

PETROLEUM (HEALTH AND SAFETY) REGULATIONS, 2014

Arrangement of Regulations

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PETROLEUM ACT 2014
PETROLEUM (HEALTH AND SAFETY)
REGULATIONS, 2014

The Minister, in exercise of the powers conferred by section 54 of the Petroleum Act, 2014 makes the following Regulations —

1. Citation.

These Regulations may be cited as the Petroleum (Health and Safety) Regulations, 2014.

2. Interpretation.

In these Regulations —

“**abandon**” means to seal a well in order to render it permanently inoperative and abandonment has a corresponding meaning;

“**Act**” means the Petroleum Act, 2014;

“**certificate of fitness**” means a certificate of the kind referred to in regulation 29 and issued under these Regulations by an inspection body;

“**competent person**” means any person, appointed by the Minister or an operator and who has the requisite knowledge, experience, skill, and qualifications to conduct any task required under the Act;

“**employee**” has the same meaning assigned in section 2 of the Employment Act (*Ch. 321A*);

“**facility manager**” means the person responsible to manage petroleum operations and supervise the health and safety aspects related thereto;

“**inspection body**” means a person or entity approved by the Minister under regulation 32 and responsible to conduct such inspections or examination of installations and equipment fixed or associated thereto, as may be necessary to determine the safety thereof;

“**lifeboat**” means a totally enclosed motor-propelled survival craft;

“**liner**” means a casing string that does not extend to the surface or seabed;

“mobile installation” means an installation that is designed or intended to be moved from place to place without major dismantling or modification, whether or not it has its own motive power;

“Mobile Offshore Drilling Unit (MODU)” means a mobile off-shore drilling unit as defined in the 1979 MODU Code, the 1989 MODU Code as amended and the 2009 MODU Code;

“notifiable operation” means —

- (a) commencement of a well operations;
- (b) the suspension of any well operation;
- (c) the abandonment of a well; or
- (d) the use of explosives;

“occupied facility” means a facility that is permanently occupied by at least twelve persons where occupancy for more than twenty-four hours in any seven day period or overnight is normally planned;

“petroleum operations” means any operations conducted under an instrument granted under the Act;

“pipeline riser” means a section of pipeline containing petroleum and greater than 40 mm in diameter that —

- (a) connects an installation to a section of pipeline lying in close proximity to the seabed; and
- (b) extends outwards from the installation;

“safety critical element” means any part or parts of an installation or plant (including computer programmes) designed to isolate or minimise a significant hazard, the failure of which could result in serious harm;

“suspend” means to render the well temporarily inoperative and suspension has a corresponding meaning;

“verification scheme” means a documented scheme that provides a basis for ensuring that safety critical elements —

- (a) remain in good repair and condition; and
- (b) where they are yet to be provided, will be suitable;

“well operator” means the operator of a well;

“well operations” means any operation in connection with the drilling of, or in, a well, and includes—

- (a) the making, completion, suspension, or abandonment of a well, including inter alia operations related or ancillary thereto whether or not before, during, or after making, completion, suspension or abandonment of the said well;
- (b) deepening, repair, or re-drilling of a well; and

- (c) any operation that renders any part of the primary pressure containment system of the well inactive or inoperable.

PART I - DUTIES RELATING TO PETROLEUM OPERATIONS

3. Operator to ensure safety of facility.

Every operator shall ensure that, at all times —

- (a) a facility is safe and possesses such integrity as is reasonably practicable; and
- (b) all work and other activities carried out on the facility are carried out in a safe manner.

4. Appointment of facility managers.

Every operator shall appoint a facility manager and ensure that the facility manager —

- (a) possesses the knowledge and skills necessary to supervise petroleum operations;
- (b) has practical experience relevant to petroleum operations;
- (c) if petroleum operation relates to a well operations, has practical experience in well-drilling and a sound knowledge of well-control methods; and
- (d) if a petroleum operation involves a facility, has experience on, or in direct association with, the facility to be supervised.

5. Compliance with facility manager.

Every operator shall ensure that all persons employed under the supervision of a facility manager—

- (a) are informed of the name of the facility manager;
- (b) comply with the instructions of the facility manager; and
- (c) comply with the instructions of the operator, for the purpose of enabling the operator to comply with the Act.

6. Safety Management System.

- (1) Every operator shall provide a Safety Management System in the form as specified in the *First Schedule*.
- (2) A Safety Management System shall —

- (a) identify, address and manage risks during the design, construction, start-up, operation, inspection, maintenance, and decommissioning of drilling, production, transportation and construction activities;
- (b) establish procedures for identifying and mitigating the risks associated with the design, fabrication, installation, operation, testing, inspection, monitoring and maintenance of facilities;
- (c) include management policies, operating practices, safe work and management of change procedures, training programs; and
- (d) make provision to describe emergency response plans for temporary refuge, evacuation, escape and rescue in the event of a major emergency.

7. Management of hazardous liquids, vapours or gases.

Every operator shall implement measures to —

- (a) detect accumulation of hazardous vapours or gases;
- (b) prevent the uncontrolled release of hazardous liquids, vapours or gases and prevent the uncontrolled accumulation of hazardous vapours or gases; and
- (c) protect personnel working in areas where hazardous liquids, vapours, or gases may exist, particularly in confined spaces.

8. Safe disposal of waste petroleum.

Every operator shall implement measures to ensure the safe disposal of any waste, petroleum, vapours or gases.

9. Sources of ignition.

Every operator shall implement measures to prevent sources of ignition being carried into or used in areas where such sources of ignition may create a hazard.

10. Notification of initial discharge of petroleum.

Before the initial discharge of any petroleum vapours or gases that may require flaring and within no less than twenty-four hours prior thereto, every operator shall—

- (a) notify the Minister in writing; and
- (b) seek prior approval by the Minister in writing.

11. Design, construction, etc.

An operator shall implement measures to ensure that a facility is designed, constructed, commissioned, equipped, operated, maintained, modified, suspended and abandoned in accordance with and where applicable—

- (a) the Institute of Petroleum Model Code of Safe Practice in the Petroleum Industry, in particular —
 - (i) Part 1, Electrical Safety Code, 1991; and
 - (ii) Part 8, Drilling and Production Safety Code for Offshore Operations, 1990;
- (b) the International Maritime Organization Code for the Construction and Equipment of Mobile Offshore Drilling Units, 2009;
- (c) the International Maritime Organization International Convention for the Safety of Life at Sea, 1974;
- (d) any other codes, conventions, standards and generally accepted and appropriate industry practice.

