

**DRAFT MAJOR HAZARD INSTALLATION REGULATIONS: 2019
RE: FOR PUBLIC COMMENTS**

Definitions

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

“change” means where there has been a change —

- (a) in the methods, equipment or procedures in use, handling or processing of equipment in a MHI that may increase the MHI’s risk profile;
- (b) or significant increase or decrease in the quantity of substances contemplated in Annexure MHI A1 and A2 that resulted in the MHI being classified as a major hazard establishment where a—
 - (i) low hazard establishment becomes a medium hazard establishment or vice versa; or
 - (ii) medium hazard establishment becomes a high hazard establishment and vice versa;
 - (iii) low hazard establishment becomes a high hazard establishment and vice versa;
- (c) when an emergency plan was brought into action for a major incident;

“designated authorities” include the South African Police Service and the Department of Health, but are not limited to these organisations;

“duty holder” means any—

- (a) (MHI) employer or self-employed person or user or pipeline who is in control of an establishment or will be in control of an establishment to be constructed or operated; and
- (b) supplier of hazardous substances;

“establishment” means the whole area under the control of the same duty holder where Annexure MHI A1, A2 and A3 substances are present in one or more;

“emergency plan” “means a plan contemplated in regulation 15;

“existing establishment” means an establishment where substances are present in quantities listed in Annexure MHI A1, A2 and A3 or otherwise classified by AIA on the date of the promulgation of these Regulations;

“high hazard establishment” “means—

- (a) an establishment where Annexure MHI A1 & A2 substances are present in quantities equal to or in excess of the quantities listed in column 4 of Annexure MHI A1 & A2; and

(b) major accident hazard pipelines contemplated in Annexure MHI 1 A3;

"impact zone" means the zone where any other installations or neighbours are at risk due to an incident at a MHI;

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

"low hazard establishment" means an establishment where Annexure MHI A1 and A2 substances are present and the quantity is equal to or exceeds the quantity in column 2 but less than quantities listed in column 3, of Annexure MHI A1 or A2;

"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 Annexure MHI A1 and A2 substances are present and the quantity is equal to or exceeds the quantity in column 3, but less than the quantity in column 4 of Annexure MHI A1 or A2;

"MHI" means a major hazard installation;

"near miss" means an unforeseen event involving one or more hazardous substances which, but for mitigating effects, actions or systems, could have escalated to a major incident;

"new establishment" means an establishment which after the date of entry into force of these Regulations is—

- (a) newly erected
- (b) declared to be an MHI ; or
- (c) changed from—
 - (i) a low hazard establishment to a medium hazard establishment or vice versa; or
 - (ii) a medium hazard establishment to a high hazard establishment and vice versa; or
 - (iii) a low hazard establishment to a high hazard establishment and vice versa;

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

"responsible person" means a person designated by duty holder in writing in full time capacity in respect of every premises on which an MHI is operated;

"risk assessment" means the process contemplated in regulation 5;

“rolling stock” means a locomotive, coach, railway carriage, truck, wagon or similar contrivance used for the purpose of transporting persons, goods or any other thing, and which can run on a railway;

“safety report” means a report contemplated in regulation 12;

“SANS 1461:2018” South African National Standard: Major Hazard Installations-Risk Assessments;

“SANS 1514:2018” South African National Standard: Major Hazard Installations-Emergency Preparedness Plan;

SANS 10228” means South African National Standard: The identification and classification of dangerous goods for transport;

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

“transit” includes a time or place in which rolling stock may be between planned points of departure and arrival.

2. Scope of Application

- (1) These Regulations apply to—
 - (a) MHI duty holders who have in their establishments the quantity of substances listed in Annexure MHI A1 or A2 or A3;
 - (b) high hazard establishments and MHI pipelines; or
 - (c) classified by an approved inspection authority.
- (2) These Regulations, excluding regulations 12 and 13, apply to medium hazard establishments.
- (3) These Regulations, excluding regulations 11, 12 and 13, apply to low hazard establishments.
- (4) Regulations 4, 9 and 10 apply to local authorities.
- (5) Regulations 10 and 15 apply to approved inspection authorities.
- (6) These Regulations do not apply to—
 - (a) nuclear installations registered in terms of the Nuclear Energy Act, 1993 (Act No. 131 of 1993);
 - (b) facilities for the manufacturing, handling, processing and storage of explosives;
 - (c) Annexure MHI 1 substances in transit and their inter-mediate temporary storage in the course of transit.

3. Management of major hazard installation

- (1) Every duty holder must before—
 - (a) erecting a new establishment;
 - (b) converting any installation into an establishment: or
 - (c) changing an establishment,

obtain written approval from the relevant local authority in terms of regulation 14(1).

(2) The duty holder must, subject to this regulation and in order to ensure that the provisions of the Act and these Regulations in relation to an establishment (s) are complied with, in writing designate a responsible person in full-time capacity and under his or her direct control in respect of every establishment.

(3) Notwithstanding the provisions of sub regulation (2) the chief inspector may, subject to conditions he or she may impose on the duty holder of a high hazard establishment, require in writing that such designated person holds a relevant qualification.

(4) A duty holder may in writing appoint one or more deputies to assist the person appointed in terms of sub regulation (2), and shall clearly define the duties of such deputies without exempting the responsible person designated in sub regulation (2) from ensuring that the duties are performed.

(5) If in the opinion of the chief inspector circumstances require the appointment of one or more deputies as contemplated in sub regulation (4) the chief inspector may instruct the duty holder to appoint a specified number of deputies.

(6) Every duty holder must consult on a regular basis with their counterparts of other MHI's within their potential impact zone to consider the possible impact and reflect on the domino effect of establishments at any of the MHI's: Provided that the duty holder shall inform those neighbouring establishments of any changes made to the establishments.

(7) The duty holder must keep a record of all consultations contemplated in sub regulation (6).

4. Notification of establishment

(1) A duty holder must notify the chief inspector, local authority and the provincial director on Form A of—

- (a) erection of MHI; or
- (b) conversion of an existing installation into an MHI, prior to such conversion.

(2) A duty holder must notify the chief inspector, local authority and the provincial director within 24 months, after the entry into force of these Regulations of the existence of his or her major hazard establishment.

- (3) The notification must be accompanied by—
- (a) proof of permission or approval from the relevant local authority on land use for MHI purposes, indicating the exact location of the site;
 - (b) a letter of designation contemplated in regulation 3(2) and the designated person's competency profile;
 - (c) an inventory list and safety data sheets of all substances that resulted in the installation being classified as a major hazard establishment;
 - (d) a statement containing the envisaged maximum quantity of substances that may be present at the establishment at any one time;
 - (g) the most recent risk assessment report as contemplated in regulation 10;
 - (h) a site map showing the establishment location and indicating developments in the vicinity of the major hazard establishment;
 - (i) 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 substances will be stored, handled, used or processed, showing the location of the major items of plant used in such activities;
 - (j) information regarding the neighbours 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 major hazard establishments and their exact distances from the establishment;
 - (k) proof of the publication of the advertisement contemplated in sub regulation (4);
 - (l) where applicable, the latest version of the major incident prevention policy.

