

S.I. No. 467/1997 - Safety, Health and Welfare at Work (Extractive Industries) Regulations, 1997

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SAFETY, HEALTH AND WELFARE AT WORK (EXTRACTIVE INDUSTRIES)
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S.I. No. 467 of 1997.

SAFETY, HEALTH AND WELFARE AT WORK (EXTRACTIVE INDUSTRIES)
REGULATIONS 1997.

I, Tom Kitt, Minister of State at the Department of Enterprise, Trade & Employment in exercise of the powers conferred on me by [section 28](#) of the [Safety, Health and Welfare at Work Act, 1989](#) (No. 7 of 1989), in relation to the matters set out in paragraphs (1) to (16), (19) to (21), (23) to (30), and (32) to (37) of the Fourth Schedule to that Act, and the Labour (Transfer of Departmental Administration and Ministerial Functions) Order, 1993 ([S.I. No. 18 of 1993](#)) as adapted by the Enterprise and Employment (Alteration of Name of Department and Title of Minister) Order, 1997 ([S.I. No. 305 of 1997](#)), and the Enterprise, Trade and Employment (Delegation of Ministerial Functions) (No. 2) Order, 1997 ([S.I. No. 330 of 1997](#)) and after consultation with the National Authority for Occupational Safety and Health, and for the purpose of giving effect to Council Directive 92/91/EEC ¹ and Council Directive 92/104/EEC ² hereby make the following Regulations:

¹ O.J. No. L348, 28 November, 1992, p. 9

² O.J. No, L404, 31 December, 1992, p. 10

PART I INTERPRETATION AND GENERAL

Citation and commencement

1. (1) These Regulations may be cited as the Safety, Health and Welfare at Work (Extractive Industries) Regulations, 1997.

(2) These Regulations shall come into operation on the 21st day of November 1997.

Interpretation

2. (1) In these Regulations—

"the Act" means the [Safety, Health and Welfare at Work Act, 1989](#) (No. 7 of 1989);

"ancillary surface installation" means any surface installation housing workstations which are essential to the operation of a surface or underground extractive industry;

"extractive Industry" means a surface or underground extractive industry or an extractive industry through drilling onshore or offshore;

"extractive Industry through drilling onshore" means any industry practising any of the following—

(a) extraction of minerals through drilling by boreholes—

(i) on any lands within the State,

(ii) on any waters being the internal or inland waters of the State (including so much thereof as are extended by [Section 5](#) of the [Maritime Jurisdiction Act, 1959](#)),

(iii) on any floating, fixed or other installation which is connected with land above the high water mark of the territorial seas of the State by a permanent structure providing access to the installation at all times and for all purposes,

(b) prospection with a view to such extraction,

(c) preparation of any such minerals so extracted for sale, other than the activity of processing those minerals;

"extractive industry through drilling offshore" means any industry practising any of the following—

(a) extraction of minerals through drilling by boreholes,

(b) prospection with a view to such extraction,

(c) preparation of any such so extracted minerals for sale, other than the activity of processing those minerals,

within the waters to which the [Safety, Health and Welfare \(Offshore Installations\) Act, 1987](#) (No. 18 of 1987), applies (other than the waters in all the areas of the sea to which the internal or inland waters of the State are extended by [Section 5](#) of the [Maritime Jurisdiction Act, 1959](#))

but other than by means of any floating, fixed or other installation which is connected with land above the high water mark of the territorial seas of the State by a permanent structure providing access to the installation at all times and for all purposes:

"minerals" has the meaning assigned to it by

(a) [section 5](#) of the [Mines and Quarries Act, 1965](#) (No. 7 of 1965), and

(b) [section 2](#) of the [Safety, Health and Welfare \(Offshore Installations\) Act, 1987](#) (No. 18 of 1987);

and includes any other naturally occurring substance having a characteristic set of physical properties with a definite range of chemical composition and a distinct molecular structure;

"place of work" includes, in relation to an extractive industry, the whole area intended to house workstations to which employees have access for the purpose of their work relating to the immediate and ancillary activities and installations of, as appropriate

(a) the surface or, as the case may be, underground extractive industry, including overburden dumps and other tips and any accommodation that is provided and, in the case of the underground extractive industry, any working area;

(b) the extractive industry through drilling onshore including any accommodation that is provided; and

(c) the extractive industry through drilling offshore, including any accommodation that is provided.

"prospecting" means the activity of searching for minerals or mineral deposits;

"the Signs Regulations" means the Safety, Health and Welfare at Work (Signs) Regulations, 1995 ([S.I. No. 132 of 1995](#));

"the Principal Regulations" means the Safety, Health and Welfare at Work (General Application) Regulations, 1993 ([S.I. No. 44 of 1993](#));

"surface extractive industry" means any industry practising any of the following

(a) surface extraction of minerals,

(b) prospecting with a view to such extraction,

and includes ancillary surface installations and the preparation of any such minerals so extracted for sale, other than the activities of any manufacturing process of those minerals;

"underground extractive industry" means any industry practising any of the following:

(a) underground extraction of minerals,

(b) prospecting with a view to such extraction, and includes ancillary surface installations and the preparation of any such minerals so extracted for sale, other than the activities of any manufacturing process of those materials;

"workstation" means any locations at a place of work in the extractive industries where work or work related activities are undertaken and includes a working place in the underground extractive industry.

(2) In these Regulations a reference to a paragraph is to a paragraph in the Regulation or, as the case may be, Schedule in which the reference occurs, unless it is indicated that reference to some other Regulation or Schedule is intended, and a reference to a Regulation is to a Regulation of these Regulations, unless it is indicated that reference to some other Regulation is intended.

(3) In these Regulations a reference to a Schedule is to a Schedule to these Regulations unless it is indicated that reference to some other Schedule is intended.

Application

3. (1) Without prejudice to the application of the relevant statutory provisions

(a) the provisions of Part II of these Regulations shall apply to every extractive industry;

(b) the provisions of Part A of the First Schedule shall apply to every extractive industry and the provisions of Part B of the First Schedule shall apply to every

(i) extractive industry through drilling onshore,

(ii) extractive industry through drilling offshore, and to ancillary surface installations in respect of every

(iii) underground extractive industry,

(iv) surface extractive industry;

(c) the provisions of the Second Schedule shall apply to every underground extractive industry;

(d) the provisions of the Third Schedule shall apply to every surface extractive industry;

(e) the provisions of the Fourth Schedule shall apply to every extractive industry through drilling onshore.

(f) the provisions of the Fifth Schedule shall apply to every extractive industry through drilling offshore.

(2) The provisions of these Regulations shall not apply to every following activities of an extractive industry through drilling by borehole

(a) extraction of landfill gas;

(b) drilling of shot-firing holes in connection with blasting operations in mines and quarries referred to in the [Mines and Quarries Act, 1965](#) (No. 7 of 1965);

(c) extraction of water except where the extraction of water is directly related to the extraction of minerals or to activities ancillary to such extraction.

(3) Without prejudice to the definition of "construction work" in Regulation 2 of the Safety, Health and Welfare at Work (Construction) Regulations, 1995 ([S.I. No. 138 of 1995](#)), for the avoidance of doubt it is hereby declared that the provisions of those Regulations do not apply to any extractive industry through drilling offshore or to any area where the [Safety, Health and Welfare \(Offshore installations\) Act, 1987](#) (No. 18 of 1987), or regulations made thereunder apply.

(4) The provisions of Regulations 2 and 4 and Part II of the Principal Regulations shall apply for the purposes of these Regulations.

(5) The requirements of the Schedules shall apply whenever required by the features of the place of work, the work activity carried on and the circumstances or the hazards prevailing in relation to any such work activity.

PART II: GENERAL SAFETY HEALTH AND WELFARE PROVISIONS

General duties of employer

4. It shall be the duty of every employer, in relation to any place of work under his or her control, to ensure that

(a) the place of work is designed, constructed, equipped, commissioned, operated and maintained in such a way that employees can perform the work

assigned to them without endangering their safety, health and welfare at work or that of other employees;

(*b*) the operation of the place of work when employees are present takes place under the supervision of a person in charge;

(*c*) work involving a special risk is carried out only by competent employees and in accordance with safety instructions given, which shall be comprehensible to all employees concerned:

(*d*) any necessary safety drills are performed at regular intervals;

(*e*) in preparing the safety statement to include references, as appropriate, to the measures taken to comply with the relevant statutory provisions and to ensure that the safety statement is adequate for both normal and critical situations;

(*f*) where he or she is the principal employer in relation to a place of work, which is shared with another employer or self employed person, to co-ordinate the measures required to be taken under Regulation 6 of the Principal Regulations and to include reference to such measures in the safety statement:

(*g*) measures and precautions appropriate to the nature of the operation concerned are taken to avoid, detect and combat the starting and spread of fires and explosions and to prevent the occurrence of explosive or health endangering atmospheres;

(*h*) to provide and maintain appropriate means of escape and rescue enabling employees to leave places of work promptly and safely in the event of danger: and

(*i*) to provide the necessary warning and other communications systems to enable assistance, escape and rescue operations to be launched immediately when the need arises.

