The chief inspector may at any time withdraw any approval granted to an approved inspection authority, subject to section 35 of the Act.

### **Duties of approved inspection authority**

**22.** (1) An approved inspection authority must ensure that the risk assessment contemplated in regulation 10 is carried out in terms of SANS 1461.

(2) An approved inspection authority must provide results on the classification and acceptability of risk, and make recommendations with regard to the following:

- (a) the suitability of the existing emergency procedures for the major risks identified;
- (b) any organisational measures that may be required;
- (c) risk reduction proposals; and
- (d) any other relevant matter.

(3) The approved inspection authority must, after each risk assessment, furnish the duty holder with the latest risk assessment report and attachments as required in terms of SANS 1461: Provided that such reports must be made available upon request by the chief inspector.

(4) An approved inspection authority must, on a monthly basis, submit a list of all major hazard installations assessed, to the chief inspector, in the form contemplated in Annexure E.

### Closure

**23.** A duty holder must notify the chief inspector, the relevant chief director: provincial operations and the local government in writing, not less than 60 days prior to the installation ceasing to be a major hazard installation.

### Offences and penalties

**24.** (1) A duty holder who contravenes any of the provisions of these Regulations commits an offence and is, on conviction, liable to a fine not exceeding R5 000 000 or to imprisonment for a period not exceeding 24 months.

(2) The maximum permissible fines that may be imposed for contravening the Regulations are set out in the table below:

PREVIOUS CONTRAVENTIONS	CONTRAVENTIONS OF REGULATIONS: 3(1), 4(1), 4(4), 6(3), 7, 10, 11(1), 12(1), 13(1), 15(2), 16, 20(6) and 22
No previous contraventions	R500 000
A previous contravention within 12 months	R1 000 000
A previous contravention in respect of the same contravention within three years	R2 500 000
Three previous contraventions in respect of the same provision within three years	R5 000 000

**Repeal of regulations**

25. The Major Hazard Installation Regulations, 2001, published in Government Notice No. R. 692 of 30 July 2001, are hereby repealed.

**Short title and commencement**

26. These Regulations are called the "Major Hazard Installation Regulations, 2022", and come into operation on a date determined by the Minister by notice in the *Government Gazette*.

## ANNEXURE A

### Dangerous substances to which these Regulations apply

This Annexure applies to the presence of dangerous substances at any establishment and determines the application of the relevant regulations in accordance with regulation 2(1). The quantities set relate to each establishment.

### Chapter 1

#### Named Dangerous Substances

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

Named substances	UN NUMBER	Quantities in tonnes		
		Column 1 Low Hazard	Column 2 Medium Hazard	Column 3 High Hazard
Ammonia anhydrous	1005	15	50	200
Ammonium nitrate (as described in Note 3)	Fertiliser based 2067 2071	2 000	5 000	10 000
Ammonium nitrate (as described in Note 4 )		500	1 250	5 000
Ammonium nitrate (as described in Note 5 )		150	350	2 500
Ammonium nitrate (as described in Note 6)		4	10	50
Potassium nitrate (as described in Note 7)	1486	2 000	5 000	10 000
Potassium nitrate (as described in Note 8)	1488	500	1 250	5 000

Named substances	UN NUMBER	Quantities in tonnes		
		Column 1 Low Hazard	Column 2 Medium Hazard	Column 3 High Hazard
Arsenic pentoxide, arsenic (V) acid and/or salts	1559	1	1	2
Arsenic trioxide, arsenious (III) acid and/or salts	1561	0,1	0,1	0,1
Bromine	(l) 1701 (a)1744	5	20	100
Chlorine	1017	5	10	25
Nickel compounds in inhalable powder form (nickel monoxide, nickel dioxide, nickel sulphide, tri-nickel disulphide, di-nickel trioxide)	3089	1	1	1
Ethyleneimine	1185	5	10	20
Fluorine	1045	5	10	20
Formaldehyde (concentration $\geq$ 90%)	1198	2,5	5	50
Hydrogen	1049	2,5	5	50
Hydrogen chloride (liquefied gas)	1050	5	25	250
Hydrogen fluoride	1052	2,5	5	20
Lead alkyls	-	2,5	5	50
Liquefied extremely flammable gases (including LPG) and natural gas (whether liquefied or not)	1075	20	50	200
Acetylene	1001	2,5	5	50
Ethylene oxide	3089	2,5	5	50

Named substances	UN NUMBER	Quantities in tonnes		
		Column 1 Low Hazard	Column 2 Medium Hazard	Column 3 High Hazard
Propylene oxide	1280	2,5	5	50
Methanol	1230	50	500	5 000
4,4-Methylenebis (2-chloraniline) and/or salts, in powder form	3077	0,01	0,01	0,01
Methyl isocyanate	2480	0,15	0,15	0,15
Oxygen	(compressed) 1072 (refrigerated) 1073	50	200	2 000
Toluene di-isocyanate	2078	1	10	100
Carbonyl dichloride (phosgene)	1076	0,3	0,3	0,75
Arsenic trihydride (arsine)	2188	0,2	0,2	1
Phosphorus trihydride (phosphine)	2199	0,2	0,2	1
Sulphur dichloride	1828	1	1	1
Sulphur dioxide	1079	2,5	5	20
Sulphur trioxide	1829	7,5	15	75
Polychlorodibenzofurans and polychlorodibenzodioxins (including TCDD), calculated in TCDD equivalent (see Note 8)	-	0,001	0,001	0,001
The following CARCINOGENS at concentrations above 5% by weight:	-	0,5	0,5	2



Named substances	UN NUMBER	Quantities in tonnes		
		Column 1 Low Hazard	Column 2 Medium Hazard	Column 3 High Hazard
4-Aminobiphenyl and/or its salts, Benzotrichloride, Benzidine and/or salts, Bis (chloromethyl) ether, Chloromethyl methyl ether, 1,2-Dibromoethane, Diethyl sulphate, Dimethyl sulphate, Dimethylcarbamoyl chloride, 1,2-Dibromo-3-chloropropane, 1,2-Dimethylhydrazine, Dimethylnitrosamine, Hexamethylphosphoric triamide, Hydrazine, 2-Naphthylamine and/or salts, 4-Nitrodiphenyl and 1,3-Propanesultone				
Petroleum products: gasolines, naphthas, kerosenes (including jet fuels), gas oils (including diesel fuels, home heating oils and gas oil blending streams)	Gas (1075)  Crude (1275)	250	2 500	25 000
Boron trifluoride	1008	5	5	20
Hydrogen sulphide	1053	5	5	20
Piperidine	2401	20	50	200

