



Republic of Mauritius



Republic of Seychelles

Offshore Petroleum Safety Code for the Joint Management Area

Prepared by the Governments of The Republic of Mauritius and the
Republic of Seychelles

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A CODE

To provide for the safe, secure and sustainable exploitation of the petroleum resources of the Joint Management Area, in accordance with Article 8 and Article 15 of the Treaty Concerning the Establishment of a Joint Management Area in the Mascarene Plateau Region between the Republic of Mauritius and the Republic of Seychelles.

An operator in the JMA will be required to comply with the provisions of this Code in accordance with Article 25 of the Model Petroleum Agreement.

PART 1

PRELIMINARY

ARTICLE 1

SHORT TITLE

This Code may be cited as the JMA Offshore Petroleum Safety Code (2014).

ARTICLE 2

INTERPRETATION

In this Code, unless the context otherwise requires:

“Abandon or abandonment” in relation to drilling, means to seal a well in order to render it permanently inoperative;

“Audit” means the systematic examination of a safety management system with the objective of assessing the effectiveness of that system in minimising the hazards associated with an Installation;

“Authority” means the Designated Authority established in Article 4 of the Agreement Concerning the Establishment of a Joint Management Area in the Mascarene Plateau Region (‘the JMA Agreement’);

“Certificate of Fitness” means a Certificate of Fitness of the kind referred to in Article 24 of this Code;

“Competent person” means a person who has the knowledge, experience, skill, and qualifications to carry out a task required by this Code;

“Contracting State” means Republic of Mauritius or Republic of Seychelles, as the context requires;

“Contractor” means a corporation, company or other legal entity or entities with limited liability that enter into a contract with the Designated Authority and which are duly regulated;

“Commission” means the Joint Commission established under Article 4 of the JMA Agreement;

"Decommission" means the measures taken by an operator upon cessation of production operations to remove or otherwise deal with all installations, equipment, pipelines and other facilities erected or used for purposes of such operation and decommissioned has a corresponding meaning.

"Drilling rig" means plant or equipment on the well site that is necessary to make, maintain, suspend or abandon a well;

"Emergency Response Plan" means a plan for responding to emergencies that occur while petroleum workers are working on an installation;

"Exploration" means any well-drilling or associated activity undertaken for the purpose of identifying petroleum, or petroleum-bearing or petroleum-generating strata, where the depth of the well is 10m or greater;

"Fixed Installation" means an Installation other than a mobile installation;

"Independent" - For the purpose of this Code, a person is independent in the exercise of a function if:

- (a) the function does not involve the examination of anything for which that person has or has had a level of responsibility that could compromise that person's objectivity; or
- (b) the function involves the examination of a thing and the person -
 - (i) is sufficiently independent of and separate from the line management of the thing to ensure that the person will be objective in the exercise of his or her function; and
 - (ii) is sufficiently free from any influence that could compromise the person's independence, including influence of an operational or financial nature.

"Inspection Body" means a person or organisation recognised by the Authority under Article 25;

"Installation Manager" means a manager appointed under Article 5;

"Joint Management Area" or "JMA" has the meaning as stated in Article 3 of the JMA Agreement;

"Lifeboat" means a totally enclosed motor-propelled survival craft;

"Liner" means a casing string that does not extend to the surface or seabed;

"Mauritius" means the Republic of Mauritius and includes -

- (a) all the territories and islands which, in accordance with the laws of Mauritius, constitute the State of Mauritius;
- (b) the territorial sea of Mauritius; and,
- (c) any area outside the territorial sea of Mauritius which, in accordance with international law, has been or may hereafter be designated under the laws of Mauritius as an area including the Continental Shelf within which the rights of Mauritius with respect to the sea, the sea-bed and sub-soil and their natural resources may be exercised;

“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;

“MODU Safety Certificate (1979)” means a certificate in the form appearing in the Appendix to the 1979 MODU Code;

“MODU Safety Certificate (1989)” means a certificate in the form appearing in the Appendix to the 1989 MODU Code;

“MODU Safety Certificate (2009)” means a certificate in the form appearing in the Appendix to the 2009 MODU Code;

“Notifiable Operation” means any work defined in Article 13 that requires written notification to the Authority prior to commencement of that work;

“Occupied”, in relation to an Installation, means an installation -

that is permanently occupied by the lesser of -

- (i) twelve people;
 - (ii) the single flight capacity of any helicopter servicing the installation;
- and

where -

- (i) more than 24 hours’ occupancy in any 7-day period is normally planned;
- and
- (ii) overnight occupancy is normally planned;

“Offshore Installation means -

- (a) any artificial structure (including a floating structure that is not a ship) used or intended to be used in or on, or anchored or attached to, the seabed for the purpose of the exploration for, or the exploitation or associated processing of, petroleum; and
- (b) includes all other works within 500 m of any part of the structure or vessel used in conjunction with the petroleum operation;

“Offshore Petroleum Operation” means -

- (a) any operation in connection with mining or exploration for petroleum; and
- (b) includes -
 - (i) the extraction, transport, treatment, processing, separation or storage of petroleum at, or in the near vicinity of, the well; and
 - (ii) any well-drilling operation; and
 - (iii) the construction, maintenance, and the operation of any works, structures, or any plant or equipment, connected with any such operation; and
 - (iv) the deposit or discharge of petroleum or other debris, cuttings, refuse, or waste water produced from or consequent on any such operation; and
 - (v) all acts incidental or conducive to any such operations;

“Operated”, in relation to an Offshore Installation, means used in or on, or anchored or attached to, the seabed for the purpose of the exploration for, or the exploitation, associated processing or storage of, natural resources;

“Operator”, in relation to an Offshore Installation, includes -

- (a) any person having a licence to explore for or exploit natural resources in the JMA where the installation is being, has been or is to be used;
- (b) any manager, lessee, licensee or operator of the installation;
- (c) any agent or petroleum worker of the operator, manager, lessee, licensee or operator of the installation; and,
- (d) any person, contractor or sub-contractor in charge of any operations connected with the installation;

“Petroleum”