(4) A duty holder who erects a MHI; or convert an existing installation into an MHI, must place an advertisement—

- (a) in English and predominant language in at least one newspaper serving the communities in the vicinity of the MHI; and
- (b) by way of notices posted within those communities.

Provided that the advertisement shall contain at least:

- (a) name and location of the major hazard establishment;

- (b) the name, title and telephone number of the contact person from whom further information can be obtained;
- (c) nature of the substances and the major incident that may occur; and
- (d) time and place where a risk assessment report will be explained and may be viewed.

(5) Any interested or affected party may make representations in writing to the relevant local authority and the chief inspector, within 60 days after the publication if that MHI is not acceptable and pose a risk to their health and safety.

5. Registration of MHI

(1) After considering an application for notification, the Chief Inspector may

—

- (a) on payment of the appropriate registration fee specified in Annexure E:
 - (i) register the premises as an MHI subject to such conditions as the Chief Inspector thinks fit to impose;
 - (ii) enter in the register, particulars pertaining to the name of MHI, the premises address and other details as the Chief Inspector thinks fit; and
 - (iii) issue to the duty holder with a certificate of registration; or
 - (iv) refuse to register the MHI

(2) Where the Chief Inspector refuses to register the MHI in respect of which an application for notification has been made, the Chief Inspector must notify the duty holder of the reasons for the refusal.

6. Duration of registration and renewal

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

(2) The Chief Inspector may, on the re-notification by the duty holder to renew the registration —

- (a) renew the registration on payment of the appropriate renewal fee specified; or
- (b) refuse to renew the registration.

(3) An application to renew the registration must be made not later than 6 months before the date of expiry of the registration, unless otherwise allowed by the Chief Inspector in any particular case.

7. Alteration in relation to occupation, use or particulars of registered MHI

(1) The duty holder must —

- (a) where there is an alteration in any of the particulars in the MHI register, furnish particulars of the alteration to the Chief Inspector in the prescribed form and manner that the Chief Inspector requires, not later than 14 days after the change occurs; or
- (b) where an alteration is to be made to the type of work carried out, inform the Chief Inspector of the proposed change and provide the Chief Inspector with the relevant documents pertaining to the change and such other information as the Chief Inspector may require, not less than 30 days before the change is to be made.

8. Revocation, suspension or cancellation of registration

(1) The Chief Inspector may direct the duty holder to comply with the requirements that the Chief Inspector specified in the direction notice, if the premises of the registered MHI become unfit for occupation or use as an MHI because of a —

- (a) failure by the duty holder of the registered MHI to ensure that the works carried out are done so safely;
- (b) change is effected on the MHI or
- (c) fact or circumstance not present when the MHI was registered.

(2) The Chief inspector may revoke the registration if —

- (a) the duty holder to whom a direction notice under sub regulation 23 is given fails to comply with the direction notice;
- (b) the Chief Inspector is satisfied that the duty holder has contravened a condition of registration; or
- (c) the Chief Inspector is satisfied that the duty holder has ceased occupation or use of the premises as an MHI.

(3) However, the Chief Inspector may, in lieu of revoking the registration under sub regulation (2), suspend the registration for such period as the Chief Inspector thinks fit.

(4) The Chief Inspector may cancel the registration on the application of the duty holder.

(5) The Chief Inspector must, before revoking or suspending the registration under paragraph (3) or (4), give to the duty holder a —

- (a) notice of the Chief Inspector's intention to revoke or suspend the registration; and
 - (b) a reasonable opportunity to submit reasons as to why the registration should not be revoked or suspended.
- (6) Where the Chief Inspector has decided, under this regulation, to revoke or suspend the registration, the Chief Inspector must give notice of the decision to the duty holder.
- (7) The revocation or suspension of the registration of sub regulations (3) or (4) does not take effect —
- (a) until the expiration of 21 days after the date on which notice of the Chief Inspector's decision to revoke or suspend the registration was given to the duty holder under sub regulation (6); or
 - (b) where an appeal against the decision is made to the Minister under section 35, until the appeal has been determined or withdrawn.
- (8) The Chief Inspector may, at any time, and for any reason that are considered sufficient, shorten the period for which the registration is suspended.

9. Sharing of information with the other MHIs

- (1) The Chief inspector may designate one or more registered MHI in a particular location as a group of MHIs, and such MHIs must share information including:
- (a) name and address of the MHI
 - (b) responsible person for that MHI
 - (c) inventory list and common or generic names of the substances present or likely to be present, which could give rise to a major accident
 - (d) nature of the major incident
 - (e) information on how affected workplaces will be alerted in the event of a major accident

10. Risk assessment

- (1) A duty holder shall after consultation with the relevant health and safety representative or health and safety committee, ensure that an approved inspection authority, who is competent to express an opinion as to the risks associated with the category of the major hazard establishment, carries out a MHI risk assessment in accordance with SANS 1461 (as amended) at intervals not exceeding 5 years or when there is 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 for the MHI risk assessment contemplated in sub regulation (1); and
 - (b) ensure that the results of the assessment are made available to the relevant health and safety representative or committee who may comment thereon.
- (3) Where the MHI risk assessment has been reviewed or revised without change to the establishment, the duty holder must submit an updated copy of the MHI risk assessment report to the chief inspector, the provincial director and the relevant local authority within 60 days.
- (4) Every duty holder must ensure that the most recent MHI risk assessment report is available on site for inspection by the chief inspector or local authority and for scrutiny by any interested person or affected person that may be affected by the activities of a major hazard establishment at a time and place and in a manner agreed upon between the parties.

11. Major incident prevention policy

- (1) The duty holder must prepare a major MHI incident prevention policy within a reasonable period prior to:
- (a) the construction and building of the establishment; or
 - (b) change in the establishment.
- (2) Every duty holder must within 36 months after the entry into force of these Regulations, prepare a major incident prevention policy.
- (3) The policy referred to in sub regulation (1) must provide for a high level of protection for persons and the environment and must include at least —
- (a) the aims and objectives of the policy;
 - (b) the roles and responsibilities of the establishment management;
 - (c) process safety performance indicators;
 - (d) commitments towards the maintenance and continual improvement of the control measures of major hazards;
 - (e) the aims and objectives of the—
 - (i) emergency preparedness plan;
 - (ii) evacuation plan regarding the—
 - (aa) speedy evacuation of persons;
 - (bb) roll call after evacuation;
 - (cc) other persons to be accounted for; and
 - (dd) the plant shut down;
 - (f) reasons for revision;
 - (g) dealing with contractors performing work on the site; and

- (h) sufficient particulars for the establishment of a process safety management system which takes account of the principles specified in Annexure MHI B.
- (4) A duty holder must review the major incident prevention policy of an installation every five years or when there is a change in the installation or establishment which renders the existing policy inadequate.