PART II - DUTIES RELATING TO WELLS

12. Primary duty of well operator.

Every well operator shall ensure, so far as is reasonable, that a well is designed, constructed, commissioned, equipped, operated, maintained, modified, suspended and abandoned so that —

- (a) there can be no unplanned escape of fluids from the well; and
- (b) risks to the health and safety of persons from the well or anything in it, or from strata to which the well is connected, is avoided and mitigated.

13. Notification of certain operations.

- (1) A notifiable operation shall not be conducted without prior approval by the Minister in writing.
- (2) Subject to paragraph (1), the Minister shall be notified in writing, by an operator, of every notifiable operation, within no less than twenty days prior to the date on which it is intended to commence such notifiable operation and every notice shall include —
 - (a) a description of the nature thereof;
 - (b) the manner in which it is to be conducted;
 - (c) the day and time when the operation will commence;
 - (d) such particulars as set out in Parts A, B, C and D of the *Second Schedule*.
 - (e) any other particulars which the Minister may deem appropriate.
- (3) The Minister shall be notified in writing of any material alteration in respect of any matters set out under paragraph (2).

- (4) At all times, a notifiable operation shall be conducted in such manner as consistent with the notice referred to in paragraph (2) and any other directives as instructed by the Minister.

14. Notification of certain events.

Every operator shall ensure that within no less than twenty-four hours, the Minister is notified in writing of—

- (a) any failure of any part of the primary pressure containment system of a well; and
- (b) the steps that the operator proposes to take in order to remedy such failure.

15. Inspection of well operations.

Every well operator shall ensure that no less than twenty-four hours —

- (a) before the commencement of a well operations; and,
- (b) after the commencement of such operation,

a competent person inspects the well operations to ensure that it is operating safely.

16. Record of well operations.

- (1) Every well operator shall ensure —
 - (a) to maintain daily records of well operations; and
 - (b) to prepare a summary report of well operations, upon completion of a well.
- (2) Daily records maintained pursuant to paragraph (1) shall contain the particulars set out in *Third Schedule*.
- (3) The summary report referred to in paragraph (1)(b) shall contain the particulars set out in the *Fourth Schedule*.
- (4) Every well operator shall ensure that a copy of the daily records and summary reports are submitted as soon as practicable to the Minister.

17. Management of particular hazards in well operations.

Every well operator shall implement measures, at all times, to —

- (a) ensure that all well operations are clearly identified;
- (b) ensure a primary pressure containment system is not made inoperative without an alternative method of controlling the well pressure being available;
- (c) supervise well-operations when the primary pressure containment system is inoperative;

- (d) provide adequate blow-out prevention equipment to enable a well to be shut in;
- (e) ensure well control equipment is tested to ensure it is adequate for the purpose for which it is installed;
- (f) ensure well control equipment is not removed without appropriate action being undertaken to ensure the safety of the well operations;
- (g) ensure access is maintained to a well operations or a well,
- (h) prevent unauthorised access to any hazardous well operations, including a well-head or drilling pond;

18. Suspension and abandonment of wells.

- (1) Every well operator shall ensure that a well is designed and constructed so that, as far as is reasonably practicable —
 - (a) the well can be suspended or abandoned in a safe manner; and
 - (b) after its suspension or abandonment, there can be no unplanned escape of fluids from the well or from the reservoir to which it led.
- (2) For the purpose of these Regulations, a well is deemed to be —
 - (a) completed, on the day that the well is first placed on steady or intermittent production of petroleum and appears, in the opinion of the Minister, to be capable of maintaining steady production;
 - (b) suspended, on the day that drilling or production operations are suspended in a manner approved by the Minister, to render the well temporarily inoperative, or as otherwise required by these Regulations but the well is not abandoned or completed;
 - (c) abandoned, on the day that all cement plugs, as required by these Regulations, are set to the satisfaction of the Minister and the well is sealed in order to render it permanently inoperative.
- (3) Every operator shall ensure that —
 - (a) a well that is not completed or suspended is abandoned before the attendant drilling installation is released;
 - (b) if an offshore well is to be abandoned, all seabed equipment is removed and all unrecovered casing is cut not less than two metres beneath the seabed and removed so the well is left in a safe condition; and
 - (c) the area of an abandoned well at the surface or the seabed is cleared of all equipment and debris and left in a safe condition.

19. Well control equipment.

Before well operations are conducted and in the course of well operations, the well operator shall ensure that suitable well control equipment and associated control systems are —

- (a) provided to protect against the uncontrolled release of petroleum; and
- (b) deployed when the well and operational conditions so require.

20. Training and supervision.

Every operator shall ensure that well operations are not conducted, unless the persons carrying out such operations —

- (a) has received the requisite information, instruction and training;
- (b) are being supervised by a competent person; and
- (c) ensure that the risk to health and safety from such operations is reduced to a level that is as low as is reasonably practicable.

21. Operation of MODUs.

The operator of a Mobile Offshore Drilling Unit shall ensure that the unit complies with the design, construction, equipment and manning requirements of the Code for the Construction and Equipment of Mobile Offshore Drilling Units adopted by the International Maritime Organization, as amended from time to time.

PART III - DUTIES RELATING TO FACILITIES

22. Preparation of safety case.

Every operator shall prepare and submit to the Minister for prior approval in writing, a safety case in accordance with the *Fifth Schedule* in respect of —

- (a) the design and construction of a facility;
- (b) the commission of a facility;
- (c) the operation, maintenance or modification of a facility; and
- (d) the decommissioning of a facility,

within no less than two months before the commencement thereof.

23. Approval of safety case.

- (1) Subject to regulation 22, the Minister may approve a safety case for the operation of a facility if he is satisfied that—

- (a) the safety case contains the information required in the *Fifth Schedule* and is in compliance with the Act;
 - (b) in the preparation of the safety case, the operator has consulted with the personnel working on the facility; and
 - (c) the safety case is appropriate for the facility and for the activities to be conducted at the facility.
- (2) Where approved by the Minister, a safety case shall be valid for a period of no more than five years.
- (3) Every operator shall ensure that—
- (a) a facility is constructed, commissioned, operated, maintained, modified and decommissioned in a manner which is consistent with the approved safety case;
 - (b) all personnel working on a facility are duly informed about the safety case and any actions required to be undertaken in compliance thereof.

