

Extraordinary



Federal Republic of Nigeria Official Gazette

No. 62

Lagos - 10th April, 2024

Vol. 111

Government Notice No. 73

The following is published as supplement to this *Gazette* :

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Printed and Published by The Federal Government Printer, Lagos, Nigeria
FGP 99/122024/350

Annual Subscription from 1st January, 2024 is Local : ₦100,000.00 Overseas : ₦131,000.00 [Surface Mail] ₦150,000.00 [Second Class Air Mail]. Present issue ₦4,500 per copy. Subscribers who wish to obtain *Gazette* after 1st January should apply to the Federal Government Printer, Lagos for amended Subscriptions.

PETROLEUM INDUSTRY ACT, No.6, 2021
UPSTREAM PETROLEUM SAFETY REGULATIONS, 2024



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PETROLEUM INDUSTRY ACT, No.6, 2021

UPSTREAM PETROLEUM SAFETY REGULATIONS, 2024

[13th Day of March, 2024]

Commence-
ment

In exercise of the powers conferred on it by sections 7(c) and 10(f) of the Petroleum Industry Act, No.6, 2021 (“the Act”) and of all other powers enabling it in that behalf, the Nigerian Upstream Petroleum Regulatory Commission (“Commission”) makes the following Regulations —

PART I — OBJECTIVE AND APPLICATION

1.—(1) The objective of these Regulations is to provide a legal framework for the safety and management of environmental related issues in upstream petroleum operations.

Objective

2. These Regulations shall apply to licensees, and lessees under the Act or preserved by the Act and companies providing services to licensees or lessees under a licence or permit issued by the Commission.

Application

PART II—APPOINTMENT AND DUTIES OF A MANAGER

3.—(1) A licensee or lessee shall register with the Commission, every company engaged by them to conduct upstream petroleum operations under these Regulations.

Appointment
of a Manager

(2) A licensee or lessee shall —

(a) appoint, in writing, a Manager, who shall be responsible for conducting upstream petroleum operations and activities on behalf of the licensee or lessee approved by the Commission ; and

General
provisions
relating to
grant of
licence and
lease

(b) notify the Commission within 72 hours in writing, of an appointment made under subregulation (2)(a) of this regulation and of any subsequent change in the appointment,

4. The Manager appointed under regulation 3 of these Regulations shall on behalf of a licensee or lessee —

Duties of a
Manager

(a) provide for its personnel, adequate safety equipment and Personal Protective Equipment (PPE), of internationally approved types ;

(b) ensure that PPE are used and maintained in serviceable condition at all times as recommended by the manufacturer ;

(c) provide fire fighting and first aid equipment at the site of every well being drilled or worked over, flow station, or any upstream petroleum installation handling crude oil, natural gas, liquified petroleum gas (LPG) or any other petroleum products in accordance with good oil and gas operating practice and to the satisfaction of the Commission ;

- (d) provide for every operation, a clear, comprehensive, safe and practical operational procedures and guidelines for its personnel ;
- (e) ensure a safety management system is in place to ensure controls are applied and managed in a consistent, effective, and sustainable manner ;
- (f) develop good health protection and promotion programme for its personnel, and mandate its contractors to adopt same ;
- (g) ensure that every contract specifies in clear terms, the responsibilities of contractors with regards to safety of operations ;
- (h) develop and maintain, contingency procedures and measures for the safety of personnel and equipment during emergency ;
- (i) develop and update an integrated emergency plan for the management of credible forms of hazardous events and accident situations that are likely to occur ; and
- (j) ensure drills are carried out periodically.

PART III — COMPLIANCE WITH SAFETY REGULATIONS

Conducting
safety
studies

5. In the implementation of facility or equipment design, engineering, procurement, construction, modification, upgrade, hookup, commissioning or decommissioning, the Company shall —

- (a) carry out comprehensive safety studies, including hazard and risk analysis of the project along with the Commission in accordance with —
 - (i) relevant guidelines,
 - (ii) American Petroleum Institute (API) recommended procedures and practices, and
 - (iii) other internationally accepted procedures and documented standards of the Company, where applicable ;
- (b) ensure that all major accident hazards and risks associated with the project are identified, recorded, analysed and reduced to as low as practicable level in conformance to IEC 61511 with respect to Functional Safety ;
- (c) ensure that every safety, emergency and communication systems conform to acceptable standards and specifications in the oil and gas industry ;
- (d) ensure that the Commission participates in all technical safety studies, technical safety audits, critical equipment inspections and tests or other activities as may be determined by the Commission ;
- (e) ensure that prior to commissioning or start-up of hydrocarbon handling facilities, Pre-Startup Safety Audit (PSSA) is conducted, and approval is obtained from the Commission ;

(f) ensure that every installation or facility has a valid Safety Case duly approved by the Commission and comply with relevant guidelines issued by the Commission from time to time ;

(g) ensure that every facility has integrated all technical safety study data from engineering, design and start-up phases for ensuring accurate traceability and sustaining operations ;

(h) ensure that every facility has up-to-date Obsolescence Management Plan and every critical equipment or system has up-to-date Obsolescence Risk Register, which shall be approved and audited from time to time by the Commission ;

(i) ensure that prior to commissioning or start-up of major hazard installations, Functional Safety Audit is conducted, and approval is obtained from the Commission. Subsequent audits should take be conducted once every three years ;

(j) ensure that any facility that exceeds its design life span, has a Life Extension Plan approved by the Commission ;

(k) ensure that facility development, modification, upgrade, de-bottlenecking, refurbishment or relocation conform to the requirements of IEC 61511 or similar standards with respect to Functional Safety ; and

(l) ensure conformity to the requirements of Occupational Safety and Health Administration (OSHA) standards.

6. The Manager appointed under these Regulations shall ensure compliance with —

(a) the provisions of this part of these Regulations ;

(b) rules, procedures and guidelines issued by the Commission with respect to the provisions of paragraph (c) of this regulation ; and

(c) the overall safety and health of the people, processes, operations and equipment associated with the project.

7. The Manager shall —

(a) appoint in writing, competent persons, to supervise and be responsible for all health and safety upstream petroleum operations ;

(b) report to the Commission within 72 hours, every appointment made under paragraph (a) of this regulation and any subsequent change in the appointment ;

(c) ensure that competent persons appointed are given appropriate training for the efficient and safe performance of their duties ;

(d) maintain a documented system, setting out the details and responsibilities of the competent persons, their mutual relations and lines of reporting and communication ;

Compliance with Regulations relating to safety of people, processes, operations and equipment

Appointment of competent person

(e) ensure that every operation or procedure is carried out by qualified personnel ; and

(f) ensure that a system is put in place to determine and approve the personnel that are qualified to perform each operation and process.

Conformance to good oil and gas field practice

8. Except as otherwise provided in these Regulations, every exploration, drilling, production and other operation necessary for the production and subsequent handling of crude oil and natural gas shall comply with good oil and gas field practice which, for the purpose of these Regulations, shall be considered to be adequate where it conforms with —

- (a) the appropriate current Codes of the Energy Institute ;
- (b) the American Petroleum Institute Codes ;
- (c) the American Society of Mechanical Engineers Codes ;
- (d) the International Electrotechnical Commission Standards ; or
- (e) any other internationally recognised and accepted systems.

Approval of new or novel technologies

9. The Manager shall ensure that only technologies duly tested and approved by the Commission are deployed for upstream petroleum operations including inspection and maintenance, and safety management.

Protection against injury

10. The Manager shall ensure that —

- (a) effective safety equipment that meet international standards, are provided for the work force ;
- (b) every personal protective equipment is used and maintained in serviceable condition at all times ;
- (c) appropriate barriers and risk reduction measures are put in place to ensure that personnel exposure to hazards are reduced to the barest minimal ; and
- (d) the risk reduction measures for all hazards complies with hierarchy of hazard control philosophy.

