



Independent Monitoring Group:

Sixth HSEC Monitoring Review

Africa Oil Corporation

12 April 2019

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LIST OF ABBREVIATIONS

ALARP	As Low as Reasonably Practicable
AOC	Africa Oil Corporation
AOI	Area of Influence
APELL	Awareness and Preparedness for Emergencies at Local Level
BAT	Best Available Technology
CPF	Central Processing Facility
EHS	Environment, Health and Safety
EHS MS	Environment, Health and Safety Management System
EHS MP	Environment, Health and Safety Management Plan
EOPS	Early Oil Pilot Scheme
EDC	Enterprise Development Centre
ENVID	Environmental Impact Identification
ERM	Environmental Resources Management Ltd
ESAP	Environmental and Social Action Plan
ESRS	Environmental and Social Review Summary
ESIA	Environmental and Social Impact Assessment
ESMP	Environmental and Social Management Plan
ESMS	Environmental and Social Management System
ESG	Environmental and Social Governance
EWT	Extended Well Test
FEED	Front End Engineering Design
FFD	Full Field Development
FID	Financial Investment Decision
FPIC	Free Prior Informed Consent
GHG	Green House Gases
GIIP	Good International Industry Practice
HAZID	Hazard Identification
HR	Human Resources
HSEC	Health, Safety, Environment and Community
IMS	Integrated Management System
IFC	International Finance Corporation
IMG	Independent Monitoring Group
JV	Joint Venture
KPI	Key Performance Indicator
KPRL	Kenya Petroleum Refineries Ltd
LALR	Land Acquisition and Livelihood Restoration
LARF	Land Access and Resettlement Framework
LLCOP	Lokichar to Lamu Crude Oil Pipeline
NEMA	National Environmental Management Authority
NGO	Non-Governmental Organisation
OSRL	Oil Spill Response Limited
PPE	Personal Protective Equipment
PS	Performance Standard
SEP	Stakeholder Engagement Plan
SP	Social Performance
SSA	Site Specific Assessment
TOR	Terms of Reference

EXECUTIVE SUMMARY

Africa Oil Corporation (AOC) is a Canada based oil and gas exploration and development company that has been active in Kenya and Ethiopia since 2009. AOC's current interests include both operated assets (Rift Basin Area Block in Ethiopia) and non-operated assets (Blocks 13T, 10BA and 10BB in the South Lokichar Basin, North-West Kenya). Its Joint Venture (JV) partner, Tullow Kenya is Operator of the non-operated assets in Kenya.

AOC entered into an Equity Subscription Agreement with the International Finance Corporation (IFC) in August 2015 to finance its oil and gas exploration, appraisal and development activities in Kenya and Ethiopia. The agreement requires AOC (and its JV partners) to conform to the IFC Performance Standards on Environmental and Social Sustainability (2012) and undertake specific actions detailed in an Environmental and Social Action Plan (ESAP) and Environmental and Social Review Summary (ESRS) (together referred to as the 'Standards').

Environmental Resources Management was commissioned as the Independent Monitoring Group (IMG), which is a requirement for projects that have been classified by the IFC as Category A. Previous reviews have been undertaken at approximately six monthly intervals between December 2015 and March 2018. This report covers the findings of the sixth review, undertaken in November/December 2018.

The Operator is progressing with ongoing appraisal and extended well testing (EWT) activities in South Lokichar as well as undertaking the Interim Trucking Project (trucking of the existing stored crude oil from previous EWT activities). An Environmental and Social Impacts Assessment (ESIA) for the Early Oil Pilot Scheme (EOPS) has been submitted to the regulatory authority for approval. The ESIA for the Foundation Phase of the South Lokichar Full Field Development (FFD) project is in progress and due for completion in the mid-2019. To support these activities the Operator is continuing to develop and operationalise management systems, plans, procedures and guidance to ensure effective identification and management of environmental and social risks.

Block 9 in Kenya has been relinquished by AOC and no further activities in Ethiopia are planned.

Observations from the documents reviewed and the site visit to inspect the oil transport process from Lokichar to Mombasa are presented in the report, along with an evaluation of conformance with the relevant Performance Standard and any actions required to fully conform to the Standards. Reference to previous observations are made, as required, to provide context. Where appropriate, recommendations have been provided where the IMG

considers that improvements could be made to meet Good International Industry Practice (GIIP).

In many cases the required actions are in progress, for example, they are being addressed in the current ESIA's or they are addressed in draft procedures that are undergoing internal review. There is a requirement to finalise and fully operationalise a number of these draft environmental and social management procedures to ensure conformance with the Performance Standards. This is important for the management of risk and impacts from the current activities and in preparation for the increased activity that will occur during the Foundation Phase of the FFD project.

The review of the crude oil transport operations from Lokichar to Mombasa concluded that the operations generally followed the established health and safety procedures. Recommendations have been made to improve the overnight accommodation facilities for drivers and improve the oil spill contingency plans and available equipment.

The focus of the next review is likely to continue to be on the South Lokichar Basin operations, EOPS and the Foundation Phase FFD ESIA.

1.1**BACKGROUND**

In August 2015, *Africa Oil Corporation (AOC)* entered into an Equity Subscription Agreement with the International Finance Corporation (IFC) for financing to support its oil and gas exploration, appraisal and development activities in Kenya and Ethiopia. The agreement included a requirement for AOC to conform to the IFC Performance Standards (PS) on Environmental and Social Sustainability (the Performance Standards) and to undertake specific actions detailed in an Environmental and Social Action Plan (ESAP). The ESAP was developed by the IFC based on its Environmental and Social Review Summary (ESRS) of AOC's activities produced in June 2015.

Environmental Resources Management Consulting East Africa Limited (ERM) was commissioned by AOC and the IFC to act as the Independent Monitoring Group (IMG) ⁽¹⁾. The role of the IMG is to conduct a review of Health, Safety, Environment and Community (HSEC) aspects associated with AOC's activities related to oil and gas exploration, appraisal and development in Kenya and Ethiopia with respect to IFC's environmental and social requirements. It is planned to undertake reviews every six months during the exploration and development phases, and annually during the production phase. The first five IMG reviews were undertaken in December 2015, July 2016, January 2017 and July 2017 (desk based due to travel restrictions) and May 2018. This report covers the findings of the sixth review, undertaken in November/December 2018.

1.2**SCOPE OF THE REVIEW**

AOC's current interests in Kenya and Ethiopia include both 'operated assets', where AOC leads development activities and 'non-operated assets', where development activities are led by another partner in a Joint Venture (JV). At the time of the previous and current reviews, there were no activities in AOC operated assets in Ethiopia and Kenya, other than some studies to support potential future operations in Ethiopia. Note that AOC has taken the decision to cease activities and relinquish its exploration licences in Ethiopia and therefore no further activities are envisaged by AOC in Ethiopia.

The current review included an on-site inspection of the transport of crude oil from Lokichar to Mombasa as part of the Interim Trucking Project. The remainder of the review was desk based, due to the low level of new activities on site. The review included a meeting in London with Tullow and AOC (Tullow Nairobi office calling in by video-conference) and a review of

(1) As required for projects classified by the IFC as Category A (projects expected to have significant adverse social and/or environmental impacts that are diverse, irreversible, or unprecedented).

documents and project presentations with follow up discussions by telephone and email.

For the purposes of evaluating operational performance, the focus of the IMG reviews has been directed at activities in non-operated assets in Kenya. Currently these are in the South Lokichar Basin in Kenya where Tullow Kenya is the Operator.

The proposed pipeline along the LAPSET corridor from South Lokichar to Lamu, on the Indian Ocean coast, is outside the scope of the IMG reviews. The IMG will, however, take into consideration those elements of the pipeline project, as an Associated Facility, that could present risks to the FFD project (as required under PS1).

1.2.1 *Objectives*

The overall objective of the reviews is to identify areas of non-conformance ⁽¹⁾ within the review framework and to make recommendations for corrective actions, or improvements in line with Good International Industry Practice (GIIP). The reviews to date have covered the following areas.

- Progress against the agreed AOC ESAP and ESRS requirements.
- Tullow Kenya operational-level HSEC management plans and procedures.
- Tullow Kenya operational performance where Tullow Kenya is the Operator.

The objectives of future reviews may vary depending on activities being undertaken, eg for activities where AOC is the Operator.

1.2.2 *Approach*

The approach taken for the current review was as follows.

- Conduct a desktop review of AOC's and the Operator's new, revised or finalised documentation on the social and environmental risks; HSEC policies, plans and procedures; stakeholder engagement plans; land access plans; and associated studies and reports. This included the early Oil Production Scheme (EOPS) ESIA and associated plans.
- Conduct a site visit to observe the Interim Trucking Project.
- Request clarifications or further information from AOC and the Operator staff, and report the review findings.

(1) The term 'compliance' relates to specific legal and regulatory measures or contract requirements, whereas the term 'conformance' relates to a standard that is outcome-based.

Each IMG report provides updated information, an update on any actions in progress and new observations. Where appropriate, information in the previous IMG review is referenced or summarised to avoid unnecessary repetition. The review methodology and action tracking procedure is presented in *Chapter 3*.

1.2.3 *Review Period*

This review covers the activities in progress between the fifth review in March 2018 and the current review in November/December 2019. Where reference is made in this report to the 'next review period', this would cover the approximately six-month period from December 2018 to the next review currently scheduled for the third quarter (Q3) of 2019.

1.3 *IMG REVIEW TEAM*

The ERM IMG review team comprised four consultants, covering the following skills specified in the IMG Scope of Work.

- Mark Irvine: Team Leader and Environmental Specialist.
- Tracey Draper: Social Performance and Labour and Working Conditions Specialist.
- Philip Wambua: Health and Safety Specialist.
- David Nicholson: Biodiversity Specialist.

1.4 *LIMITATIONS*

The findings in this report are based on the Scope of the Review described above. ERM performed these services in a manner consistent with the normal level of care and expertise exercised by members of the environmental and social consulting profession. The work is based primarily upon documents produced and studies performed by third parties, and follow-up interviews and discussions.

ERM has used information provided by AOC, Tullow Kenya and their representatives in good faith and with verification limited to requests for clarifications and additional documentary evidence. The assessment and recommendations made are based on professional judgement drawing on the available information and within the limits of the budget and schedule. The information provided in this report should be considered as technical input and not as legal advice.

1.5 *REPORT STRUCTURE*

The remainder of this review report is structured as follows.

- *Section 2* summarises the key AOC and JV assets and status of activities.
- *Section 3* outlines the assessment framework and applicable standards.
- *Section 4* presents an assessment of the progress against the AOC ESAP and ESRS requirements.
- *Section 5* presents the findings of the review with respect to the IFC Performance Standards along with the actions required to achieve full conformance and recommendations to meet GIIP.
- *Section 6:* presents the conclusions and recommendations for the next review.

The review is supported by the following annexes.

Annex A: Additional Documents Provided by AOC and Tullow Kenya Relevant to Current Activities.

Annex B: Review of Interim Trucking Project.

2.1 AOC AND JV ASSETS

Details of AOC and JV assets have been provided in the previous reviews and an update of assets and current activities is provided below. Current AOC and JV Licence Blocks in Kenya and Ethiopia referred to in this review are shown on *Figure 2.1* (downloaded from AOC's website).

2.1.1 *Operated Assets*

AOC no longer has operated assets as licenses in both Kenya and Ethiopia have been relinquished, as summarised below.

Kenya

AOC was the Operator of Block 9 in Kenya and previously undertook 1,500 km of seismic survey lines and drilled three exploration wells. The extended licence period expired on 30 June 2018 and the block has now been relinquished.

Ethiopia

AOC is the Operator of the Rift Basin Area Block. Airborne gravity gradient surveys and a seismic survey was completed in 2015. An ESIA, and associated studies, to support an application to drill a single exploration ESIA well was completed in the second quarter (Q2) of 2018 and approved by the Ethiopian regulators. The current extended exploration period will expire in February 2019. AOC has taken the decision to relinquish licences held in Ethiopia, as a result not further activity is envisaged in Ethiopia.

2.1.2 *Non-Operated Assets*

Kenya

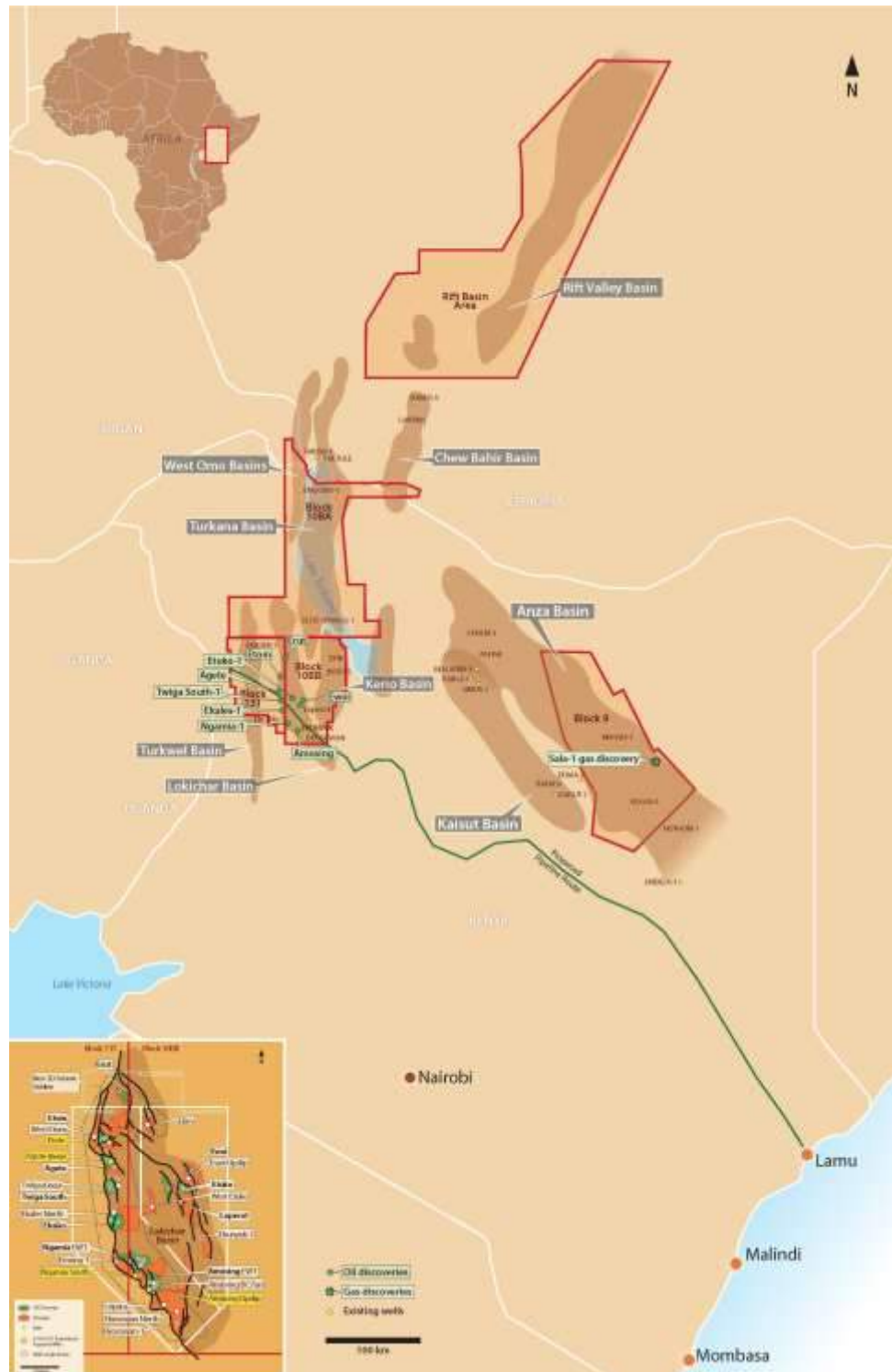
Non-operated assets in Kenya include Blocks 10BA, 13T and 10BB in Turkana County, in north-west Kenya. The assets are operated by Tullow Kenya in a JV with AOC and Total. Further details of activities in these blocks are presented below.