12. Safety reports

- (1) The duty holder of a high hazard establishment must prepare a comprehensive site specific safety report, which must be developed during the design phase of the high hazard establishment and must be continually updated during the life cycle of the project up to the date of the start of operations and shall be maintained for the duration of the life of the high hazard establishment, demonstrating that—
 - (a) the major incident prevention policy has been implemented;
 - (b) the process safety management system has been established in accordance with the information set out in Annexure MHI B;
 - (c) hazards associated with major incidents and possible major incident scenarios have been identified and that the necessary measures have been taken to prevent such incidents and to limit their consequences;
 - (d) adequate safety and reliability have been incorporated into the—
 - (i) design;
 - (ii) construction;
 - (iii) operation; and
 - (iv) maintenance,of any MHI, equipment and infrastructure used in the establishment;
 - (e) on-site emergency plans have been drawn up.
- (2) The safety report must contain information regarding an off-site emergency plan to take the necessary measures in the event of a major incident.
- (3) The duty holder of a proposed high hazard establishment must—
 - (a) send a preliminary safety report at the design stage of that establishment to the chief inspector ; and
 - (b) send a final safety report within a reasonable time before the start of operations at that installation.
- (4) The duty holder of an existing high hazard establishment must send a safety report to the chief inspector within 36 months after the entry into force of these Regulations.
- (5) Every duty holder of a high hazard establishment must—
 - (a) every five years; and
 - (b) prior to any major change to the establishment; or

- (c) whenever there is 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,
review and if necessary, revise the safety report and must send an amended safety report to the chief inspector.

13. Licence to operate a high hazard establishment

- (1) A duty holder who operates a high hazard establishment must apply for a licence to operate such an establishment. Provided that the existing establishments shall do so, not later than 36 months after the entry into force of these Regulations,
- (2) Upon receipt of an application in terms in sub regulation (1), the chief inspector, after consultation with the local authority, may—
 - (a) issue a licence; or
 - (b) decide not to issue a licence and give reasons for the decision; or
 - (c) issue a licence subject to any condition that he or she deems reasonably necessary.
- (3) A licence issued under sub regulation (2) (a) and (b) may—
 - (a) not be transferred to another establishment; and;
 - (b) lapse after 12 months if the new installation has not started or the installation has not been operated within 12 months.
- (4) The chief inspector may—
 - (a) suspend or withdraw a licence if the conditions subject to which the licence was issued are not complied with;
 - (b) alter a condition in an existing licence after consultation with the duty holder and the relevant health and safety representatives or the relevant health and safety committee.

14. General duties of local authority

- (1) Without derogating from the provisions of the National Building Regulations and Building Standards Act, 1977 (as amended), a local authority must not permit the erection of a new major hazard establishment or the expansion of a major hazard establishment at a separation distance that poses an unacceptable risk in terms of the risk assessment contemplated in regulation 6.
- (2) The local authority must—
 - (a) only where there is a separation distance which will not pose an unacceptable risk in terms of the risk assessment contemplated in regulation 6 permit new property development; and

- (b) prohibit any development adjacent to an installation that will result in that installation being declared a MHI.
- (3) The relevant local authority must give its consent for the onsite emergency preparedness plan and participate in a test drill of the on-site emergency preparedness plan as contemplated in regulation 15(6)(e): Provided that the duty holder is responsible for all on-site emergency preparedness plans, test drills and responses.
- (4) Where a relevant local authority does not have the facilities available to control a major incident or to comply with the requirements of these Regulations, that local authority must make prior arrangements with a neighbouring local authority, the relevant provincial government or the duty holder for assistance.
- (5) The off-site emergency plan to be followed outside the premises of the establishment or part of the establishment must be the responsibility of the relevant local authority.
- (6) The relevant local authority shall prepare an off-site emergency plan in accordance with SANS 1514 (as amended) and in consultation with the duty holder and interested or affected persons, within 24 months after the entry into force of these Regulations.
- (7) The duty holder must, on written request by, and within the time limits imposed by the local authority, furnish the local authority with the necessary information needed to prepare the off-site emergency plan.

15. Emergency preparedness plan

- (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);
 - (b) a responsible person's assistant contemplated in regulation 3(3);
 - (c) safety representative from the health and safety committee;
- (2) The duty holder must establish and maintain an on site emergency preparedness plan before the establishment commences operations in consultation with the emergency coordinating team and in accordance with SANS 1514 (as amended).
- (3) The on site emergency preparedness plan for an existing establishment must be updated and aligned 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 neighbors will be warned of major incidents is included in the plan;
- (b) sign a copy of the on-site emergency preparedness plan in the presence of at least two witnesses who have competency in emergency planning and who must be satisfied with the content of the emergency preparedness plan and attest to the signature of the duty holder;
- (c) obtain approval of the on-site emergency preparedness plan from the relevant local authority;
- (d) ensure that the on-site emergency preparedness plan is ready for implementation; and
- (e) cause the on-site emergency preparedness plan to be tested in practice at least once a year and take the necessary steps to arrange for the local authority to participate in that test.
- (f) must give an early warning to interested or affected parties in case a major incident is likely to go beyond the borders premises.
- (g) must inform and make arrangements with any neighbors within the potential impact zone about, and regarding, on-site emergency preparedness and response.

(5) The duty holder and the relevant local authority must take reasonable steps to activate the emergency preparedness plans in case of an incident which may result in—

- (a) a major incident;
- (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 preparedness plan at least once every three years and if necessary revise the plan.

(7) The duty holder and local authority must ensure that all first responders at the scene of a major incident have the necessary skill to deal with the substances at that establishment and are provided with emergency personal protective equipment as provided for in the emergency preparedness plan.

16. Reporting of risk and emergency occurrences

- (1) A duty holder must—
 - (a) subject to regulation 8 of the General Administrative Regulations, within 48 hours, inform the chief inspector by means of telephone, facsimile or similar means of communication—
 - (i) of a major incident;
 - (ii) of an incident that brought the emergency plan into activation; or
 - (iii) that a substance under pressure was released.

- (b) investigate and submit a written incident report to the chief inspector within seven days after the occurrence of the major incident and an emergency occurrence;
- (c) investigate and record all near misses in a register which shall at all times be available for inspection by an inspector and the local authority.

