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THE PETROLEUM ACT
(No. 2 of 2019)

IN EXERCISE of the powers conferred by subsection (1) of section 126 of the Petroleum Act, 2019, the Cabinet Secretary, Ministry of Energy and Petroleum, on the recommendation of the Authority, makes the following Draft Regulations for public comments—

PETROLEUM (UPSTREAM AND MIDSTREAM ENVIRONMENT, HEALTH AND SAFETY) REGULATIONS, 2025

PART I – PRELIMINARY	
Citation.	**1.** These Regulations may be cited as the Petroleum (Upstream and Midstream Environment, Health and Safety) Regulations, 2024.
Interpretation.	(2) In these Regulations, unless the context otherwise required— "Act" means the Petroleum Act, 2019; "accident" means an occurrence or event that results in loss of life, personal injury, property damage, and/or environmental damage; "approved standard" means a standard under the Standards Act, CAP 496. "asphyxiant gas" means any gas the release of which may create asphyxiating conditions due to displacement of oxygen; "Authority" means the Energy and Petroleum Regulatory Authority established under the Energy Act, 2019; "completion and well workover fluids" means fluids used to clean the wellbore and stimulate the flow of petroleum, or simply used to maintain downhole pressure (this may include solid material, residual drilling fluids, weighted brines or acids, petroleum, methanol and glycols and other types of performance-enhancing additives; after use, these fluids may contain contaminants including solid material, oil, and chemical additives); "contractor" means the person with whom the national government concludes a petroleum agreement and includes a subcontractor or agent;

	"decommissioning" means abandonment, recovery, removal and disposal, or if applicable re-deployment, of wells, flow lines, pipelines, facilities, infrastructure and assets related to upstream and midstream petroleum operations; "dimensioning fire" means a fire which in accordance with the defined acceptance criteria under these Regulations represents an unacceptable risk, and which consequently serves as a basis for design and operation of installations and facilities; "drilling waste" means all materials or chemicals, solid liquid or gases, associated with drilling for exploration, development, or production of crude oil or natural gas, and directional drilling for pipeline construction, including the solid materials, fragments of rock and other materials brought to the surface during the drilling process and any liquid mixture of water, sediment, drilling muds, chemical additives or other wastes that are pumped into a borehole while drilling and are specifically related to drilling activity; "EIA license" means an environmental impact assessment license, granted in accordance with the Environmental Management and Co-ordination Act, 1999 and its subsidiary legislation; "emergency" means a present or imminent event, outside the scope of normal operations, that requires prompt action and co-ordination of resources to protect the health, safety or welfare of people or to limit damage to property and the environment; "Environmental Liability Policy" means an insurance policy that covers the cost of restoring damage caused by petroleum operations, resulting in pollution of land, water, air, and biodiversity damage under the Act. "fire division" means a wall or division made of incombustible materials or an open-air separation designed to minimise the probability of a fire spreading horizontally or vertically; "flaring and venting management plan" means a projection of flaring and venting quantities and associated emissions over the lifetime of the installation with an associated plan of actions/projects/investments which the licensees plan to undertake to manage and minimise flaring and venting quantities and associated emissions. **"**Flaring and venting" are controlled processes to dispose of gas, essential for emergency and safety purposes on oil and gas installations, and in situations where it may not be feasible for the gas to be used, exported or re-injected. "flowback fluid" means a water-based solution that flows back to the earth's surface after completing the hydraulic fracturing of a reservoir (this may include chemical additives, mud, clay, dissolved metal ions and total dissolved solids); "fugitive emissions" means any releases of gas from lease production, gathering, compression, or gas plant equipment components, including emissions from valve stems, pressure relief valves, flanges and connections, gas-operated valves, compressor and pump seals, pumping well stuffing boxes, casing-to-casing bradenheads, pits, and sumps, that cannot reasonably be captured and sold or routed to a vent or flare;

	“gathering system” means facilities employed to collect, compress, and transport petroleum to another petroleum gathering system, a plant, compression facility, transmission line or other facility; “hazardous substance” means any chemical, waste, gas, medicine, drug, plant, animal or microorganism which is likely to be injurious to human health or the environment; “hydrostatic testing water” means water used in pressure testing to detect leaks and verify onshore equipment and pipeline integrity (chemical additives such as corrosion inhibitors, oxygen scavengers, biocides and dyes may be added to the water to prevent internal corrosion or to identify leaks); “incident” means an unexpected event or occurrence that does not result in serious injury or illness but may result in property or environmental damage; “disposal well” means a well, in which fluids associated with oil and natural gas production are injected for water disposal or any other purpose; “low pressure separator gas” means gas separated or liberated from a gas-liquid stream in a low-pressure separation facility which may include separators, treaters, free water knockouts, and other associated equipment; “major accident” means an occurrence such as a significant fire, explosion, release of a substance, failure of equipment or materials that results from uncontrolled developments in the course of petroleum operations, that results in loss of life, personal injury, property damage, and/or environmental damage; “midstream” means the petroleum industry sector involved in the planning, development, construction, commissioning, operation and decommissioning of crude oil and natural gas pipelines and storage depots; “midstream operator” means, as the case may be, a project proponent, a licensee, midstream permit holder and their agents; "midstream petroleum operations" means all or any of the operations related to petroleum transportation, storage, refining operations, or natural gas processing operations that are related to multiple development areas including operations for the liquefaction of natural gas; "NORM" means Naturally Occurring Radioactive Material; “NEMA” means the National Environment Management Authority established under the Environmental Management and Co-ordination Act, 1999 for the time being; “officer” means a person who is employed by a government agency or authorized by a government agency to execute any function under the Act and these Regulations; “oily waste” means a specific type of oilfield waste that contains oil generated primarily during oil production; “person” means any human being regarded as an individual, which includes, but is not limited to, employees, managers, public officers, inspectors, visitors at a facility, and third-party contractors;

	"person-in-charge" means person appointed by a contractor, permit holder or a midstream operator in accordance with these Regulations to be in charge of a specified activity or operation; "petroleum agreement" means any agreement, license, contract or other arrangement between the Government and a contractor to conduct upstream petroleum operations in accordance with the provisions of the Act. "produced sand" means sand produced from a reservoir and separated from the formation fluids during petroleum processing; "produced water" means water that comes out of a well with the petroleum during production which may contain soluble and non-soluble oil, organic compounds, suspended solids, dissolved solids, and other material used in the production process; "production facilities" means production, separation, treating, compression, flowlines, storage, and other production handling equipment employed in the production of petroleum; "safety case" means a document required under these Regulations demonstrating that there are effective means of reducing risk at a facility or during activities to the required level; "safety zone" means a demarcated area established around a facility under the Petroleum Act; "storage depot" means a midstream facility consisting of one or more tanks for storing crude oil and natural gas; "tank vapours" means gases which emanate from a wash or storage tank containing petroleum, water or other materials; "Tribunal" means the Energy and Petroleum Tribunal established under the Energy Act 2019; "waste characterisation" is the assessment of the physical, chemical, and toxicological characteristics (i.e. properties) of a waste, in order to determine its appropriate handling, treatment, and disposal; "waste manifest" is a document that provides identification and tracking information on the waste being transported; "waste storage area" means an area of a facility controlled by a contractor, permit holder or a midstream operator that is used for the purpose of collecting and storing waste produced by operations; "waste treatment" means to apply any method, technique or process such as neutralization and stabilization, that is designed to change the physical, chemical, and/or biological character or composition of waste or a component of waste to reduce the hazards the waste presents.
PART II – APPLICATION	
Application	**2.** (1) These Regulations shall apply to the environmental, health and safety requirements of upstream and midstream petroleum operations and facilities including the design, construction,

	installation, operation, maintenance, modification and decommissioning of— (i) onshore and offshore upstream petroleum operations, facilities and related equipment; and (ii) midstream petroleum operations, facilities and related equipment. (2) These Regulations shall not apply to facilities — (a) used in any downstream petroleum operations.
PART III – SAFETY REQUIREMENTS	
Division 1 – General Safety Requirements	
Risk management.	**3.** (1) Upstream and midstream petroleum operations shall be conducted in a manner that— (a) minimises, as far as practicable, any risk to the safety and health of persons or any risk to public safety that may arise from the operations and related activities; (b) secures the safety and health of persons at or near facilities where upstream and midstream petroleum operations and related activities are being conducted; and (c) enables contractors to continually develop safety practices that reflect technological advancement and advances in best petroleum industry practices. (2) Upstream and midstream petroleum facilities shall be designed, constructed, installed, operated, maintained, modified and decommissioned in accordance with a safety case that has been approved by the Authority.
General duties of contractor.	**4.** (1) A contractor, permit holder or a midstream operator shall take necessary measures— (a) to prudently identify and assess the risks related to its operations and facilities; (b) to minimise, as far as practicable, any risk to the safety and health of persons or any risk to public safety that may arise from operations and related activities; (c) to limit, as far as practicable, the effects of any incidents, hazards or accidents on human health and the environment; (d) to adopt technical, operational and organisational practices and solutions that reduce risks to an acceptable level; (e) to ensure that adequate and appropriate recovery measures are put in place to deal with the effects of any incidents, hazards or accidents; (f) to ensure that occupational safety and health measures in all operations are satisfactory to protect the safety and health of workers; and (g) to institute procedures that allow the continuing development of safety practices that reflect technological advancement and advances in best petroleum industry practices.

	(h) To adopt measures necessary for environmental protection (i) to ensure compliance with any applicable Kenyan safety and health laws and in addition ensure that— (i) responsibility and authority during each petroleum activity is clearly defined and coordinated at all times; (ii) all workers and personnel accessing a facility or participating in a petroleum activity are sufficiently informed of all relevant safety documentation and reporting procedures; and (iii) any person acting under a contractor's or a midstream operator's authority in performing upstream and midstream petroleum operations, complies with the Act, these Regulations and any other applicable law or administrative direction. (2) A contractor, permit holder or a midstream operator shall demonstrate to the Authority that it has taken all necessary measures to ensure safety and health of workers and all persons in the vicinity of operations, general public safety and the protection of the environment and property as specified under these Regulations, any approved standards and best petroleum industry practices. (3) A contractor, permit holder or a midstream operator shall cooperate with and assist the Authority to perform its regulatory functions under the Petroleum Act, 2019, these Regulations and any other applicable Kenyan law. This shall entail facilitating inspections, investigations and gathering information. (4) A contractor, permit holder or a midstream operator shall ensure timely preparation and submission of the safety case to the Authority. (5) Where the contractor, permit holder or midstream operator proposed any activity at a location that qualifies as a workplace under the Occupational Safety and Health Act 15 of 2007, for the time being, unless that workplace is subject to a valid exemption, the contractor, permit holder or midstream operator may not undertake that activity until a certificate of registration for such workplace has been issued under that Act.
Personnel training and qualifications.	**5.** (1) A contractor, permit holder or a midstream operator shall ensure that all workers involved in upstream and midstream petroleum operations have the necessary experience, qualifications and/or training to execute the work in accordance with the Act, these Regulations, and any other applicable Kenyan law. (2) A contractor, permit holder or a midstream operator shall ensure that records of worker training and competencies are maintained, kept up-to-date and readily accessible to the Authority on inspection. (3) A contractor, permit holder or a midstream operator shall routinely take steps to identify and record any insufficiency

	in worker performance that may require additional training to redress. (4) A contractor, permit holder or a midstream operator shall ensure that workers receive the necessary and specialised training— (a) to perform their tasks safely; (b) in occupational safety and health; and (c) in responding to incidents, hazards, and accidents. (5) A contractor, permit holder or a midstream operator shall make all relevant safety and procedural documentation readily available and accessible to workers and to the Authority upon request. (6) A contractor, permit holder or a midstream operator shall ensure that all workers are informed about updates introduced into the procedures and manuals that may impact— (i) operations and maintenance; (ii) training in emergency situations and simulations; (iii) escape, evacuation and rescue; (iv) machinery safety; (v) materials, products and equipment packaging, identification, storage and handling; (vi) results of any safety analysis; (vii) codes and signalling; (viii) communication and reporting practices; (ix) their preparedness and responses to emergencies; and (x) any other matter relevant to operations. (7) A contractor, permit holder or a midstream operator shall provide training to workers upon their employment, any transfer or change of work tasks, the introduction of new work equipment or changes to the equipment and upon introduction of new technology that applies to the worker's tasks. (8) The training shall be adapted to changes and/or new risk in the petroleum activity. (9) Where a worker is assigned duties related to the execution of safety and health obligations, a contractor, permit holder or a midstream operator shall ensure that the worker is certified to perform the duties in accordance with the applicable safety and health laws in Kenya.
Worker responsibility.	**6.** (1) Workers shall comply with the safety rules and procedures in force and cooperate on the implementation of measures put in place by a contractor, permit holder or a midstream operator to create a safe working environment as stipulated under the applicable Kenyan Health and Safety laws.

Division 2 – Safety Case	
Safety case requirement	**7.** (1) No contractor, permit holder or midstream operator shall commence petroleum operations until a safety case has been approved by the Authority in relation to those operations. (2) A contractor, permit holder or a midstream operator shall not engage in upstream and midstream petroleum operations unless a contractor, permit holder or a midstream operator has demonstrated to the Authority that it has— (a) diligently evaluated the risks to public safety, the safety and health of all persons, property and the environment related to its activities in accordance with these Regulations; and (b) planned and applied measures to reduce the risks identified to an acceptable level in light of the magnitude of those risks. (3) Before constructing, installing, operating, modifying or decommissioning a facility that may present a significant risk to health or safety, a contractor, permit holder or a midstream operator shall ensure that a safety case approved by the Authority is in force for that facility or related activity. (4) Where a safety case is in force for a facility, a contractor, permit holder or a midstream operator shall ensure that all operations and activities in relation to the facility comply with the safety case.
Safety case contents	**8.** (1) A safety case shall include the information in the First Schedule and shall provide for the following matters in relation to the safety and health— (a) the relevant facility description and a description of the processes and activities that will take place at the facility; (b) a risk assessment and systematic identification of hazards; and (c) a safety management system for the facility comprising— (i) a comprehensive and integrated system of risk control measures to eliminate or reduce the risks to an acceptable level; and (ii) a process for monitoring, audit, review and continuous improvement of risk management practices. (2) A safety case shall demonstrate that— (a) the accidents, hazards and possible accident scenarios in relation to the facility or related activity have been identified and that the necessary measures have been taken to prevent such accidents and to limit their consequences; (b) adequate safety and reliability that have been taken into account in the design, construction, operation and maintenance of an installation, storage facility, equipment and infrastructure

	connected with the facility's operation which are linked to assessed risk of potential incidents, hazards or accidents inside the facility; and (c) an emergency preparedness and response plan has been prepared in accordance with these Regulations, the Act and applicable Kenyan laws. (3) A contractor, permit holder or a midstream operator shall ensure that the safety case is prepared by experienced personnel with full access to all relevant information.
High-risk activities.	**9.** (1) A contractor, permit holder or a midstream operator shall ensure that the safety case for a facility shall establish and maintain a documented system of coordinating and controlling the safe performance of all work activities at the facility. (2) The safety case shall include a "permit to work" system that shall apply to particular high-risk activities that may take place at the facilities including working— (a) in confined spaces and spaces where there is a risk of oxygen deficiency; (b) over water or (to erect, modify or dismantle scaffolds over water; (c) under water; (d) at height; (e) with welding equipment and other types of hot work; (f) with the use of heat sources; (g) susceptible to causing an unexpected release of energy; (h) in simultaneous operations; (i) on live electrical equipment; (j) at risk of injurious exposure to dust; (k) on a pressurized system; (l) with pressure-testing of plant, equipment and pipelines; and (a) in condition with exposure to radiation or instruments using radiation. (3) The "permit to work" system, at a minimum, shall— (a) identify the persons having responsibility to authorise and supervise work; (b) ensure workers performing work have the requisite training and capability to perform the work; and (c) ensure that members of the workforce are competent in the application of the permit to work system. (4) A "permit to work" shall— (a) outline— (i) the nature of the work; (ii) the place where the work may be performed; (iii) the period during which the work may be performed;

	(iv) any protective equipment to be used or worn; and (v) any precautions that shall be taken to avoid endangering the health and safety of workers and other persons on or near the relevant facility or site, (b) be signed by the person-in-charge with respect to the relevant activity; and (c) be signed by the person with overall responsibility for the management of the relevant facility or site.
Risk assessment	**10.** (1) A risk assessment required in developing a safety case shall— (a) identify the likely incidents, hazards or accidents that may occur in relation to the activity or facility; (b) set out a detailed and systematic assessment of the risk associated with each of those hazards, including the likelihood and consequences of each incident; (c) identify the measures that are necessary to reduce each of those risks to a level that is as low as is reasonably practicable; and (d) include the matters outlined in the First Schedule. (2) The contractor, permit holder or a midstream operator shall perform the risk assessment using established methodologies including— (a) qualitative risk assessment, in which frequency and severity are determined purely qualitatively; (b) semi-quantitative risk assessment, in which frequency and severity are approximately quantified within ranges; or (c) quantitative risk assessment, in which full quantification occurs. (3) The contractor shall provide justification for employing the selected methodology in each case. The choice of methodology shall take into account the following dimensions: (a) the level of estimated risk (and its proximity to the limits of tolerability) (b) the complexity of the problem and/or difficulty in answering the question of whether more needs to be done to reduce the risk. (3) The risk assessment shall include analysis of the probable consequences of single failures or sequential failures in and connected to the activity or facility. (4) The risk assessment shall outline the acceptance criteria in relation to the risks being assessed which shall— (a) consider both the likelihood and consequences of identified hazards; (b) reflect the characteristics of the activity or facility concerned; (c) reflect the safety objectives of the contractor, permit holder or a midstream operator, any

	standards approved by the Authority and best petroleum industry practices. (5) The contractor, permit holder or a midstream operator shall— (a) include in the safety case a summary and explanation of the selection of acceptance criteria; (b) submit to the Authority, on request, supporting documentation for the evaluations on which the selection of acceptance criteria is based; and (c) review the risk acceptance criteria regularly as may be necessary with respect to any factor that may affect the appropriateness of the acceptance criteria selected. (6) The results of the risk assessment shall be included as part of the basis for the making safety decisions in ensuring activities meet the required safety standard. (7) A contractor, permit holder or a midstream operator shall communicate results from the risk assessment to the workers and ensure that the results are used actively in preventive safety measures and efforts. (8) A contractor, permit holder or a midstream operator shall keep and maintain complete records of all risk assessments carried out. (9) A contractor, permit holder or a midstream operator shall systematically review the basic assumptions made in the risk assessment to ensure that safety in upstream and midstream petroleum operations is maintained within the defined acceptance criteria for risk.
Safety management system.	**11.** (1) The safety management system shall outline risk control measures selected to reduce the risk to an acceptable level and may consist of— (a) measures to reduce the probability of accidents or hazardous situations occurring; and (b) measures to mitigate the consequences of accidents or hazardous situations. (2) The control measures selected shall be informed by the most critical event scenario (based on realistic severity and the realistic likelihood of occurrence). (3) A contractor, permit holder or a midstream operator shall systematically follow up the implementation of the risk control measures and reassess the basic assumptions made in the risk assessment to ensure that safety is maintained to the level required.
Safety zones.	**12.** (1) A contractor, permit holder or midstream operator shall, in preparing a safety case, include a safety zone around the area of the relevant development. (2) Where an application for a safety case makes recommendations for the establishment of a safety zone, the Authority shall inform the Cabinet Secretary that a determination of a safety zone may be required in accordance with the Act and these Regulations.