Occupational health

11. The Manager shall —

- (a) produce and conspicuously display at every facility, up-to-date information on the names, addresses and telephone numbers of the nearest physicians, hospitals and ambulance services, as may be desirable ;
- (b) ensure that first aid kits are equipped with appropriate medicament and served by qualified first aid personnel ;
- (c) ensure that contingency plans are put in place to deal with injuries that are serious beyond first aid cases ;
- (d) ensure that —
 - (i) there are functional medical facilities adequately equipped with medicaments, competent personnel and med-evac system to deal with situations arising from paragraphs (b) and (c) of this regulation, and

(ii) qualified medical personnel shall at the minimum, possess nursing certification and be registered with and authorised by the Nursing and Midwifery Council of Nigeria ;

(e) ensure that pre-employment medical assessment is carried out to establish the health status and fitness to work of each employee prior to engagement, and thereafter conduct periodic medical assessment at a maximum of two-yearly intervals and ensure that all contractors take similar actions ;

(f) annual hyperbaric tests are conducted for all personnel conducting diving operation in oil and gas industry ; and

(g) comply with any guidelines and standards issued by the Commission on occupational health and fitness to work in the upstream petroleum industry in Nigeria.

12. The Manager shall ensure that —

(a) personnel are provided with the appropriate hearing protection, if noise levels are equal to or greater than 85 dBA for an 8-hour Time Weighted Average (TWA) ;

(b) a person shall not, unless appropriately protected, be exposed to noise level equal to 115 dBA or greater for any length of time, notwithstanding that the TWA is below 85 dBA action level ;

(c) the sound pressure level at the edge of the nearest residential area shall not exceed 50 dBA at night ; and

(d) annual audiometric tests are conducted for all personnel working in high noise areas in accordance with the Occupational Health Guidelines.

Noise
abatement

13. The Manager shall ensure that every personnel —

(a) employed onshore, offshore and swamp areas receive basic safety, emergency and survival training and undertake refreshers training from time to time, including —

(i) basic first aid and CPR,

(ii) confined space escape,

(iii) basic firefighting and Self Rescue,

(iv) helicopter under water and Survival at Sea training, and

(v) lifeboat operation and usage ;

(b) employed in upstream oil and gas facilities or operation receive and undertake refreshers training from time to time on —

(i) minimum industry safety training for the facility or operation, including HSE training for bulk storage, crude haulage, natural gas safety, functional safety and operations integrity, advanced safety training as appropriate for their specific job function including training and certifications for work at height, scaffolding, and

Safety
training

(ii) such other training as the Commission or the Manager may deem necessary for the operation ; and

(c) undertake such training in subparagraphs (a) and (b) of this regulation on the use of facilities approved by the Commission and activities conducted in such facilities.

Work at height

14. All work at height, scaffolding, rope assess, and other similar operations shall —

(a) conform to internationally recognised standards such as technical guidance for National Access and Scaffolding Confederation (NASC) ; and

(b) comply with guidelines and requirements for work at height in the Nigerian oil and gas industry as approved by the Commission.

Process safety management and integrity operating window

15. The Manager shall ensure that —

(a) equipment is operated and kept within its Integrity Operating Window (IOW) ;

(b) each process equipment has required controls and safety systems that monitor and actively control their IOW ;

(c) management systems are in place to track and make visible monitor process safety performance to ensure major accident hazards remain mitigated to as low as practicable, ensuring the availability and effectiveness of barriers ;

(d) any equipment that falls short of its IOW shall be —

(i) removed from service except such equipment is de-rated and applied to a service proportionate to its new capacity such that it assumes a new IOW, or

(ii) re-assessed and actions taken within established risk-based approaches ;

(e) derating and rerating of pressurised fixed equipment is completed in accordance with applicable industry codes and shall be carried out by a qualified and competent person recognised by the Commission ; and

(f) records of derated and re-rated equipment are maintained and made available to the Commission.

Drilling rig

16.—(1) The Manager shall ensure that every rig or specialised vessel, such as flotels, survey, installation vessels, contracted to drill or carry out special services in Nigerian territory shall be approved by the Commission.

(2) The Commission shall carry out —

(a) inspection and technical audit of every vessel before granting approval ; and

(b) annual inspection and audit of all approved vessel.

17. The Manager shall ensure that —

Derricks in
rigs

(a) adequate measures are put in place to prevent derricks and portable cantilever, telescoping and jack-knife masts from overturning due to wind velocity, and the guying system are constructed in accordance with standard safe practices in the oil and gas industry ;

(b) escape lines shall be —

(i) free of knots, splices and other obstructions, and

(ii) located and secured to permit the derrick man to descend at a safe speed to a zone clear from the derrick ;

(c) access routes from the derrick floor to the crown platform are provided and kept free of obstruction ;

(d) a safety harness and lifeline are provided for employees who works above the first girt of a derrick or mast ;

(e) the lifeline is tested before the start of drilling and, thereafter, at weekly intervals and employees who works on the derrick shall be instructed on its use ;

(f) every drilling rig floor are kept free of mud and oil as practicable in order to eliminate slipping hazards and safety shoe are "anti-slip", meeting up to good oil and gas field standard ; and

(g) every tool onboard are mounted on the derrick floor and every tool are regularly inspected and checked to ensure its serviceability.

18. The Manager shall ensure that —

Blowout
prevention

(a) blow-out preventer (BOP) installation is substantially constructed, securely fastened in place and be of adequate rating for the expected maximum shut-in surface pressure based on the anticipated downhole pressure ;

(b) well-control drills are conducted once a week under a variety of operating conditions ;

(c) BOP tests are conducted during rig operations when the BOP is installed on the wellhead ; and

(d) emergency procedures and individual duties are understood and displayed conspicuously around the rig.

19. The Manager shall ensure that perforating operations are suspended during electrical, thunder and dust storms, and radio transmission shall be suspended during perforating operation to avoid premature detonation.

Perforating
operations

20. The Manager shall ensure that —

Moving
machinery

(a) rotation or reciprocating equipment and every dangerous part of any machinery are securely fenced or guarded ; and

(b) every guard protecting rotary table chain or similar machinery are capable of resisting the shock of a breaking chain.

Heating ventilation and air conditioning (HVAC)

21. The Manager shall ensure that HVAC are provided appropriately for all enclosed areas of the installation, such as living quarters, electrical switch rooms, equipment rooms and others with potential build-up and ingress of harmful gases.

Boilers and oil treaters

22. The Manager shall ensure that —

(a) the position and distance of a boiler, an oil treater or a hot work area in relation to borehole and dangerous area are taken into account before setting the boiler or oil treater or establishing the hot work area ;

(b) where practicable, that every boiler or oil treater is placed upwind from the nearest borehole or well in the direction of the prevailing wind and in a naturally ventilated area ;

(c) every boiler or oil treater is thoroughly inspected by competent personnel at intervals of not less than two years or as determined in accordance with applicable industry codes, or in line with the Risk Based Inspection (RBI) guidelines and approvals issued by the Commission ;

(d) where fire tubes are found to be below the calculated minimum required thickness for the current design pressure, a fitness for service evaluation are performed and remedial actions taken such as rerating, repair or replacement ;

(e) non-destructive test, including Ultrasonic Thickness Measurement (UTM) survey or radiographic, or any other acceptable inspection techniques are carried out on the boiler tube during an inspection under paragraph (c) of this regulation and to comply with applicable industry codes, such as ASME or API and any other internationally accepted standards ;

(f) pressure tests are carried out at intervals of not more than two years or at a frequency determined by risk-based inspection approved by the Commission or in accordance with the manufacturer's recommended designed test pressure limits ; and

(g) records of the results of every inspection are kept and made available to the Commission on demand.

Installation of electrical equipment etc.

23. The Manager shall ensure that —

(a) installation of electrical equipment at well sites or upstream oil and gas handling facilities complies with the applicable code of international Practice, such as API RP 500 ;

(b) every rig or upstream oil and gas handling facility are —

(i) fitted with emergency shutdown switches, capable of cutting off the electrical power from the facility and putting the facility in a failsafe mode, and

(ii) placed close to the normal working position of the persons in charge and at strategic locations in the facility.