Other Exploration and Production Interests

AOC holds minority interests in Impact Oil & Gas Limited (with deep water exploration blocks around Africa), Eco-Atlantic Oil & Gas Ltd (with exploration blocks located offshore Namibia and Guyana) and Africa Energy Corp (with exploration prospects in South Africa and Namibia). AOC also has JV interests in OML 127 and OML 130, offshore Nigeria through Petrovida Holdings. Operators for these blocks include Chevron Corporation (OML

127) and TOTAL SA (OML 130)¹. Activities associated with these operations are outside the scope of this IMG review, which is restricted to AOC's East African interests.

Figure 2.1 Licence Blocks and Wells in Ethiopia and Kenya



Source: Africa Oil Corporation Website (Uploaded September 2018)

¹ AOC's effective working interest in OML 127 is 1% and in OML 130 is 2%.

For the purposes of this report, the South Lokichar Basin comprises Blocks 13T and 10BB. A description of the activities associated with the development of the South Lokichar Basin, along with the environmental and social context, was provided in the previous IMG reviews so is not repeated here other than a summary of the key upstream components and an update on the midstream component.

2.2.1 *South Lokichar Basin Exploration and Appraisal*

The exploration and appraisal licence covering Blocks 10BB and 13T in South Lokichar runs until September 2020. To date, 11 exploration wells and 24 appraisal wells have been drilled. The Kenya JV has assessed potential resources of up to 1,230 million barrels of oil (1,230 mmbo). This is based on the current assessment of 90% probability of 240 mmbo, 50% probability of 560 mmbo and 10% probability of 1,230 mmbo derived from the current exploration and appraisal data.

Since the last IMG review, the operator has undertaken three well interventions (Erut-1 well suspension, Amosing-7 perforation and Ngamia-3 pressure, volume and temperature sampling) and undertook the Ngamia-11 water injection pilot test.

2.2.2 *South Lokichar Early Oil Pilot Scheme*

The Early Oil Pilot Scheme (EOPS) within block 10BB is designed to produce 2,000 barrels of oil a day from two existing Amosing wells (1 and 2A) and three existing Ngamia wells (3, 6 and 8), for a two-year period. The crude oil will be transported by road 1,200 km to the Kenya Petroleum Refineries Ltd (KPRL) facility in Changanwe, Mombasa using specialised road tankers. An ESIA for EOPS was submitted to National Environmental Management Authority (NEMA) in December 2018 for approval. EOPS is scheduled to commence in Q2 or Q3 2019 and run for up to two years.

In preparation for this, an Interim Trucking Project was agreed with GoK to transport the existing stored crude oil that was produced from previous EWT (approximately 67,000 barrels) to Mombasa. The Interim Trucking Project commenced in July 2018, with approximately 600 barrels of oil per day being transported, and will continue until the EOPS project becomes operational. At this stage the rate of oil transport will be approximately 2,000 barrels of oil per day.

2.2.3 *Extended Well Tests*

Extended Well Tests (EWT) to acquire data on the behaviour of the wells during production will be undertaken at the three Ngamia wells to be used for EOPS. The tests will use some of the installed EOPS equipment to produce up to 60,000 barrels of oil (20,000 barrels from each well) over a two-year period.

Production will be phased due to the on-site storage capacity with the produced oil stored on each well pad in 5,000 barrel capacity site tanks. Water injection tests are also being undertaken at these sites.

2.2.4 *South Lokichar Full Field Development*

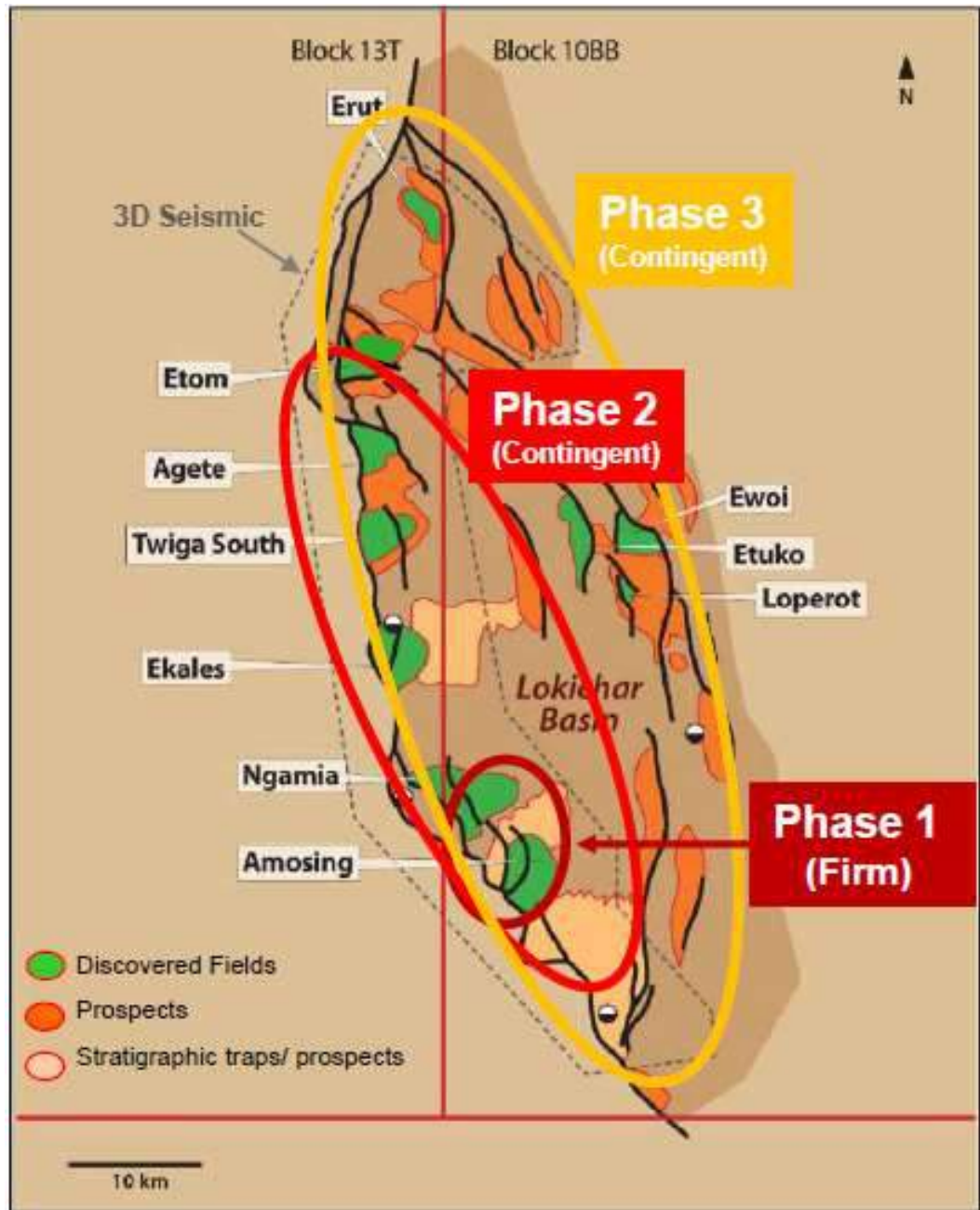
The JV is planning to develop the discoveries in phases to allow early production, and ongoing exploration and appraisal activities to run in parallel. The initial phase (Foundation Phase) is likely to encompass the Amosing and Ngamia and Twiga discoveries in Block 10BB and is likely to comprise a series of well pads, interconnecting flowlines, a Central Processing Facility (CPF), and support facilities and infrastructure (eg roads, logistics base/storage areas, waste storage sites, and power and water supply). The locations of the CPF, camps and laydown areas have been selected (to the north east of the Ngamia field). The location of all the well pads for this phase have been selected during FEED. The Foundation Phase would aim to produce 60-80,000 barrels of oil per day. A second and third phase would bring in further discoveries in Block 10BB and Block 13T.

Front End Engineering Design (FEED) for the Foundation Phase is being undertaken by Worley Parsons and is due to be completed in Q1/Q2 2019. Financial Investment Decision (FID) is targeted for 2019 with first oil is planned for 2022.

An ESIA for the Foundation Phase has been underway since 2014 with scoping and environmental and social baseline studies undertaken. The ESIA is due for completion in midfor submission to NEMA for review and approval.

Figure 2.2 illustrates the phased development approach schematically, although the specific discoveries that would be included in each phase will depend on the conclusion of the FEED studies.

Figure 2.2 South Lokichar FFD Phases



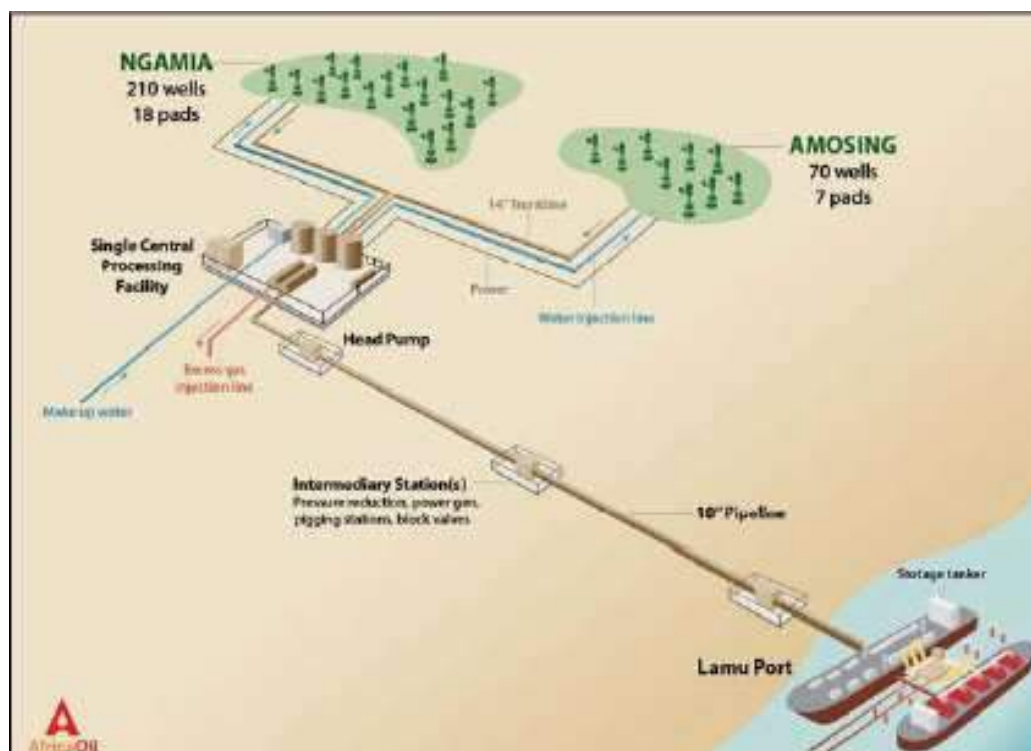
Source: Africa Oil Corporation Website (Uploaded January 2019)

Lokichar to Lamu Crude Oil Pipeline

A Joint Development Agreement was signed between the Kenya JV and the Government of Kenya in October 2017 and a Pipeline Steering Board and Pipeline Project Management Team was established. The pipeline is planned to run from the CPF at South Lokichar to a marine export terminal to be built at the Port of Lamu.

An ESIA has been commissioned and commenced in March 2018 and a FEED contractor (Wood Group) was appointed in Q2 2018. The ESIA is scheduled for completion in Q2 2019, with an IFC PS conformance supplementary assessment to be completed in Q3 2019. It is expected that land access and stakeholder engagement for the pipeline will be led by the Government of Kenya LAPSET Corridor Development Authority, via the National Lands Commission. *Figure 2.3* illustrated the FFD Foundation phase and pipeline to Lamu schematically.

Figure 2.3 South Lokichar FFD Foundation Phase and Pipeline Route Schematic



Source: Africa Oil Corporation Website (Uploaded January 2019)

A summary of the status and main activities underway or planned for each of the licence blocks described above are presented in *Table 2.1*.

Table 2.1. Status and Current Activity in AOC Licence Blocks

Licence Block	Status	Current Activity
Operated Assets		
Rift Basin Area Block, Ethiopia	Licence period expires at end of February 2019.	AOC is relinquishing this licence and no further activity is planned.
Non Operated Assets		
Blocks 13T and 10BB (South Lokichar Basin), Kenya	Exploration and appraisal licence runs to September 2020 for blocks 13T and 10BB.	Ongoing well appraisal activities, ongoing rehabilitation activities.
	Agreement made to progress with the Interim Trucking Project to transport stored oil from previous well testing to Mombasa.	The Interim Trucking Project commenced in Q3 2018 and will continue until EOPS receives approval from NEMA.
	ESIA for Phase II of EOPS was completed in Q4 2018 and is expected to commence in Q2/Q3 2019 for up to two years.	
	The South Lokichar Full Field Development Foundation Phase project is currently undergoing FEED studies to determine the location and design of the various project components. FEED is targeted for completion in Q1/Q2 2019, with first oil expected in 2022.	ESIA for the Foundation Phase FFD Project due for completion during Q2 2019.
	Pipeline Joint Development Agreement signed with Government of Kenya to progress export pipeline from South Lokichar to Port of Lamu.	ESIA studies for export pipeline commenced March 2018 and is due for completion in Q2 2019. A Supplementary Lenders Information Package (SLIP) to meet IFC standards is due for completion in Q3 2019.

3.1 ASSESSMENT FRAMEWORK

The IMG review of AOC's and its JV partners' plans and activities was undertaken through a combination of document review, discussions and a site visit (for Interim Trucking Project only). The assessment was undertaken against the following environmental and social standards.

- Environmental and social laws and regulations of Kenya in force at the time of the assessment.
- AOC's agreed ESAP and ESRS requirements (disclosed by the IFC on 31 August 2015).
- IFC Performance Standards on Environmental and Social Sustainability (2012) and related policies and guidance, including:
 - Performance Standard 1: Assessment and Management of Environmental and Social Risks and Impacts;
 - Performance Standard 2: Labour and Working Conditions;
 - Performance Standard 3: Resource Efficiency and Pollution Prevention;
 - Performance Standard 4: Community Health, Safety and Security;
 - Performance Standard 5: Land Acquisition and Involuntary Resettlement;
 - Performance Standard 6: Biodiversity Conservation and Sustainable Management of Living Natural Resources;
 - Performance Standard 7: Indigenous Peoples; and
 - Performance Standard 8: Cultural Heritage.

