Energy & Petroleum Regulatory Authority

DECOMMISSIONING, SITE ABANDONMENT AND RESTORATION GUIDELINES FOR UPSTREAM PETROLEUM OPERATIONS IN KENYA 2025

Quality Energy, Quality Life

IN EXERCISE of the powers conferred by Part 1 Section 9 (1) of the Petroleum Act (Cap. 308), the Authority makes the following guidelines: -

CITATION AND COMMENCEMENT

These guidelines may be cited as the Decommissioning, Site Abandonment and Restoration Guidelines for Petroleum Operations in Kenya 2025.

DEFINITION OF TERMS

"**Authority**" means the Energy & Petroleum Regulatory Authority (EPRA), established as the successor to the Energy Regulatory Commission (ERC) under section 10 of the Energy Act (Cap. 314).

"**Best petroleum industry practices**" means such practices, methods, standards and procedures generally accepted and followed internationally by prudent, diligent, skilled, and experienced operators in upstream petroleum operations, including practices, methods, standards and procedures intended to: -

a. Conserve petroleum by maximizing the recovery of petroleum in a technically and economically sustainable manner;

b. Promote operational safety and prevention of accidents; and

c. Protect the environment by minimizing the impact of upstream petroleum operations.

"**Decommissioning**" means abandoning, recovering, removing and disposing of wells, flow lines, pipelines, facilities, infrastructure, and assets related to upstream petroleum operations or, if applicable, redeploying them.

"**Decommissioning Plan**" means the plan for decommissioning, abandonment, recovery, removal, or, if applicable, redeployment of wells, flow lines, pipelines, facilities, infrastructure and assets related to upstream petroleum operations.

"**Facility**" includes-

a. Any structure, device, roads, or other associated installations or infrastructure, including pipelines, rail stations, pump stations, compressor stations and equipment constructed, placed, or used to carry out upstream petroleum operations.

b. Vessel, vehicle, or craft when stationary and used for drilling or support of ongoing upstream petroleum operations.

c. Vessel, vehicle, or craft for transportation of petroleum in bulk when connected to a facility for loading of petroleum.

"**Obstructions**" means structures, equipment, or objects used in oil and gas operations or marine growth on such structures that, if left in place, would substantially hinder other existing users of the seafloor. Such obstructions may include but are not limited to platforms, shell mounds, wellheads, casing stubs, production and pipeline risers, templates, pipelines, pipeline valves, power cables, pilings, and other related structures.

"**Operator**" means the designated entity that is responsible for managing the day-to-day operation of petroleum exploration, development and production.

"**Pollution**" means any direct or indirect alteration of the physical, thermal, chemical, biological or radioactive properties of any part of the environment by discharging, emitting or depositing wastes or emitting noise so as to affect any beneficial use adversely, to cause a condition which is hazardous or potentially hazardous to public health, safety, welfare or to animals, birds, wildlife, fish or aquatic life, land, property and water resources or to plants or to cause a contravention of any condition, limitation or restriction which is subject to a license under the Petroleum Act (Cap. 308).

Contents

LIST OF ACRONYMS

EA	Environmental Assessment
EIA	Environmental Impact Assessment
EMCA	Environmental Management and Coordination Amendment Act
EPRA	Energy & Petroleum Regulatory Authority
ESIA	Environmental and Social Impact Assessment
ESMP	Environmental and Social Management Plan
NEMA	National Environmental Management Authority
NORM	Naturally Occurring Radioactive Material
VOCs	Volatile Organic Compounds

1. INTRODUCTION

Decommissioning and abandoning upstream petroleum surface infrastructure, whether onshore or offshore poses significant environmental and safety risks.