24. The Manager shall ensure that —

(a) every electrical apparatus used on a rig or upstream oil and gas handling facility complies with the national and internationally recognised specifications and codes of practices for intrinsically safe equipment, such as safe flame or explosion proof apparatus, including British Standard BS EN IEC 60079-10-1:2021, the American National Standards Institute (ANSI) C2 National Electrical Safety Code of the USA, the National Fire Protection Agency (NFPA) 70, National Electric Code ;

Electrical
apparatus
design
specification
compliance

(b) every cable gland and bolted cable coupler are constructed and installed in conformity with relevant recognised international standards for flame or explosion proof fitting of acceptable type ;

(c) rigs and upstream oil and gas handling facility wiring are —

(i) installed in a manner to protect it from abrasion, trampling on or burned by hot piping,

(ii) insulated to resist weather, chemical and handling to avoid short circuits, and

(iii) inspected frequently, as dictated by good oil field practices and in compliance with the Institute of Electrical and Electronics Engineers Codes, codes from the UK Institution of Engineering and Technology (IET) or similar international codes.

25. The Manager shall ensure that every apparatus, cable, fitting and any other electrical material are installed and maintained to ensure that the flame proof or explosion proof characteristics are not invalidated.

Installation
as not to
invalidate
flame
characteristics

26. The Manager shall ensure that every apparatus used for communication purpose within a dangerous area in upstream operations are certified as safe in conformity with recognised standards such as British Standard BS EN 60079-11: 2012, or other equivalent and acceptable international standards.

Communica-
tion
equipment

27. The Manager shall ensure that every control device used in upstream operation conforms to good oil field practice, with respect to design, installation and maintenance, and safety guards are incorporated as applicable to avoid accidents.

Control
device

28. The Manager shall ensure that pressure gauge used within upstream hydrocarbon handling installations are —

Pressure
gauge

(a) inspected and calibrated for accuracy at intervals not exceeding one year or at intervals approved by the Commission in line with the approved risk-based inspection process ; and

(b) tagged with relevant maintenance details.

Pressure vessels and oil heaters

29. The Manager shall ensure that —

(a) every pressure vessel and its fittings in use in upstream oil field operation is regularly examined in accordance with the manufacturer's recommendations and where no recommendations exist, inspection shall be carried out in accordance with good oil field practice ;

(b) records of inspection carried out under regulation 25 of these Regulations and paragraph (a) of this regulation are kept, maintained and made available to the Commission on demand ;

(c) oil heaters with its internal and external parts and fittings are inspected at intervals of not more than two years or as may be determined in accordance with applicable industry codes, or in line with the Risk Based Inspection guidelines issued by the Commission ;

(d) where fire tubes are found to be below the calculated minimum required thickness for the current design pressure, a fitness for service evaluation are performed and remedial actions taken such as rerating, repair or replacement ;

(e) every compressed air system and receiver are checked for liquid level, and —

(i) drained of liquid every day, when triggered by liquid level indicator or by automated drain system, and

(ii) tested hydraulically to determine the recommended pressure, when the internal surface of the receiver cannot be inspected, and in any other case, tested at least once in every five years ;

(f) gas separator and scrubber are tested to the recommended test pressure whenever the opportunity occurs in accordance with applicable industry codes, but at intervals not exceeding five years or in accordance with the Risk Based Inspection guidelines issued by the Commission ;

(g) every vessel, other than workover rig poor-boy and vacuum degasser in service for more than 20 years, are —

(i) inspected at intervals of not more than 30 months, and

(ii) tested hydraulically to the recommended test pressure during the inspection ;

(h) every relief valve and process safety valve are inspected at least once every 30 months or at such shorter intervals as are necessary to maintain them in satisfactory conditions to ensure that they —

(i) operate effectively whenever the maximum allowable working pressure is applied, and

(ii) pass full design quantity at those settings;

(i) every pressure vessel is tested with a calibrated pressure gauge, and be —

(i) graduated in pounds per square inch or the metric equivalent, and

(ii) checked for accuracy at intervals not exceeding 12 months ;

(j) the calibration of pressure relief valves, process safety valves, pressure gauges and other process safety equipment are certified by accredited persons ; and

(k) new or repaired pipework are inspected and tested in accordance with the American Society of Mechanical Engineers (ASME) or recognised equivalent standards before it is put into use.

30. The Manager shall ensure that —

(a) every pressure vessel, equipment and associated piping used in oil field installations meets internationally recognised standards for monitoring and controlling corrosion, with respect to their design, construction, routine inspection, testing and maintenance, such as the National Association of Corrosion Engineers (NACE) or other recognised equivalent standards ;

(b) in addition to the respective manufacturer's recommended procedures, the following measures shall be taken in relation to every pressure vessel, equipment and associated piping used in oil field installations —

(i) non-destructive testing, including Ultrasonic Thickness Measurement (UTM), expected are carried out at intervals not exceeding once in five years or as may be determined in accordance with applicable industry codes, or in line with the Risk Based Inspection guidelines issued by the Commission,

(ii) where corrosion coupons are used to monitor corrosion rate in a pressure vessel, equipment or piping, the results obtained at any given time are recorded and made available to the Commission on demand,

(iii) where cathodic protection system is chosen for the control of vessel internal corrosion, an appropriate design of the system meets internationally recognised standards, such as NACE or other equivalent standards ; and

(c) the result of every inspection, test and survey carried out pursuant to this regulation are made available to the Commission on demand.

31. The Manager shall ensure that —

(a) every permanently placed bulk storage tank containing liquid petroleum —

(i) are install within a bund wall capable of containing the contents of the largest tank plus 10% of the volume of the remaining tanks,

(ii) are fitted with access ways adequate enough to allow easy access, and vents capable of relieving any excess pressure or vacuum,

(iii) have access to its roof by means of a ladder or staircase of approved standards,

(iv) have provisions made for containing any leakage to prevent contamination of water by oil for tanks installed in marine environments,

(v) are provided with efficient electrical earth connections, having an electrical resistance value not exceeding 10 ohms when measured by an

Standard for
pressure
vessels

Bulk storage

earth resistance tester of the Megger or similar type and inspected at intervals of not more than two years,

(vi) are provided with adequate and dedicated fire detection and suppression system,

(vii) are provided with adequate lightning protective device preferably of the "Envelope Protection type" that prevents any direct strike and the development of primary and secondary charges,

(viii) are provided with devices equipped with multi-point ionizers,

(ix) are provided with any other device of similar protection and effectiveness as recommended by any other relevant international bodies approved by the Commission ; and

(b) every floating roof tank are equipped with adequate wind girders.

Entering tanks, confined or semi-confined spaces

32. The Manager shall ensure that a workman shall not enter a confined or semi-confined space, or a hydrocarbon storage tank, where serious injury may occur from hydrocarbon substance or space with lack of oxygen, for cleaning or inspection, except —

(a) where the person has undergone appropriate training and risk assessment for that purpose ;

(b) where the person has proper breathing apparatus ; and

(c) the confined or semi-confined space or a hydrocarbon storage tank are continuously ventilated and tested to safe levels of hydrocarbon and harmful gases.

Cleaning of storage tanks

33. The Manager shall ensure that —

(a) during storage tank cleaning operations —

(i) adequate safety equipment and devices are provided for personnel entering the tank for their protection and survival in case of emergency while working in the tank,

(ii) the use of sand as an abrasive agent in blasting activities for cleaning of steel structures, tanks and pipelines are minimized, and

(iii) abrasive agents, when desired, are less than one percent free silica and only used, where adequate safety precautions have been taken;

(b) where the gas concentration in a storage tank exceeds five percent of lower explosive limit —

(i) gas masks are worn by personnel,

(ii) the tools used are not capable of causing sparks, and

(iii) hand lamps and torches used are certified flame proof, Group II, in conformity with recognised international standards such as British Standard BS EN IEC 60079-7 or the US National Electrical Safety Code.

34. The Manager shall ensure that —

Inspection
of storage
tanks

(a) storage tanks are opened for internal inspection at intervals of five years or as may be determined in accordance with applicable industry codes, or in line with the Risk Based Inspection Guidelines and approvals issued by the Commission.