Named substances	UN NUMBER	Quantities in tonnes		
		Column 1 Low Hazard	Column 2 Medium Hazard	Column 3 High Hazard
Bis(2-dimethylaminoethyl) (methyl)amine	-	20	50	200
3-(2-Ethylhexyloxy) propylamine	-	20	50	200
Propylamine	1277	200	500	2 000
Tert-butyl acrylate	-	100	200	500
2-Methyl-3-butenenitrile	-	200	500	2 000
Tetrahydro-3,5-dimethyl- 1,3,5-thiadiazine-2-thione (Dazomet)	1277	50	100	200
Methyl acrylate	1919	200	500	2 000
3-Methylpyridine	2313	200	500	2 000
1-Bromo-3-chloropropane	2688	200	500	2 000

## Chapter 2

### Categories of Dangerous Substances

This Chapter covers all dangerous substances falling under the hazard categories in column 1 in accordance with the GHS as reflected in the CLP Regulations:

Hazard categories	Column 1 Low Hazard	Column 2 Medium Hazard	Column 3 High Hazard
<b>1. Health Hazards: "H"</b>			
1.1 H1 Acute Toxic Category 1, all exposure routes	5	5	20
1.2 H2 Acute Toxic Category 2, all exposure routes Category 3, inhalation exposure route (see Note 9)	15	50	200
1.3 H3 Specific Target Organ Toxicity (STOT) Category 1, Single Exposure (SE STOT)	15	50	200
<b>2. Physical Hazards: "P"</b>			
2.1 P2 Flammable gases Flammable gases, Category 1 or 2	2,5	10	50
2.2 P3a Flammable aerosols (see Note 10) Flammable aerosols Category 1 or 2, containing flammable gases Category 1 or 2 or flammable liquids Category 1	50 (net)	150 (net)	500 (net)
2.3 P3b Flammable aerosols (see Note 11)	1 250 (net)	5 000 (net)	50 000 (net)

<b>Hazard categories</b>	<b>Column 1 Low Hazard</b>	<b>Column 2 Medium Hazard</b>	<b>Column 3 High Hazard</b>
Flammable aerosols Category 1 or 2, not containing flammable gases Category 1 or 2 nor flammable liquids category 1 (see Note 12)			
2.4 P4 Oxidising gases Oxidising gases, Category 1	20	50	200
P5a Flammable liquids Flammable liquids, Category 1 maintained at a temperature above their boiling point, or Flammable liquids Category 2 or 3 maintained at a temperature above their boiling point, or Other liquids with a flash point $\leq 60^{\circ}\text{C}$ , maintained at a temperature above their boiling point (see Note 12)	5	10	50
2.6 P5b Flammable liquids Flammable liquids Category 2 or 3 where particular processing conditions, such as high pressure or high temperature, may create major accident hazards, or Other liquids with a flash point $\leq 60^{\circ}\text{C}$ where particular processing conditions, such as high pressure or high temperature, may create major accident hazards (see Note 13)	20	50	200
2.6 P5c Flammable liquids Flammable liquids, Categories 2 or 3 not covered by P5a and P5b	1 250	5 000	50 000

<b>Hazard categories</b>	<b>Column 1 Low Hazard</b>	<b>Column 2 Medium Hazard</b>	<b>Column 3 High Hazard</b>
2.7 P6a Self-reactive substances and mixtures and organic peroxides Self-reactive substances and mixtures, Type A or B or organic peroxides, Type A or B	5	10	50
2.8 P6b Self-reactive substances and mixtures and organic peroxides Self-reactive substances and mixtures, Type C, D, E or F or organic peroxides, Type C, D, E or F	20	50	200
2.9 P7 Pyrophoric liquids and solids Pyrophoric liquids, Category 1 Pyrophoric solids, Category 1	20	50	200
2.10 P8 Oxidising liquids and solids Oxidising liquids, Category 1, 2 or 3, or Oxidising solids, Category 1, 2 or 3	20	50	200
<b>3. Other Hazards: "O"</b>			
3.1 O1 Substances or mixtures that react violently with water. Examples: acetyl chloride, alkali metals and titanium tetrachloride	40	100	500
3.2 O2 Substances and mixtures which in contact with water emit flammable gases, Category 1	40	100	500
3.3 O3 Substances or mixtures that liberate toxic gas when in contact with water.	20	50	200

Hazard categories	Column 1 Low Hazard	Column 2 Medium Hazard	Column 3 High Hazard
Examples: aluminium phosphide and phosphorus pentasulphide			

Net: indicates the flammable content and not the full gross mass, thus the mass of the containers is ignored.

### Chapter 3

#### Classification of pipelines as major hazard establishment

A pipeline is considered an establishment if it contains any of the following:

- (1) A fluid which—
  - (a) is flammable in air;
  - (b) has a boiling point below 5°C at 1 bar absolute; and
  - (c) is or is to be conveyed in a pipeline as a liquid.
- (2) A fluid which is or is to be conveyed in a pipeline as a gas which is—
  - (a) at pressures at above 8 bar absolute\*;
  - (b) flammable in air\*\*.
- (3) Pressurised substances:
  - (a) Mixtures of gas and liquid which have a vapour pressure in excess of 0,5 bar above atmospheric pressure when in equilibrium with its vapour included;
  - (b) A liquid which has a vapour pressure greater than 1,5 bar absolute when in equilibrium with its vapour at either the actual temperature of the liquid or at 20°C.
- (4) A very toxic fluid which—
  - (a) at 20°C has a saturated vapour pressure greater than 0,001 bar; or
  - (b) is or is to be conveyed in the pipeline as a liquid at a pressure greater than 4,5 bar absolute.
- (5) A very toxic or toxic fluid which—
  - (a) is a gas at 20°C and 1 bar absolute; and

- (b) is or is to be conveyed as a liquid or a gas, i.e. ammonia.
- (6) A toxic fluid which—
  - (a) at 20°C has a saturated vapour pressure greater than 0,4 bar; and
  - (b) is or is to be conveyed in the pipeline as a liquid.
- (7) An oxidising fluid which is or is to be conveyed as a liquid.
- (8) A fluid which reacts violently with water.
- (9) Acrylonitrile.
- (10) Carbon dioxide.
- (11) Gasoline. (Note14)

\* Paragraph 2(a) also covers liquefied gases which are flammable in air when they are conveyed as a liquid. This includes butane and propane when conveyed in a pipeline as a liquid.

\*\*Paragraph 2(b) is applicable to flammable gases conveyed as a gas. In such cases the additional duties only apply when the flammable gas is conveyed at a pressure in excess of 8 bars absolute. This covers such fluids as methane, butane and propane when conveyed as a gas.