(2) A duty holder must in the case of a major incident or an emergency occurrence contemplated in sub regulation (1) that was or may have been caused by substance(s), inform the supplier of that substance(s) about the incident.

17. Information and training

(1) A duty holder must, after consultation with the relevant health and safety representatives 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; and
- (f) safety protocols and measures to be followed in case of an emergency.

(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 substances kept at the establishment, major hazard areas, and actions to follow in case of emergency, to all contractors, visitors and any person who in any manner assists in carrying out or conducting allocated duties, before they enter the establishment.

(4) Induction orientation shall be performed again for the persons mentioned in sub regulation (3) that returns to the site, in the event of any change to establishment which significantly alters the risk associated with the establishment. Provided that the induction training will be valid for periods not exceeding 12 months.

(5) A duty holder must ensure that all interested or affected parties are informed of the appropriate emergency response in the case of a major incident and are provided with updates on any reviewed risk assessment when such review has an impact on interested and affected parties.

18. General duties of suppliers

1) Any person who supplies substance(s) to an establishment must ensure that a safety data sheet is supplied with the substance(s), provide training on the use and handling of substance and must also conduct refresher training at intervals not exceeding 24 months.

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

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

19. Approved inspection authorities

(1) An inspection body accredited in terms of the Accreditation for Conformity Assessment, Calibration and Good Laboratory Practice Act, 2006 (as amended) or a foreign inspection body must apply to the chief inspector on Form B.

(2) On receipt of the application contemplated in sub regulation (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 and 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 request contemplated in sub regulation (3) appoint an arbitrator mutually agreed upon between the parties.

(5) The dispute contemplated in sub-regulation (3) must be investigated and arbitrated within a maximum of 90 days after the submission of a request for arbitration.

(6) An approved inspection authority must comply with all the duties assigned to an approved inspection authority in these Regulations within its scope of accreditation and the relevant health and safety standards.

20. Duties of approved inspection authority

(1) An approved inspection authority must ensure that the risk assessment contemplated in regulation 6 is carried out in terms of SANS 1461 (as amended).

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

- (a) The suitability of the existing emergency procedures for the 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 MHI risk assessment report and attachments as required in terms of SANS 1461.

(4) The approved inspection authority must when requested, participate in investigating major incidents, and near-misses.

(5) The approved inspection authority must make a risk assessment available upon request by the chief inspector or the local authority.

(6) An approved inspection authority must submit a list of all major hazard installations assessed, monthly, to the chief inspector in the form contemplated in annexure F and must report to the chief inspector the need to revise the existing risk assessment in the event that it is found, after an investigation, that the existing risk assessment requires revision.

(7) An approved inspection authority shall not operate as an MHI consultant.

21. Payable fees

1) A duty holder must pay a prescribed fee each time a notification, a renewal or 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, he or she considers necessary.

(2) The fees for the issue and renewal of a certificate of registration are set out in the third and fourth columns, respectively, of Annexure E.

(3) The Chief Inspector may waive but not refund the whole or any part of any fee paid or payable under these Regulations.

22. Closure

A duty holder must 21 days prior to the day that the establishment ceases to be a MHI, notify the chief inspector, provincial director and the local authority in writing.

23. Offences and Penalties

(1) Any person who contravenes or fails to comply with these regulations is guilty of an offence and on conviction is liable to a fine not exceeding R500 000 or to imprisonment for a period not exceeding 12 months.

The maximum permissible fines that may be imposed for contravening essential Regulations are prescribed on the table below:

PREVIOUS CONTRAVENTIONS	CONTRAVENTIONS OF ANY 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	R100 000
A previous contravention within 12 months	R250 000
A previous contraventions in respect of the same contravention within 3 years	R300 000
Three previous contraventions in respect of the same provision within three years	R500 000

24. Repeal of regulations

The Major Hazard Installation Regulations, 2001 published under Government Notice No.R692 of 30 July 2001, are hereby repealed.

25. Short title and commencement

These Regulations are called the Major Hazard Installation Regulations, 2018, and come into effect on a date determined by the Minister by notice in the *Government Gazette*.

ANNEXURE MHI A

SUBSTANCES TO WHICH THESE REGULATIONS APPLY

Part 1: Introduction

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

(2) Mixtures and preparations shall be treated in the same way as pure substances provided they remain within the concentration limits set according to their properties under the SANS 10228, unless a percentage composition or other description is specifically given.

(3) The qualifying quantities set out in Parts 2 and 3 relate to each establishment

(4) The quantities to be considered for the application of the relevant regulations are the maximum quantities which are present at any one time. Substances present at an establishment only in quantities equal to or less than 2% of the relevant qualifying quantity shall be ignored for the purposes of calculating the total quantity present if their location within an establishment is such that it cannot act as an initiator of a major incident elsewhere on site.

(5) The rules given in Part 3, Note 4 governing the addition of substances, or categories of substances, shall apply.

(6) For the purpose of this Annexure, a gas is any substance that has an absolute vapour pressure equal to or greater than 101.3 kPa at a temperature of 20°C.

(7) For the purpose of this Annexure, a liquid is any substance that is not a gas and that is not in a solid state at a temperature of 20°C and at a standard pressure of 101.3kPa.

ANNEXURE MHI A1

NAMED SUBSTANCES

Where a substance or group of substances listed in this Annexure also falls within a category of Annexure MHI A2, the qualifying quantities set out in this Annexure must be used.

Named substances	Quantities in tonnes		
	Low Hazard	Medium Hazard	High Hazard
Ammonia anhydrous	5	50	200

Named substances	Quantities in tonnes		
	Low Hazard	Medium Hazard	High Hazard
<i>Ammonium nitrate (as described in Note 1; see also Note 8(1) and (2))</i>	500	5,000	10,000
Ammonium nitrate (as described in Note 2; see also Note 8)	125	1,250	5,000
Ammonium nitrate (as described in Note 3 of this Part; Note 8(2) and (3))	35	350	2,500
Ammonium nitrate (as described in Note 4 of this Part; Note 8)	1	10	50
Potassium nitrate (as described in Note 5)	500	5,000	10,000
Potassium nitrate (as described in Note 6)	125	1,250	5,000
Arsenic pentoxide, arsenic (V) acid and/or salts	0,1	1	2
Arsenic trioxide, arsenious (III) acid and/or salts	0,01	0.1	0.1
Bromine	2	20	100
Chlorine	1	10	25
Nickel compounds in inhalable powder form (nickel monoxide, nickel dioxide, nickel sulphide, tri-nickel disulphide, di-nickel trioxide)	0,1	1	1
Ethyleneimine	1	10	20
Fluorine	1	10	20
Formaldehyde (concentration \geq 90%)	0,5	5	50
Hydrogen	0,5	5	50
Hydrogen chloride (liquefied gas)	2,5	25	250
Hydrogen fluoride	0,5	5	20
Lead alkyls	0,5	5	50
Liquefied extremely flammable gases (including LPG) and natural gas (whether liquefied or not)	5	50	200
Acetylene	0,5	5	50
Ethylene oxide	0,5	5	50
Propylene oxide	0,5	5	50
Methanol	50	500	5,000
4, 4-Methylenebis (2-chloraniline) and/or salts, in powder form	0,001	0.01	0.01