Information

5. It shall be the duty of every employer in providing information, in accordance with Regulation 11 of the Principal Regulations, to his or her employees or safety representative to ensure that such information includes information on the measures to be taken concerning their safety and health in accordance with Regulation 4 and that such information is comprehensible to the employees concerned.

Health surveillance

6. It shall be the duty of every employer in making available, in accordance with Regulation 15 of the Principal Regulations, to his or her employees health surveillance as required under Regulation 15 of the Principal Regulations to ensure that such health surveillance is made available before the employees are assigned to work in the extractive industry concerned and at regular intervals thereafter.

FIRST SCHEDULE

REQUIREMENTS APPLICABLE TO THE EXTRACTIVE INDUSTRIES

PART A

1. Competent Employees

When employees are present at any place of work, there shall be a sufficient number of them with the necessary skills, experience and training to perform the tasks

assigned.

2. Information. Instruction and Training

(1) Employers shall give the necessary information, instruction, training and retraining to ensure employees' safety and health.

(2) Employers shall ensure that any instructions given are comprehensible so as not to endanger employees' safety and health or that of other employees.

3. Written instructions

(1) Written instructions, specifying rules to be observed to ensure the safety and health of employees and the safe use of equipment, shall be drawn up for every place of work.

(2) The written instructions referred to in subparagraph (1) shall be set out in the safety statement and shall include information on the use of emergency equipment and action to be taken in the event of an emergency at or near the place of work.

4. Safe working methods

Safe working methods shall be applied at each place of work or in respect of each activity concerned.

5. Regular review of safety and health measures

Any measures taken to protect the safety and health of employees, including the safety and health management system, as set out in the safety statement, shall be regularly reviewed to ensure compliance with the relevant statutory provisions.

6. Maintenance of equipment and plant

(1) A suitable scheme shall be set up providing, at regular intervals, for the systematic examination, maintenance and, where appropriate, testing of mechanical and electrical equipment and plant (each of which shall be carried out by a competent person), and for the keeping, in an appropriate manner, of records in respect of the doing of each of those things.

(2) Adequate safety equipment shall be maintained ready for use and in good working order at all times and such maintenance shall be undertaken with due regard to ongoing activities.

7. Protection from explosion risks

(1) The necessary measures shall be taken to prevent the formation, accumulation and ignition of explosive atmospheres.

(2) The safety statement shall specify the arrangements made and the equipment and measures necessary to prevent explosions.

8. Protection from fire hazards

(1) As respects the design, construction, equipping and commissioning of a place of work adequate measures shall be taken for the purposes of ensuring that—

(a) during the time that each, where appropriate, of those activities is carried on, fires are prevented from starting and spreading and that provision is made for fast and effective fire-fighting and for the supply of adequate fire-fighting materials,

(b) on and after the completion of those activities, subparagraph (2) will be complied with in relation to that place of work.

(2) As respects the operation and maintenance of a place of work. adequate measures shall be taken for the purposes of ensuring that fires are prevented from starting and spreading and that provision is made for fast and effective fire-fighting and for the supply of adequate fire-fighting materials.

(3) Places of work shall be equipped with appropriate fire-fighting equipment and, as necessary, with fire detection and alarm systems.

(4) Non-automatic fire-fighting equipment shall be easily accessible and simple to use and, where necessary, protected from damage.

(5) Taking account of Regulation 4(g), the safety statement shall specify the precautions taken to protect against, detect and combat the outbreak and spread of fires.

(6) The fire-fighting equipment shall, in accordance with the provisions of the Signs Regulations, be indicated by signs, and such signs shall be placed at appropriate points, be legible and be maintained.

9. Danger areas

(1) When places of work contain danger areas in which, owing to the nature of the work, there are risks, including those of employees or objects falling, such places of work shall be, as far as possible, provided with;

(a) devices preventing unauthorised employees from entering such areas,

(b) appropriate measures to protect employees authorised to enter danger areas,

(c) clear indication that such areas are "Danger Areas".

10. First-aid rooms

First-aid rooms shall be sign-posted in accordance with the provisions of the Signs Regulations and clearly visible first aid instructions shall be displayed in such first-aid rooms.

PART B

1. Stability and solidity

Places of work shall be designed, constructed, erected, operated, supervised and maintained to withstand the environmental forces anticipated and shall have a structure and solidity appropriate to the nature of their use.

2. Floors, walls, ceilings and roofs of rooms

- (1) The floors of places of work shall have no dangerous bumps, holes or slopes and shall be fixed, stable and not slippery.
- (2) Places of work containing workstations shall be adequately insulated against heat having regard to the type of undertaking involved and the physical activity of the employees.
- (3) The surfaces of floors, walls and ceilings in rooms shall be such that they can be cleaned or refurbished to an appropriate standard of hygiene.
- (4) Transparent or translucent walls, in particular all glass partitions, in rooms or in the vicinity of workstations and traffic routes shall be clearly indicated and made of safety material or be shielded from such places or traffic routes to prevent employees from coming into contact with such walls or being injured in the event of such walls shattering.
- (5) Access to roofs made of materials of insufficient strength shall not be permitted unless equipment is provided to ensure that the work can be carried out in a safe manner.

3. Room dimensions and air space in rooms freedom of movement at the workstation

Workrooms shall have sufficient surface area, height and air space to allow employees to perform their work without risk to their safety, health or wellbeing and the dimensions of the free space at the workstation shall allow employees sufficient freedom of movement and enable them to perform their work safely.

4. Windows and skylights

- (1) Windows, skylights and ventilation devices which are meant to be opened, adjusted or secured shall be designed so that these activities can be carried out in a safe manner.
- (2) Windows, skylights and ventilation devices referred to in subparagraph (1) shall not be positioned so as to constitute a hazard to employees when open.
- (3) It shall be possible to clean windows and skylights without risk.

5. Doors and gates

- (1) The position, number and dimensions of doors and gates, and the materials used in their construction, shall be determined by the nature and use of the rooms or areas concerned.
- (2) Transparent doors shall be appropriately marked at a conspicuous level.
- (3) Swing doors and gates shall be transparent or have see-through panels.
- (4) If transparent or translucent surfaces in doors and gates are not made of safety material and if there is a danger that employees may be injured in the event of a door or gate shattering, the surfaces shall be protected against breakage.
- (5) Sliding doors shall be fitted with a safety device to prevent them from being derailed or falling over.
- (6) Doors and gates opening upwards shall be fitted with a mechanism to secure them against falling back .

(7) Doors forming part of escape routes shall be

(a) appropriately marked:

(b) possible to open from the inside at any time without special assistance;
and

(c) possible to open when the place of work is occupied.

(8) Doors for pedestrians shall be provided in the immediate vicinity of any gates intended essentially for vehicle traffic, unless it is safe for pedestrians to pass through and such doors shall be clearly marked and left permanently unobstructed.

(9) Mechanical doors and gates shall function in such a way that there is no risk of accident to employees and they shall be fitted with easily identifiable and accessible emergency shutdown devices and, unless they open automatically in the event of a power failure, it shall also be possible to open them manually.

(10) Where chains or similar devices are used to prevent access to any place, these shall be clearly visible and appropriately identified by signs denoting any prohibition or warning.

6. Ventilation of enclosed places of work

(1) Steps shall be taken to ensure that there is sufficient fresh air in enclosed places of work, having regard to the working methods used and the physical demands placed on the employees.

(2) Where a forced ventilation system is used, it shall be maintained in working order.

(3) Any breakdown in a forced ventilation system shall be indicated by a control system where this is necessary for employees' health.

(4) Where air-conditioning or mechanical ventilation installations are used, they shall operate in such a way that employees are not exposed to draughts which are injurious, offensive or cause discomfort.

(5) Any deposit or dirt likely to create danger to the health of employees by entering into the atmosphere shall be removed without delay.

7. Room temperature

(1) During working hours, the temperature in rooms containing workstations shall be suitable for human beings, having regard to the working methods being used and the physical demands placed on the employees.

(2) The temperature in rest areas, rooms for duty staff, sanitary facilities, canteens and first aid rooms shall be appropriate to the particular purpose of such areas.

(3) Windows, skylights and glass partitions shall allow excessive effects of sunlight in places of work to be avoided, having regard to the nature of the work and of the place of work.

8. Rest rooms

(1) Where in particular because of the type of activity carried on or the presence of more than a certain number of employees, the safety or health of employees, so requires, employees shall be provided with an easily accessible rest room, but

this requirement shall not apply if the employees are employed in offices or similar workrooms providing equivalent relaxation during breaks.