## NOTES

- (1) The quantities set in Chapters 1 and 2 relate to each establishment.
- (2) Mixtures and preparations must be treated in the same way as pure substances, provided they remain within the concentration limits set according to their properties under the CLP Regulations (EC 1272\2008, as amended), unless a percentage composition or other description is specifically given.
- (3) Ammonium nitrate: fertilisers capable of *self-sustaining decomposition*.  
This applies to ammonium nitrate-based compound/composite fertilisers (compound or composite fertilisers containing ammonium nitrate with phosphate and/or potash) which are capable of self-sustaining decomposition according to UN Trough Test (Part III, subsection 38.2) and in which the nitrogen content as a result of ammonium nitrate is—
  - (a) between 15,75% and 24,5% by weight and either with not more than 0,4% total combustible or organic materials or which satisfies the

requirements of United Nations Recommendations on the Transport of Dangerous Goods: Manual of Tests and Criteria (3rd revised Edition, or as amended from time to time), Ammonium Nitrate Materials (High Nitrogen Content) Safety Regulations 2003, as amended, "the detonation resistance test"; or

(b) 15,75% or less by weight and unrestricted combustible materials.

(4) Ammonium nitrate: *fertiliser grade*.

This applies to straight ammonium nitrate-based fertilisers and to ammonium nitrate-based compound/composite fertilisers which satisfies the requirements of UN TDG and in which the nitrogen content as a result of ammonium nitrate is—

- (a) more than 24,5% by weight, except for mixtures of ammonium nitrate with dolomite, limestone and/or calcium carbonate with a purity of at least 90%;
- (b) more than 15,75% by weight for mixtures of ammonium nitrate and ammonium sulphate;
- (c) more than 28% by weight for mixtures of ammonium nitrate with dolomite, limestone and/or calcium carbonate with a purity of at least 90%, and which satisfy the detonation resistance test.

(5) Ammonium nitrate: *technical grade*.

This applies to—

- (a) ammonium nitrate and preparations of ammonium nitrate in which the nitrogen content as a result of the ammonium nitrate is—
    - (i) *between 24,5% and 28% by weight, and which contain not more than 0,4% combustible substances; or*
    - (ii) *more than 28% by weight, and which contain not more than 0,2% combustible substances;*
  - (b) aqueous ammonium nitrate solutions in which the concentration of ammonium nitrate is more than 80% by weight.
- (6) Ammonium nitrate (10/50): *"off-specs" material not satisfying the detonation test.*

This applies to—

- (a) material rejected during the manufacturing process and to ammonium nitrate and preparations of ammonium nitrate, straight ammonium nitrate-based fertilisers and ammonium nitrate-based compound/composite fertilisers referred to in Notes 2 and 3, that are



being or have been returned from the final user to a manufacturer, temporary storage or reprocessing plant for reworking, recycling or treatment for safe use, because they no longer comply with the specifications of Notes 4 and 5; or

- (b) fertilisers which do not fall within Notes 3(a) and 5 because they do not satisfy the detonation resistance test, other than fertilisers which—
- (i) *at the time of delivery to a final user satisfied the detonation resistance test; but*
  - (ii) *later became degraded or contaminated; and*
  - (iii) *are temporarily present at the establishment of the final user prior to their return for reworking, recycling or treatment for safe use or to their being applied as fertiliser.*

\*15,75% nitrogen content by weight as a result of ammonium nitrate corresponds to 45% ammonium nitrate.

\*\*24,5% nitrogen content by weight as a result of ammonium nitrate corresponds to 70% ammonium nitrate.

\*\*\*28% nitrogen content by weight as a result of ammonium nitrate corresponds to 80% ammonium nitrate.

- (7) Potassium nitrate:
- (a) Potassium nitrate (5 000/10 000): composite potassium nitrate-based fertilisers composed of potassium nitrate in prilled/granular form.
  - (b) Potassium nitrate (1 250/5 000): composite potassium nitrate-based fertilisers composed of potassium nitrate in crystalline form.
- (8) Polychlorodibenzofurans and polychlorodibenzodioxins. The quantities of polychlorodibenzofurans and polychlorodibenzodioxins are calculated using the following factors:

**TABLE 8.1 ITEF**

<b>International Toxic Equivalent Factors (ITEF) for the congeners of concern (NATO/CCMS)*</b>			
2, 3, 7, 8-TCDD	1	2, 3, 7, 8-TCDF	0,1
1, 2, 3, 7, 8-PeCDD	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
		1, 2, 3, 4, 6, 7, 8-HpCDF	0,01
OCDD	0,001	1, 2, 3, 4, 7, 8, 9-HpCDF	0,01
		OCDF	0,001

\* (T = tetra, Pe = penta, Hx = hexa, Hp = hepta, O = octa)

- (9) In a case where dangerous substances fall within category P5a flammable liquids or P5b flammable liquids, then for the purposes of these Regulations the lowest qualifying quantities apply.
- (10) Dangerous substances that fall within the Acute Toxic Category 3 via the oral route (H 301) fall under entry H2 Acute Toxic in those cases where neither acute inhalation toxicity classification nor acute dermal toxicity classification can be derived, for example, due to lack of conclusive inhalation and dermal toxicity data.
- (11) Flammable aerosols classified in accordance with the Classification and Labelling of Chemicals (GHS) classification criteria for substances and mixtures, physical hazards, and flammable gases and aerosols.
- (12) In order to use paragraph (11), the aerosol dispensers must not contain flammable gas Category 1 or 2 nor flammable liquid Category 1.
- (13) In accordance with CLP Regulation, the liquids with a flash point of more than 35°C need not be classified in Category 3 if negative results have been obtained in the sustained combustibility test L.2, Part III, section 32 of the UN

Manual of Tests Criteria. This is, however, not valid under elevated conditions such as high temperature or pressure and therefore such liquids are included in this categories.

- (14) "Gasoline" means any petroleum derivative, other than liquefied petroleum gas, with a flash point between  $-51^{\circ}\text{C}$  and  $-40^{\circ}\text{C}$  and which is suitable for use in motor vehicles.
- (15) The following examples are for illustrative purposes only and each situation should be considered carefully. In case of any doubt, the individual situation should be discussed with the approved inspection authority.
- (16) The substances present at an establishment only in quantities equal to or less than 2% of the relevant qualifying quantity must 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 incident elsewhere on site.