The review considered the sector-specific guidelines of the World Bank Group as referenced in the Performance Standards including:

- General Environmental, Health and Safety General Guidelines (April 2007); and
- Environmental, Health, and Safety Guidelines for Onshore Oil and Gas Development (April 2007).

The proposed pipeline along the LAPSSET corridor from South Lokichar to Lamu is considered as associated development. With respect such third party development, PS1 (paragraph 9) states:

In the event of risks and impacts in the project's area of influence resulting from a third party's actions, the client will address those risks and impacts in a manner commensurate with the client's control and influence over the third parties, and with due regard to conflict of interest.

The IMG will review the KJV approach to addressing these issues and any key documents made available such as ESIA Scoping Report and Terms of Reference, land access arrangements and stakeholder consultation frameworks.

A summary of relevant Kenyan laws and regulations currently in force was provided in the first IMG review so is not repeated here. There are a number of pieces of emerging legislation or legislation yet to come into force that are relevant to oil and gas activities in Kenya. These include the following.

- *Community Land Act (2016)*;
- *Petroleum (Exploration, Development and Production) Bill (2015)*;
- *Natural Resources (Classes of Transactions Subject to Ratification) Bill (2015)*;
- *The Energy Bill (2015)*; and
- *Land Laws (Amendment) Bill (2015)*.

Of note is the *Petroleum (Exploration, Development and Production) Bill*, which will establish a government authority to regulate, monitor and supervise upstream petroleum operations. This Bill underwent parliamentary readings and has now been passed to the Senate. At this stage, it is not known when these pieces of relevant legislation will be enacted or when Regulations under Community Land Act will be finalised, and hence their applicability to the project within the next review period.

3.2 *METHODOLOGY*

3.2.1 *Overview*

The IMG review comprised the following main activities.

- A review of relevant environmental and social documentation and information. Presentations were made by AOC and Tullow Kenya functional heads at a meeting at Tullow's offices in London in November 2018 with a video-conference link to Nairobi. Copies of presentations and related documents were provided.
- A site visit was conducted and visual observations were made of the Interim Trucking Project operations transporting crude oil from Lokichar to Mombasa.
- Activities were evaluated against the assessment framework to determine compliance with national laws and regulations, corporate requirements, and conformance with lender requirements. Actions that the IMG consider are required to conform to the ESAP/ESRS commitments and the relevant PSs are provided. In addition, recommendations have been made, where applicable, to improve performance and to meet GIIP. These recommendations are expected to be considered by AOC/Operator as part of continuous improvement.

3.2.2 *Document Review and Presentations*

HSEC documents covering AOC's corporate management plans and Tullow Kenya's operational policies, procedures and plans were provided prior to and during the previous IMG reviews with updated and additional plans, procedures and associated documents provided for the current IMG review. Details of the documents provided for the current review are presented in *Annex A*. The documents submitted for the previous IMG reviews are listed in the previous reports.

An operational update was presented to the IMG by AOC and Tullow Kenya outlining operations and HSEC issues and management plans along with progress on actions from the previous IMG review.

These covered the following main areas.

- Overview of AOC current and planned operations.
- Overview of Tullow Kenya Exploration and Appraisal Operations (South Lokichar Basin).
- Early Oil Pilot Scheme update and ESIA status.
- Full Field Development update and ESIA status.
- Pipeline update and ESIA status.
- Security.
- Land Access.
- Water Access.
- Social Investment.
- Contractor Management and Grievance Management.
- Waste Management.

3.2.3 *Performance Evaluation*

The status of the findings from this review, and the overall HSEC performance was rated and evaluated according to the categories presented in *Table 3.1* and *Table 3.2*.

Table 3.1. Performance Status Ratings

Status Rating	Criteria	Action
When Required	Work to meet the requirements has not commenced, as the relevant phase of the project has not started.	Workplan to be agreed prior to relevant phase commencing.
Open	Work to meet the requirements has not commenced. This may be because a new action has been identified.	Workplan to be agreed with an agreed time period.
In Progress	Work to meet requirements is in progress. Some parts of the requirements may be closed and others are planned within a defined time period.	Workplan to be completed with an agreed time period. Some items stated to have been completed may require verification before being closed.
Closed	Requirements have been fully met.	No further action required, but will require ongoing monitoring to ensure future conformance. Closed items are shown on the ESAP/ESRS items to demonstrate progress. Closed items are removed from the PS Conformance Actions

Table 3.2 Assessment Ratings

Assessment Rating	Criteria	Action
Requirement not met - Level I	Issue or situation not consistent with Applicable Standards or commitments but without an immediate risk or impact to resource or receptors.	Level I Non Conformances will be recorded, along with a recommendation for corrective action to the Company
Requirement not met - Level II	Issue or situation not consistent with Applicable Standards or Company commitments that has not yet resulted in clearly identified damage or irreversible HSEC impacts, but which requires immediate corrective action to prevent risk of impact to resources or receptors. Recurring issue or situation not consistent with Applicable Standards or Company commitments but without an immediate risk of impact to resource or receptors generally requiring systems-level corrective action.	Level II Non Conformances will generate a corrective action request, and will be recorded. Level II Non Conformances may result in a recommendation to 'Stop Work', in those situations where work activity presents on-going HSEC risks.
Requirement not met - Level III	Issue or situation not consistent with Applicable Standards or Company commitments that has resulted in significant observed impact to resources or receptors, or which has a reasonable expectation of imminent damage or irreversible HSEC impacts, and which requires immediate corrective action. Action that indicates intentional disregard for Applicable Standards or Company commitments that has not necessarily resulted in significant impact, generally requiring systems-level corrective action.	Level III Non Conformances will result in a recommendation to the Company to 'Stop Work', which will be reported to IFC. The Company will agree a time-bound Action Plan to address the non-conformance to the satisfaction of the Independent Monitoring Group.

4.1 CONFORMANCE WITH ESAP AND ESRS REQUIREMENTS

Table 4.1 presents the tasks identified in the AOC Master Action Plan together with reference to the agreed IFC ESAP and ESRS requirements, and the current status. It is recognised that the original anticipated completion date has passed for some actions, however, this is linked to the delays to commencement of operational activities.

AOC has produced a number of management plans, in the form of framework documents, outlining the requirements that would apply to any operational plans to be produced when AOC recommence field operations. Comments have been made on these framework documents in previous IMG reviews and updated documents provided. In most cases, these have been assigned as 'closed'. Where the IFC has accepted documents as final version then these items are also assigned as 'closed'.

The ESAP and ESRS requirements relevant to the current and planned Tullow Kenya operations in the South Lokichar FFD Project area are mainly closed, with some assigned as 'in progress', pending finalisation of documents or completion of current ESAs. The more detailed project-specific requirements are presented in *Section 5*.

It is noted that for future activities, site and project specific plans and procedures will be required to address the relevant ESAP and ESRS requirements where there are currently framework documents in place or where the plans and procedures are specific to the South Lokichar FFD project. These project-specific plans and procedures have been assigned as 'when required' and will need to be identified through AOC's/Operator's Risk Assessments and Site Specific Assessment Procedure (SSA), as appropriate.

Table 4.1 *Evaluation of ESAP and ESRS Requirements*

Index	Task Title & Description	Anticipated Completion Date	Status	Discussion	
ESAP 1.1	The Company will enhance HSE capacity through i) an IFC Performance Standard focused training for senior management and operational teams		Closed	Training process established and training undertaken	
ESAP 1.2	(ii) hiring an Environmental, Social and Governance Manager.		Closed	ESG Manager appointed 9 November 2015.	
ESAP 2.1	The Company will develop Stakeholder Engagement Plans (SEP), for its Kenya and Ethiopia activities per the requirements of Performance Standard 1.	No date	When required	Framework document has been produced and approved by IFC. Project specific plans will be developed when required for any future project where AOC is Operator.	
			Closed	For the South Lokichar Basin FFD Project, Tullow Kenya has prepared a Stakeholder Engagement Framework and Pre-Development Stakeholder Engagement Plan. These have been finalised following approved by the IFC.	
ESAP 2.2	Company to prepare and submit ESIA's to IFC for review and approval – undertaken per project.		Closed	An ESIA for potential drilling on the west coast of Lake Abaya in Ethiopia was completed in Q2 2018.	
			No date	When required	Project specific ESIA's will be developed when required for any future project where AOC is Operator.
			Q2 2019	In Progress	For the South Lokichar Basin development, Tullow Kenya has undertaken an ESIA for EOPS, which is pending approval, and is undertaking an ESIA for the Foundation Phase of the FFD Project.
ESAP 3	The Company will complete the additional requirements for Free Prior Informed Consent (FPIC), per the circumstances listed in Performance Standard 7, and complete a mutually acceptable process between Company and affected community and provide evidence of an agreement between the two parties on the outcome of the negotiation	No date	When required	Additional requirements will be completed when required for any future project where AOC is Operator. This project specific requirement will depend on the determination of the existence of and impacts on Indigenous Peoples in AOC's area of operations as determined through the relevant ESIA processes.	
			Closed	For the South Lokichar Basin development, Tullow Kenya has prepared a <i>Stakeholder Engagement Framework, Pre-Development Stakeholder Engagement Plan</i> and <i>Land Acquisition and Resettlement Framework</i> that outlines the approach required to achieve and document FPIC based on the definition of the project footprint and specific impacts. These have been finalised following approved by the IFC.	

Index	Task Title & Description	Anticipated Completion Date	Status	Discussion
ESAP 4a	The Company will develop an overarching human resource policy (HR) for Kenya and Ethiopia, which will make reference to Performance Standard 2 and ILO conventions, and will include associated country specific implementation procedures	No date	When required	Framework document has been produced and approved by IFC. Project specific plans will be developed when required for any future project where AOC is Operator.
			Closed	Tullow Kenya has an Employee's Handbook that includes a Human Resources Policy. This has been reviewed by the IFC and confirmed as acceptable.
	(ii) The Company will develop a Retrenchment Framework Plan that aligns with the requirements of Performance Standard 2 and that should be utilised in cases of collective dismissal by the Company and/or contractor/subcontractor	No date	When required	Retrenchment Framework Plans will be developed prior to commencement of relevant projects where staff/contractors are employed.
			When required	Tullow Kenya follows national law and conformance with IFC requirements regarding retrenchment. It has prepared plans for previous retrenchment requirements. For any future retrenchment, specific plans will be prepared.
	(iii) The Company will develop and implement a formal internal grievance mechanism applicable to all employees and workers employed at Company's sites by contractors and sub-contractors.	No date	Closed	Framework document has been produced and approved by IFC.
			When required	AOC will develop a formal worker grievance mechanism when required for any future project where AOC is the Operator.
Closed.	Tullow Kenya has an Employee's Handbook that includes a Human Resources Policy. This has been reviewed by the IFC and confirmed as acceptable.			
ESAP 4b	The Company will prepare a security risk assessment and develop Security Management Plans that are aligned with Performance Standard 4. These will be reviewed and updated as the project evolves.	No date	Closed	Framework document has been produced and approved by IFC.
			When required	Project specific Security Management Plans will be developed when required for any future project where AOC is Operator.
			Closed	Tullow Kenya has prepared Security Management Plans for ongoing activities, and submitted these and supporting studies to IFC for review and they have been confirmed as acceptable. Updates will be reviewed during future IMG reviews as required.
ESAP 5.1	The Company will develop Land Acquisition and Livelihood Restoration (LALR) Plans for each of the two countries (Kenya, Ethiopia).	No Date	Closed	Framework document has been produced and approved by IFC.
			When required	Project specific LALR plans will be developed when required for any future project where AOC is Operator.
			In Progress	A draft Land Access and Resettlement Framework (LARF) has been prepared for the South Lokichar FFD project. This is in progress while procedures for any supplementary benefits and entitlements are being finalised.
ESAP 5.2	The Company will redesign its compensation plan in Ethiopia to incorporate procedures to		Closed	Compensation Plan redesigned and the Management of Change provided to IFC as evidence.

Index	Task Title & Description	Anticipated Completion Date	Status	Discussion
	compensate prior to commencing work, vacating land and any potential damage that could occurred after seismic survey.			
ESAP 6.1	i. The Company will develop a biodiversity strategy for Kenya as described in the ESRS.		Closed	AOC have issued a Biodiversity Management Strategy (KE/ESG/FRM/BD/2017/8) that has been aligned with the Operators Biodiversity Management Framework that has been accepted by the IFC (see below).
	ii. ii The Company will develop a similar plan prior to any substantive work related to development of successful wells in Ethiopia	No date	When required	AOC will prepare and submit project-specific Biodiversity Strategies prior to future operational activities.
			Closed	For blocks where Tullow Kenya is the Operator, a Kenya Biodiversity Management Framework has been produced and accepted by the IFC. In the event that critical habit is identified in later stages of the project or in new areas, then the strategy will require to be updated to address the relevant PS requirements.
ESAP 7	The Company will prepare and submit ESIA's to IFC addressing local regulatory requirements and IFC Performance Standards in any case where wells progress to production. These will be presented to IFC for review and approval at least four months prior to start of any substantive construction.		Closed	AOC commissioned an ESIA for the potential exploratory drilling well at Lake Abaya. The ESIA was completed in Q2 2018.
		1 April 2019	In Progress	Tullow Kenya has completed ESIA's/ SSAs or will produce SSAs for all exploration and appraisal activities currently underway and planned for 2019. An ESIA for the EOPS was completed in Q4 2018 and the South Lokichar Basin FFD Foundation Phase ESIA is expected to be completed in Q2 2019.
ESRS 1	PS3: Hydrogeological study of Ethiopian blocks if there is further operational activity		Closed	AOC has undertaken a hydrological study for potential exploratory drilling site at Lake Abaya in the Rift Area Basin Block. This draft study is linked to the ESIA (see ESAP 2.2).
		No Date	When Required	In the event that other wells are planned then further hydrological studies would be required as appropriate.
ESRS 2	PS3: Quantify and report greenhouse gas (GHG) emissions for all activities		Closed	AOC has developed a system for tracking company GHG emissions and commenced tracking of GHG at the start of 2016.
		No Date	When required	At a project level, full implementation of this requirement is pending commencement of AOC Operator led activities.

Index	Task Title & Description	Anticipated Completion Date	Status	Discussion
		Mid 2019	In Progress	Tullow tracks Company-wide GHG emissions data, however, Project level emissions data will be required for the South Lokichar FFD Project to assess conformance with PS 3 requirements. This is expected to be undertaken through the current FEED and ESIA processes, along with identifying any mitigation measures to reduce emissions, and thereafter a process for annual quantification at a project level will be required.
ESRS 3	PS 8: Ensure cultural heritage management plan is in place for future exploration and development activities	No date	When required	Framework document has been produced and approved by IFC. For future exploratory drilling or development activities potential impacts to cultural heritage will be assessed through an ESIA process with mitigation and management actions taken forward to a project-specific Cultural Heritage Management Plan.
			Closed	For the South Lokichar Basin exploration, appraisal and development Tullow Kenya has a Cultural Heritage Management Procedure in place.