(2) Rest rooms shall be large enough and equipped with tables, and with seats with backs, adequate for the number of employees.

(3) In rest rooms, appropriate measures shall be introduced for the protection of non-smokers against discomfort caused by tobacco smoke.

(4) Where working hours are regularly and frequently interrupted and there is no rest room, other rooms shall be provided in which employees can stay during such interruptions, wherever this is required for the safety or health of employees, and appropriate measures shall be taken for the protection of non-smokers against discomfort caused by tobacco smoke.

9. Pregnant women and nursing mothers

Pregnant women and nursing mothers shall be able to lie down to rest in appropriate conditions.

10. Disabled employees

Places of work shall be organised, if necessary, to take account of employees with disabilities.

SECOND SCHEDULE

REQUIREMENTS APPLICABLE TO UNDERGROUND EXTRACTIVE INDUSTRIES

1. Outlets and Workings.

(1) All underground workings shall have access to the surface by at least two separate outlets which are soundly constructed and readily accessible to underground employees.

(2) Mechanical man-winding facilities, man-riding facilities or means of transport shall be available for the outlets referred to in subparagraph (1), if considerable physical effort is involved in negotiating them.

(3) Roadways shall be sign-posted to enable employees to find their way about the workings.

2. Ventilation

The depression of the main ventilation fans shall be monitored continuously, and an automatic alarm shall indicate unscheduled stoppages.

3. Gassy mines

In the case of underground workings where firedamp, that is to say any flammable gas or mixture of gases, naturally occurring in a mine, is likely to be released in such a quantity that the risk of the formation of an explosive atmosphere cannot be excluded—

- (a) the main ventilation shall be provided by one or more mechanical fans, working shall proceed taking account of firedamp emission and steps shall be taken to eliminate as far as possible the risks arising from firedamp;
- (b) auxiliary ventilation shall be limited to development and salvage work and to places with a direct connection to the main ventilation current and production workings may be ventilated by auxiliary systems only if appropriate additional measures are taken to ensure the safety and health of employees;
- (c) the ventilation measurement required to be made under Regulation 32 of the Mines (General) Regulations, 1975 ([S.I. No. 331 of 1975](#)), shall be supplemented by firedamp determinations;
- (d) where the taking of such steps is specified as necessary in the safety statement, firedamp levels shall also be continuously monitored in return airways from production units using mechanised extraction or under-winning and at the head ends of mechanised blind end workings;
- (e) smoking, carrying tobacco for smoking and any objects which may be used to produce a flame shall be prohibited:
- (f) flame cutting, welding and other similar operations shall be permitted only in exceptional circumstances and subject to specific measures, to ensure the safety and health of the employees, being taken.

4. Mines containing flammable dusts

In the case of coal mines considered to be susceptible to flammable dusts, other than mines where none of the seams being worked contains dust liable to propagate an explosion,

- (a) smoking, carrying tobacco for smoking and any objects which may be used to produce a flame shall be prohibited,
- (b) flame cutting, welding and other similar operations shall be permitted only in exceptional circumstances and subject to specific measures, to ensure the safety and health of the employees, being taken,
- (c) steps shall be taken to reduce flammable dust deposits, and to remove, neutralise or bind such dust,
- (d) the propagation of flammable dust or firedamp explosions which are liable to trigger further flammable dust explosions shall be limited by installing a system of explosion barriers and the locations of such explosion barriers shall be specified in the safety statement.

5. Gas outbursts, rock bursts and water inrushes

- (1) In zones susceptible to gas outbursts, with or without the projection of minerals or rock, rock bursts or water inrushes, measures shall be specified in the safety statement and taken so as to ensure, as far as possible, a safe system of work and the protection of employees.
- (2) The measures referred to under subparagraph (1) shall include measures to identify risk zones, protect employees in workings approaching or traversing these zones, and control the risks concerned.

6. Fires, combustion's and heatings

(1) Provision shall be made for the prevention and, where appropriate, the early detection of spontaneous combustion.

(2) The quantity of flammable materials that may be taken into underground workings shall be no more than is strictly necessary.

(3) Where it is necessary to use hydraulic fluids for the transmission of energy, fluids which are difficult to ignite shall, as far as possible, be used in order to avoid the risk of fire and its spread and such hydraulic fluids shall satisfy specifications and test conditions relating to fire resistance and hygiene criteria.

(4) Where hydraulic fluids are used which do not satisfy the specifications, conditions and criteria referred to in subparagraph (3), additional precautions shall be taken to avoid the increased risk of fire and its spread.

7. Precautions for withdrawal of employees

(1) Employees shall, where necessary, be provided with self-rescue respiratory protection devices, which they shall always keep within their reach, so as to enable them to withdraw in safety.

(2) Employees shall be trained in the use of devices referred to in subparagraph (1).

(3) Devices referred to in subparagraph (1) shall be kept at the site concerned and be checked regularly to ensure that they are in good condition.

8. Underground workforce accounting

It shall be possible to know the numbers and identities of the employees who are underground at any time and their probable location.

9 Organisation of places of work

(1) Places of work shall be so organised as to provide adequate protection against hazards, be kept in good order, with any hazardous substances or deposits removed or controlled in order not to endanger the health and safety of employees.

(2) Workstations shall be designed and constructed according to ergonomic principles taking into account the need for employees to carry out operations safely and without risk to health at their workstations.

(3) Where workstations are occupied by lone employees, the necessary supervision or means of communication shall be provided.

10. Person in Charge

(1) A competent person, appointed by the employer, shall at all times be in charge of every place of work when employees are present.

(2) Nothing in subparagraph (1) shall prevent the employer appointing himself or herself as the person in charge if he or she is competent to undertake the duties involved.

11. Supervision

(1) A competent supervisor, appointed by the employer, shall provide the

necessary supervision during all operations.

(2) The competent supervisor shall visit occupied workstations at least once during each shift, where this is specified as a necessary arrangement under the safety statement.

(3) Nothing in subparagraph (1) or (2) shall prevent the employer appointing himself or herself as supervisor if he or she is competent to undertake the duties involved.

12. Mechanical and electrical equipment and plant

(1) The selection, design, installation, commissioning, protection, operation and maintenance of mechanical and electrical equipment and plant shall take place with due regard for the safety and health of employees, taking account of the relevant statutory provisions.

(2) If equipment referred to subparagraph (1) is located in an area within which risk of fire or explosion from ignition of gas, vapour or volatile liquid exists, or is likely to exist, such equipment shall be suitable for use in that area and shall, if necessary, be fitted with suitable protective devices and failsafe systems.

(3) Mechanical equipment and plant shall be of adequate strength and free from patent defect and suitable for the purpose for which it is intended.

(4) Electrical equipment and plant shall be of sufficient capacity for the purpose for which it is intended.

13. Protection from explosion risks. harmful atmospheres and fire hazards

(1) Measures shall be taken for assessing the presence of harmful or potentially explosive substances in the atmosphere and for measuring the concentration of such substances.

(2) Where automatic and continuous monitoring devices for the measurement of gas concentrations have been identified as necessary by the safety statement, automatic alarms and isolation devices shall be provided to isolate power supplied from electrical installations and to cut off fuel supplies to internal combustion engines.

(3) Where automatic measurements referred to in subparagraph (2) are provided for, the values measured shall, where necessary, be recorded and kept in the manner specified in the safety statement.

(4) Without prejudice to the provisions of paragraphs 3 (e) and (f) and 4(a), smoking shall be prohibited in areas subject to particular fire or explosion hazards.

(5) Without prejudice to the provisions of paragraphs 3 (e) and (f) and 4(a), the use of any open flame and the execution of any work that may give rise to an ignition hazard shall be prohibited unless adequate safety precautions are taken to prevent the occurrence of fires or explosions.

14. Protection from harmful atmospheres

(1) Where harmful substances accumulate or may accumulate in the atmosphere, appropriate measures shall be taken to ensure:

(a) their suppression at source: or

(b) their extraction at source or their removal; or

(c) the dilution of accumulations of such substances in such a way that employees are not at risk.

(2) The measures taken shall be capable of dispersing these harmful substances in such a way that employees are not at risk.

(3) Appropriate and sufficient breathing and resuscitation equipment shall be made available in areas where there is a particular risk that employees may be exposed to atmospheres which are harmful to health. This subparagraph is in addition to, and not in substitution for, Part V of the Principal Regulations.

(4) In any case referred to in subparagraph (3), a sufficient number of employees trained to use equipment of the kind referred to therein shall be present at the place of work and such equipment shall be suitably stored and maintained.

(5) Where toxic gases are, or may be, present in the atmosphere, the safety statement shall specify the protective equipment to be provided and the preventive measures to be taken.