(16.1) **Application of the aggregation of substances**

**Example 1**

*A site with 4 tonnes of hydrogen (medium hazard threshold 5 tonnes) and 1 500 tonnes of flammable liquids meeting Category 6 of Chapter 3 of Annexure A (medium hazard threshold 5 000 tonnes).*

*The aggregation rule gives:  $(4/5) + (1\ 500/5\ 000) = 0,8 + 0,3 = 1,1$*

*As this result is greater than 1, medium hazard category applies.*

**Example 2**

*A site with 150 tonnes of toxic substances meeting Category 2 of Chapter 2 of Annexure A (high hazard threshold 200 tonnes) and 1 tonne of arsenic pentoxide (high hazard threshold 2 tonnes).*

*The aggregation rule gives:  $(150/200) + (1/2) = 0,75 + 0,5 = 1,25$*

*As this result is greater than 1, high hazard category applies.*

- (17) In the case of an establishment where no individual substance or preparation is present in a quantity above or equal to the relevant qualifying quantities, the following rules must be applied to determine if the establishment is covered by the relevant requirements of these Regulations:

(17.1) **Application of the aggregation of categories**

**1. High Hazard Category:**

If the sum -  $q_1/Q_{U1} + q_2/Q_{U2} + q_3/Q_{U3} + q_4/Q_{U4} + q_5/Q_{U5} + \dots$  is greater than or equal to 1, where—

- (a)  $q_x$  = the quantity of dangerous substance  $x$  (or category of dangerous substances) falling within Chapter 1 or 2; and
- (b)  $Q_{UX}$  = the relevant qualifying quantity for substance or category  $x$  from column 5 of Chapter 1 or 2, then these Regulations shall apply.

**2. Medium Hazard Category:**

If the sum -  $q_1/Q_{M1} + q_2/Q_{M2} + q_3/Q_{M3} + q_4/Q_{M4} + q_5/Q_{M5} + \dots$  is greater than or equal to 1, where—

- (a)  $q_x$  = the quantity of dangerous substance  $x$  (or category of dangerous substances) falling within Chapter 1 or 2; and
- (b)  $Q_{MX}$  = the relevant qualifying quantity for substance or category  $x$  from column 4 of Chapter 1 or 2, then these Regulations shall apply.

**3. Low Hazard Category:**

If the sum -  $q_1/Q_{L1} + q_2/Q_{L2} + q_3/Q_{L3} + q_4/Q_{L4} + q_5/Q_{L5} + \dots$  is greater than or equal to 1, where—

- (c)  $q_x$  = the quantity of dangerous substance  $x$  (or category of dangerous substances) falling within Chapter 1 or 2; and
- (d)  $Q_{LX}$  = the relevant qualifying quantity for substance or category  $x$  from column 3 of Chapter 1 or 2, then these Regulations shall apply.

- (18) These rules must be used to assess the overall hazards associated with toxicity, flammability and eco-toxicity. They must therefore be applied three times—

- (a) for the addition of substances and preparations named in Annexure A and classified as toxic or very toxic, together with substances and preparations falling into Category 1 or 2 in Chapter 2;
- (b) for the addition of substances and preparations named in Annexure A and classified as oxidising, explosive, flammable, highly flammable or extremely flammable, together with substances and preparations falling into Category 3, 6, 7a, 7b or 8 of Chapter 2; and
- (c) for the addition of substances and preparations named in Annexure A1 and classified as Annexure A for the environment (toxic to aquatic organisms), together with substances and preparations falling into Category 7(a) or 9(b) in Chapter 2, and the relevant provisions of these Regulations shall apply if any of the sums thereby obtained is greater than or equal to 1.

The relevant provisions of these Regulations apply where any of the sums obtained by (a), (b) or (c) is greater than or equal to 1, *stated in material safety data sheets of substances as per Dangerous Substances Directive (67/548/EEC)*.

#### (18.1) **Application of the 2% rule**

The 2% rule should be applied as follows:

1. The substances present at an establishment only in quantities equal to or less than 2% of the relevant qualifying quantity must 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 incident elsewhere on site.
2. This allows for some quantities of substances to be ignored when deciding whether the Regulations apply. Individual quantities of dangerous substances can be ignored if they fulfil the following criteria:
  - (a) *the quantity is 2% or less of its threshold quantity; and*
  - (b) *its location means that it cannot start a major incident elsewhere on site.*
3. *Note that–*
  - (a) *both criteria must be met;*
  - (b) *the quantity involved may be capable of producing a major incident by itself;*
  - (c) *it may be capable of starting a major incident off site; and*

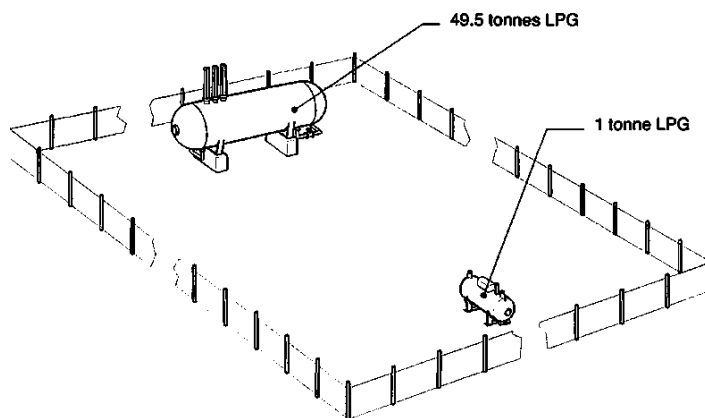
- (d) *if it meets the criteria, it can be ignored only when determining whether the establishment is within the scope of these Regulations. If the establishment is subject to the Regulations because of the presence of other dangerous substances, any quantity of 2% or less must be taken into account when considering the sources and consequences of major incidents.*

The diagram below does not depict an approved installation but it is meant for illustrative purposes only.

### **Example 1**

*An establishment with—*

- (a) *a large tank containing 49,5 tonnes of LPG; and*  
(b) *a small tank containing 1,0 tonne of LPG.*



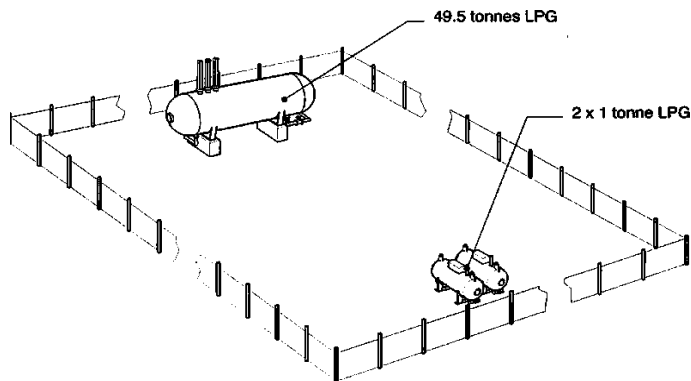
*The small tank = 2% of medium hazard threshold (50 tonnes), but the separation from the large tank is sufficient to prevent the small tank starting a major incident at the large tank. It can therefore be ignored in terms of the 2% rule.*

*The result is that medium hazard category does not apply, even though the total quantity of 50,5 tonnes is above the medium hazard threshold, which places it in the low hazard category.*

**Example 2**

An establishment with–

- (a) a large tank containing 49,5 tonnes of LPG; and
- (b) two small tanks each containing 1,0 tonne of LPG.