(b) during inspection —

(i) the tanks are subjected to visual and non-destructive test inspections,

(ii) any defect affecting the integrity and operability of the tanks observed are repaired or rectified, and

(iii) Ultrasonic Thickness Measurement (UTM) of tank shells are carried out and records made available to the Commission on demand;

(c) the tank bottom plates are inspected by competent personnel using effective and safe methods, and technologies as may be determined by the Manager and approved by the Commission ; and

(d) the results of these inspections are documented and made available to the Commission on demand.

35. The Manager shall ensure that —

Protection
devices for
tanks

(a) the bottom plates of every tank are equipped with cathodic protection device, which are designed to meet internationally recognised standards, such as NACE or other equivalent standards ;

(b) processes for the monitoring of cathodic protection systems are regularly reviewed and updated in accordance with the systems' design standards ; and

(c) where applicable, the internals of tanks are coated appropriately to meet NACE requirements and other recognised requirements approved by the Commission.

36. The Manager shall ensure that petrol, diesel oil or LPG tanks are sited in a safe distance from any oil well being drilled or worked over or any dangerous area in a direction downwind from the prevailing wind.

Use of fuel
during
drilling
operations

37. The Manager shall ensure that —

Entering of
tanks

(a) a person shall not enter a tank, confined or semi-confined spaces which contained hydrocarbon, unless —

(i) the tank is certified safe by a competent person, or

(ii) there shall be attached to such person, a lifeline held by another person, standing outside at a safe distance and in a position to observe, if the person is overcome by gas or fumes ;

(b) a person shall not enter a sump or well cellar which contained hydrocarbons, unless there is attached to the person, a lifeline held by another person standing —

(i) at the top of the sump or well at a safe distance, and

(ii) in a position to observe if the person is overcome by gas or fumes ;

(c) a person holding a lifeline referred to in paragraph 37(a)(ii) of this regulation and regulation 38(b) of these Regulations are trained for that purpose, —

(i) is capable of calling for assistance, where an accident occurs, and

(ii) be equipped to render such assistance as is practicable without entering the tank, sump or well cellar until help arrives.

Lifting
equipment

38. The Manager shall ensure that —

(a) every crane and hoist are operated by a trained person, to ensure that the crane or hoist is not used to lift loads exceeding the maximum crane capacity ;

(b) the chains, ropes, lifting tackle, hook and brake system of the crane or hoist are inspected and maintained as recommended by the original equipment manufacturers (OEM) ;

(c) general preventive maintenances are carried out on every crane and hoist as recommended by OEM at intervals of not more than one year ; and

(d) records of periodic maintenances are kept and made available to the Commission on demand.

Upstream
pipeline
operation

39. —(1) The Manager shall ensure that —

(a) every pipeline used for upstream operation are designed, constructed and maintained —

(i) in accordance with the relevant provisions of the ANSI, ASME, NACE and other applicable national and international standards and good oil and gas field practices, and

(ii) in compliance with guidelines issued by the Commission ;

(b) pipelines are not put into operation unless commissioning approval has been obtained from the Commission ;

(c) the right of way of every pipeline are accessible to allow for free access to carry out operational tests and any other maintenance work and for prompt detection of leakages ;

(d) pipelines conveying hydrocarbons are designed with pigging facility to allow pigging operation to be conducted at intervals not exceeding five years ;

(e) the initial data gathered are obtained from any newly commissioned pipeline, which shall form the baseline for the integrity of the facility ;

(f) pipeline pressure testing is carried out at intervals of not more than five years at a pressure of not less than 125 percent of the maximum operating pressure ;

(g) pipelines running on the surface are externally coated to meet the relevant provision of the NACE or equivalent standards to prevent atmospheric corrosion attack ;

(h) every pipeline is coated before burial and cathodic protection provided —

(i) within 12 months, in the case of dry land, and

(ii) within 6 months, in the case of swamp ;

(i) the cathodic protection systems are designed and constructed to meet the NACE standards or other internationally recognised equipment standards ;

(j) cathodic protection potential surveys are carried out on all buried pipelines at intervals of not more than 24 months to ensure that every section of the protected line attains a negative potential of not less than 850mV with reference to copper or copper sulphate reference electrode ;

(k) the result obtained during a survey carried out pursuant to paragraph (i) of this regulation are recorded and made available to the Commission on demand ; and

(l) all other applicable safety provisions for the design, construction commissioning, operation and maintenance of pipelines are as stipulated in the current editions of the guidelines issued by the Commission.

(2) The Commission shall appoint officials to witness any periodic survey carried out pursuant to paragraph (k) of this regulation.

40. The Manager shall ensure that —

(a) Standard Operating Procedures (SOP) are developed for the safety of critical equipment ;

(b) inspection and maintenance operations are conducted according to the original manufacturer specifications, company-specific inspection procedures, or in line with the Commission's Risk Based Inspection (RBI) guidelines that conforms with good oil and gas field practices ; and

(c) a suitable process / software / system is in place to support the lifecycle management and performance monitoring requirements of Safety Instrumented Functions (SIFs) and related critical equipment elements in accordance to IEC 61511 with respect to Functional Safety.

Safety of
critical
equipment

41. The Manager shall ensure that there are sufficient spares for critical safety equipment, and that such spares are available and ready for use when required.

Sparing

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Management
of change

42.—(1) The Manager shall develop a comprehensive Management of Change Procedure for facilities and operations under his management.

(2) Deviations shall not be made from Standard Operating Procedures and equipment or process configuration and change shall not be made to the facility that may introduce risk, unless such deviation or change is risk assessed, subjected to Management of Change Procedure and approved in writing by the Manager.

(3) All deviations and changes shall be documented, recorded and made available to the Commission on demand.

Fire fighting

43.—(1) The Manager shall conduct proper hazardous area classification.

(2) There shall be established, in areas of upstream operation, appropriate locations, or restricted areas, in which open light, fire and smoking, shall be prohibited.

(3) Sufficient number of approved firefighting equipment shall be provided.

(4) The firefighting equipment shall be —

(a) inspected in accordance with the manufacturer's recommendations or at least twice a year ; and

(b) maintained in serviceable condition at all times.

(5) Records and tags are to be maintained showing the last dates of service of the equipment.

(6) The personnel shall be —

(a) trained in the use of the firefighting equipment ; and

(b) be given refresher course every four years to reinforce and update their abilities to use the fire-fighting appliances.

Reporting
of accidents

44.—(1) The Manager shall be responsible for the safety of the personnel, including contractors and shall ensure that sufficient safety and risk awareness training and certifications are given to personnel and contractors prior to their deployment at onshore or offshore locations.

(2) The Manager shall establish a system to ensure that personnel report all HSE incidents, including near misses at a well site, hydrocarbon handling facilities or in connection with an operation under a licence or lease without any repercussion to the persons making the report unless there is wilful misconduct, negligence or criminal intent.

(3) The reported incidents shall be properly documented, analysed and reviewed, lessons learnt disseminated to personnel and follow up actions taken to prevent reoccurrence.

(4) The records of the HSE incidents and follow up actions shall be made available to the Commission on demand.

(5) The occurrence of the following incidents related to a well site or hydrocarbon handling facility or in connection with an operation shall be reported to Commission within 24 hours of the occurrence —

- (a) the death of a person ;
- (b) fire or explosion ;
- (c) an accident resulting in serious injury ; and
- (d) high-potential event (HPE) that may result in serious injury or death.

(6) The report of such incidents shall conform with the current incident reporting format and guidelines approved by the Commission,

(7) In this regulation —

(a) serious injury includes :

- (i) a fractured skull, pelvis, thigh, spine, arm, forearm, or leg,
- (ii) a dislocated shoulder hip, knee, or spine,
- (iii) the amputation of an arm or hand, or of one finger or more on the same hand, or of a leg or a foot,
- (iv) the loss of the sight of an eye or chemical or hot metal burn to the eye or any penetrating injury to the eye ;

(b) “high-potential event” includes —

- (i) unintended collapse or overturn of structure or installation,
- (ii) the collapse, overturning, or failure of, any load-bearing part of a lift or lifting machinery,
- (iii) blowout or uncontrolled flow of well-fluids from a well,
- (iv) man overboard incidents,
- (v) vessel or aircraft collision with installation,
- (vi) loss of stability or buoyancy of a floating installation,
- (vii) explosion or implosion of pressure Vessel or Tanks used for processing, storage and transportation of hydrocarbon,
- (viii) outbreak of contagious diseases, and
- (ix) any other event with similar magnitude or as may be specified by the Commission from time to time.