Named substances	Quantities in tonnes		
	Low Hazard	Medium Hazard	High Hazard
Methyl isocyanate	0,015	0.15	0.15
Oxygen	20	200	2,000
Toluene di-isocyanate	1	10	100
Carbonyl dichloride (phosgene)	0,03	0.3	0.75
Arsenic trihydride (arsine)	0,02	0.2	1
Phosphorus trihydride (phosphine)	0,02	0.2	1
Sulphur dichloride	0,1	1	1
Sulphur dioxide	0,5	5	20
Sulphur trioxide	1,5	15	75
Polychlorodibenzofurans and polychlorodibenzodioxins (including TCDD), calculated in TCDD equivalent (See Note 7)	0,0001	0.001	0.001
The following CARCINOGENS at concentrations above 5% by weight: 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	0,05	0.5	2
Petroleum products: gasolines , naphthas, kerosenes (including jet fuels), gas oils (including diesel fuels, home heating oils and gas oil blending streams)	250	2 500	25 000

NOTES

1 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) 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 satisfy the detonation resistance test described in Annexure MHI 2 to the Ammonium Nitrate Materials (High Nitrogen Content) Safety Regulations 2003 [7] "the detonation resistance test"; or
- (b) 15.75% or less by weight and unrestricted combustible materials, and which are capable of self-sustaining decomposition according to the UN Trough Test specified in United Nations Recommendations on the Transport of Annexure MHI Goods: Manual of Tests and Criteria (3rd revised Edition), Part III, subsection 38.2.

2. Ammonium nitrate: fertiliser grade.

This applies to straight ammonium nitrate-based fertilisers and to ammonium nitrate-based compound/composite fertilisers 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; or
- (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.

3. 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.

4. Ammonium nitrate (10/50): "off-specs" material and fertilisers not satisfying the detonation resistance 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 2 and 3; or
- (b) fertilisers which do not fall within Notes 1(a) and 2 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.

5. Potassium nitrate (5,000/10,000): composite potassium nitrate-based fertilisers composed of potassium nitrate in prilled / granular form.

6. Potassium nitrate (1,250/5,000): composite potassium nitrate-based fertilisers composed of potassium nitrate in crystalline form.

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

International Toxic Equivalent Factors (ITEF) for the congeners of concern (NATO/CCMS)*			
2, 3, 7, 8-TCDD	1	2, 3, 7, 8-TCDF	0.1
1, 2, 3, 7, 8-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-	0.1

		HxCDF	
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)

8.(1) 15.75% nitrogen content by weight as a result of ammonium nitrate corresponds to 45% ammonium nitrate.

(2) 24.5% nitrogen content by weight as a result of ammonium nitrate corresponds to 70% ammonium nitrate.

(3) 28% nitrogen content by weight as a result of ammonium nitrate corresponds to 80% ammonium nitrate.

8.1 Examples of the application of the aggregation and 2% rules

The following examples are for illustration 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.

Aggregation

Example 1

A site with 4 tonnes of hydrogen (medium hazard threshold 5 tonnes) and 1500 tonnes of flammable liquids meeting category 6 of Part 3 of Annexure MHI A (medium hazard threshold 5000 tonnes). The aggregation rule gives:

$$(4/5) + (1500/5000) = 0.8 + 0.3 = 1.1$$

As this result is greater than 1, medium hazard establishment applies.
Example 2

A site with 150 tonnes of toxic substances meeting category 2 of Part 3 of Annexure MHI 1 (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 MHE applies.

8.2 The 2% rule

The 2% rule is given in Annexure MHI A, Part 1, as follows:

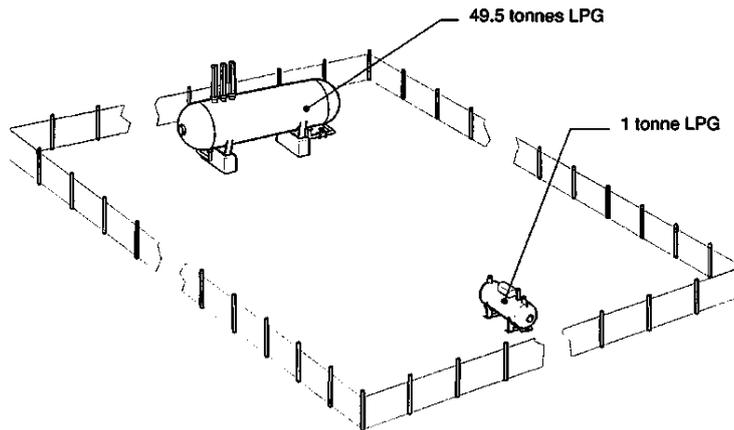
The quantities to be considered for the application of the relevant Regulations are the maximum quantities which are present at any one time. Substances present at an establishment only in quantities equal to or less than 2% of the relevant qualifying quantity shall be ignored for the purposes of calculating the total quantity present if their location within an establishment is such that it cannot act as an initiator of a major accident elsewhere on site.

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 accident elsewhere on site.

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 the 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 accidents.



Note: The diagram does not depict an approved installation, but is meant for illustration purposes only.

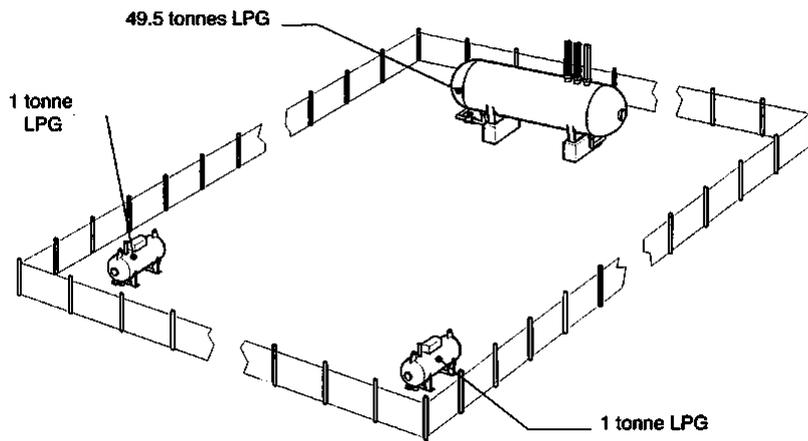
Example 2

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 MHE 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.