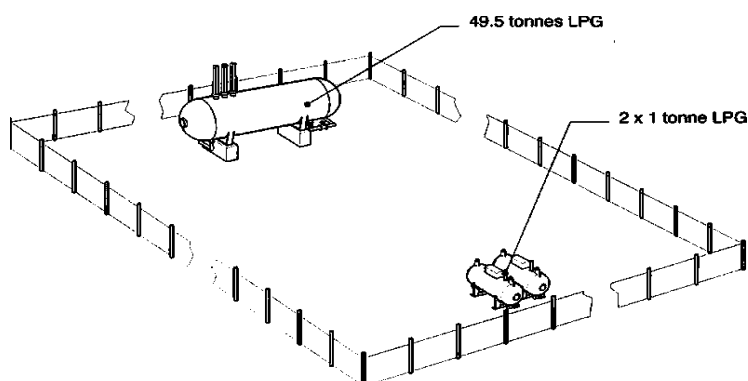
Each small tank = 2% of medium hazard threshold (50 tonnes), but their separation from the large tank and from each other is sufficient to prevent either of them starting a major incident at the other small tank or the large tank. Therefore, each can be ignored in terms of the 2% rule.

The result is that medium hazard category does not apply, even though the total quantity of 51,5 tonnes is above the medium hazard threshold, which places it in the low hazard category.

**Example 3**

An establishment with–

- (a) a large tank containing 49,5 tonnes of LPG; and
- (b) two small tanks each containing 1,0 tonne of LPG.



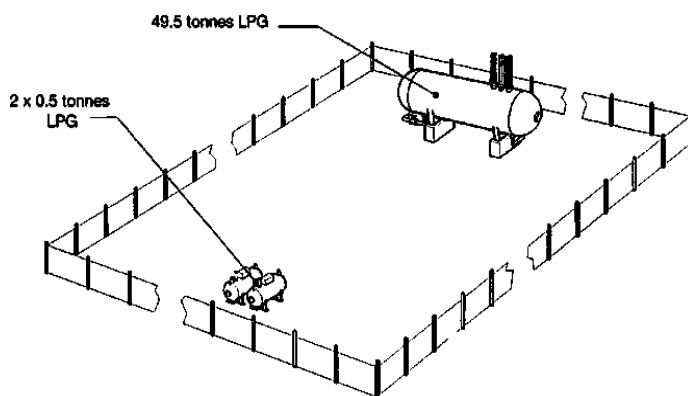
*The small tanks are adjacent to each other but their separation from the large tank is not sufficient to prevent the small tanks starting a major incident at the large tank.*

*Both small tanks = 2% of threshold (50 tonnes), but as they are adjacent they should be regarded as one quantity of more than 2%; therefore, the 2% rule does not apply. As the total quantity of 51,5 tonnes exceeds the medium hazard threshold, the medium hazard threshold applies to this establishment.*

#### **Example 4**

*An establishment with—*

- (a) a large tank containing 49,5 tonnes of LPG; and*
- (b) two small tanks each containing 0,5 tonnes of LPG.*



*The small tanks are adjacent to each other but well separated from the large tank.*

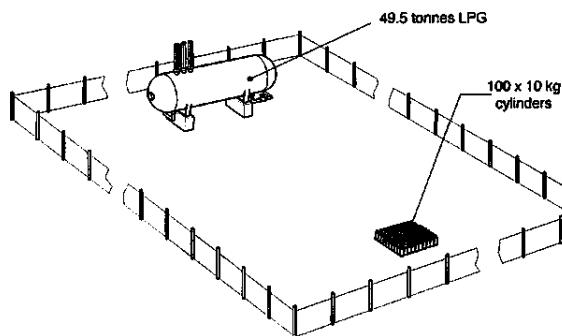
*Both small tanks = 1% of threshold (50 tonnes), but as they are adjacent they should be regarded as one quantity of 1 tonne which = 2%. As this cannot start a major incident elsewhere on site, the 2% rule applies and the medium hazard category does not apply even though the total quantity is greater than the medium hazard threshold, which places it in the low hazard category.*

#### **Example 5**

*An establishment with—*

- (a) a large tank containing 49,5 tonnes of LPG; and*
- (b) a compound containing 100 x 10 kg cylinders of LPG, i.e. 1 tonne in total.*





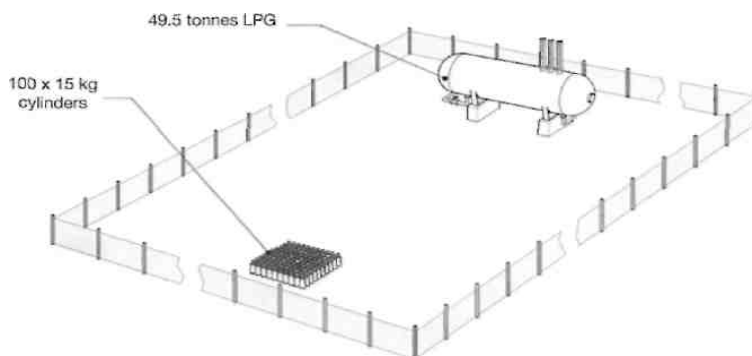
*The separation between the compound and the large tank is sufficient to prevent the cylinders starting a major incident at the large tank.*

*Each cylinder contains less than 2% of the medium hazard threshold (50 tonnes) and the total quantity in the cylinders is 1 tonne, which is 2% of the medium hazard threshold. The cylinder compound cannot start a major incident elsewhere on site, so the 2% rule applies. Therefore, the medium hazard category does not apply, which places it in the low hazard category.*

### **Example 6**

*An establishment with–*

- (a) a large tank containing 49,5 tonnes of LPG; and*
- (b) a compound containing 100 x 15 kg cylinders of LPG, i.e. 1,5 tonnes in total.*



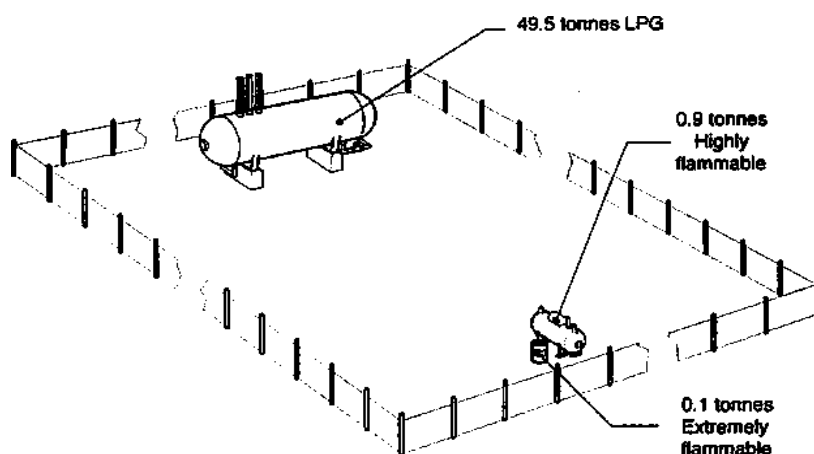
*The separation between the compound and the large tank is sufficient to prevent the cylinders starting a major incident at the large tank.*

Each cylinder contains less than 2% of the medium hazard threshold (50 tonnes) but as they are adjacent to each other they should be treated as one quantity of 1,5 tonnes, which is greater than 2% of the medium hazard threshold. Therefore, the medium hazard category applies to this establishment.