- (a) means -

- (i) any naturally occurring hydrocarbon (other than coal), whether in a gaseous, liquid, or solid state;
 - (ii) any naturally occurring mixture of hydrocarbons (other than coal), whether in a gaseous, liquid, or solid state; or,
 - (iii) any naturally occurring mixture of 1 or more hydrocarbons (other than coal), whether in a gaseous, liquid, or solid state, and 1 or more of the following, namely, carbon dioxide, helium, hydrogen sulphide, or nitrogen; and
- (b) includes -
- (i) any petroleum that has been mined or otherwise recovered from its natural condition; or,
 - (ii) any petroleum that has been mined or otherwise recovered but has been returned to a natural reservoir for storage purposes in the same or an adjacent area;

“Petroleum Worker”

- (a) means any person employed in any capacity in or around an offshore petroleum operation; and
- (b) includes any contractor or subcontractor engaged to carry out any work relating to the operation, and the petroleum workers of any such contractor or subcontractor;

“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 Case” means the particulars and items referred to in Schedule 4 of this Code;

“Safety critical element” means any part of the facilities (including software) the failure of which could cause or contribute substantially to a major accident or the purpose is to prevent or limit the effects of a major accident, the failure of which could result in serious harm to any person, the environment and asset;

“Seychelles” means the territory of the Republic of Seychelles as defined in Article 2 of the Constitution of the Republic of Seychelles;

“Ship” means every description of boat or craft used in navigation, whether or not it has any means of propulsion; and includes –

- (a) a barge, lighter, or other like vessel;
- (b) a hovercraft or other thing deriving full or partial support in the atmosphere from the reaction of air against the surface of the water over which it operates; and,
- (c) a submarine or other submersible;

“Subcontractor” means any person engaged (otherwise than as an petroleum worker) by any contractor or subcontractor to do for gain or reward any work the contractor or subcontractor has been engaged (as a contractor or subcontractor) to do;

“Suspend”, in relation to drilling, means to render the well temporarily inoperative; and suspension has a corresponding meaning;

“The 1979 MODU Code” means the *Code for the Construction and Equipment of Mobile Offshore Drilling Units, 1979*, (IMO Resolution A.414(XI) as amended by MSC/Circ.561);

“The 1989 MODU Code” means the *Code for the Construction and Equipment of Mobile Offshore Drilling Units, 1989*, (IMO Resolution A.649(16) as amended by MSC/Circ.561 and Resolution MSC.38(63));

“The 2009 MODU Code” means the *Code for the Construction and Equipment of Mobile Offshore Drilling Units, 2009*, (IMO Resolution A.1023(26));

“Verification scheme” means a documented scheme that provides a basis for ensuring that safety critical elements -

- (a) will ‘perform’ or maintain their technical integrity under normal and emergency design conditions;
- (b) remain in good repair and condition; and,
- (c) where they are yet to be provided, will be suitable.

“Well”:

- (a) means a borehole that is intended to intersect petroleum-bearing strata; and,
- (b) includes any borehole for re-injection purposes;

“Well-drilling operation” means any operation in connection with the drilling of, or in, a well, and includes but is not limited to -

- (a) the making, completion, suspension, or abandonment of a well;
- (b) the work over, deepening, repair, or re-drilling of a well;

- (c) any operation that renders any part of the primary pressure containment system of the well inactive or inoperable; and,
- (d) any on-site operation ancillary to the making, completion, suspension, or abandonment of a well, whether or not before, during, or after that actual making, completion, suspension, or abandonment takes place.

ARTICLE 3
SCOPE AND PURPOSE

- (1) The purpose of this Code is to ensure that offshore petroleum operations carried out in the JMA:
- (a) maintain the integrity of the offshore installation;
 - (b) secure the safety of operational personnel; and,
 - (c) protect the marine environment.
- (2) This Code and its Annexes shall apply to every offshore petroleum operation under the control of the operator at which petroleum workers carry out duties relating to petroleum operations in the JMA.

PART 2

DUTIES RELATING TO PETROLEUM OPERATIONS

ARTICLE 4

SAFETY OF INSTALLATION

- (1) The operator shall take all practicable steps to ensure that:
- (a) the installation is safe for any person on or near the installation; and,
 - (b) all work and other activities carried out on the installation are carried out in a manner that is safe for any person on or near the installation.
- (2) The operator shall ensure that the installation at all times possesses such integrity as is reasonably practicable (i.e. ALARP Principle).

ARTICLE 5

INSTALLATION MANAGERS

- (1) The operator shall ensure that an installation manager is appointed to:
- (a) manage the petroleum operation; and,
 - (b) supervise the health and safety aspects of the petroleum operation personally on every day on which any petroleum worker is at work.
- (2) The operator shall ensure that every installation manager appointed under this section:
- (a) possesses the knowledge and skills necessary to effectively and safely supervise the petroleum operation(s);
 - (b) has practical expertise and experience relevant to the petroleum operation(s);
 - (c) where the petroleum operation relates to a well-drilling operation, has practical experience in well-drilling and a demonstrated knowledge of well-control methods; and,
 - (d) where the petroleum operation involves an installation, has experience concerning, or in direct association with, the installation to be supervised.

- (3) The operator shall take all practicable steps to ensure that all petroleum workers are informed of the name of the installation manager.
- (4) Petroleum workers must comply with all reasonable instructions given by the installation manager in order to ensure compliance with this Code.

ARTICLE 6

MANAGEMENT OF HAZARDOUS LIQUIDS, VAPOURS AND GASES

The operator shall take all practicable steps to:

- (a) prevent the uncontrolled release of hazardous liquids, vapours or gases;
- (b) prevent the uncontrolled accumulation of hazardous vapours or gases;
- (c) detect hazardous accumulation of vapours or gases;
- (d) prevent the uncontrolled ignition of flammable liquids, vapours or gases; and,
- (e) protect petroleum workers operating in areas where hazardous liquids, vapours, or gases may exist, particularly in confined spaces.

ARTICLE 7

SAFE DISPOSAL OF WASTE PETROLEUM

The operator shall take all practicable steps to ensure the safe disposal of any waste petroleum, vapours, or gases.