During decommissioning exercises, there are risks associated with various activities. These risks include the following: -

- **Oil and Chemical Spills:** Activities undertaken during decommissioning processes can result in spills or leaks of oil and other chemicals stored in pipelines, tanks and other equipment, resulting in contamination and environmental damage.
- **Hazardous Materials Handling:** Upstream petroleum activities utilize hazardous materials, including heavy metals, radioactive materials and toxic chemicals. Improper handling of these materials during decommissioning can lead to environmental contamination and health risks.
- **Structural Integrity:** In cases of aged infrastructure, there is a risk of equipment failure or collapse during decommissioning activities. This can be a source of safety hazards for workers and potential environmental damage if spills occur.
- **Emissions and Air Quality:** Associated decommissioning activities could release pollutants, such as volatile organic compounds (VOCs), greenhouse gases and particulate matter.
- **Species and habitat Disturbance:** Offshore decommissioning activities can disrupt marine habitats and ecosystems. Installation removal can disturb benthic communities' coral reefs and fish habitats, leading to habitat loss and biodiversity decline.
- **Noise and Vibration:** Activities during decommissioning can generate significant noise and vibration, disturbing life and disrupting natural behaviors such as feeding and mating. Prolonged exposure to noise and vibration can be adverse to fauna species.
- **Wastes generation:** Decommissioning generates large quantities of waste materials, including scrap metal, concrete, and contaminated soil. Their improper disposal can lead to pollution and risks of exposure to hazardous substances.

To mitigate these risks, decommissioning and abandonment activities must be undertaken carefully to minimize the risks associated with them and ensure compliance with safety and environmental standards.

2. PURPOSE

The purpose of these Decommissioning, Site Restoration, and Abandonment Guidelines is to guide upstream petroleum contractors in undertaking these activities, in compliance with legal requirements and in line with good inter-national industry practice.

They apply to offshore and onshore petroleum production site abandonment and are not prescriptive but allow flexibility within the existing regulatory framework and best petroleum industry practices.

3. SCOPE

These guidelines apply to upstream petroleum contractors operating both offshore and onshore in Kenya.

4. REGULATORY REQUIREMENTS

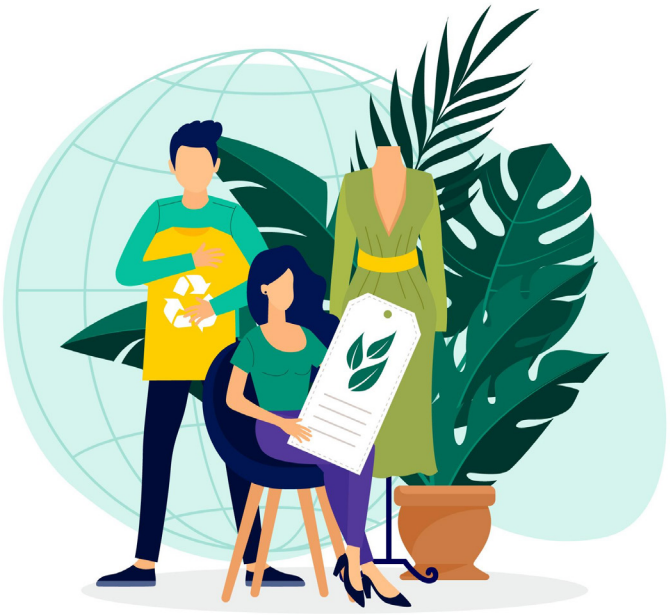
The Petroleum Act (Cap. 308) requires that a Contractor shall submit among other things, a Field Decommissioning Plan during the application for a production permit. This Decommissioning Plan will be submitted to EPRA before the commencement of development. Any amendments made to the plan must be communicated to EPRA through updated plan versions. An updated version of the Decommissioning Plan will similarly be submitted to EPRA for approval when the project has reached an aggregate production of 50% of proven reserves or ten (10) years prior to the expiry of the production permit.

The Authority shall administer the guidelines for all upstream petroleum facilities, including decommissioning production sites.

The contractor shall submit a work completion report to EPRA for approval of the site restoration/ decommissioning/ abandonment work.