24. Review of safety case.

- (1) Every operator shall review an existing approved safety case—
- (a) when directed to do so by the Minister; and
 - (b) within five years of —
 - (i) the date on which the Minister first approved the safety case; and
 - (ii) the date on which the safety case was last reviewed.
- (2) Any direction made by the Minister under paragraph (1), shall be in writing and set out—
- (a) the basis and reasons for a review;
 - (b) the period within which the review shall be conducted and completed by the operator;
 - (c) any other particulars as may be determined by the Minister.
- (3) Within thirty days of completion of a review of every existing approved safety case, the operator shall prepare and submit to the Minister a written summary thereof.

25. Revision of safety case.

- (1) The operator of a facility in respect of which there is an existing approved safety case, shall prepare and submit to the Minister for prior approval, in writing, proposed revisions to and a revised safety case, where —
- (a) the technical knowledge relied upon to formulate the safety case, including the knowledge of systems for identifying hazards and

evaluating risks of major accidents, is outdated and the existing safety case no longer adequately provides the information required in the *Fifth Schedule*;

- (b) the operator proposes to change the safety management system in a material particular;
 - (c) the activities to be carried out at the facility are different from the activities contemplated in the safety case;
 - (d) a series of proposed modifications to the facility could result in a significant cumulative change in the overall level of risk of major accidents;
 - (e) there has been a significant increase in the level of risk associated with any major accident hazard; or
 - (f) the operator proposes to modify or decommission the facility, and the proposed modification or decommissioning is not adequately addressed in the safety case.
- (2) Notwithstanding the Minister's approval of a revised safety case in accordance with paragraph (1), an operator shall review such safety case in accordance with regulation 24.
- (3) A copy of the revised safety case as approved by the Minister shall be submitted to the Minister as soon as practicable after a revision is made.

26. Right to withdraw the approval of a safety case.

- (1) The Minister may withdraw approval of an existing approved safety case, where—
- (a) an operator is not operating a facility in accordance with the approved safety case related thereto;
 - (b) the Minister does not accept a proposed revision thereto and provided that prior thereto, the Minister shall notify the operator in writing, giving the operator an opportunity to respond with a specified period of time.
- (2) Subject to paragraph (1) and in order to avoid the withdrawal of approval of an existing approved safety case by the Minister, the operator shall review and revise any proposed revisions to an existing safety case with the Minister.
- (3) During any period in which the Minister withdraws approval of an existing safety case, the operator shall ensure that the facility is not operated.
- (4) Notwithstanding paragraph (3), the Minister may permit an operator to continue operating a facility, where the Minister is satisfied that—

- (a) the health and safety of persons who are likely to be affected by the withdrawal of approval of an existing safety case will not be prejudiced; and
 - (b) the operator shall undertake to complete all proposed revisions to the existing safety case, to the satisfaction of the Minister.
- (5) Any proposed revision to an existing safety case in accordance with paragraph (2), shall be approved by the Minister in writing.
- (6) A copy of the revised safety case as approved by the Minister pursuant to paragraph (5) shall be submitted to the Minister as soon as practicable after the revision is made.

27. Custody and records of safety case.

- (1) At all times, every operator shall maintain a record of —
- (a) the approved safety case for the facility, together with all written approvals by the Minister related thereto;
 - (b) any revision to and the revised safety case;
 - (c) all reviews of a safety case and any particulars related thereto;
 - (d) the findings and recommendations of any audit of a safety case and safety management system and any actions necessary for implementation of such recommendations; and
 - (e) any other particulars as the Minister may determine.
- (2) Records of all items referred to in paragraph (1) shall be stored by every operator for a period of no less than five years from the date thereof —
- (a) in a secure place on every facility;
 - (b) at a separate address nominated for the facility and such records shall be available for inspection by the Minister or his authorized representative at any time.

28. Exemption.

- (1) Upon application to the Minister in writing, the Minister may by a certificate in writing, exempt any person, facility or well from any requirement or prohibition imposed by regulations 22, 24, 25 and 27 where in light of circumstances then prevailing, the Minister is satisfied that—
- (a) the health and safety of persons who are likely to be affected by the exemption will not be prejudiced;
 - (b) an exemption shall be compatible with the laws of The Bahamas; and
 - (c) the applicant has satisfied any other terms and conditions as the Minister may determine.

- (2) An exemption granted pursuant to paragraph (1) may be —
 - (a) subject to such terms and conditions as determined by the Minister;
 - (b) with or without limitation of time; and
 - (c) revoked by a certificate in writing at any time.

PART IV - CERTIFICATION OF FITNESS AND INSPECTION BODY

29. Certificates of fitness.

- (1) No operator shall permit an installation to be operated without possession of a certificate of fitness, in respect of the safety of —
 - (a) the structure of an installation and any equipment fixed or associated thereto; and
 - (b) all equipment necessary for the safe operation of the installation.
- (2) Paragraph (1) shall not apply to an operator operating a verification scheme.

30. Recognition of inspection body.

- (1) The Minister may, subject to prior application in writing, approve an inspection body, if satisfied that —
 - (a) the person or entity—
 - (i) operates an effective and relevant quality assurance programme;
 - (ii) has appropriate experience and background relevant to the certification work;
 - (iii) can warrant to undertake inspection work in an objective manner that promotes safety and the public interest; and
 - (b) there is no reasonably foreseeable conflict of interest with the work required to be conducted by the inspection body or any other work the inspection body undertakes or is likely to conduct.
- (2) Recognition of an inspection body is subject to the following conditions —
 - (a) any certificate of fitness issued by the inspection body is in accordance with the *Sixth Schedule*;
 - (b) any certificate of fitness issued by the inspection body contains the date on which the certificate expires, which is to be no more than five years from the date of issue of the certificate; and
 - (c) such terms and conditions as the Minister may specify.

