

No. 26**THE HEALTH AND SAFETY AT WORK ORDINANCE, 1999**

(Ordinance 6 of 1999)

REGULATIONS MADE UNDER SECTION 38

In exercise of the powers vested in him by section 38 of the Health and Safety at Work Ordinance 1999 ^(a) and of all other powers enabling him in that behalf, the Administrator hereby makes the following Regulations:-

Citation and commencement

1. These Regulations may be cited as the Health and Safety at Work (Protection of Employees from Explosive Atmospheres) Regulations 2003 and shall come into force on 30 June 2003.

Interpretation

2. - (1) In this Ordinance, unless the context otherwise requires:-

“explosive atmosphere” means a mixture with air, under atmospheric conditions, of flammable substances in the form of gases, vapours, mists or dusts in which, after ignition has occurred, combustion spreads to the entire unburned mixture;

“the Ordinance” means the Health and Safety at Work Ordinance 1999.

(2) In these Regulations, unless the context otherwise requires:-

(a) any reference to a numbered regulation or a numbered Schedule is a reference to the regulation or Schedule so numbered in these Regulations;

(b) any reference to a numbered paragraph is a reference to the paragraph so numbered in the regulation or Schedule in which it appears.

Object and application

3. - (1) These Regulations specify minimum requirements to protect the health and safety of employees potentially at risk from explosive atmospheres.

(2) These Regulations shall not apply to:-

(a) areas used directly for and during the medical treatment of patients;

(b) the use of appliances burning gaseous fuels in accordance with Council Directive 90/396 EEC of 29 June 1990 for the approximation of the laws of the member States in relation to gaseous appliances, as amended from time to time;

(c) the manufacture, handling, use, storing and transport of explosives or chemically unstable substances;

^(a) Ordinance 6 of 1999.

- (d) mineral-extracting industries, where these are subject to specific health and safety legislation;
- (e) the use of means of transport by land, water and air to which the pertinent provisions of the international agreements (such as ADNR, ADR, ICAO, IMO, RID) and the relevant ratifying laws of the above agreements apply, other than any means of transport intended for use in a potentially explosive atmosphere.

(3) The provisions of the Ordinance and the regulations made thereunder shall apply to and in relation to explosive atmospheres at work without prejudice to any more restrictive or specific provisions contained in these Regulations.

PART II

OBLIGATIONS OF THE EMPLOYER

Preventing explosions and protection

4. - (1) With a view to preventing and providing protection against explosions, every employer shall take technical or organisational measures appropriate to the nature of the operation, in order of priority and in accordance with the following basic principles:-

- (a) the prevention of the formation of explosive atmospheres, or where the nature of the activity does not allow that;
- (b) the avoidance of the ignition of explosive atmospheres; and
- (c) the mitigation of the detrimental effects of an explosion so as to ensure the health and safety of employees.

(2) Where necessary, these measures shall be combined or supplemented with measures against the propagation of explosions and shall be reviewed regularly and, in any event, whenever significant changes occur.

Assessment of explosion risks

5. - (1) When carrying out the assessment of risks pursuant to the Management of Health and Safety at Work Regulations 2003^(b), every employer shall assess the specific risks arising from explosive atmospheres, taking account of:-

- (a) the likelihood that explosive atmospheres will occur and their persistence;
- (b) the likelihood that ignition sources, including electrostatic discharges, will be present and become active and effective;
- (c) the installations, substances used, processes, and their possible interactions; and
- (d) the scale of the anticipated effects.

(2) Explosion risks must be assessed overall.

(3) Places which are or can be connected via openings to places in which explosive atmospheres may occur shall be taken into account

^(b) P.I. No. 22 of 2003.

in assessing explosion risks.

General obligations

6. To ensure the health and safety of employees, and in accordance with the basic principles of risk assessment and those referred to in regulation 4(1), every employer shall take the necessary measures to ensure that:-

- (a) where explosive atmospheres may arise in such quantities as to endanger the health and safety of employees or others, the working environment is such, that work can be performed safely;
- (b) in working environments where explosive atmospheres may arise in such quantities as to endanger the health and safety of employees, appropriate supervision of employees is provided, in accordance with the risk assessment, by the use of appropriate technical means.

Co-ordination

7. - (1) Where employees from several undertakings are present at the same workplace, each employer shall be responsible for all matters coming under his control.

(2) Without prejudice to the individual responsibility of each employer as provided for in the Ordinance and the regulations made thereunder, the employer responsible for the workplace in accordance with such legislation shall co-ordinate the implementation of all the measures concerning employees' health and safety and shall state, in the Explosion Protection Document referred to in regulation 9, the aim of that co-ordination and the measures and procedures for implementing it.

Places where explosive atmospheres may occur

8. - (1) Every employer shall classify places where explosive atmospheres may occur into zones in accordance with Schedule 1.

(2) The employer shall ensure that the minimum requirements specified in Schedule 2 are applied to and in relation to the places covered by paragraph (1).