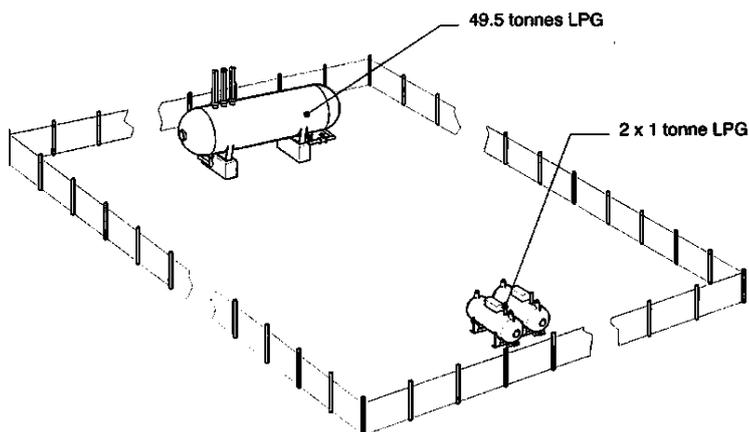
Example 3

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.

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 MHE 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.



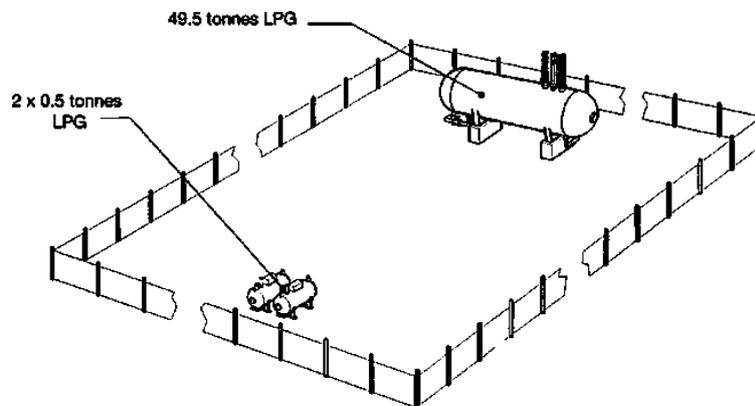
Example 4

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 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, MHE applies to this establishment.



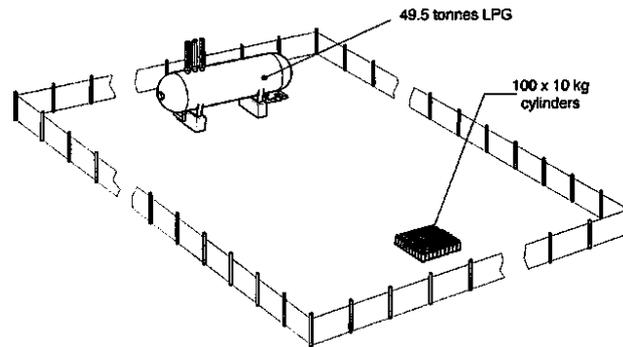
Example 4

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 medium hazard MHE does not apply even though the total quantity is greater than the medium hazard threshold, which places it in the low hazard category.



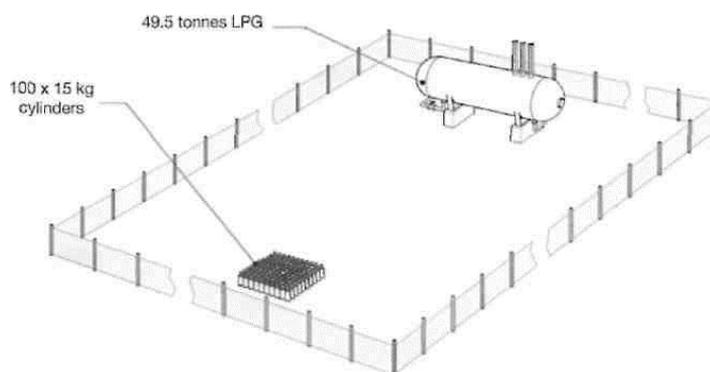
Example 5

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 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 medium hazard MHE does not apply, which places it in the low hazard category.



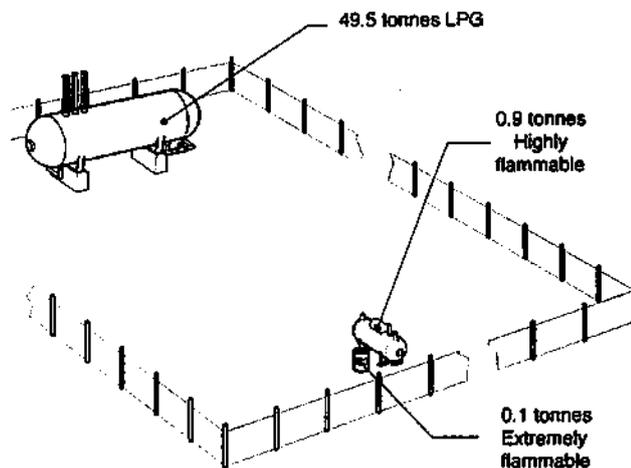
Example 6

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 medium hazard MHE 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:

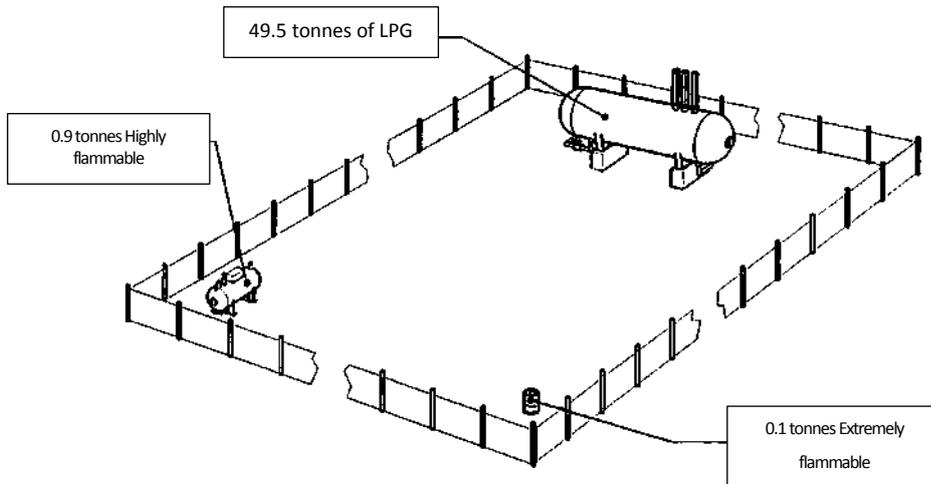
$$(0.9/50) + (0.1/10) = 0.018 + 0.01 = 1.8\% + 1.0\% = 2.8\%$$

As this is greater than 2%, they cannot be ignored for application purposes.