- (3) The Minister may withdraw approval of an inspection body if he is satisfied that —
 - (a) it is appropriate to do so; or
 - (b) the inspection body no longer complies with any provision of paragraph (1) or is not complying with any condition imposed under paragraph (2).
- (4) Subject to paragraph (3) and prior withdrawal of approval of an inspection body, the Minister shall notify the inspection body, in writing and give consideration to any response received, within such period of time as set out thereunder the said notice.
- (5) Where the Minister has —
 - (a) approved an inspection body; or
 - (b) withdrawn approval of an inspection body,a notice to that effect shall be published in the Gazette.

31. Duty of inspection body.

- (1) An inspection body—
 - (a) shall carry out such inspections or examinations of installations, and equipment fixed or associated thereto, as may be necessary to determine the safety of such installations and equipment;
 - (b) may issue a certificate of fitness where it is satisfied that all parts of the installation or equipment described in the certificate have been designed, constructed, commissioned, equipped, operated, maintained, modified, suspended and abandoned, in accordance with generally accepted and appropriate industry practice.
- (2) A certificate of fitness shall be in the form specified in the *Sixth Schedule* and contain —
 - (a) the date of its expiry, which shall not be more than five years from the date of issue of the certificate;
 - (b) such terms and conditions and the Minister may specify.
- (3) An operator shall forward a copy of the certificate of fitness to the Minister at least thirty days prior to the commencement of the operation of an installation.

32. Compliance with certificate of fitness.

- (1) An installation or any equipment necessary for the safe operation thereof, shall no longer comply with a relevant certificate of fitness if the said installation or equipment—
 - (a) sustains damage;

- (b) shows signs of deterioration that could affect the integrity of the installation or equipment; or
 - (c) is structurally modified or replaced.
- (2) If an installation or equipment necessary for the safe operation thereof no longer complies with a relevant certificate of fitness the operator shall cease to operate the said installation or equipment.
- (3) Notwithstanding paragraph (2), the inspection body may, notify the operator in writing of such limitations and conditions upon which the operator is allowed to continue to operate the said installation or equipment, subject to such limitations and conditions as set out therein.
- (4) Pursuant to paragraph (b), the inspection body shall in each case endorse on the certificate of fitness —
- (i) the reason for non-compliance; and
 - (ii) any limitations or conditions imposed upon the operator and solely within which the operator may continue to operate.

PART V - VERIFICATION SCHEMES FOR INSTALLATIONS

33. Meaning of verification schemes.

- (1) For the purposes of regulations 34 and 36, “**verification scheme**” means a written scheme for ensuring, by the methods specified in paragraph (2), that the safety-critical elements —
- (a) are, or where they are yet to be provided, will be suitable; and
 - (b) where they have been provided, remain in good repair and condition.
- (2) The methods referred to in paragraph (1) are —
- (a) examination, including testing where appropriate, of the safety-critical elements by an independent and competent person;
 - (b) examination of any design, specification, certificate or other document, marking, or standard relating to the safety-critical elements;
 - (c) examination of work in progress by independent and competent persons;
 - (d) the taking of appropriate action following a report by an independent and competent person;
 - (e) the taking of any steps incidental to the means described in this paragraph.

34. Operation of a verification scheme.

- (1) Every operator who intends to implement a verification scheme in relation to an installation shall ensure that —
 - (a) a record is made of the safety-critical elements on the installation and submitted to an independent and competent person for review and comment;
 - (b) a verification scheme, which provides for the matters set out in the *Seventh Schedule* and is prepared by or in consultation with an independent and competent person; and
 - (c) a record is kept of any reservation expressed by the independent and competent person about —
 - (i) the contents of the record referred to in paragraph (a); or
 - (ii) the verification scheme.
- (2) In relation to a new installation, a copy of the verification scheme shall be submitted to the Minister no less than three months or any shorter period specified by the Minister before the date on which the operator intends to commence operating the installation.
- (3) In relation to an existing installation, a copy of the verification scheme shall be submitted to the Minister no less than three months or any shorter period specified by the Minister before the date on which the current certificate of fitness for the installation expires.

35. Recognition of verification schemes.

- (1) The Minister may, subject to prior application in writing, approve and allow an operator to implement a verification scheme for a particular installation, if satisfied that —
 - (a) the verification scheme submitted to the Minister by the operator contains all particulars set out in the *Seventh Schedule*;
 - (b) the verifier is sufficiently independent and objective to ensure that safety is not compromised;
 - (c) the operator has notified the Minister in writing of the date by which the verification scheme will be satisfactorily implemented; and
 - (d) the operator has complied with any such other particulars as determined by the Minister.
- (2) If the Minister approves a verification scheme, an operator shall not be required to possess a certificate of fitness and comply with such requirements related thereto.
- (3) The Minister may withdraw approval for an operator to implement a verification scheme if—

- (a) it is appropriate to do so; or
 - (b) if the operator's verification scheme fails to comply with regulation 34.
- (4) Subject to paragraph (3) and prior to the withdrawal of approval for an operator to implement a verification scheme, the Minister shall notify the operator in writing and consider any response received.

36. Duties relating to verification schemes.

- (1) An operator who operates a verification scheme approved by the Minister shall—
- (a) appoint an independent and competent person to carry out the verification work identified thereunder in an objective manner;
 - (b) implement, maintain, review and revise the verification scheme, so that the management of safety critical elements can be audited;
 - (c) maintain records that show the particulars described in paragraph 5 of the *Seventh Schedule* for the duration of the operation and for a minimum period of six months after the date on which it has been decommissioned; and
 - (d) if a revision of a safety case is provided to the Minister under regulation 25, provide a copy of the revised verification scheme to the Minister as soon as practicable after the revision is made.
- (2) An operator who operates a verification scheme shall ensure that, as often as is appropriate—
- (a) the verification scheme is reviewed and, where necessary, revised or replaced by, or in consultation with, an independent and competent person; and
 - (b) a record is kept of any reservations expressed by the independent and competent person in the course of the revision or replacement.
- (3) If a verification scheme is revised or replaced, the operator shall as soon as practicable send a copy of the revision or replacement to the Minister.