Safety case application.	**13.** (1) Where a safety case is required, a contractor, permit holder or a midstream operator shall submit the safety case to the Authority for approval, three (3) months prior to any proposed activity to be governed under the safety case. (2) A contractor, permit holder or a midstream operator shall submit the application accompanied by the fee as prescribed by the Authority. (3) Upon submission, the Authority shall acknowledge receipt of the safety case within seven (7) days. (4) The Authority may, within thirty (30) days of receipt of the application, require a contractor, permit holder or a midstream operator to provide additional information related to the safety case or any other matter that the Authority may require in order to properly consider the safety case. (5) A contractor, permit holder or a midstream operator shall respond to any query within twenty-one (21) days. (6) The time period for processing the approval for safety case shall be paused until the additional information required is provided.
Safety case assessment.	**14.** (1) Where the Authority is satisfied it has received adequate information to consider the safety case, the Authority shall consult with any person or other government agency as may be deemed fit to properly evaluate the efficacy of the proposed safety case. (2) Where the Authority consults with any person or other government agency on any issue related to the safety case, any feedback must be received by the Authority at least forty-five (45) days before a decision on the safety case is required to be made. (3) The Authority shall document its processes and deliberations in evaluating the safety case and maintain internal records relating to the decision process. (4) Within one hundred and twenty days (120) of receiving adequate information on the safety case, the Authority shall— (a) reach a decision to either approve the safety case with or without conditions, or otherwise reject the safety case, providing its reasons; (b) communicate the decision of its evaluation to a contractor, permit holder or a midstream operator; or (c) if necessary, require any action to ensure the safety case complies with these Regulations or the Act. (5) Upon rejection of the safety case, the contractor, permit holder or midstream operator shall resubmit the revised safety case to the Authority for review and consideration.
Updating, revising a safety case.	**15.** (1) A contractor, permit holder or a midstream operator shall notify the Authority in writing of its intent to revise or update the safety case as soon as practicable if— (a) a significant change to the facility or related activity is proposed;

	(b) a particular operation or activity is proposed for which the safety case in force does not adequately consider the risks and required control measures; (c) a significant new risk, or a significant increase in an existing risk to safety or health, arises or is likely to arise and is not provided for in the safety case in force; or (d) any proposed modifications to an activity or facility may result in a significant cumulative change in the overall level of risk. (2) On receipt of a notification under this regulation, the Authority shall communicate in writing prescribing timelines for submission of the revised or updated safety case to the contractor or the midstream operator. (3) In any case the safety case shall be reviewed and submitted to the Authority for approval when so required and in any case every three (3) years.
Retention of safety case.	**16.** A contractor, permit holder or a midstream operator shall keep a copy of the approved current safety case at the facility addressed in the safety case.
Division 3 – Safety of Petroleum Facilities	
Sub-division 1 – General Requirements	
Facility management.	**17.** (1) A contractor, permit holder or a midstream operator shall ensure there is a person in charge with responsibility for safety and health matters at each manned facility during operations. (2) Where the safety case for a facility so requires, a contractor, permit holder or a midstream operator shall ensure a person-in-charge is assigned to be responsible for the safety and supervision of an activity. (3) A person in charge of an activity shall supervise the activity to ensure that— (a) the workers perform the activity in a safe manner in line with these regulations and best petroleum industry standards; (b) all tools and equipment are used in a safe manner; (c) all tools and equipment are maintained in a safe working condition; (d) the designated storage facility or area for tools and equipment is maintained in a safe manner; and (e) all tools and equipment are stored in a safe manner while not in use. (4) A contractor, permit holder or a midstream operator is responsible to ensure that the person-in-charge is suitably qualified and instructed to discharge the supervisory tasks under this regulation.
Manual of instructions.	**18.** (1) A contractor, permit holder or a midstream operator shall prepare a manual of instructions for safety of the facility's

	operations and bring it to the attention of every worker or any other person participating in upstream and midstream. (2) A worker or any other person participating in upstream and midstream shall comply with the requirements of the manual of instructions relevant to his or her duties. (3) A contractor, permit holder or midstream operator shall revise and update the manual of instructions for the safety of a facility's operations as need arises and ensure that such revisions are brought to the attention of workers and other persons participating in upstream and midstream in the facility.
General safety and health in facility design and construction.	**19.** (1) A contractor, permit holder or a midstream operator shall ensure that the design, engineering and construction of any facility is conducted in a manner to ensure the safety and wellbeing of persons present at or near the facility. (2) A contractor, permit holder or a midstream operator shall ensure that the design, engineering and construction of any facility is undertaken in accordance with approved standards. (3) A contractor, permit holder or a midstream operator shall ensure that the choice and location of a facility and its components is based on best petroleum industry practices and entails a risk analysis and area classification.
Design considerations.	**20.** A contractor, permit holder or a midstream operator shall ensure that the design of the facilities takes into account, at a minimum, the following considerations— (a) the local environment of the facility site; (b) the requirements of Kenya's environmental laws and regulations including the requirements contained in these Regulations; (c) the ability of the facility to withstand abnormal loads; (d) the suitability of equipment and materials for their intended purpose; (e) systems for the relief of excessive pressure; (f) classification of areas at risk of explosion, fire or collapse; (g) the layout and distribution of equipment at the facility; (h) protecting workers from the risks arising from the use of rotating machinery and other hazardous machinery; (i) reducing the use of chemicals at the facility and minimizing the risks from any such use; (j) the characteristics of confined spaces at the facility with respect to maintaining a safe atmosphere and eliminating the risk of ignition; (k) the ventilation of spaces containing petroleum and, if necessary, equipping them with pressure relief valves and/or explosion protection panels;

	(l) the use of systems to detect abnormal conditions and reduce the risk of release of hazardous substances and to contain any release; (m) the suitability of the use of automatically operating safety equipment and installations to reduce the incidence and consequences of fire, explosion, escape of gas and other hazards; (n) safe and easy access for inspection, testing and maintenance purposes; and (o) any foreseeable changes in future operational conditions.
Design functions.	**21.** A contractor, permit holder or a midstream operator shall ensure that the facilities are planned and designed to ensure that— (a) no single isolated defect or fault endangers persons, the environment or property; (b) as far as reasonably practicable, there is redundancy in the operating system and safety systems; (c) safety critical elements are identified to ensure safe control of the processes at the facility; (d) the potential for human error in operations is reduced as far as possible; and (e) the safety systems and mechanisms used in the facility are designed to control and record the relevant conditions for their integrity.
Testing.	**22.** (1) A contractor, permit holder or a midstream operator shall ensure that facilities and equipment are sufficiently tested prior to operation in order to establish their, suitability, integrity and durability. (2) A contractor, permit holder or a midstream operator shall develop a programme of regular testing of facilities and equipment to ensure that the critical components of each system continue to work safely. The regular testing programme shall include instructions on— (a) the required frequency of tests; (b) the required methodology to perform the manner of performance of the tests; and (c) the corrective measures that may be applied, and any other relevant recommendations. (3) A contractor, permit holder or a midstream operator shall ensure that testing of facility and equipment shall be performed by a person approved by the Authority.
Maintenance and repair	**23.** (1) A contractor, permit holder or midstream operator shall undertake regular inspection, maintenance and repair of all equipment and facilities. (2) A contractor, permit holder or midstream operator shall ensure that all tools, equipment, machinery and plant used in the course of upstream and midstream are— (a) maintained in a good state of repair; (b) safely constructed;

	(c) installed safely, where appropriate; and (d) regularly inspected and repaired where necessary.
New technology or new methods.	**24.** (1) Where a contractor, permit holder or a midstream operator proposes to undertake an activity that entails the use of new technology or new methods, a contractor, permit holder or a midstream operator shall establish a criteria for the development, testing, and use of the technologies, taking into account the requirements for health, safety and working environment in accordance with any approved standards and best petroleum industry practices. (2) A contractor, permit holder or a midstream operator shall inform the Authority prior to the introduction of new technology or new method in upstream and midstream.
Sub-division 2 – Facility Design and Construction	
Standards.	**25.** (1) A contractor, permit holder or a midstream operator shall ensure that facilities, systems and equipment are designed in a robust manner in accordance with any approved standards and best petroleum industry practices to ensure that— (a) the facilities, systems and equipment can be operated, tested and maintained without endangering human life, health, the environment and material assets; and (b) the facilities, systems and equipment are suitable for use and able to withstand the anticipated loads they will encounter during operation. (2) A contractor, permit holder or a midstream operator shall ensure that components of facilities and related systems and equipment shall be clearly marked and labelled to facilitate safe operation and prudent maintenance.
Structural considerations.	**26.** (1) A contractor, permit holder or a midstream operator shall ensure the integrity of support structures and materials in the facility. (2) Design requirements relating to support structures shall include functional specifications to guarantee— (a) loads and environmental conditions that may be incurred by fabrication, installation, maintenance and operation; (b) performance in normal conditions, with particular regard to damage, movements, fixings, vibration and fatigue; (c) resistance to possible actions and strain that may give rise to faults, large rigid movements or stresses comparable to faults; and (d) stability of any floating structures in situations of drifting, floundering or sinking. (3) A contractor, permit holder or a midstream operator shall determine the characteristics, functions and performance standards of all structural supports and their components and materials. Structural supports shall—

	(a) have optimum ductile properties and low sensitivity to local damage; (b) be equipped with instruments to measure environmental loads; (c) provide single stress trajectories with small concentrations of stress; (d) be resistant to corrosion and other damage; and (e) permit the simple check of conditions for maintenance and repair purposes. (4) A contractor, permit holder or a midstream operator shall ensure that the components, couplings and connecting parts are subject to safety testing during the fabrication and production process.
Consideration of materials during design.	**27.** When selecting materials for a facility during the design phase, a contractor, permit holder or a midstream operator shall— (a) ensure that materials meet all the approved standards and best petroleum industry practices regarding strength, ductility, toughness, corrosion, durability and consider the material's compatibility with process fluids and operational conditions; (b) ensure that materials adequately address the need to protection against corrosion, erosion and other forms of decay; (c) consider the fire resistance attributes of the materials; and (d) ensure that, where new materials are introduced, the materials are verified by means of necessary analyses, calculations and tests so that the materials meet appropriate stipulated safety criteria.
Pipeline and storage facility design.	**28.** A upstream and midstream operator shall ensure that the detailed layout plans and specifications for pipelines and storage depots required shall be compatible with best petroleum industry practices and consider the following factors— (a) the location of any ancillary buildings and other installations to allow for safe evacuation of personnel in case of emergency; (b) the safe performance of internal inspection and maintenance; (c) the use of control or monitoring equipment including flow detectors and pressure monitors, to protect or to secure the safe operation of the pipeline or storage tank; (d) the use of emergency shut-off valves to minimise loss of containment of the pipeline or storage tank inventory, capable of manual or automatic operation; (e) the use of isolation mechanisms such as interlocks that may remotely trigger a shut-off valve based on events such as abnormal

	pressure conditions in the pipeline or storage tank; (f) the use of devices to prevent safe operating limits being exceeded, such as pressure relief valves or block valves to limit the inventory released, which shall be spaced in accordance with the safety evaluations and allowing for maintenance access; and (g) the location of emergency shut-down valves and related mechanisms such that they, so far as reasonably practicable, shall remain operational in the event of fire, explosion or impact.
Sub-division 3 – Safety Features of Facilities	
Control room.	**29.** (1) A contractor, permit holder or a midstream operator shall ensure that the location, design and construction of a facility's control room is suitable to withstand possible major accidents. (2) The control room shall be secured with access control systems and cameras to prevent unauthorized access; (3) The layout of the control room and arrangement of panels shall ensure effective ergonomic operation of a facility in both normal circumstances and emergency situations. (4) The design of the control room shall consider the possibility of emergencies or disasters and provide emergency response procedures; (5) A contractor, permit holder or a midstream operator shall ensure availability of qualified personnel to man the control room.
Emergency shutdown system.	**30.** (1) A contractor, permit holder or a midstream operator shall ensure that facilities are installed with an emergency shutdown system which shall be designed to initiate upon detection of defined, potentially hazardous conditions. (2) A contractor, permit holder or a midstream operator shall ensure that facilities are installed with an emergency shutdown system which shall— (a) be able to prevent or mitigate the development of an incident, hazard or accident and limit the consequences of the incident, hazard or accident; (b) be designed to withstand the loads to which they may be subjected; (c) be able to perform the intended functions independently of other systems and have a simple and clear command structure; (d) be designed to maintain safe conditions in case of a fault that may prevent the system from functioning;

	(e) be capable of being activated manually from the control room or from trigger stations that are located in strategic locations in the facility; and (f) be able to bring the facility to a safe condition in the event of a fault. (3) A contractor, permit holder or a midstream operator shall ensure that— (a) emergency shutdown valves are installed with the capacity to stop the flow of petroleum and chemicals to and from a facility; (b) the emergency shutdown valves are able to isolate the fire areas of a facility; (c) the system can be tested safely and without interrupting operations; (d) all accessible emergency shutdown valves are equipped with a position indicator and the status can automatically be transferred to the control room; and (e) the re-setting of emergency shutdown valves is performed in a safe and controlled manner.
Gas release system.	**31.** (1) A contractor, permit holder or a midstream operator shall ensure that a facility equipped with or attached to processing facilities has a gas release system to prevent escalation of hazards, incidents and accidents by quickly reducing the pressure in the equipment. (2) A contractor, permit holder or a midstream operator shall ensure that the gas release system is designed so that— (a) the release of gas does not harm workers, equipment or the environment; (b) depressurization may be triggered manually from the control room; (c) any liquid separators installed in the system are secured against overfilling and the status of components in the system is monitored; and (d) maintenance and functional testing can be carried out conveniently without interrupting operations.
Depressurisation and flare system.	**32.** (1) A contractor, permit holder or a midstream operator shall ensure that facilities are installed with an automatic depressurisation and flare system, as applicable, that— (a) is designed to prevent escalation of incidents, hazards or accidents by reducing the pressure in the equipment; (b) is designed to ensure that any release of gas does not harm workers or damage equipment; and (c) is capable of being activated manually from the control room, where applicable. (2) A contractor, permit holder or a midstream operator shall ensure that a liquid separator installed in a flare system shall be secured against overfilling.
Drainage systems.	**33.** A contractor, permit holder or a midstream operator shall ensure that a facility is—

	(a) equipped with open drainage systems that can collect and divert petroleum, chemicals and other liquids so that any risk of fire, of harm to workers or of pollution to the environment is minimised; and (b) designed to ensure that any discharge of petroleum, chemicals or other liquids results in the least possible pollution of the environment.
Fire.	**34.** (1) A contractor, permit holder or a midstream operator shall ensure that the design of a facility is consistent with any approved standards and best petroleum industry practices for the prevention and control of fire and explosion hazards. (2) A contractor, permit holder or a midstream operator shall ensure that the selection of fire safety measures in the facility design includes consideration of the following— (a) segregation of process, storage, utility and safe areas; (b) safety distances derived from specific safety analyses for the facility and any approved standards and best petroleum industry practices for fire safety; (c) early release detection including pressure monitoring of gas, liquid conveyance systems, smoke and heat detection for fires; (d) evaluation of the risk of vapour accumulation in storage tanks and implementation of prevention and control techniques; (e) layout of pipes with respect to potential sources of ignition to avoid spills over high temperature piping, equipment or rotating machines; (f) passive fire protection measures; (g) limiting the areas potentially likely to be affected by accidental releases by— (i) defining fire zones equipped with a drainage system to collect and convey accidental releases of flammable liquids to a safe containment area; (ii) including secondary containment of storage tanks, where applicable; (iii) installing fire and blast partition walls in areas where appropriate separation distances cannot be achieved; (iv) designing the oily sewage system to avoid propagation of fire; and (v) any other measures the contractor, permit holder or a midstream operator may deem relevant.
Fire and gas detection system.	**35.** (1) A contractor, permit holder or a midstream operator shall ensure that a facility has an automatic fire and gas detection system that ensures quick and reliable detection of developing fires and gas leaks which functions independently of other systems.

	(2) A contractor, permit holder or a midstream operator shall ensure that the fire or gas detection system is capable of triggering automatic actions to limit the consequences of the fire or gas leak.
Fire protection.	**36.** (1) Fire protection and prevention practices within a facility or applied during upstream and midstream petroleum operations shall be governed by the Act, these Regulations, any approved standards, best petroleum industry practices and any other applicable Kenyan laws. (2) A contractor, permit holder or a midstream operator shall put in place, at a minimum, measures to improve fire protection in a facility which shall include; (a) assessment of initial fire safety preparedness; (b) provision of equipment for fire emergency on site; (c) installation of an automatic fire outbreak alert systems; (d) installation of automatic and manual fire suppression systems; (e) inspection or testing of the equipment by an independent competent body approved by the Authority; (f) measurement of dangerous gas with detection equipment; and (g) training workers to use fire protection equipment.
Passive fire protection.	**37.** (1) A contractor, permit holder or a midstream operator shall ensure that where passive fire protection measures are used at a facility, such measures shall be designed to provide the relevant structures and equipment with sufficient fire resistance with respect to load capacity, integrity and isolation properties during a design fire load. (2) A contractor, permit holder or a midstream operator shall ensure that any living quarters in a facility are designed to ensure that the functions they are designed for can be maintained during a dimensioning fire. (3) A contractor, permit holder or a midstream operator shall ensure that the choice of materials and interior design of any living quarters are considered with respect to the fire risk and are able to prevent fire from spreading.
Fire divisions.	**38.** (1) A contractor, permit holder or a midstream operator shall ensure that spaces with key functions and equipment or that pose a high fire risk, are separated from the surroundings by means of fire divisions. (2) Fire divisions shall be designed to withstand the thermal loads that may occur in a dimensioning fire, to prevent fire from spreading to the adjacent areas or cause equipment in those areas to become inoperative for a minimum period of one hour. (3) The strength of the fire divisions shall not be reduced by any intersection with ventilation ducts, piping, cables, beams, windows and doors or other penetrations. (4) Doors in fire divisions shall be capable of closing automatically.

Smoke control and ventilation.	**39.** A contractor, permit holder or a midstream operator shall ensure a facility's ventilation system is designed to effectively control smoke from a dimensioning fire and to ensure that both evacuation and fire-fighting can take place in a cautious and effective manner.
Fire alarm and evacuation.	**40.** (1) A contractor, permit holder or a midstream operator shall ensure that any living quarters and work areas in a facility— (a) are designed and protected to prevent penetration of smoke from a fire; and (b) are equipped with a reliable system capable of giving warning to every person on the facility of a detected fire event and the need to evacuate the facility. (2) The fire alarm and evacuation system referred to in sub-regulation (1) shall be capable of— (a) manual activation from the control room and any other relevant positions; and (b) activating an alarm in the control room. (3) Every operational facility shall have an emergency assembly point in an open space free from any potential risk. A contractor, permit holder or a midstream operator shall ensure that an additional emergency assembly point(s) exist to avoid overcrowding in case of an emergency and that clear guidance is provided to this effect.
Emergency exits.	**41.** (1) Each floor of a building in a facility shall have at least one escape exit which shall— (a) be clearly marked; (b) be clear for use at all times; (c) have open doorways or swinging doors to provide the maximum possibility of escape; (d) provide an unobstructed passage to the fire assembly point; and (e) be located to provide reasonably safe alternative means of escape. (2) The doors of an escape exit shall— (a) be readily opened from the inside without a key and shall swing outward if located in an exterior wall; (b) not be locked while the room is occupied; and (c) be accessible by fixed ladder, stairway, ramp, walkway, slide, slide pole or any other means consistent with any approved standards and best petroleum industry practices. (3) Any gated fence which is close to a light oil or gas processing unit shall have gates opening outward. (4) The gates of an enclosure within a facility shall be unlocked whenever the area within the enclosure is occupied. (5) A contractor, permit holder or a midstream operator shall use any other means to ensure the safety of the workers and the facility or upstream and midstream.