### Example 7

An establishment with—

- (a) a large tank containing 49,5 tonnes of LPG;
- (b) a tank containing 0,9 tonnes of highly flammable liquid (medium hazard threshold 50 tonnes); and
- (c) a tank containing 0,1 tonnes of extremely flammable liquid (medium hazard threshold 10 tonnes).



The small tanks are adjacent, but their separation from the large tank is enough to prevent the small tanks starting a major incident at the large tank. The total quantity for application purposes is determined by the aggregation rules, but first it is necessary to determine if the small tanks together exceed 2% of their threshold.

To do this, each one is expressed as a percentage of its own threshold and added together:

1. Small tanks

$(0,9/50) + (0,1/10) = 0,018 + 0,01 = 1,8\% + 1,0\% = 2,8\%$ . As this is greater than 2%, they cannot be ignored for application purposes.

The aggregation rule gives:

$$(49,5/50) + (0,9/50) + (0,1/10)$$

$$= 0,99 + 0,018 + 0,01$$

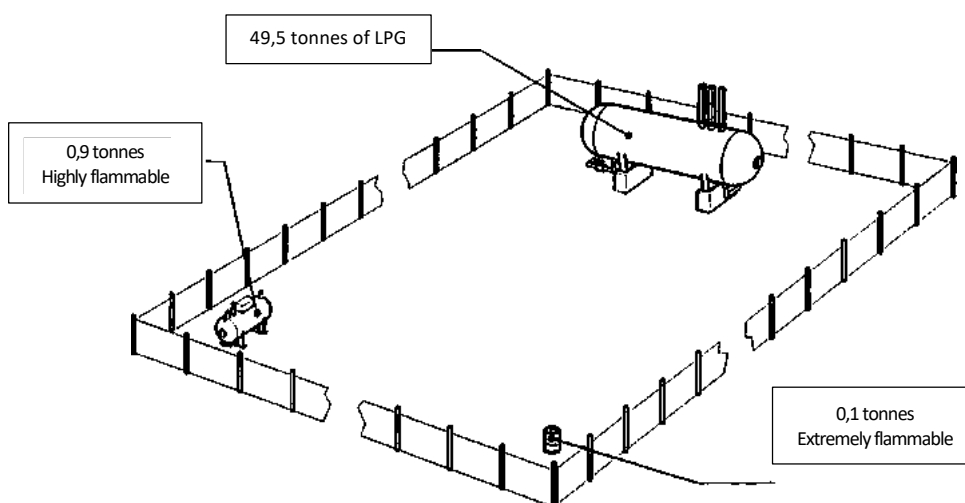
$$= 1,018$$

1,018 is greater than 1, so the medium hazard category applies to the establishment.

### Example 8

An establishment with—

- (a) a large tank containing 49,5 tonnes of LPG;
- (b) a tank containing 0,9 tonnes of highly flammable liquid (medium hazard threshold 50 tonnes); and
- (c) a tank containing 0,1 tonnes of extremely flammable liquid (medium hazard threshold 10 tonnes).



The separation is sufficient that neither small tank can start a major incident at either the other small tank or the large tank.

Because neither small tank exceeds 2% of its threshold, they can both be ignored for application purposes and the total quantity for application purposes is, therefore, the 49,5 tonnes of LPG. This is below its medium hazard threshold, so the medium hazard category does not apply to the establishment, which places it in the low hazard category.

**ANNEXURE B**

The fees for the registration and renewal of a certificate of registration are set out in the third and fourth columns of the table below:

CATEGORY OF MHI	CLASSES OF MHI	REGISTRATION FEE	RENEWAL FEE
Considered an MHI	-	R350	R350
Storage, use, handling, manufacturing and processing of one or more dangerous substances	LOW	R350	R350
	MEDIUM	R400	R400
	HIGH	R450	R450

**ANNEXURE C****Major Incident Prevention Policy**

The following principles should be taken into account when preparing a major incident prevention policy:

- (1) For the purpose of implementing the duty holder's major incident prevention policy and process safety management system, the following elements must be considered:
  - (a) the requirements laid down in the major incident prevention policy document must be proportionate to the hazards associated with major incidents present in the establishment;
  - (b) the major incident prevention policy must include the duty holder's aims and principles of action with respect to the control of hazards associated with major incidents.
  - (c) the process safety management system must include resources for determining and implementing the major incident prevention policy.
- (2) The following issues must be addressed by the process safety management system:
  - (a) organisation and personnel – the roles and responsibilities of personnel involved in the management of major hazards at all levels in the organisation. The identification of training needs of such personnel and

- the provision of the training so identified. The involvement of employees and, where appropriate, subcontractors;*
- (b) identification and evaluation of major hazards – adoption and implementation of procedures for systematically identifying major hazards arising from normal and abnormal operation and the assessment of their likelihood and severity;*
  - (c) operational control – adoption and implementation of procedures and instructions for safe operation, including maintenance of plant, processes, equipment and temporary stoppages;*
  - (d) management of change – adoption and implementation of procedures for planning modifications to, or the design of, new installations, processes or storage facilities;*
  - (e) planning for emergencies – adoption and implementation of procedures to identify foreseeable emergencies by systematic analysis and to prepare, test and review emergency plans to respond to such emergencies;*
  - (f) monitoring performance – adoption and implementation of procedures for the ongoing assessment of compliance with the objectives set by the duty holder major incident prevention policy and process safety management system, and the mechanisms for investigation and taking corrective action in the case of non-compliance. The procedures must cover the employer, self-employed person or user's system for reporting major incidents or near misses, particularly those involving failure of protective measures, and their investigation and follow-up on the basis of lessons learnt;*
  - (g) audit and review – adoption and implementation of procedures for periodic systematic assessment of the major incident prevention policy and the effectiveness and suitability of the process safety management system; the documented review of performance of the policy and process safety management system and its updating by senior management.*