15. Work permits

(1) Where specified as a necessary measure under the safety statement, a system of work permits shall be introduced for the carrying on of hazardous activities and activities which, when they are carried on in conjunction with other activities, may cause serious hazards.

(2) A work permit referred to in subparagraph (1) shall be issued by a person in charge before the activity concerned commences and shall specify the conditions to be fulfilled and the precautions to be taken before, during and after the carrying on of the activity.

16. Explosives and initiating devices

Any work activity involving the storage, transport and use of explosives and initiating devices shall be carried out by a competent person who is authorised in that behalf and such work activities shall be organised and performed in such a way that there is no risk to the safety and health of employees.

17. Traffic routes

(1) Safe means of access to and egress from workstations shall be provided, and, in the event of an emergency, an employee shall be able quickly and safely to proceed to a place of safety.

(2) Traffic routes, including stairs, fixed ladders, loading bays and ramps, shall be calculated, be of such dimensions and be located so as to ensure easy, safe and appropriate access for pedestrians or vehicles and in such a way as not to endanger employees employed in the vicinity of these traffic routes.

(3) Routes used for pedestrian traffic or goods traffic shall be of such dimensions as is appropriate having regard to the number of potential users and the type of undertaking and, if a means of transport is used on traffic routes, a sufficient safety clearance shall be provided for pedestrians.

(4) Sufficient clearance shall be allowed between vehicle traffic routes and doors, gates, passages for pedestrians, corridors and staircases.

(5) Traffic and access routes shall be clearly identified for the protection of employees.

18. Outdoor places of work

(1) Workstations, traffic routes and other areas or installations outdoors which are occupied or used by the employees in the course of their activities shall be organised in such a way that pedestrians and vehicles can circulate safely.

(2) Outdoor places of work shall be adequately lit by artificial lighting when daylight is not adequate.

(3) When employees are employed at outdoor workstations, such workstations shall be arranged so that employees, as far as possible—

(a) are protected against inclement weather conditions and falling objects,

(b) are not exposed to harmful noise levels or to harmful external influences such as gases, vapours or dust,

(c) can leave their workstations speedily in the event of danger or can be rapidly assisted to do so, and

(d) cannot slip or fall.

19. Emergency routes and exits

(1) in the event of danger, employees shall be able to evacuate all workstations quickly and as safely as possible.

(2) Emergency routes and exits shall remain clear and lead by the most direct means to the open air or to a safe area, a safe assembly point or a safe evacuation point.

(3) The number, distribution and dimensions of the emergency routes and exits shall depend on the use, equipment and dimensions of the place of work and the maximum number of persons that may be present.

(4) Emergency doors shall open outwards and shall not be so locked or fastened that they cannot be easily and immediately opened by any person who may require to use them in an emergency.

(5) Emergency routes and exits, and the traffic routes and doors giving access to such routes and exits, shall be free from obstruction so that they can be used at any time without hindrance and emergency doors shall not be locked.

(6) Emergency routes and exits requiring illumination shall be provided with emergency lighting of adequate intensity in case the lighting fails.

(7) Specific emergency routes and exits shall be indicated by signs in accordance with the provisions of the Signs Regulations.

20. Means of evacuation and escape

20. (1) Employees shall be trained in the appropriate actions to be taken in emergencies.

(2) Rescue equipment shall be provided at readily accessible and appropriately sited places and kept ready for use and shall be indicated by signs in accordance with the provisions of the Signs Regulations.

21 Safety drills

Taking account of the risks identified in the safety statement, safety drills shall be held at regular intervals at all places of work at which employees are employed, to train and check the skills of employees to whom specific duties have been assigned in the event of emergency involving the use, handling or operation of equipment to be used in an emergency, and where appropriate, employees shall also be trained in the correct use, handling or operation of such equipment.

22 Natural and artificial lighting

- (1) Every place of work shall be provided throughout with lighting capable of supplying illumination sufficient to ensure the health and safety of persons therein.
- (2) Places of work shall as far as possible receive sufficient natural light and, bearing in mind the climatic conditions, be equipped with artificial lighting adequate for the protection of employees' safety and health.
- (3) Lighting installations shall be placed in such a way that the type of lighting provided does not present a risk of accident to employees.
- (4) Places of work in which employees are exposed to risks in the event of failure of artificial lighting shall be provided with adequate emergency lighting.
- (5) Where compliance with subparagraph (4) is not possible, employees shall be provided with personal lamps.

23 Overburden dumps and other tips

Overburden dumps, spoil heaps and other tips, as well as settling lagoons, shall be designed, constructed, operated and maintained in such a way as to ensure their stability, as well as the safety and health of employees.

24 Sanitary installations

- (1) Appropriate changing rooms shall be provided for employees who have to wear special work clothes and where, for reasons of health or propriety, they cannot be expected to change in another room.
- (2) Changing rooms shall be easily accessible, be of sufficient capacity and be provided with seating.
- (3) Changing rooms shall be sufficiently large and employees shall have facilities to enable them to lock away their clothes during working hours.
- (4) Where circumstances so require, lockers for work clothes shall be separate from those for ordinary clothes.
- (5) Provision shall be made to enable wet work clothes to be dried.
- (6) Provision shall be made for separate changing rooms or separate use of changing rooms for men and women.
- (7) Where changing rooms are not required to be provided under subparagraph (1), each employee shall be provided with a place to store his or her clothes.
- (8) Adequate and suitable showers shall be provided for employees if required by the nature of the work or for health reasons related thereto, and, in such

cases, provision shall be made for separate shower rooms or separate use of shower rooms for men and women.

(9) Shower rooms shall be sufficiently large to permit each employee to wash without hindrance in satisfactory conditions of hygiene.

(10) The showers shall be equipped with hot and cold running water.

(11) Where showers are not required under subparagraph (8), adequate and suitable washbasins with running water including hot water shall be provided in the vicinity of the workstations and the changing rooms and such washbasins shall be separate for, or used separately by, men and women when so required for reasons of propriety.

(12) Separate facilities with an adequate number of lavatories and washbasins shall be provided in the vicinity of workstations, rest rooms, changing rooms and rooms housing showers.

(13) Provision shall be made for separate lavatories or separate use of lavatories for men and women.

(14) The sanitary installations referred to in this paragraph may be located on the surface.

THIRD SCHEDULE

REQUIREMENTS APPLICABLE TO SURFACE EXTRACTIVE INDUSTRIES.

1. Operation

Work shall be planned taking into account the elements of the safety statement which concern the risks of falls or slips of ground and in particular

(a) the height and slope of overburden stripping and extraction faces shall be appropriate to the nature and stability of the ground and the methods of working,

(b) benches and haul roads shall be stable enough for the plant used and be constructed and maintained in such a way that plant can be moved safely,

(c) before the start or restart of work, stripping and extraction faces above work areas or haul roads shall be checked for loose ground or rocks and scaling shall be carried out where necessary,

(d) faces and tips shall not be worked in such a way that instability is created.

2 Organisation of places of work

(1) Places of work shall be so organised as to provide adequate protection against hazards, be kept in good order, with any hazardous substances or deposits removed or controlled in order not to endanger the health and safety of employees,

(2) Workstations shall be designed and constructed according to ergonomic principles taking into account the need for employees to carry out operations safely and without risk to health at their workstations,

(3) Where workstations are occupied by lone employees, the necessary supervision or means of communication shall be provided.

3 Person in charge

(1) A competent person appointed by the employer, shall at all times be in charge of every place of work when employees are present,

(2) Nothing in subparagraph (1) shall prevent the employer appointing himself or herself as the person in charge if he or she is competent to undertake the duties involved.

4 Supervision

(1) A competent supervisor appointed by the employer, shall provide the necessary supervision during all operations.

(2) The competent supervisor shall visit occupied workstations at least once during each shift, where this is specified as a necessary arrangement under the safety statement,

(3) Nothing in subparagraphs (1) or (2) shall prevent the employer appointing himself or herself as supervisor if he or she is competent to undertake the duties involved.

5 Work permits

(1) Where specified as a necessary measure under the safety statement, a system of work permits shall be introduced for the carrying on of hazardous activities and activities which, when they are carried on in conjunction with other activities, may cause serious hazards.

(2) A work permit referred to in subparagraph (1) shall be issued by a person in charge before the activity concerned commences and shall specify the conditions to be fulfilled and the precautions to be taken before, during and after the carrying on of the activity.

6 Mechanical and electrical equipment and plant

(1) The selection, design, installation, commissioning, protection, operation and maintenance of mechanical and electrical equipment and plant shall take place with due regard for the safety and health of employees, taking account of the relevant statutory provisions.

(2) If equipment referred to in subparagraph (1) is located in an area within which risk of fire or explosion from ignition of gas, vapour or volatile liquid exists, or is likely to exist, such equipment shall be suitable for use in that area and shall, if necessary, be fitted with suitable protective devices and failsafe systems.