37. Reports of audits of installation.

- (1) For the purpose of this regulation, audit means the systematic examination of any safety management system with the objective of assessing the effectiveness of that system in minimising the hazards associated with the installation.
- (2) Every operator shall ensure that —
- (a) a report is made of any audit of the installation;
 - (b) a record is made of any action taken in consequence on such an audit; and

- (c) a copy of the report and record is kept at the installation.

PART VI - EMERGENCY RESPONSE PLAN

38. Notification of dangerous occurrences.

Every operator shall notify the Minister of any of the following dangerous occurrences as soon as practicable after the occurrence becomes known to the operator—

- (a) an event that did not cause, but might reasonably have caused, a major accident;
- (b) a well kick that either —
 - (i) exceeded 8 cubic metres or 50 barrels; or
 - (ii) required the well to be shut-in;
- (c) an uncontrolled release of hydrocarbon vapour exceeding 1 kilogram;
- (d) an uncontrolled release of petroleum liquids exceeding 80 litres;
- (e) the failure of any part of a well whose failure would cause or contribute to, or whose purpose is to prevent or limit the effect of, the unintentional release of fluids from a well or a reservoir being drawn on by a well;
- (f) damage to, or failure of, a safety-critical element that required intervention to ensure it will operate as designed;
- (g) a fire or explosion at a facility;
- (h) the uncontrolled or unintentional release or escape of any substance (other than petroleum) on or from a facility, where that release or escape had the potential to cause death or serious harm to any person;
- (i) an unintended collapse of —
 - (i) a facility;
 - (ii) any part of a facility; or
 - (iii) any plant on a facility, where that collapse jeopardised, or could have jeopardised, the integrity of the facility;
- (j) subsidence or local collapse of the seabed or ground that could have affected the foundations, or the integrity, of a facility;
- (k) an unplanned event (other than a false alarm) that required the emergency response plan to be implemented;

- (l) damage to a facility, caused by adverse weather conditions, earthquakes or other natural events, that had the potential to cause death or serious harm of any person;
- (m) a collision between a vessel, aircraft, or vehicle and a facility that resulted in damage to the facility, the vessel, the aircraft or the vehicle;
- (n) a failure of equipment required to maintain a floating installation on station;
- (o) an incident involving loss of stability or buoyancy of a floating installation.

39. Suspension of activities.

Subject to prior approval by the Minister in writing and in the event of an accident or emergency referred to in regulation 38 the operator shall, to the extent necessary, suspend petroleum operations for such period of time as conditions at the facility warrant suspension

40. Emergency response plan.

- (1) Every operator of a facility shall prepare an emergency response plan for the facility.
- (2) For the purposes of this regulation, emergency response plan means a plan for responding to emergencies that occur while personnel are working on a facility.
- (3) Every emergency response plan shall take into account the operating environmental conditions at the intended location of the facility and include —
 - (a) a description of the positions held by persons authorised to set emergency procedures in motion, including such person in charge of co-ordinating the emergency response;
 - (b) in relation to foreseeable conditions or events that could be significant in bringing about a major accident, a description of the actions that should be taken to control the conditions or events and to limit their consequences, including a description of the safety equipment and resources available;
 - (c) arrangements for limiting the risks to persons on or near the facility, including a description of —
 - (i) how warnings are to be given; and
 - (ii) the actions that persons are expected to take on receipt of a warning;

- (d) arrangements for the training of personnel in the duties expected to perform, and, where necessary, co-ordinating that training with emergency services; and
 - (e) arrangements for auditing the emergency response plan; and
 - (f) any other particulars which the Minister may determine.
- (4) The operator must give a copy of the emergency response plan to the Minister as soon as practicable after the plan is developed, and at least thirty days before commencing operations.

41. Review of emergency response plan.

- (1) Every operator of a facility shall, at suitable intervals not exceeding three years —
- (a) review the emergency response plan;
 - (b) test the plan, including undertakings to arrange for emergency services to participate in the test to such extent as is necessary; and
 - (c) revise the plan if necessary.
- (2) Notwithstanding paragraph (1), the Minister may direct that a review of the emergency response plan be conducted within a shorter period of time.
- (3) The operator shall notify the Minister in writing of any revision to the emergency response plan, as soon as practicable after the revision is made.

42. Protection of accommodation.

Every operator shall ensure that accommodation on every occupied facility is provided with —

- (a) external fire protection designed to protect the accommodation;
- (b) an integrated set of active and passive measures designed to prevent the ingress of smoke and other contaminants into the accommodation and to maintain adequate fresh air within it; and
- (c) ventilation intakes fitted with smoke and gas detectors that are capable of shutting down the ventilation intakes.

43. Provision of temporary refuge.

Every operator shall ensure that with respect to every occupied facility, a temporary refuge is provided thereon that—

- (a) is designed to protect any person in the refuge from serious harm resulting from any release of hazardous material at or near the facility; and
- (b) contains facilities capable of operating and monitoring emergency shut down systems and emergency alarms, and maintaining communication with onshore facilities.

44. Life-saving equipment for installations.

- (1) In respect of an installation, every operator shall ensure that on that installation—
 - (a) every area that could be occupied has at least two separate escape routes that are situated as far apart as practicable and that lead to the muster area in the temporary refuge;
 - (b) every escape route and abandonment station is readily accessible and unobstructed, and is provided with adequate and reliable emergency lighting and photo luminescent signs to assist in evacuation;
 - (c) provision is made for —
 - (i) a means of escape leading to an upper level in the form of ramps or stairways; and
 - (ii) a means of escape leading to a lower level in the form of ramps, stairways, or chutes;
 - (d) provision is made for embarkation and disembarkation at sea level;
 - (e) provision is made for a variety of means of escape to sea level, which may include knotted ropes, ladders, or scramble nets; and
 - (f) every person is provided with —
 - (i) a life jacket equipped with a means of locating persons in the water, such as a transmitting device, luminescent strips, or a locator light;
 - (ii) a smoke hood of a simple filter tube designed to exclude smoke for at least ten minutes;
 - (iii) a waterproof torch or chemically activated light;
 - (iv) fireproof gloves,which must be securely stored and readily accessible in the event that escape from the facility is necessary.
- (2) Every facility manager shall ensure that —
 - (a) every offshore installation is equipped with suitable and sufficient lifeboats to safely accommodate at least twice the maximum number of the persons on the facility at any time;
 - (b) sufficient lifeboats to accommodate at least the number of persons on the facility, are readily accessible from the temporary refuge;
 - (c) every offshore installation is provided with life-rafts having, in the aggregate, sufficient capacity to accommodate safely on board at least the number of persons on the facility, together with suitable ropes to enable persons to obtain access to the life rafts after the life rafts have been deployed and launched; and

- (d) every offshore installation has a sufficient number of lifebuoys, with lines attached, situated around the facility that are ready for use in the event of a person falling into the sea.