**ANNEXURE D**  
**SAFETY REPORTS**

**MINIMUM INFORMATION TO BE INCLUDED IN SAFETY REPORT**

*The information referred to in regulation 12(1), (5) and (7) is as follows:*

- (1) *Information on the management system and on the organisation of the establishment with a view to major incident prevention.*
- (2) A process safety management system must—
  - (a) be proportionate to the hazards, industrial activities and complexity of the organisation in the establishment;
  - (b) be based on assessment of the risks;
  - (c) include within its scope the general management system, including the organisational structure, responsibilities, practices, procedures, processes and resources for determining and implementing the major incident prevention policy.
- (3) The following matters must be addressed by the process safety management system:
  - (a) in relation to the organisation and personnel—
    - (i) the roles and responsibilities of personnel involved in the management of major hazards at all levels in the organisation, together with the measures taken to raise awareness of the need for continuous improvement;
    - (ii) the identification of the training needs of such personnel and the provision of the training;
    - (iii) the involvement of employees and of subcontracted personnel working in the establishment, who are important from the point of view of safety;
  - (b) the identification and evaluation of major hazards: the adoption and implementation of procedures for systematically identifying major hazards arising from normal and abnormal operation, including subcontracted activities where applicable, and the assessment of their likelihood and severity;
  - (c) in relation to operational control—
    - (i) the adoption and implementation of procedures and instructions for safe operation, including maintenance of plant, processes and

- equipment, and for alarm management and temporary stoppages;
- (ii) the taking into account of available information on best practices for monitoring and control, with a view to reducing the risk of system failure;
  - (iii) the management and control of the risks associated with ageing equipment installed in the establishment and its corrosion;
  - (iv) the inventory of the establishment's equipment, and the strategy and methodology for the monitoring and control of the condition of the equipment;
  - (v) appropriate follow-up actions and any necessary countermeasures;
- (d) the management of change: the adoption and implementation of procedures for planning modifications to, or the design of, new installations, processes or storage facilities;
- (e) in relation to planning for emergencies—
- (i) the adoption and implementation of procedures to identify foreseeable emergencies by systematic analysis;
  - (ii) the preparation, testing and review of emergency plans to respond to emergencies and the provision of specific training for staff, such training to be given to all personnel working in the establishment, including relevant subcontracted personnel;
- (f) in relation to monitoring performance—
- (i) the adoption and implementation of procedures for the ongoing assessment of compliance with the objectives set by the operator's major accident prevention policy and safety management system, and the mechanisms for investigation and taking corrective action in case of non-compliance;
  - (ii) the procedures must cover the operator's system for reporting major incidents or 'near misses', particularly those involving failure of protective measures, and their investigation and follow-up on the basis of lessons learned;
  - (iii) the procedures could also include performance indicators such as safety performance indicators and/or other relevant indicators;

- (g) in relation to audit and review–
  - (i) the adoption and implementation of procedures for periodic systematic assessment of the major accident prevention policy and the effectiveness and suitability of the process safety management system;
  - (ii) the documented review of performance of the policy and process safety management system and its updating by senior management, including consideration and incorporation of necessary changes indicated by the audit and review.

The information in the safety report must contain the elements set out in Annexure C.

*(4) Presentation of the site and surrounding area of the establishment:*

- (a) description of the site and its surrounding area, including the geographical location, meteorological, geographical and hydrographic conditions and, if necessary, its history;*
- (b) identification of installations and other activities of the establishment which could present a major incident hazard;*
- (c) description of areas where a major incident may occur.*

*(5) Description of the establishment:*

- (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 incident risks and conditions under which such a major incident could happen, together with a description of proposed preventive measures;*
- (b) description of processes, in particular the operating methods;*
- (c) description of dangerous substances:*
  - (i) inventory of dangerous substances, including–*
    - (aa) the identification of dangerous substances: chemical name, the UN number;*
    - (bb) the maximum quantity of dangerous substances present;*
  - (ii) physical, chemical, toxicological characteristics and indication of the hazards, both immediate and delayed for people;*



- (iii) *physical and chemical behaviour under normal conditions of use or under potential incidental conditions.*
- (6) *Identification and incidental risks analysis and prevention methods:*
- (a) *detailed description of the possible major incident 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 establishment;*
  - (b) *assessment of the extent and severity of the consequences of identified major incidents;*
  - (c) *description of technical consideration, methods and tools used for the safety evaluation of the establishment.*
- (7) *Measures of protection and intervention to limit the consequences of an incident:*
- (a) *description of the equipment installed in the plant to limit the consequences of major incidents;*
  - (b) *organisational alert and intervention;*
  - (c) *description of internal or external resources that can be mobilised;*
  - (d) *summary of elements described in subparagraphs (a), (b) and (c);*
  - (e) *necessity for drawing up the on-site emergency plan.*

**ANNEXURE E**

AIA REPORTS: \_\_\_\_\_

: \_\_\_\_\_ **AIA number:** \_\_\_\_\_

<i>Physical address</i>	<i>Type</i>	<i>Responsible person</i>	<i>Assessor</i>	<i>Type of assessment</i>	<i>Date of previous assessment</i>	<i>Date of assessment</i>

**FORM A**  
**NOTIFICATION OF AN ESTABLISHMENT**

**(Regulation 4)**

*Detailed guidance can be obtained from the Major Hazard Installation Regulations, 2022, which is available on the Department of Employment and Labour's website, [www.labour.gov.za](http://www.labour.gov.za).*

*The completed form must be hand-delivered to the Department of Employment and Labour's offices.*

**Physical address:**

*215 Francis Baard Street  
Laboria House Building  
Pretoria  
0001*

*Or, alternatively, you may make enquiries by email to [webmail@labour.gov.za](mailto:webmail@labour.gov.za). As electronic communication cannot be guaranteed to be secure, you may decide not to use this means if you regard any of the information as confidential.*

*A determination must be made by the applicant who the correct recipient at the local government is. This recipient must be an appropriate member from the relevant section or senior management at the local government.*

## 2. BASIC PARTICULARS OF THE ESTABLISHMENT

Name of the establishment:	
Registered name of the business:	
Company Registration No.:	
Chief Executive Officer:	
CEO's physical address:	
CEO's telephone number:	
Name of the responsible person and contact:	
Physical address of the establishment:	
Telephone number of the establishment:	
Email:	
Industry sector:	
Brief description of activity or proposed activity concerned:	
Health and safety representative(s). (At least two, where applicable)	
Trade Union	

## 2. CLASSIFICATION

2.1 Type of hazard of the establishment (mark with an X)

<b>Low</b>		<b>Medium</b>		<b>High</b>	
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2.2 Type of notification

<b>Proposed</b>		<b>Renewal</b>		<b>Review due to changes</b>	
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Comment on the lifetime of the establishment:

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2.3 When did the assessment expire? \_\_\_\_\_