ARTICLE 8

SOURCES OF IGNITION

The operator shall take all practicable steps to prevent sources of ignition being carried into or used in areas where such sources of ignition may create a hazard to petroleum workers, operations and the marine environment.

ARTICLE 9

NOTIFICATION OF INITIAL DISCHARGE OF PETROLEUM VAPOURS

The operator shall take all practicable steps to ensure that the Authority is notified in writing, at least 24 hours prior to planned discharge of any petroleum vapours or gases that may require flaring due to testing or operational reasons.

ARTICLE 10

DESIGN, CONSTRUCTION, OPERATION, MAINTENANCE, SUSPENSION, AND ABANDONMENT STANDARDS

- (1) Subject to paragraph 2 of this Article, the operator shall take all practicable steps to ensure that the petroleum operation is designed inherently safe, constructed, operated, maintained, and where relevant, suspended or abandoned (as the case may be), in accordance with the relevant part(s) of:
- (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; and
 - (b) The International Maritime Organization Code for the Construction and Equipment of Mobile Offshore Drilling Units 1989; and
 - (c) The International Maritime Organization International Convention for the Safety of Life at Sea 1974; and
 - (d) The International Organisation Standardization (ISO) International Standards.
as amended from time to time.
- (2) Where the documents referred to in paragraph 1 of this Article are not applicable to any part or elements of the petroleum operation, the operator shall take all practicable steps to ensure that the relevant parts or elements of the petroleum operation are designed, constructed, operated, maintained, and suspended or abandoned (as the case may be) in accordance with best international industry practice.

PART 3

DUTIES RELATING TO WELL-DRILLING OPERATIONS

ARTICLE 11

APPLICATION OF THIS PART

This Part applies to all well-drilling operations under the control of the operator where petroleum workers carry out duties relating to well-drilling operations.

ARTICLE 12

OPERATOR DUTIES

The operator shall ensure that a well is designed, constructed, commissioned, equipped, operated, maintained, modified, suspended, and abandoned so that:

- (a) the risk of unplanned escape of fluids, to the environment and any strata, from the well is minimised to the maximum extent possible; and
- (b) risks to the health and safety of petroleum workers and other persons from the well or anything in it, or from strata to which the well is connected, are as low as is reasonably practicable.

ARTICLE 13

NOTIFIABLE OPERATIONS

- (1) For the purposes of this Article, a Notifiable Operation is one or more of the following:
 - (a) any well-drilling operation;
 - (b) any well testing operation;
 - (c) the suspension of any well-drilling operation;
 - (d) the abandonment of any well; or,
 - (e) the use of explosives.

- (2) No operator may commence any Notifiable Operation unless the Authority has first been notified in writing of:
 - (a) the nature of that notifiable operation; and,

- (b) the time when the operator intends to commence that notifiable operation.
- (3) The notification must contain the particulars set out in Sections 1, 2, 3, and 4 (as appropriate) of Schedule 1.
- (4) The operator shall take all practicable steps to ensure that the Authority is notified at least one (1) month before the day on which the operator intends to commence the notifiable operation.
- (5) If any material alteration occurs in respect of the particulars supplied under paragraph 3 of this Article, the operator shall take all practicable steps to ensure that the Authority is notified in writing of the alteration as soon as practicable after the date of the alteration.
- (6) The operator shall take all practicable steps to ensure that any notifiable operation is carried out in a manner that is consistent with the notification.
- (7) The operator shall notify the Authority of the successful completion of any of the notifiable operations listed in paragraph 1 of this Article within one (1) working day of the completion of the operation.

ARTICLE 14

INSPECTION OF WELL-DRILLING OPERATIONS

- (1) Before the design and drilling of a well is commenced or adopted, the well operator shall prepare and implement well control procedures and a well inspection scheme, which shall be reviewed and revised as often as is appropriate during the life of that well.
- (2) The operator shall take all practicable steps to ensure that before the commencement of any well-drilling operation, and at least once a day after the commencement of any such operation, an independent competent person inspects the well-drilling operation to ensure that it is operating safely.
- (3) Inspection undertaken in accordance with the well inspection scheme must be:
 - (a) recorded in writing;

- (b) suitable for ensuring (together with the assistance of any other measures the well operator may take) that the well is designed, constructed, operated, maintained, modified, suspended, and abandoned so that –
 - (i) so far as is reasonably practicable, there can be no unplanned escape of fluids from the well;
 - (ii) risks to the health and safety of persons from the well or anything in it, or from strata to which the well is connected, are as low as reasonably practicable; and,
- (c) conducted by an independent competent person.

ARTICLE 15

WELL CONTROL EQUIPMENT

- (1) Before any well operation is carried out, the operator shall ensure that suitable well control equipment and associated control systems are provided to protect against the uncontrolled release of petroleum.
- (2) When any well operation is carried out, the operator shall take all practicable steps to ensure that suitable well control equipment and associated control systems are deployed when the well and operational conditions so require.

ARTICLE 16

MANAGEMENT OF HAZARDS IN WELL-DRILLING OPERATIONS

The operator shall take all practicable steps *inter alia* to:

- (a) ensure the primary pressure containment system is not made inoperative without alternative methods of controlling the well pressure being available;
- (b) supervise the well-drilling operation when the primary pressure containment system is inoperative;
- (c) ensure that each well-drilling operation is clearly identified;
- (d) ensure access is maintained to well-drilling operations and wells at all times, so that the operation(s) or well(s) may be properly maintained or abandoned;

- (e) prevent unauthorised access to any hazardous part of a well-drilling operation, including any well-heads;
- (f) provide adequate blow-out prevention equipment to enable the well to be shut in;
- (g) ensure blow-out prevention equipment is tested to ensure that it is adequate for the purpose for which it has been installed and that it is regularly tested and maintained to ensure the equipment remains operational at all times; and,
- (h) ensure blow-out prevention equipment is not removed without appropriate action being undertaken to ensure the safety of the well-drilling operations.