Fire protection installations and equipment.	**42.** (1) A contractor, permit holder or a midstream operator shall, during the design phase incorporate a fixed fire-fighting system in the facility design. (2) A contractor, permit holder or a midstream operator shall ensure that a facility is equipped with sufficient fire-fighting equipment to efficiently combat near-fires and prevent escalation in case of fire. (3) A contractor, permit holder or a midstream operator shall provide firefighter equipment to enable safe and effective fire-fighting to be carried out efficiently and that the equipment is kept on the installation and stored in a cautious and suitable manner ready for immediate use.
Fixed fire-fighting system.	**43.** (1) A contractor, permit holder or a midstream operator shall ensure that a fixed fire-fighting system— (a) is installed in explosion-hazard areas and in areas with a significant risk of fire; (b) covers or provides for equipment containing significant amounts of petroleum and is designed to ensure that firefighting can be carried out quickly and efficiently at all times; and (c) is capable of automatic activation by a signal from the fire detection system and in the event of gas detection, the system is automatically activated where this can result in lower explosion pressure. (2) In areas where gas is used as a fire extinguishing medium, fixed fire-fighting systems shall enable an automatic announcement to alert persons present that a release of gas has occurred. (3) The manual activation of the fire-fighting systems shall be capable of activating the general alarm of the facility. (4) Fire-fighting equipment shall be clearly marked in accordance with approved standards and best petroleum industry practices. (5) The type, capacity and location of fire-fighting equipment shall be determined with reference to the dimensioning fire to ensure that firefighting can be carried out in a safe and effective manner. (6) The fire-fighting equipment used in a facility shall meet the approved standards and best petroleum industry practices. (7) A contractor, permit holder or a midstream operator shall ensure that fire-fighting equipment in a facility is able to be tested and used during normal operational conditions. ~~(8)~~
Fire pump systems.	**44.** (1) A contractor, permit holder or a midstream operator shall ensure that any fire pump systems incorporated into the facility are designed with regard to capacity, efficiency, reliability, location and protection so as to enable effective fire-fighting of dimensioning fires in accordance with the approved standards and best petroleum industry practices. (2) A contractor, permit holder or a midstream operator shall ensure that—

	(a) fire pumps are able to start automatically when there is a pressure drop in the fire main, and when a signal is given from the fire and gas detection system; (b) fire pumps are capable of starting manually from the control room and at the prime mover; and (c) the control room is capable of monitoring and detecting the operational status of the fire pump systems. (3) A contractor, permit holder or a midstream operator shall ensure that every facility has sufficient water supply capacity at all times to combat and extinguish fires.
Fire response	**45.** (1) A contractor, permit holder or a midstream operator shall ensure that workers are trained in fire prevention and response procedures so that workers are prepared to manage operational risks and handle incidents and emergencies in an effective manner. (2) A contractor, permit holder or a midstream operator shall ensure that fire response drills are conducted on a frequent basis to enable workers to be prepared to manage operational risks and handle incidents and emergencies in an effective manner. (3) A contractor, permit holder or a midstream operator shall ensure that— (a) fire response drills are conducted under the control of the person–in–charge of the facility; (b) fire response drills are conducted at random times;
Workstation design.	**46.** A contractor, permit holder or a midstream operator shall ensure that— (a) all work areas and related equipment are designed and positioned in a manner that reduces the risk of harm, injury or illness to workers through manual handling, work position, repetitive movements or work intensity; and (b) regular ergonomic risk assessments are conducted wherever there is a change in the working conditions of processes.
Noise and Vibrations.	**47.** A contractor, permit holder or a midstream operator shall ensure that the design of a facility sufficiently reduces the risk of injury to workers due to exposure to noise or vibrations and that workers onsite wear hearing protection devices while working in areas with noise and vibration.
Ventilation.	**48.** A contractor, permit holder or a midstream operator shall ensure that the design of a facility— (a) ensures adequate ventilation— (i) so that hazardous and combustible gases do not penetrate closed areas which are classified as non-hazardous or ordinary locations; and (ii) so that smoke from a fire may be controlled;

	(b) enables control of the atmosphere of individual rooms with regard to air needs, circulation, humidity and temperature; and (c) ensures adequate ventilation for both indoor and outdoor areas to provide acceptable air quality free of hazardous pollution to in compliance with any applicable Kenyan air quality standards.
Radiation.	**49.** (1) A contractor, permit holder or a midstream operator shall ensure that a facility is designed to minimise exposure of workers to radiation and to ensure that primary technical solutions which minimise the use of radioactive substances are applied. (2) A contractor, permit holder or a midstream operator shall ensure that appropriate warning signs are present where radioactive substances are used, transported, handled, stored and disposed. (3) A contractor, permit holder or a midstream operator shall ensure that where radioactive substances are used, safe transportation, handling, storage and disposal practices are observed in accordance with the Material Safety Data Sheet from the manufacturer. (4) A contractor, permit holder or midstream operator shall adhere to the Nuclear Regulatory Act, 2019 and all other applicable Kenyan laws in the management of radiations in upstream and midstream and facilities.
Lighting.	**50.** A contractor, permit holder or a midstream operator shall ensure that a facility is designed, operated and maintained to provide adequate lighting for operations in the facility, to comply with the approved standards and best petroleum industry practices.
Division 4 – Equipment Safety	
Equipment and machinery.	**51.** (1) A contractor, permit holder or a midstream operator shall ensure that all tools, equipment and machinery used in upstream and midstream petroleum operations are— (a) designed, constructed, tested, installed, inspected and maintained safely in accordance with the approved standards and best petroleum industry practices; (b) situated and positioned in the facility safely and appropriately in relation to their intended use and other proximate activities; (c) of sufficient size and strength to withstand imposed stresses and to safely perform the functions for which they are to be used; and (d) operated only by a suitably qualified, trained or competent person. (2) A contractor, permit holder or a midstream operator shall ensure that— (a) machinery, equipment and their components are in a safe condition during operation, repair, maintenance, testing and restart;

	(b) all exposed and moving parts of machinery are enclosed, screened or railed off to prevent any worker or any other person from coming into contact with them; (c) where power-driven machinery is used, each machine has a stopping device located within easy reach of the worker operating the machinery; (d) every machine which is not individually motor driven is equipped with a clutch or other adequate means of stopping the machine; and (e) starting devices are arranged to prevent an incident, hazard or accident. (3) A contractor, permit holder or a midstream operator shall ensure that— (a) any scaffolding, stage, walkway, working platform, stairway and ladder, whether temporary or permanent, are constructed and maintained in safe condition; and (b) all hand tools are kept in a good state of repair.
Recording, monitoring instruments.	**52.** (1) Where appropriate, equipment and aspects of facilities shall be fitted with recording and monitoring instruments that allow a contractor, permit holder or a midstream operator to track the performance of the equipment and the need for maintenance or replacement. (2) A contractor, permit holder or a midstream operator shall ensure that the monitoring instruments are calibrated by a independent competent body approved by the Authority. (3) A contractor, permit holder or a midstream operator shall provide a valid calibration certificate for monitoring instruments upon request by the Authority.
Safety systems.	**53.** (1) A contractor, permit holder or a midstream operator shall ensure that electrical, instrumentation and telecommunications systems are designed and installed in such a way so as to minimise risks of fire or explosion, to prevent accidents involving personnel, support emergency functions and to maintain regular production. (2) A contractor, permit holder or a midstream operator shall ensure that instruments for checking and recording safety data are connected to an emergency energy source. (3) A contractor, permit holder or a midstream operator shall retain information on the design and installation characteristics of the safety system at the facility including at least the following— (a) a flow chart of any processing system which shows the maximum operating pressure, operating temperature, dimension, capacity and working design pressure of the separators, torch scrapers, treatment devices, storage tanks, compressors, pipeline pumps, measuring devices and other tanks and hydrocarbon handling installations; (b) information on the electrical system, including the classification of hazard areas, main equipment,

	emergency shutdown, fire and gas detection devices, and also alarm systems; and (c) schematics of any subsea control system, safety devices, umbilicals, and electric or hydraulic energy production units.
Equipment identification.	**54.** (1) A contractor, permit holder or a midstream operator shall ensure that each stationary tank or vessel containing flammable, corrosive or poisonous substances is identified by a unique assigned name or alphanumeric code. (2) A contractor, permit holder or a midstream operator shall ensure that piping within the facility containing flammable, corrosive or poisonous liquids or gases are adequately identified and labelled indicating their contents and purpose. (3) Equipment identifications in the facility shall be maintained so as to be legible in accordance with approved standards and best petroleum industry practices.
Fire-fighting equipment and systems	**55.** (1) A contractor, permit holder or a midstream operator shall ensure that a facility is equipped with sufficient fire-fighting equipment to efficiently combat fire hazards and prevent escalation in case of fire. (2) A contractor shall ensure that— (a) firefighting equipment enables safe and effective fire-fighting to be carried out efficiently and that the equipment is kept on the installation and stored in a cautious and suitable manner ready for immediate use; (b) every worker at a facility area receives instruction in the use of the fire-fighting equipment; (c) fire-fighting equipment is capable of use in a simple and safe manner; (d) water outlets are located to enable water from two well separated outlets to reach any fire or near fire on the facility; and (e) all fire-fighting equipment is inspected and tested at appropriate intervals by a qualified person and that a signed logbook is kept recording the last date and results of inspection.
Electrical installations.	**56.** (1) A contractor, permit holder or a midstream operator shall ensure that all electrical installations are designed with safeguards and other necessary protection that prevent abnormal conditions or faults that might result in danger to workers and the facility in accordance with any approved standards and best petroleum industry practices. (2) A contractor, permit holder or a midstream operator shall implement the necessary measures to prevent injury to persons and minimise hazards, incidents and accidents during work near live installations, in or near earthed and short-circuited installations, and during operation of low and high voltage installations.

	(3) Electrical installations shall be equipped with a lightning protection system and be designed with adequate protection against— (a) electrical shock during normal use and in the event of faults; (b) thermal effects; (c) over current; (d) fault currents; (e) over voltage; (f) under voltage; (g) variations in voltage and frequency; (h) power supply failure; (i) ignition of explosive gas atmosphere, electromagnetic disturbances; and (j) health hazard as a result of electromagnetic fields. (4) Electrical installations shall have an earthing system installed to prevent static electricity in connection with explosive atmospheres. (5) A contractor, permit holder or a midstream operator shall designate a competent person or a worker responsible for the electrical installations.
Safety procedures in electrical installations.	**57.** A contractor, permit holder or a midstream operator shall ensure— (a) that all testing or work performed on electrical equipment is performed by a certified person or worker; and (b) where a worker is at risk of electrical shock during the performance of testing or work, that the worker— (i) has been trained in the use of the insulated protection equipment and tools; and (ii) uses appropriate insulated protection equipment and tools to prevent injury.
Lifting appliances and operations.	**58.** (1) A contractor, permit holder or a midstream operator shall ensure that lifting appliances and operations comply with requirements of the relevant Kenyan law, approved standards and best petroleum industry practices. (2) A contractor, permit holder or a midstream operator shall ensure that the standards selected for the operation and maintenance of lifting appliances adequately consider operational conditions and the likely range of climatic conditions. (3) A contractor, permit holder or a midstream operator shall designate a person responsible to ensure that any lifting operations are carried out using lifting appliances specially designed for that purpose and certified by an inspector. (4) A contractor, permit holder or a midstream operator shall ensure that any equipment for lifting workers is designed to ensure safety for all the workers carrying out activities above normal work height.

	(5) A contractor, permit holder or a midstream operator shall establish procedures to ensure that lifting appliances and equipment are inspected— (a) prior to entry into operation; (b) following any repair or modification for the purposes of recertification; and (c) at regular intervals during the period the lifting appliances and equipment are in use. (6) During all lifting operations, a contractor, permit holder or a midstream operator shall implement communication procedures among all workers involved.
Mobile equipment.	**59.** (1) A contractor, permit holder or a midstream operator shall ensure that— (a) all powered mobile equipment shall be maintained in good functional order, and shall be operated in a manner that prevents undue danger to human life or harm to the environment; (b) where mobile equipment may be operated during hours of darkness, adequate light shall be provided and used; (c) where mobile equipment may be used in locations or under conditions where there is a danger of falling objects, an overhead guard with shelter shall be provided to protect the occupants from over-head hazards and adverse weather conditions; (d) any cab or similar means of enclosure on mobile equipment has adequate means of ventilation; (e) a guard shall be installed to protect a driver of equipment where mobile equipment uses hosting or hauling ropes; (f) mobile equipment shall be only operated by a competent and qualified driver; (g) a worker designated by a contractor, permit holder or a midstream operator to drive the mobile equipment shall operate the equipment in a safe manner; and (h) a designated signal-man shall be used to ensure safe operation where a driver's vision may be obstructed. (2) A contractor, permit holder or a midstream operator shall ensure that all powered mobile equipment are designed, constructed, tested, inspected and maintained in accordance with the approved standards.
Pressure vessels.	**60.** (1) A contractor, permit holder or a midstream operator shall ensure that boilers and unfired pressure vessel used in connection with upstream and midstream are; (a) designed, constructed, installed and maintained in accordance with any applicable Kenyan laws, approved standards and best petroleum industry practices.

	(b) inspected and tested by a independent competent body approved by the Authority before their initial use and subsequently, on a regular basis, in accordance with any applicable Kenyan laws, approved standards and best petroleum industry practices.
Rotating machinery.	**61.** Any rotating machinery and the components thereof shall be designed and installed in a manner that minimizes any risk to people, property and to the environment.
Valves and actuators.	**62.** Machinery and plant that uses valves which pose significant risks to safety shall be tested in accordance with the approved standards and best petroleum industry practices.
Division 5 – Operational Safety	
Sub-Division 1 – General Requirements	
Operational permits.	**63.** (1) Where a contractor, permit holder or a midstream operator may apply for any permit from the Authority under any regulations in respect of any operation or activity the Authority shall consider any implicated environmental, safety or health concerns. (2) The Authority may require any additional document or information or make any inquiry as it sees fit in order to verify that that environmental, safety or health concerns are appropriately considered. (3) The Authority may only issue an approval permit in respect of any upstream and midstream operation or activity under these or any regulations where it is satisfied that any potential environmental, safety or health risks have been appropriately considered and mitigated.
Coordination of safety work.	**64.** A contractor, permit holder or a midstream operator shall coordinate the operation of safety systems for all operations at a facility.
Support services.	**65.** A contractor, permit holder or a midstream operator shall have procedures and measures intended to ensure the safety, reliability and integrity of— (a) fire-fighting services; (b) transport services; (c) supply services; (d) control and emergency centres; (e) rescue and evacuation services; (f) suppliers of alternative emergency services; and (g) safety and health at work service.
Preparation for operation.	**66.** Prior to the entry into operation of an installation, a contractor, permit holder or a midstream operator shall establish a programme for the control and management of safety, the results of which shall be documented.
	(a)

Offshore communication.	**67.** (1) For all manned offshore facilities, the contractor, permit holder or midstream operator shall ensure that working radio or telephone communication lines are in place between the facility and an onshore base. (2) Unless a person-in-charge has ordered that operations may temporarily preclude it, radio or telephone communications shall be made from the onshore base to the facility at least once in each period of three hours. (3) A contractor, permit holder or midstream operator shall ensure that suitable transportation is readily available to enable transport to the offshore facility, in the event that the onshore base is unable to make contact with a manned offshore facility, except for planned communication outages.
Control and monitoring of vessel and aircraft.	**68.** A contractor, permit holder or midstream operator shall ensure that any transportation by a vessel or aircraft between an onshore base and an offshore facility is controlled and monitored from the onshore base or the offshore facility or both.
Decommissioning.	**69.** (1) In executing decommissioning operations a contractor, permit holder or midstream operator shall— (a) restore and remediate the relevant area to as near original state as possible prior to the operations as far as is practicable or to such state as is otherwise provided in the approved final decommissioning plan; (b) ensure the safety of local communities in the areas previously subjected to the upstream and midstream; (c) ensure the removal, reuse, recycling and disposal of materials and equipment resulting from the dismantling of facilities; and (d) ensure correct handling, treatment, transport and final disposal of all the waste produced, in compliance with Kenyan law and Best Petroleum Industry Practices.
Sub-Division 2 – Safety Zones	
Safety zones.	**70.** (1) The Cabinet Secretary may on advice by the Authority, determine the extent of each safety zone surrounding every— (a) upstream petroleum facility; and (b) midstream pipeline and storage facility unless the Cabinet Secretary decides, on advice by the Authority, that a safety zone is considered unnecessary in light of the risks to safety and health posed in the circumstances. (2) A safety zone may comprise of any geographical area around, above or below the facilities. (3) A contractor, permit holder or midstream operator may propose the vertical and horizontal extent of the safety zone with respect to the position of the relevant pipeline or facility in accordance with best petroleum industry practices.

	(4) An offshore safety zone established under this regulation shall have an area extending five hundred (500) metres— (a) from any part of a fixed or mobile facility used in upstream and midstream operations and around said facility; and (b) from the central point of a pipeline or subsea equipment.
Safety zone restrictions.	**71.** (1) No unauthorised person, vehicle or vessel shall enter, pass, stay or operate in the safety zone, without the permission of the contractor, permit holder or midstream operator in control of the safety zone, except— (a) a person or vehicle that enters, passes or stays in the safety zone of buried sections of an onshore pipeline and that does not cause ground disturbance; or (b) a vessel that passes or operates in the safety zone of a pipeline or subsea equipment without anchoring or trawling and that maintains a minimum vertical distance of five hundred (500) metres between its keel and said pipeline or subsea equipment. (2) The safety zone shall not limit activities which are specifically permitted in accordance with the Act or which constitute official activities of the contractor, permit holder or midstream operator.
Coming into force.	**72.** (1) Prior to the coming into force of a safety zone, the Cabinet Secretary shall cause to be published in the Kenya Gazette the following details— (a) the global positioning system coordinates of any safety zone and any relevant addresses; (b) any identifying features of installations in the safety zone or its surrounding environment; and (c) any restrictions regarding entry into or performance of any activity in the safety zone. (2) Sub-regulation (1) shall not apply where a safety zone is established or extended in case of accident or emergency.
Safety zone in cases of emergency.	**73.** The Cabinet Secretary may, upon advice by the Authority, in cases of accidents and emergencies establish a new safety zone or extend an existing safety zone where this is considered necessary to prevent or limit— (a) risk of injury or loss of life; (b) significant damage to facilities or surrounding property; (c) pollution or other environmental damage; or (d) substantial interruption to production.
Monitoring of safety zones.	**74.** A contractor, permit holder or midstream operator shall— (a) monitor all activities inside the safety zones relating to the facilities;

	(b) monitor activities proximate to the facilities for potential risks to safety of the upstream and midstream; and (c) refuse entry to unauthorised persons, vehicles and vessels.
Offshore safety zones.	**75.** A contractor, permit holder or midstream operator of a facility within a safety zone located offshore shall— (a) alert a vessel about to enter a safety zone when it has no right to enter such area; (b) alert vessels outside a safety zone if the vessels may constitute a danger to safety of the upstream and midstream; (c) to the extent possible, refuse to allow an unauthorised vessel entry into the safety zone; (d) request the Kenya Maritime Authority to— (i) issue notices to mariners and navigational warnings under section 219 of the Merchant Shipping Act, 2009 about the safety zone; (ii) consent to temporary or permanent aids to navigation established under sub-section 221(2) of the Merchant Shipping Act, 2009 and necessary for the safety zone.
Notification.	**76.** (1) A contractor, permit holder or midstream operator shall within forty-eight (48) hours inform the Authority in writing of— (a) any violation of a safety zone; and (b) any activity in or near a safety zone which may constitute a serious danger to safety of upstream and midstream operations, facilities, the public and personnel. (2) The Authority shall notify the Cabinet Secretary upon receiving any notification under sub-regulation 1(a) or 1(b) and advise the Cabinet Secretary on whether to extend the safety zone.
Sub-Division 3 – Pipeline and Storage Facility Safety	
Special provisions on pipeline and storage facility signage.	**77.** (1) Prior to the commencement of the operation of a pipeline or a storage facility, a midstream operator shall install warning signs to inform the public on the location of the pipeline and attendant dangers. (2) A operatorcontractor, permit holder or midstream operator shall install and maintain warning signs in a prominent, visible location, and in accordance with standards approved by the Authority and best petroleum industry practices. (3) Where a pipeline crosses a road, railway or watercourse, a contractor, permit holder or midstream operator shall install a pipeline warning sign on both sides of the crossing point. (4) A contractor, permit holder or midstream operator shall put in place measures for way leave security and maintenance using best petroleum industry practices.