45. Safety of personnel.

Every operator shall at all times —

- (a) upon the arrival of every person on the facility, inform that person of the procedures for evacuation, the significance of emergency signals, and the location of relevant life saving equipment;
- (b) ensure that all persons on board the facility vacate the facility in a safe and orderly manner when instructed to do so;
- (c) ensure that all persons on board the facility are trained in the use of life saving appliances, and evacuation techniques and procedures;
- (d) ensure that effective procedures are in place for the recovery of persons from the water;
- (e) identify within or near the facility the areas for evacuation and rescue purposes; and
- (f) ensure that the offshore facility is not hazardous to other maritime users.

FIRST SCHEDULE

(regulation 6)

**MATTERS TO BE ADDRESSED BY SAFETY MANAGEMENT SYSTEMS
FOR FACILITY**

A safety management system must—

- (a) describe the owner's overall goal and principles of action in relation to the control of major accident hazards;
- (b) describe how the management of major accident hazards is an integral part of the management's responsibilities at all levels in the organisation;
- (c) describe the processes for ensuring that personnel have the necessary knowledge, skills, and abilities to meet their responsibilities and perform their job safely and effectively;
- (d) describe the processes for ensuring that personnel actively participate in health and safety management activities, including the development or revision of the safety case;
- (e) describe the arrangement for ensuring that personnel are fully informed about—

- (i) the hazards to which they may be expected on the facility; and
 - (ii) the control measures and safety management system that provide the means of eliminating or reducing the risks associated with those hazards;
- (f) in relation to a facility, describe the arrangements for establishing safe and effective working relationships;
- (g) describe the processes for the systematic identification of major accident hazards and the evaluation and treatment of risks associated with those hazards;
- (h) describe the management of change process for ensuring that health and safety implications associated with changes in organisation, personnel, procedures, practices, plant, or equipment are assessed;
- (i) describe the emergency plans and arrangements in place to respond effectively to all reasonably foreseeable emergencies;
- (j) describe the system for managing the safe performance of higher risk tasks and activities;
- (k) describe the processes for ensuring that any changes to risk profiles caused by combined operations will be identified, assessed, and reduced to a level that is as low as is reasonably practicable;
- (l) provide an overview of —
 - (i) the arrangements in place for monitoring performance in relation to the management of major accident hazards and other workplace hazards;
 - (ii) the arrangements for reporting, analysing, and learning from incidents and work-related illness;
 - (iii) the arrangements in place for independent and competent persons, audit, the management of major accident hazards and other workplace hazards;
 - (iv) the arrangements in place for independent and competent persons to verify that safety critical elements remain effective;
 - (v) the arrangements in place for the periodic assessment of the facility's integrity;
 - (vi) the arrangements for reviewing periodically the effectiveness and suitability of the major accident policy and safety management system.

SECOND SCHEDULE

(regulation 13)

PARTICULARS REQUIRED TO BE NOTIFIED TO THE MINISTER ON WELL OPERATIONS

PART A

PARTICULARS REQUIRED TO BE NOTIFIED TO THE MINISTER PRIOR TO COMMENCEMENT OF ANY WELL-DRILLING OPERATION

- (1) The name and address of the facility manager appointed under regulation 4.
- (2) The name of the facility and the respective instrument to which it applies.
- (3) The proposed name and number of the well.
- (4) Particulars of the facility not described in the current safety case for the control of the operations on the well, including those—
 - (a) to control the pressure in the well; and
 - (b) to prevent the uncontrolled release of hazardous substances; and
 - (c) to minimise the effect of damage to subsea equipment by drilling equipment.
- (5) A description of the design of the well, including the limits on its safe operation and use, and the procedures for effectively monitoring the direction of the well-bore.
- (6) The location of the proposed well and, in the case of a deviated well, the bottom hole location at total depth, expressed in terms of latitude and longitude to the nearest second.
- (7) The water depth at the proposed well location with reference to mean sea level.
- (8) Description of the meteorological and oceanographic conditions surrounding the well operation and the properties of the sea-bed and subsoil at the location at which the well operation will be carried out.
- (9) The proposed depth of the well.
- (10) The specifications and capacity of the drilling rig, including pumps and blow-out prevention equipment.
- (11) The proposed spudding-in date and the anticipated date of completion.

- (12) The names of all personnel to be engaged in drilling and technical servicing of the well.
- (13) The purpose of the well.
- (14) The objectives in drilling the well.
- (15) A summary of the geology, including —
 - (a) the stratigraphy;
 - (b) the structure of feature to be drilled, together with geological or geophysical maps and sections; and
 - (c) the anticipated geological sequence or prognosis.
- (16) A sample of the form of log to be used to record geological formation.
- (17) The proposed sampling programme for the collection of drill cuttings.
- (18) The proposed coring programme.
- (19) The proposed drilling fluids (basic system and any special techniques).
- (20) The anticipated casing programme, including hole sizes, the specifications, sizes, and proposed setting depths, both vertical and measured along the hole, of the casing used, and the type and amount of cement to be used.
- (21) The proposed logging programme specifying the types of logs to be run, the intervals to be logged, proposed surveys for deviation, and other well surveys.
- (22) The proposed programme for drill-stem or formation testing and the formations to be used.
- (23) The proposed method of completion.

PART B

PARTICULARS REQUIRED TO BE NOTIFIED TO THE MINISTER PRIOR TO SUSPENSION OF ANY WELL-DRILLING OPERATION

- (1) The name and address of every facility manager appointed under regulation 4.
- (2) A diagram of the well with a description of its physical conditions, current operational state and production capacity if applicable.
- (3) The reason for suspension.
- (4) The anticipated period for which suspension is required.
- (5) The status of the well and full details of the well-drilling operations at the time the well is to be suspended.
- (6) The method of suspension.