4.1 ENVIRONMENTAL AND SOCIAL IMPACT ASSESSMENT (ESIA)

4.1.1 The Environmental Management and Coordination Act (1999) and the EIA and EA Regulations (Revised 2015) require an Environmental and Social Management Plan (ESMP) for Decommissioning to be submitted to NEMA as part of an ESIA for approval prior to the exercise. An approved ESIA detailing environmental and social management plans for the Decommissioning Phase shall form part of the approval requirement for the Decommissioning Plan by EPRA.



4.1.2 The ESIA for the selected decommissioning methodology should consider environmental protection measures in consultation with relevant stakeholders, including fence line communities in onshore facilities. The Contractor will submit the approved ESIA report for the project to EPRA and a site restoration plan during the production license application.

4.2 HANDLING OF NATURALLY OCCURRING RADIOACTIVE MATERIAL (NORM)

4.2.1 Identifying, labelling, maintaining, storing and disposing of equipment contaminated with Naturally Occurring Radioactive Material (NORM) shall be undertaken in accordance with Environmental Management and Coordination (Waste Management) Regulations (2006).

4.2.2 The removal of equipment and machinery from a site undergoing decommissioning will be preceded by an assessment of gamma dose rates and a radiology risk assessment.

4.3 DECOMMISSIONING/ SITE RESTORATION FUND

4.3.1 The Petroleum Act (Cap. 308) directs that a Decommissioning Fund be established for each development area, or other facilities operated with a production permit. The fund is for costs related to implementing a Decommissioning Plan as provided in the petroleum agreements. The Environmental Management and Coordination Act (EMCA), 1999, section 25 establishes the National Environment Restoration Fund. The fund is vested in NEMA and subject to EMCA, 1999, is administered by the Director General, NEMA. The Restoration Fund is a supplementary insurance for the mitigation of environmental degradation.

4.3.2 A committee that consists of Government functions (national and county) and the contractor will manage the fund as directed by regulations. Contractors are expected to commence payments to the fund where production has attained 50% of the aggregate recoverable reserves or at least ten (10) years before the expiry of the existing production permit.

4.3.3 The contractor will be charged a portion of the future decommissioning cost every first calendar quarter during operation. The Act also provides that for every subsequent first calendar quarter in which petroleum is produced or a facility operated, the Authority shall charge the contractor a portion of the estimated future cost for

decommissioning of facilities to be deposited in the fund.

4.3.4 The contractor shall meet any insufficiency in covering the implementation of the Decommissioning Plan and, where applicable, the owner of the facilities.

4.3.5 Any remaining accrued amounts in the fund after the Decommissioning Plan has been implemented are directed to be distributed pro rata between the Contractor and the National Government, where the National Government has a participating interest.

4.3.6 This law also requires a contractor to notify the Authority of the date and time of the intended termination of a Facility's use if termination and decommissioning of the said use are expected to terminate permanently before the expiry of the production permit.