Note: grey shaded items are closed.

5.1 INTRODUCTION

As in the previous IMG reviews, the focus of the sixth IMG review was the activities that have been undertaken and planned for the near future in the South Lokichar Development Project area ⁽¹⁾ and the systems and processes that the Operator, Tullow Kenya, has in place or is developing.

Comments on progress that has been made since the last review to address the previous observations and recommendations are presented under each Performance Standard below. Reference numbers for observations made under each Performance Standard are provided indicating which review they were originally made (Review 1 as Rev1, Review 2 as Rev2, etc). Where required, a summary of the findings of previous reviews are included to provide context and, in some cases, a number of related observations from previous reviews have been consolidated for clarity.

Where observations are not considered to fully conform to the provisions of the IFC PSs these are summarised in *Table 5.1*, along with a status rating and an assessment rating (as defined in *Table 3.1* and *Table 3.2* respectively).

Where new recommendations have been made, for example, where opportunities for improvements have been identified in the current review or where the current activities are not considered by the IMG to follow GIIP, these are summarised in *Table 5.2*.

5.2 PERFORMANCE STANDARD 1: ASSESSMENT AND MANAGEMENT OF ENVIRONMENTAL AND SOCIAL RISKS AND IMPACTS

5.2.1 Observations Related to Previous Review Findings

Environmental and Social Assessment Management Systems, Policy, Identification of Risks and Impacts, and Management Programmes (Rev1-PS1-1, Rev2-PS1-1)

Previous IMG reviews identified the need to finalise and make the various EHS management plans and procedures fully operational and issued as controlled documents. These need to be incorporated within an integrated Environmental and Social Management System (ESMS) to demonstrate that project risks and impacts are being managed systematically.

In previous IMG reviews a draft *Tullow Kenya Environmental and Social Management System Manual* was provided which described the ESMS and

(1) The Development Project area means the area that includes the primary project site(s) and related facilities that the client (including its contractors) develops or controls.

listed the key management plans and procedures. In the fifth IMG review it was noted that the current version of the ESMS is an unnumbered document and was marked 'draft for review'. During the Fifth IMG review it was reported that the ESMS is now in place and operational and will be updated at planned stages related to various project activities, such as the start of EOPS.

In the current review it was reported that the ESMS was still being developed and is scheduled to be completed following completion of the FEED Phase 2 study (scheduled for Q1/Q2 2019). It was reported that current approved and controlled documents are stored in the Operators Integrated Management System (IMS), however, access to this was not available to the IMG for the current review. Finalisation of the ESMS and its associated controlled documents is required as these are key documents describing how current and future project risks are to be identified and managed. It is expected that a final ESMS and lists of relevant controlled documents will be provided at the next IMG review.

Stakeholder Engagement, Disclosure of Information and Grievance Mechanism (Rev1-PS1-4)

Previous IMG reviews have reported that the *Pre-development Stakeholder Engagement Plan for the South Lokichar Basin (T-KE-ESP-FRM-0002)* had been issued as a controlled document and was being implemented appropriately, including recording of grievance and forced engagements the on the Borealis stakeholder management software

Several new documents were made available during the sixth IMG review to demonstrate ongoing progress with stakeholder engagement. This included *MOSAIC* reports that are used to track grievance and discussions. These reports are important for informing future stakeholder engagement priorities. The Operator is also producing a magazine (*Ustawi*) that communicates achievements in social investment. The IMG considers this an informative document to support stakeholder engagement.

Organisational Competency, Capacity and Training (Rev-3 PS1-2)

In previous IMG reviews the Operator provided a draft procedure for addressing human resource planning and evidence of training calendars, training request forms and examples of training attendance records for staff. In addition, a framework addressing training and capacity building for local contractors was provided (T-KE-LOC-FRM-0001). Reference was also made to the development of competency frameworks as part of the developing Human Resources Procedure. In the current review, an extract of the Employee Handbook was provided, which made reference to the Competency Frameworks on how employees are expected to perform their roles.

A final procedure for resource planning and the associated Competency Frameworks have not been provided to the IMG for the current review. In preparation of the FFD activities, these procedures and frameworks need to be

finalised and operationalised to ensure and demonstrate that a robust process is in place, and to fulfil the requirements of IFC PS1. It is expected that a final Resource Planning Procedure, along with relevant Competency Frameworks for key HSE roles will be provided at the next IMG review.

Environmental and Social Assessment Management Systems, Policy, Identification of Risks and Impacts, and Management Programmes (Rev5-PS1-2)

Key documents provided for previous IMG reviews on social investment included the *Kenya Joint Venture Socio-Economic Investment Strategy in Turkana 2017 – 2018* (T-KE-ESP-PLN-0006), *Sponsorship and Donations Procedure* (T-KE-CAF-PRO-0001), the *Development & Partnership Opportunities in Turkana Guideline* (T-KE-ESP-GUD-0004) and the *Local Content and Capacity Building Framework* (T-KE-LOC-FRM-0001). These strategies and associated documents were considered by the IMG to be important non-technical risk management documents and to provide a good platform for the implementation of social investment. In the previous review, the IMG recommended a more strategic approach to social investment to encourage synergies between socio-economic projects and land access projects. The IMG also recommended that an annual report would provide a good platform for the Operator to demonstrate that a strategic approach is being taken, to communicate the work being undertaken by them and their partners, and to provide transparency.

For the current IMG review the South Lokichar Development Project: Shared Prosperity and Local Content Strategy Paper (dated October 2018) was reviewed. This document articulates the linkage between supporting local content and social license to operate and defines a strategy with three core pillars including support for contracts and procurement and capacity building. The Strategy also acknowledges the challenges associated with low human/business capacity and outlines actions to support capacity development locally. This approach is closely tied to the Operator's overarching social investment approach and complements the *Development & Partnership Opportunities in Turkana Guideline* (T-KE-ESP-GUD-0004) and the *Local Content and Capacity Building Framework* (T-KE-LOC-FRM-0001) documents.

The Operator has produced *Ustawi*, a publication detailing the achievements of the Operator social investment programme. Whilst this does not provide the detail that could be provided in an annual report it does provide information on interventions on livelihood support, local content, water, education, health and social enterprise.

5.2.2

Additional Observations

Environmental and Social Assessment Management Systems, Policy, Identification of Risks and Impacts, and Management Programmes (Rev6-PS1-1)

As part of the current IMG review, an HSEC appraisal of the Interim Trucking Project was undertaken. This included a review of the available risk

assessments, operating procedures and contractor documentation (from the two road transport contractors MHL and OML) and direct observations of the oil transport operations from Lokichar to Mombasa. This included the following activities.

- Loading tanktainers at Tullow Kenya facilities in the Amosing oil field (including brief review of the loading facilities and oil storage facilities).
- Journey by road of tanktainers from Lokichar to Mombasa, including refueling and overnight rest stops.
- Offloading of crude oil from tanktainers at KPRL.

The findings of the appraisal of the Interim Trucking Project are presented in *Annex B* and the key findings are summarised below.

In general, the operations were considered to be well managed and the contracted drivers from MHL performed well and followed the required operational protocols. Whilst the scheduled driver stops every three hours were considered to be adequate to keep drivers alert, the absence of appropriate accommodation provided at overnight rest stops (resulting in drivers sleeping in their cabs) was considered by the IMG to present an unnecessary risk to driver alertness during the day, particularly given the ~~poor~~ condition of some parts of the roads used. The IMG concluded that driver allowances be reviewed so that better overnight accommodation provision is used to address this issue.

The agreed emergency procedures for dealing with Tier 1 and Tier 2 oil spills included the use of containment spill kits to prevent contamination of water courses. The trucks transporting the isotainers did not have a spill kit compatible with a crude oil spill of this magnitude with one small spill kit, suitable for a Tier 1 oil spill, being provided in an escort vehicle.

Some drivers had received training on diesel fuel spills. The requirements for handling Tier 2 spill require to be reviewed and appropriate equipment and training in its use provided to the contractors, as required under the EOPS Oil Spill Response Contingency Plan (T-KE-HSS-PLN-0114). It is noted that an oil spill exercise is planned for Q1 2019 which should address the training part of this issue (see *Section 5.5.1*).

In addition, there is the need to review the written loading and offloading procedures to align them with the actual operation now that they have been established. On-going documentation and review of the drivers' routine vehicle inspections will help to identify and register developing automotive and safety issues.

Environmental and Social Assessment Management Systems, Policy, Identification of Risks and Impacts, and Management Programmes (Rev6-PS1-2)

The IMG was provided with a copy of the EOPS ESIA (Volume I and II) dated November 2018. It is the opinion of the IMG that the ESIA is fit for purpose

and complies with the key requirements of the IFC Performance Standards with respect to identifying and managing the project impacts.

As the EOPS project does not require additional land take and will provide a limited number of specialist workers, a number of issues were effectively scoped out of the detailed assessment. These include impacts on biodiversity, ecosystem services, land use and displacement, infrastructure and services, and demographics. The impact assessment has given due focus on noise, traffic, air quality, community health and safety (road traffic accidents and risk of STD transmission), social issues and conflict. Mitigation measures were considered commensurate with the impact risk for this part of the project.

Stakeholder Engagement, Disclosure of Information and Grievance Mechanism (Rev6-PS1-3)

The EOPS ESIA also included a SEP that described an engagement process which was considered by the IMG to conform to the requirements of the IFC Performance Standards with respect to the nature of the EOPS project.

The approach adopted for EOPS is considered to provide a good model for the FFD SEP, albeit modified to address more extensive and complex issues associated with land take and displacement. Key considerations for the FFD SEP would be more extensive engagement with community members, in particular with women and vulnerable groups. Disclosure of the ESIA and the adopted mitigation measures should include communities (including women and vulnerable groups) as well as NGOs.

Environmental and Social Assessment Management Systems, Policy, Identification of Risks and Impacts, and Management Programmes (Rev6-PS1-4)

A number of documents summarising the outputs of the FEED Phase 1 studies (undertaken by Worley Parsons) were provided to the IMG for review.

- The pre-FEED Design Concept Environmental Impact Identification (ENVID) studies undertaken by Xodus in November 2015 and October 2017 were updated and revalidated by Worley Parson in July 2018. The findings were reported in *Kenya South Lokichar Foundation Project FEED 1 ENVID Revalidation Document (KSLFP-WPR-ES-RPT-0002 30)*, dated August 2018.
- Details of hazard management, safety studies, process safety, fire protection, emergency response and the approaches to EHS management, including ESIA, ENVID, Best Available Technology (BAT), Waste management, effluent discharges, emissions to air, occupational health and safety, and security are provided in the *Kenya South Lokichar Foundation Project EHS Philosophy (KSLFP-WPR-ES-PHL-0001)*, dated August 2018.

- The safety and environmental aspects of the Concept Design (FEED Phase 1) are summarised in the draft *Kenya South Lokichar Foundation Project Concept Design - Safety and Environmental ALARP Justification (KSLFP-WPR-ES-RPT-XXXX)*, dated September 2018. This document summarises EHS issues including Safety Critical Elements, Safety Assessments, Best Available Technology (BAT) studies, Hazard Identification (HAZID), EHS Plans and As Low As Reasonably Practicable (ALARP) justifications.

These studies were considered by the IMG to cover the key issues associated with the FFD project. It is noted that the formal assessments of environmental and social impacts are deferred to the Foundation Phase ESIA, which in turn will be informed by the outcome of the Phase 2 FEED studies. FEED Phase 2 is due to report in Q1/Q2 2019 and the FFD Foundation Phase ESIA is due to completion in Q2 2019. It is expected that the ESIA and FEED teams will be working closely with each other in Q1/Q2 2019 to ensure that all identified impacts are assessed and that these assessments inform the developing design, incorporating design changes and mitigation into the overall project design, as required. A review of both the FEED and ESIA studies is recommended for the next IMG review.

Environmental and Social Assessment Management Systems, Policy, Identification of Risks and Impacts, and Management Programmes (Rev6-PS1-5)

The ESIA Scoping Report for the Lokichar to Lamu Crude Oil Pipeline (LLCOP) was undertaken by Golder Associates and ESF Consultants in August 2018. The report includes the Terms of Reference (TOR) for the full ESIA as well as a Stakeholder Engagement Plan. The TOR was approved by NEMA in Q3 2018, stakeholder engagement commenced in Q4 2018 and the ESIA is due for submission to NEMA in Q2 2019. FEED is being undertaken by Wood Group and is due to report in Q1 2019.

The IMG reviewed the scoping report/TOR and considered that it was generally aligned with the approaches adopted for the FFD ESIA, with all key issues to be addressed in the ESIA identified and a stakeholder engagement plan in place covering all six counties that the pipeline will pass through. It was noted that development at the existing port at Lamu was outside the scope of the pipeline ESIA and that an ESIA had previously been undertaken for the port development by another party. It is recommended that a gap analysis is undertaken, by the Pipeline Project Management Team or its consultants, on the port development ESIA and the pipeline ESIA to verify that all potential impacts from the pipeline project have been appropriately considered, for example to socio-economic, cultural heritage and marine biodiversity resources and receptors.

Observations Related to Previous Review Findings*Contractor Management and Monitoring (Rev1-PS2-1)*

To address risk associated with contractor management and the monitoring of contractor performance, the Operator drafted *HR Guidelines for Contractors* and a draft *Contractor Non-Technical Risk Management Procedure* (which covers the expectations of contractors and their key obligations for delivering a Non-Technical Risk Management Plan for their specific activities).

The HR Guidelines for Contractors have now been updated and issued as *Implementation Guidelines for Contractors for Labour (Industrial Relations) (T-KE-HRS-GUD-0006)*, which provide a set of guidelines to support contractor compliance with the Operator ESMS. It also provides a framework for quarterly auditing of contractors.

The IMG previously provided comments on the draft *Contractor Non-Technical Risk Management Procedure*, however it was reported during the last review that this procedure was undergoing further development and the revised procedure is not currently available. In the meantime, draft text for inclusion in service contracts addressing contractors' requirements to identify and manage non-technical risks has been produced (dated November 2018). The draft text addresses the key issues for contractor non-technical risk management and refers to the need to undertake risk assessments, have an ESMP, audit and assurance processes and a grievance mechanism. It is understood that monitoring of performance and recording of grievances recorded by contractors are to be logged on the Operator's Borealis software, which will provide an important grievance tracking system.

Management and monitoring of contractors is considered by the IMG to be key project risk, therefore it is expected that these procedures and guidelines will be operational and final documents will be ready for review during the next IMG review.

Formalisation of Worker Grievance Mechanism (Rev1-PS2-2)

At the previous IMG review, local contractors raised concerns about the implementation of the contractor grievance mechanism, with local contractors and contract staff defaulting to the community grievance process to raise grievances. The *Employee Handbook* extract provided for the current review describes the worker grievance process and the *Implementation Guidelines for Contractors for Labour (Industrial Relations) (T-KE-HRS-GUD-0006)* requires contractors to adopt the same grievance process for contract workers. Processes now seem to be in place to address the issue of contractor grievances.