ARTICLE 17

CASING OF WELLS

The operator shall take all practicable steps to ensure that wells are cased:

- (a) with casing materials conforming to best international industry practice;
- (b) in an manner designed to provide a firm anchorage for blow-out prevention equipment and pressure control equipment;
- (c) with setting depths based on known or reasonably anticipated geological and engineering factors, such as -
 - (i) the presence or absence of petroleum; and
 - (ii) formation pressures and fracture gradients; and
 - (iii) lost circulation intervals; and
 - (iv) the degree of compaction or consolidation of formations; and
- (d) with sufficient casing to prevent the uncontrolled release of fluid to or from formations.

ARTICLE 18

NOTIFICATION OF CERTAIN EVENTS

The operator shall immediately inform the Authority by the quickest practicable means of:

- (a) any failure of any part of the primary pressure containment system of the well; and,

- (b) the steps that the operator proposes to take in order to remedy such failure.
such information must be followed in writing immediately.

ARTICLE 19

ABANDONMENT OF WELLS

- (1) The operator shall take all practicable steps to ensure that, in any abandonment of a well:
- (a) in the uncased portions of the well, cement plugs are placed to extend 30 m below the bottom to 30 m above the top of any oil, gas, and abnormally high pressure zones, so as to isolate them in the strata in which they are found and to prevent them escaping into other strata;
 - (b) in a cased hole where there is an open hole immediately below any casing, a cement plug is placed in the deepest cemented casing string from at least 30 m below the casing shoe to at least 30 m above the casing shoe;
 - (c) in a cased hole where the casing has been perforated or ruptured, a cement plug is placed opposite the perforation or rupture and extends from at least 30 m above to 30 m below the perforated or ruptured interval;
 - (d) in a cased hole containing a liner or liners, a cement plug is placed to cover every liner hanger and extends from at least 30 m above to 30 m below the hanger;
 - (e) no casing is recovered if its recovery will expose any abnormal pressure, lost circulation, oil, or gas or water zone;
 - (f) when recovery of casing exposes an open hole -
 - (i) a cement plug is placed to extend from at least 30 m above to 30 m below the shoe of the next larger size casing above the casing cut; or
 - (ii) if no casing show exists above the casing cut, a cement plug is placed to extend from at least 30 m above to 30 m below the stub of the casing cut;
 - (g) a surface cement plug of at least 50m in length is placed from below the base of the mud-ooze zone;
 - (h) no annular space that extends to the seabed is left open to any drilled hole below; but,

- (i) if such annular space exists, the annulus is plugged with cement to fill at least 30 m of the annular space;
- (j) the location and integrity of each cement plug is satisfactorily tested before proceeding to the next abandonment stage;
- (k) any intervals in the well not plugged with cement are filled with fluid of appropriate density suitably inhibited to prevent corrosion of the casing.

(2) The operator shall take all practicable steps to ensure that:

- (a) every well that is not completed or suspended is abandoned before the attendant drilling rig is released; and
- (b) if an offshore well is to be abandoned, all seabed equipment is removed and all unrecovered casing is cut not less than 2 m beneath the seabed and removed so the well is left in a safe condition; and
- (c) the area of the abandoned well at the surface or the seabed is cleared of all equipment and debris and left in a safe condition.

ARTICLE 20

WELL-DRILLING RECORDS

(1) The operator shall ensure that:

- (a) daily records are kept of well-drilling operation(s); and,
- (b) a summary report of well-drilling operations is made when the well is completed.

(2) The daily records shall contain the particulars set out in Schedule 2.

(3) The summary report shall contain the particulars set out in Schedule 3.

(4) The operator shall ensure that a copy of daily records, and a copy of the summary report, are supplied to the Authority as soon as reasonably practicable.

PART 4

DUTIES RELATING TO INSTALLATIONS

ARTICLE 21

SAFETY CASE

- (1) No installation shall be operated in the JMA without an accepted safety case containing the relevant particulars set out in Schedule 4 including:
 - (a) the Design Safety Case; for design and before the commencement of construction of an installation;
 - (b) the Operations Safety Case; prior to introduction of hydrocarbon to the facility for subsequent steady operation of an installation; and,
 - (c) the Decommissioning Safety Case; before the commencement of decommissioning of an installation.
- (2) The operator shall ensure that a copy of the safety case is sent to the Authority for their review and input at least three (3) months before the commencement of the construction, operation (i.e. introduction of hydrocarbon to offshore installation/facility) or decommissioning, of any installation.
- (3) The operator shall take all practicable steps to ensure that a copy of any revision of the safety case is sent to the Authority for their review and input as soon as practicable after the revision is made.
- (4) The operator shall take all practicable steps to ensure that the installation is designed, constructed, operated, and decommissioned, in a manner which is consistent with the safety case documentation.
- (5) The operator shall take all practicable steps to ensure that all concerned including operational workers are consulted about and informed of relevant parts of the safety case, and of any actions they may have to take to comply with the requirements of the safety case.
- (6) The operator of an installation in respect of which there is an accepted safety case must prepare a revised safety case and submit it to the Authority for their review and input no later than 5 years after the date on which the safety case for the installation was initially accepted.

ARTICLE 22

COMPLIANCE WITH SAFETY CASE REQUIREMENTS

- (1) The operator shall operate, modify, maintain, and decommission an installation in a manner that is consistent with the accepted safety case and any conditions or limitations imposed by the Authority.
- (2) In sub-clause (1), a reference to installation includes any part of that installation.

ARTICLE 23

SAFETY CASE RECORDS

- (1) The operator shall maintain accurate records concerning:
 - (a) the safety case for the installation;
 - (b) any revision to the safety case;
 - (c) the findings and recommendations of any audit of the safety case, safety management system and effectiveness of emergency response plan; and,
 - (d) any actions that will be, or have been, taken to implement those recommendations.
- (2) The operator shall retain the records referred to in sub-clause (1) for a minimum of 5 years after it was made, and maintain those records:
 - (a) in a secure place on the installation; and,
 - (b) at the registered address of the operator.