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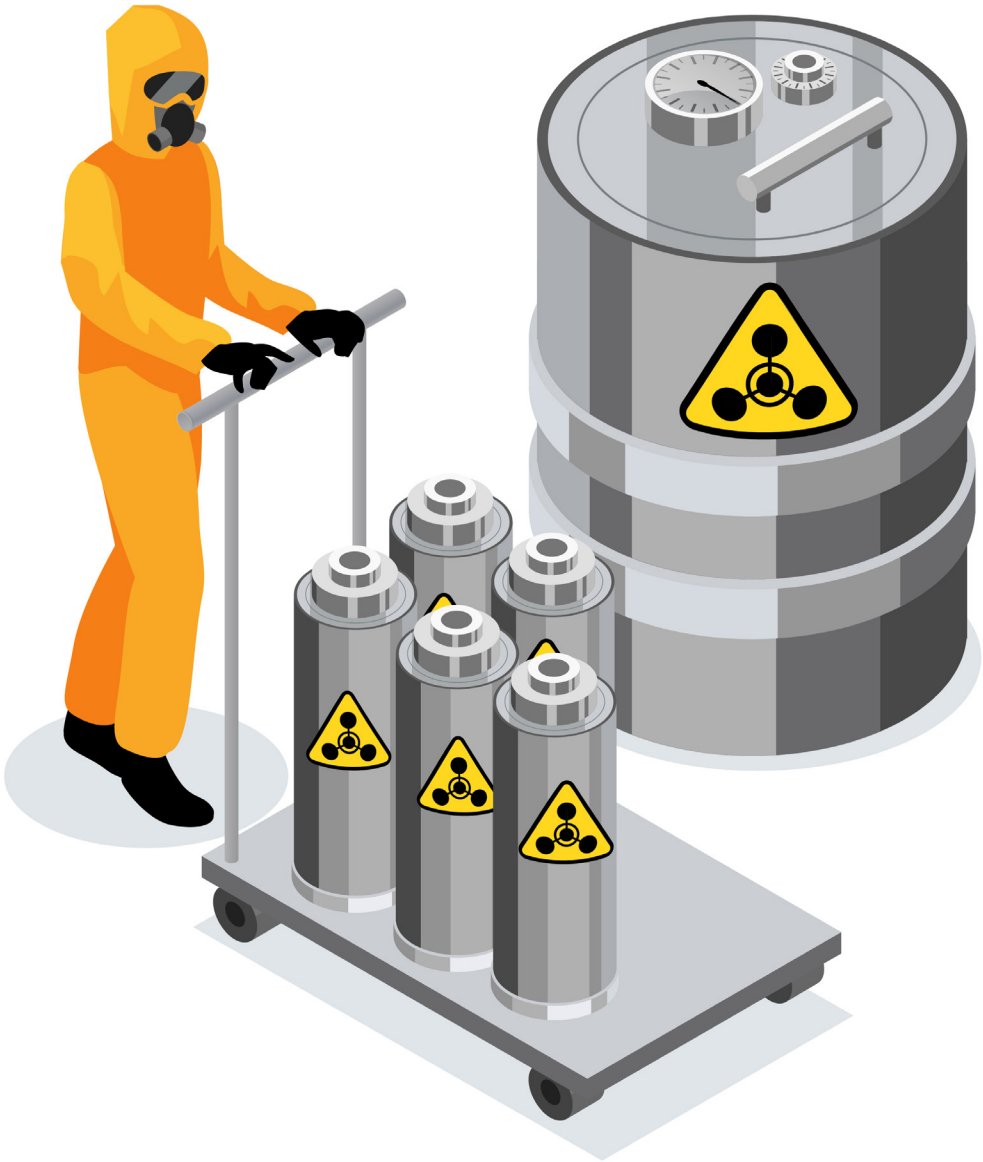


5. STAKEHOLDER NOTIFICATION AND CONSULTATION

5.1 THE GUIDELINES ON COMMENCEMENT OF SITE ABANDONMENT

5.1.1 Decommissioning shall be undertaken in accordance with the requirements of the Petroleum Act, Cap 308, and EMCA, Cap 387, as well as the Decommissioning Plan approved by EPRA in consultation with NEMA. An estimated high-level schedule for the abandonment should be submitted to EPRA for review one (1) year before the expected cessation of production.

5.1.2 The Authority, within 720 calendar days before the commencement of plugging and abandonment of a facility, shall inform the contractor which facilities and assets in the Decommissioning Plan shall be excluded from plugging and decommissioning but rather be reverted in ownership to the Government

.**5.1.3** The initiation of abandonment should begin according to the timelines approved in the Decommissioning Plan or as directed by the Authority, subject to the prompt grant of all regulatory approvals, permits and clearances.

Guide for Periodic Monitoring After Decommissioning

Following the decommissioning of upstream petroleum operations, the Operator shall undertake the following monitoring activities.

5.1.4 Decommissioning Environmental Audit to evaluate the effectiveness of the decommissioning process and identify any potential residual long-term environmental impacts as-sociated with the site.