Procedures for incidents and emergencies for pipeline and storage facility systems.	**78.** Prior to the commencement of the operation of a pipeline or storage facility, a midstream operator shall ensure that procedures and measures are in place to deal with— (a) the accidental loss of petroleum from the pipeline or storage tank; (b) the discovery of a defect in or damage to the pipeline or storage tank or of any other emergency affecting the pipeline or storage tank; and (c) the failure of any ancillary system.
Safe operating practices for pipeline and storage systems.	**79.** A midstream operator shall ensure that the safety case for operation of a pipeline or storage facility shall include the development, review and maintenance of site-specific operating standards outlining the procedures to be followed during operations.
PART IV – OCCUPATIONAL HEALTH AND SAFETY	
Division 1 – General Requirements	
Duty to maintain a healthy environment.	**80.** (1) A contractor, permit holder or a midstream operator shall ensure that work at all levels of the facility complies with the Act, these Regulations, and the approved standards on occupational safety and health, best petroleum industry practices, and any other applicable Kenyan laws. (2) A contractor, permit holder or a midstream operator shall— (a) establish goals related to the occupational safety and health; (b) focus principally on preventing the occurrence of incidents, accidents or hazardous situations; (c) ensure continuous monitoring and control of the working environment and the health of the workers when necessitated by risk factors in a facility or during upstream and midstream; (d) make a survey of hazards and carry out a risk assessment for each operation; (e) ensure systematic prevention, management and follow-up on workers who are absent from work due to sickness; and (f) ensure continuous systematic improvement of safety and health procedures and outcomes.
Alcohol and intoxicants	**81.** (1) A contractor, permit holder or a midstream operator shall ensure that— (a) no workers are under the influence of alcohol or other intoxicants while working in the course of upstream and midstream; and (b) no alcoholic beverages or any other intoxicants are allowed to be brought on to or consumed at a workplace or site of the upstream and midstream.
Fatigue and excessive exposure to hazardous conditions.	**82.** (1) A contractor, permit holder or a midstream operator shall ensure that workers shall not work for—

	(a) a continuous period; or (b) successive continuous periods for a duration that could reasonably be expected to have an adverse effect on the worker's safety and health or that of any other person. (2) A contractor, permit holder or a midstream operator shall ensure that working hours and shift schedules take into account the need to minimise periods of prolonged of exposure of workers to hazardous conditions including exposure to— (a) extreme temperatures; (b) noise or vibrations; (c) adverse weather and external atmosphere; (d) dangerous emissions; or (e) confined spaces.
Asphyxiant gas.	**83.** (1) A contractor, permit holder or a midstream operator shall institute measures to prevent the risk of release and accumulation of gases into a work environment likely to create asphyxiating conditions due to displacement of oxygen. (2) Prevention and control measures to reduce risks of asphyxiant gas release under sub-regulation (1) may include— (a) design and placement of nitrogen or any other asphyxiant gas venting systems according to approved standards and best petroleum industry practices; (b) installation of an automatic emergency shutdown system which can— (i) detect and warn of the uncontrolled release of asphyxiant gases; (ii) initiate forced ventilation; and (iii) minimise the duration of releases; and (iv) implementation of confined space entry procedures as may be considered appropriate under best petroleum industry practices.
Radiation protection.	**84.** (1) A contractor, permit holder or a midstream operator shall minimise the use of radioactive substances in operations, and where radioactive substances are used, ensure safe transportation, handling, storage and disposal of the radioactive substances in accordance with the Material Safety Data Sheet from the manufacturer. (2) Prior to the commencement of the operation, a contractor, permit holder or a midstream operator shall install warning signs to inform the public on the location of the radioactive material which may pose dangers. (3) A contractor, permit holder or a midstream operator shall handle, store, transport or dispose of radioactive substances in accordance with the approved standards, best petroleum industry practices, and any other applicable Kenyan laws.

	(4) A contractor, permit holder or a midstream operator shall ensure that all workers and any other persons present at facilities are informed of and protected against the dangerous effects of radiation.
Noise and Vibrations.	**85.** (1) A contractor, permit holder or a midstream operator shall ensure that a facility is operated in accordance with any approved standards and best petroleum industry practices with respect to the presence of noise and vibrations. (2) A contractor, permit holder or a midstream operator shall ensure that a facility is operated in a manner that— (a) reduces the risk of injury to workers due to exposure to noise and vibrations; (b) ensure that the noise level and acoustics do not preclude communication of significance to safety; and (c) ensures that the noise level in any worker break rooms, accommodation or recreation areas is reduced as much as possible. (3) A contractor, permit holder or a midstream operator shall continuously monitor and record noise and vibrations levels and shall make all records available to the Authority on request.
Lighting.	**86.** (1) A contractor, permit holder or a midstream operator shall ensure adequate lighting for the performance of all work at the facility. (2) A contractor, permit holder or a midstream operator shall ensure lighting at the facility complies with applicable national and international standards, taking into account— (a) the type of activity; (b) the suitable distribution of lighting appliances; and (c) the harmonisation of light colour with the prevailing context in the facility.
Division 2 – Chemicals and Hazardous Substances	
Exposure to chemicals and hazardous substances.	**87.** (1) A contractor, permit holder or a midstream operator shall use best endeavours to ensure the use, emission, release and discharge of any chemicals and other hazardous substances into the environment are minimized or eliminated. (2) In selecting and applying equipment and systems for storage, use, recovery and destruction of chemicals and other hazardous substances, a contractor, permit holder or a midstream operator shall take the following into consideration— (a) the safety and health of workers; (b) corrosion or other forms of material decomposition; (c) fire and explosion hazards; and (d) the risk of pollution.

Permit to use hazardous substances.	**88.** (1) A contractor, permit holder or a midstream operator shall apply for a permit to use chemicals and other hazardous substances from the Authority in the prescribed form set out in Third Schedule and upon payment of the prescribed fee. (2) The Authority shall evaluate an application for a permit under this section and communicate its decision to the applicant within thirty (30) days after receipt of the application. (3) The Authority may issue a permit under this section in the prescribed form set out in Third Schedule. (4) Where the Authority declines to issue a permit to an applicant, the Authority shall give a written communication to the applicant within thirty (30) days providing its reasons for the refusal.
Handling of chemicals and hazardous substances	**89.** (1) A contractor, permit holder or a midstream operator shall comply with all provisions of relevant Kenyan law and best petroleum industry practice on the importation, transportation, storage, use and disposal of chemicals, chemical products, chemicals and other hazardous substances. (2) The Authority may develop guidelines relating to the use of and presence of chemicals and other hazardous substances in upstream and midstream operations.
Explosives	**90.** A contractor or midstream operator who intends to use explosives in upstream and midstream petroleum operations shall do so in accordance with the applicable Kenyan law, these Regulations, best petroleum industry practices and other applicable guidelines.
Environment, Safety and Health assessment.	**91.** (1) A contractor, permit holder or a midstream operator intending to construct or operate a facility, process plant or technology that utilizes chemicals and other hazardous substances shall undertake an Environment Impact Assessment in accordance with the EMCA and its regulations.. (2) A contractor, permit holder or a midstream operator intending to store, transport, handle, import, export, use, manufacture, or distribute chemicals and other hazardous substances shall undertake a hazard and risk assessment in relation to that planned activity.
Labelling and packing of chemicals and hazardous substances.	**92.** (1) A contractor, permit holder or a midstream operator shall ensure that all containers of chemicals, chemical products or hazardous substances used at the facility or in operations are labelled and packaged in a manner that— (a) is legible or easily intelligible to workers and of an appropriate size; (b) uses uniform symbols and durable colours; and (c) complies with all applicable Kenyan laws and regulations; and includes— (i) the commercial name and identification of the chemical product, including batch of manufacture and supplier;

	(ii) the classification of the product according to the relevant national and international standards; (iii) the identification of specific risks associated with the use of the chemical product; and (iv) any relevant safety precautions. (2) A contractor or a midstream shall maintain material safety data sheets for all chemicals and hazardous substances within the facility, following the format provided in the Fourth Schedule.
Operations involving hazardous substances.	**93.** (1) A contractor, permit holder or a midstream operator shall maintain an up-to-date inventory of chemicals and other hazardous substances and products stored on premises or used in operations including information on— (a) physical, chemical and hazardous properties; (b) preventive safety measures; and (c) first-aid treatment. (2) A contractor, permit holder or a midstream operator shall regularly control and assess the levels of exposure of workers to chemicals and other hazardous substances and products. (3) A contractor, permit holder or a midstream operator shall adopt all reasonably practicable measures to protect workers from exposure to chemicals and hazardous substances including— (a) displaying signs at appropriate distances warning of the presence of chemicals and other hazardous substances; (b) training workers in the safe use of chemicals and other hazardous substances to ensure that workers— (i) recognize and understand the nature of the relevant risks involved in their activities; and (ii) adopt appropriate safety measures. (c) providing suitable personal protective equipment; (d) ensuring first aid measures and emergency procedures are adopted in case of accident; and (e) providing toxic gas detection and protection systems with alarms.
Notification to the Authority.	**94.** A contractor, permit holder or a midstream operator shall notify the Authority of all chemicals or hazardous substances present or likely to be present at facilities or to be used in operations using the form provided in Fifth Schedule— (a) thirty (30) days before the commencement of installation or operation of a facility; (b) every six (6) months after the initial notification under subparagraph (a); and (c) in relation to facilities existing at the date of commencement of these Regulations, within sixty (60) days from that date.

Division 3 – Personal Protective Equipment	
General requirement.	**95.** (1) A contractor, permit holder or a midstream operator shall ensure that all workers use personal protective equipment which is appropriate for the risks associated with operations and the environment including, but not limited to clothing, respiratory devices, and protective shields and barriers specifically designed to protect the face, head, body, sensory functions and extremities. (2) A contractor, permit holder or a midstream operator shall provide personal protective equipment and ensure that it is maintained in a sanitary and reliable condition. (3) A contractor, permit holder or a midstream operator shall ensure that any person within a facility who is likely to be exposed to a hazard, uses protection equipment in accordance with these Regulations and best petroleum industry practices. (4) A contractor, permit holder or a midstream operator shall ensure protection equipment shall— (a) be designed to protect the person from the incident, hazard or accident; (b) not in itself create a hazard; (c) be maintained, inspected and tested by a competent person; and (d) be maintained in a clean and sanitary condition by a competent person. (5) A contractor, permit holder or a midstream operator shall ensure that any person likely to be exposed to dangers in operations involving moving vehicles wears a high-visibility vest or other high-visibility clothing.
Hazard assessment.	**96.** (1) A contractor, permit holder or a midstream operator shall develop a hazard assessment report which assesses the workplace to determine the nature and extent of likely hazards which necessitate the use of personal protective equipment. (2) The hazard assessment report shall support the selection of personal protective equipment and shall, at a minimum, consider the use of the following— (a) head protection; (b) eye and face protection; (c) protective footwear and hand wear; (d) respiratory protection; (e) skin and special clothing; (f) fall-protection systems; (g) protection against drowning; (h) protection from extreme temperatures and (i) protection from excessive noise and vibrations. (3) The hazard assessment report shall be updated when so required and in any case, at least once every year. (4) A contractor, permit holder or a midstream operator shall—

	(a) communicate personal protective equipment requirements to the workers; (b) ensure that personal protective equipment provided to workers properly fit to perform their intended functions; and
Training.	**97.** (1) A contractor, permit holder or a midstream operator shall provide training on personal protective equipment and require workers to demonstrate a proper understanding of at least the following— (a) the situations necessitating personal protective equipment; (b) the relevant type of personal protective equipment for each situation; (c) any limitations of the personal protective equipment; (d) the proper use and adjustment of personal protective equipment; and (e) the proper care, maintenance, useful life and disposal of the personal protective equipment. (2) A contractor, permit holder or a midstream operator shall ensure that training is provided at regular intervals and that additional training is provided in situations where— (a) any changes in the work environment or in the nature of personal protective equipment used may necessitate further training to maintain an acceptable level of safety; or (b) a worker demonstrates any insufficiency in knowledge or use of assigned types of personal protective equipment.
Division 4 – Medical Examinations	
General requirements.	**98.** (1) A contractor, permit holder or a midstream operator shall ensure— (a) the readiness and availability of medical personnel for advice and consultation on matters relating to the risk factors of a facility; and (b) that workers receive necessary treatment and care in the event of an incident or accident. (2) In the absence of an infirmary, clinic, or hospital in near proximity to the facility which is used for the treatment of all injured workers, a contractor, permit holder or a midstream operator shall adequately train sufficient number of workers to render first aid. (3) Subject to the consent of the worker, the medical personnel shall notify a contractor, permit holder or a midstream operator of any occupational disease or injury and a contractor, permit holder or a midstream operator shall immediately and in any case not later than twenty-four (24) hours arrange for the necessary medical care to the worker.
Medical facilities and first aid services.	**99.** (1) A contractor, permit holder or a midstream operator shall provide adequate first aid and emergency medical facilities to

	deal with incidents, hazards or accidents likely to occur in a facility or during upstream and midstream. (2) A contractor, permit holder or a midstream operator shall undertake first aid needs assessment and revise it regularly whenever there are changes in the processes. (3) A contractor, permit holder or a midstream operator shall provide a first aid box, first aid station or first aid room as appropriate and affix a notice in every workroom including the name and contact of a person-in-charge of the first aid who shall be readily available during working hours. (4) In addition to requirements under sub-regulations (1) and (3), a contractor, permit holder or a midstream operator shall maintain— (a) a portable oxygen inhalation rescue apparatus in the facility or during upstream and midstream; and (b) where the eyes or other parts of the body of a person may be exposed to injurious corrosive materials, suitable facilities for quick drenching or flushing of the eyes and body shall be provided within the work area for immediate emergency use.
Medical examinations for workers.	**100.** (1) A contractor, permit holder or a midstream operator shall ensure that workers— (a) are offered regular medical examinations by a medical professional with training and experience in occupational health and at no cost to the worker to establish any effects or sickness arising from occupational hazards; and (b) undertake medical examination before they are assigned work that is likely to have health risks, so that preventive measures can be implemented. (2) A worker who has undergone medical examination shall have access to the results of the examination and an explanation of the results. (3) A contractor, permit holder or a midstream operator shall ensure the confidentiality of medical records, according to the general principles of medical ethics. (4) A worker who has been subjected to hazardous exposure in his or her employment, shall be offered special health examinations at the cost of a contractor, permit holder or a midstream operator, so that any necessary corrective measures can be implemented.
Offshore workers.	**101.** A contractor, permit holder or a midstream operator shall ensure that – (a) offshore workers undergo periodic examinations to confirm that they are in good conditions of physical and mental health and free from alcohol or drug dependency; (b) offshore workers are declared to be clinically fit to work in an offshore environment after examinations carried out in accordance with the

	applicable Kenyan safety and health laws for work at sea; and (c) workers conducting diving operations have a valid medical certificate establishing that the diver is fit to dive in accordance with the fitness requirements in any approved standards. (d) ensure that offshore workers have undertaken safety and emergency training.
Information.	**102.** (1) A contractor, permit holder or a midstream operator shall post and keep posted in accessible, conspicuous locations in a workplace, the following— (a) information regarding first aid to be rendered for any injury, occupational disease or illness likely to be sustained or contracted in the workplace; and (b) information regarding the location of first aid attendants, first aid stations and first aid rooms. (c) A safety score board indicating all near misses, accidents and fatalities that have occurred in respective years in all of the premises held by a contractor, permit holder or a midstream operator. (2) A contractor, permit holder or a midstream operator shall ensure that an up-to-date list of telephone numbers for use in emergencies is available and conspicuous at every telephone location.
Ambulance Stations.	**103.** (1) During upstream and midstream operations, a contractor, permit holder or a midstream operator shall provide means for prompt transportation of injured persons to an equipped physician or hospital, or a communication system for contacting a readily available equipped ambulance service. (2) The emergency medical transportation, where provided by a contractor, permit holder or a midstream operator, shall be equipped with the first aid kit as provided for under these Regulations and shall include resuscitation apparatus and other special equipment for emergency treatment.
Training of rescue teams and persons in first aid.	**104.** A contractor, permit holder or a midstream operator shall ensure workers undergo annual training in the use and maintenance of emergency rescue equipment, first aid and resuscitation apparatus.
PART V – ENVIRONMENTAL PROTECTION	
Environmental impact assessment.	**105.** Where a contractor, permit holder or midstream operator proposes any action governed by these Regulations which either— (a) may require an environmental impact assessment study under the applicable Kenyan laws; or (b) may be related to an activity which is subject to environmental impact assessment, the contractor, permit holder or midstream operator shall obtain an environmental impact assessment licence from NEMA in relation to the proposed project and that any application for an

	approval relating to the proposed project shall be accompanied with the relevant environmental impact assessment report.
Climate change obligations.	**106.** The contractor, permit holder or midstream operator shall comply with any climate change obligations imposed by any applicable Kenyan laws and international climate obligations. (2) In considering an application for an approval under these regulations, any government entity with responsibility under these Regulations may require applicants to provide information in their submissions to enable a consideration of the consistency of proposed action with any— (a) any applicable climate change policy, strategy or plan; and (b) any climate change duties imposed by any applicable Kenyan law.
Pollution prevention.	**107.** At all phases of activities, including planning, designing, commissioning, installing, operating and decommissioning all facilities and undertaking any related activity, the contractor, permit holder or midstream operator shall— (a) give due consideration to any pollution risks implicated by activities generally; and (b) any elevated risks presented by any particular environmental, cultural or other context to activities including, but not limited to, factors such as the presence of special context related to— (i) the environment; (ii) biodiversity; (iii) natural resources; (iv) societal and cultural heritage; and (v) any other relevant social or environmental factors.
Emissions	**108.** During all upstream and midstream operationsthe contractor, permit holder or midstream operator shall— (a) comply with all applicable Kenyan environmental regulations concerning environmental protection including pollution prevention, air emissions, air quality monitoring and reporting; and (b) take into account the need to provide robust, accurate means of preventing emissions and monitoring and controlling air quality.
Environmental restoration funds	**109.** A contractor or midstream operator shall provide a fund for the purposes of environmental mitigation and/or restoration in accordance with EMCA 1999.
Environmental Liability Policy	**110.** (1) A contractor, permit holder or midstream operator shall provide an Environmental Liability Policy in accordance with the Act (2) The Environmental Liability Policy shall; a. be in the form of an insurance cover; b. cover the potential costs as may be determined by the Authority using the Guidelines in Schedule 18;

	(3) The authority may in consultation with NEMA, coordinate and evaluate the remediation and restoration works before attesting completion and discharging the contractor, permit holder or midstream operator; (4) If the contractor, permit holder or midstream operator is not discharged under sub-regulation 1, and refuses to carry out additional works as prescribed by the Authority, the Authority will; a. notify the contractor, permit holder or midstream operator of its default b. carry out the said works at the contractor's or midstream operator's expense; and c. Recoup from the contractor, permit holder or midstream operator or its insurer under this regulation, any direct or indirect costs associated with the said works.
Division 1 – Waste Management General Requirements	
Application.	**111.** A contractor, permit holder or a midstream operator shall ensure that waste deriving from upstream and midstream petroleum operations and any other associated operational wastes is managed in accordance with the Act, these Regulations, all applicable Kenyan environmental, safety, health and maritime laws and best petroleum industry practices.
General requirements.	**112.** (1) A contractor, permit holder or a midstream operator may only transfer waste to companies or individuals that hold a valid licence from NEMA for waste transportation, storage, treatment or final disposal. (2) A contractor, permit holder or a midstream operatorshall be liable for the management of production, transportation, storage, treatment and disposal of wastes for the activities or omissions of the companies or individuals referred to in sub-regulation (1).
Waste generators.	**113.** (1) A contractor, permit holder or a midstream operator that generates wastes shall ensure that— (a) it adopts policies, processes and procedures aimed at minimising wastes deriving from upstream and midstream as far as practicable; (b) appropriate practices are adopted for waste storage, transportation, treatment, disposal and utilisation; (c) waste deriving from upstream and midstream is correctly characterized and classified; (d) the capabilities and limitations of any waste treatment and disposal methods are known; (e) accurate and complete waste related documentation and manifesting is developed and maintained; (f) its workers are properly trained in waste management; (g) waste carriers and receivers are appropriately informed about the waste's properties;