Contractor Management and Monitoring (Rev5-PS2-1)

During the previous IMG review the issue of late payments was raised by contractors and it was reported that grievances associated with late payment of wages or late payment of contracts were being registered under the community grievance mechanism as small, locally based, contractors did not have another system to raise these issues. The IMG notes that the *Strategic Risk Review* by Control Risks Group provided for the current review also highlights the risk of tensions caused by contractor actions.

For the current review the IMG was provided a copy of the *Shared Prosperity and Local Content Strategy Paper*, dated October 2018. This document acknowledges the limited capacity of local contractors and has defined interventions to strengthen local capacity. In light of this, it would be beneficial for the Operator to support local contractors to understand their rights and access to redress relating to late payment and other contract concerns. The Contractor Human Resources Forum referenced in the updated *Implementation Guidelines for Contractors for Labour (Industrial Relations)* (T-KE-HRS-GUD-0006) may be a suitable way of delivering this. It was reported at the current review that the Operator has a Key Performance Indicator (KPI) of 30 days for payment to contractors, which should speed up the payment process to contractors.

5.4 **PERFORMANCE STANDARD 3: RESOURCE EFFICIENCY AND POLLUTION PREVENTION**

5.4.1 **Observations Related to Previous Review Findings**

Consumption of Water and Energy (Rev 3-PS3-5)

During the previous IMG reviews, the Operator presented details of the technical hydrology studies and strategic option appraisal that was being undertaken to assess the needs and water supply options for the long-term provision of water for the FFD project. Further work has been undertaken since the last IMG review, as part of the FFD FEED studies, and the decision has been taken to source water from the Turkwell dam. New water intake infrastructure and a pipeline will be required and community offtakes will be included in the design. This element of the project will be included in the FFD ESIA which will be reviewed in subsequent IMG reviews. There are no further IMG observations at this stage.

Greenhouse Gases (Rev5-PS3-1)

The Operator currently tracks Company-wide GHG emissions. Under PS3 Paragraph 8, for projects that are expected to or currently produce more than 25,000 tonnes of CO₂-equivalent annually, direct emissions from the on-site facilities and indirect emissions associated with the off-site production of energy used by the project should be quantified.

For the current IMG review the Operator provided the *Greenhouse Gas (GHG) Management, Air Emissions and Effluent Discharges Plan*. This plan was dated October 2018 and was prepared as part of the Operator's Stage Gate review process for the FFD project. The plan states that GHG emissions will be addressed in the FFD ESIA based on estimates to be provided during the ongoing FEED processes. To comply with the requirements of PS3, a system will then be required for annual quantification of project emissions, in accordance with internationally recognised methodologies and good practice. *Waste Management (Rev5-PS3-2)*

The *South Lokichar Development Project Integrated Waste Management Concept Study* (October 2017) was previously reviewed by the IMG and considered to comprehensively address the key waste management issues associated with the project. The *South Lokichar Development Project Waste Management Concept Study Phase 2 Report* (Wood Group July 2018) updated the proposed approach to waste management, revisiting some of the predicted waste volumes, waste streams and recycling/treatment/disposal options associated with the FFD project.

The FEED contractor (Worley Parsons) summarised the work undertaken to inform the waste management requirements for the FFD project in the *Kenya South Lokichar Foundation Project Integrated Waste Management Philosophy- FEED Phase 1 report* (September 2018). The FEED contractor will further develop the design of the required facilities, including potential landfill locations, to inform FEED Phase 2 following further engineering studies, geotechnical evaluations and stakeholder engagement. The IMG will review project-specific waste management plans and practices as the FFD project develops in future IMG reviews.

5.5 **PERFORMANCE STANDARD 4: COMMUNITY HEALTH, SAFETY AND SECURITY**

5.5.1 **Observations Related to Previous Review Findings**

Health Profiles of Potentially Affected Communities (Rev1-PS4-1)

The FDD ESIA will address the health baseline conditions and the risk of community exposure to disease, of the potentially affected communities. This work will input into the developing the *Community, Health, Safety and Security Management Plan*. A copy of the Terms of Reference for the FDD ESIA health study was provided to the IMG for review. The approach was considered to be fit for purpose and the outcome of the study will be reviewed at the next IMG review following completion of the FFD ESIA, scheduled for mid-2019.

Emergency Response Plan (Rev1-PS4-2)

The Operator's updated *Emergency Response Plan* and Awareness and Preparedness for Emergencies at the Local Level (APELL) approach have

previously been reviewed and were considered fit for purpose. During the current review the Operator reported that the APELL plans are undergoing validation and that an oil spill response exercise is planned for Q1 2019. This will be undertaken by Oil Spill Response Limited (OSRL) and will include Operator staff, contractors (including tanktainer drivers), regulators and other stakeholders. Training will also be provided to the Turkana Country Government and community leaders on the use of Personal Protective Equipment (PPE) to be issued to people who may be employed to support any oil spill clean-up operations.

Participatory Monitoring (Rev5-PS4-1)

In the Fifth IMG review it was recommended that a programme of participatory monitoring be undertaken to help to build understanding and trust with local communities regarding project impacts. It was reported in the current review, that community members at the Twiga well site are observers of the process of an independent lab collecting soil samples and transporting them for analysis. It is recommended that further opportunities for communities to support environmental monitoring should be investigated, where it is practicable to do so.

5.6 **PERFORMANCE STANDARD 5: LAND ACQUISITION AND INVOLUNTARY RESETTLEMENT**

5.6.1 **Observations Related to Previous Review Findings**

Land Access and Resettlement Framework (Rev5 PS5-1)

The updated *Land Access and Resettlement Framework (LARF)* (November 2018) was provided to the IMG for review. The updated document defines a revised land acquisition process, decoupling the GoK led statutory land acquisition process from KJV's commitments for PS 5 alignment, including supplementary compensation. A table is provided in the LARF that outlines gaps and actions required by the KJV to ensure land acquisition is undertaken in accordance with IFC PS. These actions will be agreed with GoK. Once agreed, they will require review to ensure compliance with IFC PS 5.

All supplementary, non-statutory actions will be led by the KJV, who will also disclose these proposed actions and supplementary payments to stakeholders. Supplementary benefits and entitlements will be made to ensure full replacement cost, however it is not yet clear how the KJV proposes to pay these supplementary benefits and entitlements and whether these will be made under the umbrella of livelihood restoration. The Market and Asset Valuation Assessment (2018) report provides recommendations on supplementary payment amounts, however, these are still being evaluated to determine what level of supplementary payments are required and the mechanism for issuing them. The final land valuations of the GoK are still being analysed and whether inflationary pressures will also affect supplementary payments.

Once all actions to address gaps are clearly presented in the revised LARF, including procedures for ensuring full replacement cost, such as supplementary benefits and entitlements calculations, and livelihood restoration the LARF can be finalised.

5.7 **PERFORMANCE STANDARD 6: BIODIVERSITY AND SUSTAINABLE MANAGEMENT OF LIVING RESOURCES**

5.7.1 **Observations Related to Previous Review Findings**

Baseline Biodiversity and Habitat Assessment; Ecosystem Services Screening; Conservation Significance Mitigation; Supply Chain Sustainability Assessment; and Monitoring and Evaluation Criteria (Rev1-PS6-1, 6-2, 6-3, 6-5, 6-6, 6-7, 6-8, Rev2-PS6-9), Biodiversity Action Plan (Rev1-PS6-4).

It was reported in previous IMG reviews that several elements of IFC PS6 were being assessed through the ESIA for the FFD project. These included habitat mapping, Ecosystem Services, the sustainability of natural resources supplied to the project, and monitoring and evaluation criteria for biodiversity impacts. In the previous review, the IMG was informed that habitat mapping had been completed and no Critical Habitat had been identified within the FFD project area.

The IMG notes that in the EOPS ESIA provided for the current review, that no specific reference has been made to the habitat mapping study or to the distribution of natural and modified habitat in the study area. As no additional land is required for EOPS then there are no specific biodiversity issues associated with the project.

To meet the requirements of PS6 for the FFD ESIA, given the land take requirements, the ESIA should include screening of biodiversity values within the project areas (for example from IBAT and similar sources) and assessment of residual impacts on biodiversity should be undertaken using the outputs from the habitat mapping exercise. A copy of the maps should be included in the ESIA to evidence this process. Impacts on Ecosystem Services should follow the approaches provided in the World Resources Institute guidelines ⁽¹⁾.

Restoration Activities (Rev2-PS6-10)

At the previous IMG review the *Line Clearance and Restoration Guidelines (T-KE-EHS-GUD-0003 Rev 02)* was provided that outlined the approach to manage restoration of disturbed sites. In addition, the draft *Emong Full Restoration Plan (T-KE-EHS-PLN-XXXX)* and progress report was provided for review and comments were provided by the IMG on how the report of the restoration activities could be improved to follow the requirements outlined in the plan. This is considered by the IMG to be important so that lessons can be learned to inform future restoration activities. Recommendations to improve the

(1) <https://www.wri.org/publication/weaving-ecosystem-services-into-impact-assessment>

restoration practices to increase the chances of successful restoration were also provided.

For the current review no updated or final restoration plans were provided. A spreadsheet based outline work plan was provided for tree planting and invasive species removal for the Twiga 1 and Twiga 2 sites in Q4 2018. It was not clear from this outline work plan how long the tree water regime and invasive removal would continue for.

To address the PS6 requirements, it is recommended that the restoration guidelines should be updated, drawing on lessons learnt to provide clear guidance, including monitoring and maintenance schedules, for future site restoration practices.

Management of Invasive Species (Rev2-PS6-11)

During previous review draft *Invasive Species Management Procedure* (dated September 2016) and an assessment for the invasive species *Prosopis juliflora* (Baseline Study On Existing Invasive Species In Tullow Kenya By Operations - A Study on *Prosopis juliflora*) was provided. At the current review the IMG was informed that the final *Invasive Species Management Procedure* is still under development and will be operationalised following internal review. It was noted that the outline workplan for restoration of Twiga 1 and Twiga 2 included the removal of invasive species, as discussed above. When completed, the procedure should be incorporated into site specific EHS MPs and Site Restoration Plans to meet the requirements of PS6.

5.8 **PERFORMANCE STANDARD 7: INDIGENOUS PEOPLES**

There are no current actions or recommendations on this issue, however, implementation of FPIC will continue to be monitored during future IMG reviews, particularly with respect to the requirements of the LARF, as discussed under PS 5.

5.9 **PERFORMANCE STANDARD 8: CULTURAL HERITAGE**

There are no current actions or recommendations on this issue. Implementation of the procedure will be monitored during future IMG reviews.

Table 5.1 Evaluation of IFC Performance Standard Requirements

Review Date/ Reference	Category	Summary of Findings	Actions	Responsibility and Timing/Revised Timings	Current Status/Comment on Progress	Current IMG Rating
<i>Performance Standard 1 Assessment and Management of Environmental and Social Risks and Impacts</i>						
Dec 2015 Rev1-PS1-1 Jun 2016 Rev2-PS1-1	<i>Environmental and Social Assessment Management Systems, Policy, Identification of Risks and Impacts, and Management Programmes</i>	Previous IMG reviews identified that the various project and Company documents were a combination of controlled documents and uncontrolled documents and draft reports without issue dates and revision/status.	ESMP and associated documents should be finalised to demonstrate that a robust process is in place to identify and manage project risks, as required by PS1.	Operator HSE and SP Teams with respect to their relevant operations. It is expected that these procedures will be finalised and made fully operational over the next review period.	In Progress A draft ESMS Manual was reviewed during the Fourth IMG review and comments provided. For the current review the IMG was informed that this will be finalised post FEED (Phase 2) in Q1/Q2 2019	Level I Action required to address this issue to avoid future risks
Jan 2017 Rev3-PS1-2	<i>Organisational Competency, Capacity and Training</i>	The Operator reported that an annual review of planned activities, resource requirements and training needs is undertaken and that the requirements are reviewed when there are significant changes to planned activities. The operator is developing a Human Resources Procedure including competency frameworks. It was reported that some of these have been completed and others are under development.	It is expected that the Human Resources Procedure will be finalised and operationalised to ensure and demonstrate that a robust process is in place prior to increased work activities, and to fulfil the requirements of PS1.	Operator HR Department It is expected that these procedures will be finalised and made fully operational over the next review period.	In Progress A Human Resources Procedure is being developed.	Level I Action required to address this issue to avoid future risks
Dec 2019 Rev 6-PS1-1	<i>Environmental and Social Assessment Management Systems, Policy, Identification of Risks and</i>	As part of the current IMG review, an HSEC appraisal of the Interim Trucking Project was undertaken. The trucks transporting the isotainers did not have spill	The requirements for handling Tier 2 spill require to be reviewed and appropriate equipment and training in its use provided to the contractors, as required under the EOPS Oil Spill Response	Operator HSE team Changes required by end of Q2 2019	Open It is noted that an oil spill exercise is planned for Q1 2019 which should address the training part of this issue.	Level II. Corrective action required to avoid current risks

Review Date/ Reference	Category	Summary of Findings	Actions	Responsibility and Timing/Revised Timings	Current Status/Comment on Progress	Current IMG Rating
	<i>Impacts, and Management Programmes</i>	<p>kits capable of handling a crude oil spill of this magnitude with one small spill kit, suitable for a Tier 1 oil spill, being provided in an escort vehicle and the drivers reported that they had only been trained in diesel fuel spill handling</p> <p>There was an absence of appropriate accommodation provided at overnight rest stops (with drivers sleeping in their cabs).</p>	<p>Contingency Plan (T-KE-HSS-PLN-0114).</p> <p>Overnight allowances for meals and accommodation of a good standard is required to address this issue.</p>			
Performance Standard 2 Labour and Working Conditions						
Dec 2015 Rev1-PS2-1	<i>Contractor Management and Monitoring</i>	Previous reviews of contractor management and performance monitoring was identified as a residual project risk.	The <i>Contractor Non-Technical Risk Management Procedure</i> (which covers the expectations of contractors and their key obligations for delivering a Non-Technical Risk Management Plan for their specific activities) requires to be finalised as contractors are currently operating in the field (for example the Interim Trucking Project and preparation for EOPS).	Operator EHS Team It is expected that these procedures will be finalised and made fully operational over the next review period.	In Progress <i>Contractor Non-Technical Risk Management Procedure</i> is undergoing a reworking and is not yet available for IMG review.	Level 1 Action required to address this issue to avoid future risks
Performance Standard 3 Resource Efficiency and Pollution Prevention						
Mar 2018 Rev5-PS3-1	<i>Greenhouse Gas Emissions</i>	The Operator collates companywide CO ₂ emissions through Procedure (T-KE-ESP-PRO-0004) and (T-ESP-PRO-0001).	A procedure for the annual collation and reporting of greenhouse gas emissions at project level should be prepared. An assessment of project specific emissions will be provided by the FEED studies and reported in the FFD ESIA. Where emissions are estimated to be more than 25,000 tonnes per annum then options to	Operator EHS Team Project-specific procedure to be developed following the Phase 2 FEED studies and FFD ESIA, expected at the end of Q2 2019	In progress Data on predicted project emissions is being gathered as part of the current ESIA's.	Level 1 Action required to address this issue to avoid future risks