PART 5

CERTIFICATES OF FITNESS AND VERIFICATION SCHEMES

ARTICLE 24

CERTIFICATES OF FITNESS

- (1) The operator shall ensure that the installation is not operated unless there is a current Certificate of Fitness, in the form set out in Schedule 6, is in place with respect to:
 - (a) the structure of the installation; and
 - (b) all equipment necessary for the safe operation of the installation.
- (2) The matters referred to in paragraph (1)(a) and (b) of this Article may be covered by a single Certificate of Fitness where consistent with best international practice.
- (3) Paragraph 1 of this Article does not apply to the operator operating under a verification scheme.
- (4) The operator shall take all practicable steps to ensure that a copy of any Certificate of Fitness is forwarded to the Authority at least 1 month prior to the commencement of operations at the installation.
- (5) For the purposes of this Code, an installation or equipment shall be deemed automatically to no longer comply with the relevant Certificate of Fitness where:
 - (a) the installation or equipment sustains damage; or
 - (b) shows signs of deterioration that could affect the integrity of the installation or equipment; or
 - (c) is structurally modified or replaced.
- (6) If the installation or equipment no longer complies with the relevant Certificate of Fitness:
 - (a) The operator shall cease to operate that installation or equipment unless and until the inspection body referred to in Article 25 allows such operation under paragraph 6(b) of this Article;
 - (b) The inspection body referred to in Article 25 may allow the operator to continue to operate that installation or equipment in accordance with such reasonable limitations and conditions as it notifies to the operator in writing, and -

- (i) the Certificate of Fitness is subject to those limitations and conditions; and,
 - (ii) the operator may continue to operate the installation or equipment only within those limitations or conditions (if any);
- (c) The inspection body must in each case endorse on the Certificate of Fitness -
- (i) the reason or reasons for non-compliance; and,
 - (ii) any limitations or conditions imposed under this paragraph.

ARTICLE 25

RECOGNITION OF INSPECTION BODIES

- (1) The Authority may recognise a person or organisation as an inspection body, for the purposes of this Code, where it is satisfied that:
- (a) the person or organisation operates an effective and relevant quality assurance programme; and
 - (b) the person or organisation has appropriate experience and background relevant to the certification work; and
 - (c) the person or organisation is currently accredited, to a recognised industry standard; and
 - (d) the person or organisation is likely to carry out its inspection work in an objective fashion that promotes safety and the public interest; and
 - (e) there is no reasonably foreseeable conflict of interest between the person or organisation's verification work inspection work, and any other work the person or organisation does or is likely to do.
- (2) The Authority may withdraw recognition of an inspection body where the Authority is satisfied that:
- (a) it is appropriate to do so; or
 - (b) the inspection body no longer complies with any provision of paragraph 1 of this Article.

ARTICLE 26

INSPECTION BODY TO CARRY OUT INSPECTIONS AND ISSUE CERTIFICATES OF FITNESS

- (1) An inspection body shall:
- (a) carry out such inspections or examinations of installations, and equipment fixed to or associated with installations, as may be necessary to determine the safety of such installations and equipment;
 - (b) issue Certificates of Fitness in respect of the safety of the structure of installations, equipment fixed to the structure, and other equipment necessary for the safe operation of the installation; and,
 - (c) impose limitations or conditions under paragraph 6 of Article 24, if the installation or equipment no longer complies with the relevant certificate of fitness.
- (2) The inspection body shall, before issuing a Certificate of Fitness under sub-clause (1)(b), be satisfied that all parts of the installation or equipment described in the certificate have been designed, constructed, maintained, or suspended or decommissioned, in accordance with best international industry practice.
- (3) A Certificate of Fitness shall be in the form specified in Schedule 6 and contain the date of its expiry, which shall in all cases not be more than 5 years from the date of issue of the certificate.

ARTICLE 27

RECOGNITION OF VERIFICATION SCHEMES

- (1) The Authority may authorise the operator to operate a verification scheme for a particular installation, where it is satisfied that:
- (a) the operator has provided the Authority with a suitable verification scheme for the installation containing the particulars set out in Schedule 7;
 - (b) the verifier is sufficiently independent and objective to ensure that safety is not compromised; and,
 - (c) the operator has notified the Authority in writing of the date by which the verification scheme will be satisfactorily implemented.

- (2) Where the Authority approves a verification scheme, the operator shall not be required to comply with the certification requirements imposed under Article 24.
- (3) The Authority may withdraw recognition of the verification scheme where it is appropriate to do so or if the operator's verification scheme does not comply with Article 24.

ARTICLE 28

FUNCTIONS OF OPERATORS OPERATING VERIFICATION SCHEMES

The operator who operates a verification scheme shall take all practicable steps to:

- (a) appoint a competent person or persons to carry out the verification work identified in the verification scheme, who is or are sufficiently independent of the verification work to ensure that the verification work is carried out in an objective fashion;
- (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 clause 5 of Schedule 7 for the duration of the operation and for a minimum period of 6 months after the date on which it has been decommissioned; and,
- (d) if a revision of a safety case is provided to the Authority under Article 21, provide a copy of the revised verification scheme to the Authority as soon as practicable after the revision is made.

ARTICLE 29

REPORTS OF AUDITS OF INSTALLATION

The operator shall take all practicable steps to ensure, in relation to any installation under the control of that operator, 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 6

MANAGEMENT OF EMERGENCIES

ARTICLE 30

EMERGENCY RESPONSE PLANS

- (1) The operator shall prepare an Emergency Response Plan for every installation it operates.
- (2) The Emergency Response Plan shall take into account the operating and environmental conditions at the intended location of the installation and shall include:
 - (a) a description of the positions held by people authorised to initiate emergency procedures, and the position held by the person in charge of co-ordinating the emergency response; and
 - (b) in relation to foreseeable conditions or credible events that could cause a major accident, a description of the actions that shall be taken to control the conditions or events and to minimise or mitigate their consequences, including a description of the safety equipment and resources available; and
 - (c) arrangements for limiting the risks to persons on or near the installation, including a description of—
 - (i) the required modalities for the issuance of warnings; and
 - (ii) the actions to be taken on receipt of a warning; and
 - (d) arrangements for training petroleum workers in the duties they will be expected to perform, and, where necessary, co-ordinating that training with emergency services; and
 - (e) arrangements for auditing the Emergency Response Plan.
- (3) The operator shall ensure that a copy of the Emergency Response Plan is sent to the Authority for their review and input at least two (2) months before the commencement of offshore petroleum operations.
- (4) The operator shall ensure provide a copy of the final Emergency Response Plan to the Authority as soon as practicable after the plan is finalised, and no later than one (1) month prior to the commencement of offshore petroleum operations.