	(h) the required approvals and operational requirements are in place for any on-site handling, transportation, treatment, and disposal method; and (i) a waste management provider shall have the required approvals and operational requirements in place for off-site handling, transportation, treatment and disposal. (2) (a) A contractor, permit holder or a midstream operator shall maintain all facilities, vessels, worksites and any other relevant location in such manner which ensures that waste does not pose safety hazard or nuisance or adversely affect air, soil, surface water or groundwater. (b) A contractor, permit holder or a midstream operator shall be liable for the activities or omissions of parties to whom it may transfer waste in the course of the waste management activities.
Waste management plan.	**114.** (1) Prior to commencing of any upstream and midstream that may generate waste, a contractor, permit holder or a midstream operator in consultation with the Authority shall develop a waste management plan and submit it for approval to NEMA and any other relevant entity. (2) The waste management plan shall— i. comprehensively identify all wastes that will be generated; ii. establish a clear strategy for waste management, including options for waste elimination, reduction and recovery at source, reuse, recycling, treatment and responsible disposal in accordance with best petroleum industry practices and best available technologies; and iii. contain a mechanism allowing waste consignments to be tracked from the originating location to the final waste treatment and disposal location.
Characterisation and classification	**115.** (1) A contractor, permit holder or a midstream operator that generates waste shall characterise and segregate waste by separating hazardous waste from non-hazardous waste. (2) Characterisation, classification and management of hazardous waste shall be conducted in accordance with the applicable Kenyan law, these Regulations, best petroleum industry practices and other applicable guidelines. (3) A contractor, permit holder or a midstream operator shall use the relevant parameters of the waste characterisation and classification to assess and determine the appropriate handling, transportation, treatment, and disposal of that waste, in accordance with the waste management plan.
Waste tracking and transportation.	**116.** (1) A contractor, permit holder or a midstream operator that generates waste shall implement a waste tracking system which ensures that the quantities and characteristics of all

	generated wastes, both hazardous and non-hazardous, as well as their final treatment and disposal methods are known. (2) NEMA shall require a contractor, permit holder or a midstream operator to prepare an annual waste disposal report. These reports shall contain information on the type, quantity and ultimate treatment and/or disposal of wastes, including those treated and/or disposed on-site. (3) A contractor, permit holder or a midstream operator that is responsible for shipping hazardous waste to another location shall create a waste manifest prescribed in the Sixth Schedule. (4) A waste manifest shall not be required— (a) when the quantity of waste does not exceed 5 kilograms or 5 litres; (b) when the waste is treated or disposed on-site; or (c) when the waste is uncontaminated produced water. (5) A copy of a manifest and supporting documents shall be retained by a contractor, permit holder or a midstream operator that generates waste, transporter, and waste receiver for a minimum of two (2) years from the date of shipment.
General manifest requirements.	**117.** (1) Except when otherwise prescribed in these Regulations, a manifest is required for each quantity of hazardous waste being transported. (2) Where one vehicle, vessel or other means of transportation is used for single or multiple trips to move wastes, a waste manifest shall be required for each trip. (3) Where more than one vehicle, vessel or other means of transportation is used or multiple trips are required to move a quantity of the specific waste, a waste manifest shall be required for each vehicle, vessel or other means of transportation and for each trip. (4) Shipments of mixed wastes comprised of several waste types shall be manifested as the most dangerous waste contained if the individual quantities of each waste type are not known. A contractor, permit holder or a midstream operator that generates waste shall indicate the total quantity of the waste on the manifest. The waste generator shall indicate on the manifest or attachment the waste types included in the mixed waste shipment.
Manifest discrepancies.	**118.** (1) If the receiver notes a significant discrepancy regarding either the quantity or characteristics of the waste shipped relative to what was received, the receiver shall notify the generator and the transporter within twenty-four (24) hours of receipt of the waste. (2) In cases where a significant discrepancy is the result of an action by the transporter (i.e. accident, leak, etc.) the transporter shall notify the generator within twenty-four (24) hours of such occurrence. (3) As soon as practicable a contractor, permit holder or a midstream operator shall notify the Authority of any significant discrepancy by the quickest and most effective means available.

	(4) For discrepancies not considered to be significant, within sixty (60) days of the shipment date, a contractor, permit holder or a midstream operator shall complete the corresponding section of the manifest and submit it to the Authority.
Waste storage areas — general requirements.	**119.** (1) A waste storage area, either stand-alone or as part of a facility or other location of activities, shall be designed, constructed, and operated so that it complies with these Regulations, the approved standards and best petroleum industry practices. (2) When selecting the location of the waste storage area, a contractor, permit holder or a midstream operator shall consider the following— (a) the risk of environmental damage including any impact to the quality of surface and groundwater, health of humans, animals, and plants during construction, operation, and decommissioning of the facility; (b) drainage ways and areas prone to seasonal flooding; (c) the location for the facility should be at least 100 metres from the normal high-water mark of a body of water, permanent stream, or water well used for domestic purposes; and (d) any environmentally sensitive areas or areas where the public may be directly impacted. (3) Waste storage areas shall be handled in a manner to ensure that— (a) produced fugitive air emissions or uncontrolled gases do not exceed the limits established in the applicable Kenyan laws; (b) uncontrolled fumes or gases sufficient to pose a risk of fire or explosion are not produced; (c) there is no threat to public health, safety, or the environment through other means; (d) a perimeter fence or other barrier is installed to prevent public and wildlife access to the storage area; (e) storage areas have signs at the entrance of the facility identifying the facility name, operator name, warning signs, emergency phone number, and categories of the wastes stored in the storage area as characterised, and classified under these Regulations; (f) procedures and mechanisms to control odours are in place; and (g) the areas are suitable for the type of waste stored. (4) An emergency response plan shall be maintained on-site at all times which describes appropriate measures to follow in the event of any emergency such as a fluid spill, tank fire or any other hazard.

	(5) Any waste or empty barrels used to contain waste shall not be stored for longer than one (1) year. (6) A contractor, a midstream operator or an operator of waste storage areas shall document and retain on-site the following records for a period of not less than two (2) years— (a) copies of all dockets for materials received and shipped; (b) a balance of the amount of waste stored at the facility at the beginning of each month; (c) for each receipt of waste material, the quantity, source, generator, type (characterisation), and date received; and (d) a closing inventory balance for each month identifying total quantities of waste materials received, volumes of waste materials sent for treatment and/or disposal, and the name and location of the treatment and/or disposal facility.
Waste treatment facilities— General requirements.	**120.** (1) A contractor or a midstream shall ensure that a waste treatment facility shall be designed, constructed, and operated in accordance with these Regulations, the approved standards and best petroleum industry practices. (2) A contractor, a midstream operator or a third-party operating a waste treatment facility shall implement a comprehensive groundwater monitoring program for their site. (3) NEMA may require a contractor, a midstream operator operating a waste treatment facility to submit monthly reports including the following— (a) an opening monthly inventory balance of wastes, residuals (liquids and solids), and/or products (recovered crude oil); (b) type, volume, origin and generator of each receipt of waste material; (c) the volume and deliveries (name and location of facility) of residuals and/or recovered crude oil; and (d) a closing monthly inventory balance of wastes, residuals (liquids and solids), and/or products (recovered crude oil).
Division 2 – Petroleum Industry Waste	
Produced water.	**121.** (1) All produced water from a well shall be managed in accordance with these Regulations, approved standards and best petroleum industry practices. (2) A contractor shall evaluate all feasible alternatives for the management and disposal of produced water and integrate them into facility and production design such as— (a) injecting produced water into the reservoir to enhance oil recovery; (b) injecting produced water into a dedicated disposal well drilled to a suitable receiving subsurface geological formation; or

	(c) other uses for which the produced water may be safe and appropriate such as— (i) irrigation; (ii) dust control; (iii) use by other industry; or (iv) any other feasible use recommended by the relevant agency. (3) A contractor shall ensure that sufficient storage capacity is included in facility's design to ensure continual operation, in the event of system failure or interruption of the disposal solution. (4) A contractor shall consider all disposal means to reduce the volume of produced water. (5) A contractor shall treat any produced water prior to discharge to meet the limits established by NEMA. (6) Where surface disposal methods are used, a contractor shall select such production chemicals that will minimize environmental hazards related to residual chemical additives in the produced water stream, by considering their application rate, toxicity, bioavailability, and bioaccumulation potential.
Flowback fluids.	**122.** (1) All flowback fluids shall be managed in accordance with these Regulations, the approved standards and best petroleum industry practices. (2) A contractor shall evaluate and integrate into design feasible alternatives for the management and disposal of flowback fluids different and separate from those of produced water including— (a) temporary storage in sealed tanks for reuse in further hydraulic fracturing operations; and (b) temporary storage prior to injection into a suitable disposal well. (3) An assessment of alternatives shall be adequately documented by a contractor. (4) Where no alternatives are technically, environmentally or economically feasible, flowback water shall be treated to meet the limits established by NEMA prior to its disposal.
Hydrostatic water testing.	**123.** (1) A contractor shall manage hydrostatic water testing in accordance with these Regulations, the approved standards and best petroleum industry practices. (2) A contractor, permit holder or a midstream operator shall manage hydrostatic testing water in accordance with these Regulations, standards approved in the Authority and best petroleum industry practices as defined in said Regulations. (3) Following hydrotesting, hydrostatic testing waters may be disposed of by— (a) injection into a disposal well if one is available for this purpose; (b) other possible uses such as irrigation, dust control and use by other industry; or (c) discharge to surface waters or land,

	if the chemical nature of the test water is compatible with these options, and if no adverse environmental and/or human health impacts can be caused. (4) If a disposal well is unavailable and discharge to surface waters or land is necessary, a contractor, permit holder or a midstream operator shall consider the following pollution prevention and control measures— (a) reduce the need for chemicals by minimizing the time that test water remains in the equipment or pipeline; (b) carefully select chemical additives in terms of dose concentration, toxicity, biodegradability, bioavailability, and bioaccumulation potential; (c) conduct toxicity testing as necessary using recognized test methodologies; (d) use the same water for multiple tests; and (e) monitor hydrostatic test water quality before use and discharge and treat to meet the limits established by the Authority and NEMA prior to its disposal. (5) If significant quantities of chemically treated hydrostatic test waters are required to be discharged to a surface water body, a contractor, permit holder or a midstream operator shall conduct and document an assessment of alternatives.
Drilling waste.	**124.** (1) A contractor shall employ techniques and practices that minimize the amount of waste produced in the course of drilling. (2) A contractor shall consider alternative options with respect to management of drilling waste that may include one, or a combination of the following— (a) measures directed at minimizing volumes of drilling waste requiring disposal; (b) minimisation of environmental hazards related to residual chemical additives on discharged cuttings by careful selection of the fluid system and water-based drilling fluids shall be selected whenever it is technically feasible; (c) careful selection of drilling fluid additives, taking into account their concentration, toxicity, bioavailability and bioaccumulation potential; (d) use of high-efficiency solids removal and treatment equipment to reduce and minimize the amount of residual fluid contained in drilled cuttings; (e) use of directional drilling techniques where technically feasible to avoid sensitive surface areas and to gain access to the reservoir from less sensitive surface areas. (f) injection of drilling waste into a dedicated disposal well; (g) injection into the annular space of a well;

	(h) storage in dedicated storage tanks or lined pits prior to treatment, recycling, and/or final treatment and disposal; (i) monitor and minimize the concentration of heavy metal impurities in barite stock used in the fluid formulation. (j) on-site or off-site biological or physical treatment to render drilling waste non-hazardous prior to final disposal using established methods approved by the Authority and NEMA, in which case, bioremediation and landfarming alternatives shall be assessed prior to adoption; and (k) recycling of spent fluids back to the vendors for treatment and re-use. (3) A contractor shall treat and dispose of all drilling waste in accordance with these Regulations, the approved standards and best petroleum industry practices.
Radioactive sources.	**125.** (1) A contractor, permit holder or midstream operator shall within twenty four (24) hours notify the Authority and any other relevant government agency if it encounters radioactive materials in the process of its operations in accordance with Kenyan laws. (2) A contractor shall not abandon radioactive sources in a well without prior approval of the Authority in a case where radioactive sources cannot practicably be removed. (3) A risk assessment shall be carried out in relation to all wells which must be permanently abandoned as a consequence of radioactive sources which may have been left in the well. (4) Where a radioactive source cannot practicably be removed, the well shall be abandoned in a manner that ensures safety to human health and the environment in accordance with all relevant laws, the approved standards and best petroleum industry practices.
Produced sand.	**126.** (1) A contractor shall treat and dispose of all produced sand in accordance with these Regulations, the approved standards and best petroleum industry practices. (2) Produced sand shall be treated as oily waste and may be treated and disposed in accordance with these Regulations and other applicable Kenyan law. (3) If water is used to remove oil from produced sand, it shall be recovered and routed to an appropriate treatment and disposal system. (4) A contractor shall reduce the production of sand at source using effective downhole sand control measures.
Completion and well workover fluids.	**127.** (1) A contractor shall treat and dispose of all completion and well workover fluids in accordance with these Regulations, the approved standards and best petroleum industry practices. (2) Feasible disposal options for completion and well workover fluids shall be considered, including the following—

	(a) collection of fluids, where handled in closed systems, and shipment back to the original vendors for recycling; (b) injection into a disposal well, where available; (c) inclusion as part of the produced water waste stream for treatment and disposal; and (d) on-site or off-site biological or physical treatment at an approved facility in accordance with the waste management plan.
Naturally occurring radioactive materials.	**128.** (1) Where NORM is present or NORM precipitation and/or accumulation conditions are known or expected to exist, a contractor, permit holder or midstream operator shall develop a NORM management plan to ensure appropriate handling and management procedures. (2) A contractor shallsubmit for approval to the Authority a NORM management plan, which shall be shared with the Authority, NEMA and Radiation Protection Board. (3) A NORM management plan shall include the following— (a) identification, characterisation and assessment of existing situations involving the generation of NORM in the past, present or future; (b) evaluation of NORM management options for both existing and future NORM waste and selection of the optimum option; and (c) implementation of the optimum option for each NORM stream. (4) A contractor shall treat and dispose of NORM, in accordance with these Regulations, the approved standards and best petroleum industry practices. A contractor shall retain updated records related to the radiation exposure levels of equipment and the disposal of oil and gas NORM waste for a period of not less than ten (10) years.
Division 3 – Disposal Wells	
Disposal wells permit.	**129.** A contractor shall not dispose of petroleum waste, brine, wastewater and other substances produced in association with the exploration and production of petroleum into a formation not productive of petroleum without prior obtainment of a permit from the Authority.
Application process of disposal well permit.	**130.** (1) A contractor shall apply for a disposal well permit to the Authority in writing at least two (2) months before commencement of injection operations. (2) An application for disposal well permit shall include— (a) an application form provided in the Seventh Schedule; and (b) information regarding the locations of any historical seismic events within a circular area of 160 square kilometres, centred around the proposed disposal well location. (3) A contractor upon submission of an application shall pay a permit fee prescribed by the Authority.

Additional information.	**131.** Where conditions exist that may increase the risk that fluids will not be confined to the injection interval, the Authority may require a contractor to submit additional information to demonstrate that fluids will be properly contained.
Processing application for disposal well permit.	**132.** (1) On receipt of an application for a disposal well permit, the Authority shall notify the applicant in writing within seven (7) days if— (a) a contractor has failed to pay the prescribed fee; or (b) there is an error or deficiency in the application. (2) If the applicant fails to rectify an error or deficiency within the required period, the Authority shall— (a) not process the application, and (b) give notice to the applicant of its inability to process the application. (3) On receipt of a compliant application for a disposal well permit, the Authority shall— (a) acknowledge receipt of the application and confirm that the application is complete; and (b) arrange for and carry out a public consultation to— (i) identify all relevant stakeholders whose participation is desirable or whose interests may be affected by upstream and midstream subject to the permit; (ii) inform all identified stakeholders of the proposed procedure and schedule for the iteration of the permit application; (iii) sufficiently communicate to identified stakeholders the scope of the permit application under consideration to enable effective participation; and (iv) collect and facilitate feedback received from the stakeholders. (4) In conducting a public consultation under this regulation, the Authority shall adopt a procedure and schedule appropriate to ensure the contents of the permitting application and any proposed operations are fully considered by relevant stakeholders.
Issuance of disposal well permit .	**133.** (1) The Authority shall approve an application by issuing a disposal well permit if the Authority is satisfied that (a) the information provided in the permit application meets the requirements specified in the Eighth Schedule; and (b) a contractor has demonstrated that the formations are separated from freshwater formations by impervious beds which will give adequate protection to such freshwater formations. (2) The Authority shall acknowledge receipt of the application within one (1) week of receipt; and inform a contractor in writing of the decision of the Authority within two (2) months after the receipt of the application.

	(3) Where— (a) a contractor fails to pay the prescribed fee; or (b) there is an error or deficiency in the application, the Authority shall notify a contractor in writing within fourteen (14) days after the receipt of the application to rectify the situation. (4) If the applicant fails to rectify the deficiencies within the period specified in the notification provided in the preceding sub-regulation the Authority shall— (a) not process the application; and (b) give notice to the applicant of its inability to process the application. (5) The Authority shall reject an application if the proposed activities may result in the occurrence of any significant detrimental risk to the environment, private property, individuals or the public safety. (6) A disposal well permit shall be subject to such conditions as the Authority may specify. (7) A contractor is required to conduct operations related to disposal of petroleum waste, brine, wastewater and other substances produced related to operations in compliance with applicable Kenyan laws, standards, terms and conditions of the issued permit.
Duration and renewal of disposal well permit.	**134.** (1) A disposal well permit shall be valid for the period specified in the permit and may be renewed. (2) An application for the renewal of disposal well permit shall be submitted to the Authority by a Contractor not later than thirty (30) days prior to its expiration.
Permit suspension, modification, cancellation.	**135.** A disposal well permit may be modified, suspended, or terminated by the Authority for just cause after notice and opportunity for hearing, if— (a) a material change of conditions occurs in the operation or completion of the disposal well, or there are material changes in the information originally furnished; (b) freshwater is likely to be polluted as a result of continued operation of the well; (c) there are substantial violations of the terms and provisions of the permit or of Authority rules; (d) the applicant has misrepresented any material facts during the permit issuance process; (e) injected fluids are escaping from the permitted disposal zone; (f) injection is likely to be or determined to be contributing to seismic activity; or (g) waste of oil, gas, or geothermal resources is occurring or is likely to occur as a result of the permitted operations.

Division 4 – Flaring, Venting and Fugitive Emissions	
Sub-Division 1 – Flaring and Venting	
Venting and/or flaring approval.	**136.** (1) A contractor sub-contractor, permit-holder or licensee shall not vent or flare natural gas in the course of the conduct of upstream petroleum operations except with the prior authorization of the Authority in consultation with the National Government agency responsible for environment and safety and any other National Government entity in accordance with these Regulations. (2) The prior consent under sub-regulation (1) shall not be required— (a) in the case of an emergency and where such venting or flaring is necessary to avert a disaster; (b) for safety reasons, such as flaring in safety burner pilots to maintain positive pressure;
Flaring and/or venting approval application.	**137.** (1) A contractor, permit holder or a midstream operator shall apply for a flaring and/or venting approval to the Authority in writing at least two (2) months before commencement of operations or of each calendar year. (2) An application for a flaring and/or venting approval shall include— (a) an application form provided in the Ninth Schedule; (b) flaring and venting management plan which shall include matters outlined in Schedule 18; (c) information detailing the contractor's operations, and the expected flare and/or vent volumes associated with such operations; (d) the amount and quality of oil or natural gas involved and the duration of the requested venting/flaring; (e) an analysis of all feasible alternatives for associated gas's use; (f) information supporting that the flare and/or vent volume requested is at a level that is technically and economically justified; and (g) any other documents that may be requested by the Authority. (3) The Authority shall issue an approval on a field basis, or where several fields tie-in into common facilities, the contractor may apply for a single, composite approval. Approval for midstream operators may include the entirety of their facilities. (4) A contractor, permit holder or a midstream operator, upon submission of an application, shall pay a fee prescribed by the Authority.