Review Date/ Reference	Category	Summary of Findings	Actions	Responsibility and Timing/Revised Timings	Current Status/Comment on Progress	Current IMG Rating
			improve efficiency and preventative maintenance plans will be required.			
Performance Standard 4 Community Health, Safety, and Security						
Dec 2015 Rev1-PS4-1	<i>Health Profiles of Potentially Affected Communities</i>	A gap was identified in the documentation of health profiles of the potentially affected communities to understand community exposure and risk to disease, including the potential impact of project activities on local communities such as workforce interaction with communities.	A health profile for the affected communities should be developed to understand potential health risks and impacts to the community and local Project workforce.	Community Health profiles to be addressed in South Lokichar Development Project Phase 1 ESIA, due for completion in Q2 2019.	In Progress A Terms of Reference has been developed to guide the health studies for the FFD ESIA.	Level I Action required to address this issue to avoid future risks
Performance Standard 5 Land Acquisition and Involuntary Resettlement						
Mar 2018 Rev5-PS5-1	<i>Land Access and Resettlement Framework</i>	A revised <i>Land Access and Resettlement Framework (Nov. 2018)</i> was reviewed and is generally aligned with PS 5. This document defines a revised land acquisition process, decoupling the GoK led statutory land acquisition process from KJV's commitments for PS 5 alignment, including supplementary compensation.	Finalise the Land Access and Resettlement Framework, confirming the actions required to bridge the gap between GoK and IFC PS 5, including the provision of supplementary payments to achieve full replacement cost.	Operator Social Performance Team Final document to be made available at the next review, to ascertain how full replacement cost will be achieved.	In Progress Procedures for full replacement cost to be decided and incorporated into LARF.	Level I Action required to address this issue to avoid future risks
Performance Standard 6 Biodiversity Conservation and Sustainable Management of Living Natural Resources						
Dec 2015 Rev1-PS6-1 (Rev1-PS6-1, 6-2, 6-3, 6-5, 6-6, 6-7, 6-8, Jun 2016	<i>Baseline Biodiversity and Habitat Assessment; Ecosystem Services Screening; Conservation Significance Mitigation;</i>	It was reported in previous IMG reviews that several elements of IFC PS6 were being assessed through the ESIA for the FFD project. These included habitat mapping, Ecosystem Services, the sustainability of natural resources supplied to the project, and monitoring and	The baseline assessment/habitat mapping to be used to define the biodiversity values that are likely to be present within the project area. The baseline assessment should focus on species of conservation significance and their habitats. An assessment of impacts on ecosystem services and the supply	Operator HSE Team The Natural/Modified Habitat mapping was completed in Q1 2017.	In Progress Outputs from the habitat mapping study to be included in the FFD ESIA to evidence the assessment process.	Level I Action required to address this issue to avoid future risks

Review Date/ Reference	Category	Summary of Findings	Actions	Responsibility and Timing/Revised Timings	Current Status/Comment on Progress	Current IMG Rating
Rev2-PS6-9).	<i>Supply Chain Sustainability Assessment; and Monitoring and Evaluation Criteria</i>	evaluation criteria for biodiversity impacts. In the previous review, the IMG was informed that habitat mapping had been completed and no Critical Habitat had been identified within the FFD project area.	chain to determine the sustainability of Natural Resources supplied should be undertaken as part of the ESIA's. The ESMP developed from the ESIA's should address monitoring and evaluation criteria for biodiversity impacts.	The FFD ESIA due to be completed by Q2 2019.		
Dec 2015 Rev1-PS6-5 Jun 2016 Rev2-PS6-11	<i>Invasive Species Management</i>	It is a requirement of IFC PS6 that the risk of introducing invasive species be assessed and managed, where appropriate, to reduce risks of further transmission and proliferation due to project related activities. The existing invasive species management list is contained in the broader Kenyan Biodiversity Management Plan.	An <i>Invasive Species Management Procedure</i> should be produced to relate to site-specific requirements and incorporated into site specific EHS MPs.	Operator HSE Team A draft procedure was produced in September 2016 but has not been updated and finalised.	In Progress It is expected that the procedures will be finalised and made fully operational over the next review period as restoration projects are underway.	Level I Action required to address this issue to avoid future risks.

Table 5.2 Good Practice Recommendations

Review Reference	Category	Summary of Findings	Recommendations
<i>Performance Standard 1 Assessment and Management of Environmental and Social Risks and Impacts</i>			
Rev6-PS1-1	<i>Environmental and Social Assessment Management Systems, Policy, Identification of Risks and Impacts, and Management Programmes</i>	As part of the current IMG review, an HSEC appraisal of the Interim Trucking Project was undertaken. This included a review of the available risk assessments, operating procedures and contractor documentation (from the two road transport contractors MHL and OML) and direct observations of the oil transport operations from Lokichar to Mombasa. In general, the operations were considered to be well managed and the contracted drivers from MHL performed well and followed the required operational protocols.	In addition, it is recommended that the written loading and offloading procedures are reviewed and updated to align them with the actual operations now that they have been established. Recording and reviewing the drivers' routine vehicle inspections will help to identify and register any developing safety issues.
Rev6-PS1-3	<i>Stakeholder Engagement, Disclosure of Information and Grievance Mechanism</i>	The EOPS ESIA included a SEP that described an engagement process which was considered by the IMG to conform to the requirements of the IFC Performance Standards with respect to the nature of the EOPS project.	For the FFD SEP it is recommended that more extensive engagement with community members, in particular with women and vulnerable groups are undertaken and disclosure of the ESIA and the adopted mitigation measures should include communities (including women and vulnerable groups) as well as NGOs.
Rev6-PS1-5	<i>Environmental and Social Assessment Management Systems, Policy, Identification of Risks and Impacts, and Management Programmes</i>	The IMG reviewed the scoping report/TOR for the Lokichar to Lamu pipeline ESIA and considered that it was generally aligned with the approaches adopted for the FFD ESIA.	It was noted that development at the existing port at Lamu was outside the scope of the pipeline ESIA and that an ESIA had previously been undertaken for the port development by another party. It is recommended that a gap analysis is undertaken between the port development ESIA and the pipeline ESIA to verify that all potential impacts from the pipeline project have been appropriately considered, for example to socio-economic, cultural heritage and marine biodiversity resources and receptors.
<i>Performance Standard 2 Labour and Working Conditions</i>			
Rev5-PS2-1	<i>Contractor Management and Monitoring</i>	For the current review the IMG was provided a copy of the <i>Shared Prosperity and Local Content Strategy Paper</i> , dated October 2018. This document acknowledges the limited capacity of local contractors and has defined interventions to strengthen local capacity.	It would be beneficial for the Operator to support local contractors to understand their rights and access to redress relating to late payment and other contract concerns. The Contractor Human Resources Forum referenced in the updated <i>Implementation Guidelines for Contractors for Labour (Industrial Relations)</i> (T-KE-HRS-GUD-0006) may be a suitable way of delivering this.

Review Reference	Category	Summary of Findings	Recommendations
Performance Standard 4 Community Health, Safety, and Security			
Rev5-PS4-1	<i>Participatory Monitoring</i>	In the Fifth IMG review it was recommended that a programme of participatory monitoring be undertaken to help to build understanding and trust with local communities regarding project impacts. It was reported in the current review, that community members at the Twiga well site are supporting the site remediation work by collecting soil samples to be dispatched for laboratory analysis.	It is recommended that further opportunities for communities to support environmental monitoring should be investigated, where it is practicable to do so.
Performance Standard 6: Biodiversity And Sustainable Management Of Living Resources			
Rev2-PS6-10	<i>Restoration Activities</i>	<p>The IMG has commented in previous reviews on the <i>Line Clearance and Restoration Guidelines (T-KE-EHS-GUD-0003 Rev02)</i> and the draft <i>Emong Full Restoration Plan (T-KE-EHS-PLN-XXXX)</i>, and provided recommendations on how the restoration activities could be improved.</p> <p>A spreadsheet based outline work plan was provided for tree planting and invasive species removal for the Twiga 1 and Twiga 2 sites in Q4 2018. As no updated or final restoration plans were provided it was not clear from this outline work plan how long the tree water regime and invasive removal would continue for.</p>	To address the PS6 requirements, it is recommended that the restoration guidelines should be updated, drawing on lessons learnt to provide clear guidance, including monitoring and maintenance schedules, for future site restoration practices.

6 CONCLUSIONS

6.1 ESAP REQUIREMENTS

This review presents an assessment of AOC progress with ESAP/ ESRS requirements, identifying those actions that have been completed, are in progress or pending commencement of activities. A number of AOC ESG Framework documents have been produced and reviewed by the IFC.

The ESAP/ESRS requirements relevant to the current and planned Tullow Kenya operations in South Lokichar are mainly closed, with some pending revisions to draft documents or completion of current ESIAs. For future JV-led activities, additional site-specific plans and procedures may be required to address relevant ESAP and ESRS requirements. These will be identified through the Operator's Site Specific Assessment Procedure.

6.2 IFC PERFORMANCE STANDARDS REQUIREMENTS

The Operator is undertaking FEED studies and completing the FFD Foundation Phase ESIA. The approaches taken are generally aligned with the requirements of the IFC Performance Standards with a number of management systems, plans, procedures and guidelines requiring to be developed and operationalised to ensure effective identification and management of environmental and social risks. It is expected that the FFD ESIA will inform the finalisation of many of these documents so that they are in place and operational prior to FFD field activities.

6.3 RECOMMENDATIONS FOR NEXT REVIEW

The focus of the next review is likely to be on the South Lokichar Basin exploration and appraisal operations, EOPS and the FFD project. Key will be reviewing the findings of the FFD ESIA and assessing progress with making relevant EHS systems, plans, procedures and guidance documents fully operational and embedding these as controlled EHS management documents.

Annex A

Additional Documents
Provided by AOC and
Tullow Kenya Relevant to
Current Activities

SOURCE/TOPIC	DOCUMENT TITLE
Risk Reviews and Incident Management	Control Risks Strategic Risk Review Report. 5 March 2018.
	Control Risks Lokichar Basin Monthly Report 01-31. October 2018
	20180808 IMTCMT PXR Crisis Management Team Exercise Post Activity Report
	20180504 TKBV IMT PXR Incident Management Workshop Post Activity Report
Tullow Kenya General EHS	1433956.594 A.0 Plan of Study Health 2018
	MOSAIC REPORT 3 23112018 shortform R1
	Twiga 1 & 2 Tree Planting & Invasive Species Removal Plan
Tullow Kenya FFD Foundation Phase	KSLFP-WPR-ES-PHL-0001-0_EHSPHil. Kenya South Lokichar Foundation Projects EHS Philosophy. 09/08/18
	KSLFP-WPR-ES-RPT-0002-0_ENVID Kenya South Lokichar Foundation Projects FEED 1 ENVID revalidation. 30/08/18
	KSLFP-WPR-ES-RPT-XXXX Rev 0 - ALARP Final Draft. Kenya South Lokichar Foundation Projects concept design- safety and Environmental ALARP Justification. 21/09/18
	GHG StageGate Review_4thOct_Rev1
	IWMF StageGate Review 4thOct_Rev1
	Tullow IWM Concept Refresh Rev O1 Final
	KSLFP-WPR-EG-PHL-0001-0_IWMF
Land Access	LARF - Revised Draft Sections - ALL sections including NEW Section 6 - 011118.doc
	AECOM. Land Acquisition and Resettlement Services for the South Lokichar Development Phase. Market and asset Valuation Assessment. 29 November 2018.
Tullow Kenya HR/Contracting	T-KE-HRS-GUD-0006 Industrial Relations Implementation Guidelines For Contractors _Final_2017 Rev0 (002)
	Recruitment Procedure (T-KE-HRS-PRO-0015)
	Extract from TKBV Employee Handbook
	Strategy Paper Shared Prosperity 17.10.18
Early Oil Pilot Scheme Early Oil Pilot Scheme	AOC Supplemental Appraisal_Interim_Trucking 270618
	T-KE-SCM-PRO-0017. ISO Tank Loading and Offloading Procedure. 17/7/2018.
	OM and MH Driver licences, training certs, company policies and procedures
	Copy of JV Trucking Audit Docs
	Emergency Response Policy & Procedures (2018)
	T-KE-HSS-PRO-0002 Incident Management Procedure 28/05/2018
	Petrorisk Middle East. Tullow Kenya BV Early Oil Pilot Scheme- Phase -1 HAZOP Workshop Report. 28 June 2017.
1654017 510_A 5 - EOPS Stakeholder Engagement Plan	

SOURCE/TOPIC	DOCUMENT TITLE
	EOPS ESIA Consultation - Project Description Presentation - Sept2018
	EOPS ESIA Stakeholder Engagement presentation September 2018 rev5
	EOPS Background Info Document_2018 - English
	EOPS Background Info Document_2018 - Swahili
	1654017.722_B.2_ EOPS - Non-Technical Summary_DRAFT_tgf. EOPS ESIA
	T-KE-HSS-PLN-0114. EOPS Phase 1 Oil Spill Contingency Plan. 18-5-18
Midstream	1772867 523 A1 - LLCOP - GA - SR - ToR. ESIA ToR for the Lokichar to Lamu Crude Oil Pipeline Project. 3/10/2018
	Lokichar to Lamu Crude Oil Pipeline - Scoping Report and ToR 3/10/2018
	1772867 507 A2 LLCOP GA SE SEP.. Lokichar to Lamu Crude Oil Pipeline Project. Stakeholder engagement Plan. 3/10/2018

Annex B

Review of Interim Trucking Project



IMG TRUCKING AUDIT

Lokichar to Mombasa Crude Oil
Transportation

18 March 20199

Project No: 0467030

The business of sustainability



Document title	IMG TRUCKING AUDIT
Document subtitle	Lokichar to Mombasa Crude Oil Transportation
Project No.	0467030
Date	18 March 2019
Version	1.1
Author	Philip Wambua, ERM
Client Name	Africa Oil Kenya

Document history

Version	Revision	Author	Reviewed by	ERM approval to issue		Comments
				Name	Date	
Draft	0	Philip Wambua	Mark Irvine	Don Gibson	21.01.2019	Draft for client review
Final	1	Philip Wambua	Mark Irvine	Don Gibson	14.03.2019	Addressing client comments