(3) Mechanical equipment and plant shall be of adequate strength and free from patent defect and suitable for the purpose for which it is intended.

(4) Electrical equipment and plant shall be of sufficient capacity for the purpose for which it is intended.

7 Protection from explosion risks, harmful atmospheres and fire hazards

(1) Measures shall be taken for assessing the presence of harmful or potentially explosive substances in the atmosphere and for measuring the concentration of

such substances.

(2) Where automatic and continuous monitoring devices for the measurement of gas concentrations have been identified as necessary by the safety statement, automatic alarms and isolation devices shall be provided to isolate power supplied from electrical installations and to cut off fuel supplies to internal combustion engines.

(3) Where automatic measurements referred to in subparagraph (2) are provided for, the values measured shall, where necessary, be recorded and kept in the manner specified in the safety statement.

(4) Smoking shall be prohibited in areas subject to particular fire or explosion hazards.

(5) The use of any open flame and the execution of any work that may give rise to an ignition hazard shall be prohibited unless adequate safety precautions are taken to prevent the occurrence of fires or explosions.

8 Protection from harmful atmospheres

(1) Where harmful substances accumulate or may accumulate in the atmosphere, appropriate measures shall be taken to ensure:

(a) their suppression at source; or

(b) their extraction at source or removal; or

(c) the dilution of accumulations of such substances, in such a way that employees are not at risk.

(2) The measures taken shall be capable of dispersing these harmful substances in such a way that employees are not at risk.

(3) Appropriate and sufficient breathing and resuscitation equipment shall be made available in areas where there is a particular risk that employees may be exposed to atmospheres which are harmful to health. This subparagraph is in addition to, and not in substitution for, Part V of the Principal Regulations.

(4) In any case, referred to in subparagraph (3), a sufficient number of employees trained to use such equipment of the kind referred to therein shall be present at the place of work and such equipment shall be suitably stored and maintained.

(5) Where toxic gases are, or may be, present in the atmosphere, the safety statement shall specify the protective equipment to be provided and the preventive measures to be taken.

9 Explosives and initiating devices

Any work activity involving the storage, transport and use of explosives and initiating devices shall be carried out by a competent person who is authorised in that behalf and such work activities shall be organised and performed in such a way that there is no risk to the safety and health of employees.

10 Traffic route

(1) Safe means of access to and egress from workstations shall be provided, and, in the event of an emergency, an employee shall be able quickly and safely to proceed to a place of safety.

- (2) Traffic routes, including stairs, fixed ladders, loading bays and ramps, shall be calculated, be of such dimensions and be located so as to ensure easy, safe and appropriate access for pedestrians or vehicles and in such a way as not to endanger employees employed in the vicinity of these traffic routes.
- (3) Routes used for pedestrian traffic or goods traffic shall be of such dimensions as is appropriate having regard to the number of potential users and the type of undertaking and, if a means of transport is used on traffic routes, a sufficient safety clearance shall be provided for pedestrians.
- (4) Sufficient clearance shall be allowed between vehicle traffic routes and doors, gates, passages for pedestrians, corridors and staircases.
- (5) Traffic and access routes shall be clearly identified for the protection of employees.
- (6) Where vehicles or machines enter places of work, traffic rules shall be established as necessary,

11 Outdoor places of work

- (1) Workstations, traffic routes and other areas or installations outdoors which are occupied or used by the employees in the course of their activities shall be organised in such a way that pedestrians and vehicles can circulate safely.
- (2) Outdoor places of work shall be adequately lit by artificial lighting when daylight is not adequate.
- (3) When employees are employed at outdoor workstations, such workstations shall be arranged so that employees, as far as possible
 - (a) are protected against inclement weather conditions and falling objects,
 - (b) are not exposed to harmful noise levels or to harmful external influences such as gases, vapours or dust,
 - (c) can leave their workstations speedily in the event of danger or can be rapidly assisted to do so, and
 - (d) cannot slip or fall.

12 Emergency routes and exits

- (1) In the event of danger, employees shall be able to evacuate all workstations quickly and as safely as possible.
- (2) Emergency routes and exits shall remain clear and lead by the most direct means to the open air or to a safe area, a safe assembly point or a safe evacuation point.
- (3) The number, distribution and dimensions of the emergency routes and exits shall depend on the use, equipment and dimensions of the place of work and the maximum number of persons that may be present.
- (4) Emergency doors shall open outwards and shall not be so locked or fastened that they cannot be easily and immediately opened by any person who may require to use them in an emergency.
- (5) Emergency routes and exits, and the traffic routes and doors giving access to such routes and exits, shall be free from obstruction so that they can be used at any time Without hindrance and emergency doors shall not be locked.

(6) Emergency routes and exits requiring illumination shall be provided with emergency lighting of adequate intensity in case the lighting fails.

(7) Specific emergency routes and exits shall be indicated by signs in accordance with the provisions of the Signs Regulations.

13 Means of evacuation and escape

(1) Employees shall be trained in the appropriate actions to be taken in emergencies.

(2) Rescue equipment shall be provided at readily accessible and appropriately sited places and kept ready for use and shall be indicated by signs in accordance with the provisions of the Signs Regulations.

14 Safety drills

Taking account of the risks identified in the safety statement, safety drills shall be held at regular intervals at all places of work at which employees are employed, to train and check the skills of employees to whom specific duties have been assigned in the event of emergency involving the use, handling or operation of equipment to be used in an emergency, and where appropriate, employees shall also be trained in the correct use, handling or operation of such equipment.

15 Natural and artificial lighting

(1) Every place of work shall be provided throughout with lighting capable of supplying illumination sufficient to ensure the health and safety of persons therein.

(2) Places of work shall as far as possible receive sufficient natural light and, bearing in mind the climatic conditions, be equipped with artificial lighting adequate for the protection of employees' safety and health.

(3) Lighting installations in rooms containing workstations and in passageways shall be placed in such a way that the type of lighting provided does not present a risk of accident to employees.

(4) Places of work in which employees are exposed to risks in the event of failure of artificial lighting shall be provided with adequate emergency lighting.

(5) Where compliance with subparagraph (4) is not possible, employees shall be provided with personal lamps.

16 Overburden dumps and other tips

Overburden dumps, spoil heaps and other tips, as well as settling lagoons, shall be designed, constructed, operated and maintained in such a way as to ensure their stability, as well as the safety and health of employees.

17 Sanitary installations

(1) Appropriate changing rooms shall be provided for employees who have to wear special clothes and where, for reasons of health or propriety, they cannot be expected to change in another room.

- (2) Changing rooms shall be easily accessible, be of sufficient capacity and be provided with seating.
- (3) Changing rooms shall be sufficiently large and employees shall have facilities to enable them to lock away their clothes during working hours.
- (4) Where circumstances so require, lockers for work clothes shall be separate from those for ordinary clothes.
- (5) Provision shall be made to enable wet work clothes to be dried.
- (6) Provision shall be made for separate changing rooms or separate use of changing rooms for men and women.
- (7) Where changing rooms are not required to be provided under subparagraph (1), each employee shall be provided with a place to store his or her clothes.
- (8) Adequate and suitable showers shall be provided for employees if required by the nature of the work or for health reasons related thereto, and in such cases, provision shall be made for separate shower rooms or separate use of shower rooms for men and women.
- (9) Shower rooms shall be sufficiently large to permit each employee to wash without hindrance in satisfactory conditions of hygiene.
- (10) The showers shall be equipped with hot and cold running water.
- (11) Where showers are not required to be provided under subparagraph (8), adequate and suitable washbasins with running water including hot water shall be provided in the vicinity of the workstations and the changing rooms and such washbasins shall be separate for, or used separately by, men and women when so required for reasons of propriety.
- (12) Separate facilities with an adequate number of lavatories and washbasins shall be provided in the vicinity of workstations, rest rooms, changing rooms and rooms housing showers.
- (13) Provisions shall be made for separate lavatories or separate use of lavatories for men and women.

FOURTH SCHEDULE

REQUIREMENTS APPLICABLE TO THE EXTRACTIVE INDUSTRIES THROUGH DRILLING ONSHORE

1 Organisation of places of work

- (1) Places of work shall be so organised as to provide adequate protection against hazards, be kept in good order, with any hazardous substances or deposits removed or controlled in order not to endanger the health and safety of employees,
- (2) Workstations shall be designed and constructed according to ergonomic principles taking into account the need for employees to carry out operations safely and without risk to health at their workstations,
- (3) Where workstations are occupied by lone employees, the necessary supervision or means of communication shall be provided.
- (4) Areas within which there is a special hazard shall be delineated and warning signs placed.

2 Person in charge

- (1) A competent person appointed by the employer shall at all times be in charge of every place of work when employees are present,
- (2) Nothing in subparagraph (1) shall prevent the employer appointing himself or herself as the person in charge if he or she is competent to undertake the duties involved.