The aggregation rule gives:

$$49.5 + 0.9 + 0.1 = 1.018$$

50 50 10 which is greater than 1, so medium hazard MHE 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 medium hazard MHE does not apply to the establishment, which places it in the low hazard category.

ANNEXURE MHI A2

LISTED SUBSTANCES

Categories of substances and preparations not specifically named in Annexure MHI A1

Categories of dangerous substances	Quantity in tonnes		
Column 1	Column 2	Column 3	Column 4
VERY TOXIC (R26 as per Note 4)	0,5	5	20

TOXIC (R23 as per Note 4)	5	50	200
OXIDISING	5	50	200
FLAMMABLE, where the substance or preparation falls within the definition given in Note 2(a)	500	5 000	50 000
HIGHLY FLAMMABLE, where the substance or preparation falls within the definition given in Note 2(b)(i)	5	50	200
HIGHLY FLAMMABLE liquids, where the substance or preparation falls within the definition given in Note 2(b)(ii)	500	5 000	50 000
EXTREMELY FLAMMABLE, where the substance or preparation falls within the definition given in Note 3(c)	1	10	50
ANNEXURE MHI FOR THE ENVIRONMENT risk phrases: (a) Very toxic to aquatic organisms	10	100	200
(b) Toxic to aquatic organisms: may cause long term adverse effects in the aquatic environment	20	200	500
ANY CLASSIFICATION not covered by those given above in combination with risk phrases (a) Reacts violently with water	10	100	500
(b) In contact with water, liberates toxic gas	5	50	200

NOTES

1. Substances and preparations shall be classified for the purposes of Annexure MHI A2 according to SANS 10228.

2. In the case of substances and preparations with properties giving rise to more than one classification, for the purposes of these Regulations the lowest qualifying quantities shall apply. However, for the application of the rule in Note 3, the qualifying quantity used shall always be the one corresponding to the classification concerned.

(a) "Flammable", "highly flammable" and "extremely flammable" mean -

(i) flammable liquids - substances and preparations having a flash point equal to or greater than 23°C and less than or equal to 60°C (danger group III as per SANS 10228), supporting combustion;

(ii) highly flammable liquids –

(aa) substances and preparations which may become hot and finally catch fire in contact with air at ambient temperature without any input of energy; substances and preparations which have a flash point lower than 60°C and which remain liquid under pressure, where particular processing conditions, such as high pressure or high temperature, may create major-incident hazards;

(bb) substances and preparations having a flash point lower than 23°C and which are not extremely flammable (danger group II, SANS 10228); and

(3). The extremely flammable gases and liquids –

(a) liquid substances and preparations which have a flash point lower than 0°C and the boiling point (or, in the case of a boiling range, the initial boiling point) of which at normal pressure is less than or equal to 35°C; and

(b) gases which are flammable in contact with air at ambient temperature and pressure, which are in a gaseous or supercritical state; and

(c) flammable and highly flammable liquid substances and preparations maintained at a temperature above their boiling point.

(4). 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 shall be applied to determine the application of these Regulations to the establishment:

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 Annexure MHI A1 or B; and

(b) Q_x = the relevant qualifying quantity for substance or category x from column 3 of Annexure MHI A1 and MHI B then these Regulations apply.

If the sum - $q_1/Q_1 + q_2/Q_2 + q_3/Q_3 + q_4/Q_4 + q_5/Q_5 + \dots$ is greater than or equal to 1, where -

(i) q_x = the quantity of dangerous substance x (or category of dangerous substances) falling within Annexure MHI A1 and B; and

(ii) Q_x = the relevant qualifying quantity for substance or category x from column 2 of Annexure MHI A1 and B, then these Regulations shall apply.

(5). These rules shall 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 MHI A1 and classified as toxic or very toxic, together with substances and preparations falling into category 1 or 2 in Annexure MHI A2;

(b) for the addition of substances and preparations named in Annexure MHI A1 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 Annexure MHI A2; and

(c) for the addition of substances and preparations named in Annexure MHI A1 and classified as Annexure MHI for the environment (toxic to aquatic organisms), together with substances and preparations falling into category 7(a) or 9(b) in Annexure MHI A2, and the relevant provisions of these Regulations shall apply if any of the sums thereby obtained is greater than or equal to 1.

(6). Stated in material safety data sheets of substances as per Dangerous Substances Directive (67/548/EEC)

ANNEXURE MHI A3

CLASSIFICATION OF PIPELINES AS MAJOR HAZARD ESTABLISHMENTS

For the purposes of this Annexure—

(a) a liquid is oxidising, if it has been, or is liable to be classified, pursuant to section 2(1) of the Hazardous Substance Act, 1973 as oxidising, and

(b) a fluid is toxic or very toxic, or reacts violently with water, if it has been, or is liable to be classified, pursuant to section 2(1) of the Hazardous Substance Act, 1973 as toxic, very toxic or as reacting violently with water.

A pipeline is classified as a MHI if any of the following applies:

(1). A fluid which is or is to be conveyed in a pipeline as a liquid:

(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.

(Paragraph 2(a)(i) of Annexure MHI A2 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.)

(2). A fluid which is or is to be conveyed in a pipeline as a gas at above 8 bar absolute and its flammable in air.

(Paragraph 2(a)(ii) of Annexure MHI A2 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).

(3). 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. 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 are included.

(The intention is that this will cover pipelines conveying spiked crude which could have a considerable vapour pressure associated with it as well as pipelines which could be conveying fluids with a presence of sour gases. To determine whether the fluid attracts the additional duties, it is necessary to establish

whether the gaseous element will separate out from the liquid with time to produce a pressure in excess of 1.5 bar absolute. The definition thus excludes stabilised crude oils in which the vapour pressure of the dissolved gas is suppressed by the lower vapour pressure of other constituents.)

- (4). A toxic or very 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

- (5). 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.

- (6). 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.

- (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.

(“gasoline” means any petroleum derivative, other than liquefied petroleum gas, with a flashpoint between -51° and -40° centigrade and which is suitable for use in motor vehicles; (Mostly petrol). (Diesel is not included)

ANNEXURE MHI B

Principles to be taken into account when preparing major incident prevention policy document

- (1). For the purpose of implementing the duty holder's major incident prevention policy and process safety management system 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, sub-contractors;
 - (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 on-going 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 MHI C

PURPOSE AND CONTENTS OF 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.

This information must contain the elements set out in Annexure MHI B.