Processing of flaring and/or venting application.	**138.** (1) On receipt of an application for flaring or venting, the Authority shall notify the applicant in writing within seven (7) days if— (a) a contractor, permit holder or midstream operator fails to pay the prescribed fee; or (b) there is an error or deficiency in the application. (2) If the applicant fails to rectify an error or deficiency within the required period, the Authority shall— (a) not process the application, and (b) give notice to the applicant of its inability to process the application. (3) The Authority shall inform a contractor, permit holder or midstream operator of its decision in writing within one (1) month after submission of a complete application.
Issuance of flaring and/or venting approval.	**139.** (1) The Authority, in consultation with NEMA, shall approve an application for flaring and/or venting if the Authority is satisfied that— (a) the information provided in the permit application meets the requirements specified in the Tenth Schedule; (b) flare and/or vent volume requested is at a level that is technically and economically justified; (c) flare and/or vent volume requested achieves the lowest level of flare/vent that is consistent with best petroleum industry practice; (d) all feasible alternative uses of the associated gas use have been evaluated; and (e) flaring/venting is necessary to safeguard the safety and health of persons in the contract area or to prevent damage to the property of any person. (2) An approval for flaring and/or venting issued by the Authority may be subject to such conditions as the Authority may specify. (3) A contractor, permit holder or a midstream operator shall conduct flaring and/or venting and related operations in compliance with all applicable Kenyan laws, standards, and any conditions of the issued approval.
Duration and renewal of flaring and/or venting approval.	**140.** (1) A flaring and/or venting approval shall be valid for one (1) year and may be renewed as necessary, upon application by a contractor, permit holder or a midstream operator. (2) Renewals are subject to the procedures outlined in these Regulations applicable to initial applications.
Amendment of flaring and/or venting approval.	**141.** (1) Where a contractor, permit holder or midstream operator wishes to make material changes to the conditions of an existing approval, a contractor, permit holder or midstream operator shall apply to the Authority for approval of the material changes in accordance with these regulations on flaring and/or venting approval. (2) Material changes may include, but are not limited to— (a) change of operator of the well or facility; and

	(b) an increase in volume of gas to be released.
Suspension, modification or cancellation of flaring and/or venting approval.	**142.** (1) The Authority may modify, suspend, or terminate a flare and/or vent approval if— (a) a material change of conditions occurs in the operations of the approval holder, or there are material changes in the information originally furnished; (b) there are substantial violations of the terms and conditions of the approval or of Authority rules; or (c) the applicant has misrepresented any material facts during the application process. (2) Where the Authority proposes to modify, suspend, or cancel a flare and/or vent approval under this regulation, the Authority shall— (a) provide fourteen (14) days notice to the approval holder; (b) provide reasons for modification, suspension or cancellation; and (c) ensure that the approval holder has an opportunity to respond to the Authority's reasoning for taking the proposed action with respect to the approval.
Releases not readily measured.	**143.** (1) Releases of gas that are not readily measured by devices routinely used in petroleum operation and that do not require a prior consent may include, but are not limited to, the following— (a) tank vapours from crude oil storage tanks, gas well condensate storage tanks, or saltwater storage tanks, including makeup gas for gas blanket maintenance; (b) fugitive emissions of gas; (c) amine treater, glycol dehydrator flash tank and/or reboiler emissions; (d) blow down gas from flow lines, gathering lines, meter runs, pressurized vessels, compressors, or other gas handling equipment for construction, maintenance or repair; (e) gas purged from compressor cylinders or other gas handling equipment for start-up; (f) gas released at a well site during drilling operations and prior to the completion date of the well, including gas produced during air or gas drilling operations or gas which shall be separated from drilling fluids using a mud-gas separator, or mud-degasser; or (g) gas released at a well site during initial completion, recompletion in another field, or work over operations in the same field, including but not limited to perforating, stimulating, deepening, cleanout, well maintenance or repair operations. (2) Notwithstanding the foregoing, the Authority may require the flaring of releases of gas not readily measured by devices routinely used in the operation of oil wells, gas wells,

	gas gathering systems, or gas plants if the Authority, in consultation with NEMA, determines that flaring is required for safety reasons.
Emergency and safety venting or flaring.	**144.** (1) In the event of an emergency, failure, breakdown, or malfunction of any piece of equipment, a contractor, permit holder or a midstream operator shall send excess gas to an efficient flare system. (2) Emergency venting may be permitted under specific conditions where a flare gas system is not available or when flaring of the gas stream is not possible. A contractor, permit holder or midstream operator shall fully document justification for excluding a gas flaring system. (3) As soon as reasonably possible, after the release of gas commences, a contractor, permit holder or a midstream operator shall notify the Authority in writing. (4) The volume of gas that is released shall be measured or estimated in accordance with the methodology established by the Authority and shall be reported to the Authority. (5) A contractor, permit holder or a midstream operator shall take all necessary measures to avoid emergency venting for a period exceeding twenty-four (24) hours. (6) The Authority may issue an emergency approval and allow additional releases of gas for a period exceeding twenty-four (24) hours if the contractor, permit holder or midstream operator demonstrates the necessity for such release.
Sub-Division 2 – Fugitive Emissions	
Fugitive emissions management program.	**145.** (1) A contractor, permit holder or a midstream operator shall develop and document a fugitive emissions management program (FEMP) as outlined in the Eleventh Schedule and submit the FEMP to the Authority and NEMA. (2) The Authority may direct a contractor, permit holder or a midstream operator to carry out additional actions to manage fugitive emissions if the Authority determines that additional actions are necessary to mitigate potential risks to the environment or safety.
Fugitive emissions survey.	**146.** (1) A contractor, permit holder or a midstream operator shall conduct fugitive emissions surveys at the frequency specified in the FEMP using methods and equipment in compliance with the approved standards and best petroleum industry practices, except that such surveys shall not be required for facilities that are designed to vent all received and produced gas. (2) A contractor, permit holder or a midstream operator shall survey, at least, the following— (a) equipment components with hydrocarbon throughput; (b) hydrocarbon gas–driven pneumatic devices; (c) tank-top equipment, including thief hatches and gauge-board assemblies; (d) surface casing vents and the area around the wellbore;

	(e) equipment used to destroy vent gas, including burners, flare ignitors, pilots, and combustors; and (f) equipment used to conserve vent gas, including vapor recovery units and vent gas capture systems. (3) A contractor, permit holder or a midstream operator shall ensure that individuals conducting fugitive emission surveys are trained, qualified and certified to use fugitive emissions survey equipment. (4) A contractor, permit holder or a midstream operator shall ensure that all equipment used to detect or quantify fugitive emissions is operated, serviced, and calibrated to the manufacturer's recommendations. (5) The Authority may conduct its own fugitive emissions surveys independent of the FEMP, and on the basis of such surveys, direct contractors or midstream operators to undertake remedial work to address any identified deficiency.
Repairs.	**147.** (1) A contractor, permit holder or a midstream operator shall repair sources of fugitive emissions or take other action to eliminate fugitive emissions within twenty-four (24) hours of identification if fugitive emissions— (a) are causing off-premises odours; (b) are the result of a failed pilot or ignitor on a flare stack; or (c) are causing or have the potential to cause environmental, safety or health concerns. (2) A contractor, permit holder or a midstream operator shall notify the Authority of all other sources of fugitive emissions not repaired within twenty-four (24) hours. (3) The Authority shall direct a contractor, permit holder or a midstream operator to repair all other sources of fugitive emissions or take other actions to eliminate fugitive emissions within thirty (30) days unless postponement can be technically and economically justified.
PART VI –REPORTING AND RECORD-KEEPING	
Division 1: Incident and accident reporting	
General requirement.	**148.** (1) A contractor, permit holder or a midstream operator shall ensure that, in the event of an incident or an accident, response measures are implemented to— (a) prevent injury or loss of life; (b) minimize pollution; (c) ensure that workers can be evacuated to safety quickly and efficiently; and (d) ensure that normal conditions can be restored as soon as practicable through— (i) any required repair to facilities or equipment; (ii) any necessary clean-up of pollution;

	(iii) any necessary restoration of the environment; and (iv) any continued monitoring of conditions. (2) A contractor, permit holder or a midstream operator shall systematically investigate any incident or accident to find out its causes and report to the Authority and relevant Government agencies in accordance with these Regulations and applicable Kenyan law.
Initial notification and written reporting.	**149.** (1) In the event of any incident or accident causing loss of life, personal injury, explosion, oil spill, fire or damage to the environment or property, a contractor, permit holder or a midstream operator shall report to the Authority and relevant Government agencies of the incident or accident as soon as practicable and in any case not later than 2 hours after— (a) the time of the occurrence of the incident or accident; or (b) the time a contractor, permit holder or a midstream operator becomes aware of the incident or accident. (2) A notification under sub-regulation (1) may be made electronically using form in the Twelfth Schedule. (3) A contractor, permit holder or a midstream operator shall submit a written report within forty-eight hours of any incident or accident under this regulation, using the reporting template provided in Thirteenth Schedule. (4) The Authority may, by notice in writing, require a contractor, permit holder or a midstream operator to submit one or more written reports of the reported incident or accident, if the initial report required in this regulation is deemed insufficient.
Division 2: Record Keeping	
Health and Safety records	**150.** (1) A contractor, permit holder or a midstream operator shall keep up-to-date records of— (a) safety performance and results; (b) compliance with health, hygiene and safety legislation; (c) medical examinations of workers; (d) the outcome of equipment testing and inspections and auditing of safety procedures; (e) staff training; (f) continuous improvement activities; and (g) any other record as the Authority may require. (2) A contractor, permit holder or a midstream operator shall provide workers and contractors with relevant information for their performance and health.
Risk register	**151.** A contractor, permit holder or midstream operator must maintain and make readily available at the location of any facility or activity, a risk register summarising— (a) each risk identified in the safety case;

	(b) the risk assessment with respect to that risk; (c) the mitigation measures in place in relation to that risk with respect to the relevant facility or activity; and (d) schedule for monitoring and reviewing the risks to ensure that the mitigation measures are effective.
Record of persons at a facility.	**152.** (1) A contractor, permit holder or a midstream operator shall at all times keep a record of every person present at a facility. (2) The record referred to under sub-regulation (1) shall— (a) specify particulars of the persons on the facility; and (b) be made available at all time for examination by an authorised representative of the Authority.
Testing.	**153.** A contractor, permit holder or a midstream operator shall maintain records of the details and results of all tests of facilities and equipment and shall ensure these are readily available for inspection
Fire Drill	**154.** A contractor, permit holder or a midstream operator shall ensure that a record shall be kept of fire response drills in such detail as to allow for continuous improvement in fire response actions.
Pressure vessels.	**155.** A contractor, permit holder or a midstream operator shall ensure that— (a) the results of the inspection and testing under this regulation; and (b) any actions taken as a consequence of the outcome of inspection and testing under this regulation, are sufficiently recorded and made available to the Authority on request.
Personal Protective Equipment	**156.** (1) A contractor, permit holder or a midstream operator shall keep a record of all personal protective equipment provided in the course of upstream and midstream. (2) The record required by this regulation shall contain— (a) a description of the equipment and the date of its acquisition by a contractor, permit holder or a midstream operator; (b) the date and result of each inspection and test of the equipment; (c) the date and nature of any maintenance work performed on the equipment since its acquisition by a contractor, permit holder or a midstream operator; (d) the name of the competent person who performed the inspection, test, maintenance or repair of the equipment; and (e) any other relevant information.

	(3) Contractors or a midstream operator shall maintain records on training provided to workers on the use and maintenance of personal protective equipment which shall include— (a) the date of training; (b) the recipients of the training; (c) the content of the training; and (d) any other relevant information. (4) A contractor, permit holder or a midstream operator shall maintain the records required under this regulation for at least two (2) years after the equipment ceases to be in use.
Drilling waste from wells	**157.** (1) A contractor shall document, retain in the well file and upon request make available to the Authority and/or NEMA on the following information— (a) the location and identification of the well that generated the drilling waste; (b) the type of drilling mud system used; (c) the method used to store the drilling waste and a plot plan identifying the location of the storage system; (d) the volume of drilling waste generated, and the management method used; and (e) if different drilling waste types or phases were segregated, the information above shall be documented for the management of each segregated type or phase. (2) A contractor shall retain the information provided in sub-regulation (1) until the well site and any associated remote drilling waste storage or biodegradation site have successfully been reclaimed. (3) A contractor shall submit post-disposal information to the Authority and the Environmental Authority, identifying the drilling waste volumes generated, the management or disposal options used, and the disposal locations.
Directional Drilling waste	**158.** (1) For drilling waste that has been generated from directional drilling activities associated with pipeline construction, a midstream operator shall document and retain until the pipeline has been abandoned, or, where a remote site was used to manage the drilling waste, until the remote site has been successfully reclaimed, the following information— (a) the identification of the pipeline that generated the drilling waste; (b) the geographical co-ordinates of the pipeline “from” and “to” location; (c) the plot plan showing the entry and exit pits of the directional drill, and a description of the method used to prevent migration of drilling mud/waste during drilling in the event that the pit does not consist of suitable clayey soils;

	(d) if a remote site was used, its geographical co-ordinates and specific use (e.g., storage, including type of storage system, and disposal, including type of disposal method), and a plot plan showing the storage and disposal areas; (e) the type of mud system used, and a list of all the additives, products, or chemicals used, including the quantities used, and documentation to verify the mud system was nontoxic. (f) the quantities of drilling waste generated, and the management method used; (g) a copy of the post-disposal information submitted under sub-regulation (1). 2. Within twelve (12) months of each directional drilling activity associated with pipeline construction, a midstream operator shall submit to NEMA, post-disposal information identifying the drilling waste volumes generated, storage systems used, disposal methods used, and locations of disposals.
Flaring and Venting	**159.** (1) A contractor, permit holder or a midstream operator shall continuously and accurately measure the quantity of natural gas vented or flared using use measurement methods approved by the Authority. (2) A contractor, permit holder or a midstream operator shall maintain records of flaring and venting events which shall— (a) include the date, time, duration, gas source or type (e.g., sour inlet gas, acid gas), rates, and volumes for each incident; (b) include information on any complaints related to flaring, incineration, and venting and how these complaints were investigated and addressed; and (c) describe each non-routine flaring, incineration, and venting incident and any changes made to prevent future non-routine events from occurring. (3) A contractor, permit holder or a midstream operator shall ensure that flaring and venting records shall— (a) be retained from their creation throughout the life of the facility, for each facility where flaring and venting occurs; and (b) be made available to the Authority upon request.
Methane reporting	**160.** (1) Contractors and midstream operators shall submit an annual methane emissions report to the Authority and NEMA by the end of the first quarter of each year. (2) Methane emissions shall be quantified using the methodology approved by the Authority. (3) A contractor, permit holder or a midstream operator shall include in the annual methane emissions report; the annual volume of vent gas in cubic metres and the corresponding mass of methane in kilograms emitted by the facility.

Methane records	**161.** (1) A contractor, permit holder or a midstream operator shall retain records for the period of four (4) years and provide them to the Authority upon request. (2) The records referred to in sub-regulation (1) shall include the following— (a) calculations, by site, used to determine the volume and mass of methane from each of the sources below— (i) vent gas, (ii) instruments and pumps, (iii) compressor seals, (iv) glycol dehydrators, and (v) fugitive emissions; (b) for fugitive emissions— (i) the FEMP that is in effect, (ii) completed training programs and valid certifications for all individuals conducting fugitive emission surveys, and (iii) survey results; (c) annually updated inventory of pneumatic instruments and pumps that emit vent gas, including— (i) tracking identifier or serial number, (ii) location and facility ID, (iii) installation or modification date, (iv) make and model, and (v) device type.
Radiation Exposure	**162.** A contractor, permit holder or midstream operator shall submit to the Authority, annual records related to radiation exposure levels and disposal of NORM waste from oil and gas operations
Accidents and Incidents.	**163.** (1) A contractor, permit holder or a midstream operator shall with fourty- eight (48) hours report all incidents or accidents that occur on-site in the form and manner prescribed in the Thirteenth Schedule. — (2) By the end of the first quarter of each year a contractor, permit holder or a midstream operator shall submit a summary of details of the incidents or accidents recorded under this regulation for the previous year. (3) A contractor, permit holder or a midstream operator shall maintain records under sub-regulation (1) for a minimum of ten (10) years and make them available to the Authority on request.
Workplace Injuries and Accidents	**164.** The obligations, benefits and rights in relation to workplace injuries, shall be subject to the provisions of the Work Injuries and Benefit Act, 2007.
Incident or accident investigation.	**165.** (1) Upon receipt of an oral or written, accident report, the Authority may appoint a responsible officer or officers to hold an inquiry into the cause of the incident or accident. (2) The officer conducting an inquiry may—

	(a) give notice to any person to appear before him or her at a hearing to give evidence and to produce such documents referred to in the notice; (b) call for the production of relevant books, documents and records for purposes of the inquiry; (c) conduct onsite inspections in accordance with the provisions of the Regulations; (d) question any relevant person or witness; (e) require any such person or witness to sign a declaration of the truth of the matter on which he or she is so questioned; and (f) exercise other powers as may be necessary for purposes of the inquiry. (3) An officer conducting an inquiry under this regulation may, subject to confidentiality requirements, if deemed appropriate, open the inquiry to the public and conduct the inquiry in a manner and under conditions he or she considers fit for ascertaining the cause and circumstances of the incident or accident. (4) Upon conclusion of the inquiry, the officer(s) shall develop a draft report summarizing— (a) relevant facts on the incident or accident; (b) the cause(s) or likely cause(s) of the incident or accident; (c) the adequacy of prevention, mitigation and remedial measures applied with respect to the incident or accident; and (d) any other matter as the officer(s) may deem fit. (5) The officer(s) shall submit the draft report to a contractor, permit holder or a midstream operator who may submit any comments or observations within thirty (30) days. (6) Within thirty (30) days from receiving comments and observations from a contractor, permit holder or a midstream operator, the officer(s) shall submit a final report to the Authority and send a copy to a contractor, permit holder or a midstream operator.
PART VII – EMERGENCY PREPAREDNESS	
General requirement.	**166.** (1) A contractor, permit holder or a midstream operator shall formulate emergency procedures for the facilities they operate which shall allow an effective response to an emergency situation. (2) Emergency procedures shall include the following matters— (a) evacuation procedures; (b) procedures for notifying emergency service organizations at the earliest opportunity; (c) first aid, medical treatment and assistance; and (d) procedures for effective communication between the person authorized by a contractor, permit holder or a midstream operator to coordinate the

	emergency response and all persons at the facility; (e) a plan for drills for practising emergency procedures and, including the frequency of drills; and (f) information, training and instruction to employees in relation to implementing the emergency procedures.
Emergency preparedness and response procedures.	**167.** (1) A contractor, permit holder or a midstream operator shall develop and maintain emergency preparedness and response plan and procedures for each facility that provides an adequate response to accidents and hazard situations during upstream and midstream. (2) A contractor, permit holder or a midstream operator shall develop the emergency preparedness and response plan based on the results from risk assessment. (3) The emergency preparedness and response plans and procedures shall— (a) adopt measures intended to prevent or minimise the harmful effects of incidents and accidents and recover the environment; (b) be coordinated with any national emergency response system; and (c) provide for testing of emergency procedures, including outlining the required frequency of testing. (4) The Authority shall— (a) require that the emergency response activities be coordinated with intergovernmental activities in force in its geographical region; (b) assist cooperation with other contractors; (c) take measures to obtain any necessary additional resources; (d) specify the required functions of the emergency response equipment; and (e) where justified, require a contractor, permit holder or a midstream operator to place any additional safety apparatus at or near the installations. (5) A contractor, permit holder or a midstream operator shall notify the Authority, at least fifteen (15) days in advance, of plans for holding emergency response drills if: (a) the drills involve stoppage of operations for more than 24 hours and/or (b) Involves other relevant government agencies. (6) A contractor, permit holder or a midstream operator shall— (a) keep a copy of the emergency preparedness and response plan at the facility; and (b) provide a copy of the emergency preparedness and response plan to the Authority and any other relevant stakeholders as the Authority may determine.