45. The Manager shall, for the safe conduct of offshore operations, ensure that —

(a) operational facilities, including platforms, vessels, or rigs are well equipped and adequate for the environment where the operations are carried out ;

(b) pre-mobilization and pre-shipment safety inspection are conducted by officials of the Commission prior to deployment or operation in the upstream oil and gas industry;

Swamp and
offshore
operations

(c) there is an oil spill emergency response plan and associated equipment approved by the Commission ;

(d) competent and well-equipped standby diving set-up is available when diving operations are in progress or are likely to be required ;

(e) there are personnel floatation devices for each person at the location ;

(f) personnel working in swamp and offshore locations are fully accounted for under Offshore Safety Permit (OSP) accountability system of the Commission ;

(g) on arrival at the location, all personnel receive instruction on proper use of life-saving equipment and safety procedures including evacuation modes ; and

(h) there are available such other things and materials as are necessary for the operation.

Air, land and
marine travel

46. The manager shall ensure that —

(a) journeys are undertaken using an approved journey management plan that caters for contingencies ;

(b) embarkation to swamp and offshore facilities are through embarkation points approved by the Commission ;

(c) a passenger travelling to and from oil and gas facilities and locations shall, before the commencement of the journey, be briefed by ground crew and appropriate personnel on safety and emergency measures ;

(d) passengers wait for the aircraft, vehicle or boat at designated locations ;

(e) every Pilot shall comply with Nigerian Civil Aviation Authority (NCAA) requirements to —

(i) undertake biennial reviews to certify flight performance ability,

(ii) successfully complete water survival courses,

(iii) undertake refresher courses every four years; and

(iv) do any such other requirements as may be imposed by the Commission, from time to time; and

(f) air travels conform to relevant NCAA requirements.

Waste
management

47. The Manager shall ensure that handling and disposal of —

(a) liquid and solid wastes, including drilling fluids and mud, drill cuttings, deck drainages, sanitary and domestic wastes, accidental oil spills or blowout ; and

(b) other wastes generated from drilling operations, conforms with specifications prescribed in the Upstream Petroleum Environmental Regulations issued by the Commission.

48. The Manager shall ensure that, for a planned shutdown and startup of a facility, the following procedures shall apply —

Planned
shutdown

- (a) the Commission is notified prior to the commencement of the shutdown or startup ;
- (b) hazard analysis is conducted prior to the shutdown; and
- (c) in the event of a deviation from a planned shutdown and start-up, the operator shall put in place a change management procedure and notify the Commission.

49. The Manager shall ensure that —

Loading,
transportation
and
offloading

- (a) marine vessels, rail wagons and bulk road vehicles used for storage and transportation of hydrocarbon are certified to be fit for the purpose and approved by the Commission ;
- (b) vessels, wagons and vehicles are inspected and maintained in accordance with the requirements of the Commission ;
- (c) records and result from inspections carried out under paragraph (b) of this regulation are kept and made available on demand to the Commission ;
- (d) the last and next inspection dates are marked and made visible on vessels that store and handle petroleum ; and
- (e) standard procedures are developed and maintained for storage, loading, transportation and offloading operations for all classes of hydrocarbons to which these Regulations relates.

50.—(1) A person shall not use an explosive at a well site or in an installation where petroleum is handled unless it is approved by the Manager.

Handling of
explosives

(2) Prior approval for the handling and use of explosives at the well site or installation shall be given by the relevant agency of government.

(3) A report shall be made to the Commission of any use of explosives authorised by the Manager within 48 hours under this regulation.

51. Without prejudice to the provisions of the Nuclear Safety and Radiation Protection Act, 1995, the Manager shall ensure that —

Handling of
radioactive
materials

- (a) every radioactive source planned to be used in an upstream petroleum operation shall be verified and documented with the Commission ;
- (b) necessary information as may be required by the Commission in respect of the radioactive source are made available on demand ;
- (c) the competent person appointed pursuant to these Regulations, takes measures to prevent exposure of personnel to radioactive materials ;
- (d) appropriate training are given to personnel on the nature of radiological hazards and the precautions to be observed for all radioactive materials in use in the operations they are engaged in ;

(e) disposal or accumulation of radioactive wastes is not made, except in accordance with the NNRA Code of Practice and IAEA procedures ;

(f) the NNRA Code of Practice and the IAEA guidelines and other recommended standard practices for handling, shipping, transportation, storage and use of radioactive sources are strictly complied with in the use of those sources ;

(g) radioactive sources of minimum strength for the required task are used ;

(h) for radioactive sources used in downhole operations, the capsule containing the isotope are designed to withstand anticipated well-bore temperatures and pressures without rupture or leakage ;

(i) wipe or leak tests are performed on capsules containing the isotope at intervals of three months, as preventive measures and the records made available on demand to the Commission ;

(j) any failure of radioactive sources or irradiation equipment to de-energise or return to its safe position after the intended exposure period is reported to the Commission within 48 hours ;

(k) to avoid accidental loss or theft, isotope sources are —

(i) securely stored at the operating base,

(ii) carrying warning labels as approved by the NNRA and the IAEA,

(iii) transported in locked containers on specially licensed vehicles, and

(iv) fully documented at every stage of handling or transfer;

(l) at the operating base, suitable underground pits are used for storage of isotope sources ;

(m) offshore platforms and barges, special shielded containers are used to store and transport radioactive sources;

(n) the transport index of each radioactive sources are conspicuously displayed or tagged on the container ;

(o) for safe field operation of an isotope sources, attention are paid to —

(i) minimising the time of exposure,

(ii) maximising the distance from the source at all times, and

(iii) providing good shielding to reduce the dose rate;

(p) personal dosimeters are issued to and worn by radiation personnel and be evaluated on monthly basis ;

(q) average exposure of radiological personnel over five-year period shall not exceed 20mSv per annum, and annual exposure shall not exceed 50mSv. (25 μ Sv per hour for 2000-hour exposure per year) and non-radiological personnel (the public) shall not exceed 100 mr (1mSv) per year ; and

(r) where a tool containing a radioactive source cannot be recovered from a well, it shall be promptly reported to the Commission with details of the abandonment procedure followed in securing the tool safely in place.

52.—(1) Notwithstanding the provision of these Regulations, the Manager may apply for the implementation of a Risk Based Inspection (RBI) programme for an oil and gas asset.

Risk Based
Inspection
(RBI)

(2) The application referred to in subregulation (1) of this regulation shall be in conformity with the prescribed format set out in a guideline for the implementation of RBI in the upstream oil and gas industry and subject to the approval of the Commission.

53. The Manager shall ensure that —

Documenta-
tion of
inspection

(a) the results of every inspection, test and survey carried out under these Regulations are documented, maintained and made available on demand to the Commission ;

(b) safety signs are conspicuously displayed to provide awareness, caution and direction, such as areas of “No Smoking”, “high noise”, “exit”, “muster point” ;

(c) relevant information of emergency contact and numbers including nearby emergency firefighting outfits are displayed ;

(d) develop appropriate hazard communication channels, including use of posters, bulletins, slogans, or jingles.

54.—(1) The Manager shall ensure that —

Fire
precautions

(a) adequate measures are provided and kept in readiness for immediate use to extinguish fires that may occur in a well being drilled or worked over, flow station or other installation, where petroleum is handled to the satisfaction of the Commission ;

(b) each item of firefighting equipment is inspected at least two times a year by a competent person ;

(c) the date of the last inspection of the firefighting equipment is tagged or painted on the appliance and the result of the inspection entered in a logbook kept on site for that purpose ;

(d) persons employed on site are trained in the use of the firefighting equipment and instruction to those persons, in case of fire, are clearly expressed and prominently displayed on the location ;

(e) a “No Smoking” sign are conspicuously displayed at strategic points in a restricted area ;

(f) where an upstream pipeline runs in an open trench, a fire stop shall be provided at such intervals as may be specified in the relevant guidelines issued by the Commission, provided that the distance between the two fire stops shall not exceed 90 metres ; and

(g) a fire clearance zone of a minimum of three metres is maintained around the perimeter fence of any well being drilled or worked over, flow station or other upstream installations.