5.1.5 During the first year post-decommissioning, undertake quarterly monitoring of the integrity of wellbores to ensure they remain properly plugged and abandoned, preventing potential leaks or migration of fluids and yearly until the movement of fluids in the bore well is similar to the movement of fluids in the earth's crust.

5.1.6 For offshore operations, continuous monitoring over a minimum period of five (5) years after decommissioning of the condition of any subsea infrastructure left in place to ensure it doesn't pose a threat to marine life or navigation.

6. GUIDELINES FOR DECOMMISSIONINGUPSTREAM PETROLEUM FACILITIES IN KENYA

6.1 GENERAL DECOMMISSIONING REQUIREMENTS

The guidelines on decommissioning requirements are as follows.

6.1.1 The Petroleum Act (Cap. 308) directs that a contractor decommissions a Facility as provided for in the Act, the Petroleum Sharing Agreement, and the approved Decommissioning Plan.

6.1.2 In cases where all the decommissioned facilities revert to the National Government, the Authority may issue a directive on the time limits for disposal of the decommissioned facilities. This directive will take into consideration factors such as economic efficiency, technical viability, safety and any environmental concerns, as well as consideration for other users. A contractor is legally compelled to follow the issued directive even where the production permit has lapsed. A contractor who abandons a facility similarly retains responsibility for any damage or loss occasioned by or in connection with it.

6.1.3 The Operator shall complete all decommissioning activities before the Production Sharing Contract ceases to be in force wholly or in relation to blocks where decommissioning activities are to be completed.

6.1.4 The Operator shall, if required by the Authority, maintain property in good condition and repair and remove disused property where there is a decision to award and renew or transfer titles or consent to surrender a PSC/permit/license.

6.1.5 Plugging and abandonment shall be in accordance with the plugging and abandonment permit issued by the Authority, using best petroleum industry practices. A Contractor must undertake decommissioning activities in accordance with these practices.

6.1.6 A contractor will NOT plug and abandon a well or remove any permanent form of casing therefrom without giving forty eight (48) hours prior notification to the Authority. An abandoned well shall be securely plugged to prevent environmental damage, pollution, subsea damage, or water entering or escaping from the strata penetrated.

6.1.7 A contractor shall state in the application to plug and abandon a well on land whether that well can provide fresh water supply.

6.1.8 Following the surrender, expiry, or relinquishing of a production permit, the Authority will notify a Contractor in writing to vacate the property or do otherwise as deemed sat-isfactory to the Authority.

6.1.9 The notice will also include a directive to the contractor to apply for a plugging permit from the Authority to plug all wells drilled in the area and any required environmental restoration.

6.1.10 A contractor may reach an agreement with the National Government for the latter to take up the responsibility for future maintenance of an abandoned Facility based on agreed financial compensation as provided by law.

6.2 CONTENTS OF A DECOMMISSIONING PLAN.

6.2.1 In line with the stipulations of the Petroleum Act (Cap. 308), a Decommissioning Plan shall entail proposals for continued production or shutdown of production, decommissioning of facilities and any other information required under the Petroleum Act (Cap. 308) Regulations and other relevant laws. This may constitute further use of the facilities in upstream petroleum operations, other uses, complete or partial removal, and disposal or abandonment.

6.2.2 Decommissioning with Redeployment/Repurposing Guidelines Where decommissioning is undertaken with the intention to redeploy or repurpose the facility, the Operator shall :-

- Provide a thorough evaluation of the existing facility assessing the structural integrity, remaining useful life of components, potential for adaptation to a new use and presence of hazardous materials.
- Ensure the intended repurposing aligns with relevant zoning regulations, building codes, and required environmental permits.
- Clearly define the new intended use of the facility. Consideration shall be made of industries with compatible needs to minimize modifications.
- Develop a plan for any necessary modifications to adapt the facility for its new use.

6.3 SITE RESTORATION

After bringing the site to an environmentally safe condition,

6.3.1 Restore the site to a condition prescribed under the Decommissioning Plan, ESIA License Conditions and County Government Agreements.