21 January 2019

IMG TRUCKING AUDIT

Lokichar to Mombasa Crude Oil Transportation

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APPENDIX A PHOTO LOG

APPENDIX B TRIP LOG

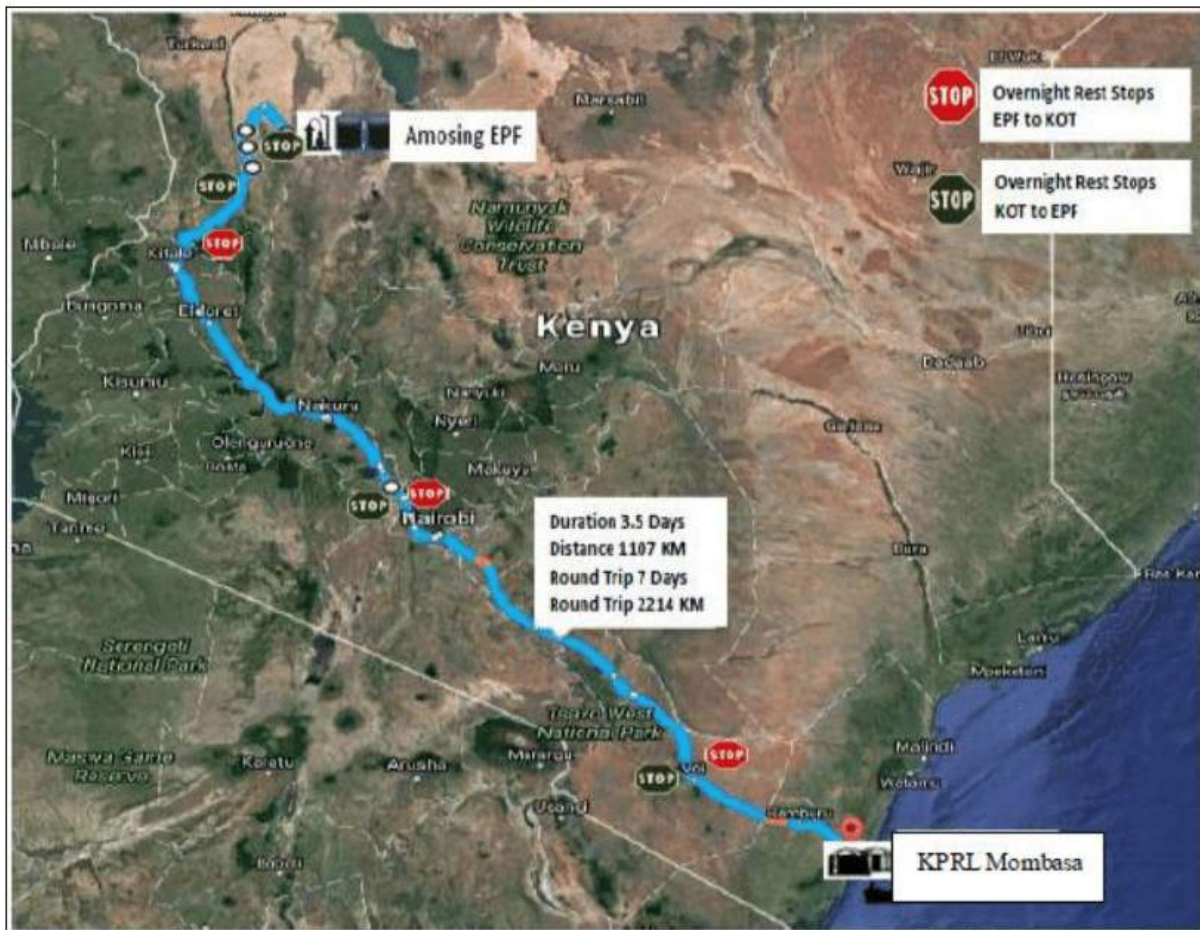
1. BACKGROUND

As part of the South Lokichar Development Project, crude oil produced from extended well testing (EWT) was stored at well pads in the Amosing and Ngamia fields near Kapese, Lokichar, Turkana County, Kenya. At the time of this appraisal, approximately 67,000 barrels of oil had been accumulated. The Interim Trucking Project was designed to move existing produced EWT crude oil from Kapese to the Kenya Petroleum Refineries Ltd. (KPRL) facility in Changamwe, Mombasa for export prior to the commencement of Early Oil Production Scheme (EOPS). The trucking operations commenced in July 2018.

ERM was requested by Africa Oil Kenya to undertake an appraisal of the oil transport operations as part of its Independent Monitoring Group functions.

This Appraisal provides an evaluation of environmental and social risks related to the road transport element of the Interim Trucking Project and sets out mitigation to be implemented by Tullow, the Operator, and the selected transportation contractor.

A seven -day round trip of approximately 2,100 km was planned as mapped out below.

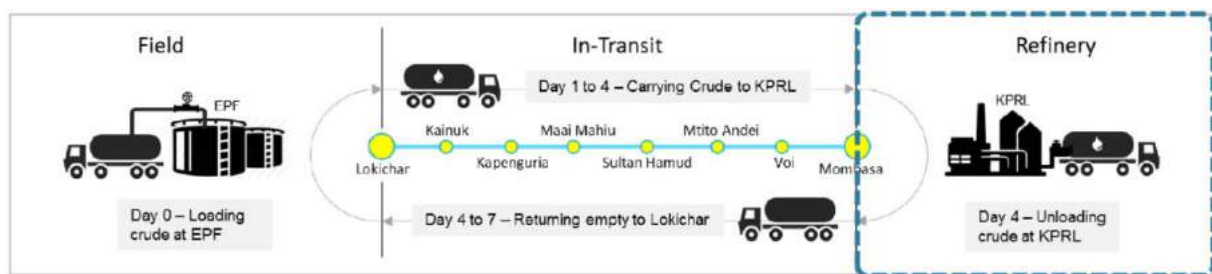


2. SCOPE

The project scope comprised:

- Loading tanktainers at Tullow Kenya facilities in the Amosing and Ngamia oil fields (including brief review of the loading facilities and oil storage facilities);
- Journey by road of tanktainers from Lokichar to Mombasa, including refuelling and overnight rest stops;
- Offloading of crude oil from tanktainers at KPRL;
- Return journey by road of empty tanktainers from Mombasa to Lokichar, including refuelling and overnight rest stops.

The auditor did not accompany the trucks on the return journey. The logistics schematic is shown below



3. THE TRUCKS/DRIVERS

Two Contractors have been engaged to transport the crude oil from Lokichar to Mombasa and to provide all drivers, vehicles, insulated fuel transportation containers (tanktainers) and other necessary infrastructure and equipment. The two haulage contractors selected to undertake the transportation activities are:

- Oilfield Movers Ltd (OML); and
- Multiple Hauliers East Africa Ltd (MHEAL).

The road transport Contractor appraised to transport the EOPS crude oil tanktainers was Multiple Hauliers Ltd. (MHEAL). On this trip, they provided seven trucks to each load with 150 barrels of oil, loaded at between 80 to 85° C, from Ngamia infield oil storage facilities to the Kenya Pipeline Refineries Limited Changamwe refinery. Trucks movements are monitored by the IVMS through the contractors' Nairobi office and daily movement reports submitted to Tullow Kenya. Tullow Kenya have been granted access to the IVMS tracking platforms for both contractors to facilitate real-time monitoring as required.

The auditor was impressed with the discipline of the MHEAL drivers who exhibited great maturity in their approach to the journey and challenges. Apart from one driver who exhibited some unsafe behaviour early in the journey, the rest of the 1,000 km trip was without incident

All seven drivers are over thirty years of age and CE (Heavy Goods Vehicle for Transportation of Hazardous materials) licenced for heavy commercial vehicles per *National Transport and Safety Authority (Operation of Commercial Service Vehicles) Regulations, 2018*. In addition, they have attended the MHEAL driving academy and have all attained the ADR Certification for transportation of hazardous cargo. Some of the driver certifications presented were dated mid-December.

The road trucks are all one brand, Man Diesel 430 HP prime mover with sleeper cabin. The KCJ registration implies that these are relatively new vehicles – end 2016 early 2017 registration and in very good condition. From records shared, the vehicles go through the annual inspection mandated in Motor Vehicle Inspection Regulations (NTSA) 2018 under the Traffic Act Revised, Cap 403, 2012. The auditor did a detailed inspection of each truck and the trailer carrying the isotainer. This included tyres, wheel bolts, windscreen, fire extinguisher, spare tyres, chevrons, air braking hose connections, lights and indicators. There were no spill kits on board as required in the trucking specification. However, a Tier 1 spill kit is provided in the convoy escort pick-up trucks provided by each contractor. Apart from one vehicle with partially worn tyres the condition of the vehicles was exemplary. The drivers regularly inspect their own vehicles, however, there is no vehicle 360 checklist or documentation of faults found so that rectification close-out is ensured.

4. THE CRUDE OIL LOADING FACILITY

Crude is stored in onsite EWT tanks. First stage heating involves using a Hot Oiler to pass hot water through the EWT tanks' steam coils. The oil is waxy thus heating allows the crude oil to flow easily. The crude is then pumped through a second diesel fired Hot Oiler to heat the crude to 75 – 80°C. The oil is pumped into the tanktainers (truck mounted isotainers) using a 400 barrel per hour pump to enable the full convoy of tanktainers loading to be completed during the day shift, prior to trucks being dispatched the next morning. It is expected that tank contents lose 2 to 3 degrees temperature per day.

The operational facilities were reviewed during a previous visit on 20th November 2018 accompanied by the General Manager of Africa Oil Kenya. The first stage oil heater had broken down precluding the loading of crude oil during that visit. The second visit during which this appraisal was conducted commenced on December 5th 2018.

Although not an in-depth review, the following were noted.

1. There are bridging documents between Tullow Kenya and the two crude oil transportation companies Oil Movers Ltd. and Multiple Hauliers Ltd.
2. The bridging document between Tullow Kenya (TKBV) and the transportation companies is dated June 2018.
3. The bridging document states that the Safe Work Plan that takes primacy is the Tullow Safe Work Plan whereas it is the individual contractors EHS MS that is used to control transportation of crude.
4. The Journey Management Plan that takes primacy is that of Multiple Hauliers Ltd. Note this states a maximum of ten hours driving with rests after 4 hours whereas our proposed journey schedule indicated 12 hours driving with three-hour stops.
5. The vehicle and equipment inspection are the purview of the haulage contractor. As no drivers were on site the vehicle 360 was not reviewed however, one vehicle was observed by the auditor to have a non-functioning/inspected fire extinguisher.
6. The documentation implies that there is an oil spill kit on board the vehicles capable of handling an isotainer primary loss of containment- this was not seen and no driver was on site to demonstrate this.
7. The Incident Management Plan – one part of the document states that MHEAL incident management will be followed, another states that the TKBV Incident Management system will take primacy. This is not specific to location of the incident within TKBV site or outside the fence.
8. There is documentation to indicate that TKBV have gone through scenario based Incident Management training including oil spill response- there is no indication that MHEAL and OML have completed training for oil spills.

The auditor was housed at the main base camp a few kilometres from the Kapese airstrip. On arrival a safety induction was provided and signed for. In the afternoon, the auditor was driven to the operational sites.

Operations of the Tullow EOPS sites has been recently handed over to Al Mansoori (Middle East based company). Details of the operational contract and management system to be used were not reviewed. Al Mansoori oversees operations at both Ngamia and Amosing sites and currently runs the oil loading operations with verification by Bureau Veritas. There is currently about 67,000 barrels of dead stock on site that is being ferried in batches to Mombasa. Four trips had been completed at the time of the appraisal.

The auditor checked in at the gate and surrendered cell phones (this site has hazard classification areas – rated Class 1 ,Div. 2) and were welcomed by Mr Nasr, Al Mansoori Site Operations Supervisor, and Mr Muriuki Site EHS Supervisor who provided site induction. There were four trucks on site. The current crude oil stock is at about 70 degrees and due to breakdown of the steam generator, operations are unable to get this to 80 degrees, the preferred loading temperature. The isotainers lose between 5 and 10 degrees during the three-day road trip. Kenya Petroleum Refineries Limited (KPRL) prefers to offload at temperatures above 60 degrees. At the time of the audit, Tullow was looking at a short term lease of a pre-oiler heater, for heating to be able to achieve the required loading temperature of 80 degrees Celsius.

Notes from Ngamia 8

- There are 2 7.2 KW compressor with air receiver on site. The air receiver inspection certificates were not immediately available.
- Tullow has a burn down philosophy hence 1 x 50 kg dry powder extinguisher is only sufficient to douse a small diesel tank fire onsite.
- The site supervisor advised of one air ingress explosion caused by opening the top of the crude holding tanks during level dipping – the opening of vapour space to operator is not desirable. An alternative level measurement should be sought.
- Sampling points do not have double isolation- the supervisor advised that sampling is done under atmospheric rather than pressurised delivery to the loading tankers, although this is not the practice witnessed
- The stairs to access the top of the containers is too steep and a fall risk- the railings on top do not provide adequate fall protection if sampling and dipping is to be done.
- The site supervisor answered his cell phone twice while in a classified area which was a significant breach of safety protocol.
- For the initial phased Tullow has a burn down philosophy. The site thus has no fire water tank or ring main.

At the Amosing 1 site

The auditor was welcomed by Mr Hassam. The following were observed on site:

- The gas line to flare has been crafted with numerous spool pieces that are unsupported and bowing. In some areas the piping is partially on the soil meaning inspection and maintenance will be an issue. The piping is not straight and quality of workmanship could be improved.
- The recovered gas line from separator to the gas generator set is above ground with route through partially covered sleeves below the road way- the sleeves had caused two humps with potential rainwater accumulation point in between.
- The gas pipeline is very close to the internal roadway and should be re- routed.
- The surface cable trays are poorly installed, crooked and take an odd route in delivering data cables to the office block- this should be straightened in order to create space for installation of the second 35,000 litre diesel tank within the bund.
- There are a number of trip hazards associated with the polythene bund lining and above ground piping. Pipe bridges need to be installed for safety of personnel.

Loading operations were witnessed for four trucks and the turnaround for the additional three trucks into the loading area. The auditor arrived on site after the commencement of operations thus did not witness the initial hydro test (Step 4e of “Isotank loading and Offloading Procedure”). It could therefore not be

ascertained that pressure was maintained at 150% of operating pressure and that water was properly disposed as no charts were shared. There is a holding tank specified in the procedure for discharged water - the slop tank and spill gathering container at site did not appear to have any water in them. The flexible hose would be the weakest link in the loading piping. The test certificate supplied from SS Flexhose of India was issued to a third party Zikhard Solutions(K) Ltd. for a 40 metre 3 inch hose with rated operating pressure of 18 Kg/cm². It is unclear if the 10 metre section on site has been individually tested.

The sampling techniques and comingling of oil was noted as satisfactory. The personnel on top of the tanks wore and properly used harnesses for work at height. It was noted that an in-tank temperature measurement was made while dipping the isotainers, however, periodic temperature assay was by a non-contact infrared digital thermometer on the loading piping. Each isotainer was loaded with 23,800 litres as per procedure and seals applied by Bureau Veritas. The “standby signal”, “90% level signal and “stop pumping signal” were well announced by hand and on two way radio. It is noted that there is no “stop pumping” instruction between step ‘q’ and step ‘r’ in the documented procedure before disconnection of connecting piping, step ‘s’. Section 5 of the procedure refers erroneously to “offloading”.

5. THE ROAD TRIP

The road trip commenced at dawn on Wednesday 6th December with tool box talks by the Multiple Hauliers field supervisor inside the Tullow Oil Kapese gate. The first few kilometres are on well graded gravel roads within the Tullow field area until joining the main A1 road at Lokichar township. A detailed trip log for the four days is attached as Appendix B. It was noted that throughout the journey, drivers were diligent in having their folder with the COTS (Crude Oil Transfer Sheets) logged at every stop and check in station.