(2) A Company which maintains a firefighting unit or service shall while responding to or engaged in or returning from a firefighting operation, have the right of access, right of way and security of its fire equipment as granted to the relevant State and Federal Fire Service under sections 32, 33 and 35 of the Fire Service Act.

Use of
internal
combustion
engines

55. The Manager shall ensure that, unless precautions have been taken to prevent fire or explosion, internal combustion engines are not to be used within —

- (a) a radius of 45 metres of the centre of any bore-hole being drilled for crude oil, gas or being worked over ; or
- (b) 30 metres of an area with potential for flammable content susceptible to ignition.

Offshore
management
system
manual

56. The Manager shall ensure that option management system manual is made available for every offshore operation, specifying the —

- (a) share of responsibilities between marine crew and drilling or production crew ;
- (b) lines of command in an emergency ;
- (c) share of responsibilities between offshore organisation and shore base organisation ;
- (d) inter-field responsibilities and communications ;
- (e) scheme for risk analysis,
- (f) system for implementation and follow up of results ;
- (g) helicopter abandonment procedures in the event of a ditch or capsized, including ditch preparation, stable flotation abandonment and capsized abandonment procedures ;
- (g) personnel documentation procedures at the shore base ; and
- (h) arrangements for protecting persons on the installations from hazards of explosion, fire, heat, smoke, toxic gas and fumes during emergency.

Safe access

57. The Manager shall ensure that —

- (a) safe access are —
 - (i) provided on drilling rigs and other installations, with non-slip walkways and handrails leading over complex pipe systems and other obstructions, and
 - (ii) kept free of obstructions ; and
- (b) every drain in the area of general access is covered.

Restricted
areas and
access
control

58. The Manager shall ensure that —

- (a) every well being drilled or worked over, flow station, pump station, jetty, tank farm, upstream pipeline and similar installation constitute restricted areas and their boundaries clearly defined and secured ;

(b) a person is not admitted into a restricted area unless the person is authorised to do so by a competent person ;

(c) a notice is conspicuously displayed at the entrance of a restricted area, giving details of the nature of the restrictions ; and

(d) measures are put in place to prevent and detect unauthorised access to the restricted areas.

59. The Manager shall ensure that —

(a) appropriate equipment and systems are provided for immediate detection and effective control of toxic and combustible gases ;

(b) the occurrence of hydrogen sulphide in any gas or oil well outside the limits specified by the Commission in guidelines are reported to the Commission within 24 hours of the occurrence ;

(c) after the occurrence referred to in paragraph (b) of this regulation, tests shall be carried out to determine the concentration of the hydrogen sulphide in the gas and adequate steps are taken to protect all persons working on the well ;

(d) the danger of breathing hydrogen sulphide bearing gas are declared to the personnel on site ; and

(e) the precautions taken include the provision of an adequate number of blowers and self-contained air or compressed air type breathing apparatus at the well and on any subsequent well in the same field or on any other well likely to penetrate the hydrogen sulphide bearing formation.

Detection
and
management
of toxic and
combustible
gasses

60. There shall be for every facility in used for upstream petroleum operations a plan for the evaluation, monitoring and reduction of occupational safety and industrial health risk (OSIH Risk Management Plan) and the Manager shall —

Occupational
safety and
industrial
health

(a) for motion hazard abatement, ensure that —

(i) all potential motion hazards in a workplace, including the tasks and equipment involved, is identified and assessed,

(ii) safety procedures to control and prevent motion hazard is developed, implemented, and communicated to employees and contractors,

(iii) in line with the manufacturer's specifications, equipment in motion is inspected, maintained, and repaired regularly to prevent equipment-related hazards,

(iv) employees involved in any tasks with motion hazard is provided with appropriate personal protective equipment (PPE), including safety glasses, hard hats, gloves, face shields, and safety shoes,

(v) incidents relating to motion hazard is monitored and recorded, and use the records to identify trends and areas where improvements may be made,

(vi) employees are trained and educated on the potential hazard associated with motion and its prevention, and

(vii) safety procedures are regularly reviewed and updated to reflect changes in equipment, work practices, or regulations, and to address any incidents or near misses ;

(b) for vibration abatement, ensure that —

(i) risks are assessed before starting any work that involves exposure to vibration and such risk assessment shall be conducted to determine the potential hazards and risks associated with the work or task, these shall consider the type of vibration, duration of exposure and individual exposure to vibration,

(ii) vibration exposure levels are regularly monitored, and such levels are maintained within safe limits prescribed by OSH guidelines,

(iii) licensees, operators and permit holders or service providers, implement vibration management program that includes risk assessments, control measures, monitoring, training, and health surveillance,

(iv) licensees, operators and permit holders or service providers shall take appropriate steps and measures to reduce or eliminate hazards involving changes to work processes, the use of protective equipment or machinery, or the provision of training and education to workers,

(v) steps are taken to minimise exposure to vibration, such as limiting the amount of time workers spend using vibrating equipment, providing rest breaks, and rotating tasks,

(vi) it is regularly mandatory to monitor vibration exposure levels and essential to ensure that such levels remain within safe limits through the use of personal monitoring devices or by measuring the vibration levels of equipment and machinery during OSH compliance monitoring programs and audits,

(vii) workers are professionally trained on the risks associated with vibration exposure, control and reduction of exposure, identification of the symptoms of vibration-related health effects and keep records and details of training programs attended, including refresher courses taken where necessary,

(viii) mandatory health surveillance program is implemented to identify any early signs of vibration-related health effects in workers and make provisions for early intervention and treatment, and

(ix) maintenance of equipment and machinery, and regular servicing of equipment and machinery in line with manufacturer's specification or approved asset integrity management program is adopted to reduce vibration levels and ensure that the equipment and machinery are operating safely ;

(c) for biological hazards abatement, ensure that —

(i) licensee, operators and permit holders or service providers implement a robust OSH Management System that considers Phyto-sanitary and zoo-sanitary measures in form of applicable policies, legislation, regulation and official work or tasks procedures to prevent the introduction or spread of hazardous biological agents, such as general and quarantine pests, regulated non-quarantine pests and others, to prevent and mitigate or limit the operational impact of these hazardous biological agents,

(ii) management of biological hazards is considered from design, operations and to decommissioning or abandonment stages of all project life cycles,

(iii) oil and gas project is not approved by the Commission or facility operated by a licensee, operator or permit holder without adequate assessment and mitigation of biological hazards to the satisfaction of the Commission,

(iv) licensees, operators and permit holders or service providers implement and conduct periodic biological hazard risk assessment as a process to identify, evaluate, and prioritize biological hazards to determine their risks to human health, equipment or machinery and the environment,

(v) the goal of biological hazard risk assessment is to identify the most significant hazards and to determine the measures needed to control or eliminate these hazards within upstream petroleum industry operations,

(vi) risk assessment for biological hazards is conducted to predict, identify, analyse, evaluate, control, and confirm the control for infections and diseases, contaminants and toxins, and injuries arising from biological hazards,

(vii) risk assessment is conducted by a qualified person permitted by the Commission, with knowledge of the hazards, the process, and the area where the assessment is being done,

(viii) assessment is reviewed and updated as necessary to reflect changes in the work environment or new information about the hazards

(ix) site or project is designed to provide a general and specific bio-hazard emergency response plan for responding to accident or incidents due to bio-hazard events, and

(x) the source of contamination is eliminated as a fundamental approach to the prevention and control of any hazards including biological hazards ;

(d) for Chemical Hazards abatement, ensure that —

(i) medical or biological monitoring system is put in place where hazardous substances are used and employees shall be trained to be familiar with threshold limit values or permissible exposure limits, and