- (7) The details of any standards that have been applied;
- (8) Whether or not any seabed equipment will project above the seabed and, if so, how will it be marked at the surface of the sea.

PART C

PARTICULARS REQUIRED TO BE NOTIFIED TO THE MINISTER PRIOR TO ABANDONMENT OF ANY WELL

- (1) The name and address of every facility manager appointed under regulation 4.
- (2) The registration number of the licence.
- (3) The name and number of the well.
- (4) The estimated date of abandonment.
- (5) A detailed summary of the reasons for abandonment.
- (6) A detailed programme of abandonment indicating the sequence of operations, the positions of cement or bridge plugs, the method of the emplacing and testing the integrity of plugs, the details of any intention to recover casing, tubing, surface or down-hole equipment, the details of any debris to be left in the hole, and the plans for seabed restoration.
- (7) The details of any standards that have been applied.

PART D

PARTICULARS REQUIRED TO BE NOTIFIED TO THE MINISTER PRIOR TO USE OF ANY EXPLOSIVES

- (1) The name and address of every facility manager appointed under regulation 4.
- (2) The depth and density of perforations.
- (3) The type of gun, including pressure ratings.
- (4) The sequence of perforating.
- (5) The type of detonator.
- (6) The programme proposed for the use of explosives.

THIRD SCHEDULE

(regulation 16(2))

PARTICULARS TO BE KEPT IN DAILY WELL-DRILLING RECORDS

- (1) The name and location of the well.
- (2) The name of the facility involved.
- (3) The elevation of the Kelly bushing, rotary table, or derrick floor above the mean sea level and above the seabed.
- (4) The date, the drilling depths at the beginning and end of work on that date, and the distance drilled for each twenty-four hour period.
- (5) The direction and inclination of any deliberate deviation in the well.
- (6) The diameter and true vertical and measured depths of —
 - (a) any well drilled; and
 - (b) any casing installed and any alteration thereto;
- (7) The current operation.
- (8) The completion date in the final daily drilling records.
- (9) The rock types penetrated during drilling as determined from drill cuttings, cores, and side wall samples; and the proportions from each rock type expressed graphically in columnar form or sufficient width as to be clearly legible using generally recognised geological symbols.
- (10) The lithological description of the rock types penetrated or encountered to accompany the graphic representation in paragraph (9).
- (11) The penetration rates recorded graphically.
- (12) The drilling fluid density immediately before making the report.
- (13) The well site measurements or estimates of porosity.
- (14) Any oil staining observed on cuttings or cores.
- (15) The cored intervals and type of core (conventional, wire-line, and side-wall), together with the percentage recovery.
- (16) The details of the drill-stem or formation tests (open hole or cased), the interval tested, the recovery, and relevant engineering details.
- (17) The details of any casing operations and any subsequent modifications.
- (18) The details of cementing operations, including the measured cement tops, the setting of plugs and pressure tests.
- (19) The particulars of water, oil or gas encountered.

- (20) The type or wire-logging, deviation, and temperature surveys, and any other test or survey carried out.
- (21) The record of other operations such as fishing, perforating, acidizing, and fracturing.
- (22) The mud type, mud data, changes in mud type, and circulation losses.
- (23) The bit record.
- (24) Details of any unsafe aspects of the well-drilling operation found during any inspection required to be undertaken under regulation 15 and any remedial steps taken.

FOURTH SCHEDULE

(regulation 16(3))

PARTICULARS TO BE INCLUDED IN SUMMARY REPORT OF COMPLETED WELL-DRILLING

- (1) A statement stating the reasons for locating and drilling the well, the well-drilling operations, the geology, and the conclusions drawn from the operations.
- (2) General information on the well-drilling operation, including —
 - (a) the names of the resident manager and other employees;
 - (b) the name of the well, and its location expressed in terms of latitude and longitude to the nearest one-hundredth of 1 second;
 - (c) the elevation of the Kelly-bushing, rotary table, or derrick floor above the mean sea level and the seabed;
 - (d) the date of commencement of well-drilling operations, of spudding-in of the well, when the total depth was reached, and when the drilling rig was released;
 - (e) the total depth reached;
 - (f) the status of the well (with a schematic drawing).
- (3) General information on the drilling, including—
 - (a) the name and address of the drilling company, if other than the resident manager;
 - (b) the details of the drilling plant, including make, type rated capacity, drill pipe used, and motors (including make, type, and rated power output);
 - (c) the details of the mast (derrick), including make, type, size, and rated capacity;

- (d) the details of the pump, including make, type, size, and working pressure;
 - (e) the blow-out prevention equipment, including make, type, size, and working pressures;
 - (f) the hole sizes and depths;
 - (g) details of directional drilling, including kick-off depth, angle build-up, average and maximum deviation, and severity and depth of any dog-legs;
 - (h) the casing and liner details, including size, weight, grade, thread and coupling, number of joints, and setting depths;
 - (i) the casing cement details, including the quantities and grades of cement used, the methods used (single or multistage), and cement tops (estimated or logged);
 - (j) the drilling fluid used, including mud type, brief details of treatment, weight, relevant mud properties, and the quantity of additives used;
 - (k) the completion fluid analysis;
 - (l) the details of drilling fluid losses;
 - (m) the water supply for drilling fluids;
 - (n) the perforation record, including casing size, intervals, type of charge, hole density, size of holes, and method used;
 - (o) the details of plugging back and squeeze cement jobs and methods used;
 - (p) the details of fishing operations, including the depth and nature of the fish jobs and any equipment left in the hole;
 - (q) the drilling analysis.
- (4) A summary of the geological sampling information, including —
- (a) drill cuttings - the method and intervals of sampling, the intervals during which no samples were taken or recovered, and where the samples have been stored;
 - (b) coring – conventional or wireline, core number, interval cored, the percentage recovery of interval, where the core has been stored and core analysis results, including porosity, permeability, and fluid saturation;
 - (c) sidewall sampling – the intervals sampled, the method used, recovery, and where the core has been stored.
- (5) The details of wireline logging and mechanical surveys, and the interpretation of these surveys.