	(7) A contractor, permit holder or a midstream operator shall immediately implement the emergency response plan and procedures where— (a) a major accident occurs at a facility or during upstream and midstream; or (b) an incident occurs that could reasonably be expected to lead to a major accident. (8) A contractor, permit holder or a midstream operator shall notify the Authority and any other relevant stakeholders of the occurrence of an incident or accident.
Consultation with authorities.	**168.** (1) In preparing an emergency response plan, a contractor, permit holder or a midstream operator shall consult— (a) the Authority and relevant Government Agencies; and (b) the County Government where the facility is located, or activity is carried out. (2) A contractor, permit holder or a midstream operator shall consider the recommendations made by the authorities listed above in the development of the emergency response plan.
Oil spill response plan	**169.** (1) A contractor, permit holder or a midstream operator shall ensure that, where a risk of a significant oil spill exists, the emergency procedures shall include a plan with respect to oil spill preparedness and response. (2) An oil spill preparedness and response shall be consistent with any applicable national policy on oil spill preparedness and response, all applicable Kenyan laws and, at a minimum, shall include consideration of the following matters— (a) organizational roles and responsibilities with regard to administering and implementing the plan; (b) communications strategy and responsibilities; (c) strategic response coordination with authorities, and other relevant entities; (d) suitable scenario planning and risk assessment; (e) appropriate analysis of the location, surroundings and ecological context; (f) measures for spill detection, identification of the source of spills and spill control; (g) options for containment, removal and remediation of spills; (h) reporting and notification obligations; (i) arrangements for training with respect to the plan; (j) requirements to update the plan; and (k) any other matter required by the Authority,
Public awareness.	**170.** (1) Prior to commencement of any upstream or midstream operations, the Authority shall undertake to communicate to affected members of the public in a language that they can easily understand—

	(a) the nature of any proposed activities; (b) any legal rights of affected members of the public with respect to the proposed activities; (c) the means by which affected members of the public may liaise with the Authority before and during the proposed activities. (2) Where any significant change to the information communicated to the affected members of the public under this regulation., the Authority shall ensure such changes are promptly communicated to the affected members of the public. (3) Prior to installing any facility a contractor, permit holder or a midstream operator shall provide the following information to the local community where the facility will be located— (a) the name and location of the facility or petroleum activity; (b) the name, position and contact details of a person-in-charge with whom members of the local community may liaise; (c) a general description of the potential hazards posed by the operation of the facility; (d) the means by which the local community will be informed of an incident or accident occurring; and (e) the actions, as specified in the emergency plan, that members of the local community may take if an incident or accident occurs.
PART VIII – INSPECTIONS, CONTROL AND ENFORCEMENT	
General inspection and audit rights.	**171.** (1) The Authority or its designated agents shall be responsible for carrying out safety, health and environmental inspections or audits of all activities related to upstream and midstream petroleum operations. (2) The Authority, or an inspector authorized by the Authority in writing, may at all reasonable times inspect any upstream and midstream petroleum operations, and any records of a contractor, permit holder or a midstream operator relating thereto, with the goal of monitoring compliance with the requirements established in these Regulations. (3) A contractor, permit holder or a midstream operator shall assist the facilitation of inspections and provide, where available, facilities similar to those applicable to its own staff or contracted persons for transport to the upstream and midstream, subsistence and accommodation and pay all reasonable expenses directly connected with the inspection.
Power of inspectors.	**172.** (1) The Cabinet Secretary shall, by notice in the Gazette, appoint duly qualified persons, to be inspectors of the Authority. (2) The Authority or an inspector may at all reasonable times and upon at least a twenty-four (24) hours' notice to a contractor, permit holder or a midstream operator or a subcontractor, enter into any part of the licence area or any other location, premises, structure or business place

	occupied by a contractor, permit holder or a midstream operator or a subcontractor— (a) to examine or investigate anything which a contractor, permit holder or a midstream operator or a person contracted by the foregoing is authorised by the Act and these Regulations to perform, install, construct or take possession of; (b) to inspect and make abstracts or copies of any logs, records, maps, accounts or other documents which a contractor, permit holder or a midstream operator or a person contracted by the foregoing is required to make or keep in accordance with the Act and these Regulations; (c) to carry out any other authorised function under the Act and these Regulations. (d) require the production of, inspect, examine and copy licences, registers, records and other documents relating to these Regulations; (e) access documents for examination or copy or otherwise reproduce and shall issue a certificate of seizure to the person from whom they were taken and return them on completion; (f) take samples of any articles and substances to which these Regulations relate and submit such samples for test and analysis; (g) conduct tests or take measurements; (h) require that anything be operated, used or set in motion, under conditions specified by the inspector; and (i) use any machine, structure, material or equipment in the place the inspector is inspecting in order to carry out the inspection. (3) Notwithstanding sub regulation (1) an inspector may at any time and without notice enter an area which is subject of a licence and inspect the operation and facility of a contractor, permit holder or a midstream operator or a person contracted by the foregoing without notice for the purpose of ascertaining that the provisions of these Regulations or any other applicable Kenyan law are being complied with. (4) An inspector shall identify himself or herself upon arrival at the licence area, a facility or any other location, premises, structure or business place occupied by a contractor, permit holder or a midstream operator or a subcontractor. (5) An inspector shall not, in exercising his or her powers under this regulation, unreasonably interfere with or delay the operations of a contractor, permit holder or a midstream operator or a subcontractor. (6) An inspector may make any investigation necessary to determine whether or not the provisions of the Act and these Regulations are being complied with. (7) Where an inspector finds any plant or facility in a dangerous condition or any practice or method of work in connection with any licensed petroleum activity carried out in a dangerous manner, or is not in accordance with the Act,

	these Regulations, the approved standards or is contrary to best petroleum industry practices, the inspector may give the person-in-charge notice in writing to repair, replace and/or remedy that operation, practice or method of work. (8) If the contractor, a midstream operator or person to whom an enforcement order is directed fails to comply with the enforcement order, the Authority may apply to the Tribunal for an order requiring compliance with the enforcement order.
Enforcement orders.	**173.** With the written approval of the Authority, an inspector may issue enforcement orders— (a) requiring facility operators to cease activities polluting or likely to pollute the environment in violation of the provisions of these Regulations; (b) requiring facility operators to implement any remedial measures to restore the environment within such reasonable time as determined by the Authority; (c) ordering the closure of facilities polluting or likely to pollute the environment in violation of the provisions of these Regulations; (d) requiring the installation of any equipment on any land, premise, or vehicle for purposes of monitoring compliance with the provisions of these Regulations, upon giving the owner or occupier of the land three (3) months' written notice; and (e) revoking permits issued by the Authority in accordance with these Regulations.
Amendment and cancellation of enforcement orders.	**174.** (1) With the written approval of the Authority, an officer authorized to conduct an inspection may— (a) amend the terms or conditions of an enforcement order; or (b) lift or cancel an enforcement order. (2) Where an enforcement order is amended by addressing it to additional persons, a copy of the order shall be served on any person whose name was added to it, and the same person to whom the original order was issued.
Failure to comply with enforcement orders.	**175.** (1) If the contractor, a midstream operator, or person to whom an enforcement order is directed fails to comply with the enforcement order, the Authority may take reasonable action it considers necessary to carry out the terms of the enforcement order. (2) Costs incurred by the Authority under this regulation are recoverable by the Government in an action against the contractor, a midstream operator or person to whom the enforcement order was directed, or by order of the Cabinet Secretary directing any company or individual to which the enforcement order relates to pay to the Cabinet Secretary an amount not exceeding the amount owing in respect of the costs. (3) Costs under this regulation may include—

	(a) any costs incurred in investigating and responding to any matter to which an enforcement order relates; or (b) costs related to environmental assessment, remediation and compensation to affected persons.
Jointly and severally liable	**176.** Where an enforcement order is issued to more than one person, all persons named in the order shall be jointly and severally responsible for carrying out the terms of the order and shall be jointly and individually severally liable for payment of the costs of doing so, including any costs incurred by the Authority under the preceding section.
Seizure.	**177.** (1) During an inspection, an inspector may seize physical, digital or documentary evidence without the requisite search authority or warrant, if the inspector has reasonable grounds to believe that— (a) there has been an offence committed under these Regulations and (b) that the item seized provides evidence as to the commission of an offence. (2) Where an item is seized, the inspector shall notify the contractor, midstream operator or other relevant person as to the reason for the seizure and provide a certificate of seizure outlining the information in Fourteenth Schedule. (3) The Authority shall be responsible for maintaining the condition of seized items. (4) Within twenty-four (24) hours from the seizure of any item under this Regulation, the Authority will submit a report to the Tribunal, which will validate or reject the necessity to retain the seized item. (5) If the Tribunal does not issue a decision within seventy two (72) hours from receiving the Authority's petition, the seized item shall be returned to the contractor, a midstream operator or other relevant person who is entitled to possession of it. (6) Where a contractor, a midstream operator or person is convicted of an offence under these Regulations, and anything relating to the conviction that was seized under this Part is still detained, the item shall, on the expiration of the time for taking an appeal from the conviction or on the conclusion of the proceedings, as the case may be— (a) be forfeited to the Government, if the court so directs; or (b) be restored to the contractor, a midstream operator or person from whom it was seized or to any other company or individual who is entitled to possession of it, subject to any terms and conditions imposed by the court.
PART IX – OFFENCES AND PENALTIES	
Offences and Penalties.	**178.** (1) Any person who— (a) contravenes any provision of these Regulations;

	(b) fails to comply with any direction given under these Regulations commits an offence and is liable on conviction to a fine or imprisonment as determined by the Act and the Fifteenth Schedule.
PART X – MISCELLANEOUS	
Register of permits and approvals.	**179.** (1) The Authority shall keep a register of all permits and approvals issued under these Regulations which shall individually record their— (a) terms and conditions; (b) amendments; (c) duplicates; (d) suspensions or revocations; and (e) accompanying fees paid to the Authority. (2) Any person may, during the Authority's working hours, inspect the register subject to paying a fee. (3) The fee under sub-regulation (2) does not apply to members of the Kenya Police Service, on-duty public officers, members of the National Assembly, the Authority's employees and persons authorised by the Authority.
Grievance Redress	**180.** (1) A contractor, permit holder or other such person dissatisfied with a decision of the Authority in respect of any matter provided for under these regulations may make a complaint to the Authority in writing. (2) The Authority shall acknowledge the receipt of the complaint in writing within five (5) days and attend to the complaint within thirty (30) days. (3) Where a contractor is not satisfied with the Authority's response to the complaint, a contractor may appeal to the Tribunal within thirty (30) days of the receipt of the Authority's response to the complaint.

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FIRST SCHEDULE

Regulations 16 – 19

Safety case application form

Safety case applications shall follow the guidance given by the Authority and shall be accompanied by this cover sheet.

Facility Details	
Facility Name(s):	
Facility type:	
Key functions:	
Location	

Submission			
Document title:			
Document No.:		Revision:	Issue Date
Development stage:	(e.g. design, construction, modification….)		
Reason for Submission	The reason why the safety case is being submitted including whether it is being submitted for the first time, or is a material change of a previous safety case)		
Supporting documents			
Document title:			
Document No.:		Revision:	Issue Date
Document title:			
Document No.:		Revision:	Issue Date
(repeat rows as necessary)			

Difference from previously submitted Safety Case (if applicable) Outline the changes made to the safety case or notification from a previously submitted version if relevant

Applicant			
Name:		Signature:	
Position:		Date:	
Postal address:			
Email:			
Phone number(s):	(tel.)	(mob.)	
On behalf of:		(Name of operator)	

Petroleum Agreement:	

The safety case application shall be submitted with one signed original, one additional hard copy and two electronic copies. Electronic documents submitted shall be a single, text searchable, indexed Portable Document Format (PDF) file, which is clearly labelled and in A4 format.

SECOND SCHEDULE

Regulation 91

APPLICATION FOR PERMIT TO USE HAZARDOUS SUBSTANCES IN UPSTREAM AND MIDSTREAM.

Contact details	
Applicant name	
Address	
Tel No	
Cell phone No	
E-mail	
Fax	
Manufacturer name	
Manufacturer address	
Site information	
Physical Location (county, town, street,)	
LR No	
GPS Coordinates	
Environment Impact Assessment Licence	
Product information	
Registration number	
Common names	
Chemicals or materials name	
Trade name	
Concentration	

State of product (technical or formulated)	
Purpose for use in mining	
Quantity (Weight, Volume)	
Onsite / Mining site storage facility	
DECLARATION BY APPLICANT	
I hereby certify that the particulars given above are correct / true to the best of my knowledge	
Name	
Signature	
Date	

FOR OFFICIAL USE ONLY	
Approved/Not approved	
Comments	
Receipt No Amount (KShs)	
Officer's Name	
Signature Date	

THIRD SCHEDULE

Regulation 92

Permit No:			Application Ref No:		
PERMIT TO USE HAZARDOUS SUBSTANCES IN UPSTREAM AND MIDSTREAM					
This Permit is issued to: Name: Address: Tel No:					
To use chemicals or hazardous substances in petroleum activities as follows:					
Chemicals/ Substances	Registration No	CAS No	HS No	Quantity	Purpose
Location of site (LR No/ County/ Town/ Other): GPS Coordinates:					
This Permit is valid from: to:					
This permit is subject to the following conditions:					
Signed:			Date:		
Position of signatory:			(Official seal)		

FOURTH SCHEDULE

Regulation 94

MATERIAL SAFETY DATA SHEET Information on MSDS should be provided in the order provided below.
1. Identification 2. Hazard identification 3. Composition / information of ingredients 4. First-aid measures 5. Fire-fighting measures 6. Accidental release measures 7. Handling and storage 8. Exposure controls / personal protection 9. Physical and chemical properties 10. Stability and reactivity 11. Toxicological information 12. Ecological information 13. Disposal considerations 14. Transport information 15. Regulatory information

16. Other information.

FIFTH SCHEDULE

Regulation 97

Hazardous Substances Report Form

Each notification to the Authority concerning all hazardous substances present or likely to be present at the facilities or to be used in operations shall employ the form outlined in this schedule.

NOTIFICATION OF HAZARDOUS SUBSTANCES PRESENT OR LIKELY TO BE PRESENT AT FACILITIES OR TO BE USED IN OPERATIONS

Date: .....

To: Energy and Petroleum Regulatory Authority

Contractor ……

Address: ……

Facility: ……

	Substance trade name	Harmonized System (HS) code	Quantity of substance	Reason for use of substance	Quantity increased since previous report	Reason for increase
1						
2						
3						
4						
5						
6						…

(add rows as necessary)

Signed: ……

Name: ……

Position: ……

On behalf of: ……
(name of contractor)

SIXTH SCHEDULE

Regulation119

(to be filled in triplicate)

<table>
<tr><th colspan="4">WASTE MANIFEST FORM</th></tr>
<tr><th colspan="2">GENERATOR</th><th colspan="2">TRANSPORTER</th></tr>
<tr><td>Company Name:</td><td>Operator ID:</td><td colspan="2">Company Name:</td></tr>
<tr><td colspan="2">Address:</td><td colspan="2">Address:</td></tr>
<tr><td colspan="2">Postal Code:</td><td colspan="2">Postal Code:</td></tr>
<tr><td>City:</td><td>Country:</td><td>City:</td><td>Country:</td></tr>
<tr><td colspan="2">Source Site Location</td><td rowspan="2">Unit No.</td><td>Phone:</td></tr>
<tr><td colspan="2">NEMA License Type Number:</td><td>Fax:</td></tr>
<tr><td colspan="2">Recipient:</td><td colspan="2">Certification – I declare that I received wastes as offered by the Generator for delivery to the intended Receiver and that the information contained below is correct and complete.

NAME (for the Transporter):

Signature:

Date:</td></tr>
<tr><td colspan="2" rowspan="2">Receiving Site Location:</td><td colspan="2">RECIPIENT</td></tr>
<tr><td>Company Name:</td><td>Operator ID:</td></tr>
<tr><td colspan="2">City:</td><td colspan="2">Address:</td></tr>
<tr><td colspan="2">County</td><td colspan="2">Postal Code:</td></tr>
</table>

NAME (for the Generator): Signature:	NAME (for the Recipient): Signature:

Waste Description	Containers		Total Quantity	Unit No.	Waste Code
	No.	Type			
1.					
2.					
Comments:					
Discrepancies	NAME (Print):	Date:	Signature:		

Instructions: Manifests shall be composed of one original and three copies. The waste generator and the waste transporter shall fill in information in the original. After the generator hands over the waste to the transporter, the waste generator shall retain the first copy, and the waste transporter shall keep the original, and the remaining copies. The waste transporter shall, at all times avail the manifest form for inspection by NEMA upon request.

When the waste transporter delivers the waste to the receiver, the waste transporter shall retain the second copy of the manifest and surrender the remaining copies and the original to the receiver. After verifying that there are no discrepancies between the cargo and the manifest, the receiver shall complete the original form, retain the third copy of the manifest, and give the original back to the generator. One copy shall be submitted to the Authority by the waste generator (contractor, permit holder or midstream operator) within 60 days of the commencement of the waste transfer.

SEVENTH SCHEDULE

Regulation 133

DISPOSAL WELL PERMIT APPLICATION
Applicant name: (full corporate name)
Address: (full corporate address)
Petroleum Agreement name and number:
Phone:
Email address:
Type of permit requested:
Proposed start date:
Proposed finish date:
Methodology and equipment to be used:
Location of the well (GPS Coordinates)
Name and address of a contractor (where such person is not a contractor)
Contact details (name and contact details primary contact regarding the well) (full name, address, telephone number and email address)
Enclosed documents: (tick the boxes as appropriate) □ copy of registration documents □ complete well plan □ global positioning system (GPS) location of each well □ Environmental Impact Licence □ copy of fee payment receipt □ logs

□ seismic information □ geologic cross-sections □ pressure front boundary calculations □ structure maps □ other supporting documents (specify, where applicable)
Declaration: 1. I hereby confirm that our company, its contractors and possess the ability to construct a well site, access road to the well site, facilitate mobility of equipment, supplies, and materials to the well site during drilling, monitoring, appraisal and evaluation activities. 2. I hereby confirm that the information provided in this application is to my knowledge true and accurate. 3. I understand that it is an offence to give false information in an application for a disposal well permit. 4. I acknowledge that our company and our contractors and shall conduct drilling operations as approved by the Authority. 5. I acknowledge that our company and our contractors and shall not commence and conduct drilling operations and drill or convert a well prior to obtaining a disposal well permit from the Authority.
Date: (dd-mm-yyyy)
Authorised Applicant’s representative (full name)
Authorised Signature: (Applicant’s representative)

EIGHTH SCHEDULE

Regulation 136

Disposal Well Permit
This Disposal Well permit is hereby issued under the Petroleum (Upstream and Midstream Environment, Safety and Health) Regulations, 2021 to the named applicant to conduct the drilling and well operations as follows:
Applicant name:
Address: (full corporate address)
Type and purpose permit: (description of issued permit):
Commencement date (dd-mm-yyyy of permit issuing date):
Expiry date: (dd-mm-yyyy of first expiry date)
Renewal: (dd-mm-yyyy of new expiry date in case of renewal)
Location of the well (GPS Coordinates)
Terms and conditions: 1. The applicant or a person conducting drilling or conversion operations on behalf of the operator shall— (a) commence work within (__) months from issuance of this permit, unless when an unforeseen circumstance arises; (b) conduct drilling or conversion operations under a submitted well program except for during an emergency or reapproval by Authority; (c) comply with all applicable Kenyan laws and regulations; and (d) provide data, reports and information in compliance with the Petroleum Act, 2019, Petroleum (Upstream and Midstream Environment, Safety and Health) Regulations, 2021, the individual Petroleum Agreement, and any other applicable Kenyan law; (e) submit the amended well drilling or conversion program, where an applicant intends to deviate from the approved program; (f) other terms and conditions. 2. This permit is valid for (__) and may not be altered, revised, or modified, except with the consent of the Applicant and the Authority.
Date of issuance: (dd-mm-yyyy)
Signature: (Authority's representative)

NINTH SCHEDULE

Regulation 142

APPLICATION FOR VENTING AND/OR FLARING PERMIT

This application is hereby submitted under the Petroleum (Upstream and Midstream Environment, Safety and Health) Regulations, 2021, for the venting and/or flaring permit.
Applicant name: (full corporate name)
Petroleum Agreement/License name and number:
Address: (full corporate address)
Phone number:
Email address:
Type of permit requested:
Proposed start date of the permit:
Proposed end date of the permit:
Estimated volumes requested to be vented or flared:
Enclosed documents: (tick the boxes as appropriate) □ copy of registration documents □ sources of vented or flared gas □ information supporting need for venting or flaring (safety of venting and impossibility of flaring) □ methodology to measure or estimate vented or flared gas □ all relevant environmental licenses and reports as may be required by law; □ other supporting documents (specify)
Declaration: 1. I hereby confirm that the information provided in this application is to my knowledge true and accurate. 2. I understand that it is an offence to give false information in an application for a venting and/or flaring approval.