(ii) Safety Data Sheets (SDSs) which is an important mandatory tool for managing chemical risks during upstream petroleum operations are made available to employees and they are adequately trained on the use of SDSs to assess chemical risks;

(e) for human factors and ergonomics, ensure that —

(i) workstations, workplace, or equipment are constructed to give way for stooping, bending stretching, over-reaching and working over-head during operation is eliminated or minimised,

(ii) the need to lift, carry, push, or pull heavy loads, or parts, is eliminated to the extent as possible,

(iii) all display screens, dials and START/STOP/EMERGENCY buttons are positioned so that they are readily visible and accessible by the operating personnel,

(iv) visual display screens are positioned so that interference from glare is reduced to the minimum,

(v) the operation of equipment in a facility does not increase the risk of body structure disorder, including in repetitive tasks, handling operations machine paced work and prolonged exposure operations,

(vi) workers are provided with appropriate personal protective equipment (PPE) for tools and equipment used, including gloves, eye protection, respiratory protection, and hearing protection,

(vii) licensees, operators, permit holders or service providers regularly assess and adjust PPEs and their designs to guarantee possible safety, protection and comfort,

(viii) employers provide for workers training and education on ergonomic hazards and prevention measures, to increase awareness of ergonomic hazards and encourage workers to take steps to reduce the risk of injury or discomfort, and

(ix) workplace environment for all upstream petroleum operations are free from recognized hazards that can cause death or serious physical harm to a person ;

(f) for odour abatement, ensure that —

(i) industrial hygiene odour management practices comply with applicable regulations and standards, such as those established by the Occupational Safety and Health Administration (OSHA) and the Environmental Protection Agency (EPA),

(ii) there is a regular odour monitoring to assess the effectiveness of control measures and identify any potential hazards, including opportunities for the OSH compliance monitoring, OSH annual audit and validation of OSH performance evaluation and reporting information, and

(iii) risk assessment is applied during procurement, storage, application, and usage of chemicals which may have the potential to release VOCs and affect indoor air quality ;

- 72.—(1) A competent person shall—
- (g) for industrial health, ensure that the work and environment does not have an adverse impact on workers' health, both physical and mental ; and
 - (h) for personnel accountability, design and implement a Personnel Accountability System (PAS) which shall comprise of a process or set of procedures designed to ensure that all personnel within an organization, particularly those involved in high-risk or emergency operations, are properly accounted for, at all times.

61. A copy of these Regulations shall be conspicuously displayed at all times at every location, facility or installation undertaking oil and gas operations.

Display of these Regulations

PART IV — DUTIES OF PERSONNEL

62. The Manager and competent person appointed under these Regulations shall ensure total compliance with the provisions of these Regulations.

Compliance with these Regulations

63. A person under the age of 18 years of age shall not be engaged to work at a dangerous area.

Exclusion of children from dangerous area

64. A person shall not accumulate or permit the accumulation of flammable or combustible materials at a well, flow station, pump station, tank farm or any other installation handling petroleum, unless the area is so designated.

Prohibition of accumulation of flammable materials

65.—(1) A person, working on a drilling rig, flow station, pump station, tank farm, or other installation handling petroleum, shall wear personal protective equipment that provide adequate protection against identifiable hazards in line with good oil field practice.

Safety belts, etc

(2) A person working at a fixed workstation above the derrick floor of a drilling rig or other high-rise installation or at a height above six feet shall wear appropriate personal fall protection devices.

(3) A tool, machine part or other loose material of any kind shall not be kept above the derrick floor or on the elevated platform of an installation, unless it is required for immediate use, and adequate precaution taken to prevent injury to any person below.

66. A counterbalance shall not clear the ground or derrick floor by more than one and a half metres unless adequate precaution is taken to prevent injury to any person below the derrick floor.

Counter-balance

67.—(1) A person shall not remove or render ineffective any safeguard, where the machinery relating to it is in operation.

Machinery safeguards

(2) Where it is necessary to make an adjustment or a repair to a machinery, the machinery shall be shut down and not be operated until the safeguard is replaced and it is safe for the repair to be carried out.

(3) Lock Out Tag Out ("LOTO") system or an alternative effective protection system consistent with good oil and gas field practice shall be applied to prevent unsafe inspection or maintenance of machinery.

Electrical apparatus

68.—(1) A person, other than a duly qualified person or technician, shall not open or restore a flame proof or an explosion proof equipment, and after completion of any necessary adjustment or repairs of the equipment, shall ensure that it is perfectly restored that the flame proof or explosion proof characteristics have not been impaired by the opening and closing of the equipment.

(2) Any adjustment to or a repair of any apparatus within the flame proof or explosion proof equipment shall not be carried out until all the live parts within the flame proof have been made dead and efficiently earthed.

Signaling equipment

69. A person, other than a duly qualified person, shall not repair, adjust or maintain a signaling equipment and after completion of any repair, adjustment or maintenance, the person shall ensure that the intrinsic safety qualities of the electrical circuit have not in any way been impaired.

Sleeping, drinking etc. on duty

70. A person who is at a well or in an oil installation platform where petroleum is being handled shall not —

(a) while on duty —

(i) sleep, or

(ii) consume an alcoholic liquor or a hard drug ; or

(b) be admitted for duty while under the influence of alcoholic liquor or hard drug ; or

(c) be admitted without declaration of prescription medication, if any.

Prohibition of smoking etc., in restricted areas

71. A person who is at a well or in any other restricted area, within the context of these Regulations, shall not —

(a) be in possession of prohibited items including firearms, explosives or knives, and any other item the manager may proscribe;

(b) smoke ;

(c) use any naked light ;

(d) make any fire ; or

(e) use any communication or digital device that is not certified as intrinsically safe, except in such places as may be set aside and notified by the Manager for that purpose.

- 72.—(1) A competent person shall —
- (a) observe all safety measures at a drilling site or at an installation handling petroleum where work is in progress ; and
 - (b) ensure that work —
 - (i) does not start before essential safety measures are put in place, or
 - (ii) discontinue the work, where safety can no longer be assured.
- (2) Any person who notice an unusual escape of —
- (a) petroleum oil or gas from a well, pipeline or an installation, or
 - (b) anything unsafe or likely to produce damage,
- shall forthwith inform the Manager or competent person of the escape.

PART V — DIVING OPERATIONS - RESPONSIBILITIES AND REQUIREMENTS

73. The Manager shall —

- (a) ensure that, diving operations and the activities of diving contractors are carried out in accordance with all relevant national legislation, codes, standards and other international safe diving practice;
- (b) ensure that —
 - (i) diving procedure manuals, emergency and contingency guidelines are kept on site and readily available to an inspector of the Commission when demanded,
 - (ii) a diving contractor who is retained on a long-term basis, is evaluated every six months to ascertain his performance in line with approved standards,
 - (iii) the equipment deployed for diving operations are in good working condition,
 - (iv) where a diving operation is to be carried out at night or in darkness, the plant and equipment shall be adequately illuminated, except where the nature of the diving operation renders the illumination undesirable,
 - (v) gas cylinder used for diving operation shall be clearly marked with the name and the chemical formula of its contents,
 - (vi) only an approved or a certificated doctor trained in hyperbaric and diving medicine, shall issue a certificate of medical fitness to a diver before being engaged for diving operation,
 - (vii) the plant and equipment for diving operations shall be regularly examined, tested and maintained to ensure that they can safely be used, and
 - (viii) the examination of plant and equipment for diving operations shall be examined six hours before embarking on a diving operation, by a qualified diving technician, certified by the International Maritime Contractors Association (IMCA) or accredited international company qualification accepted by the Commission ;

(c) require a diving contractor to supply breathing mixture of suitable content and temperature, of adequate pressure and rate to sustain prolonged vigorous physical exertion at ambient pressure for the duration of a diving operations ; and

(d) comply with all applicable guidelines and requirements for diving operations in the Nigerian oil and gas industry as approved by the Commission.