ARTICLE 31

PROTECTION OF ACCOMMODATION

The operator shall ensure that accommodation on every occupied, fixed or floating installation 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.

ARTICLE 32

PROVISION OF TEMPORARY REFUGE

The operator shall ensure that a temporary refuge is provided on every occupied, fixed installation 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 installation; and
- (b) contains facilities capable of operating and monitoring emergency shutdown systems and emergency alarms, and maintaining communication with onshore facilities.

ARTICLE 33

OFFSHORE LIFE-SAVING EQUIPMENT

(1) The operator shall ensure that on each installation as a minimum the following requirements are met:

- (a) every area that could be occupied has at least two (2) 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; and

- (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; and
- (d) provision is made for embarkation and disembarkation at sea level; and
- (e) provision is made for a variety of means of escape to sea level, which may include knotted ropes, ladders, or scramblenets; and
- (f) every person is provided with the following equipment, which must be securely stored and readily accessible in the event that escape from the installation is necessary -
 - (i) an immersion suit;
 - (ii) a life jacket equipped with a means of locating persons in the water, such as a transmitting device, luminescent strips, or a locator light;
 - (iii) a smoke hood of a simple filter tube designed to exclude smoke for at least 10 minutes;
 - (iv) a torch or chemically activated light;
 - (v) fireproof gloves.

(2) The operator shall ensure that:

- (a) every installation is equipped with suitable and sufficient lifeboats to safely accommodate at least twice the maximum number of people on the installation at any time;
- (b) sufficient lifeboats to accommodate at least the number of people on the installation are readily accessible from the temporary refuge;
- (c) every installation is provided with life-rafts having, in the aggregate, sufficient capacity to accommodate safely on board as least the number of people on the installation, together with suitable ropes to enable people to obtain access to the life-rafts after the life-rafts have been deployed and launched; and
- (d) every installation has a sufficient number of lifebuoys, with lines attached, situated around the installation that are ready for use in the event of a person falling into the sea.

ARTICLE 34

MANAGEMENT OF HAZARDS IN ALL INSTALLATIONS

The operator shall:

- (a) ensure every person shall be informed through safety induction, as soon as practicable after his or her arrival on the installation, of the procedures for evacuation, the significance of emergency signals, and the location of relevant life-saving equipment;
- (b) ensure all people on board the installation vacate the installation in a safe and orderly manner when instructed to do so;
- (c) ensure all people on board the installation are trained in the use of life-saving appliances, and evacuation techniques and procedures;
- (d) ensure effective procedures are in place for the recovery of people from the water;
- (e) identify the installation for evacuation and rescue purposes; and
- (f) ensure the installation is not hazardous to other maritime users.

PART 7
**DUTIES RELATING TO THE OPERATION OF MOBILE
OFFSHORE DRILLING UNITS (MODUS) IN THE JMA**

ARTICLE 35

REQUIREMENTS FOR OPERATION OF A MODU IN THE JMA

A MODU must not be operated in the JMA, or be moved to or from a location in the JMA, if there is not in force a MODU Safety Certificate mentioned in the following table:

	Date of Construction of MODU	MODU Safety Certificate
1	before 1 May 1991	MODU Safety Certificate (1979)
2	after 30 April 1991 and before 1 January 2012	MODU Safety Certificate (1989)
3	after 31 December 2011	MODU Safety Certificate (2009)

ARTICLE 36

OPERATIONAL READINESS OF MODUS

(1) The operator of a MODU must ensure that:

- (a) the gas detection systems, fire protection systems and fire fighting systems and appliances of the MODU comply with section 9.19 of the 2009 MODU Code (regardless of whether the 2009 MODU Code applies to the MODU); and
- (b) all life saving appliances on the MODU comply with section 10.18 of the 2009 MODU Code (regardless of whether the 2009 MODU Code applies to the MODU).

SCHEDULE 1 (ARTICLE 13)

PARTICULARS REQUIRED TO BE NOTIFIED TO THE AUTHORITY

- (1) Particulars required to be notified to the Authority prior to commencement of any well-drilling operation:
- (a) The name and address of every Installation Manager appointed under Article 5;
 - (b) The registration number and the term and expiry date of the exploration or mining permit or license number;
 - (c) The proposed name and number of the well;
 - (d) Any codes complied with under Article 10;
 - (e) Particulars of the plant and arrangements for the control of the operations on the well, including those -
 - (i) To control the pressure in the well; and
 - (ii) To prevent the uncontrolled release of hazardous substances; and
 - (iii) To minimise the effect of damage to subsea equipment by drilling equipment;
 - (f) 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;
 - (g) The water depth at the proposed well location with reference to mean sea level.
 - (h) The proposed depth of the well;
 - (i) The specifications and capacity of the drilling rig, including pumps and blow-out prevention equipment;
 - (j) The proposed spudding-in date and the anticipated date of completion;
 - (k) The names of all petroleum workers to be engaged in drilling and technical servicing of the well;
 - (l) The purpose of the well;
 - (m) The objectives in drilling the well;
 - (n) A summary of the geology, including -
 - (i) The stratigraphy; and

- (ii) The structure or feature to be drilled, together with geological or geophysical maps and sections; and
- (iii) The anticipated geological sequence or prognosis;
- (o) A sample of the form of log to be used to record geological information;
- (p) The proposed sampling programme for the collection of drill cuttings;
- (q) The proposed coring programme;
- (r) The proposed drilling fluids (basic system and any special techniques);
- (s) 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;
- (t) 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;
- (u) The proposed programme for drill-stem or formation testing and the formations to be used;
- (v) The proposed method of completion.