(3) Where necessary, places where explosive atmospheres may occur in such quantities as to endanger the health and safety of employees shall be marked with signs at their points of entry in accordance with Schedule 3.

Explosion Protection Document

9. - (1) When carrying out the obligations imposed by regulation 5 the employer shall ensure that a document, referred to in these Regulations as the "Explosion Protection Document", is drawn up and kept up to date.

- (2) The Explosion Protection Document must show, in particular:-
 - (a) that the explosion risks have been determined and assessed;
 - (b) that adequate measures will be taken to attain the aims of these Regulations;

- (c) those places which have been classified into zones in accordance with Schedule 1;
- (d) those places where the minimum requirements set out in Schedule 2 will apply;
- (e) that the workplace and work equipment, including warning devices, are designed, operated and maintained with due regard for safety; and
- (f) measures have been taken for the safe use of work equipment in accordance with the Health and Safety at Work (Use of Work Equipment) Regulations 2002^(c).

(3) The Explosion Protection Document must be drawn up prior to the commencement of work and be revised when the workplace, work equipment or organisation of the work undergoes any significant change.

(4) The employer may combine existing explosion risk assessment documents or other equivalent reports produced pursuant to the Ordinance or any regulations made thereunder or any other legislation.

Special requirements for work equipment and workplaces

10. - (1) Work equipment for use in places where explosive atmospheres may occur which is made available in the undertaking for the first time after these Regulations come into force must comply with the minimum requirements specified in Parts A and B of Schedule 2.

(2) Where no other specific legislation is applicable or any such legislation is only partially applicable, work equipment for use in places where explosive atmospheres may occur which is already in use or is made available in the undertaking for the first time, before these Regulations come into force, must comply with the minimum requirements specified in Part A of Schedule 2.

(3) Workplaces which contain places where explosive atmospheres may occur which are used for the first time after these Regulations come into force must comply with the minimum requirements of these Regulations.

(4) Workplaces which contain places where explosive atmospheres may occur which are already in use before these Regulations come into force must comply with the minimum requirements of these Regulations by 30 June 2006.

(5) Modifications, extensions and restructuring of workplaces containing places where explosive atmospheres may occur undertaken after these Regulations come into force must comply with the minimum requirements of these Regulations.

SCHEDULE 1

(Regulations 8(1) and 9(2) (c))

CLASSIFICATION OF PLACES WHERE EXPLOSIVE ATMOSPHERES MAY OCCUR**Preliminary**

1. The following system of classification must be applied to places where precautions are taken in accordance with Regulations 4, 5, 8 and 9.

Places where explosive atmospheres may occur

2. – (1) A place in which an explosive atmosphere may occur in such quantities as to require special precautions to protect the health and safety of the employees concerned is deemed to be hazardous within the meaning of these Regulations.

(2) A place in which an explosive atmosphere is not expected to occur in such quantities as to require special precautions is deemed to be non-hazardous within the meaning of these Regulations.

(3) Flammable or combustible substances are considered as materials which may form an explosive atmosphere, unless an investigation of their properties has shown that in mixtures with air they are incapable of independently propagating an explosion.

Classification of hazardous places

3. – (1) Hazardous places are classified in terms of the zones defined in sub-paragraph (3) below, on the basis of the frequency and duration of the occurrence of an explosive atmosphere.

(2) The extent of the measures to be taken in accordance Part A of Schedule 2, is determined by this classification.

(3) In this Schedule:-

“Zone 0” means a place in which an explosive atmosphere consisting of a mixture with air of flammable substances in the form of gas, vapour or mist is present continuously or for long periods or frequently;

“Zone 1” means a place in which an explosive atmosphere consisting of a mixture with air of flammable substances in the form of gas, vapour or mist is likely to occur in normal operation occasionally;

“Zone 2” means a place in which an explosive atmosphere consisting of a mixture with air of flammable substances in the form of gas, vapour or mist is not likely to occur in normal operation but, if it does occur, will persist for a short period only;

“Zone 20” means a place in which an explosive atmosphere in the form of a cloud of combustible dust in air is present continuously, or for long periods or frequently;

“Zone 21” means a place in which an explosive atmosphere in the form of a cloud of combustible dust in air is likely to occur in normal operation occasionally;

“Zone 22” means a place in which an explosive atmosphere in the form of a cloud of combustible dust in air is not likely to occur in normal operation but, if it does occur, will persist for a short period only.

Notes

1. Layers, deposits and heaps of combustible dust must be considered as any other source which can form an explosive atmosphere.
2. “Normal operation” means the situation when installations are used within their design parameters.

SCHEDULE 2

(Regulations 8(2), 9(2)(d) and 10(1) and (2))

PART A**MINIMUM REQUIREMENTS FOR IMPROVING
THE SAFETY AND HEALTH PROTECTION OF
EMPLOYEES POTENTIALLY AT RISK FROM EXPLOSIVE
ATMOSPHERES****Preliminary**

1. The obligations referred to in this Schedule apply to and in relation to:-

- (a) places classified as hazardous in accordance with Schedule 1 whenever required by the features of workplaces, workstations, the equipment or substances used or the danger caused by the activity related to the risks from explosive atmospheres;
- (b) equipment in non-hazardous places which is required for, or helps to ensure, the safe operation of equipment located in hazardous places.