6.3.2 All waste should be safely disposed of in accordance with relevant environmental regulations.

6.3.3 Provide a letter signed by an authorised NEMA official confirming that the site has been restored and cleared of all obstructions.

6.4 POST-SITE RESTORATION REPORTING

The operator will, subsequent to the completion of decommissioning and site restoration provide a report containing the following: -

6.4.1 Project Identification: Details such as the name of the operation, location, and license number.

6.4.2 Restoration Activities: Detailed description of the restoration activities conducted, including:

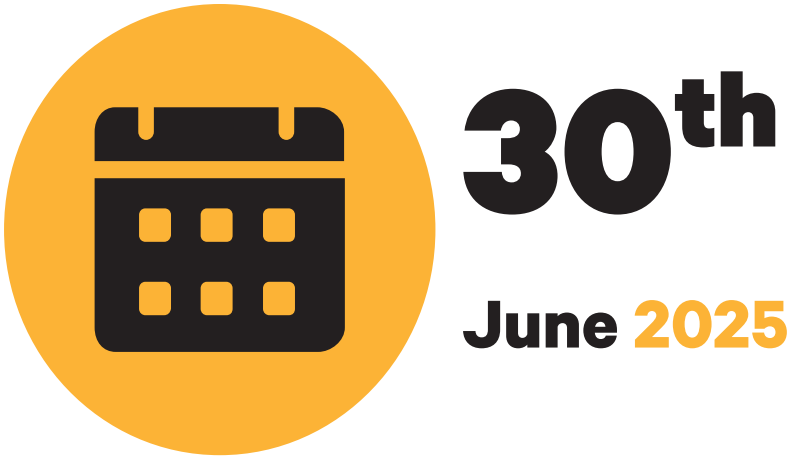
- Methods used for soil remediation (if applicable);
- Re-vegetation techniques employed (e.g., seed planting, transplanting); and
- Erosion control measures implemented.
- Waste management practices.

6.4.3 Monitoring Data: Presentation of data collected during the monitoring period. This will include:

- Vegetation cover percentage and species composition;
- Soil quality analysis results;
- Water quality data (if relevant); and
- Photographic documentation of site progress.

EFFECTIVE DATE

The effective date of the guidelines shall be:



ANNEX 1- UPSTREAM AND MISTREAM PETROLEUM DECOMMISSIONING PLAN, WELL PLUGGING AND ABANDONMENT PLAN CONTENT AND OUTLINE

1.0. Comprehensive Decommissioning Plan Content & Outline

1.1. Executive Summary

i. Overview of the field, location, operator, and licence.

ii. Key facilities to be decommissioned (wells, CPF, pipelines, utilities).

iii. Objectives, guiding principles, and scope of the decommissioning.

iv. Regulatory references: Petroleum Act 2019 (Sections 39, 40, 41, 42, 43, 44 and 75), EMCA 1999 and applicable international standards.

1.2. Legal, Regulatory, and Contractual Framework

i. Summary of all applicable Kenyan laws and petroleum agreements.

ii. Licences and permits held; obligations under PSC or licence terms.

iii. Summary of EPRA, NEMA, Water Resources Authority, and County Government roles.

iv. Reference to international frameworks (IFC PS 1–6, IOGP 557, API E3).

1.3. Project Description and Facility Inventory

i. Geographical and operational overview of the field.

ii. Inventory of all physical assets: wells, flowlines, manifolds, process units, power systems, tanks, pipelines, camps, and waste facilities.

iii. Condition assessment and integrity status of each major asset.

iv. Maps, as-built drawings, and photographic records.

1.4. Decommissioning Objectives and Strategy

i. End-of-life goals (safety, environmental protection, restoration).

ii. Strategic options: full removal, partial removal, conversion to reuse, or leave-in-place.

iii. Comparative assessment of each option using five criteria (safety, environmental impact, socio-economic impact, technical feasibility, and cost).

iv. Preferred decommissioning option and justification.