On arrival in Mombasa since vehicles went straight to the refinery for weighing and the night stop, the auditor visited the MHEAL yard in Changamwe a few kilometres away to assess yard conditions. The Safety Officer welcomed the auditor and took him around the facility before introducing the yard manager. Points noted at this facility are below.

- Office building emergency exits open inwards instead of outwards
- Ablutions and showers of decent quality however no changing room /lockers
- Fire extinguishers, emergency assembly point, secured fence and facility for 140 vehicles
- On site generator set exhausts into the room, diesel is loaded manually (spill risks)
- Drivers tend to congregate around diesel dispensing pump whereas this should be a secure area (consider provision of welfare room).
- 24 hour security, however, insufficient lighting at night. Lighting at diesel pump is not intrinsically safe.

6. CRUDE OIL OFFLOADING

On arrival in Mombasa decision was made to drive straight to the Kenya Petroleum Refineries Ltd facility as the thermometer on one of the isotainers indicated temperatures below 60 degrees (the thermometer was later found to be miscalibrated). Normal practice is for trucks to spend the night at the MHEAL yard a few kilometres from the refinery and offload in the morning.

The process at KPRL is to pre – weigh the tanker trailer on the in house weighbridge. The auditor met the KPRL site supervisor, and requested hot work permit to take photographs from the site safety manager. Although the auditor has been to this refinery on several occasions, he was not requested for his last safety induction credentials. The following morning after the tool box talk, the trucks were lined up toward the dipping platform. The KPRL subcontractor, Opera EA limited, accompanied by an assessor from Bureau Veritas broke the seals on the isotainer to take samples and temperature at the dip/ holding area (not at Tank 117 as stated in the procedure).. A co-mingled sample was collected and KPRL technicians conduct BS&W (basic sediment and water) assessment. The vehicles then drove to the T117 tank area within the refinery where personnel hook up to the pump and tank for offloading. The isotainers were clamped to a grounding cable although it was noted that the connection point on the isotainer was painted rather than raw steel.

The table below indicates the KPRL vehicle offloading order with duration. The offloading station has two pumps allowing two isotainers to offload simultaneously

No.	Vehicle Registration	Trailer Registration	Dip Temperature	Offloading start time	Offloading end time
1	KCJ 847A	ZA 6754	56.4	0859	0936
2	KCJ 539M	ZA 6751	61.1	0903	0945
3	KCJ 532M	ZA 6759	58.3	1000	1052
4	KCJ 839M	ZA 6755	58.0	1005	1034
5	KCJ 540M	ZA 6764	58.6	1048	1110
6	KCJ 536M	ZA 6761	57.9	1108	1138
7	KCJ 538M	ZA 6768	56.4	1130	1155

Only one of the isotainers had a pumping challenge and had to be steamed during offloading – the measured temperature was 58.3 degrees. The requirement that vehicle keys be handed to the offloading technician was deemed counterproductive from an emergency response perspective, thus it is not followed.

7. RISKS

7.1 Road Accidents

In the opinion of the auditor, MHL drivers were considered very mature, however conditions on Kenya roads call for extra vigilance. There is a detailed response protocol for road accidents. The journey and stops every three hours ensures drivers are adequately alert, however, the inability of drivers to find decent accommodation for the allowances provided to them at designated rest stops overnight increases the risk of a driver error. It was noted that Tullow had audited the rest stops commonly used by the alternate haulage contractor, Oil Movers Limited.

7.2 Spills

The MHEAL emergency manual has documented procedures for spill handling and containment. The emergency procedure mentions "Put in place containment to collect the spilling product and especially stop it from going into valleys and water drains (use the provided 'Spill Kit')". These spill kits are not on the trucks hauling the isotainers. One small spill kit potentially capable of a Tier 1 spill, sits on the convoy escort pick up. From interviews with the drivers, it was apparent that the drivers had been trained on a diesel spill from a punctured fuel tank, however, the auditor was unconvinced that they could adequately handle a crude oil spill. The inability to handle a major isotainer leak from a roll over or cross fire event is potential environmental risk.

7.3 Security Issue

Security issues centre around livestock rustling and stock theft on the Pokot/Turkana county border. Attack on a commercial vehicle has been reported on a truck ferrying consumer goods presumably because these are fast moving and marketable items. There is minimal perceived threat to the trucks and isotainers as the product has low retail value however, the armed escort through to Kainuk should be retained.

8. KEY ISSUES SUMMARY AND CONCLUSION

The table below highlights the key gaps identified on the Lokichar to Mombasa journey and a proposed mitigation.

	Objective	Gap Assessed	Proposed Mitigation
1	Accelerate delivery of national road infrastructure required for the full-field development, such as rehabilitation of the A1 road and the reconstruction of the Kainuk Bridge	Parts of the road from Kainuk to Kapese were upgraded to bitumen standard in time for the 3 rd June ceremonial flag off. The road section is currently pitting and cracking due to insufficient base material. The Kainuk bridge is in early stages of construction	Consult with local and county officials on the time line for completion of the road sections in question.
2	Overnight accommodation is provided for drivers at agreed locations. Accommodation must include as a minimum: sleeping, washing and toilet facilities and access to food. Drivers will not be permitted to sleep in the cabs of the trucks. Accommodation may be in a facility provided by the Contractor or commercial facilities available in the location(s).	Overnight stop supervisors confirm auditor's observation that truck drivers are sleeping in their cabs due to insufficient allowances provided for the seven day round trip. It is unclear whether facilities audited by Tullow representatives were to IFC PS2 standards.	Immediate review of driver allowances for overnight accommodation to allow daily allowances to cover food and accommodation for the seven day trip and delays if they occur. Tullow to audit both trucking contractors for arrangements with regard to overnight accommodation and driver remuneration and welfare. Harmonise MHEAL/OSL/TKBV company policies on number of hours driven per day and break after a maximum of 4 hours, driving hours not to exceed 9 hours per 24 hours of driving
3.	The basic requirements for the Contractors include emergency response & spill response on the route used by its vehicles, including spill trailer, Tier 1 and Tier 2 spill kits	The tanker trucks do not have spill kits capable of handling Tier 2 crude oil spill The drivers do not have specific spill kit training. The convoy escort vehicle that joins after Marich Pass, has a spill kit potentially capable of handling an overland Tier 1 spill only.	1. Review requirements for handling a Tier 2 spill and assist contractor upgrade truck and convoy driver competence within 60 days. 2. Review requirement for an over water spill scenario. 3. Develop a joint emergency response plan between both trucking companies and Tullow .4. Audit the proficiency of the drivers with regards to spill response. 5. Deploy a dedicated spill response vehicle
4.	Provision and implementation of a drug & alcohol screening program for its staff. Drivers will be tested for alcohol daily	The alcohol – blow system exists at most of the rest stops, however the unit at the Athi River (outside Nairobi) stop was non-functional and testing could	Provide back-up testing units at key rest stops and ensure rigorous application of the daily test prior to commencement of days activities.

	Objective	Gap Assessed	Proposed Mitigation
	prior to commencement of driving activities.	not be conducted at commencement of day three.	
5.	Tanktainers loading and unloading procedures	The documented loading and unloading procedure yet to be shared. The procedure outlined in the interim trucking proposal is not aligned- notably 1: there is no quarantine area and seal of the tankers post dipping, and 2: there is no custody metering.	Review offloading procedures and adjust to actual practice.
6.	A periodic vehicle 360 inspection to be conducted prior and during the 7 day round trip	The drivers are meticulous in conducting vehicle inspections however, vehicle faults are not documented or time stamped.	Provide a basic checklist for drivers to complete and submit on a daily basis. Vehicle record to include automotive anomalies. Ensure all checklists are received for prompt action by the Nairobi depot.

Overall trucking operations are in the opinion of the auditor safe, apart from the risk posed by driver not using the accommodation at rest sites and the inability to handle a major spill. There are some gaps at the Kapese operational facility and the current loading and offloading procedures require to be adjusted to match the actual situation on the ground.

APPENDIX A PHOTO LOG



1. Four isotainers loading at ramp



2. Gas detection within 15 meters of loading area




3. Loading temperature sensing



4. Tier 1 level spill kit at loading ramp



6. Quick link to isotainer connection valve

<p>5. Halliburton preheater, noted diesel spill from broken level gauge</p>	
 <p>7. Oil sampling point within bund.</p>	 <p>8. Alcohol blow at trip commencement</p>
 <p>9. Trucks leaving Ngamia 8 well site storage area</p>	 <p>10. Grounding, connectivity measured periodically</p>



11. Truck convoy post security check



12. Convoy at Kesogon trading centre



13. Convoy escort vehicle with spill kit on board



14. Trucks turn into KPRL Mombasa



15. BV and Opera (EA) subcontractor staff at offload



16. Steam to isotainer at Tank 117 during offloading

APPENDIX B TRIP LOG

KAPESE TO MOMBASA - TRIP SUMMARY

The tank truck loading operations were completed at approximately 1645 on Tuesday 4th December 2018. All trucks had seals placed on bottom valve and top hatch and valve. To facilitate an early morning departure the seven loaded tanker trucks drove from Ngamia 8 filling station to the Multiple Hauliers East Africa Limited (MHEAL) yard adjacent to the Kapese camp for the overnight. Drivers were accommodated at the camp.

DAY ONE

At 0545, Wednesday 5th December, the auditor and the trucks assembled at the exit gate to Tullow's Kapese camp for briefing. Kapese camp was logged as kilometre 0. Security personnel recommended auditor vehicle be set between tank trucks 3 and 4.

	Arrival Time	Departure Time	Logged Kilometres	Activity
1	0605	0635	1	Tullow gate. Prayer, Toolbox talk and briefing by MHEAL field supervisor and auditor. Appointment of lead driver. Vehicle 360, alcohol blow, security exit documentation.
2	0720	0740	12	South Lokichar town, county cess stop. Joined by security personnel from CIPU. Security briefing allocation of armed personnel to vehicles, MHEAL field supervisor returns to base camp. One driver paperwork late that delayed departure by ten minutes. Join A1 all weather road (Kapenguria to Lodwar road)
3	0810	0825	46	Regrouping stop. Driver of vehicle 4 cautioned on behaviour. Convoy in close formation past security hotspot. Drove past town of Kalemungorok, border of Pokot and Turkana county, at 0900.
4	0954	1025	117	Kainuk township. Security detail returned to base camp. Some drivers had tea break. Joined by MHEAL convoy supervisor Mr Ali. Departure delayed by vehicle 4 downloading diesel from buffer tank.
5	1040			Convoy over Kainuk river pontoon bridge (temporary one-way bridge after collapse of original into the river). Brief truck grouping (not a stop) at junction to Turkwell gorge.
6	1335	1415	195	Kesogon township. Convoy pulled off road. Vehicle 360. Drivers stop for lunch.
7	1645	Overnight	284	Convoy slow and step ascent through Marich pass then decent onto floor of Rift Valley. Vehicles checked into Eldoret city MHEAL yard. Vehicle 360. Auditor to hotel at 1730.

DAY TWO

At 0550, Thursday 6th December, the auditor arrives at MHEAL yard to meet the trucks and drivers. Drivers had not sought overnight accommodation but slept in trucks. Security adequate however, facilities and ablutions at yard below acceptable standard. MHEAL yard supervisor arrived at 06:05.

	Arrival Time	Departure Time	Logged Kilometres	Activity
1	0605	0625	284	MHEAL yard Eldoret. Prayer, Tool box talk and briefing by MHEAL yard supervisor and auditor, Q&A session, Vehicle 360, alcohol blow, exit documentation stamped.
2	0720	0735	324	Burnt Forest township. Drivers stop for breakfast. Vehicle 360. Driver of vehicle 4 commended for identifying risk from leaning power transformer and parking accordingly.
3	1046	1105	431	Salgaaa shopping centre. Regrouping stop required due to the convoy separation in the climbing lanes and steep decent (other trucks exhibiting clutch burn) before Nakuru city. Vehicle 360. Lead driver commended for appropriate convoy pace through this area.
4	1205	1255	474	Gilgil township – MHEAL designated checkpoint. Signed into visitor book with Mr Kiarie- MHEAL office supervisor. Driver lunch. COTS documentation stamped. Rest area is not level, causing three of the trucks to park at roadside.
5	1630	overnight	614	Athi River MHEAL yard for overnight. Auditor to hotel, Nairobi.

DAY THREE

At 0620, Friday 7th December, the auditor arrives at MHEAL yard, Athi River to meet the trucks and drivers. Drivers had not sought overnight accommodation but slept in trucks. Security issue as auditor was not initially allowed into the MHEAL yard- resolved by calling Tullow Kapese. Facilities and ablutions marginal, unpaved area and high dust levels.

	Arrival Time	Departure Time	Logged Kilometres	Activity
1	0620	0640	614	MHEAL yard Athi River. Prayer, Tool box talk and briefing by MHEAL yard supervisor, lessons learned. Auditor cautioned on temptation to speed on open sections of road. Vehicle 360, alcohol blow not functioning, exit documentation stamped.
2	0710		654	Convoy slow by police activity around fatal accident involving two passenger vehicles occasioned by heavy fog in Konza area.
3	0802	0820	667	Convoy regrouping stop at Salama township. Bathroom break.

IMG TRUCKING AUDIT

	Arrival Time	Departure Time	Logged Kilometres	Activity
4	0930	1020	734	Kiboko township. Breakfast stop. Vehicle 360. Driver of vehicle with trailer Z 6768 cautioned on poor overtaking. Re- assumed correct convoy order as this was not followed on leaving Athi River.
5	1155	1205	779	Driver break, mid Tsavo near Manyani prison. Drivers also took brief bathroom break just after Mtito Andei township
6	1350	1410	899	Voi city, MHEAL designated checkpoint. Drivers stopped adjacent to the office to buy water, snacks. Documentation stamped. Auditor signed visitor's book.
7	1455	1520	931	Maungu township. Lunch stop. Vehicles stopped off-road, vehicle 360.
8	1825	overnight	1047	Mombasa. Trucks driven to Kenya Petroleum Refinery Ltd. rather than MHEAL depot after one tanker oil temperature noted to be low. Trucks weighed. Auditor to MHEAL yard for inspection of facility, thereafter to hotel.

DAY FOUR

At 0640, Saturday 8th December, the auditor arrives at Kenya Petroleum Refinery. Relevant KPRL staff did not arrive on site until about 0750. Hot work permit to take photographs was requested and provided. Tanker seals placed on bottom valve and top hatch and valve were inspected and broken by Bureau Veritas assessor on site. Off-loading of first truck commenced at 0859.

	Arrival Time	Departure Time	Logged Kilometres	Activity
1	0640	1240	1047	Toolbox talk. Alcohol blow. Trucks were lined up for dipping, water assay, then steaming and offloading of crude oil into KPRL tanks. All seven trucks were completed by noon thanks to vigilance of KPRL staff. Trucks reweighed. Driver de-briefing and auditor thanks. Trucks departed to Voi stop via MHEAL depot.

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