2.4 Age of the establishment \_\_\_\_\_

2.5 Subsequent risk assessments

<b>DATE OF MHI RISK ASSESSMENT</b>	<b>TYPE OF MHI RISK ASSESSMENT</b>	<b>AIA</b>

2.6 Date of evaluation of current risk assessment: \_\_\_\_\_

2.7 Were the employees consulted and informed of the status of the establishment?

<b>Yes</b>	<input type="checkbox"/>	<b>No</b>	<input type="checkbox"/>
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*Attach proof*

If not, provide a reason:

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**3. PUBLIC AWARENESS**

3.1 Were the neighbours and public notified?

<b>Yes</b>	<input type="checkbox"/>	<b>No</b>	<input type="checkbox"/>
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*Attach proof*

If not, provide a reason:

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3.2 *Were there any objections?*

<b>Yes</b>		<b>No</b>	
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*Attach proof*

*If yes, provide a reason:*

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3.3 *Were the objections regarding health and safety of the public?*

<b>Yes</b>		<b>No</b>	
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*Attach proof*

*If yes, provide a reason and resolutions:*

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**4. INVENTORY OF SUBSTANCES**

*Provide an inventory list of all substances that will be present, their physical form and quantity.*

*Physical form includes gas, liquid, powder and solids. Quantity is the maximum which is anticipated will be present. The information as in Annexure A must be used.*

<b>Name of substance</b>	<b>Physical form</b>	<b>Maximum quantity</b>

	<i>Details of the elements of the immediate environment liable to cause a major incident or aggravate the consequences thereof:</i>
Describe other establishments or features of environment which could lead to a major incident on your site. Describe elements of surrounding environment which could make the consequences of a major incident worse (e.g. nearby housing, other occupied buildings, farming and sewage works)	<b>Neighbouring establishments</b>
	<b>Surrounding vulnerabilities</b>
	<b>Other</b>

## **5. DETAILS OF APPROVED INSPECTION AUTHORITY (AIA)**

5.1 Name of the AIA (as relevant): \_\_\_\_\_

5.2 AIA number: \_\_\_\_\_

(Attach certificate)

5.3 SANAS certificate number: \_\_\_\_\_

(Attach certificate and schedule)

5.4 Name of assessor: \_\_\_\_\_

(Attach competency records)

5.5 Telephone number: \_\_\_\_\_

**6. SITE MAPS**

*Attach proof*

**7. LOCAL GOVERNMENT**

7.1 Name of local government: \_\_\_\_\_

7.2 Contact person: \_\_\_\_\_

7.3 Contact details: \_\_\_\_\_

7.4 Province: \_\_\_\_\_

*Attach proof of advertisement of the status*

7.5 Land use approval status

<b>Yes</b>		<b>No</b>	
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*Attach proof*

*If not, state the reasons and attach proof of when the permit will be submitted:*

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7.6 Acknowledgement by local government

*Official Stamp*

Received by: \_\_\_\_\_

DESIGNATION: \_\_\_\_\_

Contact: \_\_\_\_\_

Signature: \_\_\_\_\_

**8. EMERGENCY PREPAREDNESS**

8.1 Emergency preparedness plans

(a) On-site plan

<b>Yes</b>		<b>No</b>	
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*Attach proof*



*If not yet concluded, attach action plan with clear target dates of not more than six months and comment below:*

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

(b) *Off-site plan*

<b>Yes</b>		<b>No</b>	
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*Attach proof*

*If not yet concluded, attach action plan with clear target dates of not more than six months and comment below:*

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

**8.2 Relevant local government responsible for activating emergency plans**

Name: \_\_\_\_\_

Contact Person: \_\_\_\_\_

Designation: \_\_\_\_\_

*Was there an agreement between the establishment and the local government?*

<b>Yes</b>		<b>No</b>	
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*Attach proof*

*If no, comment and attach certificate of designation:*

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

**8.3 What is the upcoming revision period (maximum of three years)?**

\_\_\_\_\_

8.4 *Were employees consulted?*

<b>Yes</b>		<b>No</b>	
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*Attach proof*

*Attach consent statement from relevant health and safety representative(s) or health and safety committee.*

8.5 *Were employees trained on emergency preparedness and procedures to follow during all types of emergencies?*

<b>Yes</b>		<b>No</b>	
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*Attach proof*

## **9. SIGNATURES**

9.1 *Establishment Representative*

*Name and Surname:* \_\_\_\_\_ *Position:* \_\_\_\_\_

*Date:* \_\_\_\_\_

*Attach letterhead of the establishment*

9.2 *Responsible Person*

*Name and Surname:* \_\_\_\_\_ *Position:* \_\_\_\_\_

*Date:* \_\_\_\_\_

*Attach appointment letter*

**FORM B****APPLICATION FOR REGISTRATION AS APPROVED INSTALLATION  
INSPECTION AUTHORITY****DEPARTMENT OF EMPLOYMENT AND LABOUR  
OCCUPATIONAL HEALTH AND SAFETY ACT, 1993 (ACT NO. 85 OF 1993)**

<i>The Chief Inspector Department of Employment and Labour Private Bag X117 PRETORIA, 0001</i>	
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*The Chief Inspector*

*I hereby apply to be registered as an approved inspection authority for major hazard establishments in terms of regulation 19 of the Major Hazard Installation Regulations, 2022. I declare that the particulars given below are, to the best of my knowledge and belief, correct.*

**1. PARTICULARS OF INSPECTION BODY**

*Registered name of Inspection Body:* \_\_\_\_\_

*Trading name:* \_\_\_\_\_

*State whether you are a sole proprietor/partnership/company/close corporation (delete which is not applicable)*

*Business registration number:* \_\_\_\_\_

*Chief Executive Officer:* \_\_\_\_\_

*Partners:* \_\_\_\_\_

*Province:* \_\_\_\_\_

*Physical Address:* \_\_\_\_\_

## 2. SCOPE OF APPLICATION (Tick appropriate block(s))

TYPE A	3 <sup>d</sup> party	
TYPE B	In-house	
TYPE C	Manufacturer	

## 3. SIGNATORIES:

3.1 \_\_\_\_\_

3.2 \_\_\_\_\_

## 4. SPECIMEN SIGNATURE OF THE SIGNATORIES:

1	2	3	4
3.1			
3.2			

*Attach more if there are many***SUPPORTING DOCUMENTS**

- (a) Certified copy of IDs
- (b) Certified copy of business registration
- (c) Organogram of the inspection body
- (d) Certified copy of accreditation certificate and schedule from the accreditation body

Signature of the applicant \_\_\_\_\_

Date of application: \_\_\_\_\_

FOR OFFICE USE

Application : APPROVED/NOT APPROVED

REASON FOR REFUSAL: \_\_\_\_\_

\_\_\_\_\_

COMMENTS: \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

Allocated Registration Number: \_\_\_\_\_

Approving Official: \_\_\_\_\_

Signature: \_\_\_\_\_

Date: \_\_\_\_\_