1.5. Well Plugging and Abandonment (P&A) Programme

i. List of wells and coordinates (GPS).

ii. Technical plugging design: plug types, depths, cement types, verification tests.

iii. Reservoir isolation procedures; handling of wells with radioactive sources (NORM).

iv. Independent verification plan and certificates.

v. Site restoration and wellhead marking specifications.

vi. Schedule for post-abandonment inspections (minimum twice in 15 months).

1.6. Facility Dismantling and Site Restoration

i. Dismantling plan for process plants, tanks, pipelines, utilities, and camps.

ii. Material inventory (steel, piping, electricals, concrete, sludge).

iii. Removal, cleaning, reuse, recycling, or disposal strategy.

iv. Decontamination procedures (hydrocarbon purging, degassing, NORM cleaning).

v. Site restoration plan: grading, topsoil replacement, re-vegetation.

vi. Independent verification of dismantling and restoration completion.

1.7. Environmental and Social Impact Management

i. Decommissioning-specific ESIA or ESIA addendum with licence from NEMA.

ii. Updated baseline studies (air, water, soil, biodiversity, noise, socio-economic).

iii. Cumulative impact assessment and mitigation hierarchy.

iv. Community health, safety, and livelihood restoration measures.

v. Post-closure environmental monitoring (water, soil, vegetation).

1.8. Waste and NORM Management Plan

i. Waste hierarchy (avoid, minimise, reuse, recycle, dispose).

ii. Waste classification (hazardous, non-hazardous, NORM).

iii. Waste Acceptance Criteria (WAC) for each route (thermal desorption, landfill, incineration).

iv. Waste manifest system and tracking.

v. Groundwater and leachate monitoring at disposal sites.

vi. Procedures for safe NORM storage, transport, and disposal per API RP 5A5 and IAEA guidelines.

1.9. Health, Safety, and Emergency Management

i. HSE management structure for decommissioning.

ii. Risk identification and control measures (chemical, mechanical, confined-space, ergonomic).

iii. Job-specific risk assessments and permits to work.

iv. Worker competence, certification, and training.

v. Emergency Response Plan linked to the National Oil Spill and Disaster Contingency Plans (both onshore and offshore).

vi. Fire-protection measures during dismantling and P&A.

1.10. Financial Provision and Decommissioning Fund

i. Estimated cost of decommissioning (wells, facilities, waste, monitoring).

ii. Methodology for cost estimation and escalation factors.

iii. Establishment of a Decommissioning Fund in a USD interest-bearing escrow account jointly managed by EPRA, the Ministry, County Government, and Contractor.

iv. Governance and fund-release procedures.

v. Annual fund review and top-up mechanism.

1.11. Stakeholder Engagement and Communication

i. Stakeholder mapping (local communities, county agencies, national authorities).

ii. Consultation strategy and meeting records.

iii. Feedback integration matrix.

iv. Public disclosure plan for non-confidential decommissioning information.

1.12. Implementation Schedule

i. Detailed Gantt chart covering P&A, facility dismantling, waste management, restoration, verification, and monitoring.

ii. Critical milestones aligned with funding and regulatory approvals.

1.13. Monitoring, Verification, and Reporting

i. Performance indicators (HSE, environmental, schedule, cost).

ii. Independent verification plan by EPRA-approved entity.

iii. Reporting templates and timelines (monthly progress, annual fund statement).

iv. Final decommissioning report structure (activities, costs, verification, residual monitoring).

1.14. Residual Liability and Post-Closure Obligations

i. Declaration of residual liability by the contractor.

ii. Conditions for transfer of ownership to the National Government.

iii. Post-closure inspection and maintenance plan (minimum 5 years).

iv. Financial and legal mechanisms for residual risks.

1.15. Annexes

i. Maps, as-built drawings, tables of wells and facilities.

ii. Environmental and socio-economic baseline data.

iii. Cost breakdown and financial assurance schedules.

iv. Stakeholder consultation records.

v. Independent verification and closure certificates.

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