Organisational measures

2. – (1) The employer must provide employees working in places where explosive atmospheres may occur with sufficient and appropriate training with regard to explosion protection.

(2) Where required by the Explosion Protection Document:-

- (a) work in hazardous places must be carried out in accordance with written instructions issued by the employer;
- (b) a system of permits to work must be applied for carrying out both hazardous activities and activities which may interact with other work to cause hazards.

(3) Permits to work must be issued by the person responsible for issuing such permits prior to the commencement of the work.

Explosion protection measures

3. – (1) Any escape or release, whether or not intentional, of flammable gases, vapours, mists or combustible dusts which may give rise to explosion hazards must be suitably diverted or removed to a safe place or, if that is not practicable, safely contained or rendered safe by some other suitable method.

(2) Where an explosive atmosphere contains several types of flammable or combustible gases, vapours, mists or dusts, protective measures must be appropriate to the greatest potential risk.

(3) Prevention of ignition hazards in accordance with regulation 4 must also take account of electrostatic discharges, where employees or the working environment act as charge carrier or charge producer.

(4) Employees must be provided with appropriate working clothes consisting of materials which do not give rise to electrostatic discharges that can ignite explosive atmospheres.

(5) Plant, equipment, protective systems and any associated connecting devices must only be brought into service if the Explosion Protection Document indicates that they can be safely used in an explosive atmosphere. This applies also to work equipment and associated connecting devices which are not regarded as equipment or protective systems within the meaning of the Health and Safety at Work (Use of Work Equipment) Regulations 2002, if their incorporation into an installation can in itself give rise to an ignition hazard. Necessary measures must be taken to prevent confusion between connecting devices.

(6) All necessary measures must be taken to ensure that the workplace, work equipment and any associated connecting device made available to employees have been designed, constructed, assembled and installed, and are maintained and operated, in such a way as to minimise the risks of an explosion and, if an explosion does occur, to control or minimise its propagation within that workplace or work equipment. For such workplaces appropriate measures must be taken to minimise the risks to employees from the physical effects of an explosion.

(7) Where necessary, employees must be given optical or acoustic warnings and withdrawn before the explosion conditions are reached.

(8) Where required by the Explosion Protection Document, escape facilities must be provided and maintained to ensure that, in the event of danger, employees can leave endangered places promptly and safely.

(9) Before a workplace containing places where explosive atmospheres may occur is used for the first time, its overall explosion safety must be verified. Any conditions necessary for ensuring explosion protection must be maintained. Such verification must be carried out by persons competent in the field of explosion protection as a result of their experience or professional training.

(10) Where the risk assessment shows it is necessary:-

- (a) it must be possible, where power failure can give rise to the spread of additional risks, to maintain equipment and protective systems in a safe state of operation independently of the rest of the installation in the event of power failure;
- (b) manual override must be possible in order to shut down the equipment and protective systems incorporated within automatic processes which deviate from the intended operating conditions, provided that this does not compromise safety; only employees competent to do so may take such action;
- (c) on operation of the emergency shutdown, accumulated energy must be dissipated as quickly and as safely as possible or isolated so that it no longer constitutes a hazard.

PART B**CRITERIA FOR THE SELECTION OF EQUIPMENT AND PROTECTIVE SYSTEMS**

4. – (1) Unless the Explosion Protection Document based on the risk assessment states otherwise, equipment and protective systems for all places in which explosive atmospheres may occur must be selected on the basis of the categories referred to in the Health and Safety at Work (Use of Work Equipment) Regulations 2002.

(2) In particular, the following categories of equipment must be used in the zones indicated, provided they are suitable for gases, vapours or mists or dusts, as appropriate:-

- (a) in zone 0 or zone 20, category 1 equipment,
- (b) in zone 1 or zone 21, category 1 or 2 equipment,
- (c) in zone 2 or zone 22, category 1, 2 or 3 equipment.

SCHEDULE 3
(Regulation 8(3))
WARNING SIGN

The warning sign for places where explosive atmospheres may occur referred to in regulation 8(3) must:-

- (a) take the form depicted below;

PLACE WHERE EXPLOSIVE ATMOSPHERES MAY OCCUR



RISK OF EXPLOSION

- (b) be triangular in shape; and
(c) comprise black letters on a yellow background with black edging (the yellow part to take up at least 50 % of the area of the sign).

Dated this 20th day of February 2003.

By the Administrator's Command,
J.C.A. JARVIS CBE,
Chief Officer,
Sovereign Base Areas.

(107/6)



SUPPLEMENT No. 3
TO
THE SOVEREIGN BASE AREAS GAZETTE
No. 1281 of 17th March 2003
SUBSIDIARY LEGISLATION

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