(2) Particular required to be notified to the Authority prior to suspension of any well-drilling operation:

- (a) The name and address of every employer and of every manager appointed under Article 5;
- (b) The name and number of the well;
- (c) The reason for suspension;
- (d) The anticipated period for which suspension is required;
- (f) The status of the well and full details of the well-drilling operations at the time the well is to be suspended;
- (g) The method of suspension;
- (h) Any codes complied with under Article 10;
- (h) 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.

(3) Particulars required to be notified to the Authority prior to abandonment of any well:

- (a) The name and address of every Installation Manager appointed under Article 5;

- (b) The registration number of the license;
- (c) The name and number of the well;
- (d) The estimated date of abandonment;
- (e) A detailed summary of the reasons for abandonment;
- (f) 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;
- (g) Any codes complied with under Article 10.

(4) Particulars required to be notified to the Authority prior to use of any explosives:

- (a) The name and address of every Installation Manager appointed under Article 5;
- (b) The depth and density of perforations;
- (c) The type of gun (including pressure ratings);
- (d) The sequence of perforating;
- (e) The type of detonator;
- (f) The programme proposed for the use of explosives.

SCHEDULE 2 (ARTICLE 20)

PARTICULARS TO BE KEPT IN DAILY WELL-DRILLING RECORDS

- (1) The name, number, and location of the well.
- (2) The elevation of the kelly-bushing, rotary table, or derrick floor above mean sea level and above the seabed.
- (3) The date, the drilling depths at the beginning and end of work on that date, and the distance drilled for each 24 hour period.
- (4) The direction and inclination of any deliberate deviation in the well.
- (5) The current diameter of the hole.
- (6) The current operation.
- (7) The completion data in the final daily drilling records.
- (8) The rock types penetrated during drilling as determined from drill cuttings, cores, and sidewall 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.
- (9) A lithological description of the rock types penetrated or encountered to accompany the graphic representation in clause 8.
- (10) The penetration rates recorded graphically.
- (11) The well-site measurements or estimates of porosity.
- (12) Any oil staining observed on cuttings or cores.
- (13) The cored intervals and type of core (conventional, wire-line, and sidewall), together with the percentage recovery.
- (14) The details of drill-stem or formation tests (open hole or cased), the interval tested, the recovery, and relevant engineering details.
- (15) The details of any casing operations and any subsequent modifications.
- (16) The details of cementing operations, including the measured cement tops, the setting of plugs, and pressure tests.
- (17) The particulars of water, oil, or gas encountered.
- (18) The type of wire-logging, deviation, and temperature surveys, and any other test or survey carried out.
- (19) The record of other operations such as fishing, perforating, acidising, and fracturing.

- (20) The mud type, mud data, changes in mud type, and circulation losses.
- (21) The bit record.
- (22) Details of any unsafe aspects of the well-drilling operation found during any inspection required to be undertaken under Article 14 and any remedial steps taken.

SCHEDULE 3 (ARTICLE 20)

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 manager and other participants;
 - (b) The exploration or mining permit or license number;
 - (c) The name and number of the well, and its location expressed in terms of latitude and longitude to the nearest one-hundredth of 1 second;
 - (d) The elevation of the kelly-bushing, rotary table, or derrick floor above the mean sea level and the seabed;
 - (e) 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;
 - (f) The total depth reached;
 - (g) The status of the well (with a schematic drawing).

- (3) General information on the drilling, including:
 - (a) The name and address of the drilling contractor, if other than the 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 and 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.

SCHEDULE 4 (ARTICLE 21)

PARTICULARS TO BE INCLUDED IN SAFETY CASE FOR INSTALLATION

- (1) The name and address of the duty holder for the installation.
- (2) A summary of how the duty holder complied with Article 21 in the preparation or revision of a safety case.

Safety management system

- (3) A detailed description of the safety management system that provides for all activities that will, or are likely to, take place on, or in connection with, the installation.
- (4) The safety management system must address the matters set out in Schedule 5.

Installation

- (5) In relation to the installation:
 - (a) particulars of all relevant international standards that have been applied, or will be applied, in relation to the installation, or plant used on or in connection with the installation;
 - (b) a description of installation with scale diagrams, of —
 - (i) in relation to a production system installation, the intended location of the installation;
 - (ii) the main and secondary structure of the installation and its materials;
 - (iii) the process plant and equipment of the installation;
 - (iv) the layout and configuration of its plant;
 - (v) any designated hazardous areas;
 - (vi) in relation to a production system installation, the connections to any pipeline or installation;
 - (vii) in relation to a production system installation, any wells to be connected to the installation;

- (c) particulars of the types of operation, and activities in connection with any operation that the installation is capable of performing;
- (d) in relation to an offshore installation, the maximum number of persons expected to be on the installation at any time and for whom accommodation is to be provided;
- (e) particulars of the range of operating and environmental conditions within which the installation has been designed to operate and how the installation's structures have been designed and are maintained for the stated operating and environmental conditions;
- (f) particulars of the plant and arrangements that will be used to control the pressure in the well and prevent the uncontrolled release of petroleum;
- (g) in relation to a production installation, a description of any pipeline with the potential to cause a major accident (where applicable), including details of –
 - (i) the fluid that it conveys;
 - (ii) its dimensions and layout;
 - (iii) its contained volume at declared maximum allowable operating pressure;
 - (iv) any apparatus and works intended to secure safety;
- (h) in relation to an offshore installation, particulars of plant, equipment, and procedures for diving support and hyperbaric rescue;
- (i) a description of the areas that have been classified as hazardous, including the rated classification;
- (j) a description of the systems available for early detection of smoke, fire, accumulations of flammable (and other hazardous) gases, leakages of flammable liquids, and other events that may require emergency response;
- (k) a description of the arrangements for giving warning of an emergency by audible, and where necessary, visual alarm systems to all petroleum workers on the installation;
- (l) a description of the arrangements for communication during an emergency –
 - (i) between persons on the installation;
 - (ii) in relation to an offshore installation, between the installation and other installations, supporting aircraft, and vessels;

- (iii) between the installation and remote support locations, emergency services and any onshore services;
- (m) a description of the measures for limiting the extent of an emergency, including—
 - (i) measures to combat fire and explosion; and
 - (ii) emergency shutdown systems; and
 - (iii) facilities for the monitoring and control of the emergency and for organising evacuation;
- (n) a description of the measures taken for the protection of petroleum workers from hazards of explosions, fire, heat, smoke, hazardous gas, or fumes during any period while petroleum workers may need to remain on an installation during an emergency;
- (o) in relation to an offshore installation, a description of the temporary refuge arrangements that offer protection against an escalating major accident;
- (p) a description of the evacuation and escape systems.