3 Supervision

- (1) A competent supervisor appointed by the employer shall provide the necessary supervision during all operations.
- (2) The competent supervisor shall visit occupied workstations at least once during each shift, where this is specified as a necessary arrangement under the safety statement,
- (3) Nothing in subparagraphs (1) or (2) shall prevent the employer appointing himself or herself as supervisor if he or she is competent to undertake the duties involved.

4 Work permits

- (1) Where specified as a necessary measure under the safety statement, a system of work permits shall be introduced for the carrying on of hazardous activities and activities which, when they are carried on in conjunction with other activities, may cause serious hazards.
- (2) A work permit referred to in subparagraph (1) shall be issued by a person in charge before the activity concerned commences and shall specify the conditions to be fulfilled and the precautions to be taken before, during and after the carrying on of the activity.

5 Explosives and initiating devices

Any work activity involving the storage, transport and use of explosives and initiating devices shall be carried out by a competent person who is authorised in that behalf and such work activities shall be organised and performed in such a way that there is no risk to the safety and health of employees.

6 Overburden dumps and other tips

Overburden dumps, spoil heaps and other tips, as well as settling lagoons, shall be designed, constructed, operated and maintained in such a way as to ensure their stability, as well as the safety and health of employees.

7 Mechanical and electrical equipment and plant

- (1) The selection, design, installation, commissioning, protection, operation and maintenance of mechanical and electrical equipment and plant shall take place with due regard for the safety and health of employees, taking account of the relevant statutory provisions.
- (2) If equipment referred to in subparagraph (1) is located in an area within

which risk of fire or explosion from ignition of gas, vapour or volatile liquid exists, or is likely to exist, such equipment shall be suitable for use in that area and shall, if necessary, be fitted with suitable protective devices and failsafe systems.

(3) Mechanical equipment and plant shall be of adequate strength and free from patent defect and suitable for the purpose for which it is intended.

(4) Electrical equipment and plant shall be of sufficient capacity for the purpose for which it is intended.

8 Well control

Following risk assessment, suitable well control equipment shall be provided for use during borehole operations to protect against blow-out, and deployment of such equipment shall take into account the prevailing well and operational conditions.

9 Protection from explosion risks, harmful atmospheres and fire hazards

(1) Measures shall be taken for assessing the presence of harmful or potentially explosive substances in the atmosphere and for measuring the concentration of such substances.

(2) Where automatic and continuous monitoring devices for the measurement of gas concentrations have been identified as necessary by the safety statement, automatic alarms and isolation devices shall be provided to isolate power supplied from electrical installations and to cut off fuel supplies to internal combustion engines.

(3) Where automatic measurements referred to in subparagraph (2) are provided for, the values measured shall, where necessary, be recorded and kept in the manner specified in the safety statement.

10 Protection from harmful atmospheres

(1) Where harmful substances accumulate or may accumulate in the atmosphere, appropriate measures shall be taken to ensure their collection at source and removal.

(2) The measures taken shall be capable of dispersing these harmful substances in such a way that employees are not at risk.

(3) Appropriate and sufficient breathing and resuscitation equipment shall be made available in areas where there is a particular risk that employees may be exposed to atmospheres which are harmful to health. This subparagraph is in addition to, and not in substitution for, Part V of the Principal Regulations.

(4) In any case referred to in subparagraph (3), a sufficient number of employees trained to use equipment of the kind referred to therein shall be present at the place of work and such equipment shall be suitably stored and maintained.

(5) Where toxic gases are, or may be, present in the atmosphere, the safety statement shall specify the protective equipment to be provided and the preventive measures to be taken.

11 Traffic route

(1) Safe means of access to and egress from workstations shall be provided, and,

in the event of an emergency, an employee shall be able quickly and safely to proceed to a place of safety.

(2) Traffic routes, including stairs, fixed ladders, loading bays and ramps, shall be calculated, be of such dimensions and be located so as to ensure easy, safe and appropriate access for pedestrians or vehicles and in such a way as not to endanger employees employed in the vicinity of these traffic routes.

(3) Routes used for pedestrian traffic or goods traffic shall be of such dimensions as is appropriate having regard to the number of potential users and the type of undertaking and, if a means of transport is used on traffic routes, a sufficient safety clearance shall be provided for pedestrians.

(4) Sufficient clearance shall be allowed between vehicle traffic routes and doors, gates, passages for pedestrians, corridors and staircases.

(5) Traffic and access routes shall be clearly identified for the protection of employees.

(6) Where vehicles or machines enter places of work, traffic rules shall be established as necessary.

12 Outdoor places of work

(1) Workstations, traffic routes and other areas or installations outdoors which are occupied or used by the employees in the course of their activities shall be organised in such a way that pedestrians and vehicles can circulate safely.

(2) Outdoor places of work shall be adequately (it by artificial lighting when daylight is not adequate).

(3) When employees are employed at outdoor workstations, such workstations shall be arranged so that employees, as far as possible

(a) are protected against inclement weather conditions and falling objects,

(b) are not exposed to harmful noise levels or to harmful external influences such as gases, vapours or dust,

(c) can leave their workstations speedily in the event of danger or can be rapidly assisted to do so, and

(d) cannot slip or fall.

13 Emergency routes and exits

(1) In the event of danger, employees shall be able to evacuate all workstations quickly and as safely as possible.

(2) Emergency routes and exits shall remain clear and lead by the most direct means to the open air or to a safe area, a safe assembly point or a safe evacuation point.

(3) The number, distribution and dimensions of the emergency routes and exits shall depend on the use, equipment and dimensions of the place of work and the maximum number of persons that may be present.

(4) (a) Emergency doors shall open outwards and shall not be so locked or fastened that they cannot be easily and immediately opened by any person who may require to use them in an emergency.

(b) Where it is not possible to provide emergency doors which open outwards sliding doors shall be provided.

(5) Emergency routes and exits, and the traffic routes and doors giving access to such routes and exits, shall be free from obstruction so that they can be used at any time without hindrance and emergency doors shall not be locked.

(6) Emergency routes and exits requiring illumination shall be provided with emergency lighting of adequate intensity in case the lighting fails

(7) Accommodation and rest rooms shall have at least two separate escape routes situated as far apart as possible and each leading to a safe area, a safe assembly point or a safe evacuation point.

(8) Specific emergency routes and exits shall be indicated by signs in accordance with the provisions of the Signs Regulations.

14 Means of evacuation and escape

(1) Employees shall be trained in the appropriate actions to be taken in emergencies.

(2) Rescue equipment shall be provided at readily accessible and appropriately sited places and kept ready for use and shall be indicated by signs in accordance with the provisions of the Signs Regulations.

(3) Where escape routes are difficult, and where irrespirable atmospheres are or may be present, self-contained breathing apparatus shall be provided for immediate use at the workstations.

15 Remote control in emergencies

Where required by the safety statement, such equipment as is necessary, capable of remote control in the event of emergency shall be provided at suitable locations and such equipment shall include systems for the isolation and blow-down of wells, plant and pipelines.

16 Communication, general and emergency

(1) Where required by the safety statement, every place of work at which employees are present shall be provided with:

(a) an acoustic and optical system capable of transmitting an alarm indication as necessary, to every part of the place of work in which employees work:

(b) an acoustic system capable of being heard distinctly at all parts of the installation where employees are frequently present.

(2) Facilities for raising the alarm shall be provided at suitable locations.

(3) When employees are present at any location in which employees do not normally work, appropriate communication systems shall be placed at their disposal.

17 Safe assembly points and muster lists

Where required by the safety statement, safe assembly points shall be specified, muster lists shall be maintained and the necessary action taken.

18 Safety drills

Taking account of the risks identified in the safety statement, safety drills shall be held at regular intervals at all places of work at which employees are employed, to train and check the skills of employees to whom specific duties have been assigned in the event of emergency involving the use, handling or operation of equipment to be used in an emergency, and where appropriate, employees shall also be trained in the correct use, handling or operation of . such equipment,

19 Natural and artificial lighting

- (1) Every place of work shall be provided throughout with lighting capable of supplying illumination sufficient to ensure the health and safety of persons therein.
- (2) Places of work shall as far as possible receive sufficient natural light and, bearing in mind the climatic conditions, be equipped with artificial lighting adequate for the protection of employees' safety and health.
- (3) Lighting installations in rooms containing workstations and in passageways shall be placed in such a way that the type of lighting provided does not present a risk of accident to employees.
- (4) Places of work in which employees are exposed to risks in the event of failure of artificial lighting shall be provided with adequate emergency lighting.
- (5) Lighting installations shall be designed to ensure that operational control areas, escape routes and hazardous areas remain illuminated except that where places of work are occupied only occasionally, this requirement shall only apply to the period during which employees are present.