- (2). 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, 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.
- (3). description of installation:
- (a) description of the main activities and products of the parts of the establishment which are important from the point of view of safety, sources of major 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 allocated to the substance by SANS 10228;
 - (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 accidental conditions.
- (4). Identification and accidental 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 installation;

- (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 installation.
- (5). 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 sub-paragraphs (a), (b) and (c);
 - (e) necessity for drawing up the on-site emergency plan.

ANNEXURE D

NOTIFICATION OF MAJOR HAZARD ESTABLISHMENT

FORM A

(Regulation 4)

Detailed guidance can be obtained from Major Hazard Installation Regulations, 2014 and it is available on the Department of Labour website, www.labour.gov.za.

The completed form must be sent to the Department of Labour by post; hand delivery or email:

Postal Address:

The Chief Inspector
Department of Labour
Private Bag X117
PRETORIA
0001

Physical Address:

215 Francis Baard
Laboria House Building
Pretoria
0001

or alternatively, you may send it by e-mail to: 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 authority is. This recipient must be appropriate members of senior management at the local authority.

1. BASIC PARTICULARS OF ESTABLISHMENT

Name of MHI establishment:	
Registered name of the business:	
Company Registration No:	
Chief Executive Officer:	
CEO's physical Address:	
CEO's Telephone number:	
Name and position of person in charge of the MHI Establishment:	
Physical Address of the MHI Establishment:	
Telephone:	
Email:	
Industry Sector:	
Brief description of activity or proposed activity concerned, including nature of business:	
Relevant Health and safety representative(s).	
Trade Union	
Other	

2. CLASSIFICATION

2.1 Is the establishment/installation classified as a MHI?

Yes

No

2.2 Type of MHI

Low:

Medium:

High:

2.3 Type of Notification

New:

Modification:

Existing:

Comment on the life time of the establishment:

2.4 Were the employees consulted and informed of the MHE

Yes No

Attach proof

3. PUBLIC AWARENESS

3.1 Were the neighbours and public notified?

Yes No

Attach proof

3.2 Were there any objections?

Yes No

If yes, attach proof of those objections

3.3 Were the objections regarding health and safety?

Yes No

If yes explain and attach proof of resolution of objections:

4. INVENTORY OF SUBSTANCES

Provide an inventory list of all hazardous 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.

Name of Hazardous Substance	Physical Form	Maximum Quantity

Details of the elements of the immediate environment liable to cause a major incident or aggravate the consequences thereof:

Describe other establishments or features of environment which could lead to a major incident on your site. Describe elements

Neighbouring MHI
Surrounding Vulnerabilities

of surrounding environment which could make the consequences of a major incident worse (e.g. nearby housing; other occupied buildings; farming, sewage works, etc.)

Other

5. DETAILS OF APPROVED INSPECTION AUTHORITY

5.1 Name of the AIA (as relevant): _____

5.2 MHI AIA number: _____

(Attach certificate)

5.3 SANAS Certificate Number: _____

(Attach certificate & schedule)

5.4 Name of Assessor: _____

(Attach competency records)

5.5 Telephone number: _____

6. RISK ASSESSMENT

6.1 Type of risk assessment

(a) Baseline:

(b) Review:

(c) Revision:

6.2(a) If risk assessment is not a baseline, when was the first risk assessment conducted?

(b) By who was the assessment conducted? _____

(c) When did the assessment expire? _____

(d) Age of the Establishment _____

6.3 Subsequent risk assessments

DATE OF MHI RISK ASSESSMENT	TYPE OF MHI RISK ASSESSMENT	AIA/

6.4 Date of evaluation of current MHI risk assessment:

Attach proof

Indicate variations & reasons?

7. SITE MAPS

Included?

Yes No

8. LOCAL AUTHORITY

8.1 Name of Local Authority _____

8.2 Contact Person: _____

8.3 Contact Details: _____

8.4 Land use MHI approval status

Yes No

Attach proof.

If not, state the reasons:

8.5 Acknowledgement by Local Authority

Official Stamp

Received by: _____

DESIGNATION: _____

Contact: _____

Signature: _____

9. EMERGENCY PREPAREDNESS

9.1 Emergency preparedness plans

(a) On-site plan

Yes No

Attach proof

If not yet concluded attach action plan with clear targets dates of not more than six months.

Comments:

(b) Off-site plan

Yes No

Attach proof

If not yet concluded attach action plan with clear targets dates of not more than six months.

Comments:

9.2 Relevant Local authority responsible for activating emergency plans

Name: _____

Contact Person: _____

Designation: _____

Was there an agreement between the establishment and Local authority?

Yes No

If yes Attach proof

If no, comment on the plan of action and further agreements:

9.3 What is the revision period (maximum of 3 years)?

9.4 Were employees consulted?

Yes No

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

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

Yes No

If yes attach proof.

If no, attach plan of action.

ANNEXURE E

PAYABLE FEES

The fees for the issue and renewal of a certificate of registration are set out in the third and fourth columns, respectively, of the table below opposite the MHI that falls within the category of MHI specified in the first column of the table below.

CATEGORY OF MHI	CLASSES OF MHI	REGISTRATION FEE	RENEWAL FEE
Deemed MHI	-	R250	R250
Storage of one or more dangerous substances in warehouses	LOW	R250	R250
	MEDIUM	R300	R300
	HIGH	R350	R350
Bulk storage of one or more dangerous substances	LOW	R300	R300
	MEDIUM	R350	R350
	HIGH	R400	R400
Manufacturing and processing of one or more dangerous substances	LOW	R350	R350
	MEDIUM	R400	R400
	HIGH	R450	R450

ANNEXURE F

FORM B

**APPLICATION FOR REGISTRATION AS APPROVED MAJOR HAZARD
INSTALLATION INSPECTION AUTHORITY**

**DEPARTMENT OF LABOUR
OCCUPATIONAL HEALTH AND SAFETY ACT, 1993 (ACT NO.85 OF
1993)**

The Chief Inspector Department of Labour Private Bag X117 PRETORIA, 0001	
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The Chief Inspector

I hereby apply to be approved as an approved inspection authority for major hazard establishments in terms of regulation 14 of the Major Hazard Installation Regulations, 2018. I declare that the particulars given hereunder 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/closed 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 rd party	
TYPE B	Inhouse	
TYPE C	Manufacturer &	

3. SIGNATORIES:

3.1 _____
3.2 _____
3.3 _____

4. SPECIMEN SIGNATURE OF THE SIGNATORIES:

1		2	3	4
3.1				
3.2				
3.3				

SUPPORTING DOCUMENTS

- (a) Certified copy of IDs
- (b) Certified 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: _____

ANNEXURE G

MONTHLY AIA REPORTS

Name of MHI	Physical Address	Type	MHI Responsible Person	AIA	Assessor	Type of assessment	Date of previous Assessment	Date of Assessment	LG contact details	AIA File Number