3. I acknowledge that our company shall conduct petroleum production operations as approved by the Authority and other state bodies of Kenya. 4. I acknowledge that our company shall not commence and conduct any unauthorized venting and/or flaring operations prior to obtaining an approval from the Authority
Date: (dd-mm-yyyy)
Authorised Applicant's representative (full name)
Authorised Signature: (Applicant's representative)

TENTH SCHEDULE

Regulation 144

VENTING/FLARING PERMIT
Approval no.: xxxx/yyyy
This venting/flaring permit is hereby issued under the Petroleum (Upstream and Midstream Environment, Safety and Health) Regulations, 2024 exclusively to the named applicant to conduct activities specified in this approval as follows:
Applicant name:
Address: (full corporate address)
Phone number:
Email address:
Petroleum Agreement/License name and number:
Commencement date: (dd-mm-yyyy):
Expiry date: (dd-mm-yyyy of first expiry date)
Estimated volumes approved to be vented and/or flared:
Terms and conditions: 1. The applicant or an authorised person hereby shall— a. commence authorized activities within (__) months from issuance of this approval, unless when an unforeseen circumstance arises; b. execute authorized activities under the application and not deviate from its approval except for during an emergency; c. comply with all applicable Kenyan laws and regulations; and d. provide all required data, reports and information in compliance with the Petroleum Act, 2019, Petroleum (Upstream and Midstream Environment, Safety and Health) Regulations, 2021, individual Petroleum Agreement and any other applicable Kenyan law; e. other conditions (specify here): 2. This approval is valid for (__) and may not be altered, revised, or modified, except with the consent of the Applicant and the Authority.

Date of issuance: (dd-mm-yyyy)
Signature: (Authority’s representative)

ELEVENTH SCHEDULE

Regulation 148

Fugitive Emissions Management Program
Structure and content of the fugitive emissions management program (FEMP)
The FEMP shall be designed to reduce fugitive emissions, contain the elements listed below, and be updated to reflect any changes to operations: 1. contact information of the individual accountable for the FEMP; 2. resources allocated to developing and implementing the FEMP, including which group within the company is responsible for maintaining and updating the FEMP and who will be conducting the surveys; 3. preventive maintenance practices to reduce or prevent fugitive emissions; 4. the procedures and plans that will be used to meet the required frequency of fugitive emissions surveys and to complete repairs, indicating any deviations from the prescribed frequency and provide justification; 5. techniques and equipment used for fugitive emissions surveys, including equipment make and model and any plans to use alternative technologies; 6. calibration methods and equipment maintenance practices for equipment used for fugitive emissions surveys; 7. training programs and certification completed by individuals conducting fugitive emissions surveys; 8. description of how individuals will be trained and how often they will be retrained or recertified; 9. internal procedures to track, manage, and verify the status of repairs; 10. data management practices and systems to ensure that survey results trigger required repairs and that the repairs are captured for annual reporting; and 11. provisions for continuous improvement of the FEMP, including how FEMP data will be used to evaluate program performance.

TWELFTH SCHEDULE

INCIDENT AND ACCIDENT REPORTING TEMPLATE

Initial Report (to be submitted electronically)

A. Reporting Entity Details	
i) Name of Owner/Operator:	
Company Name:	
License Number:	
Environment Liability Policy:	
ii) Incident Reporter	
Name:	
Phone Number	
Mobile Number:	
Designation:	
iii) Contact Project proponent:	
Name:	
Phone Number:	
Mobile Number:	
Designation:	
B. Incident Details	
Incident Date (dd-mmm-yyyy)	
Incident time (hh:mm)	
Reporting Date (dd-mmm-yyyy)	
Reporting Time (hh:mm)	
Incident Reference Code	
Criteria Triggering the Reporting of the incident*	
A short and General Description of the incident	
Initial response measure undertaken	
Support Required from the Authority/ Government Agency	

* Criteria Triggering the Reporting of the incident

1. Loss of life or personal injury occasioned by entry into land for exploratory, survey, infrastructure development and maintenance activities;
2. Damage to property amounting to approximately Kes 1,000,000 and above, caused by any irregularity, trespass, or other wrongful proceedings occasioned by entry into land for exploratory, survey, infrastructure development and maintenance activities; or
3. Damage to property amounting to approximately Kes 1,000,000 and above, occasioned by the breaking of any

petroleum infrastructure or by reason of any defect in such infrastructure

THIRTEENTH SCHEDULE

Regulation 152 & 165

Incident/accident Report: Reported in writing within 48 hours.

Petroleum (Upstream and Midstream Environment, Safety and Health) Regulations, 2024	
Notice of Accident or Incident	
Date:	
To:	The Director General Energy and Petroleum Regulatory Authority
A. Reporting Entity Details	
i. Name of Owner/Operator:	
Company Name:	
License Number:	
Environment Liability Policy:	
ii. Incident Reporter:	
Name:	
Phone Number	
Mobile Number:	
Designation:	
ii. Contact Project proponent:	
Name:	
Phone Number:	
Mobile Number:	
Designation:	
Contractor Name:	
Name of person filing notice:	
Contact details of person filing notice:	
B. Incident/accident Details	
Date:	Time:
Location:	
Nature of incident/accident	
Description of the incident/accident	
Measures taken to prevent the incident/accident	
Measures taken to mitigate the effects of the incident/accident	

Measures taken to secure the location from further incident/accident			
Injuries (if applicable)			
Injuries incurred?	(Y/N)	Total	
Details of Injuries			
Name of injured person			
Nature of injuries			
First aid application: Person giving first aid: Location: Measures applied (including time):			
Any additional details:			
			(Repeat rows as necessary)
Casualties (if applicable)			
Casualties occurred?	(Y/N)	Total	
Details of casualties			
Names of deceased person			
Nature of injuries sustained			
First aid application: Person giving first aid: Location: Measures applied (including time):			
Any additional details:			
			(Repeat rows as necessary)
Contact details Provide contact information and the current location (e.g. facility, treatment centre etc) for each injured person and current location for interview			
Witness details (if any)			
Provide: - name(s) of witnesses			

- contact details for witnesses - copies of any statement given by a witness in relation to the incident or accident
(Repeat rows as necessary)
Signed:

Please attach any information that is relevant to the incident/accident or any other additional information the authority may require.

FOURTEENTH SCHEDULE

Regulation 179

Certificate of Seizure	
Inspector (1) Name:	Inspector (2) Name:
Contact details:	Contact details:
Inspection Details	
Date:	Time:
Location:	
Reason for inspection:	
Subject of seizure	
Item description (e.g. quantity type)	
Justification for seizure	
(Repeat rows as necessary for additional items)	
Location where item(s) to be taken	
Address	
Contact details	
Signed (Inspector 1):	Signed (Inspector 2):

FIFTEENTH SCHEDULE

Regulations 6, 7, 8, 9 and 87

OFFENCES, FINES AND PENALTIES

Regulation	Offence	Penalty
6,7,8	Contractor, permit holder or midstream operator failure to comply with a duty imposed to him	A fine of not more than Kshs. 500,000.00 or a term not exceeding 6 months or both
9, 87,	An employee who contravenes the provisions of these regulations	A fine of not more than Kshs. 50,000.00 or 3-months imprisonment or both

SIXTEENTH SCHEDULE

Regulation 16, 91, 132 and 141

APPLICATION/PERMIT FEES

Regulation	Item	Fee in Ksh.
16	Safety Case Application	10,000,000
92	Permit to use hazardous substances	2,000,000
133	Disposal well permit	3,000,000
142	Flaring and Venting	20,000,000

SEVENTEETH SCHEDULE

Guidance: Safety Case Contents

Overview

The safety case for a facility or related activity shall demonstrate that there are effective means of ensuring:

(a) systematic implementation of risk identification and control;

(b) continual and systematic identification of deficiencies in the control of risk (safety management system); and

(c) continual and systematic improvement of the control of risk.

A safety case provided under these Regulations shall include the information outlined in this Schedule with respect to:

(a) Methodology

(b) Facility Description

(c) Risk Assessment

(d) Safety Management System including continuous improvement processes.

A. Methodology

The Safety Case shall outline the methodology used in preparing the risk assessment and other aspects of the safety case including any references to industry standards.

The methodology shall outline the approach taken to accurately identify all hazards and risks relating to the upstream and midstream petroleum operations, facilities and personnel, including the types of assessment employed as follows: -

(a) qualitative risk assessment, in which frequency and severity are determines purely qualitatively;

(b) semi-quantitative risk assessment, in which frequency and severity are approximately quantified within ranges; or

(c) quantitative risk assessment, in which full quantification occurs.

The risk assessment methodology should provide a ranking of risks in order, for subsequent consideration of risk reduction i.e. mitigation. The rigour of assessment should be proportionate to the magnitude of risk and complexity of the problem identified as illustrated in figure 1. Therefore, in the case of an extremely high-risk situation, that is labelled ‘intolerable’, quantitative risk assessment may be employed.

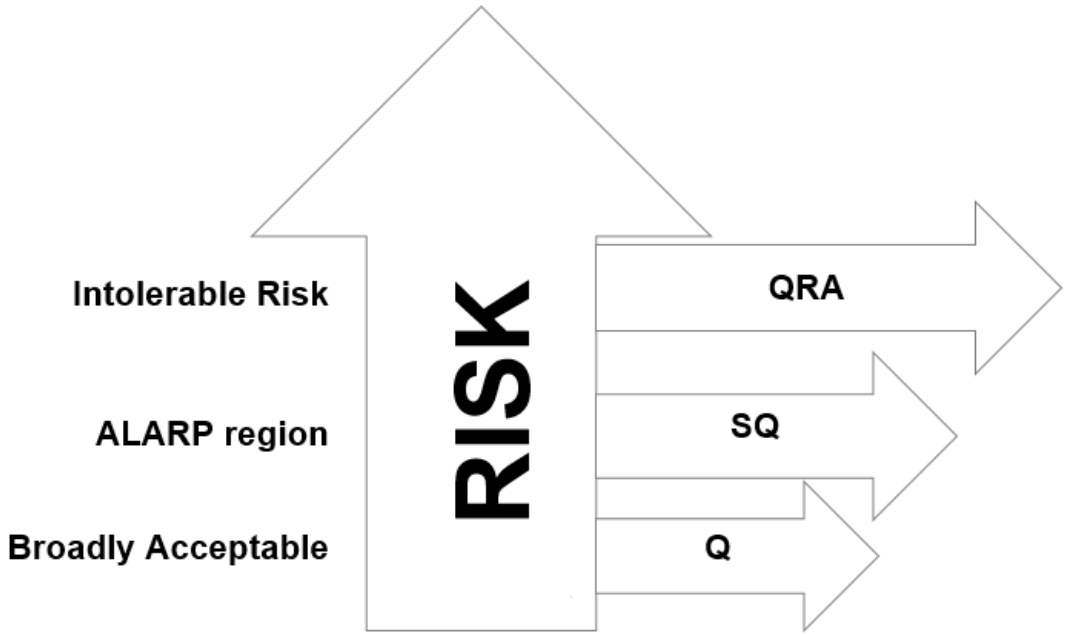

Figure 1: Proportionate Risk Assessment

KEY:

ALARP- As Low As Reasonably Probable

Q- Qualitative risk assessment

SQ- Semi-quantitative risk assessment

QRA- Quantitative risk assessment

B. Facility Description

Where a safety case is developed for a facility it shall contain a description of the facility including details of:

1) the principal functions and operations of the facility;

2) the layout of the facility;

3) the activities that will, or are likely to, take place at, or in connection with, the facility;

4) identification of installations at the facility or any related activities or operations that may present a risk of an incident, hazard or accident including:
   (a) a description of the main operations, materials, and products of the parts of the facility which may be a source of significant risks to safety; and
   (b) a description of hazardous substances present or likely to be present.

5) The location and the surrounding environment including any relevant matters relating to meteorological, geological, hydrographic conditions or the history of the site;

6) any neighbouring facilities or sites that may impact the level of risk at the facility or during activities; and

7) any other relevant matters.

C. Risk Assessment

A contractor, permit holder or a midstream operator shall, in relation to the facility and related activities, outline a detailed description of the assessment, or series of assessments, that:

(a)identifies all hazards having the potential to cause an incident or accident including a detailed description of incident scenarios and possible causes such as operational, external or natural causes;

(b)provides a detailed and systematic assessment of the risk associated with each of those hazards, including the likelihood and consequences of each potential incident or accident including a description of the conditions under which they might occur including a summary of the events which may play a role in triggering each of these scenarios;

(c)where relevant, incorporates a review of past accidents and incidents with the same substances and processes used, consideration of lessons learned from the past accidents and incidents and explicit reference to specific measures taken to prevent such accidents; and

(d)identifies the technical and other control measures that are necessary to reduce that risk to a level that is as low as reasonably practicable.

The risk assessment shall be set out in a logical, coherent and accessible format which identification of the risks arranged by each activity to be performed in a particular installation or facility.

The risk assessment shall clearly identify any high-risk installations or facilities.

Risk calculation and acceptance criteria

Risk acceptance criteria used in the risk assessment shall be clear, objective, transparent and support of reasoned decision making.

Contractors or midstream operators shall establish risk tolerability criteria against which all risks shall be assessed and reduced to a level that is tolerable and as low as reasonably practicable in the given context.

D. Safety management system

The safety case for the facility shall also contain a detailed description of the system risk control measures and practices including mitigation and recovery measures that are adequate and effective to reduce risk to safety and health of persons at or near the facility to a level that is as low as reasonably practicable.

The safety management system shall:

(a) be comprehensive and integrated;

(b) consider and provide for all activities that are likely to take place at, or in connection with, the facility; and

(c) define appropriate technical measures such as those relating to:

(i) design;

(ii) construction;

(iii) safety systems;

(iv) choice of chemical products;

(v) operation, maintenance, and systematic inspection of the installation;

(d) define relevant organisational measures such as those relating to:

(i) training and instruction of workers;

(ii) supply of safety equipment;

(iii) number of persons at the installation;

(iv) working hours;

(v) definition of responsibilities and control of workers and contractors;

(e) establish emergency plans and procedures for the site;

(f) provide for the continual and systematic identification of hazards to safety and health of persons at or near the facility;

(g) provide for the continual and systematic assessment of:

(i) the likelihood of the occurrence, during normal or emergency situations, of injury or occupational illness associated with those hazards; and

(ii) the likely nature of such injury or occupational illness;

(h) provide for inspection, testing and maintenance of the equipment and hardware that are the physical control measures for those risks;

(i) provide for adequate communications between the facility and any relevant auxiliary facility, installation or mode of transport

(j) specify the performance standards that apply

(k) provide procedures for reporting incidents or accidents, particularly those involving failure of protective measures, and the conduct of investigation and addressing lessons learned

(l) provide for any other matter that is necessary to ensure that the risk control measures meet the requirements and objects of these Regulations

Without limiting the control measures, a contractor, permit holder or a midstream operator shall ensure adequate consideration of:

(i) risks arising during evacuation, escape and rescue in case of emergency; and

(ii) risks arising from equipment and hardware.

Safety case for construction, installation, modification or decommissioning stage

If a contractor, permit holder or a midstream operator of a facility submits a safety case for a construction, installation, modification or decommissioning stage in the life of the facility, the safety case shall contain the matters outlined in this Schedule with sufficient reference to:

(a) the facility at that stage in the life of the facility; and

(b) the activities that will, or are likely to, take place at, or in connection with, the facility during that stage in the life of the facility; and

(c) to the extent that it is practicable—the facility and the activities that will, or are likely to, take place when the facility is in operation.

Updating aspects of the safety case

The contractor, permit holder or midstream operator shall define any conditions or criteria that may require updating a risk assessment in addition to those outlined in these regulations.

EIGHTEENTH SCHEDULE

Guidelines for the Evaluation of Environmental Liability Policy

The significance of any damage that has adverse effects on reaching or maintaining the favourable conservation status of habitats or species has to be assessed by reference to the conservation status at the time of the damage, the services provided by the amenities they produce and their capacity for natural regeneration. Significant adverse changes to the baseline condition should be determined by means of measurable data such as:

a. the number of individuals, their density or the area covered,
b. the role of the particular individuals or of the damaged area in relation to the species or to the habitat conservation, the rarity of the species or habitat (assessed at local, regional and higher level including at Community level),
c. the species' capacity for propagation (according to the dynamics specific to that species or to that population), its viability or the habitat's capacity for natural regeneration (according to the dynamics specific to its characteristic species or to their populations),
d. the species' or habitat's capacity, after damage has occurred, to recover within a short time, without any intervention other than increased protection measures, to a condition which leads, solely by virtue of the dynamics of the species or habitat, to a condition deemed equivalent or superior to the baseline condition.

2. Damage with a proven effect on human health must be classified as significant damage. The following does not have to be classified as significant damage:

a. negative variations that are smaller than natural fluctuations regarded as normal for the species or habitat in question,
b. negative variations due to natural causes or resulting from intervention relating to the normal management of sites, as defined in habitat records or target documents or as carried on previously by owners or operators,
c. damage to species or habitats for which it is established that they will recover, within a short time and without intervention, either to the baseline condition or to a condition which leads, solely by virtue of the dynamics of the species or habitat, to a condition deemed equivalent or superior to the baseline condition.

NINETEENTH SCHEDULE

Guidance on the contents of a Flaring and Venting Management Plan

1. The Flaring and Venting Management Plan shall provide a projection of flaring and venting quantities and associated emissions over the lifetime of the installation with an associated plan of actions/projects/investments which the licensees plan to undertake to manage and minimise flaring and venting quantities and associated emissions. At a minimum, the documentation should contain:

   (a) a brief overview of the field and associated main facilities;

   (b) a detailed description of the plant commissioning philosophy and procedure, including gas export line commissioning should this be applicable, setting out steps to minimise flaring and venting;

   (c) the commissioning schedule;

   (d) a summary of the main flaring and venting assumptions and the greenhouse gas emission profiles of different commissioning strategies considered;

   (e) flaring and/or venting forecasts – on a daily basis and total quantities

   (f) sketches and figures should be as follows:

      1) high level field layout

      2) process flow diagram

      3) gas compression, dehydration, gas export and fuel gas system

2. Throughout the oil and gas Lifecyle, the operator is required to provide weekly reports to the Authority detailing the following information relating to the previous week's activity:

   (a) a short technical summary of the performance of the gas handling plant, highlighting any features which have affected or could affect the operation of the plant

   (b) an update on commissioning activity progress and main works planned

   (c) daily rates of oil production, gas production, gas export, gas used for fuel and of gas flare and/or vent

   (d) cumulative plots of production and flaring and venting compared to consented quantities for that period and a plot of associated emissions

   (e) gas compression plant uptime

3. Applications made for annual consents exercise should contain the following information:
   (a) List of fields sending hydrocarbons to the terminal or similar site

(b) Actual flaring and venting quantities from the previous year to the current year (i.e. 12 months historic quantities)
(c) Expected flaring and venting quantity for the next year, broken down into the categories below
(d) Summary of measures being considered or implemented to reduce flaring or venting and associated emissions throughout lifecycle activities, supported by, amongst other things, improved energy efficiency, continued focus on maintenance, and a high level of production efficiency

4. Where flaring or venting is forecast to be in excess of consented levels, the Authority may request for and consider the following information:
   (a) a robust remediation plan and investment plan, with approved budget and timing, to revert to original consent rates
   (b) options for, or evidence of, curtailment of production to minimise flare and vent quantities and associated emissions – including scenarios that result in the temporary shut-in of production analysis on scenario emissions
   (c) evidence that export outages have been planned for and all other options have been appropriately considered by the operator, such as but not limited to:
      i) sheltering annual maintenance activities
      ii) planning activities where periods of zero production are required (e.g. annual maintenance shut downs) to align with known downstream/export outages
      iii) line pack
      iv) evidence of Managing Director (or equivalent) awareness of the issue, and operator request for variation request