74. The Manager shall ensure that —

(a) every diving contractor engaged for diving operation complies with applicable national and international diving regulation and shall —

(i) appoint a competent diving supervisor, in writing, to be in immediate control of the diving operation on site,

(ii) issue guiding rules for regulating the conduct of all persons engaged in the diving operation,

(iii) provide diving operations logbook, which is to be maintained and retained for at least two years after the date of the last entry,

(iv) ensure that all essential tools and facilities for safe operation are available and functional before the commencement of a diving operation, and

(v) not permit the use of compressed natural air as the breathing mixture in any diving operation at a depth exceeding 50 metres ;

(b) the contractor makes provision for —

(i) emergency services during diving operations, using saturation techniques or at depth exceeding 50 metres,

(ii) facilities for transferring divers safely under suitable pressure and conditions to a place where treatment can be given safely under pressure are available,

(iii) effective means of communication between the place at which the operation is being or is to be carried out in case of any emergency services ;

(c) diving supervisor has the discretion to decide whether or not, it is safe to commence or discontinue a diving operation ;

(d) where an on-site diving supervisor takes part in the diving operation as a diver, the diver shall designate a qualified person to take charge of the diving operation ;

(e) an incompetent person does not take part in a diving operation as a diver unless the person —

(i) has undertaken formal training to use the equipment provided for diving operation, and

(ii) possesses valid certificate of medical fitness to dive issued by a doctor trained in Hyperbaric and Diving Medicine, and has a permit issued by the Commission ;

(f) there is a standby diver for every diving operation, who shall, where a diving bell is being used —

(i) descend into the bell to the depth from which work is to be carried out and remain in the bell to monitor the diver or divers who leave it, and

(ii) be in immediate readiness to render assistance during an emergency ;

(g) there is a standby diver for every diving operation, who shall, where a diving bell is being used —

(i) in any other cases different from paragraph (f) of this regulation, and

(ii) be in immediate readiness to dive, except that where there are two divers in the water at the same time who are near enough to be able to communicate with and to render assistance to each other in an emergency and each one of them may be regarded as the stand-by diver for the other ; and

(h) there is an extra diver on the surface to render assistance where —

(i) hazard is likely to endanger the diver such as strong current, or

(ii) risk of a diver being trapped, or the equipment entangled.

PART VI — INFRINGEMENT AND ADMINISTRATIVE PENALTIES

PURSUANT TO SECTION 231 OF THE ACT

75.—(1) A person who violates the provisions of these Regulation by failing to comply or ensure compliance with the provision of these Regulations is liable to an administrative penalty of ₦10,000,000.

Offences

(2) A person who makes a false declaration to the Commission is liable to an administrative fine of ₦1,000,000.

(3) In addition to the penalty prescribed in subregulation (1) of this regulation, the Commission may direct the company to remove the person from any of the position referred to under these Regulations.

(4) A Company that fails to comply or ensure compliance with any of the provisions of these Regulations is liable to an administrative penalty of ₦250,000,000.

(5) A Manager who —

(a) fails to comply or ensure compliance with any of the provisions of these Regulations ;

(b) makes a false declaration to the Commission or willfully furnishes information so required which is in any respect false or insufficient, is liable to an administrative penalty prescribed by the Commission not exceeding N10,000,000.

(6) In addition to the penalty prescribed in subregulation (1) of this regulation the Commission may direct the removal of the Manager from office.

(7) A person who contravenes any provision of these Regulations for which no penalty is provided is liable to a penalty not exceeding USD250,000 issued by the Commission or upon conviction imprisonment for a term not exceeding two years or to both.

PART VII — MISCELLANEOUS PROVISIONS

Inquiries into accidents

76.—(1) Where an accident is reported to the Commission under regulations 44 of these Regulations, the Commission may order an investigation or inquiry into the circumstances surrounding the accident.

(2) A person holding an inquiry under regulation 77 of these Regulations shall, for the purpose of the inquiry, have the powers, to —

- (a) summon witnesses ;
- (b) call for the production of books and documents ;
- (c) examine witnesses and parties ; and
- (d) call for an autopsy to be conducted to ascertain the cause of death in cases of suspicious circumstances.

(3) Any person summoned to attend or to produce a book or document, but —

- (a) refuses or neglects to do so ; or
- (b) refuses to answer any question put to the person by or with the concurrence of the officer holding the inquiry,

is liable to administrative penalty as may be prescribed by the Commission of not more than USD250,000).

Limitation on location of buildings

77.—(1) A person shall not locate a building in which fire or light, other than a flame proof or explosion proof electric lighting installation, is used, within 45 metres of the centre of a borehole being drilled for or producing oil or gas or being worked over or 30 metres of a dangerous area; unless the building is positive pressurized and purged with clean air.

(2) the powers and duties of the Commission under these Regulations may be exercised or performed as the case may be, by any public officer duly authorised in writing in that behalf.

78. The Mineral Oils (Safety) Regulations 1963 is revoked.

Revocation

79. In these Regulations, —

Interpretation

“*ANSI*” means American National Standard Institute ;

“*API*” means American Petroleum Institute ;

“*ASME*” means the American Society of Mechanical Engineers ;

“*Company*” means the holder of an Oil Prospecting Licence and Oil Mining ;

Lease under the Petroleum Act, Petroleum Exploratory License, Petroleum Prospecting Licence, Petroleum Mining License under the Petroleum Industry Act, marginal field award, licence or permit issued by the Commission as applicable under the authority of the Minister of Petroleum Resources ;

“*Commission*” means Nigerian Upstream Petroleum Regulatory Commission (NUPRC) created under the Petroleum Industry Act, No. 6, 2021 ;

“*Competent person*” means a person appointed by the Manager under regulation 5 of these Regulations. A Competent Person shall have sufficient training, knowledge and other qualities to manage specialised oil and gas operations and have the authority to take decisions with respect to his area of operations on behalf of the Company ;

“*Crude oil*” means the natural product of wells or seepages of petroleum oil before the oil has been refined or otherwise treated ;

“*dangerous area*” means —

(a) any enclosed premises containing a dangerous location together with a space extending not less than fifteen metres measured along the shortest part in air of flammable gases or vapour from any point of escape of those gases from the premises, or

(b) any open premises containing one or more dangerous locations together with a space extending not less than fifteen metres in all directions from every such dangerous location ;

“*Dangerous atmosphere*” means an atmosphere containing any flammable gas or vapour in a concentration capable of ignition by an open flame or electric spark ;

“*Dangerous location*” means a location where a leakage or emission, of a product which can produce a dangerous atmosphere, is likely to occur ;

“*Functional Safety Audit*” means a systematic and independent examination of the particular safety lifecycle phase activities under review ;

“*Gas*” or *natural gas*” means gas obtained from boreholes or released from crude oil and consisting principally of hydrocarbons ;

“*Gas free*” means an absence of any concentration of combustible or harmful gases in a vessel, container or any area below the prescribed limits ;

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- “*IEC*” means International Electrotechnical Commission ;
“*Integrity Operating Windows*” are the limits under which a machine can operate safely ;
“*IMCA*” means International Marine Contractors Association ;
“*IAEA*” means International Atomic Energy Agency ;
“*LEL*” means Lower Explosive Limit ;
“*LPG*” means Liquefied Petroleum Gas ;
“*Manager*” means the Managing Director of a Company holding a license or lease granted under the Act or any person designated by the Managing Director as a Manager for the purpose of these Regulations ;
“*NACE*” means the National Association of Corrosion Engineers ;
“*NNRA*” means the Nigeria Nuclear Regulatory Authority ;
“*Recommended test pressure*” means pressure which is not less than one and half times the maximum allowable working pressure ;
“*Restricted area*” in an installation or oilfield means an area in which certain precautions are necessary to ensure safety by reason of the possible presence of dangerous atmosphere or because of the operations being carried out therein ;
“*SIF*” means Safety Instrumented Function, which is a set of equipment intended to reduce the risk due to a specific hazard ; and
“*TWA*” means Time Weighted Average.

80. These Regulations may be cited as the Upstream Petroleum Safety Regulations, 2024. Citation

MADE at Abuja this 13th day of March, 2024.

ENGR. GBENGA KOMOLAFE, FNSE
Commission Chief Executive
Nigeria Upstream Petroleum Regulatory Commission