20 Sanitary installations

- (1) Appropriate changing rooms shall be provided for employees who have to wear special work clothes and where, for reasons of health or propriety, they cannot be expected to change in another room.
- (2) Changing rooms shall be easily accessible, be of sufficient capacity and be provided with seating.
- (3) Changing rooms shall be sufficiently large and employees shall have facilities to enable them to lock away their clothes during working hours.
- (4) Where circumstances so require, lockers for work clothes shall be separate from those for ordinary clothes.
- (5) Provision shall be made to enable wet work clothes to be dried.
- (6) Provision shall be made for separate changing rooms or separate use of changing rooms for men and women.
- (7) Where changing rooms are not required to be provided under subparagraph (1), each employee shall be provided with a place to store his or her clothes.
- (8) Adequate and suitable showers shall be provided for employees if required by the nature of the work or for health reasons related thereto, and in such cases, provision shall be made for separate shower rooms or separate use of shower rooms for men and women.
- (9) Shower rooms shall be sufficiently large to permit each employee to wash

without hindrance in satisfactory conditions of hygiene.

(10) The showers shall be equipped with hot and cold running water.

(11) Where showers are not required to be provided under subparagraph (8), adequate and suitable washbasins with running water including hot water shall be provided in the vicinity of the workstations and the changing rooms and such washbasins shall be separate for, or used separately by, men and women when so required for reasons of propriety.

(12) Where the rooms housing the showers or washbasins are separate from the changing rooms, there shall be easy access between the two.

(13) Separate facilities with an adequate number of lavatories and washbasins shall be provided in the vicinity of workstations, rest rooms, changing rooms and rooms housing showers.

(14) Provisions shall be made for separate lavatories or separate use of lavatories for men and women.

FIFTH SCHEDULE

REQUIREMENTS APPLICABLE TO THE EXTRACTIVE INDUSTRIES THROUGH DRILLING OFFSHORE

1 Organisation of places of work

(1) Places of work shall be so organised as to provide adequate protection against hazards, be kept in good order, with any hazardous substances or deposits removed or controlled in order not to endanger the health and safety of employees.

(2) Workstations shall be designed and constructed according to ergonomic principles taking into account the need for employees to carry out operations safely and without risk to health at their workstations.

(3) Areas within which there is a special hazard shall be delineated and warning signs placed.

2 Work Permits

(1) Where required as a necessary measure by the safety statement, a system of work permits shall be introduced for the carrying on of

(a) hazardous activities, and

(b) activities which, when they are carried on in conjunction with other activities, may cause serious hazards.

(2) This paragraph is in addition to, and not in substitution for, Regulation 5 of the Safety, Health and Welfare (Offshore Installations)(Operations) Regulations, 1991 ([S.I. No. 16 of 1991](#)).

3 Supervision

(1) A competent supervisor appointed by the employer shall provide the necessary supervision during all operations.

(2) The necessary supervision shall be provided by persons having the skills and

competence to ensure that employees and self employed persons are provided with the protection required for their safety and health during all operations undertaken at the place of work.

(3) Nothing in subparagraph (1) shall prevent the employer appointing himself or herself as supervisor if he or she is competent to undertake the duties involved.

4 Mechanical and electrical equipment and plant

(1) The selection, design, installation, commissioning, protection, operation and maintenance of mechanical and electrical equipment and plant shall take place with due regard for the safety and health of employees, taking account of the relevant statutory provisions.

(2) If equipment referred to in subparagraph (1) is located in an area within which risk of fire or explosion from ignition of gas, vapour or volatile liquid exists, or is likely to exist, such equipment shall be suitable for use in that area and shall, if necessary, be fitted with suitable protective devices and failsafe systems.

(3) Mechanical equipment and plant shall be of adequate strength and free from patent defect and suitable for the purpose for which it is intended.

(4) Electrical equipment and plant shall be of sufficient capacity for the purpose for which it is intended.

5 Protection from explosion risks, harmful atmospheres and fire hazards

(1) Measures shall be taken for assessing the presence of harmful or potentially explosive substances in the atmosphere and for measuring the concentration of such substances.

(2) Where automatic and continuous monitoring devices for the measurement of gas concentrations have been identified as necessary by the safety statement, automatic alarms and isolation devices shall be provided to isolate power supplied from electrical installations and to cut off fuel supplies to internal combustion engines.

(3) Where automatic measurements referred to in subparagraph (2) are provided for, the values measured shall, where necessary, be recorded and kept in the manner specified in the safety statement.

6 Protection from harmful atmospheres

(1) Where harmful substances accumulate or may accumulate in the atmosphere, appropriate measures shall be taken to ensure their collection at source and removal.

(2) The measures taken shall be capable of dispersing these harmful substances in such a way that employees are not at risk.

(3) Appropriate and sufficient breathing and resuscitation equipment shall be made available in areas where there is a particular risk that employees may be exposed to atmospheres which are harmful to health. This subparagraph is in addition to, and not in substitution for, Part V of the Principal Regulations.

(4) In any case referred to in subparagraph (3), a sufficient number of employees trained to use equipment of the kind referred to therein shall be present at the place of work and such equipment shall be suitably stored and maintained.

(5) Where toxic gases are, or may be, present in the atmosphere, the safety statement shall specify the protective equipment to be provided and the preventive measures to be taken.

7 Traffic routes

(1) Safe means of access to and egress from workstations shall be provided, and, in the event of an emergency, an employee shall be able quickly and safely to proceed to a place of safety.

(2) Traffic routes, including stairs, fixed ladders, loading bays and ramps, shall be calculated, be of such dimensions and be located so as to ensure easy, safe and appropriate access for pedestrians or vehicles and in such a way as not to endanger employees employed in the vicinity of these traffic routes.

(3) Routes used for pedestrian traffic or goods traffic shall be of such dimensions as is appropriate having regard to the number of potential users and the type of undertaking and, if a means of transport is used on traffic routes, a sufficient safety clearance shall be provided for pedestrians.

(4) Sufficient clearance shall be allowed between vehicle traffic routes and doors, gates, passages for pedestrians, corridors and staircases.

(5) Traffic and access routes shall be clearly identified for the protection of employees.

8 Outdoor places of work

(1) Workstations, traffic routes and other areas or installations outdoors which are occupied or used by the employees in the course of their activities shall be organised in such a way that pedestrians and vehicles can circulate safely.

(2) When employees are employed at outdoor workstations, such workstations shall be arranged so that employees, as far as possible

(a) are protected against inclement weather conditions and falling objects,

(b) are not exposed to harmful noise levels or to harmful external influences such as gases, vapours or dust,

(c) can leave their workstations speedily in the event of danger or can be rapidly assisted to do so, and

(d) cannot slip or fall.

9 Emergency routes and exits

(1) In the event of danger, employees shall be able to evacuate all workstations quickly and as safely as possible.

(2) Emergency routes and exits shall remain clear and lead by the most direct means to the open air or to a safe area, a safe assembly point or a safe evacuation point.

(3) The number, distribution and dimensions of the emergency routes and exits shall depend on the use, equipment and dimensions of the place of work and the maximum number of persons that may be present.

(4) (a) Emergency doors shall open outwards and shall not be so locked or fastened that they cannot be easily and immediately opened by any person who may require to use them in an emergency.

(b) Where it is not possible to provide emergency doors which open outwards sliding doors shall be provided.

(5) Emergency routes and exits, and the traffic routes and doors giving access to such routes and exits, shall be free from obstruction so that they can be used at any time without hindrance and emergency doors shall not be locked.

(6) Emergency routes and exits requiring illumination shall be provided with emergency lighting of adequate intensity in case the lighting fails.

(7) Accommodation and rest rooms shall have at least two separate escape routes situated as far apart as possible and each leading to a safe area, a safe assembly point or a safe evacuation point.

(8) Specific emergency routes and exits shall be indicated by signs in accordance with the provisions of the Signs Regulations.

10 Fire detection and fire fighting

(1) Appropriate precautions, which shall be specified in the safety statement, shall be undertaken to protect against, detect and combat the outbreak and spread of fires.

(2) Where appropriate, fire walls shall be provided for the purpose of segregating fire risk areas.

(3) Adequate fire detection and protection systems, fire-fighting systems and alarms shall be provided at all places of work in accordance with the risks identified in the safety statement and shall include:

(a) fire detection systems,

(b) fire alarms,

(c) fire water mains,

(d) fire hydrants and hoses,

(e) water deluge systems and water monitors,

(f) automatic sprinkler systems,

(g) gas extinguishing systems,

(h) foam systems,

(i) portable fire extinguishers,

(j) fireman's equipment.

(4) Non-automatic fire-fighting equipment provided shall be easily accessible, simple to use and, where necessary, protected from damage.