- (6) The details of the data recorded for intervals tested, the methods of testing and the circumstances, the equipment details, the results (including recoveries, pressures, and temperatures), and the interpretation methods.
- (7) The details of fluid samples, method of sampling, interval sampled, and analyses.
- (8) The details, methods used, and result of any pressure, temperature, and flow-meter surveys.
- (9) General information on the geology, including —
 - (a) a summary of previous work – geological, geophysical and drilling;
 - (b) a summary of the geological survey;
 - (c) a strategic table showing for each formation the age, the depth to the top of the formation, thickness and lithology;
 - (d) a description of well stratigraphy;
 - (e) a structural interpretation;
 - (f) a brief statement on target horizon or of any formation penetrated;
 - (g) a correlation of the section drilled and a comparison of the results with those of neighbouring wells, supported by cross-sections if necessary;
 - (h) the details of porosity and permeability of the sediments penetrated with reference to the log interpretation;
 - (i) a re-evaluation of geological concepts as a result of drilling.

FIFTH SCHEDULE

(regulation 22, 23 and 25)

SAFETY CASES

A safety case prepared in respect of any facility shall include the following information —

- (1) The name and address of the operator of the facility (if not the licensee).
- (2) A description of the extent to which the operator has taken into account any matters raised by the Minister.
- (3) A summary of how any safety representatives for the facility were consulted with regard to the revision, review or preparation of the safety case.
- (4) A description, with suitable diagrams, of—
 - (a) the main and secondary structure of the facility and its materials;
 - (b) its plant;

- (c) the layout and configuration of its plant;
 - (d) the connections to any pipeline or facility; and
 - (e) any wells connected or to be connected to the facility.
- (5) A suitable plan of the location of the facility and of anything connected to it, and (if applicable) particulars of—
- (a) the meteorological and oceanographic conditions to which the facility may foreseeably be subjected; and
 - (b) the properties of the sea-bed and subsoil at its location.
- (6) Particulars of the types of operation, and development activities in connection with an operation, which the facility is capable of performing.
- (7) The maximum number of persons—
- (a) expected to be on the facility at any time; and
 - (b) for whom accommodation is to be provided.
- (8) Particulars of the plant and arrangements for the control of well operations, including those—
- (a) to control pressure in a well;
 - (b) to prevent the uncontrolled reproduction lease of hazardous substances and contain hazardous substances that are reproduction leased;
 - (c) to minimise the effects of damage to subsea equipment by drilling equipment; and
 - (d) to reduce the risk of a major accident as low as reasonably practicable, to the point where the cost of further risk reduction would be grossly disproportionate to the benefits of such reduction.
- (9) A description of any pipeline with the potential to cause a major accident, including—
- (a) the fluid which it conveys;
 - (b) its dimensions and layout;
 - (c) its contained volume at declared maximum allowable operating pressure; and
 - (d) any apparatus and works intended to secure safety.
- (10) A description of the marine area surrounding the facility and the procedures establishing a safety zone or similar perimeter around the facility which vessels are to be prohibited from entering or remaining within, except in connection with development activities, safety inspection or emergency response.
- (11) A detailed emergency response plan, including—

- (a) a description, for each foreseeable hazard including: blowouts, oil spills, releases of hydrogen sulphide, hurricanes, earthquakes, helicopter accidents, fires, explosions, vessel collisions, structural failures and terrorism/sabotage, of the emergency plans and procedures for both onshore and offshore risks,
 - (b) a summary of training requirements for relevant personnel and contractors and of the program for tests and drills of safety procedures, including monthly simulation exercises in respect of foreseeable hazards;
 - (c) a description of arrangements made for protecting persons on the facility from toxic gas at all times other than during any period while they may need to remain on the facility following an incident which is beyond immediate control;
 - (d) a description of the measures taken or to be taken or the arrangements made or to be made for the protection of persons on the facility from hazards of explosion, fire, heat, smoke, toxic gas or fumes during any period while they may need to remain on the facility following an incident which is beyond immediate control and for enabling such persons to be evacuated from the facility where necessary, including provision for —
 - (i) temporary refuge;
 - (ii) routes from locations where persons may be present to temporary refuge and for egress therefrom to points from where the facility may be evacuated;
 - (iii) means of evacuation at those points; and
 - (iv) facilities within the temporary refuge for the monitoring and control of the incident and for organising evacuation; and
 - (e) a description of the effectiveness of the spill response systems to respond to an oil spill at the facility, on the basis of an analysis of the frequency, duration and timing of the environmental conditions that would preclude a response and taking into account weather conditions, hours of daylight, and tides and currents.
- (12) A description of the main requirements in the specification for the design of the facility and its plant, which shall include —
- (a) any limits for safe operation or use specified therein;
 - (b) a description of how the operator has ensured, or will ensure, compliance with the regulations; and
 - (c) a description of how the operator has ensured, or will ensure, the suitability of the safety-critical elements.
- (13) Particulars of any combined operations which may involve the facility, including —
-

- (a) a summary of the arrangements in place for co-ordinating the management systems of all licensees or lessees involved in any such combined operation;
- (b) a summary of the arrangements in place for a joint review of the safety aspects of any such combined operation by all licensees or lessees involved, which shall include the identification of hazards with the potential to cause a major accident and the assessment of risks which may arise during any such combined operation;
- (c) the plant likely to be used during any such combined operation; and
- (d) the likely impact any such combined operation may have on the facilities involved.

SIXTH SCHEDULE

(regulation 31(2))

FORM OF CERTIFICATE OF FITNESS

.....
[Name or description of Petroleum Operation]

I HEREBY CERTIFY that all of the following parts of the above-mentioned petroleum operations have been — (*Tick appropriate box*)

Designed	[]	Constructed	[]	Commissioned	[]
Equipped	[]	Operated	[]	Maintained	[]
Modified	[]	Suspended	[]	Abandoned	[]

as indicated below, in accordance with generally accepted and appropriate part or parts of the codes of practice specified:

To be completed where applicable:

The following parts of the above-mentioned petroleum operation have the following limitations:

Part [description]	Limitation
--------------------	------------

To be completed where applicable:

The terms and conditions upon which the certificate of fitness is granted shall include:

This certificate of fitness expires on or, in respect of any part of the petroleum operation, on the date on which that part no longer complies with this certificate of fitness.

Signed.....Date.....

[*Name of Inspection body*] is an inspection body approved by the Minister.