Management of major accident hazards

- (6) A detailed description of the formal safety assessment for the installation, including a description of:
 - (a) all major accident hazards;
 - (b) an assessment of the risk associated with each major accident hazard supported by safety engineering studies e.g. Fire and Explosion Risk Analysis (FERA), Quantitative Risk Analysis (QRA), Occupied Building Risk Assessment (OBRA), Emergency Systems Survivability Analysis (ESSA) ; Failure Mode Effects and Criticality Analysis, Flammable and Toxic gases dispersion modelling, etc.)
 - (c) the elimination, prevention, reduction, and mitigation control measures that have been, or will be, taken to reduce the risks to a level that is ALARP (as low as is reasonably practicable);
 - (d) the performance standards for each control measure;
 - (e) the assurance & verification processes that will be put in place to confirm that the control measure remains fit for purpose;
 - (f) the process used to identify major accident hazards, assess the risks, identify the control measures, and set performance standards.

Performance monitoring

(7) A description of:

- (a) the arrangements in place for monitoring the management of major accident hazards and other workplace hazards;
- (b) the arrangements for reporting, analysing, and learning from incidents and work-related illness;
- (c) the arrangements for monitoring and measuring occupational health exposures;
- (d) the arrangements in place for independent and competent persons to audit the management of major accident hazards and other workplace hazards;
- (e) the arrangements in place for independent and competent persons to verify that safety-critical elements remain effective;
- (f) the arrangements in place for the periodic assessment (i.e. through inspection and maintenance) of the installation's integrity.

SCHEDULE 5 (ARTICLE 21)

MATTERS TO BE ADDRESSED BY SAFETY MANAGEMENT SYSTEMS FOR INSTALLATION

The safety management system must:

Policies and objectives

- (a) describe the duty holder's overall goal and principles of action in relation to the control of major accident hazards;

Organisation and personnel

- (b) describe how the management of major accident hazards is an integral part of management's responsibilities at all levels in the organisation;
- (c) describe the processes for ensuring that each petroleum worker including individuals assigned to safety critical activities is competent and has the necessary knowledge, skills, and abilities to meet their responsibilities and perform their job safely and effectively;
- (d) describe the processes for ensuring that petroleum workers actively participate in health and safety management activities, including the development or revision of the safety case;
- (e) describe the arrangements for ensuring that petroleum workers are fully informed about –
 - (i) the hazards to which they may be exposed on the installation; 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 production system installation, describe the arrangements for establishing safe and effective working relationships with contractors and subcontractors;
- (g) in relation to a non-production installation, describe the arrangements for establishing safe and effective working relationships with the principal with whom the owner has contracted, and employees and contractors of the principal;

Standards and procedures

- (h) describe the processes for the systematic identification of major accident hazards and the evaluation and treatment of risks associated with those hazards;
- (i) describe the management of change (MoC) process for ensuring that health and safety implications associated with changes in organisation, personnel, procedures, practices, plant, or equipment are assessed;
- (j) describe the emergency plans and arrangements in place to respond effectively to all reasonably foreseeable emergencies;
- (k) describe the permit-to-work (PTW) system for managing the safe performance of higher-risk tasks and activities;
- (l) describe the processes for ensuring that any changes to risk profiles caused by combined operations, simultaneous operations or concurrent operations will be identified, assessed, and reduced to a level that is as low as is reasonably practicable;

Performance monitoring

- (m) 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 to 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 installation's integrity;
 - (vi) the arrangements for reviewing periodically the effectiveness and suitability of the major accident policy and safety management system.

SCHEDULE 6 (ARTICLE 26)

FORM OF CERTIFICATE OF FITNESS

.....

[Name or description of Petroleum Operation]

I certify that all of the following parts of the above-mentioned petroleum operations have been designed, constructed, operated and maintained, and suspended or decommissioned, as indicated below, in accordance with generally accepted and appropriate part or parts of the codes of practice specified:

Part [description]	Code of practice	Action*
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The following parts of the above-mentioned petroleum operation have the following limitations:

Part [description]	Limitation
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This Certificate of Fitness expires on the close ofor, 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.....

[Inspection body]

.....is an inspection body recognised by the Authority

-
- List whether it has been Designed (D), Constructed (C), Operated (O), Maintained (M), Decommissioned (De)

SCHEDULE 7 (ARTICLE 27)

PARTICULARS TO BE PROVIDED FOR IN VERIFICATION SCHEME

- (1) The principles to be applied by the employer for the installation in selecting persons -
 - (a) To perform functions under the scheme; and
 - (b) To keep the scheme under review.

- (2) Arrangements for implementation and revision of the scheme, including provisions for -
 - (a) Co-ordination of activities among the persons and/or organisations involved; and
 - (b) Communication of, and access to, information.

- (3) The nature and frequency of examination and testing, including -
 - (a) Examination, and testing where appropriate, of the critical safety elements; and
 - (b) Examination of any design, specification, certificate, or other document, marking, or standard relating to those elements; and
 - (c) Examination of fabrication, construction, and repair work in progress.

- (4) Arrangements for review and revision of the scheme, including -
 - (a) Review of the identification of safety critical elements; and
 - (b) Review of the methods for examination and testing of the safety critical elements; and
 - (c) Revision and issue of the documented scheme.

- (5) The arrangements for the making and preservation of records, showing-
 - (a) The examination and testing carried out; and
 - (b) The findings; and
 - (c) Remedial action recommended; and
 - (d) Remedial action performed.

- (6) Arrangements for communicating the matters contained in clause 5 to an appropriate level in the employer's management system.