(5) Emergency systems shall be segregated or otherwise afforded protection from accidents to the extent necessary to ensure that the emergency functions remain operational in an emergency and such systems shall be duplicated, where appropriate.

(6) Fire-fighting equipment shall be indicated by signs in accordance with the provisions of the Signs Regulations and signs shall be placed at appropriate points, be legible and maintained.

11 Remote control in emergencies

(1) Where required by the safety statement, a remote control system in the event of an emergency shall be provided.

(2) The remote control system referred to in subparagraph (1) shall incorporate monitoring stations at suitable locations which may be used in the event of an emergency including, if necessary, monitoring stations at safe assembly points and evacuation stations.

(3) The equipment capable of remote control referred to in subparagraph (2) shall include, at least, systems for ventilation, emergency shutdown of equipment which could give rise to ignition, the prevention of the escape of flammable liquids and gas, fire protection and well control.

12 Communication general and emergency

When employees are present at places of work which are not normally occupied as workstations, a communication system appropriate to the circumstances of the activity shall be provided.

13 Safe assembly points and muster list

(1) Adequate measures shall be taken

(a) to protect evacuation points and safe assembly points from the effects of radiant heat, smoke and explosion,

(b) to ensure that escape routes to and from evacuation points and safe assembly points remain passable, and

(c) to ensure that protection is provided to employees for a sufficient period of time to enable safe evacuation escape and rescue to be organised and carried out where necessary.

(2) When risk analysis has been carried out in association with the requirements of the safety statement, at least one of the protected locations referred to in subparagraph (1) shall provide appropriate facilities to enable equipment referred to in paragraph 11 to be remotely controlled and the emergency services on shore to be communicated with.

(3) Safe assembly points and evacuation points shall be readily accessible from accommodation and work areas.

(4) For each individual safe assembly point, a list containing the names of employees and other persons assigned to that safe assembly point shall be kept up to date and displayed.

(5) This paragraph is in addition to, and is not in substitution for, Regulation 4(4) of the Safety, Health and Welfare (Offshore Installations) (Life-Saving Appliances) Regulations, 1991 ([S.I. No. 15 of 1991](#)).

(6) A list of persons assigned special duties in the event of an emergency shall be provided and displayed at suitable locations at the place of work and their names shall be noted in accordance with the procedures specified in the Safety, Health and Welfare (Offshore Installations) (Emergency Procedures) Regulations, 1991 ([S.I. No. 14 of 1991](#)).

14 Means of evacuation and escape

(1) The safety statement shall specify the required response times of standby

vessels and helicopters for each installation.

(2) This paragraph is in addition to, and not in substitution for, Regulation 13(1), (2), (3) and (4) of the Safety, Health and Welfare (Offshore Installations) (Emergency Procedures) Regulations, 1991 ([S.I. No. 14 of 1991](#)), and Regulation 31(1), (2), (3) and (4) of the Safety, Health and Welfare (Offshore Installations)(Operations) Regulations, 1991 ([S.I. No. 16 of 1991](#)).

15 Safety drills

(1) Safety drills shall be held at regular intervals at places of work at which employees are usually present in which

(a) all employees to whom specific duties have been assigned involving the use, handling or operation of emergency equipment are trained and examined in the execution of such duties, taking into account the risks specified in the safety statement and where appropriate, employees shall be drilled in the correct use, handling or operation of that equipment,

(b) all emergency equipment used in the drill is examined, cleaned and, where appropriate, recharged or replaced and all portable equipment so used is returned to the place where it is ordinarily kept,

(c) survival craft are verified for operation.

(2) This paragraph is in addition to, and not in substitution for. Regulations 4(1), (2), (3), (4) and (6), 7(1) and (2), 8(1) and (4), 9, 10 and 11 of the Safety, Health and Welfare (Offshore Installations)(Emergency Procedures) Regulations, 1991 ([S.I. No. 14 of 1991](#)), and Regulation 4(1)(a) and (5) of the Safety, Health and Welfare (Offshore Installations)(Life-Saving Appliances) Regulations, 1991 ([S.I. No. 15 of 1991](#)).

16 Helicopter operations

(1) Helicopter decks at places of work shall be of sufficient size and located so as to provide a clear approach to enable the largest helicopter using the deck to operate under the most severe conditions anticipated for helicopter operations.

(2) This paragraph is in addition to, and not in substitution for, Regulations 30(1)(b) and 32(1) (a), (b) and (f) of the Safety, Health and Welfare (Offshore installations)(Operations) Regulations, 1991 ([S.I. No. 16 of 1991](#)).

17 Accommodation

(1) Where the nature, scale and duration of operations so require, the employer shall provide employees with accommodation which shall:

(a) be suitably protected against the effects of explosion, the infiltration of smoke and gas and the outbreak and spread of fire as specified in the safety statement,

(b) be suitably equipped with ventilation, heating and lighting facilities,

(c) be provided at each level with at least two independent exits leading to escape routes,

(d) be protected against noise, smells and fumes likely to be hazardous to health from other areas, and against inclement weather,

(e) be separate from any workstation and located away from dangerous

areas,

(*f*) contain sufficient beds or bunks for the number of persons who may sleep on an installation and any room designated as sleeping accommodation shall contain adequate space for the occupants to store their clothes,

(*g*) include a sufficient number of showers and washing facilities equipped with hot and cold running water and be sufficiently spacious to permit each worker to wash without hindrance in suitably hygienic conditions,

(*h*) be equipped with a sufficient number of lavatories and washbasins,

(*i*) be maintained to adequate standards of hygiene.

(2) Separate sleeping rooms, shower rooms or separate use of shower rooms, facilities or separate use of facilities, shall be provided for men and women.

18 Natural and artificial lighting

(1) Every place of work shall be provided throughout with lighting capable of supplying illumination sufficient to ensure the health and safety of persons therein.

(2) Places of work shall as far as possible receive sufficient natural light and, bearing in mind the climatic conditions, be equipped with artificial lighting adequate for the protection of employees' safety and health.

(3) Lighting installations in rooms containing workstations and in passageways shall be placed in such a way that the type of lighting provided does not present a risk of accident to employees.

(4) Places of work in which employees are exposed to risks in the event of failure of artificial lighting shall be provided with adequate emergency lighting.

19 Sanitary installations

(1) Appropriate changing rooms shall be provided for employees who have to wear special work clothes and where, for reasons of health or propriety, they cannot be expected to change in another room.

(2) Changing rooms shall be easily accessible, be of sufficient capacity and be provided with seating.

(3) Changing rooms shall be sufficiently large and employees shall have facilities to enable them to lock away their clothes during working hours.

(4) Where circumstances so require, lockers for work clothes shall be separate from those for ordinary clothes.

(5) Provision shall be made to enable wet work clothes to be dried.

(6) Provision shall be made for separate changing rooms or separate use of changing rooms for men and women.

(7) Where changing rooms are not required to be provided under subparagraph (1), each employee shall be provided with a place to store his or her clothes.

(8) Adequate and suitable showers shall be provided for employees if required by the nature of the work or for health reasons related thereto, and in such cases, provision shall be made for separate shower rooms or separate use of shower rooms for men and women.

- (9) Shower rooms shall be sufficiently large to permit each employee to wash without hindrance in satisfactory conditions of hygiene.
- (10) The showers shall be equipped with hot and cold running water.
- (11) Where showers are not required to be provided under subparagraph (8), adequate and suitable washbasins with running water including hot water shall be provided in the vicinity of the workstations and the changing rooms and such washbasins shall be separate for, or used separately by, men and women when so required for reasons of propriety.
- (12) In addition to any facilities provided in an accommodation area, suitable showers and washing facilities shall where necessary, be provided in the vicinity of workstations.
- (13) Separate facilities with an adequate number of lavatories and washbasins shall be provided in the vicinity of workstations, rest rooms, changing rooms and rooms housing showers.
- (14) Provisions shall be made for separate lavatories or separate use of lavatories for men and women.
- (15) In addition to any facilities provided in an accommodation area, lavatories and washbasins shall, where necessary, be provided in the vicinity of workstations.

Given under my Hand, this 21 day of November, 1997

TOM KITT, T.D.

Tom Kitt T.D.,

Minister of State at the

Department of Enterprise, Trade and Employment

EXPLANATORY NOTE

These Regulations give effect to Council Directive 92/91/EEC on the minimum requirements for improving safety and health protection of workers in the mineral extracting industry through drilling and Council Directive 92/104/EEC on the minimum requirements for improving the safety and health protection of workers in surface and underground mineral extracting industries. These Regulations outline the general duties of the employer, general requirements for the provision of information, instruction and training, and the use of safe working methods and also specific requirements applicable to Extractive Industries, Underground Extractive Industries, Surface Extractive Industries, Extractive Industries through Drilling On-Shore and Extractive Industries through Drilling Off-Shore.

Oireachtas

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